THE COUNTY COMMISSIONERS
OF KENT COUNTY, MARYLAND
AGENDA

June 22, 2021

10:00 AM Call to Order/Pledge of Allegiance/Moment of Silence

Building is Open for In-Person Attendance or Dial 1-872-239-8359 and enter Conference ID 325 050 833#

Consent Items

#1 - Regular Session Minutes, June 15, 2021

#2 - Liquor Minutes, June 15, 2021

#3 - Public Hearing Minutes, June 15, 2021

#4 - Rock Hall Volunteer Fire Company, Combined Gaming, July 31, 2021
Raffle Permit Application

Recognition

Hannah Kinne
Employee Recognition

Appointments

Dennis Hickman, Captain, Kent County Sheriff's Office
Axon Enterprise, Inc. Quote Summary

Wayne Rickert, Executive Director, Rebuilding Together Kent County and Dawson Hunter, Housing and Transportation Coordinator, Local Management Board
Housing Repair Services

Paul Rickert, Area Extension Director, University of Maryland Extension
Funding Proposal

Departmental Appointments

Herbert Dennis, Warden, Detention Center
Security Camera Replacement

Herbert Dennis, Warden, Detention Center
Trinity Services Group, LLC Contract

Herbert Dennis, Warden, Detention Center
Trinity Services Group, LLC Food Service Agreement

Herbert Dennis, Warden, Detention Center
Conmed, Inc., Correct Care Solutions, LLC Contract

Herbert Dennis, Warden, Detention Center
Mid-Shore Behavioral Health Grant

Virginia Gregg, Emergency Planner, Emergency Services
Kent County Hazard Mitigation Plan

April Bitter, Project Manager, Information Technology

Renewal of Verizon PRI Contract

April Bitter, Project Manager, Information Technology

Third Year Central Square Contract

Carla Gerber, Deputy Director, Planning, Housing, and Zoning

FY2022 Maryland Agricultural Land Preservation Foundation Easement Acquisition Cycle Rankings

Human Resources Director

Parks and Recreation

Recreation Program Coordinator Vacancy

Public Works - Roads Division

Motor Equipment Operator I Vacancies

Public Works Director

Environmental Operations Division

FY2022 Landfill Monitoring Contracts

Environmental Operations Division

Procurement/Purchase Order Number Request

Environmental Operations Division

Public Landings and Facilities Board Appointments

Environmental Operations Division

Public Landings and Facilities Board Appointments

County Engineer

Kent Ag Center Buildings Demolition Change Order

County Attorney

Thomas N. Yeager, County Attorney

- Mutual Aid Agreement between County Governments and Sheriffs on the Eastern Shore
- County Commissioners of Kent County and the Sheriff of Kent County

County Administrator

Arnessa Dowell, Director, Kent County Public Library

Third Amendment to Lease, Kent County Public Library Galena Branch

County Administrator Report

Maryland Association for Environmental and Outdoor Education

Maryland Green School 2021

Kent Alcohol and Tobacco Enforcement KATE

Sondra M. Blackiston, Clerk/Kate Manager

Senate Bill 205/House Bill 12, Alcoholic Beverages - Sale or Delivery for Off-Premises Consumption

Building is Open for In-Person Attendance: Public Comment/Media Review Dial 1-872-239-8359 and enter Conference ID 325 050 833#

Procedures for Public Comment

Contingency Fund

Contingency and Use of Fund Balance Report

Closed Session

Thomas N. Yeager, County Attorney

Legal
This meeting will be closed under the Annotated Code of Maryland General Provisions Article § 3-305 (b) (7) To consult with counsel to obtain legal advice; and (8) To consult
with staff, consultants, or other individuals about pending or potential litigation

(Meetings are conducted in Open Session unless otherwise indicated. All or part of County Commissioners' meetings can be held in closed session under the authority of the MD Open Meetings Law by vote of the Commissioners. Breaks are at the call of the President. Please note that times listed for specific items on the agenda are only estimates, and that the order of agenda items may change as time dictates or allows. Meetings are subject to audio and video recordings.)

#1 - Regular Session Minutes, June 15, 2021
6/22/2021
County Commissioners Meeting

ATTACHMENTS:
Description

#2 - Liquor Minutes, June 15, 2021
6/22/2021
County Commissioners Meeting

ATTACHMENTS:
Description

#3 - Public Hearing Minutes, June 15, 2021
6/22/2021
County Commissioners Meeting

ATTACHMENTS:
Description

#4 - Rock Hall Volunteer Fire Company, Combined Gaming, July 31, 2021
6/22/2021
County Commissioners Meeting

Item Summary:
Raffle Permit Application

ATTACHMENTS:

Description

7-2021 Rock Hall Volunteer Fire Company, Combined Gaming, July 31, 2021, Application

Permit# 7-2021

MULTIPLE GAMING DEVICE AND RAFFLE PERMIT APPLICATION

Pursuant to the provisions of the Annotated Code of Maryland, Criminal Law §§ 13-1701 to 13-1706.

Name of Organization: Rock Hall Vol Fire Co.

Address of Organization: 21500 Rock Hall Ave, Rock Hall, Md. 21661

Telephone: (410) 639-7888

Is the organization formed or located in Kent County? (Yes) No

Does the organization serve the residents of Kent County? (Yes) No

Is this organization tax exempt under the provisions of the Internal Revenue Code? (Yes) No

Tax Exempt Number: 33043309

Person responsible for complying with permit regulations and requirements:

Name: Linda George

Address: 5894 Henry Ave, P.O. Bx 458, Rock Hall, Md 21661

E-Mail: lmg63@live.com

Telephone: (443) 480-0675

Type of permit sought: ( ) Raffle Only (X) Combined gaming devices used in a single fund-raising event

Location address of fund-raising affair: 21500 Rock Hall Ave

Rock Hall, Md 21661

Are these premises owned, leased, or regularly occupied by the organization named above? (Yes) No

Date(s) of fund-raising: July 31, 2021

Date and Time of Drawing: July 31, 2021 Begin at: 12:00 End at: 5:00

If you are seeking a permit authorizing only a raffle that is not conducted in combination with other gaming activity, please sign below.

If, however, you are seeking to conduct a fund-raiser using more than one gaming activity in a single event, please complete the following page.

Signature of person completing this application:

Please Select One:

(X) Pick Up

( ) Mail Permit (will be mailed to person responsible)

County Commissioners Office

Date 6-9-21 LJC

Pursuant to the provisions of the Annotated Code of Maryland, Criminal Law §§ 13-1701 to 13-1706.

Check the gaming devices to be used at this fund-raising event to award merchandise or cash prizes:

(X) Raffles	( ) Chance books	( ) Paddle Wheels
( ) Wheels of fortune	(X) Card games	( ) Lotteries

( ) Other Pull tabs.

Will this fund-raiser be managed and operated only by individuals domiciled in Kent County? (Yes) No

If no, please explain circumstances:

Will alcoholic beverages be served or available for purchase at this fund-raising event? (Yes) No

Is the organization a religious organization? Yes (No)

If yes, has it conducted services regularly in Kent County for at least three (3) years? Yes (No)

Where are services conducted and how often?

What percentage of funds derived from the multiple gaming devices will be spent or donated to:

_____% Civic _____% Charitable _____% Educational

Name, address and telephone of person completing application:

Linda M. George
589H Henry Ave, Rock Hall, Md. 21661
(443) 480-0675

Signature of person completing application: Hall Manager.

Hannah Kinne
6/22/2021
County Commissioners Meeting

Item Summary:
Employee Recognition

ATTACHMENTS:

Description

06.22.21 Hannah Kinne, Intern, Certificate of Recognition

Certificate of Recognition

This is to certify that

Hannah Kinne

is hereby recognized

for her profound dedication and work ethic during her work in the Commissioners' Office and the Economic and Tourism Development Department. Ms. Kinne started working as an Intern in the Commissioners' Office as part of the Summer Youth Employment Program in June 2015. Ms. Kinne returned every year thereafter, working as an Administrative Assistant. She has been an invaluable part of each Department she has worked with over the years, and she continues to work diligently with the County until her endeavor to continue with her master's degree. We, the County Commissioners of Kent County, Maryland are proud in honoring Ms. Kinne on the next step of her journey in becoming a Professional of Library Science.

THE COUNTY COMMISSIONERS
OF KENT COUNTY, MARYLAND

P. Thomas Mason

P. Thomas Mason, President

Ronald H. Fithian, Member

Robert N. Jacob, Jr., Member

June 22, 2021

Dennis Hickman, Captain, Kent County Sheriff's Office
6/22/2021
County Commissioners Meeting

Item Summary:
Axon Enterprise, Inc. Quote Summary

ATTACHMENTS:

Description

06.22.21 5-Year Quote Summary, Axon Enterprise, Inc., for Kent County Sheriff's Office, Body Worn Cameras Solution

06.22.21 Agreement, Master Services and Purchasing By and Between Axon Enterprise, Inc., and The County Commissioners of Kent County for Body Worn Cameras

06.22.21 Kent County Sheriff's Office, AXON3 Body Camera Presentation

AXON ENTERPRISE, INC.

5-YEAR QUOTE SUMMARY

Kent County Sheriff's Office

Axon Enterprise, Inc.
17800 North 85th Street
Scottsdale, AZ 85255

Main Contacts:

Amber Stanton
480-676-2854

Axon's Body 3 package bundles hardware, software, accessories, equipment refreshes, and warranties together to help equip your officers with the solutions they need to stay safe.

Kent County and Axon Enterprise, Inc. (Axon) will be partnering to deliver a Body Worn Camera (BWC) solution for the Kent County Sheriff's Office at a total 5 year cost of **$174,526.22.** Our goal is to deliver predictable annual spend, and the best technology in order to reduce your agency's liability while increasing your agency's efficiency and most importantly, safety.

Axon represents the entire network of devices, applications, and people that is revolutionizing public safety around the world. Our mission is to protect life. Our technologies give law enforcement the confidence, focus, and time they need to keep their communities safe. Today, our CEWs are in use in more than 18,000 agencies globally and our other Axon family of products are in use by more than 6,000 agencies. Our suite of connected products from body cameras to evidence management, has given police agencies the flexibility and the versatility to operate with increased transparency and efficiency

The Axon Ecosystem gives public safety leaders new tools to protect life:
https://www.axon.com/
https://vimeo.com/axonenterprise

Logistical Details: 30-45 Days from Signed Quote to delivery of hardware. Set up can be scheduled based on department preference after delivery.

Next Steps:
Paperwork we need the agency to sign:

- Quote

The solution created for the Kent County Sheriff's Office includes:

Hardware:

- (2) 8 Bay Docking Stations for Charging and Evidence Offload
- (22) AB3 Cameras Delivered in Year 1
- (1) Spare AB3
- Mounts for Each User
- (22) Signal Sidearm for Firearm Activation of Camera

Software:

- (22) Unlimited Licenses
- Multi-Cam Playback, Redaction Studio, and Device Analytics
- Unlimited Storage for Every Body Camera User in Evidence.com
- GPS Location and Live Streaming for Every Officer while Recording (Respond+)
- Autotagging for Every Officer
- Redaction Assistant

Warranties and Equipment Refresh:

- Full 5-year Warranty on All Devices
- (22) of the Latest Cameras at Year 2.5
- (22) of the Latest Cameras at Year 5
- New Docking Stations and Mounts Each Refresh
-

Axon Professional Services:

- In Person Set Up of All Devices and Docks
- System Admin and End User Training Virtually

Program Products & Features:

Axon Body 3

Axon Body 3 isn't just a camera: it's a rugged communications beacon front-and-center on every call. Featuring our new Axon Aware technology and an LTE connection that enables real-time features like GPS; Body 3 empowers officers with more support in the moment. Coupled with enhanced low-light performance and reduced motion blur, that means clearer evidence in the now, more efficient AI-powered processes after the fact, and most importantly, safer communities in the long run.

What is TAP?

The Technology Assurance Plan (TAP) is a service plan that combines warranty coverage on your Axon body cameras with automatic refresh units every 2.5 years. Minimizing the chance that an officer goes on duty without a camera, TAP includes on-site spare units, as well as an extended warranty at no additional cost through the life of the agreement. TAP not only protects your agency today—it ensures it will stay protected in the future.

Evidence.com
Axon Evidence is a scalable, cloud-based system that consolidates all of your digital files, making them easy to manage, access, and share. Now you can also know your evidence is securely stored in Microsoft Azure's Government cloud, and that any activity is captured in audit trails to ensure chain of custody and evidence authenticity.

Axon Respond
Axon Respond builds on the active intelligence provided by the AB3 LTE-connected camera. Axon Respond is our latest game-changing technology that brings real-time situational awareness features like live maps and streaming to our connected devices, critical evidence previews and prioritized wireless upload, and post-event reporting capabilities. Axon Respond also provides critical notifications, including gunshot detection, and map-based location tracking via Evidence.com. These features enable proactive assistance for officers in the field.

Axon Capture
Axon Capture is a mobile application built specifically for law enforcement that allows officers to capture digital evidence right from the field. The application eliminates the need to carry multiple devices for photo, video and audio recording. Instead, it uses the capabilities of the smartphone already in your pocket and adds the security and organization needed to protect truth. You can add tags, titles or GPS coordinates to any recording before uploading the data to Evidence.com, without leaving anything on your phone.

Axon Signal Sidearm
The OSP 7 package includes Axon Signal Sidearm – a smart sensor that attaches to an officer's holster. The Signal Sidearm sensor uses Axon Signal technology to trigger Axon body-worn cameras within range to start recording automatically when an officer's weapon is drawn.

Auto Tagging
Auto-tagging takes information from your computer-aided dispatch and records management system and ties it to your videos on Axon Evidence. Auto-tagging automatically tags incident ID, category, location and other tags to videos automatically. It avoids the misspellings and incomplete information of manual entry. Auto-tagging requires minimal involvement from agency IT staff and no need to involve CAD or RMS providers. Having this feature saves about $200 per officer per month in productivity costs.

Professional Services
Axon's Starter Package will help introduce our technologies to your agency with the right training and implementation support. The Professional Services team will assist in the hardware and software setup your new Axon Body Worn Camera program.

The Axon Customer Success Manager
Whenever you purchase an Axon product, we want to ensure that it's easy to use and providing value to your agency. That's why we assign our customers a single point of contact to ensure you always have the tools and information you need.

Axon Enterprise, Inc.
17800 N 85th St.
Scottsdale, Arizona 85255
United States
Phone: (800) 978-2737

Q-299627-44355.659AS

Issued: 06/08/2021

Quote Expiration: 06/30/2021

Account Number: 445589

Payment Terms: Net 30
Delivery Method: Fedex - Ground

SHIP TO
Dennis Hickman
Kent County Sheriff's Office - MD
104 Vickers Drive Unit B
Chestertown, MD 21620
US

BILL TO
Kent County Sheriff's Office - MD
104 Vickers Drive Unit B
Chestertown, MD 21620
US

SALES REPRESENTATIVE
Amber Stanton
Phone:
Email: astanton@axon.com
Fax:

PRIMARY CONTACT
Dennis Hickman
Phone: (410) 810-2254
Email: dhickman@kentgov.org

Year 1

Item	Description	Term (Months)	Quantity	List Unit Price	Net Unit Price	Total (USD)
Axon Plans & Packages						
73746	PROFESSIONAL EVIDENCE.COM LICENSE	60	22	0.00	0.00	0.00
73686	EVIDENCE.COM UNLIMITED AXON DEVICE STORAGE	60	22	0.00	0.00	0.00
73683	10 GB EVIDENCE.COM A-LA-CART STORAGE	60	88	0.00	0.00	0.00
73478	REDACTION ASSISTANT USER ACCESS LICENSE	60	22	0.00	0.00	0.00
73680	RESPOND DEVICE PLUS LICENSE	60	22	0.00	0.00	0.00
73682	AUTO TAGGING LICENSE	60	22	0.00	0.00	0.00
Hardware						
73202	AXON BODY 3 - NA10		22	699.00	629.10	13,840.20
74210	AXON BODY 3 - 8 BAY DOCK		2	1,495.00	1,345.50	2,691.00
70033	WALL MOUNT BRACKET, ASSY, EVIDENCE.COM DOCK		2	43.90	39.51	79.02
11534	USB-C to USB-A CABLE FOR AB3 OR FLEX 2		22	0.00	0.00	0.00
74020	MAGNET MOUNT, FLEXIBLE, AXON RAPIDLOCK		24	0.00	0.00	0.00
75015	SIGNAL SIDEARM KIT		22	249.00	249.00	5,478.00
71044	BATTERY, SIGNAL SIDEARM, CR2430 SINGLE PACK		44	0.00	0.00	0.00
Other						
73842	UNLIMITED EVIDENCE.COM TAP BUNDLE PAYMENT	12	22	1,068.00	961.20	21,146.40
73827	AB3 CAMERA TAP WARRANTY	60	22	0.00	0.00	0.00

Year 1 (Continued)

Item	Description	Term (Months)	Quantity	List Unit Price	Net Unit Price	Total (USD)
Other (Continued)						
73828	AB3 8 BAY DOCK TAP WARRANTY	60	2	0.00	0.00	0.00
71019	NORTH AMER POWER CORD FOR AB3 8-BAY, AB2 1-BAY / 6-BAY DOCK		2	0.00	0.00	0.00
73479	REDACTION ASSISTANT USER ACCESS PAYMENT	12	22	108.00	97.20	2,138.40
73666	RESPOND DEVICE PLUS PAYMENT	12	22	228.00	205.20	4,514.40
73835	AUTO TAGGING LICENSE PAYMENT	12	22	108.00	97.20	2,138.40
Services						
85144	AXON STARTER		1	2,750.00	2,750.00	2,750.00
79999	AUTO TAGGING / PERFORMANCE IMPLEMENTATION SERVICE		1	0.00	0.00	0.00
					Subtotal	54,775.82
					Estimated Shipping	0.00
					Estimated Tax	0.00
					Total	54,775.82

Spares

Item	Description	Term (Months)	Quantity	List Unit Price	Net Unit Price	Total (USD)
Hardware						
73202	AXON BODY 3 - NA10		1	699.00	0.00	0.00
74020	MAGNET MOUNT, FLEXIBLE, AXON RAPIDLOCK		1	0.00	0.00	0.00
11534	USB-C to USB-A CABLE FOR AB3 OR FLEX 2		1	0.00	0.00	0.00
87063	TECH ASSURANCE PLAN BODY 3 CAMERA PAYMENT	12	1	336.00	0.00	0.00
Other						
73827	AB3 CAMERA TAP WARRANTY	60	1	0.00	0.00	0.00
					Subtotal	0.00
					Estimated Tax	0.00
					Total	0.00

Year 2

Item	Description	Term (Months)	Quantity	List Unit Price	Net Unit Price	Total (USD)
Other						
73842	UNLIMITED EVIDENCE.COM TAP BUNDLE PAYMENT	12	22	1,068.00	961.20	21,146.40

Year 2 (Continued)

Item	Description	Term (Months)	Quantity	List Unit Price	Net Unit Price	Total (USD)
Other (Continued)						
73479	REDACTION ASSISTANT USER ACCESS PAYMENT	12	22	108.00	97.20	2,138.40
73835	AUTO TAGGING LICENSE PAYMENT	12	22	108.00	97.20	2,138.40
73666	RESPOND DEVICE PLUS PAYMENT	12	22	228.00	205.20	4,514.40
					Subtotal	29,937.60
					Estimated Tax	0.00
					Total	29,937.60

Year 3

Item	Description	Term (Months)	Quantity	List Unit Price	Net Unit Price	Total (USD)
Other						
73309	AXON CAMERA REFRESH ONE		22	0.00	0.00	0.00
73842	UNLIMITED EVIDENCE.COM TAP BUNDLE PAYMENT	12	22	1,068.00	961.20	21,146.40
73689	MULTI-BAY BWC DOCK 1ST REFRESH		2	0.00	0.00	0.00
73479	REDACTION ASSISTANT USER ACCESS PAYMENT	12	22	108.00	97.20	2,138.40
73309	AXON CAMERA REFRESH ONE		1	0.00	0.00	0.00
73835	AUTO TAGGING LICENSE PAYMENT	12	22	108.00	97.20	2,138.40
73666	RESPOND DEVICE PLUS PAYMENT	12	22	228.00	205.20	4,514.40
					Subtotal	29,937.60
					Estimated Tax	0.00
					Total	29,937.60

Year 4

Item	Description	Term (Months)	Quantity	List Unit Price	Net Unit Price	Total (USD)
Other						
73842	UNLIMITED EVIDENCE.COM TAP BUNDLE PAYMENT	12	22	1,068.00	961.20	21,146.40
73479	REDACTION ASSISTANT USER ACCESS PAYMENT	12	22	108.00	97.20	2,138.40
73835	AUTO TAGGING LICENSE PAYMENT	12	22	108.00	97.20	2,138.40
73666	RESPOND DEVICE PLUS PAYMENT	12	22	228.00	205.20	4,514.40
					Subtotal	29,937.60
					Estimated Tax	0.00
					Total	29,937.60

Year 5

Item	Description	Term (Months)	Quantity	List Unit Price	Net Unit Price	Total (USD)
Other						
73310	AXON CAMERA REFRESH TWO		22	0.00	0.00	0.00
73842	UNLIMITED EVIDENCE.COM TAP BUNDLE PAYMENT	12	22	1,068.00	961.20	21,146.40
73688	MULTI-BAY BWC DOCK 2ND REFRESH		2	0.00	0.00	0.00
73479	REDACTION ASSISTANT USER ACCESS PAYMENT	12	22	108.00	97.20	2,138.40
73310	AXON CAMERA REFRESH TWO		1	0.00	0.00	0.00
73835	AUTO TAGGING LICENSE PAYMENT	12	22	108.00	97.20	2,138.40
73666	RESPOND DEVICE PLUS PAYMENT	12	22	228.00	205.20	4,514.40
					Subtotal	29,937.60
					Estimated Tax	0.00
					Total	29,937.60

Grand Total	**174,526.22**

AXON

Discounts (USD)

Quote Expiration: 06/30/2021

List Amount	194,038.80
Discounts	19,512.58
Total	**174,526.22**

**Total excludes applicable taxes*

Summary of Payments

Payment	Amount (USD)
Year 1	54,775.82
Spares	0.00
Year 2	29,937.60
Year 3	29,937.60
Year 4	29,937.60
Year 5	29,937.60
Grand Total	**174,526.22**

Notes
NASPO Contract No. OK-MA-145-015 used for pricing and purchasing justification

Tax is subject to change at order processing with valid exemption.

Axon's Sales Terms and Conditions

This Quote is limited to and conditional upon your acceptance of the provisions set forth herein and Axon's Master Services and Purchasing Agreement (posted at www.axon.com/legal/sales-terms-and-conditions) **and the Axon Customer Experience Improvement Program Appendix, which includes the sharing of de-identified segments of Agency Content with Axon to develop new products and improve your product experience** (posted at www.axon.com/legal/sales-terms-and-conditions), as well as the attached Statement of Work (SOW) for Axon Fleet and/or Axon Interview Room purchase, if applicable. **The Axon Customer Experience Improvement Program Appendix ONLY applies to Customers in the USA**. In the event you and Axon have entered into a prior agreement to govern all future purchases, that agreement shall govern to the extent it contemplates the products and services being purchased and does not conflict with the Axon Customer Experience Improvement Program Appendix. Any purchase order issued in response to this Quote is subject solely to the above referenced terms and conditions. By signing below, you represent that you are lawfully able to enter into contracts. If you are signing on behalf of an entity (including but not limited to the company, municipality, or government agency for whom you work), you represent to Axon that you have legal authority to bind that entity. If you do not have this authority, please do not sign this Quote.

Signature: P. Thomas Mason **Date:** June 22, 2021

Name (Print): P. Thomas Mason **Title:** President

PO# (Or write N/A):

Please sign and email to Amber Stanton at astanton@axon.com or fax to

Thank you for being a valued Axon customer. For your convenience on your next order, please check out our online store buy.axon.com

The trademarks referenced above are the property of their respective owners.

Axon Internal Use Only		
		SFDC Contract #:
		Order Type:
		RMA #:
		Address Used:
Review 1	Review 2	SO #:
Comments:		

Master Services and Purchasing Agreement between Axon and Agency (Online)

This Master Services and Purchasing Agreement ("**Agreement**") is between Axon Enterprise, Inc., a Delaware corporation ("**Axon**"), and the agency on the Quote ("**Agency**"). This Agreement is effective as of the later of the (a) last signature date on this Agreement or (b) signature date on the Quote ("**Effective Date**"). Axon and Agency are each a "**Party**" and collectively "**Parties**". This Agreement governs Agency's purchase and use of the Axon Devices and Services detailed in the Quote Appendix ("**Quote**"). It is the intent of the Parties that this Agreement act as a master agreement governing all subsequent purchases by Agency for the same Axon products and services in the Quote, and all such subsequent quotes accepted by Agency shall be also incorporated into this Agreement by reference as a Quote. The Parties therefore agree as follows:

1 Definitions.

"**Axon Cloud Services**" means Axon's web services for Axon Evidence, Axon Records, Axon Dispatch, and interactions between Evidence.com and Axon Devices or Axon client software. Axon Cloud Service excludes third-party applications, hardware warranties, and my.evidence.com.

"**Axon Device**" means all hardware provided by Axon under this Agreement.

"**Quote**" means an offer to sell and is only valid for devices and services on the quote at the specified prices. Any terms within Agency's purchase order in response to a Quote will be void. Orders are subject to prior credit approval. Changes in the deployment estimated ship date may change charges in the Quote. Shipping dates are estimates only. Axon is not responsible for typographical errors in any offer by Axon, and Axon reserves the right to cancel any orders resulting from such errors.

"**Services**" means all services provided by Axon under this Agreement, including software, Axon Cloud Services, and professional services.

2 Term. This Agreement begins on the Effective Date and continues until all subscriptions hereunder have expired or have been terminated ("**Term**").

All subscriptions including Axon Evidence, Axon Fleet, Officer Safety Plans, Technology Assurance Plans, and TASER 7 plans begin after shipment of the applicable Axon Device. If Axon ships the Axon Device in the first half of the month, the start date is the 1st of the following month. If Axon ships the Axon Device in the second half of the month, the start date is the 15th of the following month. For purchases solely of Axon Evidence subscriptions, the start date is the Effective Date. Each subscription term ends upon completion of the subscription stated in the Quote ("**Subscription Term**").

Upon completion of the Subscription Term, the Subscription Term will automatically renew for an additional 5 years ("**Renewal Term**"). For purchase of TASER 7 as a standalone, Axon may increase pricing to its then-current list pricing for any Renewal Term. For all other purchases, Axon may increase pricing on all line items in the Quote up to 3% at the beginning of each year of the Renewal Term. New devices and services may require additional terms. Axon will not authorize services until Axon receives a signed Quote or accepts a purchase order, whichever is first.

3 Payment. Axon invoices upon shipment. Payment is due net 30 days from the invoice date. Payment obligations are non-cancelable. Agency will pay invoices without setoff, deduction, or withholding. If Axon sends a past due account to collections, Agency is responsible for collection and attorneys' fees.

4 Taxes. Agency is responsible for sales and other taxes associated with the order unless Agency provides Axon a valid tax exemption certificate.

5 Shipping. Axon may make partial shipments and ship Axon Devices from multiple locations. All shipments are FOB shipping point via common carrier. Title and risk of loss pass to Agency upon Axon's delivery to the common carrier. Agency is responsible for any shipping charges in the Quote.

6 Returns. All sales are final. Axon does not allow refunds or exchanges, except warranty returns or as provided by state or federal law.

7 **Warranty**.

7.1 Hardware Limited Warranty. Axon warrants that Axon-manufactured Devices are free from defects in workmanship and materials for 1 year from the date of Agency's receipt, except Signal Sidearm, which Axon warrants for 30 months from the date of Agency's receipt. Axon warrants its Axon-manufactured accessories for 90-days from the date of Agency's receipt. Used conducted energy weapon ("**CEW**") cartridges are deemed to have operated properly. Extended warranties run from the expiration of the 1-year hardware warranty through the extended warranty term. Non-Axon manufactured Devices are not covered by Axon's warranty. Agency should contact the manufacturer for support of non-Axon manufactured Devices.

7.2 Claims. If Axon receives a valid warranty claim for an Axon manufactured Device during the warranty term, Axon's sole responsibility is to repair or replace the Device with the same or like Device, at Axon's option. A replacement Axon Device will be new or like new. Axon will warrant the replacement Axon Device for the longer of (a) the remaining warranty of the original Axon Device or (b) 90-days from the date of repair or replacement.

If Agency exchanges a device or part, the replacement item becomes Agency's property, and the replaced item becomes Axon's property. Before delivering a Axon Device for service, Agency must upload Axon Device data to Axon Evidence or download it and retain a copy. Axon is not responsible for any loss of software, data, or other information contained in storage media or any part of the Axon Device sent to Axon for service.

7.3 Spare Axon Devices. For qualified purchases, Axon may provide Agency a predetermined number of spare Axon Devices as detailed in the Quote ("**Spare Axon Devices**"). Spare Axon Devices are intended to replace broken or non-functioning units while Agency submits the broken or non-functioning units, through Axon's warranty return process. Axon will repair or replace the unit with a replacement Axon Device. Title and risk of loss for all Spare Axon Devices shall pass to Agency in accordance with shipping terms under Section 5. Axon assumes no liability or obligation in the event Agency does not utilize Spare Axon Devices for the intended purpose.

7.4 Limitations. Axon's warranty excludes damage related to: (a) failure to follow Axon Device use instructions; (b) Axon Devices used with equipment not manufactured or recommended by Axon; (c) abuse, misuse, or intentional damage to Axon Device; (d) force majeure; (e) Axon Devices repaired or modified by persons other than Axon without Axon's written permission; or (f) Axon Devices with a defaced or removed serial number.

7.4.1 To the extent permitted by law, the above warranties and remedies are exclusive. Axon disclaims all other warranties, remedies, and conditions, whether oral, written, statutory, or implied. If statutory or implied warranties cannot be lawfully disclaimed, then such warranties are limited to the duration of the warranty described above and by the provisions in this Agreement.

7.4.2 Axon's cumulative liability to any Party for any loss or damage resulting from any claim, demand, or action arising out of or relating to any Axon Device or Service will not exceed the purchase price paid to Axon for the Axon Device, or if for Services, the amount paid for such Services over the 12 months preceding the claim. Neither Party will be liable for direct, special, indirect, incidental, punitive or consequential damages, however caused, whether for breach of warranty or contract, negligence, strict liability, tort or any other legal theory.

8 **Statement of Work**. Certain Axon Devices and Services, including Axon Interview Room, Axon Channel Services, and Axon Fleet, may require a Statement of Work that details Axon's Service deliverables ("**SOW**"). In the event Axon provides an SOW to Agency, Axon is only responsible to perform Services described in the SOW. Additional services are out of scope. The Parties must document scope changes in a written and signed change order. Changes may require an equitable adjustment in fees or schedule. The SOW is incorporated into this Agreement by reference.

9 **Axon Device Warnings**. See www.axon.com/legal for the most current Axon Device warnings.

10 **Design Changes.** Axon may make design changes to any Axon Device or Service without notifying Agency or making the same change to Axon Devices and Services previously purchased by Agency.

11 **Bundled Offerings.** Some offerings in bundled offerings may not be generally available at the time of Agency's purchase. Axon will not provide a refund, credit, or additional discount beyond what is in the Quote due to a delay of availability or Agency's election not to utilize any portion of an Axon bundle.

12 **Insurance.** Axon will maintain General Liability, Workers' Compensation, and Automobile Liability insurance. Upon request, Axon will supply certificates of insurance.

13 **Indemnification.** Axon will indemnify Agency's officers, directors, and employees ("**Agency Indemnitees**") against all claims, demands, losses, and reasonable expenses arising out of a third-party claim against an Agency Indemnitee resulting from any negligent act, error or omission, or willful misconduct by Axon under this Agreement, except to the extent of Agency's negligence or willful misconduct, or claims under workers compensation.

14 **IP Rights.** Axon owns and reserves all right, title, and interest in Axon devices and services and suggestions to Axon, including all related intellectual property rights. Agency will not cause any Axon proprietary rights to be violated.

15 **IP Indemnification.** Axon will indemnify Agency Indemnitees against all claims, losses, and reasonable expenses from any third-party claim alleging that the use of Axon Devices or Services infringes or misappropriates the third-party's intellectual property rights. Agency must promptly provide Axon with written notice of such claim, tender to Axon the defense or settlement of such claim at Axon's expense and cooperate fully with Axon in the defense or settlement of such claim. Axon's IP indemnification obligations do not apply to claims based on (a) modification of Axon Devices or Services by Agency or a third-party not approved by Axon; (b) use of Axon Devices and Services in combination with hardware or services not approved by Axon; (c) use of Axon Devices and Services other than as permitted in this Agreement; or (d) use of Axon software that is not the most current release provided by Axon.

16 **Agency Responsibilities.** Agency is responsible for (a) Agency's use of Axon Devices; (b) breach of this Agreement or violation of applicable law by Agency or an Agency end user; and (c) a dispute between Agency and a third-party over Agency's use of Axon Devices.

17 **Termination.**

17.1 **For Breach.** A Party may terminate this Agreement for cause if it provides 30 days written notice of the breach to the other Party, and the breach remains uncured at the end of 30 days. If Agency terminates this Agreement due to Axon's uncured breach, Axon will refund prepaid amounts on a prorated basis based on the effective date of termination.

17.2 **By Agency.** If sufficient funds are not appropriated or otherwise legally available to pay the fees, Agency may terminate this Agreement. Agency will deliver notice of termination under this section as soon as reasonably practicable.

17.3 **Effect of Termination.** Upon termination of this Agreement, Agency rights immediately terminate. Agency remains responsible for all fees incurred before the effective date of termination. If Agency purchases Axon Devices for less than the manufacturer's suggested retail price ("**MSRP**") and this Agreement terminates before the end of the Term, Axon will invoice Agency the difference between the MSRP for Axon Devices received, including any Spare Axon Devices, and amounts paid towards those Axon Devices. Only if terminating for non-appropriation, Agency may return Axon Devices to Axon within 30 days of termination. MSRP is the standalone price of the individual Axon Device at the time of sale. For bundled Axon Devices, MSRP is the standalone price of all individual components.

18 **Confidentiality.** "**Confidential Information**" means nonpublic information designated as confidential or, given the nature of the information or circumstances surrounding disclosure, should reasonably be

understood to be confidential. Each Party will take reasonable measures to avoid disclosure, dissemination, or unauthorized use of the other Party's Confidential Information. Unless required by law, neither Party will disclose the other Party's Confidential Information during the Term and for 5-years thereafter. Axon pricing is Confidential Information and competition sensitive. If Agency is required by law to disclose Axon pricing, to the extent allowed by law, Agency will provide notice to Axon before disclosure. Axon may publicly announce information related to this Agreement.

19 General.

19.1 Force Majeure. Neither Party will be liable for any delay or failure to perform due to a cause beyond a Party's reasonable control.

19.2 Independent Contractors. The Parties are independent contractors. Neither Party has the authority to bind the other. This Agreement does not create a partnership, franchise, joint venture, agency, fiduciary, or employment relationship between the Parties.

19.3 Third-Party Beneficiaries. There are no third-party beneficiaries under this Agreement.

19.4 Non-Discrimination. Neither Party nor its employees will discriminate against any person based on race; religion; creed; color; sex; gender identity and expression; pregnancy; childbirth; breastfeeding; medical conditions related to pregnancy, childbirth, or breastfeeding; sexual orientation; marital status; age; national origin; ancestry; genetic information; disability; veteran status; or any class protected by local, state, or federal law.

19.5 Export Compliance. Each Party will comply with all import and export control laws and regulations.

19.6 Assignment. Neither Party may assign this Agreement without the other Party's prior written consent. Axon may assign this Agreement, its rights, or obligations without consent: (a) to an affiliate or subsidiary; or (b) for purposes of financing, merger, acquisition, corporate reorganization, or sale of all or substantially all its assets. This Agreement is binding upon the Parties respective successors and assigns.

19.7 Waiver. No waiver or delay by either Party in exercising any right under this Agreement constitutes a waiver of that right.

19.8 Severability. If a court of competent jurisdiction holds any portion of this Agreement invalid or unenforceable, the remaining portions of this Agreement will remain in effect.

19.9 Survival. The following sections will survive termination: Payment, Warranty, Axon Device Warnings, Indemnification, IP Rights, and Agency Responsibilities.

19.10 Governing Law. The laws of the state where Agency is physically located, without reference to conflict of law rules, govern this Agreement and any dispute arising from it. The United Nations Convention for the International Sale of Goods does not apply to this Agreement.

19.11 Notices. All notices must be in English. Notices posted on Agency's Axon Evidence site are effective upon posting. Notices by email are effective on the sent date of the email. Notices by personal delivery are effective immediately. Contact information for notices:

Axon: Axon Enterprise, Inc.	Agency:
Attn: Legal	Attn:
17800 N. 85th Street	Street Address
Scottsdale, Arizona 85255	City, State, Zip
legal@axon.com	Email

19.12 Entire Agreement. This Agreement, including the Appendices and any SOW(s), represents the entire agreement between the Parties. This Agreement supersedes all prior agreements or

understandings, whether written or verbal, regarding the subject matter of this Agreement. This Agreement may only be modified or amended in a writing signed by the Parties.

Each representative identified below declares they have been expressly authorized to execute this Agreement as of the date of signature.

Axon Enterprise, Inc.	**Agency**
Signature: _____	Signature: P. Thomas Mason
Name: _____	Name: P. Thomas Mason
Title: _____	Title: President
Date: _____	Date: June 22, 2021

Axon Cloud Services Terms of Use Appendix

1 **Definitions.**

"Agency Content" is data uploaded into, ingested by, or created in Axon Cloud Services within Agency's tenant, including media or multimedia uploaded into Axon Cloud Services by Agency. Agency Content includes Evidence but excludes Non-Content Data.

"**Evidence**" is media or multimedia uploaded into Axon Evidence as 'evidence' by an Agency. Evidence is a subset of Agency Content.

"**Non-Content Data**" is data, configuration, and usage information about Agency's Axon Cloud Services tenant, Axon Devices and client software, and users that is transmitted or generated when using Axon Devices. Non-Content Data includes data about users captured during account management and customer support activities. Non-Content Data does not include Agency Content.

"**Personal Data**" means any information relating to an identified or identifiable natural person. An identifiable natural person is one who can be identified, directly or indirectly, in particular by reference to an identifier such as a name, an identification number, location data, an online identifier or to one or more factors specific to the physical, physiological, genetic, mental, economic, cultural or social identity of that natural person.

2 **Access.** Upon Axon granting Agency a subscription to Axon Cloud Services, Agency may access and use Axon Cloud Services to store and manage Agency Content. Agency may not exceed more end users than the Quote specifies. Axon Air requires an Axon Evidence subscription for each drone operator. For Axon Evidence Lite, Agency may access and use Axon Evidence only to store and manage TASER CEW and TASER CAM data ("**TASER Data**"). Agency may not upload non-TASER Data to Axon Evidence Lite.

3 **Agency Owns Agency Content.** Agency controls and owns all right, title, and interest in Agency Content. Except as outlined herein, Axon obtains no interest in Agency Content, and Agency Content is not Axon's business records. Agency is solely responsible for uploading, sharing, managing, and deleting Agency Content. Axon will only have access to Agency Content for the limited purposes set forth herein. Agency agrees to allow Axon access to Agency Content to (a) perform troubleshooting, maintenance, or diagnostic screenings; and (b) enforce this Agreement or policies governing use of the Axon products.

4 **Security.** Axon will implement commercially reasonable and appropriate measures to secure Agency Content against accidental or unlawful loss, access or disclosure. Axon will maintain a comprehensive information security program to protect Axon Cloud Services and Agency Content including logical, physical access, vulnerability, risk, and configuration management; incident monitoring and response; encryption of uploaded digital evidence; security education; and data protection. Axon agrees to the Federal Bureau of Investigation Criminal Justice Information Services Security Addendum.

5 **Agency Responsibilities.** Agency is responsible for (a) ensuring Agency owns Agency Content; (b) ensuring no Agency Content or Agency end user's use of Agency Content or Axon Cloud Services violates this Agreement or applicable laws; and (c) maintaining necessary computer equipment and Internet connections for use of Axon Cloud Services. If Agency becomes aware of any violation of this Agreement by an end user, Agency will immediately terminate that end user's access to Axon Cloud Services.

Agency will also maintain the security of end user names and passwords and security and access by end users to Agency Content. Agency is responsible for ensuring the configuration and utilization of Axon Cloud Services meet applicable Agency regulation and standards. Agency may not sell, transfer, or sublicense access to any other entity or person. Agency shall contact Axon immediately

if an unauthorized party may be using Agency's account or Agency Content, or if account information is lost or stolen.

To the extent Agency uses the Axon Cloud Services to interact with YouTube®, such use may be governed by the YouTube Terms of Service, available at https://www.youtube.com/static?template=terms.

6 **Privacy**. Agency's use of Axon Cloud Services is subject to the Axon Cloud Services Privacy Policy, a current version of which is available at https://www.axon.com/legal/cloud-services-privacy-policy. Agency agrees to allow Axon access to Non-Content Data from Agency to (a) perform troubleshooting, maintenance, or diagnostic screenings; (b) provide, develop, improve, and support current and future Axon products and related services; and (c) enforce this Agreement or policies governing the use of Axon products.

7 **Axon Body 3 Wi-Fi Positioning**. Axon Body 3 cameras offer a feature to enhance location services where GPS/GNSS signals may not be available, for instance, within buildings or underground. Agency administrators can manage their choice to use this service within the administrative features of Axon Cloud Services. If Agency chooses to use this service, Axon must also enable the usage of the feature for Agency's Axon Cloud Services tenant. Agency will not see this option with Axon Cloud Services unless Axon has enabled Wi-Fi Positioning for Agency's Axon Cloud Services tenant. When Wi-Fi Positioning is enabled by both Axon and Agency, Non-Content and Personal Data will be sent to Skyhook Holdings, Inc. ("**Skyhook**") to facilitate the Wi-Fi Positioning functionality. Data controlled by Skyhook is outside the scope of the Axon Cloud Services Privacy Policy and is subject to the Skyhook Services Privacy Policy.

8 **Storage**. For Axon Unlimited Device Storage subscriptions, Agency may store unlimited data in Agency's Axon Evidence account only if data originates from Axon Capture or the applicable Axon Device. Axon may charge Agency additional fees for exceeding purchased storage amounts. Axon may place Agency Content that Agency has not viewed or accessed for 6 months into archival storage. Agency Content in archival storage will not have immediate availability and may take up to 24 hours to access.

9 **Location of Storage**. Axon may transfer Agency Content to third-party subcontractors for storage. Axon will determine the locations of data centers for storage of Agency Content. For United States agencies, Axon will ensure all Agency Content stored in Axon Cloud Services remains within the United States. Ownership of Agency Content remains with Agency.

10 **Suspension**. Axon may temporarily suspend Agency's or any end user's right to access or use any portion or all of Axon Cloud Services immediately upon notice, if Agency or end user's use of or registration for Axon Cloud Services may (a) pose a security risk to Axon Cloud Services or any third-party; (b) adversely impact Axon Cloud Services , the systems, or content of any other customer; (c) subject Axon, Axon's affiliates, or any third-party to liability; or (d) be fraudulent.

Agency remains responsible for all fees incurred through suspension. Axon will not delete Agency Content because of suspension, except as specified in this Agreement.

11 **Axon Cloud Services Warranty**. Axon disclaims any warranties or responsibility for data corruption or errors before Agency uploads data to Axon Cloud Services.

12 **Axon Records**. Axon Records is the software-as-a-service product that is generally available at the time Agency purchases an OSP 7 bundle. During Agency's Axon Records Subscription Term, Agency will be entitled to receive Axon's Update and Upgrade releases on an if-and-when available basis.

The Axon Records Subscription Term will end upon the competition of the Axon Records Subscription as documented in the Quote, or if purchased as part of an OSP 7 bundle, upon

competition of the OSP 7 Term ("**Axon Records Subscription**")

An "**Update**" is a generally available release of Axon Records that Axon makes available from time to time. An "**Upgrade**" includes (i) new versions of Axon Records that enhance features and functionality, as solely determined by Axon; and/or (ii) new versions of Axon Records that provide additional features or perform additional functions. Upgrades exclude new products that Axon introduces and markets as distinct products or applications.

New or additional Axon products and applications, as well as any Axon professional services needed to configure Axon Records, are not included. If Agency purchases Axon Records as part of a bundled offering, the Axon Record subscription begins on the later of the (1) start date of that bundled offering, or (2) date Axon provisions Axon Records to Agency.

13 **Axon Cloud Services Restrictions**. Agency and Agency end users (including employees, contractors, agents, officers, volunteers, and directors), may not, or may not attempt to:

- **13.1** copy, modify, tamper with, repair, or create derivative works of any part of Axon Cloud Services;
- **13.2** reverse engineer, disassemble, or decompile Axon Cloud Services or apply any process to derive any source code included in Axon Cloud Services, or allow others to do the same;
- **13.3** access or use Axon Cloud Services with the intent to gain unauthorized access, avoid incurring fees or exceeding usage limits or quotas;
- **13.4** use trade secret information contained in Axon Cloud Services, except as expressly permitted in this Agreement;
- **13.5** access Axon Cloud Services to build a competitive device or service or copy any features, functions, or graphics of Axon Cloud Services;
- **13.6** remove, alter, or obscure any confidentiality or proprietary rights notices (including copyright and trademark notices) of Axon's or Axon's licensors on or within Axon Cloud Services; or
- **13.7** use Axon Cloud Services to store or transmit infringing, libelous, or other unlawful or tortious material; to store or transmit material in violation of third-party privacy rights; or to store or transmit malicious code.

14 **After Termination**. Axon will not delete Agency Content for 90-days following termination. There will be no functionality of Axon Cloud Services during these 90-days other than the ability to retrieve Agency Content. Agency will not incur additional fees if Agency downloads Agency Content from Axon Cloud Services during this time. Axon has no obligation to maintain or provide Agency Content after these 90-days and will thereafter, unless legally prohibited, delete all Agency Content. Upon request, Axon will provide written proof that Axon successfully deleted and fully removed all Agency Content from Axon Cloud Services.

15 **Post-Termination Assistance**. Axon will provide Agency with the same post-termination data retrieval assistance that Axon generally makes available to all customers. Requests for Axon to provide additional assistance in downloading or transferring Agency Content, including requests for Axon's data egress service, will result in additional fees and Axon will not warrant or guarantee data integrity or readability in the external system.

16 **U.S. Government Rights**. If Agency is a U.S. Federal department or using Axon Cloud Services on behalf of a U.S. Federal department, Axon Cloud Services is provided as a "commercial item," "commercial computer software," "commercial computer software documentation," and "technical data", as defined in the Federal Acquisition Regulation and Defense Federal Acquisition Regulation Supplement. If Agency is using Axon Cloud Services on behalf of the U.S. Government and these terms fail to meet the U.S. Government's needs or are inconsistent in any respect with federal law, Agency will immediately discontinue use of Axon Cloud Services.

17 **Survival**. Upon any termination of this Agreement, the following sections in this Appendix will

survive: Agency Owns Agency Content, Storage, Axon Cloud Services Warranty, and Axon Cloud Services Restrictions.

Professional Services Appendix

1 **Utilization of Services.** Agency must use professional services as outlined in the Quote and this Appendix within 6 months of the Effective Date.

2 **Body-Worn Camera Full Service (BWC Full Service).** BWC Full Service includes advance remote project planning and configuration support and up to 4 consecutive days of on-site service and a professional services manager to work with Agency to assess Agency's deployment and determine which on-site services are appropriate. If Agency requires more than 4 consecutive on-site days, Agency must purchase additional days. BWC Full Service options include:

System set up and configuration • Instructor-led setup of Axon View on smartphones (if applicable) • Configure categories and custom roles based on Agency need • Register cameras to Agency domain • Troubleshoot IT issues with Axon Evidence and Axon Dock ("**Dock**") access • One on-site session included
Dock configuration • Work with Agency to decide the ideal location of Docks and set configurations on Dock • Authenticate Dock with Axon Evidence using admin credentials from Agency • On-site assistance, not to include physical mounting of docks
Best practice implementation planning session • Provide considerations for the establishment of video policy and system operations best practices based on Axon's observations with other agencies • Discuss the importance of entering metadata in the field for organization purposes and other best practice for digital data management • Provide referrals of other agencies using the Axon camera devices and Axon Evidence • Recommend rollout plan based on review of shift schedules
System Admin and troubleshooting training sessions Step-by-step explanation and assistance for Agency's configuration of security, roles & permissions, categories & retention, and other specific settings for Axon Evidence
Axon instructor training (Train the Trainer) Training for Agency's in-house instructors who can support Agency's Axon camera and Axon Evidence training needs after Axon has fulfilled its contractual on-site obligations
Evidence sharing training Tailored workflow instruction for Investigative Units on sharing Cases and Evidence with local prosecuting agencies
End user go-live training and support sessions • Assistance with device set up and configuration • Training on device use, Axon Evidence, and Evidence Sync
Implementation document packet Axon Evidence administrator guides, camera implementation guides, network setup guide, sample policies, and categories & roles guide
Post go-live review

3 **Body-Worn Camera Starter Service (BWC Starter).** BWC Starter includes advance remote project planning and configuration support and one day of on-site Services and a professional services manager to work closely with Agency to assess Agency's deployment and determine which Services are appropriate. If Agency requires more than 1 day of on-site Services, Agency must purchase additional on-site Services. The BWC Starter options include:

System set up and configuration (Remote Support) • Instructor-led setup of Axon View on smartphones (if applicable) • Configure categories & custom roles based on Agency need • Troubleshoot IT issues with Axon Evidence and Axon Dock ("**Dock**") access
Dock configuration • Work with Agency to decide the ideal location of Dock setup and set configurations on Dock • Authenticate Dock with Axon Evidence using "Administrator" credentials from Agency • Does not include physical mounting of docks
Axon instructor training (Train the Trainer) Training for Agency's in-house instructors who can support Agency's Axon camera and Axon Evidence training needs after Axon's has fulfilled its contracted on-site obligations
End user go-live training and support sessions • Assistance with device set up and configuration • Training on device use, Axon Evidence, and Evidence Sync
Implementation document packet Axon Evidence administrator guides, camera implementation guides, network setup guide, sample policies, and categories & roles guide

4 **Body-Worn Camera Virtual 1-Day Service (BWC Virtual)**. BWC Virtual includes all items in the BWC Starter Service Package, except one day of on-site services.

5 **CEW Services Packages**. CEW Services Packages are detailed below:

System set up and configuration • Configure Axon Evidence categories & custom roles based on Agency need. • Troubleshoot IT issues with Axon Evidence. • Register users and assign roles in Axon Evidence. • **For the CEW Full Service Package**: On-site assistance included • **For the CEW Starter Package**: Virtual assistance included
Dedicated Project Manager Assignment of specific Axon representative for all aspects of planning the rollout (Project Manager). Ideally, Project Manager will be assigned to Agency 4–6 weeks before rollout
Best practice implementation planning session to include: • Provide considerations for the establishment of CEW policy and system operations best practices based on Axon's observations with other agencies • Discuss the importance of entering metadata and best practices for digital data management • Provide referrals to other agencies using TASER CEWs and Axon Evidence • **For the CEW Full Service Package:** On-site assistance included • **For the CEW Starter Package:** Virtual assistance included
System Admin and troubleshooting training sessions On-site sessions providing a step-by-step explanation and assistance for Agency's configuration of security, roles & permissions, categories & retention, and other specific settings for Axon Evidence
Axon Evidence Instructor training • Provide training on the Axon Evidence to educate instructors who can support Agency's subsequent Axon Evidence training needs. • **For the CEW Full Service Package:** Training for up to 3 individuals at Agency • **For the CEW Starter Package:** Training for up to 1 individual at Agency
TASER CEW inspection and device assignment Axon's on-site professional services team will perform functions check on all new TASER CEW Smart weapons and assign them to a user on Axon Evidence.

Post go-live review **For the CEW Full Service Package**: On-site assistance included. **For the CEW Starter Package**: Virtual assistance included.

6 **Smart Weapon Transition Service**. The Smart Weapon Transition Service includes:

Archival of CEW Firing Logs Axon's on-site professional services team will upload CEW firing logs to Axon Evidence from all TASER CEW Smart Weapons that Agency is replacing with newer Smart Weapon models.
Return of Old Weapons Axon's on-site professional service team will ship all old weapons back to Axon's headquarters. Axon will provide Agency with a Certificate of Destruction

*Note: CEW Full Service packages for TASER 7 include Smart Weapon Transition Service instead of 1-Day Device Specific Instructor Course.

7 **Signal Sidearm Installation Service**. If Agency purchases Signal Sidearm Installation Service, Axon will provide one day of on-site Services and one professional services manager and will cover the installation of up 100 Signal Sidearm devices per package purchased. Agency is responsible for providing an appropriate work area and ensuring all holsters that will have Signal Sidearm installed onto them are available on the agreed-upon installation date(s). Installation includes:

Removal of existing connection screws that affix a holster to a holster mount
Proper placement of the Signal Sidearm Mounting Plate between the holster and the mount
Reattachment of the holster to the mount using appropriate screws
Functional testing of Signal Sidearm device

8 **Out of Scope Services**. Axon is only responsible to perform the professional services described in the Quote and this Appendix. Any additional professional services are out of scope. The Parties must document scope changes in a written and signed change order. Changes may require an equitable adjustment in the charges or schedule.

9 **Delivery of Services**. Axon personnel will work Monday through Friday, 8:30 a.m. to 5:30 p.m., except holidays. Axon will perform all on-site tasks over a consecutive timeframe. Axon will not charge Agency travel time by Axon personnel to Agency premises as work hours.

10 **Access Computer Systems to Perform Services**. Agency authorizes Axon to access relevant Agency computers and networks, solely for performing the Services. Axon will work to identify as soon as reasonably practicable resources and information Axon expects to use and will provide an initial itemized list to Agency. Agency is responsible for and assumes the risk of any problems, delays, losses, claims, or expenses resulting from the content, accuracy, completeness, and consistency of all data, materials, and information supplied by Agency.

11 **Site Preparation**. Axon will provide a hardcopy or digital copy of current user documentation for the Axon Devices ("**User Documentation**"). User Documentation will include all required environmental specifications for the professional Services and Axon Devices to operate per the Axon Device User Documentation. Before installation of Axon Devices (whether performed by Agency or Axon), Agency must prepare the location(s) where Axon Devices are to be installed ("**Installation Site**") per the environmental specifications in the Axon Device User Documentation. Following installation, Agency must maintain the Installation Site per the environmental specifications. If Axon modifies Axon Device User Documentation for any Axon Devices under this Agreement, Axon will provide the update to Agency when Axon generally releases it

12 **Acceptance**. When Axon completes professional Services, Axon will present an acceptance form ("**Acceptance Form**") to Agency. Agency will sign the Acceptance Form acknowledging completion. If Agency reasonably believes Axon did not complete the professional Services in

substantial conformance with this Agreement, Agency must notify Axon in writing of the specific reasons for rejection within 7 calendar days from delivery of the Acceptance Form. Axon will address the issues and re-present the Acceptance Form for signature. If Axon does not receive the signed Acceptance Form or written notification of reasons for rejection within 7 calendar days of delivery of the Acceptance Form, Axon will deem Agency to have accepted the professional Services.

13 **Agency Network**. For work performed by Axon transiting or making use of Agency's network, Agency is solely responsible for maintenance and functionality of the network. In no event will Axon be liable for loss, damage, or corruption of Agency's network from any cause.

Technology Assurance Plan Appendix

If Technology Assurance Plan ("**TAP**") or a bundle including TAP is on the Quote, this appendix applies.

1 **TAP Warranty.** The TAP warranty is an extended warranty that starts at the end of the 1-year Hardware Limited Warranty.

2 **Officer Safety Plan.** If Agency purchases an Officer Safety Plan ("**OSP**"), Agency will receive the deliverables detailed in the Quote. Agency must accept delivery of the TASER CEW and accessories as soon as available from Axon.

3 **OSP 7 Term.** OSP 7 begins after Axon ships the Axon Body 3 or TASER 7 hardware to Agency. If Axon ships in the first half of the month, OSP 7 starts the 1st of the following month. If Axon ships in the second half of the month, OSP 7 starts the 15th of the following month ("**OSP 7 Term**").

4 **TAP BWC Upgrade.** If Agency has no outstanding payment obligations and purchased TAP, Axon will provide Agency a new Axon body-worn camera ("**BWC Upgrade**") as scheduled in the Quote. If Agency purchased TAP Axon will provide a BWC Upgrade that is the same or like Axon Device, at Axon's option. Axon makes no guarantee the BWC Upgrade will utilize the same accessories or Axon Dock.

5 **TAP Dock Upgrade.** If Agency has no outstanding payment obligations and purchased TAP, Axon will provide Agency a new Axon Dock as scheduled in the Quote ("**Dock Upgrade**"). Accessories associated with any Dock Upgrades are subject to change at Axon discretion. Dock Upgrades will only include a new Axon Dock bay configuration unless a new Axon Dock core is required for BWC compatibility. If Agency originally purchased a single-bay Axon Dock, the Dock Upgrade will be a single-bay Axon Dock model that is the same or like Axon Device, at Axon's option. If Agency originally purchased a multi-bay Axon Dock, the Dock Upgrade will be a multi-bay Axon Dock that is the same or like Axon Device, at Axon's option.

6 **Upgrade Delay.** Axon may ship the BWC and Dock Upgrades as scheduled in the Quote without prior confirmation from Agency unless the Parties agree in writing otherwise at least 90 days in advance. Axon may ship the final BWC and Dock Upgrade as scheduled in the Quote 60 days before the end of the Subscription Term without prior confirmation from Agency.

7 **Upgrade Change.** If Agency wants to change Axon Device models for the offered BWC or Dock Upgrade, Agency must pay the price difference between the MSRP for the offered BWC or Dock Upgrade and the MSRP for the model desired. If the model Agency desires has an MSRP less than the MSRP of the offered BWC Upgrade or Dock Upgrade, Axon will not provide a refund. The MSRP is the MSRP in effect at the time of the upgrade.

8 **Return of Original Axon Device.** Within 30 days of receiving a BWC or Dock Upgrade, Agency must return the original Axon Devices to Axon or destroy the Axon Devices and provide a certificate of destruction to Axon including serial numbers for the destroyed Axon Devices. If Agency does not return or destroy the Axon Devices, Axon will deactivate the serial numbers for the Axon Devices received by Agency.

9 **Termination.** If Agency's payment for TAP, OSP, or Axon Evidence is more than 30 days past due, Axon may terminate TAP or OSP. Once TAP or OSP terminates for any reason:

- **9.1** TAP and OSP coverage terminate as of the date of termination and no refunds will be given.
- **9.2** Axon will not and has no obligation to provide the Upgrade Models.
- **9.3** Agency must make any missed payments due to the termination before Agency may purchase any future TAP or OSP.

TASER 7 Appendix

This TASER 7 Appendix applies to Agency's TASER 7, OSP 7, or OSP 7 Plus purchase from Axon.

1 **Duty Cartridge Replenishment Plan.** If the Quote includes "**Duty Cartridge Replenishment Plan**", Agency must purchase the plan for each CEW user. A CEW user includes officers that use a CEW in the line of duty and those that only use a CEW for training. Agency may not resell cartridges received. Axon will only replace cartridges used in the line of duty.

2 **Training.** If the Quote includes a training voucher, Agency must use the voucher within 1 year of issuance, or the voucher will be void. Axon will issue Agency a voucher annually beginning on the start of the TASER Subscription Term. The voucher has no cash value. Agency cannot exchange it for another device or service. Unless stated in the Quote, the voucher does not include travel expenses and will be Agency's responsibility. If the Quote includes Axon Online Training or Virtual Reality Content Empathy Development for Autism/Schizophrenia (collectively, "**Training Content**"), Agency may access Training Content. Axon will deliver all Training Content electronically.

3 **Extended Warranty.** If the Quote includes an extended warranty, the extended warranty coverage period warranty will be for a 5-year term, which includes the hardware manufacturer's warranty plus the 4-year extended term.

4 **Trade-in.** If the Quote contains a discount on CEW-related line items, including items related to OSP, then that discount may only be applied as a trade-in credit, and Agency must return used hardware and accessories associated with the discount ("**Trade-In Units**") to Axon. Agency must ship batteries via ground shipping. Axon will pay shipping costs of the return. If Axon does not receive Trade-In Units within the timeframe below, Axon will invoice Agency the value of the trade-in credit. Agency may not destroy Trade-In Units and receive a trade-in credit.

Agency Size	Days to Return from Start Date of TASER 7 Subscription
Less than 100 officers	30 days
100 to 499 officers	90 days
500+ officers	180 days

5 **TASER 7 Subscription Term.** The TASER 7 Subscription Term for a standalone TASER 7 purchase begins on shipment of the TASER 7 hardware. The TASER 7 Subscription Term for OSP 7 begins on the OSP 7 Start date.

6 **Access Rights.** Upon Axon granting Agency a TASER 7 Axon Evidence subscription, Agency may access and use Axon Evidence for the storage and management of data from TASER 7 CEW devices during the TASER 7 Subscription Term. Agency may not upload any non-TASER 7 data or any other files to Axon Evidence. Agency may not exceed the number of end users than the Quote specifies.

7 **Privacy.** Axon will not disclose Agency Content or any information about Agency except as compelled by a court or administrative body or required by any law or regulation. Axon will give notice if any disclosure request is received for Agency Content, so Agency may file an objection with the court or administrative body.

8 **Termination.** If payment for TASER 7 is more than 30 days past due, Axon may terminate Agency's TASER 7 plan by notifying Agency. Upon termination for any reason, then as of the date of termination:

8.1 TASER 7 extended warranties and access to Training Content will terminate. No refunds will be given.

8.2 Axon will invoice Agency the remaining MSRP for TASER 7 products received before termination. If terminating for non-appropriations, Axon will not invoice Agency if Agency returns the CEW, rechargeable battery, holster, dock, core, training suits, and unused cartridges to Axon within 30 days of the date of termination.

8.3 Agency will be responsible for payment of any missed payments due to the termination before being allowed to purchase any future TASER 7 plan.

Axon Auto-Tagging Appendix

1 **Scope.** Axon Auto-Tagging consists of the development of a module to allow Axon Evidence to interact with Agency's Computer-Aided Dispatch ("**CAD**") or Records Management Systems ("**RMS**"). This allows end users to auto-populate Axon video meta-data with a case ID, category, and location-based on data maintained in Agency's CAD or RMS.

2 **Support.** For thirty days after completing Auto-Tagging Services, Axon will provide up to 5 hours of remote support at no additional charge. Axon will provide free support due to a change in Axon Evidence, so long as long as Agency maintains an Axon Evidence and Auto-Tagging subscription. Axon will not provide support if a change is required because Agency changes its CAD or RMS.

3 **Changes.** Axon is only responsible to perform the Services in this Appendix. Any additional Services are out of scope. The Parties must document scope changes in a written and signed change order. Changes may require an equitable adjustment in fees or schedule.

4 **Agency Responsibilities.** Axon's performance of Auto-Tagging Services requires Agency to:

- **4.1** Make available relevant systems, including Agency's current CAD or RMS, for assessment by Axon (including remote access if possible);
- **4.2** Make required modifications, upgrades or alterations to Agency's hardware, facilities, systems and networks related to Axon's performance of Auto-Tagging Services;
- **4.3** Provide access to the premises where Axon is performing Auto-Tagging Services, subject to Agency safety and security restrictions, and allow Axon to enter and exit the premises with laptops and materials needed to perform Auto-Tagging Services;
- **4.4** Provide all infrastructure and software information (TCP/IP addresses, node names, network configuration) necessary for Axon to provide Auto-Tagging Services;
- **4.5** Promptly install and implement any software updates provided by Axon;
- **4.6** Ensure that all appropriate data backups are performed;
- **4.7** Provide assistance, participation, and approvals in testing Auto-Tagging Services;
- **4.8** Provide Axon with remote access to Agency's Axon Evidence account when required;
- **4.9** Notify Axon of any network or machine maintenance that may impact the performance of the module at Agency; and
- **4.10** Ensure reasonable availability of knowledgeable staff and personnel to provide timely, accurate, complete, and up-to-date documentation and information to Axon.

5 **Access to Systems.** Agency authorizes Axon to access Agency's relevant computers, network systems, and CAD or RMS solely for performing Auto-Tagging Services. Axon will work diligently to identify as soon as reasonably practicable resources and information Axon expects to use and will provide an initial list to Agency. Agency is responsible for and assumes the risk of any problems, delays, losses, claims, or expenses resulting from the content, accuracy, completeness, and consistency of all data, materials, and information supplied by Agency.

Axon Fleet Appendix

1 **Agency Responsibilities.** Agency must ensure its infrastructure and vehicles adhere to the minimum requirements to operate Axon Fleet 2 or Axon Fleet 3 (collectively, "Axon Fleet") as established by Axon during the qualifier call and on-site assessment at Agency and in any technical qualifying questions. If Agency's representations are inaccurate, the Quote is subject to change.

2 **Cradlepoint.** If Agency purchases Cradlepoint Enterprise Cloud Manager, Agency will comply with Cradlepoint's end user license agreement. The term of the Cradlepoint license may differ from the Axon Evidence Subscription. If Agency requires Cradlepoint support, Agency will contact Cradlepoint directly.

3 **Third-party Installer.** Axon will not be liable for the failure of Axon Fleet hardware to operate per specifications if such failure results from installation not performed by, or as directed by Axon.

4 **Wireless Offload Server.**

4.1 **License Grant.** Axon grants Agency a non-exclusive, royalty-free, worldwide, perpetual license to use Wireless Offload Server ("**WOS**"). "Use" means storing, loading, installing, or executing WOS solely for data communication with Axon Devices for the number of licenses purchased. The WOS term begins upon the start of the Axon Evidence Subscription.

4.2 **Restrictions.** Agency may not: (a) modify, alter, tamper with, repair, or create derivative works of WOS; (b) reverse engineer, disassemble, or decompile WOS, apply any process to derive the source code of WOS, or allow others to do so; (c) access or use WOS to avoid incurring fees or exceeding usage limits; (d) copy WOS in whole or part; (e) use trade secret information contained in WOS; (f) resell, rent, loan or sublicense WOS; (g) access WOS to build a competitive device or service or copy any features, functions or graphics of WOS; or (h) remove, alter or obscure any confidentiality or proprietary rights notices (including copyright and trademark notices) of Axon or Axon's licensors on or within WOS.

4.3 **Updates.** If Agency purchases WOS maintenance, Axon will make updates and error corrections to WOS ("**WOS Updates**") available electronically via the Internet or media as determined by Axon. Agency is responsible for establishing and maintaining adequate Internet access to receive WOS Updates and maintaining computer equipment necessary for use of WOS. The Quote will detail the maintenance term.

4.4 **WOS Support.** Upon request by Axon, Agency will provide Axon with access to Agency's store and forward servers solely for troubleshooting and maintenance.

5 **Axon Vehicle Software.**

5.1 **License Grant.** Axon grants Agency a non-exclusive, royalty-free, worldwide, perpetual license to use ViewXL or Dashboard (collectively, "Axon Vehicle Software".) "Use" means storing, loading, installing, or executing Axon Vehicle Software solely for data communication with Axon Devices. The Axon Vehicle Software term begins upon the start of the Axon Evidence Subscription.

5.2 **Restrictions.** Agency may not: (a) modify, alter, tamper with, repair, or create derivative works of Axon Vehicle Software; (b) reverse engineer, disassemble, or decompile Axon Vehicle Software, apply any process to derive the source code of Axon Vehicle Software, or allow others to do so; (c) access or use Axon Vehicle Software to avoid incurring fees or exceeding usage limits; (d) copy Axon Vehicle Software in whole or part; (e) use trade secret information contained in Axon Vehicle Software; (f) resell, rent, loan or sublicense Axon Vehicle Software; (g) access Axon Vehicle Software to build a competitive device or service or copy any features, functions or graphics of Axon Vehicle Software; or (h)

remove, alter or obscure any confidentiality or proprietary rights notices (including copyright and trademark notices) of Axon or Axon's licensors on or within Axon Vehicle Software.

6 **Axon Fleet Upgrade**. If Agency has no outstanding payment obligations and has purchased the "Fleet Technology Assurance Plan" (Fleet TAP), Axon will provide Agency with the same or like model of Fleet hardware ("Fleet Upgrade") as schedule on the Quote.

If Agency would like to change models for the Axon Fleet Upgrade, Agency must pay the difference between the MSRP for the offered Axon Fleet Upgrade and the MSRP for the model desired. The MSRP is the MSRP in effect at the time of the upgrade. Agency is responsible for the removal of previously installed hardware and installation of the Axon Fleet Upgrade.

Within 30 days of receiving the Axon Fleet Upgrade, Agency must return the original Axon Devices to Axon or destroy the Axon Devices and provide a certificate of destruction to Axon, including serial numbers of the destroyed Axon Devices. If Agency does not destroy or return the Axon Devices to Axon, Axon will deactivate the serial numbers for the Axon Devices received by Agency.

7 **Privacy.** Axon will not disclose Agency Content or any information about Agency except as compelled by a court or administrative body or required by any law or regulation. Axon will give notice if any disclosure request is received for Agency Content, so Agency may file an objection with the court or administrative body.

8 **Axon Fleet Termination.** Axon may terminate Agency's Fleet subscription for non-payment. Upon any termination:

8.1 Axon Fleet subscription coverage terminates, and no refunds will be given.

8.2 Axon will not and has no obligation to provide the Axon Fleet Upgrade.

8.3 Agency will be responsible for payment of any missed payments due to the termination before being allowed to purchase any future Fleet TAP.

Axon Respond Appendix

This Axon Respond Appendix applies to both Axon Respond and Axon Respond Plus.

1 **Axon Respond Subscription Term**. If Agency purchases Axon Respond as part of a bundled offering, the Axon Respond subscription begins on the later of the (1) start date of that bundled offering, or (2) date Axon provisions Axon Respond to Agency.

If Agency purchases Axon Respond as a standalone, the Axon Respond subscription begins the later of the (1) date Axon provisions Axon Respond to Agency, or (2) first day of the month following the Effective Date.

The Axon Respond subscription term will end upon the completion of the Axon Evidence Subscription associated with Axon Respond.

2 **Scope of Axon Respond**. The scope of Axon Respond is to assist Agency with real-time situational awareness during critical incidents to improve officer safety, effectiveness, and awareness. In the event Agency uses Axon Respond outside this scope, Axon may initiate good-faith discussions with Agency on upgrading Agency's Axon Respond to better meet Agency's needs.

3 **Axon Body 3 LTE Requirements**. Axon Respond is only available and usable with an LTE enabled body-worn camera. Axon is not liable if Agency utilizes the LTE device outside of the coverage area or if the LTE carrier is unavailable. LTE coverage is only available in the United States, including any U.S. territories. Axon may utilize a carrier of Axon's choice to provide LTE service. Axon may change LTE carriers during the Term without Agency's consent.

4 **Axon Fleet 3 LTE Requirements.** Axon Respond is only available and usable with a Fleet 3 system configured with LTE modem and service. Agency is responsible for providing LTE service for the modem. Coverage and availability of LTE service is subject to Agency's LTE carrier.

5 **Axon Respond Service Limitations**. Agency acknowledges that LTE service is made available only within the operating range of the networks. Service may be temporarily refused, interrupted, or limited because of: (a) facilities limitations; (b) transmission limitations caused by atmospheric, terrain, other natural or artificial conditions adversely affecting transmission, weak batteries, system overcapacity, movement outside a service area or gaps in coverage in a service area and other causes reasonably outside of the carrier's control such as intentional or negligent acts of third parties that damage or impair the network or disrupt service; or (c) equipment modifications, upgrades, relocations, repairs, and other similar activities necessary for the proper or improved operation of service.

With regard to Axon Body 3, Partner networks are made available as-is and the carrier makes no warranties or representations as to the availability or quality of roaming service provided by carrier partners, and the carrier will not be liable in any capacity for any errors, outages, or failures of carrier partner networks. Agency expressly understands and agrees that it has no contractual relationship whatsoever with the underlying wireless service provider or its affiliates or contractors and Agency is not a third-party beneficiary of any agreement between Axon and the underlying carrier.

6 **Termination**. Upon termination of this Agreement, or if Agency stops paying for Axon Respond or bundles that include Axon Respond, Axon will end Aware services, including any Axon-provided LTE service.

Add-on Services Appendix

This Appendix applies to Axon Citizen for Communities, Axon Redaction Assistant, and Axon Performance.

1 **Subscription Term.** If Agency purchases Axon Citizen for Communities, Axon Redaction Assistant, or Axon Performance as part of OSP 7, the subscription begins on the later of the (1) start date of the OSP 7 Term, or (2) date Axon provisions Axon Citizen for Communities, Axon Redaction Assistant, or Axon Performance to Agency.

If Agency purchases Axon Citizen for Communities, Axon Redaction Assistant, or Axon Performance as a standalone, the subscription begins the later of the (1) date Axon provisions Axon Citizen for Communities, Axon Redaction Assistant, or Axon Performance to Agency, or (2) first day of the month following the Effective Date.

The subscription term will end upon the completion of the Axon Evidence Subscription associated with the add-on.

2 **Axon Citizen Storage.** For Axon Citizen, Agency may store an unlimited amount of data submitted through the public portal ("**Portal Content**"), within Agency's Axon Evidence instance. The post-termination provisions outlined in the Axon Cloud Services Terms of Use Appendix also apply to Portal Content.

3 **Performance Auto-Tagging Data.** In order to provide some features of Axon Performance to Agency, Axon will need to store call for service data from Agency's CAD or RMS.

Axon Auto-Transcribe Appendix

This Appendix applies to Axon Auto-Transcribe.

1) **Subscription Term.** If Agency purchases Axon Auto-Transcribe as part of a bundle or Axon Cloud Services subscription, the subscription begins on the later of the (1) start date of the bundle or Axon Cloud Services license term, or (2) date Axon provisions Axon Auto-Transcribe to Agency. If Agency purchases Axon Auto-Transcribe minutes as a standalone, the subscription begins on the date Axon provisions Axon Auto-Transcribe to Agency.

   Axon Auto-Transcribe minutes expire one year after being provisioned to Agency by Axon.

   If Agency cancels Auto-Transcribe services, any amounts owed by the Parties will be based on the amount of time passed under the annual subscription, rather than on the number of minutes used, regardless of usage.

2) **Auto-Transcribe A-La-Carte Minutes.** Upon Axon granting Agency a set number of minutes, Agency may utilize Axon Auto-Transcribe, subject to the number of minutes allowed on the Quote. Agency will not have the ability to roll over unused minutes to future Auto-Transcribe terms. Axon may charge Agency additional fees for exceeding the number of purchased minutes.

3) **Axon Auto-Transcribe On-Demand.** Upon Axon granting Agency an On-Demand subscription to Axon Auto-Transcribe, Agency may utilize Axon Auto-Transcribe with no limit on the number of minutes. The scope of Axon Auto-Transcribe On-Demand is to assist Agency with reviewing and transcribing individual evidence items. In the event Agency uses Axon Auto-Transcribe On-Demand outside this scope, Axon may initiate good-faith discussions with Agency on upgrading Agency's Axon Auto-Transcribe On-Demand to better meet Agency's needs.

4) **Warranty.** Axon does not warrant the accuracy of Axon Auto-Transcribe.

Axon Virtual Reality Content Terms of Use Appendix

1 **Term**. The Quote will detail the duration of the Virtual Reality Content license.

2 **Headsets**. Agency may purchase additional virtual reality headsets from Axon. In the event Agency decides to purchase additional virtual reality headsets for use with Axon's Virtual Reality Content, Agency must purchase those headsets from Axon.

3 **License Restrictions**. All licenses will immediately terminate if Agency does not comply with any term of this Agreement. If Agency utilizes more users than stated in this Agreement, Agency must purchase additional Virtual Reality Content licenses from Axon. Agency may not use Virtual Reality Content for any purpose other than as expressly permitted by this Agreement. Agency may not:

- **3.1** modify, tamper with, repair, or otherwise create derivative works of Virtual Reality Content;
- **3.2** reverse engineer, disassemble, or decompile Virtual Reality Content or apply any process to derive the source code of Virtual Reality Content, or allow others to do the same;
- **3.3** copy Virtual Reality Content in whole or part, except as expressly permitted in this Agreement;
- **3.4** use trade secret information contained in Virtual Reality Content;
- **3.5** resell, rent, loan or sublicense Virtual Reality Content;
- **3.6** access Virtual Reality Content to build a competitive device or service or copy any features, functions, or graphics of Virtual Reality Content; or
- **3.7** remove, alter, or obscure any confidentiality or proprietary rights notices (including copyright and trademark notices) of Axon or Axon's licensors on or within Virtual Reality Content or any copies of Virtual Reality Content.

4 **Termination**. Axon may terminate Agency's license immediately for Agency's failure to comply with any of the terms in this Agreement.

Flock Software Terms of Use Appendix

1 **Definitions.**

Certain capitalized terms, not otherwise defined herein, have the meanings set forth or cross-referenced in this Section 1.

"**Aggregated Data**" means information that relates to a group or category of customers, from which individual customer identities have been removed, that is not linked or reasonably linkable to any customer, including via a device.

"**Authorized End User**" shall mean any individual employees, agents, or contractors of Customer accessing or using the Flock Services through the Web Interface, under the rights granted to Customer pursuant to this Agreement.

"**Customer Data**" will mean the data, media and content provided by Customer through the Flock Services. For the avoidance of doubt, the Customer Data will include the Footage and geolocation information and environmental data collected by sensors built into the Units.

"**Documentation**" will mean text and/or graphical documentation, whether in electronic or printed format, that describe the features, functions and operation of the Flock Services which are provided by Flock to Customer in accordance with the terms of this Agreement.

"**Embedded Software**" will mean the software and/or firmware embedded or preinstalled on the Hardware.

"**Flock IP**" will mean the Flock Services, the Documentation, the Hardware, the Embedded Software, the Installation Services, and any and all intellectual property therein or otherwise provided to Customer and/or its Authorized End Users in connection with the foregoing.

"**Flock Services**" means the provision, via the Web Interface, of Flock's software application for automatic license plate detection, searching image records, and sharing Footage.

"**Flock System**" means collectively, the Hardware, Embedded Software, and Flock Services.

"**Footage**" means still images and/or video captured by the Hardware in the course of and provided via the Flock Services.

"**Hardware**" shall mean the Flock cameras and any other physical elements that interact with the Embedded Software and the Web Interface to provide the Flock Services. The term "**Hardware**" excludes the Embedded Software.

"**Implementation Fee(s)**" means the monetary fees associated with the Installation Services, as defined in Section 1.9 below.

"**Installation Services**" means the services provided by Flock including the installation, placements and configuration of the Hardware, pursuant to any Statement of Work.

"**Non-Customer End User**" means a Flock customer that has elected to give Customer access to its data in the Flock System.

"**Non-Customer End User Data**" means the Footage, geolocation data, environmental data and/or notifications of a Non-Customer End User.

"**Support Services**" shall mean On-site Services and Monitoring Services, as defined in Section 2.9 below.

"**Unit(s)**" shall mean the Hardware together with the Embedded Software.

"**Usage Fee**" means the subscription fees to be paid by the Customer for ongoing access to Services and Hardware.

"**Web Interface**" means the website(s) or application(s) through which Customer and its Authorized End Users can access the Flock Services in accordance with the terms of this Agreement.

2 Flock Services.

2.1 Provision of Access. Subject to the terms of this Agreement, Flock hereby grants to Customer a non-exclusive, non-transferable right to access the features and functions of the Flock Services via the Web Interface during the term of Customer's agreement, solely for the Authorized End Users. The Footage will be available for Customer's designated administrator, listed on the Order Form, and any Authorized End Users to access via the Web Interface for thirty (30) days. Authorized End Users will be required to sign up for an account, and select a password and username ("**User ID**"). Flock will also provide Customer with the Documentation to be used in accessing and using the Flock Services. Customer shall be responsible for all acts and omissions of Authorized End Users, and any act or omission by an Authorized End User which, if undertaken by Customer, would constitute a breach of this Agreement, shall be deemed a breach of this Agreement by Customer. Customer shall undertake reasonable efforts to make all Authorized End Users aware of the provisions of this Agreement as applicable to such Authorized End User's use of the Services, and shall cause Authorized End Users to comply with such provisions. Flock may use the services of one or more third parties to deliver any part of the Flock Services, including without limitation using a third party to host the Web Interface which makes the Flock Services available to Customer and Authorized End Users. Flock will pass through any warranties that Flock receives from its then-current third-party service provider to the extent that such warranties can be provided to Customer. Except in the event of Flock's willful misconduct or negligence, such warranties as provided by such third-parties are Customer's sole and exclusive remedy and Flock's sole and exclusive liability with regard to such third-party services, including without limitation, hosting the web interface. Customer agrees to comply with any acceptable use policies and other terms of any third party service provider that are provided or otherwise made available to Customer from time to time.

2.2 Embedded Software License. Subject to all terms of this Agreement, Flock grants Customer a limited, non-exclusive, non-transferable, non-sublicensable (except to the Authorized End Users), revocable right to use the Embedded Software as installed on the Hardware by Flock; in each case, solely as necessary for Customer to use the Flock Services.

2.3 Documentation License. Subject to the terms of this Agreement, Flock hereby grants to Customer a non-exclusive, non-transferable right and license to use the Documentation during the Service Term for Customer's internal purposes in connection with its use of the Flock Services as contemplated herein.

2.4 Usage Restrictions. The purpose for usage of the Hardware, Documentation, Services, support, and Flock IP is solely to facilitate gathering evidence that could be used in a lawful criminal investigation by the appropriate government agency and not for tracking activities that the system is not designed to capture ("**Permitted Purpose**"). Customer will not, and will not permit any Authorized End Users to, (i) copy or duplicate any of the Flock IP; (ii) decompile, disassemble, reverse engineer or otherwise attempt to obtain or perceive the source code from which any software component of any of the Flock IP is compiled or interpreted, or apply any other process or procedure to derive the source code of any software included in the Flock IP, or attempt to do any of the foregoing, and Customer

acknowledges that nothing in this Agreement will be construed to grant Customer any right to obtain or use such source code; (iii) modify, alter, tamper with or repair any of the Flock IP, or create any derivative product from any of the foregoing, or attempt to do any of the foregoing, except with the prior written consent of Flock; (iv) interfere or attempt to interfere in any manner with the functionality or proper working of any of the Flock IP; (v) remove, obscure, or alter any notice of any intellectual property or proprietary right appearing on or contained within any of the Flock Services or Flock IP; (vi) use the Flock Services, support, Hardware, Documentation or the Flock IP for anything other than the Permitted Purpose; or (vii) assign, sublicense, sell, resell, lease, rent or otherwise transfer or convey, or pledge as security or otherwise encumber, Customer's rights under Sections 2.1, 2.2, or 2.3.

2.5 **Retained Rights; Ownership**. As between the Parties, subject to the rights granted in this Agreement, Flock and its licensors retain all right, title and interest in and to the Flock IP and its components, and Customer acknowledges that it neither owns nor acquires any additional rights in and to the foregoing not expressly granted by this Agreement. Customer further acknowledges that Flock retains the right to use the foregoing for any purpose in Flock's sole discretion. There are no implied rights.

2.6 **Suspension**. Notwithstanding anything to the contrary in this Agreement, Flock may temporarily suspend Customer's and any Authorized End User's access to any portion or all of the Flock IP if (i) Flock reasonably determines that (a) there is a threat or attack on any of the Flock IP; (b) Customer's or any Authorized End User's use of the Flock Service disrupts or poses a security risk to the Flock Service or any other customer or vendor of Flock; (c) Customer or any Authorized End User is/are using the Flock IP for fraudulent or illegal activities; (d) Flock's provision of the Flock Services to Customer or any Authorized End User is prohibited by applicable law; (e) any vendor of Flock has suspended or terminated Flock's access to or use of any third party services or products required to enable Customer to access the Flock; or (f) Customer has violated any term of this provision, including, but not limited to, utilizing the Services for anything other than the Permitted Purpose, and has failed to cure such violation within thirty days following written notice of such violation from Flock (each such suspension, in accordance with this Section 2.6, a "**Service Suspension**"). Flock will make commercially reasonable efforts, circumstances permitting, to provide written notice of any Service Suspension to Customer (including notices sent to Flock's registered email address) and to provide updates regarding resumption of access to the Flock IP following any Service Suspension. Flock will use commercially reasonable efforts to resume providing access to the Flock Service as soon as reasonably possible after the event giving rise to the Service Suspension is cured. Flock will extend the Customer's term by the duration of any suspension (for any continuous suspension lasting at least one full day) where the Service Suspension is not caused by the direct Customer's actions or by the actions of parties associated with the Customer. Flock will have no liability for any damage, liabilities, losses (including any loss of data or profits) or any other consequences that Customer or any Authorized End User may incur as a result of a Service Suspension.

2.7 **Installation Services**.

2.7.1. Designated Locations. Prior to performing the physical installation of the Units, Flock shall advise Customer on the location and positioning of the Units for optimal license plate image capture, as conditions and location allow. While Flock will provide advice regarding the location of positioning of such Units, Customer will have the ultimate decision regarding the location, position and angle of the Units (each Unit location so designated by Customer, a "**Designated Location**"). Due to the fact that Customer selects the Designated Location, Flock shall have no liability to Customer resulting from any poor performance, functionality or Footage resulting from or otherwise relating to the Designated Locations. After an installation plan with Designated Locations and equipment has been agreed upon by both Flock and the Customer, any subsequent changes to the installation plan

driven by Customer's request will incur a $250 charge in addition to any equipment charges. These changes include but are not limited to camera re-positioning, adjusting of camera mounting, re-angling, changes to heights of poles, and removing foliage.

2.7.2. Customer's Installation Obligations. Customer agrees to allow Flock and its agents reasonable access to the designated installation locations at all reasonable times upon reasonable notice for the purpose of performing the installation work (together with the preceding sentence, the "**Customer Installation Obligations**"). It is understood that the Implementation Fees do not include any permits or associated costs, any federal, state or local taxes including property, license, privilege, sales, use, excise, gross receipts or other similar taxes which may now or hereafter become applicable to, measured by or imposed upon or with respect to the installation of the Hardware, its use, or any other services performed in connection therewith and that Customer shall be solely responsible for the foregoing. Customer represents and warrants that it has all necessary right title and authority and hereby authorizes Flock to install the Hardware at the Designated Locations and to make any necessary inspections or tests in connection with such installation.

2.7.3. Flock's Installation Obligations. The Hardware shall be installed in a workmanlike manner in accordance with Flock's standard installation procedures, and the installation will be completed within a reasonable time from the time that the Designated Locations are selected by Customer. Following the initial installation of the Hardware and any subsequent Reinstalls or maintenance operations, Flock's obligation to perform installation work shall cease; however, Flock will continue to monitor the performance of the Units for the length of the Term and will receive access to the Footage for a period of three (3) business days after the initial installation in order to monitor performance and provide any necessary maintenance solely as a measure of quality control. Customer can opt out of Flock's access to Footage after the initial installation which would waive Flock's responsibility to ensure such action was successful. Customer understands and agrees that the Flock Services will not function without the Hardware. Labor may be provided by Flock or a third party.

2.7.4. Theft and Damage. Flock agrees to replace the Hardware up to one (1) time during the Term of the Agreement, at no cost to Customer, in the event of theft or damage. Subsequent replacement due to damage or theft will be at Customer's own expense, at a replacement cost of three hundred dollars ($300) per camera. Customer shall not be required to replace subsequently damaged or stolen units; however, Customer understands and agrees that functionality, including Footage, will be materially affected due to such subsequently damaged or stolen units and that Flock will have no liability to Customer regarding such affected functionality nor shall the Fees owed be impacted.

2.7.5. Security Interest. The Hardware shall remain the personal property of Flock and will be removed upon the termination or expiration of Customer's Agreement. Customer agrees to perform all acts which may be necessary to assure the retention of title of the Hardware by Flock. Should Customer default in any payment for the Flock Services or any part thereof or offer to sell or auction the Hardware, then Customer authorizes and empowers Flock to remove the Hardware or any part thereof. Such removal, if made by Flock, shall not be deemed a waiver of Flock's rights to any damages Flock may sustain as a result of Customer's default and Flock shall have the right to enforce any other legal remedy or right.

2.8 **Hazardous Conditions**. Unless otherwise stated in the Agreement, Flock's price for its services under this Agreement does not contemplate work in any areas that contain hazardous materials, or other hazardous conditions, including, without limit, asbestos, lead, toxic or flammable substances. In the event any such hazardous materials are discovered in the designated locations in which Flock is to perform services under this

Agreement, Flock shall have the right to cease work immediately in the area affected until such materials are removed or rendered harmless. Any additional expenses incurred by Flock as a result of the discovery or presence of hazardous material or hazardous conditions shall be the responsibility of Customer and shall be paid promptly upon billing.

2.9 Support Services. Subject to the payment of fees, Flock shall monitor the performance and of Flock Services and may, from time to time, advise Customer on changes to the Services or the Designated Locations which may improve the performance or functionality of the Services or may improve the quality of the Footage. The work, its timing, and the fees payable relating to such work shall be agreed by the Parties prior to any alterations to or changes of the Services or the Designated Locations ("**Monitoring Services**"). Subject to the terms hereof, Flock will provide Customer with reasonable technical and on-site support and maintenance services ("**On-Site Services**") in-person or by email at hello@flocksafety.com. Flock will use commercially reasonable efforts to respond to requests for support.

2.10 Intentionally deleted.

2.11 Changes to Platform. Flock Safety may, in its sole discretion, make any changes to any system or platform that it deems necessary or useful to (i) maintain or enhance (a) the quality or delivery of Flock Safety's products or services to its customers, (b) the competitive strength of, or market for, Flock Safety's products or services, (c) such platform or system's cost efficiency or performance, or (ii) to comply with applicable law.

3 Customer Responsibilities.

3.1 Customer Obligations. Upon creation of a User ID, Customer agrees to provide Flock with accurate, complete, and updated registration information. Customer may not select as its User ID a name that Customer does not have the right to use, or another person's name with the intent to impersonate that person. Customer may not transfer its account to anyone else without prior written permission. Customer will not share its account or password with anyone and must protect the security of its account and password. Customer is responsible for any activity associated with its account. Customer shall be responsible for obtaining and maintaining any equipment and ancillary services needed to connect to, access or otherwise use the Services. Customer will, at its own expense, provide assistance to Flock, including, but not limited to, by means of access to, and use of, Customer facilities, as well as by means of assistance from Customer personnel to the limited extent any of the foregoing may be reasonably necessary to enable Flock to perform its obligations hereunder, including, without limitation, any obligations with respect to Support Services or any Installation Services.

3.2 Customer Representations and Warranties. Customer represents, covenants, and warrants that Customer will use the Services only in compliance with this Agreement and all applicable laws and regulations, including but not limited to any laws relating to the recording or sharing of video, photo, or audio content. To the extent allowed by the governing law of the state mentioned in Section 9.6, or if no state is mentioned in Section 9.6, by the law of the State of Georgia, Customer hereby agrees to indemnify and hold harmless Flock against any damages, losses, liabilities, settlements and expenses, including without limitation costs and attorneys' fees, in connection with any claim or action that arises from an alleged violation of Customer's representations and warranties made pursuant to this Section 3.2, Customer's Installation Obligations, or otherwise from Customer's use of the Flock Services, Hardware and any Embedded Software, including any claim that such actions violate any applicable law or third party right. Although Flock has no obligation to monitor Customer's use of the Flock Services, Flock may do so and may prohibit any use of the Services it believes may be (or alleged to be) in violation of the foregoing.

4 **Confidentiality; Data, Feedback; Aggregated Statistics.**

4.1 **Customer and Non-Customer End User Data.** As between Flock and Customer, all right, title and interest in the Customer Data and Non-Customer End User Data, belong to and are retained solely by Customer. Customer hereby grants to Flock a limited, non-exclusive, royalty-free, worldwide license to use the Customer Data and Non-Customer End User Data and perform all acts with respect to the Customer Data and Non-Customer End User Data as may be necessary for Flock to provide the Flock Services to Customer, and a non-exclusive, perpetual, irrevocable, worldwide, royalty-free, fully paid license to use, reproduce, modify and distribute the Customer Data and Non-Customer End User Data as a part of the Aggregated Data (as defined in Section 4.4 below). This Agreement does not by itself make any Non-Customer End User Data the sole property or the Proprietary Information of Customer.

4.2 **Feedback.** If Customer provides any suggestions, ideas, enhancement requests, feedback, recommendations or other information relating to the subject matter hereunder, Customer hereby assigns (and will cause its agents and representatives to assign) to Flock all right, title and interest (including intellectual property rights) with respect to or resulting from any of the foregoing.

4.3 **Aggregated Data.** Notwithstanding anything in this Agreement to the contrary, Flock shall have the right to collect and analyze data and other information relating to the provision, use and performance of various aspects of the Flock Services and related systems and technologies (including, without limitation, information concerning Customer Data and data derived therefrom). For the sake of clarity, Aggregated Data is compiled anonymous data which has been stripped of any personal identifying information. Customer acknowledges that Flock will be compiling Aggregated Data based on Customer Data and Non-Customer End User Data input into the Flock Services ("**Aggregated Data**"). Customer hereby grants Flock a non-exclusive, worldwide, perpetual, royalty-free right and license (during and after the Service Term hereof) to use and distribute such Aggregated Data to improve and enhance the Services and for other marketing, development, diagnostic and corrective purposes in connection with the Flock Services and other Flock offerings. No rights or licenses are granted except as expressly set forth herein.

4.4 **Confidentiality.** Each Party (the "**Receiving Party**") understands that the other Party (the "**Disclosing Party**") has disclosed or may disclose business, technical or financial information relating to the Disclosing Party's business (hereinafter referred to as "**Proprietary Information**" of the Disclosing Party). Proprietary Information of Flock includes non-public information regarding features, functionality and performance of the Services. Proprietary Information of Customer includes non-public data provided by Customer to Flock or collected by Flock via the Unit, including the Footage, to enable the provision of the Services, which includes but is not limited to geolocation information and environmental data collected by sensors built into the Units ("**Customer Data**"). The Receiving Party agrees: (i) to take the same security precautions to protect against disclosure or unauthorized use of such Proprietary Information that the party takes with its own proprietary information, but in no event will the Receiving Party apply less than reasonable precautions to protect such Proprietary Information, and (ii) not to use (except in performance of the Services or as otherwise permitted herein) or divulge to any third person any such Proprietary Information. Flock's use of the Proprietary Information may include processing the Proprietary Information to send Customer alerts, such as when a car exits Customer's neighborhood, or to analyze the data collected to identify motion or other events. The Disclosing Party agrees that the foregoing shall not apply with respect to any information that the Receiving Party can document (a) is or becomes generally available to the public, or (b) was in its possession or known by it prior to receipt from the Disclosing Party, or (c) was rightfully disclosed to it without restriction by a third party, or (d) was independently developed without use of any Proprietary Information of the Disclosing Party. Nothing in this Agreement will prevent the Receiving Party from

disclosing the Proprietary Information pursuant to any judicial or governmental order, provided that the Receiving Party gives the Disclosing Party reasonable prior notice of such disclosure to contest such order. For clarity, Flock may access, use, preserve and/or disclose the Footage to law enforcement authorities, government officials, and/or third parties, if legally required to do so or if Flock has a good faith belief that such access, use, preservation or disclosure is reasonably necessary to: (a) comply with a legal process or request; (b) enforce this Agreement, including investigation of any potential violation thereof; (c) detect, prevent or otherwise address security, fraud or technical issues; or (d) protect the rights, property or safety of Flock, its users, a third party, or the public as required or permitted by law, including respond to an emergency situation. In the event Customer requests Flock to enable law enforcement monitoring against law enforcement hotlists, Customer hereby expressly grants Flock a non-exclusive, worldwide, perpetual, royalty-free right and license (during and after the term hereof) to disclose the Customer Data (inclusive of any Footage and Footage search access) to enable law enforcement monitoring against law enforcement hotlists. Flock may store deleted Footage in order to comply with certain legal obligations but such retained Footage will not be retrievable without a valid court order, subject to Section 9.1 below.

5 RESERVED.

6 RESERVED.

7 Remedy; Warranty; and Disclaimer.

7.1 Remedy. Upon a malfunction or failure of Hardware or Embedded Software (a "**Defect**"), Customer must first make commercially reasonable efforts to address the problem by contacting Flock's technical support as described in Section 2.9 above. If such efforts do not correct the Defect, Flock shall, or shall instruct one of its contractors to, in its sole discretion, repair or replace the Hardware or Embedded Software suffering from the Defect. Flock reserves the right in their sole discretion to refuse or delay replacement or its choice of remedy for a Defect until after it has inspected and tested the affected Unit; provided that such inspection and test shall occur within seventy-two (72) hours after Customer notifies the Flock of a Defect. In the event of a Defect, Flock will repair or replace the defective Unit at no additional cost. In the event that a Unit is lost, stolen, or damaged, Flock agrees to replace the Unit at a fee according to the then-current Reinstall Policy (https://www.flocksafety.com/reinstall-fee-schedule). Customer shall not be required to replace subsequently lost, damaged or stolen Units, however, Customer understands and agrees that functionality, including Footage, will be materially affected due to such subsequently lost, damaged or stolen units and that Flock will have no liability to Customer regarding such affected functionality nor shall the Usage Fee or Implementation Fees owed be impacted.

7.2 Exclusions. Flock will not provide the remedy described in Section 7.1 above if any of the following exclusions apply: (a) misuse of the Hardware or Embedded Software in any manner, including operation of the Hardware or Embedded Software in any way that does not strictly comply with any applicable specifications, documentation, or other restrictions on use provided by Flock; (b) damage, alteration, or modification of the Hardware or Embedded Software in any way; or (c) combination of the Hardware or Embedded Software with software, hardware or other technology that was not expressly authorized by Flock.

7.3 Warranty. Flock shall use reasonable efforts consistent with prevailing industry standards to maintain the Services in a manner which minimizes errors and interruptions in the Flock Services. Flock Services may be temporarily unavailable for scheduled maintenance or for unscheduled emergency maintenance, either by Flock or by third-party providers, or because of other causes beyond Flock's reasonable control, but Flock shall use reasonable efforts to provide advance notice in writing or by e-mail of any scheduled service disruption.

7.4 **Disclaimer**. THE REMEDY DESCRIBED IN SECTION 7.1 ABOVE IS CUSTOMER'S SOLE REMEDY, AND FLOCK'S SOLE LIABILITY, WITH RESPECT TO DEFECTIVE HARDWARE AND/OR EMBEDDED SOFTWARE. THE FLOCK DOES NOT WARRANT THAT THE FLOCK SERVICES WILL BE UNINTERRUPTED OR ERROR FREE; NOR DOES IT MAKE ANY WARRANTY AS TO THE RESULTS THAT MAY BE OBTAINED FROM USE OF THE FLOCK SERVICES. EXCEPT AS EXPRESSLY SET FORTH IN THIS SECTION, THE FLOCK SERVICES AND INSTALLATION SERVICES ARE PROVIDED "AS IS" AND FLOCK DISCLAIMS ALL WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE AND NON-INFRINGEMENT.

7.5 **Force Majeure**. Flock Safety is not responsible nor liable for any delays or failures in performance from any cause beyond its control, including, but not limited to acts of God, changes to law or regulations, embargoes, war, terrorist acts, riots, fires, earthquakes, floods, power blackouts, strikes, weather conditions or acts of hackers, internet service providers or any other third party or acts or omissions of Customer or any Authorized End User.

8 **Limitation of Liability and Indemnity**.

8.1 **Limitation of Liability**. NOTWITHSTANDING ANYTHING TO THE CONTRARY, FLOCK AND ITS SUPPLIERS (INCLUDING BUT NOT LIMITED TO ALL HARDWARE AND TECHNOLOGY SUPPLIERS), OFFICERS, AFFILIATES, REPRESENTATIVES, CONTRACTORS AND EMPLOYEES SHALL NOT BE RESPONSIBLE OR LIABLE WITH RESPECT TO ANY SUBJECT MATTER OF THIS AGREEMENT OR TERMS AND CONDITIONS RELATED THERETO UNDER ANY CONTRACT, NEGLIGENCE, STRICT LIABILITY, PRODUCT LIABILITY, OR OTHER THEORY: (A) FOR ERROR OR INTERRUPTION OF USE OR FOR LOSS OR INACCURACY, INCOMPLETENESS OR CORRUPTION OF DATA OR FOOTAGE OR COST OF PROCUREMENT OF SUBSTITUTE GOODS, SERVICES OR TECHNOLOGY OR LOSS OF BUSINESS; (B) FOR ANY INDIRECT, EXEMPLARY, INCIDENTAL, SPECIAL OR CONSEQUENTIAL DAMAGES; (C) FOR ANY MATTER BEYOND FLOCK'S ACTUAL KNOWLEDGE OR REASONABLE CONTROL INCLUDING REPEAT CRIMINAL ACTIVITY OR INABILITY TO CAPTURE FOOTAGE OR IDENTIFY AND/OR CORRELATE A LICENSE PLATE WITH THE FBI DATABASE; (D) FOR ANY PUBLIC DISCLOSURE OF PROPRIETARY INFORMATION MADE IN GOOD FAITH; OR (E) FOR ANY AMOUNTS THAT, TOGETHER WITH AMOUNTS ASSOCIATED WITH ALL OTHER CLAIMS, EXCEED THE FEES PAID AND/OR PAYABLE BY CUSTOMER TO FLOCK FOR THE FLOCK SERVICES UNDER THIS AGREEMENT IN THE TWELVE (12) MONTHS PRIOR TO THE ACT THAT GAVE RISE TO THE LIABILITY, IN EACH CASE, WHETHER OR NOT FLOCK HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. IN THE EVENT OF AN EMERGENCY, CUSTOMER SHOULD CONTACT 911 AND SHOULD NOT RELY ON THE FLOCK SERVICES.

8.2 **Responsibility**. Each Party to this Agreement shall assume the responsibility and liability for the acts and omissions of its own employees, deputies, officers, or agents, in connection with the performance of their official duties under this Agreement. Each Party to this Agreement shall be liable (if at all) only for the torts of its own officers, agents, or employees that occur within the scope of their official duties. Customer will not pursue any claims or actions against Flock's suppliers.

8.3 **Indemnity**. Customer hereby agrees to indemnify and hold harmless Flock against any damages, losses, liabilities, settlements and expenses (including without limitation costs and attorneys' fees) in connection with any claim or action that arises from an alleged violation of Section 3.1, a breach of this Agreement, Customer's sharing of any data in connection with the Flock system, Flock employees or agent or Non-Customer End Users,

or otherwise from Customer's use of the Flock Services, Hardware and any Software, including any claim that such actions violate any applicable law or third party right. Although Flock has no obligation to monitor Customer's use of the Flock Services, Flock may do so and may prohibit any use of the Flock Services it believes may be (or alleged to be) in violation of the Section 3.2 or this Agreement.

9 Record Retention.

9.1 Data Preservation. The Customer agrees to store Customer Data and Non-Customer End User Data in compliance with all applicable local, state and federal laws, regulations, policies and ordinances and their associated record retention schedules. As part of Customer's consideration for paid access and no-fee access to the Flock System, to the extent that Flock is required by local, state or federal law to store the Customer Data or the Non-Customer End User Data, Customer agrees to preserve and securely store this data on Flock's behalf so that Flock can delete the data from its servers and, should Flock be legally compelled by judicial or government order, Flock may retrieve the data from Customer upon demand, provided, however, if Flock receives a disclosure request for Customer Data, Flock will give Customer notice, unless legally prohibited from doing so, to allow Customer to file an objection with the court or administrative body.

10 Miscellaneous.

10.1 Publicity. Flock has the right to reference and use Customer's name and trademarks and disclose the nature of the Flock Services provided hereunder in each case in business and development and marketing efforts, including without limitation on Flock's website.

10.2 Export. Customer may not remove or export from the United States or allow the export or re-export of the Flock IP or anything related thereto, or any direct product thereof in violation of any restrictions, laws or regulations of the United States Department of Commerce, the United States Department of Treasury Office of Foreign Assets Control, or any other United States or foreign Customer or authority. As defined in FAR section 2.101, the Flock Services, the Hardware, the Embedded Software and Documentation are "commercial items" and according to DFAR section 252.2277014(a)(1) and (5) are deemed to be "commercial computer software" and "commercial computer software documentation." Consistent with DFAR section 227.7202 and FAR section 12.212, any use, modification, reproduction, release, performance, display, or disclosure of such commercial software or commercial software documentation by the U.S. Government will be governed solely by the terms of this Agreement and will be prohibited except to the extent expressly permitted by the terms of this Agreement.

Skydio Terms of Use Appendix

1 **Definitions.**

"**Advanced Software**" means optional capabilities, functions or other features of the Onboard Software that may be specified and identified as such in the Quote. Skydio's characterization of capabilities, functions or other features as Advanced Software shall be dispositive. Notwithstanding any other provision herein, a software feature that is locked or otherwise disabled unless or until an Advanced Software Package is purchased for such software feature shall be deemed an Advanced Software. Advanced Software does not include Mobile Apps.

"**Advanced Software Package**" means an optional, additional-charge license right, specified in the Quote, pursuant to which Skydio shall unlock Advanced Software to permit Customer to use Advanced Software (and in some cases the Skydio Hardware that it controls).

"**Authorized Devices**" are (a) mobile devices that Customer owns or is authorized to use, and (b) controllers purchased by Customer hereunder, which in each case (a) and (b) are used by Customer to operate the Skydio Hardware purchased by Customer hereunder.

"**Base Software**" means capabilities, functions or other features of the Onboard Software that are both: (a) standard capabilities, functions or other features available and activated on Skydio's base consumer version of Skydio Hardware, and (b) available for use without purchase of Advanced Software Package. Base Software may be specified and identified as standard features in the Quote. Any capability, function, or feature that is not a Base Software shall be deemed an Advanced Software.

"**Customer**" means the customer procuring Skydio Products or services.

"**Error**" means a critical error in the Advanced Software that causes the Advanced Software to be inoperable.

"**Skydio License Term**" means with respect to an Advanced Software Package, the term of that Advanced Software Package, including (if applicable) the initial specified term and any renewal terms.

"**Mobile Apps**" means software applications (in executable form only), as may be specified on the Quote, that are specifically intended for use on a mobile device (and any Updates thereto).

"**Onboard Software**" means software, in executable format only, embedded into or otherwise pre-installed on Skydio Hardware as supplied by Skydio, and any Updates thereto, whether or not embedded on read only memory. Onboard Software includes Base Software and Advanced Software.

"**Skydio Privacy Policy**" means Skydio's privacy policy located at https://www.skydio.com/privacy-policy and as it may be amended from time to time by Skydio in its sole discretion.

"**Product**" means Skydio Hardware and Software, as provided by Skydio pursuant to this Agreement and any applicable Quote.

"**Skydio Hardware**" means drones and other unmanned aircraft, controllers, docks, accessories and related hardware that Customer purchases from Skydio or its distributors or resellers.

"**Skydio Software**" means Onboard Software and Mobile Apps.

"**Support Term**" means, for Base Software, the support term specified in the Quote, and, for each Advanced Software Package, the applicable Skydio License Term for such Advanced Software

Package purchased hereunder.

"**Updates**" means any upgrades, updates, maintenance releases, bug fixes or modified versions of Skydio Software that Skydio may release from time to time.

2 **License.** Subject to and in accordance with the terms and conditions of this Agreement and further conditioned upon Customer's payment of all Fees, Skydio grants to Customer:

2.1 a limited, perpetual, non-exclusive, non-transferable (except as provided in Section 5 below titled "Transferability") right and license to use the Base Software solely on Skydio Hardware;

2.2 a limited, perpetual, non-exclusive, non-transferable right and license to download, install, execute and use Mobile Apps on Authorized Devices solely to operate Skydio Hardware in accordance with this Agreement;

2.3 if Customer purchases an Advanced Software Package for the use of an Advanced Software, as specified in the Quote, a limited, non-exclusive, non-transferable right and license, during the Skydio License Term of the Advanced Software Package, to use the Advanced Software on Skydio Hardware that Customer purchases from Skydio solely to operate the Skydio Hardware in accordance with this Agreement ("**Advanced Software License**"); and

2.4 a limited, non-exclusive, non-transferable right and license to install solely on Skydio Hardware any Updates to the Onboard Software, if and when provided by Skydio.

3 **Additional License Terms.** Additional License Terms. The license rights of Section 2 are limited to the United States, Canada and Japan.

3.1 Unless otherwise specified in the applicable Quote, the Advanced Software License is granted on a per-unit basis and it may only be exercised with respect to the specific units of Skydio Hardware identified on the applicable Quote or, if the Quote does not specify such units, then with respect to no more than the total number of Skydio Hardware units authorized on the Quote, or if such total number of units is not specified on the Quote, then only with respect to one (1) single Skydio Hardware unit ("**Authorized Units**").

3.2 Rights under the Advanced Software License are not transferable between Authorized Units. When an Advanced Software License is exercised on a specific Authorized Unit (by unlocking, activating, accessing or using the Advanced Software on that Authorized Unit), such Advanced Software License, or any rights thereof, cannot be transferred to a different unit of Skydio Hardware, except: (i) if Skydio replaces an Authorized Unit pursuant to a warranty claim, Skydio shall transfer to the replacement Authorized Unit, the Advanced Software License of the inoperable unit that is being replaced, and (ii) if a particular Authorized Unit is rendered permanently inoperable, Skydio shall, upon Customer's request, transfer the Advanced Software License rights to a replacement Authorized Unit, provided, however, that Skydio may condition such transfer on Customer returning to Skydio the remnants of the inoperable unit or other evidence of its inoperability.

4 **Limitations and Restrictions.** Except as otherwise expressly provided in this Agreement, the foregoing license grant excludes any right to, and Customer shall not (and shall not permit others to) do any of the following with respect to the Skydio Software: (i) license, sublicense, sell, resell, rent, lease, transfer, distribute, time share, operate as a service bureau, or otherwise make any of it available for access by third parties; (ii) disassemble, reverse engineer or decompile it; (iii) copy, create derivative works based on or otherwise modify it; (iv) remove or modify a copyright, trademark, logo or other proprietary rights notice or brand labeling in it; (v) use it to reproduce, distribute, display, transmit, or use material protected by copyright or other intellectual property right (including the rights of publicity or privacy) without first obtaining the permission of the owner; (vi) use it to create, use, send, store or run viruses or other harmful computer code, files, scripts, agents or other programs or otherwise engage, in a malicious act or disrupt its security, integrity or operation; (vii) install, execute or otherwise reproduce Onboard Software on any device other than the Skydio Hardware on which Skydio originally installed the Onboard Software; (viii) install any Skydio Software on any type of device not approved by Skydio; (ix) disable or otherwise circumvent

any technological measures in Skydio Software to limit its installation, use or access; (x) unlock, activate, access or use an Advanced Software on any device other than as permitted under an Advanced Software Package purchased by Customer; and (xi) publish or release any benchmarking or performance data applicable to the Skydio Software.

5 **Transferability**. Subject to the terms and conditions of this Agreement, Customer may transfer the Base Software, including any relevant Base Software license rights, only on a permanent basis and as part of the sale or transfer of the Skydio Hardware on which the Base Software is loaded, provided that Customer retains no copies of any version of the Skydio Software. With the exception of the Base Software, Customer may not transfer any other Skydio Software or other Skydio Software license rights granted herein to another person or entity without the express written permission of Skydio, unless allowed by applicable law stating that transfer may not be restricted.

6 **Evaluation License**. Skydio may make certain Skydio Software available in object code form to end users only for evaluation, training or other limited non-commercial purposes without charging a Fee ("**Evaluation License**"). Where Skydio has provided an Evaluation License, all of the terms of this Agreement shall apply except that (i) Customer's license rights shall be limited to the evaluation of that Skydio Software, (ii) Customer shall not be required to pay a Fee for the evaluation of that Skydio Software and (iii) Skydio shall have the right to revoke the license to the Skydio Software at any time and for any reason.

7 **Updates**. The terms and conditions of this Agreement shall apply to all Updates or additional copies of the Skydio Software. Subject to the terms and conditions of this Agreement, including Customer's timely payment of all Fees due and owed to Skydio, Skydio will provide or make available to Customer, during the Support Term, Updates for Base Software, Mobile Apps and any Advanced Software that was enabled under the purchased Advanced Software Package on the Authorized Units. Notwithstanding any other provision of this Agreement, Customer has no license or right to use any Updates to the Advanced Software unless Customer holds a valid license to the Advanced Software and has paid any required Fees for such Advanced Software. Updates are solely provided on a "when-and-if-available" basis and as made generally available by Skydio to its customers. Customer shall promptly install any Updates that Skydio designates as required for the continued safe operation of Skydio Hardware or operation of any Advanced Software.

8 **Proprietary Notices**. Customer agrees to maintain and reproduce all copyright and other proprietary notices on all copies, in any form, of the Skydio Software in the same form and manner that such copyright and other proprietary notices are included on the Skydio Software.

9 **Intellectual Property**. Customer agrees that all worldwide patent, copyright and other intellectual property rights in the Product, and all copies of the Software however made (including copies pre-installed on the Skydio Hardware purchased by Customer) are the exclusive property of Skydio and its suppliers. All Skydio Software is licensed to Customer, not sold. All rights not expressly granted to Customer in this Agreement are reserved by Skydio and its suppliers. There are no implied licenses under this Agreement.

10 **Fees**. Skydio reserves the right to suspend and/or terminate access to the Skydio Software if any undisputed fees for Skydio Hardware or Software are past due. Such suspension or termination shall not relieve Customer from its obligation to pay all undisputed amounts.

11 **Third Party Software and Open Source Software**. The Skydio Software may include third party software, and open source software ("**OSS**"), and such software is provided under separate license terms.

11.1 To the extent the licenses for any OSS requires Skydio to make available to Customer the corresponding source code included in the Skydio Software, Customer may obtain a copy of the applicable OSS source code by sending a written request to legal@skydio.com. The OSS license terms shall take precedence over this Agreement to the extent that this Agreement imposes greater restrictions on Customer than the applicable OSS license

terms. Customer acknowledges receipt of notices for the Open Source Components for the initial delivery of the Skydio Software.

11.2 The use of third party software or applications, or the integration of such software or applications with the Skydio Software, (collectively, "**Third Party Applications**"), may result in Customer data or information being transferred to a third party. Skydio is not responsible for, and Customer agrees to hold Skydio harmless, for any data or information transferred to third parties in connection with your use of Third Party Applications.

12 **Commercial Item.** The Skydio Software and associated documentation are "commercial items" as defined at FAR 2.101 and according to DFAR section 252.2277014(a)(1) and (5) are deemed to be "commercial computer software" and "commercial computer software documentation." Consistent with DFAR section 227.7202 and FAR section 12.212, any use, modification, reproduction, release, performance, display, or disclosure of such commercial software or commercial software documentation by the U.S. Government will be governed solely by the terms of this Agreement and will be prohibited except to the extent expressly permitted by the terms of this Agreement.

13 **Term and Termination.** This Agreement is effective upon Skydio Software purchase, activation or download, as applicable, and shall continue until terminated.

13.1 **Paid License Term**. Each Advanced Software Package purchased hereunder shall have its own Skydio License Term. Each Skydio License Term shall have an initial term for the time period set forth on the Quote and that the Skydio License Term shall automatically extend for successive additional one (1) year renewal terms thereafter if any (subject to payment of the then-current applicable license fees for each such renewal term) unless either party give notice to the other of its intention not to renew the Skydio License Term at least thirty (30) days before expiration of the then-current initial or renewal term, as the case may be ("**Renewal Terms**"). If a Skydio License Term is not set forth in the Quote, each Skydio License Term shall have an initial term that commences upon the date of provisioning of the Skydio Software and expires one (1) year later; provided, however, that the Skydio License Term shall automatically extend per the Renewal Terms. Unless Skydio terminates this Agreement for breach by Customer, the perpetual licenses to use Base Software shall survive.

13.2 **Free or Trial License Term**. If you have obtained a license to a free version of the Skydio Software, then your license will continue until terminated in accordance with this Agreement. If you have obtained a trial license to the Skydio Software, then your license will continue for such time period as may be specified by Skydio with respect to such trial (and if no period is specified, for 30 days). Skydio may terminate a trial license at any time in its sole discretion.

13.3 **Termination**. Skydio may terminate Customer's license rights under this Agreement immediately without notice if Customer fails to comply with any terms of this Agreement or Customer fails to make any payment as required hereunder. In no event will termination relieve Customer of its obligation to pay any fees payable for Skydio Hardware or Software. Upon termination or expiration of this Agreement for any reason, Customer shall immediately cease using any Skydio Software and must destroy or return to Skydio all copies of the Skydio Software and associated documentation in its possession or control. The following sections shall survive the termination or expiration of this Agreement: Sections 1, 2(a), 2(b), 2(d), 4, 5 and 7-26.

14 **End of Life.** Skydio may discontinue the provision of any Skydio Software, support or Updates in its sole discretion in accordance with, and any licenses granted herein are subject to, Skydio Product End of Life Policy, which is available at https://support.skydio.com/hc/en-us/articles/360057153714, and is hereby incorporated by reference herein.

15 **Limited Warranty.** The only warranty that Skydio provides with respect to any Skydio products or services is the written limited warranty statement provided with the products or services or as otherwise set forth at https://skydio.com/warranty-terms ("**Limited Warranty**").

16 **Limitations.** Any use of the Skydio Hardware and Software, including any reliance upon or use of any of the information generated thereby, shall be at Customer's and its authorized users' sole risk. Except as expressly set forth in the Limited Warranty and to the extent permitted by law, the Products are provided "as is" and "as available" without warranty of any kind (all of which are hereby disclaimed), whether express, implied or statutory, including the implied warranties of merchantability, fitness for a particular purpose, or non-infringement. If statutory or implied warranties cannot be lawfully disclaimed, then such warranties are limited to the duration of the warranty set forth in the Limited Warranty and by the provisions in this Agreement. Skydio's cumulative liability to any Party for any loss or damage resulting from any claim, demand, or action arising out of or relating to any Skydio Products or any service will not exceed the amounts paid by Customer in the 12 months prior to the action giving rise to the liability. Neither Party will be liable for direct, special, indirect, incidental, punitive or consequential damages, however caused, whether for breach of warranty or contract, negligence, strict liability, tort or any other legal theory.

17 **Safety and Compliance**. Customer and Customer's authorized users agree to use the Skydio Hardware only in a manner that complies with all laws. Customer shall ensure that it and its authorized users operate product in accordance with the information and warnings set forth at https://www.skydio.com/safety (the "**Safety and Operating Guide**"). Customer acknowledges that improper operation of the unmanned aircraft systems may cause injury to persons or property. Customer shall at all times comply with all applicable local, state, national, and international laws and regulations related to the operation of unmanned aircraft systems in any territory of operation, including any applicable laws and orders with regard to privacy, pilot licensure, operating within visual line of sight (unless the Customer has received proper approval from a civil aviation authority waiving such limitation), detecting and avoiding other aircraft, and airspace restrictions (such as temporary flight restrictions issued by Federal Aviation Administration or other appropriate government agencies). Customer shall obtain and maintain all necessary licenses, consent, and authorizations of any kind necessary to operate unmanned aircraft systems.

18 **Feedback**. If Customer or Customer's authorized users send Skydio comments, suggestions, ideas, materials, notes, drawings, concepts or other information (collectively, "**Submissions**"), Customer and Customer's authorized users (as applicable) grant to Skydio a worldwide, non-exclusive, perpetual, irrevocable, transferable, sub-licensable, royalty-free license to use, copy, modify, publicly display, publicly perform, distribute and otherwise exploit the Submissions. None of the Submissions shall be subject to any obligation of confidentiality on Skydio's part, and Skydio shall not be liable for any use or disclosure of any Submissions.

19 **Privacy**. Skydio shall, in providing the Products, comply with Skydio Privacy Policy to the extent that Customer provides Skydio with personally identifiable information.

20 **Mapbox Terms.** The Mobile App uses features and content provided by Mapbox, such as maps and locations on a map. Use of any such Mapbox features and content is subject to the then-current version of Mapbox's terms and privacy policy, which can be found at https://www.mapbox.com/legal/tos/ , including the Mapbox Government Terms of Service, which can be found at https://www.mapbox.com/legal/usg-tos, and you hereby agree to comply with such terms. You can opt out of location telemetry reporting pursuant to such terms.

21 **Services.** In accordance with this Agreement, so long as Customer timely pays all amounts owed hereunder, Skydio shall render to Customer, during the applicable Skydio License Term of each Advanced Software Package purchased herunder, the support services consisting of: (a) providing Customer's named Administrators (defined below) with consultation in English, via telephone and email, during Skydio's normal business hours (9AM to 5PM PST) to assist in using the Advanced Software licensed under the Advanced Software Package; and (b) making reasonable efforts to

correct any critical error in the Advanced Software that causes the Advanced Software to be inoperable ("**Error**"), all in accordance with Skydio's support policies published on its Website, as updated from time to time. Errors do not include, and Skydio has no obligation to correct, malfunctions caused in whole or in part by modification of Software, the operation of third-party products or the integration of Software with or into third-party products, improper installation of the Advanced Software or other Software, or the use of Software other than in accordance with the applicable specifications provided by Skydio. Support is only available for the current and single prior major release of Advanced Software. No other services are included under this Agreement.

22 **Administrators.** Customer shall designate up to three (3) of its employees to administer the Services on its behalf and serve as points of contact in communicating with us, as set forth in the applicable Confirmation or as otherwise agreed by the parties in writing ("**Administrators**"). If a person named as an Administrator leaves Customer's employ, Customer may designate another one of its employees to serve as Administrator to replace the departing employee.

23 **Indemnification.** Skydio will indemnify Customer's officers, directors, and employees ("**Customer Indemnitees**") against all claims, demands, losses, and reasonable expenses arising out of a third-party claim against an Customer Indemnitee resulting from any negligent act, error or omission, or willful misconduct by Skydio under this Agreement, except to the extent of Customer's negligence or willful misconduct, or claims under workers compensation.

24 **IP Indemnification.** Skydio will indemnify Customer Indemnitees against all claims, losses, and reasonable expenses from any third-party claim alleging that the use of Skydio Products or services infringes or misappropriates the third-party's intellectual property rights. Customer must promptly provide Skydio with written notice of such claim, tender to Skydio the defense or settlement of such claim at Skydio's expense and cooperate fully with Skydio in the defense or settlement of such claim. Skydio's IP indemnification obligations do not apply to claims based on (a) modification of Skydio Products or services by Customer or a third-party not approved by Skydio; (b) use of Skydio Products and services in combination with hardware or services not approved by Skydio; (c) use of Skydio Products and services other than as permitted in this Agreement; or (d) use of Skydio Software that is not the most current release provided by Skydio.

25 **Customer Responsibilities.** Customer is responsible for (a) Customer's use of Skydio Products; (b) breach of this Agreement or violation of applicable law by Customer or a Customer's authorized end user; and (c) a dispute between Customer and a third-party over Customer's use of Skydio Products.

26 **Export Sales and Export Controls.** Customer acknowledges that the Skydio Products, services and technology are subject to export controls under the laws and regulations of the United States (U.S.). Customer shall comply with such laws and regulations governing use, export, re-export, and transfer of Skydio Products, services and technology and shall obtain all required U.S. and local authorizations, permits, or licenses. Skydio and Customer each agree to provide the other such information and assistance as may reasonably be required by the other in connection with securing such authorizations and licenses, and to take timely action to obtain all required supporting documentation.

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Skydio, Inc.
114 Hazel Ave.,
Redwood City, CA 94061
legal@skydio.com

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Axon Commander™ Software Appendix

5 **License.** Axon owns all executable instructions, images, icons, sound, and text in Commander. All rights are reserved to Axon. Axon grants a non-exclusive, royalty-free, worldwide right and license

to use Commander. "Use" means storing, loading, installing, or executing Commander exclusively for data communication with an Axon Device. Agency may use Commander in a networked environment on computers other than the computer it installs Commander on, so long as each execution of Commander is for data communication with an Axon Device. Agency may make copies of Commander for archival purposes only. Agency shall retain all copyright, trademark, and proprietary notices in Commander on all copies or adaptations.

6 **Term.** The Quote will detail the duration of the Commander license, as well as any maintenance. The term will begin upon installation of Commander by Axon.

7 **License Restrictions.** All licenses will immediately terminate if Agency does not comply with any term of this Agreement. Agency may not use Commander for any purpose other than as expressly permitted by this Agreement. Agency may not:

7.1 modify, tamper with, repair, or otherwise create derivative works of Commander;
7.2 reverse engineer, disassemble, or decompile Commander or apply any process to derive the source code of Commander, or allow others to do the same;
7.3 access or use Commander to avoid incurring fees or exceeding usage limits or quotas;
7.4 copy Commander in whole or part, except as expressly permitted in this Agreement;
7.5 use trade secret information contained in Commander;
7.6 resell, rent, loan or sublicense Commander;
7.7 access Commander to build a competitive device or service or copy any features, functions, or graphics of Commander; or
7.8 remove, alter, or obscure any confidentiality or proprietary rights notices (including copyright and trademark notices) of Axon or Axon's licensors on or within Commander or any copies of Commander.

8 **Support.** Axon may make available updates and error corrections ("**Updates**") to Commander. Axon will provide Updates electronically via the Internet or media as determined by Axon. Agency is responsible for establishing and maintaining adequate access to the Internet to receive Updates. Agency is responsible for maintaining the computer equipment necessary to use Commander. Axon may provide technical support of a prior release/version of Commander for 6 months from when Axon made the subsequent release/version available.

9 **Termination.** Axon may terminate Agency's license immediately for Agency's failure to comply with any of the terms in this Agreement. Upon termination, Axon may disable Agency's right to login to Axon Commander.

Axon Application Programming Interface Appendix

1 **Definitions.**

"**API Client**" means the software that acts as the interface between Agency's computer and the server, which is already developed or to be developed by Agency.

"**API Interface**" means software implemented by Agency to configure Agency's independent API Client Software to operate in conjunction with the API Service for Agency's authorized Use.

"**Axon Evidence Partner API, API or AXON API**" (collectively "**API Service**") means Axon's API which provides a programmatic means to access data in Agency's Axon Evidence account or integrate Agency's Axon Evidence account with other systems.

"**Use**" means any operation on Agency's data enabled by the supported API functionality.

2 **Purpose and License.**

2.1 Agency may use API Service and data made available through API Service, in connection with an API Client developed by Agency. Axon may monitor Agency's use of API Service to ensure quality, improve Axon devices and services, and verify compliance with this Agreement. Agency agrees to not interfere with such monitoring or obscure from Axon Agency's use of API Service. Agency will not use API Service for commercial use.

2.2 Axon grants Agency a non-exclusive, non-transferable, non-sublicensable, worldwide, revocable right and license during the Term to use API Service, solely for Agency's Use in connection with Agency's API Client.

2.3 Axon reserves the right to set limitations on Agency's use of the API Service, such as a quota on operations, to ensure stability and availability of Axon's API. Axon will use reasonable efforts to accommodate use beyond the designated limits.

3 **Configuration.** Agency will work independently to configure Agency's API Client with API Service for Agency's applicable Use. Agency will be required to provide certain information (such as identification or contact details) as part of the registration. Registration information provided to Axon must be accurate. Agency will inform Axon promptly of any updates. Upon Agency's registration, Axon will provide documentation outlining API Service information.

4 **Agency Responsibilities.** When using API Service, Agency and its end users may not:

4.1 use API Service in any way other than as expressly permitted under this Agreement;

4.2 use in any way that results in, or could result in, any security breach to Axon;

4.3 perform an action with the intent of introducing any viruses, worms, defect, Trojan horses, malware, or any items of a destructive nature to Axon Devices and Services;

4.4 interfere with, modify, disrupt or disable features or functionality of API Service or the servers or networks providing API Service;

4.5 reverse engineer, decompile, disassemble, or translate or attempt to extract the source code from API Service or any related software;

4.6 create an API Interface that functions substantially the same as API Service and offer it for use by third parties;

4.7 provide use of API Service on a service bureau, rental or managed services basis or permit other individuals or entities to create links to API Service;

4.8 frame or mirror API Service on any other server, or wireless or Internet-based device;

4.9 make available to a third-party, any token, key, password or other login credentials to API Service;

4.10 take any action or inaction resulting in illegal, unauthorized or improper purposes; or disclose Axon's API manual.

5 **API Content.** All content related to API Service, other than Agency Content or Agency's API Client content, is considered Axon's API Content, including:

5.1 the design, structure and naming of API Service fields in all responses and requests;
5.2 the resources available within API Service for which Agency takes actions on, such as evidence, cases, users, or reports; and
5.3 the structure of and relationship of API Service resources; and
5.4 the design of API Service, in any part or as a whole.

6 **Prohibitions on API Content**. Neither Agency nor its end users will use API content returned from the API Interface to:
6.1 scrape, build databases, or otherwise create permanent copies of such content, or keep cached copies longer than permitted by the cache header;
6.2 copy, translate, modify, create a derivative work of, sell, lease, lend, convey, distribute, publicly display, or sublicense to any third-party;
6.3 misrepresent the source or ownership; or
6.4 remove, alter, or obscure any confidentiality or proprietary rights notices (including copyright and trademark notices).

7 **API Updates**. Axon may update or modify the API Service from time to time ("**API Update**"). Agency is required to implement and use the most current version of API Service and to make any applicable changes to Agency's API Client required as a result of such API Update. API Updates may adversely affect how Agency's API Client access or communicate with API Service or the API Interface. Each API Client must contain means for Agency to update API Client to the most current version of API Service. Axon will provide support for 1 year following the release of an API Update for all depreciated API Service versions.

Advanced User Management Appendix

1 **Scope.** Advanced User Management allows Agency to (a) utilize bulk user creation and management, (b) automate user creation and management through System for Cross-domain Identity Management ("**SCIM**"), and (c) automate group creation and management through SCIM.

2 **Advanced User Management Configuration.** Agency will work independently to configure Agency's Advanced User Management for Agency's applicable Use. Upon request, Axon will provide general guidance to Agency, including documentation that details the setup and configuration process.

Axon Channel Services Appendix

1 **Definitions.**
"**Axon Digital Evidence Management System**" means Axon Evidence or Axon Commander, as specified in the attached Channel Services Statement of Work.

"**Active Channel**" means a third-party system that is continuously communicating with an Axon Digital Evidence Management System.

"**Inactive Channel**" means a third-party system that will have a one-time communication to an Axon Digital Evidence Management System.

2 **Scope.** Agency currently has a third-party system or data repository from which Agency desires to share data with Axon Digital Evidence Management. Axon will facilitate the transfer of Agency's third-party data into an Axon Digital Evidence Management System or the transfer of Agency data out of an Axon Digital Evidence Management System as defined in the Channel Services Statement of Work ("**Channel Services SOW**"). Channel Services will not delete any Agency Content. Agency is responsible for verifying all necessary data is migrated correctly and retained per Agency policy.

3 **Purpose and Use.** Agency is responsible for verifying Agency has the right to share data from and provide access to third-party system as it relates to the Services described in this Appendix and the Channel Services SOW. For Active Channels, Agency is responsible for any changes to a third-party system that may affect the functionality of the channel service. Any additional work required for the continuation of the Service may require additional fees. An Axon Field Engineer may require access to Agency's network and systems to perform the Services described in the Channel Services SOW. Agency is responsible for facilitating this access per all laws and policies applicable to Agency.

4 **Project Management.** Axon will assign a Project Manager to work closely with Agency's project manager and project team members and will be responsible for completing the tasks required to meet all contract deliverables on time and budget.

5 **Warranty.** Axon warrants that it will perform the Channel Services in a good and workmanlike manner.

6 **Monitoring.** Axon may monitor Agency's use of Channel Services to ensure quality, improve Axon devices and services, prepare invoices based on the total amount of data migrated, and verify compliance with this Agreement. Agency agrees not to interfere with such monitoring or obscure from Axon Agency's use of channel services.

7 **Agency's Responsibilities.** Axon's successful performance of the Channel Services requires Agency:

7.1 Make available its relevant systems for assessment by Axon (including making these systems available to Axon via remote access);

7.2 Provide access to the building facilities and where Axon is to perform the Channel Services, subject to safety and security restrictions imposed by the Agency (including providing security passes or other necessary documentation to Axon representatives performing the Channel Services permitting them to enter and exit Agency premises with laptop personal computers and any other materials needed to perform the Channel Services);

7.3 Provide all necessary infrastructure and software information (TCP/IP addresses, node names, and network configuration) for Axon to provide the Channel Services;

7.4 Ensure all appropriate data backups are performed;

7.5 Provide Axon with remote access to the Agency's network and third-party systems when required for Axon to perform the Channel Services;

7.6 Notify Axon of any network or machine maintenance that may impact the performance of

the Channel Services; and

7.7 Ensure the reasonable availability by phone or email of knowledgeable staff, personnel, system administrators, and operators to provide timely, accurate, complete, and up-to-date documentation and information to Axon (these contacts are to provide background information and clarification of information required to perform the Channel Services).

VIEVU Data Migration Appendix

1 **Scope.** Agency currently has legacy data in the VIEVU Solution from which Agency desires to move to Axon Evidence. Axon will work with Agency to copy legacy data from the VIEVU solution into Axon Evidence ("**Migration**"). Before Migration, Agency and Axon will work together to develop a Statement of Work ("**Migration SOW**") to detail all deliverables and responsibilities. The Migration will require the availability of Agency resources. Such resources will be identified in the SOW. On-site support during Migration is not required. Upon Agency's request, Axon will provide on-site support for an additional fee. Any request for on-site support will need to be pre-scheduled and is subject to Axon's resource availability.

A small amount of unexposed data related to system information will not be migrated from the VIEVU solution to Axon Evidence. Upon request, some of this data can be manually exported before Migration and provided to Agency. The Migration SOW will provide further detail.

2 **Changes.** Axon is only responsible to perform the Services described in this Appendix and Migration SOW. Any additional services are out of scope. The Parties must document scope changes in a written and signed change order. Changes may require an equitable adjustment in the charges or schedule.

3 **Project Management.** Axon will assign a Project Manager to work closely with Agency's project manager and project team members and will be responsible for completing the tasks required to meet all contract deliverables on time and budget.

4 **Downtime.** There may be downtime during the Migration. The duration of the downtime will depend on the amount of data that Agency is migrating. Axon will work with Agency to minimize any downtime. Any VIEVU mobile application will need to be disabled upon Migration.

5 **Functionality Changes.** Due to device differences between the VIEVU solution and the Axon's Axon Evidence solution, there may be functionality gaps that will not allow for all migrated data to be displayed the same way in the user interface after Migration

6 **Acceptance.** Once the Migration is complete, Axon will notify Agency and an acceptance form. Agency is responsible for verifying that the scope of the project has been completed and all necessary data is migrated correctly and retained per Agency policy. Agency will have 90 days to provide Axon acceptance that the Migration was successful, or Axon will deem the Migration accepted.

In the event Agency does not accept the Migration, Agency agrees to notify the Axon within a reasonable time. Agency also agrees to allow Axon a reasonable time to resolve any issue. In the event Agency does not provide the Axon written rejection of the Migration during these 90 days, Agency may be charged for additional monthly storage costs. After Agency provides acceptance of the Migration, the Axon will delete all data from the VIEVU solution 90 days after the Migration.

7 **Post-Migration.** After Migration, the VIEVU solution may not be supported and updates may not be provided. Axon may end of life the VIEVU solution in the future. If Agency elects to maintain data within the VIEVU solution, Axon will provide Agency 90 days' notice before ending support for the VIEVU solution.

8 **Warranty.** Axon warrants that it will perform the Migration in a good and workmanlike manner.

9 **Monitoring.** Axon may monitor Agency's use of Migration to ensure quality, improve Axon devices and services, prepare invoices based on the total amount of data migrated, and verify compliance with this Agreement. Agency agrees not to interfere with such monitoring or obscure from Axon Agency's use of Migration.

Axon Support Engineer Appendix

1 **Axon Support Engineer Payment.** Axon will invoice for Axon Support Engineer ("**ASE**") services, as outlined in the Quote, when the Axon Support Engineer commences work on-site at Agency.

2 **Full-Time ASE Scope of Services.**

2.1 A Full-Time ASE will work on-site four (4) days per week.

2.2 Agency's Axon sales representative and Axon's Agency Success team will work with Agency to define its support needs and ensure the Full-Time ASE has skills to align with those needs. There may be up to a 6-month waiting period before the Full-Time ASE can work on-site, depending upon Agency's needs and availability of a Full-Time ASE.

2.3 The purchase of Full-Time ASE Services includes 2 complimentary Axon Accelerate tickets per year of the Agreement, so long as the ASE has started work at Agency, and Agency is current on all payments for the Full-Time ASE Service.

The Full-Time ASE Service options are listed below:

Ongoing System Set-up and Configuration • Assisting with assigning cameras and registering docks • Maintaining Agency's Axon Evidence account • Connecting Agency to "Early Access" programs for new devices
Account Maintenance • Conducting on-site training on new features and devices for Agency leadership team(s) • Thoroughly documenting issues and workflows and suggesting new workflows to improve the effectiveness of the Axon program • Conducting weekly meetings to cover current issues and program status
Data Analysis • Providing on-demand Axon usage data to identify trends and insights for improving daily workflows • Comparing Agency's Axon usage and trends to peers to establish best practices • Proactively monitoring the health of Axon equipment and coordinating returns when needed
Direct Support • Providing on-site, tier 1 and tier 2 technical support for Axon devices • Proactively monitoring the health of Axon equipment • Creating and monitoring RMAs on-site • Providing Axon app support • Monitoring and testing new firmware and workflows before they are released to Agency's production environment
Agency Advocacy • Coordinating bi-annual voice of customer meetings with Axon's Device Management team • Recording and tracking Agency feature requests and major bugs

3 **Regional ASE Scope of Services**

3.1 A Regional ASE will work on-site for 3 consecutive days per quarter. Agency must schedule the on-site days at least 2 weeks in advance. The Regional ASE will also be available by phone and email during regular business hours up to 8 hours per week.

3.2 There may be up to a 6-month waiting period before Axon assigns a Regional ASE to Agency, depending upon the availability of a Regional ASE.

3.3 The purchase of Regional ASE Services includes 2 complimentary Axon Accelerate tickets per year of the Agreement, so long as the ASE has started work at Agency and Agency is current on all payments for the Regional ASE Service.

The Regional ASE service options are listed below:

Account Maintenance • Conducting remote training on new features and devices for Agency's leadership • Thoroughly documenting issues and workflows and suggesting new workflows to improve the effectiveness of the Axon program • Conducting weekly conference calls to cover current issues and program status • Visiting Agency quarterly (up to 3 consecutive days) to perform a quarterly business review, discuss Agency's goals for your Axon program, and continue to ensure a successful deployment of Axon devices
Direct Support • Providing remote, tier 1 and tier 2 technical support for Axon devices • Creating and monitoring RMAs remotely
Data Analysis • Providing quarterly Axon usage data to identify trends and program efficiency opportunities • Comparing an Agency's Axon usage and trends to peers to establish best practices • Proactively monitoring the health of Axon equipment and coordinating returns when needed
Agency Advocacy • Coordinating bi-yearly Voice of Agency meetings with Device Management team • Recording and tracking Agency feature requests and major bugs

4 **Out of Scope Services.** The ASE is responsible to perform only the Services described in this Appendix. Any additional Services discussed or implied that are not defined explicitly in this Appendix will be considered out of the scope.

5 **ASE Leave Time**. The ASE will be allowed up 7 days of sick leave and up to 15 days of vacation time per each calendar year. The ASE will work with Agency to coordinate any time off and will provide Agency with at least 2 weeks' notice before utilizing any vacation days.

BODY CAMERA

PRESENTATION





MARYLAND

SENATE BILL 71

-MARYLAND POLICE ACCOUNTABILITY ACT OF 2021

-REQUIRES THE KENT COUNTY SHERIFF'S OFFICE TO USE BODY-WORN CAMERAS BY 2025

-THE CAMERA MUST HAVE THE ABILITY TO RECORD VIDEO 60 SECONDS PRIOR TO ACTIVATION



WHY BODY CAMERAS?

- Police officers wear body cameras as a way to record the video and audio of events that occur when they are on the job.

- The goal of this technology is to:

- Provide evidence
- Increase officer safety
- Increase public confidence in policing

IMPROVE THE BEHAVIOR OF EVERYONE

- The average person will behave better if they know that there is some level of accountability for their actions.

- When there is a noticeable camera present on the uniform of a police officer, then the interactions between the public and law enforcement officials typically become more civilized.



REDUCES COMMUNITY COMPLAINTS

- The use of body cameras by police officers in communities has dropped the number of public complaints.

- There are also fewer use-of-force issues that occur when this technology accompanies law enforcement officials while they are working.



USEFUL EVIDENCE FOR PROSECUTION

The video footage that becomes available from police body cameras is useful evidence.

-The evidence is quite convincing

-Can provide corroborating material that backs up witness statements or written reports about an incident that occurs

-It can improve the rate of convictions and increase the number of successful plea-bargaining efforts by the State's Attorney's Office

-The Kent County States Attorney's Office fully supports the implementation of body cameras



-Police officers need time to train and improve just like any other person.

-By reviewing the process of events that occurred, there are more learning opportunities that can help an officer make better decisions in the future.

GREAT FOR TRAINING





INCREASED OFFICER SAFETY

- Police officers undertake an extremely dangerous job with many occupational hazards that are unique to their line of work. Often, officers are called to address situations with violent, often unpredictable individuals. Tragically, officers can and do get killed or injured in the line of duty.

- Although body cameras don't necessarily influence police behavior under duress, research does show that they improve officer safety. When individuals know or believe they're being recorded, research supports the observation that people are more likely to behave less aggressively than if they aren't being recorded or don't know that they are.

AXON - OFFICER SAFETY

ONE OF THE REASONS WE CHOSE AXON IS BECAUSE OF THE OFFICER SAFETY FEATURES.

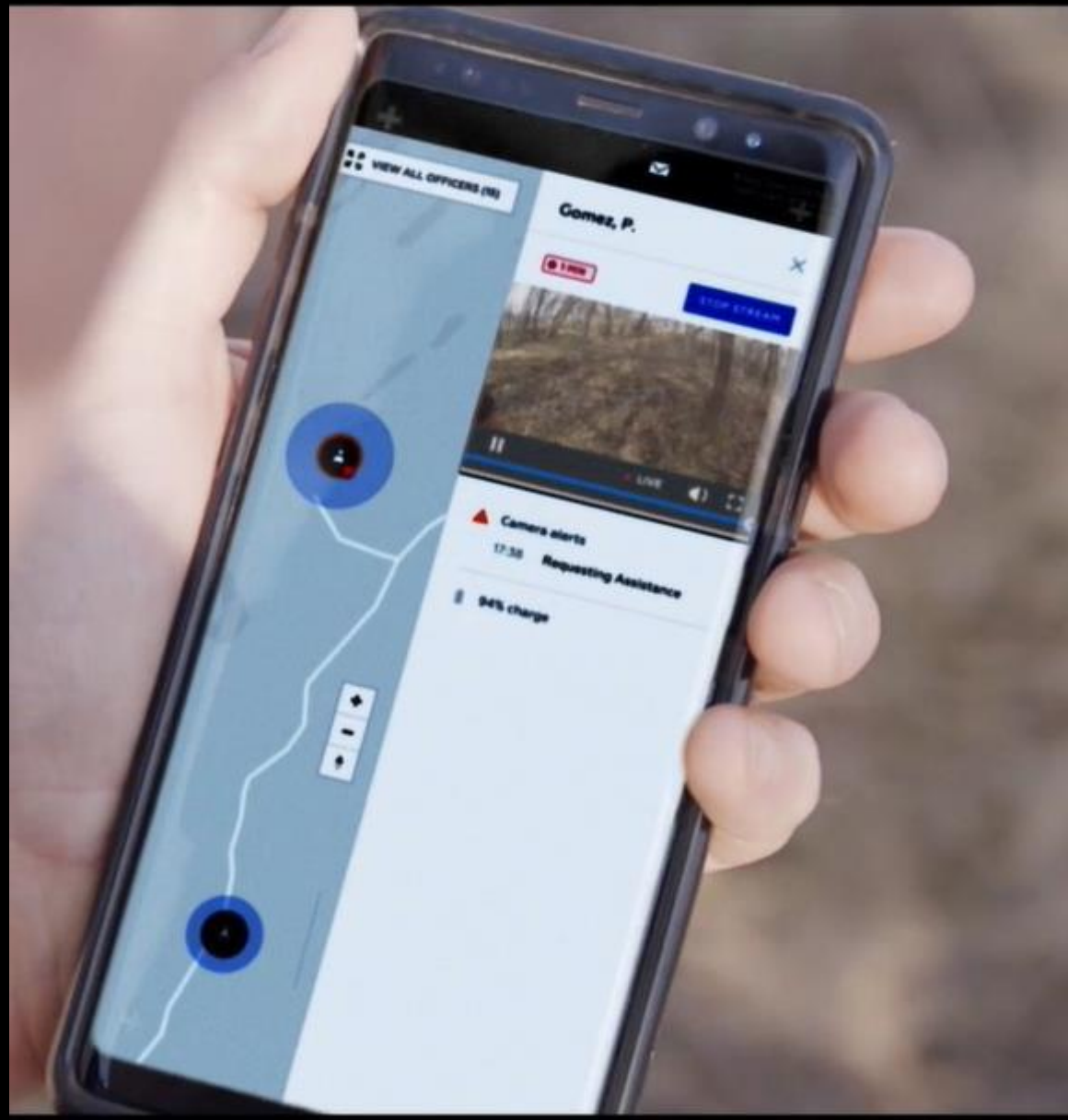
https://www.axon.com/resources/ab3-respond-devices/introducing-axon-body-3-with-aware



VIDEO HIGHLIGHTS

-CAMERA HAS THE ABILITY TO BE VIEWED LIVE WHILE IT IS ACTIVATED

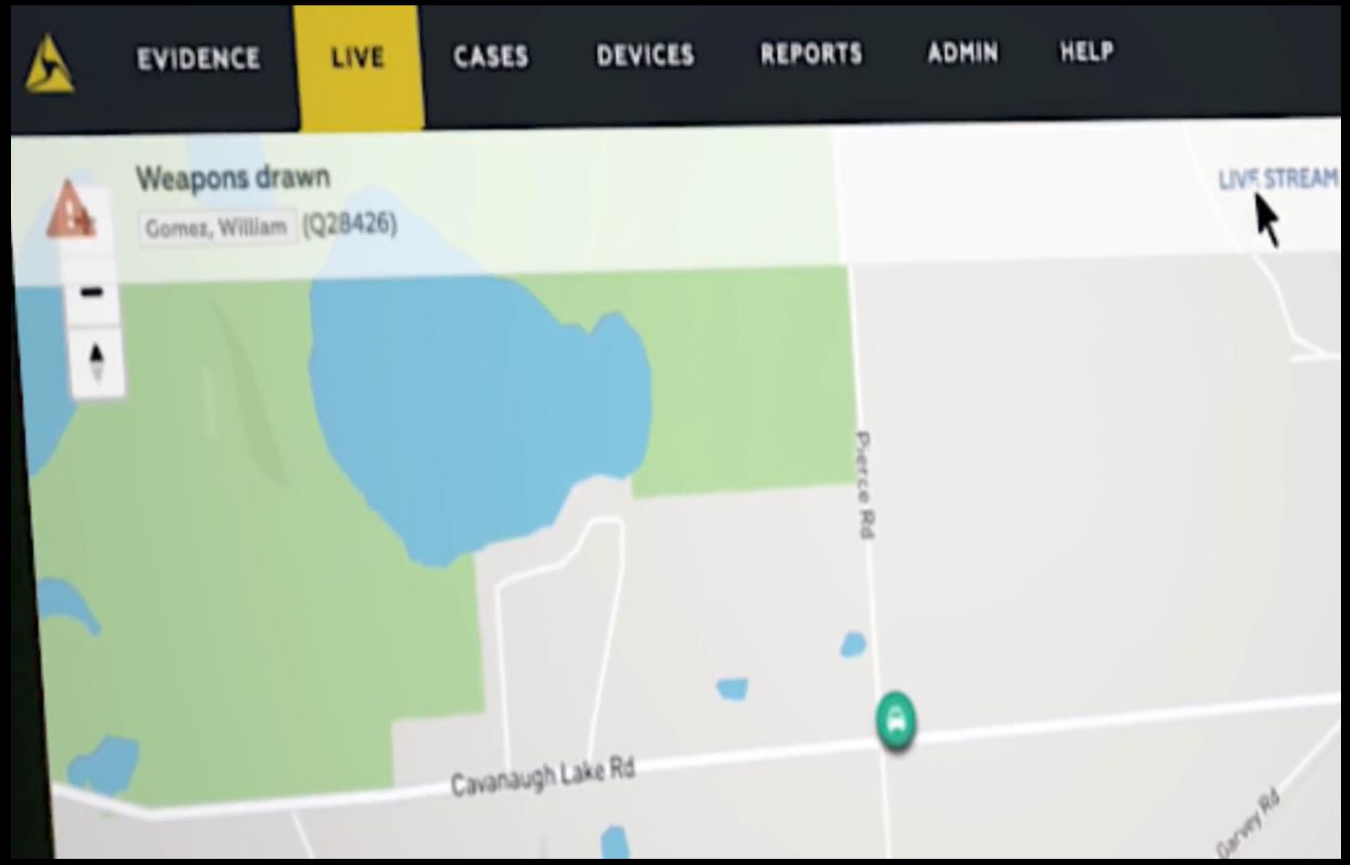
-THE GPS LOCATION CAN BE QUICKLY OBTAINED TO GET HELP TO A DEPUTY



VIDEO HIGHLIGHTS

-WHEN A DEPUTY DRAWS THEIR WEAPON, THE CAMERA IS IMMEDIATELY ACTIVATED

-AFTER THE WEAPON IS DRAWN AN ALERT CAN BE SENT OUT



THE CONTRACT

Kent Co - AB2 (22) NASPO.pdf



Wayne Rickert, Executive Director, Rebuilding Together Kent County and Dawson Hunter, Housing and Transportation Coordinator, Local Management Board
6/22/2021
County Commissioners Meeting

Item Summary:
Housing Repair Services

ATTACHMENTS:

Description

Rebuilding Together Kent County One-Pager

Rebuilding Together Kent County Presentation

Rebuilding Together
Kent County

In 1973 several residents of Midland, Texas volunteered their time and skills to rehabilitate the home of a neighbor on the last weekend in April, beginning what became known as Christmas in April. In 1988, the organization opened its national office in Washington, D.C. and with this growth came change, including a new name - Rebuilding Together. After Hurricane Isabel devastated Rock Hall in 2003, volunteers from the Presbyterian Church helped with recovery efforts and, recognizing a greater need, decided to become an affiliate of the national Rebuilding Together network. For over 15 years, Rebuilding Together Kent County has been dedicated to serving neighbors who struggle physically and/or financially with critical home repairs and modifications.

Until 2019 we were almost entirely volunteer-run. Recognizing our ability to do more in Kent County, we applied for a grant that enabled us to hire several part-time staff to help create a larger, more sustainable organization. Since then, we have been able to make homes safer and healthier for over 100 neighbors, investing almost $200,000 in building equity for Kent County homeowners. We have created an infrastructure that will enable us to do more repairs and document them effectively for rigorous government reporting requirements. While we continue to engage volunteers, we now also contract increasingly with local businesses to execute major projects.

While securing additional funding has increased our impact dramatically, the number of neighbors requesting services continues to out-pace our current financial capacity. With grants from the Maryland Affordable Housing Trust and USDA Housing Preservation Program currently at the maximum limit, we are seeking new sustainable funding sources.

Our strategic plan creates a compelling future for our organization - *if* we can secure the financing. We are exploring CDBG funding and funding from the regional Federal Home Loan Bank's Affordable Housing Program. Our staff will expand as we have the resources to serve more neighbors.

Critical to our success will be creating partnerships with other nonprofits, businesses and local government agencies. As a member of the Basic Needs Workforce, we are actively working to focus regional efforts to improve efficiency, attract funding, and increase impact to elevate the quality of life for current and future county residents. We continue to seek partners to join the movement to end substandard housing in our communities.

Kent County Commissioners
June 22, 2021



Rebuilding Together®
Kent County

Ending substandard housing in Kent County!

Our Mission:

Repairing homes,
revitalizing communities,
rebuilding lives.

Our Vision:

Safe homes & communities for everyone.

History – Rebuilding Together

1973: Christmas in April

1988: Rebuilding Together

History – Rebuilding Together

Rock Hall - fall 2003



Our Community



Kent County

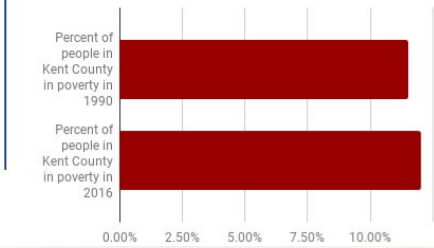
POPULATION OF KENT COUNTY:
18,284

NUMBER OF PEOPLE IN KENT COUNTY LIVING IN POVERTY:

1990	2016
1,943	2,193

Income

POVERTY RATES IN KENT COUNTY (1990 VS 2016)



CHANGE IN POVERTY RATE FROM 1990-2016



1

INDIVIDUALS LIVING IN DEEP POVERTY

62.2% of people in Kent County who live in poverty have incomes below 50% of the poverty line - $5,940 for an individual – in 2016. ***Census Bureau, American Community Survey 5-Year Estimates 2012-2016***

The Challenge





Where are we today?



It’s really about our neighbors



Serving our Veterans…



Serving our Community…

African American Schoolhouse



Paul Rickert, Area Extension Director, University of Maryland Extension
6/22/2021
County Commissioners Meeting

Item Summary:
Funding Proposal

ATTACHMENTS:

Description

FY22 University of Maryland Extension Funding Proposal

UNIVERSITY OF
MARYLAND
EXTENSION

A FUNDING PROPOSAL TO KENT COUNTY GOVERNMENT FROM UNIVERSITY OF

MARYLAND EXTENSION – KENT COUNTY

ON

ELEVATING THE CURRENT AGRICULTURE AGENT ASSOCIATE POSITION (Professional Track)

TO AGRICULTURE AGENT POSITION (Tenure Track) – FY22

Offered by: Paul R. Rickert, Ed.D.

6/10/2021

University of Maryland Extension - Kent County Office
709 Morgnec Road #202
Chestertown, MD 21620
410-778-1661

University programs, activities, and facilities are available to all without regard to race, color, sex, gender identity or expression, sexual orientation, marital status, age, national origin, political affiliation, physical or mental disability, religion, protected veteran status, genetic information, personal appearance, or any other legally protected class.

Commissioners:

The University of Maryland Extension and College of Agriculture and Natural Resources thanks you for this opportunity to request an amendment to our proposed budget. We appreciate the more than 100 years of fiscal and in-kind support that Kent County has provided as we partner to improve the lives of Kent residents in the areas of Agriculture and Food Systems, Family and Consumer Sciences, Environment and Natural Resources, and 4-H Youth Development.

Situation Statement:

University of Maryland Extension (UME) is a statewide, non-formal education system within the College of Agriculture and Natural Resources at UMD College Park and University of Maryland Eastern Shore. UME educational programs and problem-solving assistance are available to residents and are based on the research and experience of land grant universities such as the University of Maryland, College Park.

To fulfill the needs of UME, the College of AGNR, the University of Maryland - College Park, community residents' needs, and the expectations of local, state, and federal funders, UME employs two tracks of educators; Tenured/Tenure Track (TTK) and Professional Track (PTK);

UMD EXTENSION FIELD FACULTY

Professional Track Educator (PTK)	Tenured/Tenure Track Educator (TTK)
Agent Associate Appointees shall be able to: teach research-based subject matter from the University for community residents based on local issues and needs; assume leadership for educational development plans; deliver educational programs directly to clientele, peers, and/or volunteers through train-the-trainer or other similar venues in order to extend programming efforts throughout the state. An earned Bachelor's degree will be a minimum requirement for appointment at this rank. Appointments to this rank are typically one years and are renewable based on funding.	**Agent** (parallel to the rank of Assistant Professor) In addition to the requirements delineated for Agent Associates, the appointee must hold a master's degree in an appropriate discipline and show evidence of academic ability and leadership skills. The appointee shall have an educational background related to the specific position. Agents also have state responsibilities and may elect to assume leadership responsibilities as their career progresses. Agents conduct local, regional, and state-level research to help solve problems that advance the profession and impact clientele. In addition, they are required to produce scholarly work in the form of white papers, journal articles, and fact sheets. This work is intended to benefit the field of study, in this case Agronomy, as well as the local stakeholder.

Adapted from II-1.00(A) UNIVERSITY OF MARYLAND POLICY & PROCEDURES ON APPOINTMENT, PROMOTION, AND TENURE OF FACULTY

The Kent County office has had difficulty retaining the PTKs in the Ag Program long term often due to the salary differential between the PTK rank and the TTK rank. There are always factors that are outside of the control of an employer, but it is plausible that elevating the Ag position from a PTK to a

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TTK position – with the associated rank and salary - will result in a longer serving hire. This will be a major benefit to the Kent farm community as relationships are built and maintained. Additionally, knowledge of local issues, whether social, fiscal, environmental, or technical, and those who can help bring a resolution to them becomes increasingly rooted. The last tenured Ag Agent was John Hall who retired in 2010 after more than 30 years serving residents of Kent County. Since 2010, three PTK educators have been in the position. The continual turnover makes serving Kent residents more difficult.

PROPOSAL:

Obtain funding from Kent County and UME to convert the PTK Agriculture and Food Systems Educator position in Kent County to a TTK position. This means shifting state funds within and to the Kent Office. Associate Dean Jim Hanson, and the UME Agriculture and Food Systems Program Leader Darren Jarboe have agreed to allocate additional funding if Kent County was able to increase their contribution toward this position. Dean Craig Beyrouty supports this transition. UME is asking Kent County to add an additional $15,156 to the request for FY22 as a baseline increase.

There are several benefits to approving this supplemental funding to upgrade to a TTK position:

1) Currently, Kent County is the only county within the state of Maryland that has no TTK faculty in any of the program areas.
2) UME would seek input from the county with regard to the specific of needs in the county and the major focus on this program. This will be highly beneficial to an agricultural county such as Kent.
3) While it cannot be guaranteed, the process of being hired as a TTK faculty member is more strenuous, and the salary is higher than the PTK position allows, meaning that having a TTK position would likely mean a longer term hire, as this is an extended career path.
4) TTK faculty also need to conduct research, publication, and speaking. The TTK incumbent would likely have broader and more in-depth knowledge. This will enhance the educational programming and services to Kent County.

COSTS:

For FY20, the County contribution to the Kent UME Office was $139,410. In FY21 the County contribution decreased to $127,243 (a decrease of about 8.75%). UME's FY22 County request increased to $129,173 (caused by the Governor's COLA) but it was otherwise a flat budget. To convert this position from PTK to TTK UME is asking the county to increase the FY22 requested amount by $15,156, making a total of $144,329. This would not be a one-time cost request but an addition to the permanent budget. This is the maximum salary needed in case the hire happens to hold the Ph.D., has 12 or more years of related service, and has certain licensures. UME must have a total of just over $83,000 that is available/committed as the highest salary to move forward with this plan.

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Salary and Operational Cost
UME Kent County

Funding Source	FY2020	% Cost	FY2021	% Cost	FY2022 (requested)	% Cost	FY2022 Amended Request	% Cost
County	$ 139,410	32.91	$ 127,243	30.93	$ 129,173	30.95	$ 144,329	31.54
State	$ 216,068	51.01	$ 216,068	52.52	$ 220,068	52.73	$ 245,165	53.58
Federal	$ 40,598	9.58	$ 40,598	9.87	$ 40,598	9.73	$ 40,598	8.87
Federal Grant	$ 27,500	6.49	$ 27,500	6.68	$ 27,500	6.59	$ 27,500	6.01
Total:	$ 423,576	100.00	$ 411,409	100.00	$ 417,339	100.00	$ 457,592	100.00

Should the commissioners approve the permanent addition to the budget, UME will begin the search late this summer with the intent to have the new faculty member begin his or her position on January 1, 2022. This is aligned with UME's internal policy designed to ensure that a hire would not be disadvantaged in the University's tenure review process with regard to timing of that review. In the event of a COLA then those costs would be part of a subsequent budget.

Thank you for the opportunity to present this amendment to the FY22 budget. We look forward to a continued partnership that benefits the residents of Kent County

Paul Rickert, Ed.D.
Area Extension Director
Upper Shore Cluster
University of Maryland Extension
College of Agriculture & Natural Resources
University of Maryland – College Park

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Herbert Dennis, Warden, Detention Center
6/22/2021
County Commissioners Meeting

Item Summary:
Security Camera Replacement

ATTACHMENTS:

Description

06.22.21 Contract, Talon Security and Technical Services, Kent County Detention Center, New Building Camera System

CONTRACT

THIS CONTRACT, made this 22nd day of June 2021, by and between the County Commissioners of Kent County, a body corporate and politic of the State of Maryland, hereinafter referred to as the OWNER, and Talon Security and Technical Services, hereinafter referred to as the CONTRACTOR;

WITNESSETH, That for and in consideration of the mutual covenants and promises between the parties hereto, it is fully agreed that:

1. The CONTRACTOR will furnish all of the labor, materials, equipment, and transportation necessary for the installation of a new camera system at the Kent County Detention Center, in accordance with the specifications and contract documents entitled "The County Commissioners of Kent County, Maryland, Request For Proposal # KCDC 21-02, For The Installation of a New Building Camera System at the Kent County Detention Center, 104A Vickers Drive, Chestertown, MD 21620".

2. LIABILITY INSURANCE. CONTRACTOR shall furnish to Owner, before beginning any work hereunder, a Certificate of Insurance certifying that the Contractor carries comprehensive, general liability insurance coverage through a policy which protects the County , and names the County as an Additional Insured in aggregate liability coverage of not less than Two Million ($2,000,000.00) Dollars.

3. WORKER'S COMPENSATION INSURANCE. CONTRACTOR shall furnish to the County Commissioners, before beginning construction, a Certificate of Workmen's Compensation Insurance covering all employees of said Contract in amounts statutorily required.

4. COMPLETION OF WORK. The CONTRACTOR shall commence the work covered by this contract within fifteen (15) calendar days after the date of receipt of the Notice to Proceed and shall complete the same within Ninety (90) calendar days unless the period for completion is extended as provided for in the general conditions.

5. CONTRACT SUM. The OWNER shall pay the CONTRACTOR for the performance of said work, subject to additions or deletions provided herein Eighty-Nine Thousand Six Hundred Seventy-Four Dollars ($89,674.00) in conformity with the bid schedule.

6. The contract documents include the following attachments:
   a. Signed Bid Proposal Dated June 2, 2021.
   b. Change Order Dated June 9, 2021.

7. The OWNER will pay to the CONTRACTOR in the manner and at such times as set forth in the general conditions and in such amounts as required by the Contract Documents.

8. This Contract shall be governed by the Laws of the State of Maryland, without regard to its conflicts of law principles. Jurisdiction and venue shall lies in State or federal located within the State of Maryland.

9. This Contract shall be binding upon all parties hereto and their respective heirs, executors, administrators, successors, and assigns.

IN WITNESS WHEREOF, the parties hereto have executed, or caused to be executed by their duly authorized officials, this Contract in duplicate, on the date first above written.

WITNESS/ATTEST

Lacey J. Cox 6/22/21

THE COUNTY COMMISSIONERS
OF KENT COUNTY, MARYLAND

By: P. Thomas Mason
P. Thomas Mason, President

Robert N. Jacob, Jr., Member

Ronald H. Fithian, Member

TALON SECURITY AND TECHNICAL SERVICES

_____

By: _____

_____
Title

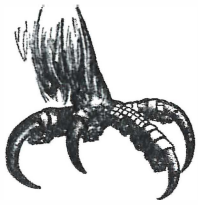
_____
Employer Identification Number

Proposal

TALON SECURITY
AND TECHNICAL SERVICES

Providing Professional Technical Services to Maryland's Eastern Shore.

Date: 6/2/2021



PO BOX 754
TRAPPE, MD. 21673

www.TalonSecurityMD.com

Service@TalonSecurityMD.com

410-476-4400

Customer Info.
Customer name: Kent County Detention Center
Address: Chestertown, MD.
Phone Number:
Alternate Phone:

QTY	DESCRIPTION OF SERVICE/MATERIALS		
37	Axis M3206-LVE 4MP Vandal Resistant IR Dome Cameras		
3	Axis Q9216-SLV 1.3MP Vandal Resistant IR Dome Cameras W/Audio		
7	Axis Q3518-LVE 4K (8MP) 130' IR Dome Cameras		
1	Axis S1148 64TB Axis Video Server		
1	Axis 4 Monitor Client Machine		
1	Axis S9101 Single Monitor Client Machine		
3	Articulating TV Brackets		
3	43" TVs		
3	24" Monitors		
4	2-Wire Network Converters		
2	24 Port 250 Watt POE Switch		
1	2000va UPS		
5	External Battery Pack UPS Batteries		
1	2200va UPS		
1	Bonds, Administrative, Engineering, Submittals, Etc.		

Comments: INCLUDES ALL PARTS, INSTALLATION, AND TRAINING. INCLUDES REPLACING ALL EXISTING CAMERA WIRING, EXCEPT TO OUTSIDE POLES. WARRANTY 1YR LABOR, 5YR PARTS.
PLEASE NOTE: DUE TO CURRENT MARKET AND SUPPLY CHAIN VOLATILITY, PRICING IS ONLY GOOD FOR 30 DAYS, AND PARTS AVAILABILITY ARE SUBJECT TO CHANGE AT ANY TIME.

SUBTOTAL	94,184.00
CREDITS	-
TOTAL	$94,184.00

Approved By: P. Thomas Mason Date: 6/22/21

Talon Security Rep:_____ Date:_____

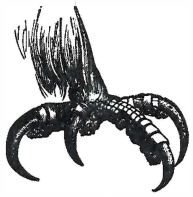
Make all checks payable to Talon Security
THANK YOU FOR YOUR BUSINESS!

Proposal

TALON SECURITY
AND TECHNICAL SERVICES

Providing Professional Technical Services to Maryland's Eastern Shore.

Date: 6/9/2021



410-476-4400

PO BOX 754
TRAPPE, MD. 21673

www.TalonSecurityMD.com

Service@TalonSecurityMD.com

Customer Info.
Customer name: Kent County Detention Center
Address: Chestertown, MD.
Phone Number:
Alternate Phone:

QTY	DESCRIPTION OF SERVICE/MATERIALS		
	Change Order 6.9.21		
5	**Remove 5 of 6 External Battery Pack UPS Batteries. Recalculated battery backup needs based on 30 mins vs 4 hours and updated parts list.**		
1	**Update booking UPS. Recalculated battery backup needs based on 30 mins vs 4 hours and updated parts list.**		
1	**Removed 1 24" Monitor for server. Replaced with rack mounted monitor/keyboard/mouse for new server rack location in multi-purpose room closet.**		
1	**Add open-frame 12u wall-mounted network rack to relocate most camera equipment to multi-purpose room closet.**		
1	**Add 1 4u vertical network rack for camera server for mounting in multi-purpose room closet.**		
1	**Add 1 48 port cat6 patch panel for network rack in multi-purpose room closet.**		
1	**Add 1 UPS for Control client machine as main UPS will now be located in multi-purpose room closet.**		

Comments:

CHANGE ORDER TOTAL	**-$4,510.00**
PREVIOUSE JOB TOTAL	$94,184
NEW JOB TOTAL	**$89,674.00**

Approved By: P. Thomas Mason Date: 6/22/21

Talon Security Rep:_____ Date:_____

Make all checks payable to Talon Security
THANK YOU FOR YOUR BUSINESS!

BID SURETY

KNOWN ALL MEN BY THESE PRESENTS, that we the undersigned, Talon Security & Technology Service, LLC, as principal, and The Cincinnati Insurance Company as surety, are hereby held and firmly bound unto the County Commissioners of Kent County AS OWNER in the penal sum of 5% of $100,000 for the payment of which, well and truly to be made, we hereby jointly and severally bind ourselves, successors and assigns.

The condition of the above obligation is such that whereas the Principal has submitted to the County Commissioners of Kent County a certain BID, attached hereto and hereby made a part of hereof to enter into a contract in writing, for the Camera installation

NOW, THEREFORE,

a) If said BID shall be rejected, or

b) If said BID shall be accepted and the principal shall execute and deliver a contract in the form of Contract attachment hereto (properly completed in accordance with said BID) and shall furnish a BOND for his faithful performance of said contract, and for the payment of all persons performing labor, furnishings, materials, in connection therewith, and shall in all other respects perform the agreement created by the acceptance of said BID, this obligation shall be void, otherwise the same shall remain in force and effect; it being expressly understood and agreed that the liability of the Surety for any and all claims hereunder shall, in no event, exceed the penal amount of the obligation as herein stated.

The Surety, for value received, hereby stipulated and agrees that the obligations of said Surety and its BOND shall be in no way impaired or affected by any extension of the time within which the OWNER may accept such BID, and said Surety does hereby waive notice of any such extension. IN WITNESS WHEREOF, the Principal and Surety have hereunto set their hands and seals, and such of them as are corporations have caused their corporate seals to be hereto affixed and these presents to be signed by their proper officers, the day and year first set forth above.

Principal

The Cincinnati Insurance Company
Surety

By: Ryan Shay

By: Victoria M Bradford

IMPORTANT: Surety companies executing BONDS must authorized to transact business in the State of Maryland.

THE CINCINNATI INSURANCE COMPANY

Fairfield, Ohio

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS: That THE CINCINNATI INSURANCE COMPANY, a corporation organized under the laws of the State of Ohio, and having its principal office in the City of Fairfield, Ohio, does hereby constitute and appoint

Joseph L. Gast; Geraldine Littleton; Katherine M. King; Victoria M. Bradford; Kimberly Simpson; Kathy Bennett; Timothy Wisniewski; Maureen Cody; and Kevin J. Hayes

of Salisbury, Maryland its true and lawful Attorney(s)-in-Fact to sign, execute, seal and deliver on its behalf as Surety, and as its act and deed, any and all bonds, policies, undertakings, or other like instruments, as follows:

Any such obligations in the United States, up to Five Million and No/100 Dollars ($5,000,000.00).

This appointment is made under and by authority of the following resolution passed by the Board of Directors of said Company at a meeting held in the principal office of the Company, a quorum being present and voting, on the 6th day of December, 1958, which resolution is still in effect:

"RESOLVED, that the President or any Vice President be hereby authorized, and empowered to appoint Attorneys-in-Fact of the Company to execute any and all bonds, policies, undertakings, or other like instruments on behalf of the Corporation, and may authorize any officer or any such Attorney-in-Fact to affix the corporate seal; and may with or without cause modify or revoke any such appointment or authority. Any such writings so executed by such Attorneys-in-Fact shall be binding upon the Company as if they had been duly executed and acknowledged by the regularly elected officers of the Company."

This Power of Attorney is signed and sealed by facsimile under and by the authority of the following Resolution adopted by the Board of Directors of the Company at a meeting duly called and held on the 7th day of December, 1973.

"RESOLVED, that the signature of the President or a Vice President and the seal of the Company may be affixed by facsimile on any power of attorney granted, and the signature of the Secretary or Assistant Secretary and the seal of the Company may be affixed by facsimile to any certificate of any such power and any such power of certificate bearing such facsimile signature and seal shall be valid and binding on the Company. Any such power so executed and sealed and certified by certificate so executed and sealed shall, with respect to any bond or undertaking to which it is attached, continue to be valid and binding on the Company."

IN WITNESS WHEREOF, THE CINCINNATI INSURANCE COMPANY has caused these presents to be sealed with its corporate seal, duly attested by its Senior Vice President this 19th day of December, 2018.

The Cincinnati Insurance Company CORPORATE SEAL OHIO

THE CINCINNATI INSURANCE COMPANY

Stephen A. Vantre

STATE OF OHIO) ss:
COUNTY OF BUTLER)

On this 19th day of December, 2018, before me came the above-named Vice President of THE CINCINNATI INSURANCE COMPANY, to me personally known to be the officer described herein, and acknowledged that the seal affixed to the preceding instrument is the corporate seal of said Company and the corporate seal and the signature of the officer were duly affixed and subscribed to said instrument by the authority and direction of said corporation.

NOTARIAL SEAL STATE OF OHIO

KEITH COLLETT, Attorney at Law
NOTARY PUBLIC - STATE OF OHIO
My commission has no expiration date. Section 147.03 O.R.C.

I, the undersigned Secretary or Assistant Secretary of THE CINCINNATI INSURANCE COMPANY, hereby certify that the above is a true and correct copy of the Original Power of Attorney issued by said Company, and do hereby further certify that the said Power of Attorney is still in full force and effect.

GIVEN under my hand and seal of said Company at Fairfield, Ohio.
this 8th day of June 2021

The Cincinnati Insurance Company CORPORATE SEAL OHIO

BN-1005 (4/19)

TALON SECURITY
AND TECHNICAL SERVICES, LLC.
P.O. Box 754 Trappe, MD. 21673
410-476-4400
www.TalonSecurityMD.com

Better Service, Better Prices, Guaranteed!

June 3, 2021

Kent County Detention Center: Comparable Jobs and Reference List

Choptank Electric - 2016

Analytic Camera System, Companywide.
This job meets or exceeds similar cost and size. This project included roughly 180 cameras, across nearly 40 sites, interconnected to one location.

David Robinson
Substation and Relays Engineer
Choptank Electric
410-479-8622

Ridgely Volunteer Fire Department - 2017

This project included Cameras, Fire system, Phone System, Access Control, Audio/video systems, Data/Phones, Networking.

Eric Kellner
Former Chief
Ridgely Volunteer Fire Department
410-443-1870

Barbie Utz
443-786-0457

Choptank Electric - 2016

Salisbury District building.
This project included Cameras, Fire System, Access Control, Building Cell Communications, Audio Video Systems, Emergency Panic System, Intercom, and Remote Network Gate Interlink.

Tom Aydelott
Facilities Manager
Choptank Electric
410-726-0653

Caroline County Sheriff's Office – 2020

This project included Cameras, Access Control, Audio/Video, and Network and Phone cabling.

James Henning
Captain
Caroline County Sheriff's Office
410-479-2515

KENT COUNTY DEPARTMENT OF PUBLIC WORKS
COUNTY ENGINEER
709 Morgnec Road
Chestertown, MD 21620
410-778-2600
Fax 410-778-7424

Michael S. Moulds, P.E.
Director
mmoulds@kentgov.org

James M. Wright, Jr., P.E.
County Engineer
jwright@kentgov.org

June 3, 2021

RFP #KCDC 21-02
For The
Installation of a New Building Camera System
At the
Kent County Detention Center

Addendum No. 1

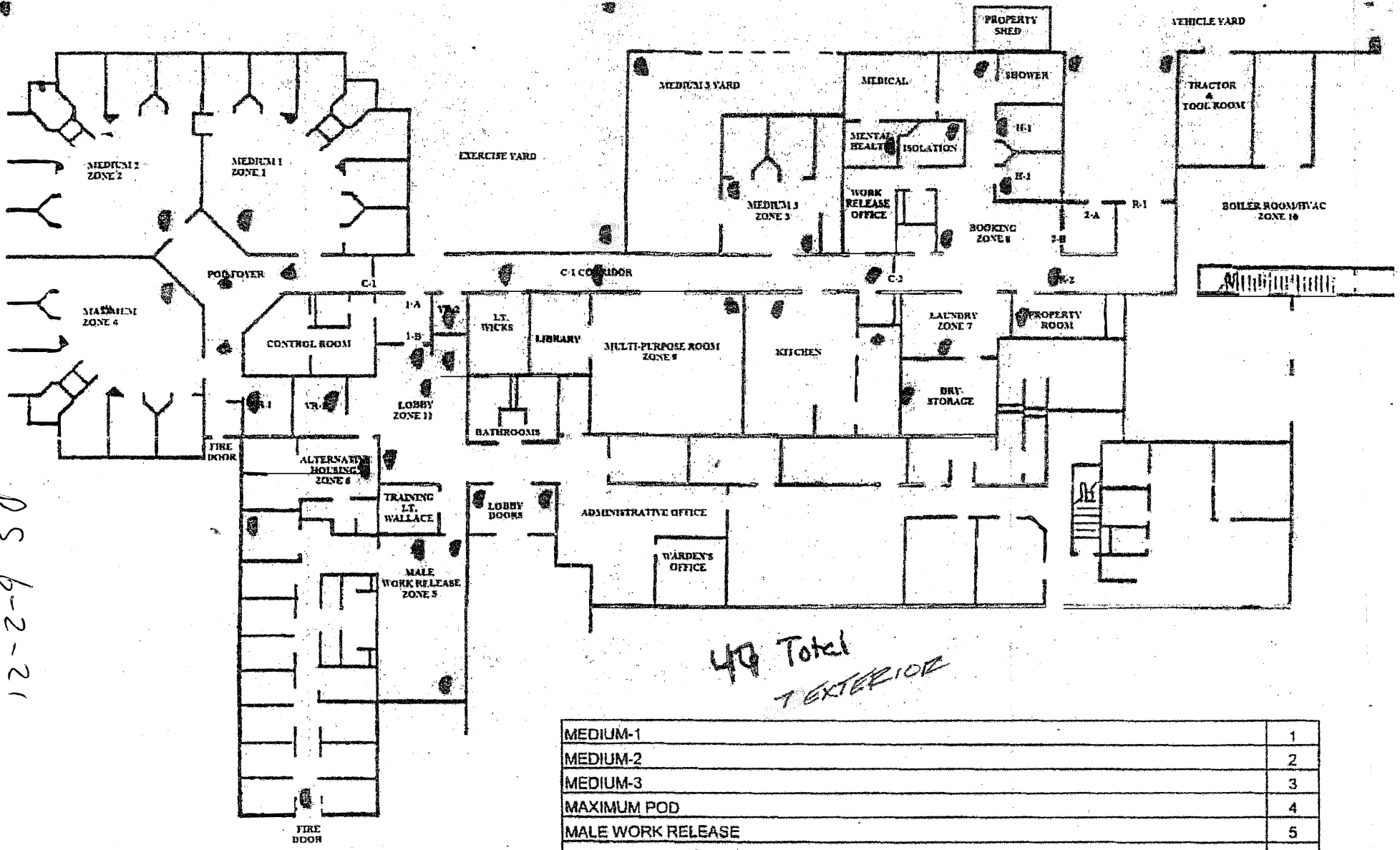
The following clarification to questions discussed at the pre-bid meeting and/or received from bidders are hereby made a part of the RFP specifications. **Bidders must acknowledge receipt of this addendum in their bids.**

1. UPS, is specified to power entire camera system, how long does the UPS need to power the entire system for?
   The UPS must power the entire system for a minimum of 4 hours.
2. Does the facility require a UPS at each workstation?
   The entire camera system requires a minimum 4-hour back-up capacity. It is up to the installer to decide the method.
3. Please confirm **ALL** new cabling is required.
   All cabling shall be new.
4. Can we reuse existing conduits for new cat6 cabling?
   Existing wire conduits may be re-used provided all work meets current electrical code requirements.
5. Will three (3) separate days of training be acceptable?
   Training must accommodate all affected employees using the equipment. Vendors must accommodate the staff scheduling.
6. Please provide the locations of the security video recorder, network switch and workstations to be installed.
   All camera system control equipment shall be located in the control room. One TV and one monitor shall be located in the booking/receiving area.
7. Are there any prevailing wage or Davis-Bacon requirements?
   No.
8. Are there any minority participation goals?
   No.
9. Are CAD drawings required? Will PDF as-builts acceptable?
   CAD drawings are preferred but PDF as-builts will be acceptable if clear and legible.

RS 6-2-21

10. Are there certain hours work cannot be performed?
    There are no work hour limitations.
11. What is the daily security check-in/outs required by the contractor?
    Workers will be scanned, temperature checked, required to wear a mask, and all tools logged upon entry and exit.
12. Will the facility provide a secure area (away from inmate access) for staging and storing tools/materials?
    There is no interior storage area available. Contractors shall be responsible for providing a storage container if on site storage is needed.
13. Will the facility provide security escort during project duration?
    Yes, but escort officers are limited in availability and contractor may be limited in the number of simultaneous areas of work.
14. Please confirm camera counts, which rooms require audio, and the outside camera locations.
    Please refer to attached sketch. There are a total of 47 cameras. Seven (7) exterior cameras. Audio is not required.
15. Will the county allow a vendor to offer two camera systems in their proposal?
    All bidders must submit a bid based on the specified equipment. Bid award will be based on the specified equipment. Bidders may submit an alternate system for consideration by the county, but only the low bidder's alternate system will be considered by the county. Proprietary equipment is not acceptable to the County.
16. Is there conduit feeding the current pole cameras?
    This is unknown.
17. Will the county extend the due date to allow for adjusted responses to the questions?
    There is no planned bid date extension at this time.
18. Will the county require inside cable to be installed inside EMT conduit?
    All new wiring shall be installed in conduit.
19. Does this project fall under your prevailing wage requirements?
    See question #7.
20. If so, can you provide the prevailing wage reference information for the labor calculations.
    N/A.
21. Which pole camera is monitored by the Sheriff's department?
    None of the included cameras are operated or monitored by the Sheriff's department.

RS 6-2-21



12-2-21 RS 6-2-21

49 Total
1 EXTERIOR

MEDIUM-1	1
MEDIUM-2	2
MEDIUM-3	3
MAXIMUM POD	4
MALE WORK RELEASE	5
ALTERNATIVE HOUSING	6
LAUNDRY, INSIDE PROPERTY ROOM, OUTSIDE PROPERTY SHED	7
BOOKING, HOLDING CELLS, ISOLATION, MEDICAL, STRIP SHOWER, LAWYERS ROOM	8
KITCHEN/DRY STORAGE, MULTI-PURPOSE ROOM, W/R OFFICE, LT'S OFFICE,	9
BOILER ROOM, TRACTOR ROOM, VEHICLE YARD, REC YARDS, R-2/CHEMICAL AREA	10
CONTROL, VISITING ROOMS, LOBBY/BATHROOMS, TRAINING/ADMIN OFFICE	11

AXIS S9101

Optimal surveillance for server installations

AXIS Camera Station S9101 Desktop Terminal is a micro form factor desktop terminal optimized for high-definition surveillance video where space is limited. The terminal is preloaded with AXIS Camera Station software to minimize installation time and complements Axis network video recorders to create a high performing surveillance workstation. AXIS S9101 has validated hardware and software components for optimal surveillance experience, and includes three-year hardware warranty with on-site replacement service. AXIS S9101 supports two monitors in a dual screen setup for system overview. A universal keyboard and computer mouse are included.

> Ease of installation

> AXIS Camera Station software included

> Validated hardware

> On-site replacement service



AXIS S9101

Processor	Intel® Core i3-8100T
Memory	8 GB RAM
Operating system	Microsoft® Windows® 10 Enterprise Operating system recovery: yes Operating system drive: 128 GB SSD
Video streaming	Live view: Up to 25 camera split views or 1 x 4K camera view Playback: 4 x 1080p camera split views or 1 x 4K camera view Supports two monitors
Graphic card	Intel® HD Graphics 630
Power	90 Watt AC Adapter (100 to 240 V AC, 50/ 60 Hz, 1.6 A)
Connectors	5x USB 3.1 1x USB 3.1 Type-C 1x Ethernet (RJ45) 1 GbE 2x DisplayPort™ 1.2 1x Universal audio jack 1x Audio line out
Operating conditions	5 °C to 35 °C (41 °F to 95 °F) Humidity 20–80% RH (non-condensing)
Storage conditions	-40 °C to 65 °C (-40 °F to 149 °F)
Approvals	IEC/EN/UL 60950-1 FCC Part 15 Subpart B Class B, ICES-003 Class B, VCCI Class B, RCM AS/NZS CISPR 32 Class B, KC KN32 Class B, KN35, EN 55032, EN 55024, EN/IEC 61000-3-2, EN/IEC 61000-3-3, EN 50564, EN 62623, EAC, BSMI, NOM
Dimensions	178 x 36 x 182 mm (7.1 x 1.4 x 7.2 in)
Weight	1.2 kg (2.6 lb)
Included accessories	Keyboard (international/US), computer mouse, power supply with cable
Optional accessories	Axis joysticks and control boards For more accessories, see *axis.com*
Warranty	Axis 3-year warranty and AXIS Extended Warranty option, see *axis.com/warranty*

Environmental responsibility:

axis.com/environmental-responsibility

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AXIS COMMUNICATIONS

Datasheet

AXIS S9002 Mk II

Effective 4K client for server installations

AXIS Camera Station S9002 Mk II Desktop Terminal is an easy-to-install desktop terminal for high-definition surveillance with support for four simultaneous 4K streams. The terminal is preloaded with AXIS Camera Station client and all necessary software and is preconfigured to minimize installation time. With its slim form factor, AXIS S9002 Mk II complements Axis rack servers to create a high-end surveillance workstation. The terminal has validated hardware components, such as graphic card and CPUs and supports four monitors for optimal system overview. AXIS S9002 Mk II includes a 5-year warranty, a keyboard and computer mouse.

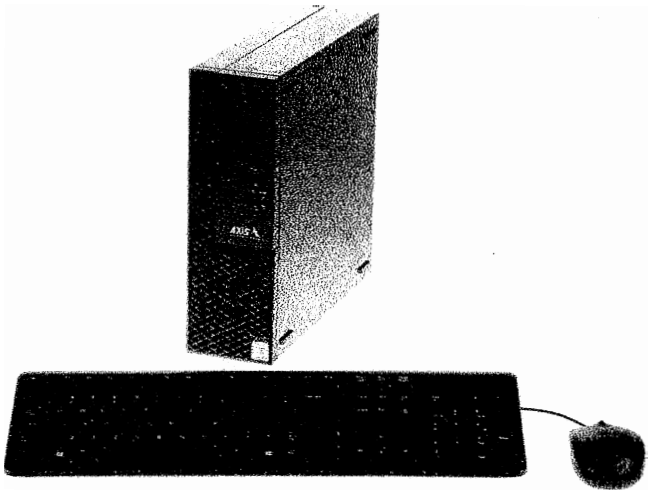
> Ease of installation

> AXIS Camera Station client included

> Validated high performing hardware

> High-definition surveillance up to four 4K streams

> Extensive support



HDTV NETWORK VIDEO

4K NETWORK VIDEO

AXIS S9002 Mk II

Hardware

Processor	Intel® Core™ i5
Memory	8 GB
Graphic card	Nvidia® Quadro®
Power	300 W (100 – 240 V AC, 50/60 Hz, 4.2 – 2.1 A)
Connectors	5x USB 3.1 1x USB 3.1 Type-C 4x USB 2.0 2x DisplayPort™ 1.2 (not preferred) 4x Mini DisplayPort™ 1x Ethernet (RJ45) 1 GbE 1x Universal audio jack) 1x Audio line out 1x Serial port PS2 Mouse and keyboard ports

Video

Video streaming	Live view: 4 monitors x 4K full screen at 25 fps 4 monitors x 4 split x 1080p at 20 fps 4 monitors x 9 split x 720p at 15 fps Playback: Limited to 1 monitor but supports the same split scenarios as for live view.

General

Operating system	Microsoft® Windows® 10 IoT Enterprise SAC Built-in operating system recovery: yes Operating system drive: 128 GB SSD
Operating conditions	0 °C to 45 °C (32 °F to 113 °F)
Storage conditions	-40 °C to 65 °C (-40 °F to 149 °F)
Approvals	**EMC** EN 55032, EN 55024, EN/IEC 61000-3-2, EN/IEC 61000-3-3, EN 50564, EN 62623, FCC Part 15 Subpart B Class B, ICES-003 Class B, VCCI Class B, RCM AS/NZS CISPR 32 Class B, KC KN32 Class B, KN35, **Safety** IEC/EN/UL 60950-1, EN 62368-1, NOM, BSMI, EAC
Dimensions	292 x 93 x 290 mm (11.5 x 3.67 x 11.42 in)
Weight	5.0 kg (11 lb)
Included accessories	Keyboard (international/US), mouse, 4 x Mini DisplayPort™ to DisplayPort™ adapters
Optional accessories	Axis joysticks and control boards For more accessories, see *axis.com*
Warranty	5-year warranty, see *axis.com/warranty*

Environmental responsibility:

axis.com/environmental-responsibility

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AXIS Camera Station S1148 Recorder

Out-of-the box ready server for UHD surveillance

AXIS Camera Station S1148 Recorder is an out-of-the-box ready rack server validated for reliable ultra high-definition recording. For quick and easy installation, AXIS S1148 is preconfigured and preloaded with AXIS Camera Station video management software including licenses for 48 channels plus all necessary software. The system configuration can easily be imported from AXIS Site Designer, and AXIS Camera Station lets users take full advantage of Axis wide portfolio of video surveillance devices. With redundant enterprise-grade hard disks and power supplies, operating system stored on solid-state drive (SSD), and expandable storage, AXIS S1148 provides high-performance and reliability for your system.

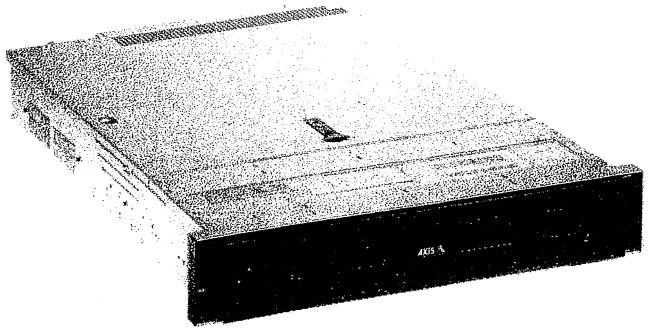
> Ease of installation

> AXIS Camera Station licenses included

> Full compatibility with Axis products

> Available with 24TB/ 64TB/ 144TB storage

> 5-year warranty



AXIS Camera Station S1148 Recorder

Models	S1148 24 TB S1148 64 TB S1148 140 TB
Licenses	48 AXIS Camera Station core licenses included, can be upgraded with additional licenses (sold separately)
System scalability	Qualified for up to 64 video channels and 128 doors
Hardware	
Processor	Intel® Xeon® Silver
Memory	**S1148 24 TB** 8 GB **S1148 64 TB** 16 GB **S1148 140 TB** 32 GB
Storage	**S1148 24 TB** Hot swappable Enterprise Class HDD Total HDD slot: 8 Free HDD slot: 2 Out-of-the-box storage: 20 TB after RAID 5 Out-of-the-box capacity without RAID: 24 TB (6x4 TB) **S1148 64 TB** Hot swappable Enterprise Class HDD Total HDD slot: 12 Free HDD slot: 4 Out-of-the-box storage: 56 TB after RAID 5 Out-of-the-box capacity without RAID: 64 TB (8x8 TB) **S1148 140 TB** Hot swappable Enterprise Class HDD Total HDD slot: 12 Free HDD slot: 0 Out-of-the-box storage: 120 TB after RAID 6 Out-of-the-box capacity without RAID: 144 TB (12x12 TB) [a]
RAID	**S1148 24 TB** Factory RAID level: 5 RAID levels: 0, 1, 5, 6, 10 **S1148 64 TB** Factory RAID level: 5 RAID levels: 0, 1, 5, 6, 10 **S1148 140 TB** Factory RAID level: 6 RAID levels: 0, 1, 5, 6, 10
Power	**S1148 24 TB** 2 x 495 W hot-plug redundant power supplies (included) (100-240 V AC, 6.5 - 3 A, 50/60 Hz) **S1148 64 TB** 2 x 750 W hot-plug redundant power supplies (included) (100-240 V AC, 10 - 5 A, 50/60 Hz) **S1148 140 TB** 2 x 750 W hot-plug redundant power supplies (included) (100-240 V AC, 10 - 5 A, 50/60 Hz)
Connectors	**Front side:** 1x USB 3.1 Type-C 2x USB 2.0 1x VGA **Rear side:** 2x USB 3.1 2x Ethernet (RJ45) 1 GbE 1x VGA 1x Serial port
Video	
Video streaming	Not intended for local viewing of video. Recommended to use AXIS desktop terminals.
Recording	Qualified for recording up to 64 video channels with a total recording rate up to 512 Mbit per second.
General	
Operating system	Microsoft® Windows® 10 IoT Enterprise SAC Built-in operating system recovery: yes Operating system drive: 240 GB SSD
Operating conditions	10 °C to 35 °C (50 °F to 95 °F) Humidity 20-80% RH (non-condensing)
Storage conditions	-40 °C to 65 °C (-40 °F to 149 °F)
Approvals	**EMC** EN 55032 Class A, EN 55024, EN 61000-3-2, EN 61000-3-3, FCC Part 15 Subpart B Class A, ICES-3(A)/NMB-3(A), RCM AS/NZS CISPR 32 Class A, VCCI Class A, KC KN 32 Class A, KC KN 35 **Safety** IEC/EN/UL 60950-1, EN 62368-1, NOM, BSMI, EAC
Dimensions	681 x 482 x 87 mm (26.82 x 19 x 3.43 in), 2U chassis
Weight	**S1148 24 TB** 20.3 kg (45 lb) **S1148 64 TB** 22.3 kg (49 lb) **S1148 140 TB** 26.5 kg (58 lb)
Included accessories	Rack rails, 2x C13 to C14 power cords for rack PDU (Wall plug power cords are not included)
Optional accessories	Axis desktop terminals For more accessories, see *axis.com*
Warranty	5-year warranty, see *axis.com/warranty*

a. *Prior to Q2 2020: 140 TB (14x10 TB)*

AXIS Camera Station

For details about AXIS Camera Station features and functions, see the AXIS Camera Station datasheet on *axis.com*

Environmental responsibility:

axis.com/environmental-responsibility

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AXIS COMMUNICATIONS

AXIS M3206–LVE Network Camera

Robust wide-angle surveillance in 4 MP with IR

AXIS M3206-LVE offers a wide-angle view in 4 MP for indoor and outdoor surveillance. This robust, IK10-rated fixed dome includes a weathershield and mounting bracket for easy installation. Featuring WDR and built-in IR illumination it delivers clear and sharp video even in challenging light or complete darkness. Devices can be connected to the I/O ports to trigger alarms or actions, and the input can be supervised. Plus, you can connect the HDMI port to a monitor for public viewing. Furthermore, Zipstream enhanced with H.264 or H.265 significantly lowers bandwidth and storage requirements.

> 4 MP video quality

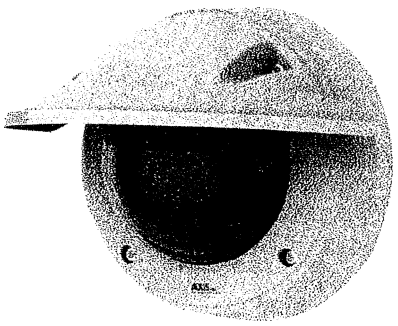
> WDR and IR illumination

> Wide-angle horizontal and vertical FOV

> I/O connectivity

> Zipstream and support for H.264/H.265





	and I/O Interface, Axis mounts and microphones, smoked dome, black casing For more accessories, see *axis.com*
Video management software	AXIS Companion, AXIS Camera Station, video management software from Axis Application Development Partners available at *axis.com/vms*
Languages	English, German, French, Spanish, Italian, Russian, Simplified Chinese, Japanese, Korean, Portuguese, Traditional Chinese
Warranty	5-year warranty, see *axis.com/warranty*

a. *This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit. (openssl.org), and cryptographic software written by Eric Young (eay@cryptsoft.com).*

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Datasheet

AXIS Q3518-LVE

Outdoor-ready fixed dome for solid performance in 4K

AXIS Q3518-LVE Network Camera is a vandal-resistant fixed dome for harsh environments with a weathershield protecting against sun, rain and snow. Thanks to its top-quality image sensor, Forensic WDR, Lightfinder technology, and OptimizedIR illumination, the camera provides unparalleled video quality in any light conditions. Electronic image stabilization is instrumental for smooth and steady video when the camera is subject to vibrations. AXIS Q3518-LVE offers redundancy between Power over Ethernet and DC power. Video analytics, supervised inputs and digital outputs further support the surveillance task.

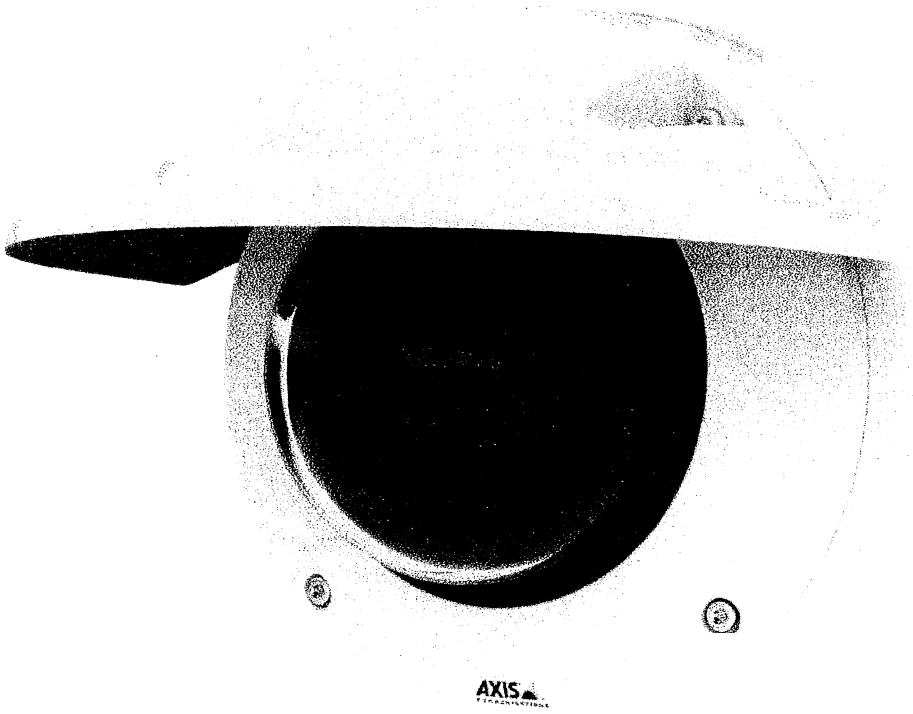
> 4K video at full frame rate

> Forensic WDR, Lightfinder, and OptimizedIR

> Axis Zipstream technology

> EIS and vandal resistance with IK10+ rating

> Power with redundancy and configurable I/O ports



AXIS Q3518-LVE

Camera

Image sensor	Progressive scan RGB CMOS 1/1.7"
Lens	Varifocal, 4.3-8.6 mm, F1.5 Remote focus and zoom, P-Iris control, IR-corrected Horizontal field of view: 93° – 48° Vertical field of view: 51° – 27°
Day and night	Automatically removable infrared-cut filter
Minimum illumination	**Color:** 0.15 lux at 50 IRE, F1.5 **B/W:** 0.03 lux at 50 IRE, F1.5 0 lux with IR illumination on
Shutter speed	1/28500 to 2 s
Camera angle adjustment	**Pan:** 360° **Tilt:** ±80° **Rotation:** ±175°

Video

Video compression	H.264 (MPEG-4 Part 10/AVC) Baseline, Main and High Profiles Motion JPEG
Resolution	3840x2160 to 160x120
Frame rate	25/30 fps with power line frequency 50/60 Hz
Video streaming	Multiple, individually configurable streams in H.264 and Motion JPEG Axis Zipstream technology in H.264 Controllable frame rate and bandwidth VBR/ABR/MBR H.264
Multi-view streaming	8 individually cropped-out view areas
Pan/Tilt/Zoom	Digital PTZ, Optical zoom, Preset positions
Image settings	Compression, color, brightness, sharpness, contrast, local contrast, white balance, day/night threshold, exposure control (including automatic gain control), defogging, exposure zones, fine tuning of behavior at different light levels, Forensic WDR: Up to 120 dB depending on scene, electronic image stabilization, dynamic text and image overlay, privacy masks, mirroring of images, rotation: 0°, 90°, 180°, 270°, auto, including corridor format

Audio

Audio streaming	Full-duplex
Audio encoding	24-bit LPCM 48 kHz, AAC LC 8/16/32/48 kHz, G.711 PCM 8 kHz, G.726 ADPCM 8kHz, Opus 8/16/48 kHz Configurable bitrate
Audio input/output	Input for external microphone or line-level device Line output Automatic gain control

Network

Security	Password protection, IP address filtering, IEEE 802.1X (EAP-TLS) network access control[a], HTTPS[a] encryption, digest authentication, user access log, centralized certificate management, brute force delay protection, signed firmware
Supported protocols	IPv4, IPv6 USGv6, HTTP, HTTPS[a], HTTP/2, SSL/TLS[a], QoS Layer 3 DiffServ, FTP, SFTP, CIFS/SMB, SMTP, Bonjour, UPnP™, SNMP v1/v2c/v3 (MIB-II), DNS, DynDNS, NTP, RTSP, RTP, SFTP, TCP, UDP, IGMPv1/v2/v3, RTCP, ICMP, DHCPv4/v6, ARP, SOCKS, SSH, SIP, LLDP, MQTT v3.1.1, Syslog

System integration

Application Programming Interface	Open API for software integration, including VAPIX® and AXIS Camera Application Platform; specifications at *axis.com* AXIS Video Hosting System (AVHS) with One-Click Connection One-click cloud connection ONVIF Profile G, ONVIF Profile S and ONVIF Profile T, specification at *onvif.org* Support for Session Initiation Protocol (SIP) for integration with Voice over IP (VoIP) systems, peer to peer or integrated with SIP/PBX
Event triggers	Analytics, supervised external inputs, virtual inputs through API, edge storage events, shock detection
Event actions	Record video: SD card and network share Upload of images or video clips: FTP, SFTP, HTTP, HTTPS, network share and email Pre- and post-alarm video or image buffering for recording or upload Notification: email, HTTP, HTTPS, TCP and SNMP trap Overlay text, external output activation, play audio clip, zoom preset
Data streaming	Event data
Built-in installation aids	Remote zoom, remote focus, pixel counter, leveling assistant, autorotation, straighten image

Analytics

Applications	Included AXIS Motion Guard, AXIS Fence Guard, AXIS Loitering Guard AXIS Video Motion Detection, active tampering alarm, audio detection Supported AXIS Perimeter Defender, AXIS Digital Autotracking Support for AXIS Camera Application Platform enabling installation of third-party applications, see *axis.com/acap*

General

Casing	IP66-, IP67-, IP6K9K- and NEMA 4X-rated, IK10+ (50 joules) impact-resistant casing with polycarbonate hard-coated dome, aluminum base and dehumidifying membrane Encapsulated electronics, captive screws Color: White NCS S 1002-B For repainting instructions of casing or skin cover and impact on warranty, contact your Axis partner.
Mounting	Mounting bracket with holes for junction boxes (double-gang, single-gang, 4" square, and 4" octagon) and for ceiling and wall mounting ¾" (M25) conduit side entry
Sustainability	PVC-free
Memory	1 GB RAM, 512 MB Flash
Power	Power over Ethernet (PoE) IEEE 802.3af/802.3at Type 1 Class 3, typical 7.1 W, max 12.6 W 8–28 V DC, typical 7.7 W, max 13.4 W Power redundancy
Connectors	RJ45 10BASE-T/100BASE-TX PoE, terminal block for two configurable supervised inputs / digital outputs (12 V DC output, max load 50 mA), 3.5 mm mic/line in, 3.5 mm line out, terminal block for DC input
IR illumination	OptimizedIR with power-efficient, long-life 850 nm IR LEDs Range 40 m (130 ft) or more, depending on the scene
Storage	Support for microSD/microSDHC/microSDXC card Support for SD card encryption (AES-XTS-Plain64 256bit) Support for recording to network-attached storage (NAS) For SD card and NAS recommendations see *axis.com*
Operating conditions	-50 °C to 60 °C (-58 °F to 140 °F) Start-up: -40 °C to 60 °C (-40 °F to 140 °F) Humidity 10–100% RH (condensing)
Storage conditions	-40 °C to 65 °C (-40 °F to 149 °F) Humidity 5–95% RH (non-condensing)
Approvals	**EMC** EN 55032 Class A, EN 50121-4, IEC 62236-4, EN 55024, IEC/EN 61000-6-1, IEC/EN 61000-6-2, FCC Part 15, Subpart B, Class A, ICES-003 Class A, VCCI Class A, RCM AS/NZS CISPR 22 Class A, KCC KN32 Class A, KN35 **Safety** IEC/EN/UL 62368-1, IEC/EN/UL 60950-22, IEC/EN 62471, IS 1352 **Environment** IEC 60068-2-1, IEC 60068-2-2, IEC 60068-2-6, IEC 60068-2-14, IEC 60068-2-27, IEC 60068-2-78 NEMA 250 Type 4X, IEC/EN 62262 IK10+ (50J), ISO 20653 IP6K9K IEC/EN 60529 IP66/67 **Network** NIST SP500-267
Dimensions	Height: 182 mm including weathershield ø 183 mm

Weight	2.0 kg (4.4 lb) including weathershield
Included accessories	Installation guide, Windows® decoder 1-user license, drill hole template, cable gaskets, I/O and DC connectors, connector guard, weathershield, Axis U-shape conduit adapter
Optional accessories	AXIS Q35 Smoked Dome A, AXIS Dome Intrusion Switch B, AXIS Multicable B I/O Audio Power AXIS Q35-VE Skin Cover A Black, AXIS ACI Conduit Adapter 3/4" NPS, AXIS T94M01D Pendant Kit including weathershield, AXIS T94M02L Recessed Mount, AXIS T8351 Microphone, Axis Mounts & Cabinets For more accessories, see *axis.com*
Video management software	AXIS Companion, AXIS Camera Station, video management software from Axis' Application Development Partners available at *axis.com/vms*
Languages	English, German, French, Spanish, Italian, Russian, Simplified Chinese, Japanese, Korean, Portuguese, Traditional Chinese
Warranty	5-year warranty, see *axis.com/warranty*

a. *This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit. (www.openssl.org), and cryptographic software written by Eric Young (eay@cryptsoft.com).*

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Datasheet

AXIS Q9216-SLV Network Camera

Impact-resistant anti-ligature camera

AXIS Q9216-SLV is a compact and robust ligature-resistant (anti-ligature) corner-mount camera that delivers 4 MP video quality. It covers 125 degrees horizontally and 95 degrees vertically, with no blind spots. Featuring invisible IR illumination, it's ideal for covert video surveillance in complete darkness. With an IK10+/IP66 rated casing, it also includes a removable built-in microphone and an indication LED. The camera has polygonal privacy masking, which allows for flexible coverage and helps ensure occupant privacy is respected. Furthermore, signed firmware and a Trusted Platform Module (TPM, FIPS 140-2 level 2 certified) help prevent unauthorized access and safeguard your system.

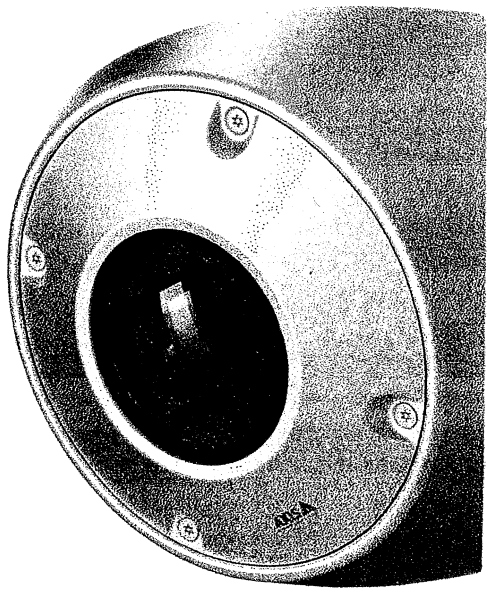
> Anti-ligature, robust (IK10+)

> Corner camera – no blind spots

> WDR and invisible IR (940 nm)

> Compact design – easy to install

> Zipstream supporting H.264 and H.265



Included accessories	Installation guide, Windows® decoder 1-user license, AVHS Authentication key, AXIS Device Microphone A, AXIS Connector A 4-pin 2.5 straight, cable gaskets, RESISTORX® 20 bit
Optional accessories	AXIS TQ9601 Conduit Top Box, AXIS T8645 PoE+ over Coax Compact AXIS Surveillance Cards For more accessories, see *axis.com*
Video management software	AXIS Companion, AXIS Camera Station, video management software from Axis Application Development Partners available at *axis.com/vms*
Languages	English, German, French, Spanish, Italian, Russian, Simplified Chinese, Japanese, Korean, Portuguese, Polish, Traditional Chinese
Warranty	5-year warranty, see *axis.com/warranty*

a. *This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit. (www.openssl.org), and cryptographic software written by Eric Young (eay@cryptsoft.com).*

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AXIS® COMMUNICATIONS

Installation of New Camera and Wiring

Kent County Detention Center

Project #KCDC 21-02

Bidder & Amount:

Talon Security and technical services **$94,184.00**

Po. Box 754, Trappe, MD. 21673

Wycliffe Enterprises, Inc. dba Wycliffe Technologies **$120,660.00**

4501 Forbes Blvd. Ste. H, Lanham Md. 20706

Vision Technologies LLC **$ 137,980.00**

6704 Curtis Ct. Glen Burnie, Md 21060

ShawnTech Communications, LLC **$167,076.05**

8521 Gander Creek Drive, Miami, OH 45342

MCA-DBA as S3 Integration **$151,024.27**

1530 Caton Center Dr. Suite N Balt. Md 21227

Montgomery Technology System, LLC **$ 201,500.00**

23 old Stage Rd, Greenville, Al 36037

THE COUNTY COMMISSIONERS OF KENT COUNTY, MARYLAND

REQUEST FOR PROPOSAL

KCDC 21-02

FOR

THE INSTALLATION OF
A NEW BUILDING CAMERA SYSTEM

AT THE

Kent County Detention Center
104A Vickers Drive
Chestertown, MD 21620

Director of Purchasing
400 High Street
Chestertown, Maryland 21620-1312

SCHEDULE

BID NUMBER # KCDC 21-02

Date	Step
May 13, 2021	Begin Newspaper Advertising; Mail/Email Notices to Bidders on Bid List; Post on eMaryland Marketplace Advantage.
May 26, 2021	10:00 a.m. Pre-bid meeting at the Kent County Detention Center, 104A Vickers Drive, Chestertown, MD.
June 9, 2021	10:00 a.m. Bid Opening at 709 Morgnec Road.
June 22, 2021	Tentative Award by County Commissioners.

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BID NUMBER # KCDC 21-02

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24. Termination of Contract
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21. Insurance
22. Immigration Law Compliance
23. Federal Taxpayer Identification Certificate (W-9)

SECTION C. SCOPE OF WORK, SPECIFICATIONS AND RELATED MATTERS

This section is for the using or requesting department or agency to specify in detail, including references to attachments, etc., the specifications, drawings, details, etc., to be included in the RFP/IFB. It has been prepared primarily by the using agency.

SECTION D. BID FORMS

INDEX OF BID FORMS

1. Standard Sealed Bid Price Sheet
2. Standard Sealed Bid Form
3. Bid Surety
4. Signature Form
5. Affidavit of Qualifications to Bid
6. Non-Collusion Certificate
7. General Terms and Conditions of Contract between County and Contractor

SECTION A. GENERAL MATTERS

1. Summary

The County Commissioners of Kent County, Maryland, a body corporate and politic and a political subdivision of the State of Maryland (the "County") is requesting proposals from qualified bidders to install a building security camera system at the Kent County Detention Center, located at 104A Vickers Drive, Chestertown Maryland 21620.

2. Issuing Office

Director of Purchasing
400 High Street
Chestertown, MD 21620-1312

Telephone #: (410) 778-4600
kentcounty@kentgov.org

The individual listed above shall serve as the "Director of Purchasing" and as the sole point of contact for purposes of this procurement.

3. Silence of Specification

The apparent silence of the specifications as to any detail, or the apparent omission from it of detailed description concerning any point, shall be regarded as meaning that only the best commercial practice is to prevail and only material and workmanship of the first quality are to be used. Proof of specifications compliance will be the responsibility of the vendor.

4. Preparation of Proposal

a. The bidder's proposal shall be written in ink or typewritten on the form provided.

b. If items are listed with a zero quantity, bidder shall state unit price **ONLY** (intended for open end purchases where estimated requirements are not known). The proposal shall show a total bid price for each item bid and the total bid price of the proposal, excluding zero quantity items.

5. Prices Quoted

The prices quoted are those for which the material will be furnished F.O.B. Destination and include all charges that may be imposed during the period of the contract.

6. Samples or Brochures

Samples or brochures may be required by the County for evaluation purposes. They shall be such as to permit the County to compare and determine if the item offered complies with the intent of the specifications.

7. Questions and Inquiries

All questions and inquiries regarding the terms of this RFP should be directed to the Director of Purchasing identified above prior to the pre-proposal conference.

Questions subsequent to the pre-proposal conference must be submitted in writing to the person below.

Please refer any questions to: Warden Herb Dennis
Kent County Detention Center
Phone: 410-778-6025
Email: hdennis@kentgov.org

Questions must be received by noon, June 2, 2021. A summary of questions and answers, including those addressed at the pre-proposal conference, will be distributed to all attendees of the pre-proposal conference and any others known to have received the bid documents.

Written responses shall be considered the official answers and shall supersede any verbal discussions. Verbal answers at or subsequent to the pre-proposal conference are not binding and reliance should not be placed on the same.

8. Submission Deadline and Instructions

All proposals must arrive at the Department of Public Works ("Bid Receipt Office") by June 9, 2021, at 10:00 A.M. in order to be considered. Requests for extension of this date or time will not be granted. Offerors mailing proposals should allow sufficient mail and internal delivery time to ensure timely receipt at the Bid Receipt Office. Proposals or unsolicited amendments to proposals arriving after the closing date and time will **NOT** be considered.

Bidders are cautioned that bids mailed, shipped express, by courier, or hand delivered to arrive the day of the bid opening must be in the hands of the Bid Receipt Office no later than 10:00 a.m. on the date specified. Bids received later than that time will be returned unopened. Please check your method of delivery to see if it conforms to this requirement. Proposals must be mailed, shipped, or hand delivered to the address below:

Director of Purchasing

Bid Receipt Office
Kent County Department of Public Works
709 Morgnec Road
Chestertown, Maryland 21620

BIDDERS ARE ADVISED THAT MAIL IS DELIVERED ONCE A DAY, AND USUALLY ARRIVES AFTER THE TIME SPECIFIED FOR BID DELIVERY ON THE APPLICABLE DATE.

BIDS WILL NOT BE ACCEPTED AT ANY OTHER LOCATION.

THE COUNTY WILL NOT BE RESPONSIBLE FOR ANY BIDS DELIVERED TO ANY OTHER LOCATION THAN THE BID RECEIPT OFFICE WHETHER SUCH OTHER LOCATION IS A COUNTY OFFICE OR OTHERWISE.

All proposals must be in a sealed envelope with the following information clearly printed on the outside:

THIS IS A SEALED BID PROPOSAL FOR

KENT COUNTY – KCDC 21-02.

Please note that if a bid is mailed, sent by messenger service, or delivered by commercial carrier (e.g. FEDEX, UPS, etc.). **THE OUTSIDE ENVELOPE, AS WELL AS THE INSIDE ENVELOPE, IF ANY, MUST CONTAIN THE LEGEND SHOWN ABOVE**. County staff receives many items by such services and if the legend does not appear a response may be misrouted or delayed in opening. The bidder takes full responsibility for the legend and THE COUNTY WILL NOT DEEM A BID AS TIMELY RECEIVED, EVEN IF RECEIVED ON TIME, IF OPENED LATER THAN THE DEADLINE DUE TO LACK OF THE APPROPRIATE LEGEND ON THE MAILER/OUTSIDE ENVELOPE.

9. Duration of Offer

Unless otherwise specified by the County, proposals submitted in response to this solicitation are irrevocable for 90 days following the closing date. This period may be extended only with the offeror's written agreement.

10. Withdrawal of Proposals

A bidder may withdraw its proposal unopened after it has been deposited, if such a request is made prior to the time set for the opening of the proposal.

11. Public Inspection of Proposals

If the bidder designates a portion of its bid as confidential, it shall isolate and identify in writing the confidential portions. The bidder shall include with this designation a statement

that explains and supports for firm's claim that the bid items identified as confidential contain trade secrets or other proprietary data.

12. Changes in Contract Documents

Changes to contract documents shall be made only in writing, and copies will be emailed, faxed, or mailed to all known prospective bidders. The County assumes no responsibility for verbal instructions or interpretations. The contract documents contain the provisions required for the contract. Information obtained from an officer, agent, or employee of the County or any other person shall not affect the risks or obligations assumed by the bidder or relieve him of fulfilling any of the conditions of the contract.

13. Revisions to the RFP

If it becomes necessary to revise this RFP, amendments will be provided to all prospective offerors that were sent this RFP or otherwise are known by the Director of Purchasing to have obtained this RFP. Acknowledgment of the receipt of all amendments will be required.

14. Cancellation of the RFP; Rejection of All Proposals

The County may cancel this RFP, in whole or in part, or may reject any/all proposals submitted in response whenever this action is determined to be in the best interest of the County. Kent County shall have no liability or obligation to any of the proposers preparing or submitting proposals under this RFP.

15. Proposal Acceptance; Discussions

The County reserves the right to accept or reject any and all proposals, in whole or in part, received in response to this RFP, to waive or permit cure of minor irregularities; and to conduct discussions with all qualified offerors in any manner necessary to serve the best interests of the County. The County also reserves the right, at its sole discretion; to award a contract based upon the written proposals received without prior discussions or negotiations.

16. Disqualification of Bidders

Any one or more of the following causes may be considered as sufficient for the disqualification of a bidder and the rejection of its proposal or proposals:

A. More than one proposal for the same contract from an individual, firm, or corporation under the same or different names.
B. Evidenced of collusion among bidders.
C. Unsatisfactory performance record as evidenced by past experience.
D. If the unit prices are obviously unbalanced either in excess or below reasonable cost analysis values.
E. If there are any unauthorized additions, interlineation, conditional or alternate bids or irregularities of any kind which may tend to make the proposal incomplete,

indefinite, or ambiguous as to its meaning.

F. Non-attendance of mandatory pre-bid meetings may be cause of disqualification.

17. Bid Opening

All bids will be opened and publicly read by designated County staff at 10:00 a.m., June 9, 2021, Kent County Department of Public Works, 709 Morgnec Road, Chestertown, Maryland. Bidders and other interested parties are invited to attend these public forums.

18. Omission of Specifications

The omission of a bidder of any of any specifications, or details of any specifications which would normally apply to the products of service herein stated, shall not relieve the bidder from fulfilling those required specifications needed to provide an end product best suited to the intended purpose. The best commercial practices are to prevail, and only materials of first quality, correct type, size, and design are to be used.

Workmanship shall be of first quality. All parts and materials, whether specified herein or not, shall be rated to meet or exceed the maximum rating required by the product or service and its maximum intended purpose.

19. Incurred Expenses

The County will not be responsible for any costs incurred by an offeror in preparing and submitting a proposal in response to this RFP.

20. Compliance with Law

By submitting an offer in response to this RFP, the offeror, if awarded the contract, agrees that it will comply with all federal, state, and local laws applicable to its activities and obligations under the contract.

21. Acceptance of Terms and Conditions

By submitting a response to this RFP, an offeror shall be deemed to have accepted all the terms, conditions, and requirements set forth in this RFP unless otherwise clearly noted and explained in its proposal. All proposals submitted in response to this request for Proposal become the property of the County. ***All County agreements are subject to the County's General Terms and Conditions unless otherwise specifically changed or waived hereunder or in the Contract.***

22. Term

Any contract(s) resulting from this procurement will be for the stated period; provided, however, that all contracts are subject to non-appropriations and termination for convenience

clauses.

23. Failure To Deliver or Perform

In the event the offeror fails to deliver the goods or services covered by the contract and in accordance with the delivery dates stipulated in the contract, the County reserves the right to purchase on the open market those goods and services which the offeror has failed to deliver and shall deduct any additional costs incurred by the County as a result of such failure to deliver, from any money due the offeror under the contract or other contracts with the County.

24. Termination of Contract

The County reserves the right to cancel the contract entered into as a result of this bid if, in its opinion, there shall be a failure on the part of the offeror at any time to perform faithfully any of the contract requirements. Should the offeror fail to comply with contract requirements, except for circumstances beyond it control, such as, but not limited to an Act of God, war, flood, and governmental restrictions, the County reserves the right to purchase the required goods or services in the open market and charge the offeror with any excess costs, or to complete the required work or obtain the required goods at the expense of the offeror and to withhold any monies that may be due or become due and apply same to any expenses or excess costs incurred to the County.

The County may terminate this agreement at any time, for any reason, and shall be liable only for time and costs incurred as of the date of termination.

25. Changes to the Contract

The County may at any time make changes within the general scope of the contract in the design or specifications of the services to be delivered. The contract shall be modified in writing to reflect any equitable adjustment caused by any increase or decrease in the offeror's cost or time required for performance or change in scope of service. The County reserves the right to increase or decrease quantities and/or projects at their discretion.

26. Agreement/Contract

Any agreement or contract resulting from the acceptance of a Proposal shall be on forms either supplied by or approved by the County and shall contain, as a minimum, applicable provisions of the Request For Proposal. The County reserves the right to reject any agreement that does not conform to the Request For Proposal and any County requirements for agreements and contracts.

27. Contract and Related Data

No reports, information or data given to or prepared by the County under the contract shall be made available to any person by the firm without the prior written approval of the County.

28. Contract Award

It is the intent of the County to award a contract to the lowest qualified responsible and responsive bidder within 30 calendar days following bid opening; however, the County requires bidders, by signing the "Standard Bid Acceptance" form to guarantee their bid for a period of 90 days following the bid opening date. The County reserves the right to reject any and/or all bids.

The County also reserves the right to negotiate further the terms of the contract, including the award amount, with the selected bidder prior to entering into a contract. If contract negotiations cannot be concluded successfully with the selected bidder, the County may negotiate a contract with the next selected bidder, and so on. The County reserves the right to negotiate with the bidder whose proposal is the closest to being acceptable or to seek additional proposals after the proposal date. The County reserves the right to waive any irregularities and technicalities and may, at its discretion, request a follow-up or amended proposal.

29. Contract Extension

There is no anticipated contract extension required for this project.

30. Contract Documents

The Contract Documents shall include this RFP, Schedule, Information to Bidders, Bid Forms, Specifications, Drawings, Addenda, the County General Terms and Conditions, the resulting contract, and any other documents which are clearly intended to be a part of the terms, conditions, requirements, and specifications for the subject products or services.

31. Kent County Purchasing Code

All County purchases are subject to and to be accomplished in accordance with Chapter 49 of the CPLL. Bidders should familiarize themselves with Chapter 49. A copy of Chapter 49 may be obtained from the Clerk to the County Commissioners, 410-778-4600 and available online through the County's web site at http://www.kentcounty.com/

32. Termination for Convenience

Contracts shall remain in effect for the time period and quantity specified unless the contract is terminated by the County. The County may terminate the contract at any time by giving written notice of such termination and specifying the effective date thereof, at least thirty (30) days before the effective date of termination.

33. Termination for Cause

If, for any reasons, or through any cause, the Contractor fails to fulfill in a timely and proper manner its obligations under this Contract, or if the Contractor violates any of the covenants,

agreements, or stipulations of this Contract, the County shall thereupon have the right to terminate this contract by giving written notice to the Contractor of such termination and specifying the effective date thereof, at least five (5) days before the effective date of such termination. In the event, all finished or unfinished documents, data, studies, surveys, drawings, maps, models, photographs, and reports or other material prepared by the Contract under this Contract shall, at the option of the County, become its property, and the Contractor shall be entitled to receive just and equitable compensation for any satisfactory work completed on such documents and other materials which is usable to the County.

34. Non-discrimination

The County is an equal opportunity employer. The County complies with Title VI of the Civil Rights Act of 1964, which provides that no person shall be denied on the grounds of race, color, or national origin, be excluded from, be denied the benefits of, or discriminated against under any program or activity receiving Federal financial assistance. **Each bidder shall verify through execution of the bid form that it does not discriminate on the basis of race, color, creed, religion, gender, age, lawful sexual orientation, marital status, national origin, or on any other basis generally prohibited by any federal, State, or local law, rule, or regulation.**

35. Kent County Ethics Ordinance

By submitting a bid in response hereto, the bidder acknowledges that it is familiar with the County's Code of Ethics, CPLL, Chapter 29, and certifies that it has no knowledge of any violation of that Chapter, that it has no knowledge of any conflict of interest which may exist or arise under Chapter 29 if the bidder is awarded a contract, and that it has not given any gift (as that term is defined in Chapter 29) to anyone who has or may participate in the awarding of this contract or the management or supervision thereof. Contact the County's Attorney Office at 410-810-0428 if any additional information is required. A copy of Chapter 29 may be obtained from the Clerk to the County Commissioners, 410-778-4600 and available online through the County's web site at http://www.kentcounty.com/

SECTION B. BID PROPOSALS AND RELATED MATTERS

1. Pre-Proposal Conference

A pre-proposal conference will be held on May 26, 2021 beginning at 10:00 a.m. in the meeting room, Kent County Detention Center, 104A Vickers Drive, Chestertown, Maryland 21620. All interested offerors are urged to attend. Nothing stated at the pre-bid conference may change the invitation for bids unless the Director of Purchasing makes a change by written amendment.

2. Presentation

Offerors may be required to make individual written or oral presentations to the County

representatives in order to clarify their proposals.

3. Proposal Form

Proposals should be prepared simply and economically, providing a straightforward, concise description of the offeror's proposal for meeting the requirements of this procurement.

4. Bid Forms

All Bids must be made on the required bid forms. All blank spaces for bid prices must be completed in ink or typewritten, and the bid form must be fully completed and executed when submitted. Unless otherwise specifically required, only one copy of the bid form is required. A conditional or qualified bid will not be accepted. The base price on the bid form shall be the total cost of the item being bid in accordance with the specifications in the RFP. Alternates shall only be used to reflect increases or decreases in the base bid price. Only those alternates, which are specifically requested by the County will be considered.

5. Bid Notice Disclaimer

The mailing of bid solicitations (notices) to incumbent and/or potential vendors of goods and services is a courtesy extended by the County, as well as a method for generating interest among vendors. For purposes of bidding opportunities, generally, interested vendors should rely on the public notices published in the newspapers of general circulation in Kent County and the eMaryland Marketplace.

6. Bid Surety

All bids shall be accompanied by a Bid Surety in the form of a certified check, or bid bond, made payable to the County Commissioners of Kent County, Maryland for the penal sum of 5% of the bid price. Bid Surety will be returned to all bidders upon completion of the contract award process, with the exception of the successful bidder. Non-Performance or failure to sign the contract within ten (10) working days after the award, or later within the bid guarantee period at the discretion of the County, or withdrawal of a bid subsequent to opening but prior to award, shall result in forfeiture of the Bid Surety. Any Bid Surety and related forms and instruments required must be executed and attached to submittal.

7. Waiver of Technicalities

The County reserves the right to waive formalities or technicalities in bids as the interest of the County may require in accordance with the terms of the County's Purchasing Ordinance, Chapter 49, Code of Public Local Laws of Kent County, Maryland ("CPLL").

8. Basis of Award

All responsive proposals from responsible bidders will be eligible for contract award, based on the following:

A. Lowest price from a responsive and responsible bidder as indicated by the total price on the bid form.

B. Compliance with specifications.

C. Compliance with terms of bid package.

D. Ability to perform or deliver on time.

E. Firm experience and references.

The County may undertake such investigations or inquiries as it deems necessary to determine the ability of the bidder to perform the work, and the bidder shall furnish County with all requested information and data for this purpose.

9. Modification or Withdrawal of Bids

A. Pre-Opening Modification or Withdrawal of Bids

Bids may be modified or withdrawn by written notice received by the Clerk to the County Commissioners before the time and date set for bid opening.

B. Disposition of Bid Bond

If a bid is withdrawn in accordance with this regulation, the Bid Bond, if any, shall be returned to the Bidder.

C. Late Bids, Late Withdrawals, and Late Modifications

Any bid and any request for Withdrawal or Modification received after the time and date set for receipt and opening of bids is late and will be disregarded.

10. Performance and Payment Bonds

In accordance with the specifications, the selected bidder will be required to furnish a Performance Bond and a Payment Bond each in an amount of one hundred percent (100%) of the contract price. The successful bidder shall be required to furnish the bond(s) at the time of the execution of the contract. Where attorneys-in-fact sign bid, payment, and/or performance bonds bidders must provide with each bond a certified and effective dated copy of their Power of Attorney. The bidder to whom the contract is awarded will be required to execute the contract and obtain the requisite bonds within ten (10) calendar days from the date when Notice to Award is delivered by the County to the bidder.

11. Substitutions

The material, products, and equipment described in the bidding documents establish a standard of required function, dimension, appearance, and equality to be met by any proposed substitution, unless specifically stated otherwise. No substitutions will be considered prior to receipt of the bids unless a written request for approval has been received at least ten (10) days prior to the receipt of bids. Each such request shall include the name of material or equipment for which a substitution is proposed and a complete description of the proposed substitute including drawings, cuts, performance, test data, and any other information necessary for evaluation.

12. Alternates

An alternate is a dollar amount to be added to or subtracted from the base bid price. The County may request alternate prices to compare various options that may be in their best interest. The County shall have the right to accept alternates in any order or combination, and to determine the low bidder on the basis of the base bid and alternates accepted.

13. Addenda

Addenda, if any, will be emailed, mailed or delivered to all that are known to have received a complete set of bidding documents and will be posted on the eMaryland Marketplace Advantage. Copies of Addenda will be made available for inspection wherever bidding documents are on file for that purpose. No addenda will be issued later than three (3) days prior to the date for receipt of bid, except an Addendum withdrawing the request for bids or one which includes postponement of the date for receipt of bids.

14. Trade and Brand Names

Unless specifically provided otherwise in an RFP, the use of or references to any trade or brand names in this bid package shall be solely for the purpose of establishing a standard, and shall in no way infer that other trade and brand names will not be acceptable.

15. Product Literature

Bidders shall include with their bid submittal literature detailing make, model, and specifications of the product which they are bidding, if applicable.

16. Exceptions to Bid Specifications

Any bidder taking an exception to the stated specifications or requirements must make such exceptions clear and in writing, and shall attached such exceptions to, or include them in, the sealed bid proposal. This section is not to be construed to mean that the county is obligated to accept any such exception. **THE COUNTY IS NOT OBLIGATED TO ACCEPT ANY BID NOT IN CONFORMANCE WITH BID SPECIFICATIONS AND MAY REJECT SUCH BIDS WITHOUT COMMENT OR REVIEW. BIDDERS TAKING SUCH EXCEPTIONS DO SO AT THEIR OWN RISK.**

17. Time of Delivery

The Contractor, after receipt of written notice of the award of the contract and receipt of the purchase order, shall diligently prosecute same so that it will be fully completed within the number of consecutive calendar days stated in the proposal. Calendar days for completing delivery of the bid items shall start from the date of notice of said award and purchase order.

18. Default in Contracting

Should the bidder to whom the contract is awarded fail, or be unable, to execute the contract for any reason, within seven (7) calendar days after notification of award, then an amount equal to the difference between the accepted bid price and that of the next highest bidder shall be forfeited to the owner as liquidated damages.

19. Payment Terms

Payment will be made only for properly approved invoices supported by adequate information and details enabling the County to make a determination that the appropriate level of performance has been reached, including invoices for materials actually delivered and services actually performed. Otherwise, payment will not be made. Invoices must include the period covered and a detailed listing of the items included in the invoice, which shall be subject to the review of the County. Invoices shall be submitted monthly (for ongoing projects or orders) or within 30 days of delivery or completion (for single service or delivery contracts) by paper or by electronic invoice (via fax or email). Approved payment shall be made to the contractor within forty five (45) calendar days of receipt of an acceptable invoice. Payment will be made upon successful submission and approval of services. Invoices shall be mailed directly to the designated Contract Administrator.

20. Kent County Substance Abuse Policy

The County adopted the "Kent County Government Substance Abuse Policy," to which policy the successful bidder must strictly adhere. Prospective bidders are cautioned to make themselves familiar with the policy. **Bidders must state on the "Standard Bid Form" whether or not you have a drug abuse program in effect.**

21. Insurance

Prior to execution of this contract, the successful bidder shall submit a "**Certificate of Insurance**" indicating it carries the specified insurances in the amount specified in this RFP. Coverages shall be maintained throughout the term of the contract. Unless otherwise specified, coverage levels shall be required as follows:

A. Professional malpractice, negligence, and errors and omissions coverage in minimum amounts of $2,000,000.00 per event and $1,000,000.00 per person.

B. General Liability - Minimum - $2,000,000.00

C. Workers' Compensation Insurance as required as law.

D. Comprehensive Liability Insurance with minimum limits of $1,000,000.00 per person, $2,000,000.00 per occurrence. Policy shall include the broad form of Comprehensive General Liability Endorsement or its equivalent.

E. All required coverages shall include and specifically name the County as an additional insured and loss payee with respect to all operations under the contract.

F. The successful bidder will furnish the County any up-to-date certificates of insurance stating the requirements listed above at contract implementation.

22. Immigration Law Compliance

By submitting and signing a proposal, each bidder hereby certifies that it does not, and if awarded the contract, will not during the performance of the contract, employ illegal workers or otherwise violate any provisions of any applicable federal, State, or local law concerning the employment of illegal aliens, the certification of nationality of workers, or otherwise.

23. Federal Taxpayer Identification Certificate (W-9)

All first time successful bidders doing business with the County must submit a completed standard "Federal Taxpayer Identification Certificate – W-9".

SECTION C. SCOPE OF WORK, SPECIFICATIONS AND RELATED MATTERS

RFP # KCDC 21-02

INSTALLATION OF A COMPLETE BUILDING SECURITY CAMERA SYSTEM

It is the intent of these specifications to cover all aspects of the installation of a complete building security camera system that replaces the existing camera system at the Kent County Detention System, 104A Vickers Drive, Chestertown, MD. The new camera system shall provide, at a minimum, the same visual coverage as the existing system. The new system shall include all equipment listed in this proposal as the minimum necessary for a complete system. Any incidental work required to fulfill the requirements of the specified work shall be considered a part of said specified work and no additional payment shall be made.

All work shall be performed in accordance with the prevailing code for the trade or trades involved and shall be done in a first-class workmanship manner.

Inferior or shoddy workmanship or materials will not be tolerated nor accepted for payment. It shall be fully understood that the Kent County Detention Center Warden shall make the final decision as to the acceptance of all work and material and that in the event of an adverse decision, no claim of any sort shall be made against the county or any of its employees, agents or assigns.

All work shall be performed in accordance with the following:

1. Kent County Building Code
2. "The B.O.C.A. Basic Building Code", latest edition, with all revisions.
3. National Fire Protection Association Standards, latest edition.
4. "Life Safety Code".
5. Americans with Disabilities Act.
6. All applicable Federal, State and local regulations.

SUBSTITUTIONS

Whenever a material, method of construction, article or piece of equipment is identified on the plans or specifications by reference to brand name or catalog numbers, it shall be understood that this is referenced for the purpose of defining the scope of work, performance or other salient requirements and that other materials, methods of construction, or products of equal capacities, quality and function shall be considered. The contractor may recommend the substitution of a material, method of construction, article or piece of equipment of equal substance and function for those specified herein, if in the opinion of the county, such substitution is of equal substance and function to that specified. The contractor warrants that if substitutes are approved, no major changes in the function or general design of the project will

result. Incidental changes or extra component parts required to accommodate the substitute will be made by the contractor without a change in the contract price or contract time.

BACKGROUND INFORMATION

Kent County Detention Center is located at 104A Vickers Drive. Chestertown Md. 21620. The existing security cameras are located throughout the entire Detention Center interior and exterior for surveillance from the facility Control Room. The video information provided by the security camera system is utilized by the State's Attorney, Public Defender, private attorneys and law enforcement for court proceedings. The camera system is used by the facility's internal investigator.

GENERAL SCOPE OF WORK

The general scope of work includes the replacement of the existing interior and exterior camera system, including all interior wiring. Replacement shall include installation of 47 new cameras, installation of the network video recorder, viewing stations, monitors, UPS and full on-site testing of all equipment. The successful bidder shall also provide all necessary system customization, demonstration, and training on the features and operation of the network video recorder.

It shall be the responsibility of all bidders to visit the site and verify existing conditions.

SECURITY CAMERA SYSTEM SPECIFICATIONS

The following specifications are the minimum requirements for the camera system and shall not be construed to be an all-encompassing set of camera system specifications. It shall be the bidder's responsibility to include all necessary items to provide a complete control system panel project.

1. General. The system shall include the following items as a minimum.
    a. New security camera system to replace the existing camera system.
    b. Camera system wiring.
    c. 37 Axis M3206-LVE 4MP Vandal Resistant IR Dome Cameras, or approved equal.
    d. 3 Axis Q8414-LVS 1.3MP Vandal Resistant IR Dome Cameras w/Audio, or approved equal.
    e. 7 Axis Q3518-LVE 4K 8MP 130' IR Dome Cameras, or approved equal.
    f. 1 64TB Axis Video Server, or approved equal.
    g. 2 Axis Client Machines w/Windows 10, or approve equal.
    h. 3 Articulating TV brackets.
    i. 3 43" Color TVs.
    j. 3 24" Color Monitors
    k. 4 2-Wire Network Convertors
    l. 1 48 Port POE Switch.

2. Electrical Requirements.
    a. Provide uninterrupted power supply entire camera system.
    b. Replace all camera wiring except to outside poles.

3. Training
    a. Selected bidder shall provide system training to all staff members. This may require multiple training sessions depending on staff availability.

4. Maintenance
    a. The selected bidder must be able to provide system maintenance 24 hours/day 7 days/week after the system is installed.

EXPERIENCE

In addition to the bid price, bidders shall submit evidence of their experience and qualifications as it relates to this project. References shall also be provided with current contact information. Past performance, staff qualifications and availability and other resources will be major criteria in the review of proposals.

COMPLETION TIME

This project must be completed within 90 calendar days after issuance of the Notice to Proceed.

WARRANTY

The contractor shall provide a one (1) year labor and five (5) year parts warranty.

AWARD

The successful bidder shall be selected based upon a review of qualifications, experience, and price. The decision of the County Commissioners of Kent County shall be final. The County Commissioners of Kent County reserve the right to accept or reject any or all proposals should it be in the best interest of the county to do so.

SECTION D. BID FORMS

BID NUMBER KCDC 21-01

1. Standard Sealed Bid Price Sheet
2. Standard Sealed Bid Form
3. Bid Bond
4. Signature Form
5. Affidavit of Qualifications to Bid
6. Non-Collusion Certificate

STANDARD SEALED BID PRICE SHEET

BID NUMBER KCDC 21-02

County Commissioners of Kent County, Maryland:

We hereby submit, for your review, our proposal requested by the RFP. This proposal includes and incorporates all information and specifications, which are contained in the Contract Documents, as described in the RFP, the same as if specifically written herein. A completed, signed, and accepted copy of this Standard Sealed Bid Form shall serve as a valid and binding contract.

TOTAL BID PRICE $_____.

To begin work as specified in the "Notice to Proceed" and to prosecute said work to complete the contract within 90 calendar days.

Drug Abuse Policy In Effect (Circle One)	**YES**	**NO**
Insurance certificate attached (Circle One)	**YES**	**NO**
Bid Surety Attached? (Circle One)	**YES**	**NO**
Signature form executed? (Circle One)	**YES**	**NO**
Affidavit of qualification to bid? (Circle One)	**YES**	**NO**
Non-collusion certificate (Circle One)	**YES**	**NO**

STANDARD SEALED BID FORM

BID NUMBER KCDC 21-02

BIDDER:

AGENT (TYPED): _____

FIRM Name: _____

ADDRESS: _____

_____

TELEPHONE: _____

EMAIL: _____

FAX #: _____

Submitted by: _____
(Signature of authorized agent above)

_____, **this** _____ **day of** _____ **2021.**

BID SURETY

KNOWN ALL MEN BY THESE PRESENTS, that we the undersigned, _____,
as principal, and _____
as surety, are hereby held and firmly bound unto the County Commissioners of Kent County AS OWNER in the penal sum of _____ for the payment of which, well and truly to be made, we hereby jointly and severally bind ourselves, successors and assigns.

The condition of the above obligation is such that whereas the Principal has submitted to the County Commissioners of Kent County a certain BID, attached hereto and hereby made a part of hereof to enter into a contract in writing, for the _____
_____
_____

NOW, THEREFORE,

a) If said BID shall be rejected, or

b) If said BID shall be accepted and the principal shall execute and deliver a contract in the form of Contract attachment hereto (properly completed in accordance with said BID) and shall furnish a BOND for his faithful performance of said contract, and for the payment of all persons performing labor, furnishings, materials, in connection therewith, and shall in all other respects perform the agreement created by the acceptance of said BID, this obligation shall be void, otherwise the same shall remain in force and effect; it being expressly understood and agreed that the liability of the Surety for any and all claims hereunder shall, in no event, exceed the penal amount of the obligation as herein stated.

The Surety, for value received, hereby stipulated and agrees that the obligations of said Surety and its BOND shall be in no way impaired or affected by any extension of the time within which the OWNER may accept such BID, and said Surety does hereby waive notice of any such extension. IN WITNESS WHEREOF, the Principal and Surety have hereunto set their hands and seals, and such of them as are corporations have caused their corporate seals to be hereto affixed and these presents to be signed by their proper officers, the day and year first set forth above.

_____ _____
Principal Surety

By: _____ By: _____

IMPORTANT: Surety companies executing BONDS must authorized to transact business in the State of Maryland.

SIGNATURE FORM

NAME OF BIDDER: _____

SIGNATURE OF AUTHORIZED PERSON: _____

PRINT AUTHORIZED PERSON: _____

TITLE OF AUTHORIZED PERSON: _____

STREET NAME AND NUMBER: _____

CITY, STATE, ZIP CODE: _____

TELEPHONE NUMBER: _____

FAX _____

E-MAIL _____

DATE: _____

BIDDERS FEDERAL EMPLOYERS IDENTIFICATION NO. _____

BIDDERS CONTRACTORS LICENSE AND PERMIT NUMBERS:

_____

_____

_____

_____

_____

AFFIDAVIT OF QUALIFICATION TO BID

I HEREBY AFFIRM THAT

1. I am the (Title) _____ and the duly authorized representative of the firm of (Name of Corporation) _____ whose address is _____ and that I possess the legal authority to make this affidavit on behalf of myself and the firm for which I am acting.

Except as described in paragraph 3 below, neither I nor the above firm, nor to the best of my knowledge, any of its officers, directors, or partners, or any of its employees directly involved in obtaining contracts with the State of any county, bi-county, or multi-county agency, or subdivision of the State, have been convicted of, or have pleaded no contender to a charge of, or having during the course of an official investigation or other proceeding, admitted in writing or under oath, acts or omissions which constitute bribery, attempted bribery, or conspiracy to bribe under the provisions of Criminal Law Article of the Annotated Code of Maryland, or under the laws of any state or the Federal government.

2. (State "none", or as appropriate, list any conviction, plea, or admission described in paragraph 2 above, with the data: court, position with the firm, and the sentence or disposition, if any) _____

_____

_____

I acknowledge that this affidavit is to be furnished to the County Attorney for the County Commissioners of Kent County, and where appropriate, to others. I acknowledge that, if the representations set forth in this affidavit are not true and correct, the County Commissioners of Kent County may terminate any contract awarded and take any other appropriate action. I further acknowledge that I am executing this affidavit in compliance with Section 16D of Article 78A of the Annotated Code of Maryland, which provides that certain persons who have been convicted of, or have admitted to bribery, attempted bribery, or conspiracy to bribe may be disqualified, either by operation of law or after hearing, from entering into contracts with the State or any of its agencies or subdivisions.

I do solemnly declare and affirm under the penalties of perjury that the contents of this affidavit are true and correct.

Signature _____ Date _____

NON-COLLUSION CERTIFICATE

I HEREBY CERTIFY I am the _____
(Title)

and the duly authorized representative of the firm of _____

_____

whose address is _____

_____

AND THAT NEITHER I, nor to the best of my knowledge, information, and belief, the above firm, nor any of its other representatives I here represent, have:

a. Agreed, conspired, connived, or colluded to produce a deceptive show of competition in the compilation of the bid, or offer being submitted herewith.

b. Not in any manner, directly or indirectly, entered into any agreement, participated in any collusion to fix the bid price or price proposal of the bidder, or offer of herein or any competitor, or otherwise taken into action in restraint of free competition bidding in connection with the Contract for which the within bid or offer is submitted.

In making this affidavit, I represent that I have personal knowledge of the matters and facts herein stated.

_____ _____
Date Signature

_____ _____
Date Print Name or Type

GENERAL TERMS AND CONDITIONS OF CONTRACT
BETWEEN COUNTY AND CONTRACTOR

("General Conditions")

1. ACCOUNTING SYSTEM AND AUDIT, ACCURATE INFORMATION

The Contractor certifies that all information the Contractor has provided or will provide to the County is true and correct and can be relied upon by the County in awarding, modifying, making payments, or taking any other action with respect to this contract including resolving claims and disputes. False or misleading information constitutes grounds for the County to terminate this contract for cause and to pursue any other appropriate remedy. The Contractor certifies that the Contractor's accounting system conforms to generally accepted accounting principles, is sufficient to comply with the contract's budgetary and financial obligations and is sufficient to produce reliable financial information.

The County may examine the Contractor's and any first-tier subcontractor's records to determine and verify compliance with the contract and to resolve or decide any claim or dispute arising under this contract. The Contractor and any first tier subcontractor must grant the County access to these records at all reasonable times during the contract term and for three (3) years after final payment (or for such longer period as may be required pursuant to any federal, state, or other loan or grant condition). If the contract is supported to any extent with federal or state funds, the appropriate federal or state authorities may also examine these records. The Contractor must include the preceding language of this paragraph in all first-tier subcontracts.

2. AMERICANS WITH DISABILITIES ACT

The Contractor agrees to comply with the nondiscrimination requirements of Titles II and III, and other provisions, of the Americans with Disabilities Act of 1990, Pub. Law 101-336, as amended, currently found at 42 U.S.C., § 12101, et seq.

3. APPLICABLE LAWS

This contract must be construed in accordance with the applicable laws, rules, and regulations of the State of Maryland (without regard to its conflicts of laws principles) and of Kent County. All Kent County laws, rules, and regulations are incorporated by reference into, and made a part of, this contract. In the case of any inconsistency between this contract and such laws, rules, and regulations, the laws, rules and regulations shall govern. The Contractor must, without additional cost to the County, pay any necessary fees and charges, obtain any necessary licenses and permits, and comply with applicable federal, state and local laws, codes and regulations. For purposes of litigation involving this contract, except for contract Disputes discussed in paragraph 8 below, exclusive venue and jurisdiction must be in the Maryland State courts located in Kent County, Maryland.

4. ASSIGNMENTS AND SUBCONTRACTS

The Contractor may not assign or transfer this contract, any interest herein or any claim hereunder, except as expressly authorized in writing by County's DIRECTOR OF PURCHASING, or as otherwise specifically provided for in the contract. Unless performance is separately and expressly waived in writing by the DIRECTOR OF PURCHASING, an assignment does not release the Contractor from responsibility for performance of this contract. Unless otherwise provided in the contract, the Contractor may not contract with any other party for furnishing any of the materials or services herein contracted for without the written approval of the DIRECTOR OF PURCHASING.

5. CHANGES

The DIRECTOR OF PURCHASING may unilaterally change the work, materials and services to be performed, in accordance with County law, rule, or regulation. The change must be in writing and within the general scope of the contract. The contract will be modified to reflect any time or money adjustment the Contractor is entitled to receive. Any claim concerning an adjustment in time or money due to a change must be given in writing to the DIRECTOR OF PURCHASING or the designated contract administrator, within thirty (30) days from the date that the change was ordered, or the claim is waived. Any failure to agree upon a time or money adjustment must be resolved under the "Disputes" clause of this contract. The Contractor must proceed with the prosecution of the work as changed, even if there is an unresolved claim. No charge for any extra work, time or material will be allowed, except as provided in this section.

6. CONTRACT ADMINISTRATION

A. The contract administrator, subject to paragraph B below, is the Department representative designated by the DIRECTOR OF PURCHASING. The contract administrator is authorized to:

(1) serve as liaison between the County and Contractor;

(2) give direction to the Contractor to ensure satisfactory and complete performance;

(3) monitor and inspect the Contractor's performance to ensure acceptable timeliness and quality;

(4) serve as records custodian for this contract;

(5) accept or reject the Contractor's performance;

(6) furnish timely written notice of the Contractor's performance failures to the DIRECTOR OF PURCHASING;

(7) prepare required reports;

(8) approve or reject invoices for payment;

(9) recommend contract modifications or terminations to the DIRECTOR OF PURCHASING; and

(10) issue notices to proceed.

B. The contract administrator is NOT authorized to make determinations (as opposed to recommendations) that alter, modify, terminate or cancel the contract, effect a procurement, interpret ambiguities in contract language, or waive the County's contractual rights.

7. COST AND PRICING DATA

The Contractor guarantees that any cost and/or pricing data provided to the County will be accurate and complete. The Contractor grants the County access to all books, records, documents, and other supporting data in order to permit adequate evaluation of the Contractor's proposed price(s). The Contractor also agrees that the price to the County, including profit or fee, may, at the option of the County, be reduced to the extent that the price was based on inaccurate, incomplete, or non-current data supplied by the Contractor.

8. DISPUTES DURING CONTRACT PERFORMANCE

Any dispute by Contractor arising during the performance of the contract, which dispute is not disposed of by mutual agreement, must be decided as provided hereunder. Pending final resolution of a dispute, the Contractor must proceed diligently with contract performance. Subject to the discretion of the DIRECTOR OF PURCHASING, the head of the County department, office, or agency ("Department Head") of the contract administrator is the designee of the DIRECTOR OF PURCHASING, for the purpose of dispute resolution. If the contract administrator is the Department Head, then the dispute shall be managed by the DIRECTOR OF PURCHASING. The Department Head may, with the Contractor's consent, delegate this responsibility to another person (other than the contract administrator). The Contractor waives any dispute or claim not made in writing and received by the Department Head within thirty (30) days of the occurrence giving rise to the dispute or claim. A dispute must be in writing, for specific relief, and any requested relief must be fully supported by affidavit and all relevant calculations, including cost and pricing information, records, and other information. The Contractor may, at the County's option, be made a party to any related dispute involving another Contractor.

9. DOCUMENTS, MATERIALS AND DATA

All documents, materials or data developed as a result of this contract are the County's property, unless specifically provided for in the contract. The County has the right to use and reproduce any documents, materials, and data, including confidential information, used in the performance of, or developed as a result of, this contract. The County may use this information for its own purposes, including reporting to state and federal agencies. The Contractor warrants that it has title to or right of use of all documents, materials or data used or developed in connection with this contract. The Contractor must keep confidential all documents, materials, and data prepared or developed by the Contractor or supplied by the County.

10. DURATION OF OBLIGATION

The Contractor agrees that all of Contractor's obligations and warranties which, directly or indirectly, are intended by their nature or by implication to survive performance of the contract shall so survive the completion of performance, termination for cause, or the termination for convenience of the contract.

11. ENTIRE AGREEMENT

There are no promises, terms, conditions, or obligations other than those contained in the contract, including any terms, conditions, documents or exhibits thereto, and these General Conditions. This contract supersedes all communications, representations, or agreements, either verbal or written, between the parties hereto, with the exception of express warranties given to induce the County to enter into the contract.

12. ETHICS REQUIREMENTS/ POLITICAL CONTRIBUTIONS

The Contractor must comply with the ethics provisions contained in Chapter 29 – Ethics of the Code of Public local Laws of Kent County.

13. GUARANTEE

A. Contractor guarantees for one year from acceptance, or for such other period of time as may have been expressly stated in the contract or the County's written solicitation, all goods, services, and construction offered, including those used in the course of providing the goods, services, and/or construction. This includes a guarantee that all products offered (or used in the installation of those products) carry a guarantee against any and all defects for such period. The Contractor must correct any and all defects in material and/or workmanship which may appear during the guarantee period, or any defects that occur within one (1) year of acceptance even if discovered more than one (1) year after acceptance, by repairing (or replacing with new items or new materials, if necessary) any such defect at no cost to the County and to the County's satisfaction.

B. Should a manufacturer's or service provider's warranty or guarantee exceed the requirements stated above, that guarantee, or warranty will be the primary one used in the case of defect. Copies of manufacturer's or service provider's warranties must be provided upon request.

C. All warranties and guarantees must be in effect from the date of acceptance by the County of the goods or services.

D. The Contractor guarantees that all work shall be accomplished in a workmanlike manner, and the Contractor must observe and comply with all federal, State, County and local laws, ordinances and regulations in providing the goods and performing the services listed.

E. Goods and materials provided under this contract must be of first quality, latest model, and of current manufacture, and must not be of such age or so deteriorated as to impair their usefulness or safety. Items that are used, rebuilt, or demonstrator models are unacceptable, unless specifically

requested by the County in the in the contract documents.

F. ***All goods shall be merchantable and fit for the particular purpose ordered or purchased, and the Contractor so represents and warrants.***

14. HAZARDOUS AND TOXIC SUBSTANCES

Manufacturers and distributors are required by federal "Hazard Communication" provisions of 29 CFR 1910.1200, and the Maryland "Access to Information About Hazardous and Toxic Substances" Law, to label each hazardous material or chemical container, and to provide Material Safety Data Sheets to the purchaser. The Contractor must comply with these laws and must provide the County with copies of all relevant documents, including Material Safety Data Sheets, prior to performance of services or contemporaneous with delivery of goods.

15. IMMIGRATION REFORM AND CONTROL ACT

The Contractor warrants that both the Contractor and any subcontractor do not and shall not hire, recruit or refer for a fee, for employment under this contract or any subcontract, an alien while knowing the alien is an unauthorized alien, or any individual without complying with the requirements of the federal Immigration and Nationality laws, including but not limited to any verification and record keeping requirements. The Contractor further assures the County that, in accordance with those laws, it does not and will not discriminate against an individual with respect to hiring, or recruitment or referral for a fee, of the individual for employment or the discharging of the individual from employment because of such individual's national origin or, in the case of a citizen or intending citizen, because of such individual's citizenship status.

16. INCONSISTENT PROVISIONS

Notwithstanding any provisions to the contrary in any contract terms or conditions supplied by the Contractor, the County's General Conditions supersede the Contractor's terms and conditions in the event of any inconsistency, unless specifically waived or amended by the County.

In the case of any conflicts or ambiguities among the contract documents, such matters shall be resolved in favor of the following priorities:

a. ***Any term or condition specifically provided for in a contract or exhibit to a contract, other than terms and conditions provided by the Contractor.***

b. ***Terms and conditions specified by the County in any request for proposal, request for interest of qualifications, invitation to bid, or other document specifying with particularity the County's terms and conditions.***

c. ***These General Conditions.***

The lack of a specific provision in any of the documents referred to in items 16.a and 16.b above shall not operate to create an ambiguity with these General Conditions.

17. INDEMNIFICATION

The Contractor is responsible for any loss, personal injury, death and any other damage (including incidental and consequential) that may be done or suffered by reason of the Contractor's negligence or failure to perform any contractual obligations. The Contractor must indemnify and save the County harmless from any loss, cost, damage and other expenses, including attorney's fees and litigation expenses, suffered or incurred due to the Contractor's negligence or failure to perform any of its contractual obligations. If requested by the County, the Contractor must defend the County in any action or suit brought against the County arising out of the Contractor's negligence, errors, acts or omissions under this contract. The negligence of any agent, subcontractor or employee of the Contractor is deemed to be the negligence of the Contractor. For the purposes of this paragraph, County includes its elected officials, officials, employees, agents, boards, and agencies.

18. INDEPENDENT CONTRACTOR

The Contractor is an independent contractor. The Contractor and the Contractor's employees or agents are not agents or employees of the County. Neither these General Conditions nor the contract are intended to create, nor do they create any partnership, joint venture, agency or other relationship between the County and the Contractor.

19. INFRINGEMENT

Contractor represents and warrants that there is no copyright or patent infringement with respect to any goods or materials furnished pursuant to the contract. The Contractor shall indemnify and hold harmless the County with respect to costs, expense, damages, and liability arising from or on account of any claim for infringement.

20. INSPECTIONS

The County has the right to monitor, inspect and evaluate or test all supplies, goods, or services called for by the contract at all reasonable places (including the Contractor's place of business) and times (including the period of preparation or manufacture).

21. INSURANCE

Prior to execution of the contract, the Contractor must obtain at its own cost and expense, and keep in force and effect during the term of this contract, including all extensions, the insurance specified in the contract, including any applicable table or attachment, with an insurance company licensed or qualified to do business in the State of Maryland and with an A. M. Best rating of not less than A-. The Contractor must submit a certificate of insurance prior to award of this contract and prior to any contract modification extending the term of the contract, as evidence of compliance with this provision. The County must be named as an additional insured on all liability policies. Forty-five (45) days written notice to the County of cancellation or material change in any of the policies is required. In no event may the insurance coverage be less than that shown on the applicable table, attachment, or contract provision for required insurance. Subject to applicable law, the DIRECTOR OF PURCHASING may waive or modify the requirements of this section 21 in whole or in part.

22. NON-CONVICTION OF BRIBERY

The Contractor hereby declares and affirms that, to its best knowledge, none of its officers, directors, members, partners, or employees directly involved in obtaining contracts has been convicted of bribery, attempted bribery, or conspiracy to bribe under the laws of any state or the federal government.

23. NONDISCRIMINATION IN EMPLOYMENT

The Contractor shall not discriminate in employment, or in the treatment of employees, or discriminate in any manner on the basis of race, color, gender, age, religion, creed, national origin, ancestry, marital status, disability, political affiliation, or lawful sexual orientation and shall follow and obey all applicable State, federal, and County laws and regulations regarding employment discrimination. The Contractor must bind its subcontractors to the provisions of this section.

24. PAYMENTS

This contract is subject to a non-appropriations clause as provided herein. No payment may be made or is due under this contract unless funds for the payment have been appropriated and encumbered by the County. Under no circumstances will the County pay the Contractor for legal fees. The Contractor must not proceed to perform any work (provide goods, services, or construction) prior to receiving written confirmation that the County has appropriated and encumbered funds for the work. If the Contractor fails to obtain this verification from the County prior to performing work, the County has no obligation to pay the Contractor for the work.

If this contract provides for an additional contract term, or for work in any period beyond the end of the County's fiscal year in which the contract is executed, continuation of this contract beyond the end of that fiscal year is contingent upon the subsequent appropriation of funds and encumbrance of those appropriated funds for payments under this contract. If funds are not appropriated and encumbered to support continued performance in a subsequent fiscal period, this contract terminates without further notice from, or cost to, the County. The Contractor acknowledges that the County

Commissioners have no obligation to appropriate funds for this contract in subsequent fiscal years. Furthermore, the County has no obligation to encumber funds to this contract in subsequent fiscal years. Accordingly, for each subsequent contract term, the Contractor must take appropriate action to verify that such funds have been appropriated and encumbered. See Annotated Code of Maryland, Article 31, section 3.

25. PERSONAL PROPERTY

All furniture, office equipment, equipment, vehicles and other similar types of personal property specified in the contract and purchased with funds provided under the contract become the property of the County upon the termination or expiration of this contract, unless expressly stated otherwise.

26. TERMINATION FOR CAUSE

The County may terminate the contract in whole or in part, and from time to time, whenever the County determines that the Contractor is:

a. defaulting in performance or is not complying with any provision of this contract;

b. failing to make satisfactory progress in the prosecution of the contract; or

c. endangering the performance of this contract.

Prior to a termination for cause, the County will send the Contractor written notice specifying the cause. The notice will give the Contractor ten (10) days from the date the notice is issued to cure the default or make progress satisfactory to the County in curing the default, unless a different time is given in the notice. If the County determines that default contributes to the curtailment of an essential service or poses an immediate threat to life, health, or property, the County may terminate the contract immediately upon issuing oral or written notice to the Contractor without any prior notice or opportunity to cure. In addition to any other remedies provided by law or the contract, the Contractor must compensate the County for additional costs that would be incurred by the County, whether the costs are actually incurred or not, to obtain substitute performance. A termination for cause shall be considered a termination for convenience as of the date the Contractor was advised of the termination for cause, if there was, in fact, no cause.

27. TERMINATION FOR CONVENIENCE

This contract may be terminated by the County, in whole or in part, upon written notice to the Contractor, when the County determines termination to be in the County's best interest. The termination is effective ten (10) days after the notice is issued, unless a different time is given in the notice. The County is liable only for payment for acceptable performance prior to the effective date of the termination, and for costs reasonably incurred as of the date of termination, which costs or items acquired by such costs cannot be economically retained by the Contractor for other or future use of the Contractor.

28. TIME

Time is of the essence in the performance by Contractor of the contract and of all ancillary matters arising therefrom.

29. TITLE

All goods delivered or provided to the County or otherwise pursuant to the contract, and the title thereto, shall be free any security interest, lien, contract restriction, or other form of encumbrance. Title shall pass to the County at the place of delivery to the County, subject to the County's right to inspect and accept or reject the goods.

30. WORK UNDER THE CONTRACT

Work may not commence under this contract until all conditions for commencement are met, including execution of the contract by both parties, compliance with insurance requirements, and issuance of any required notice to proceed.

Herbert Dennis, Warden, Detention Center
6/22/2021
County Commissioners Meeting

Item Summary:
Trinity Services Group, LLC Contract

ATTACHMENTS:

Description

06.22.21 Agreement, Trinity Services Group, Inc., Food Service for Kent County Detention Center

TRINITY SERVICES GROUP, INC.

CONFIRMATION COPY

February 16, 2021

Warden Herbert Dennis
Kent County Detention Center
104 Vickers Dr.
Unit A
Chestertown, MD 21620

Re: Kent County Detention Center
Food Service Agreement

Dear Warden Dennis,

It continues to be an honor and a privilege to provide food services at the Kent County Detention Center. This letter is to request your confirmation of an extension of our Agreement for another year through February 14, 2022, and your approval of a meal price adjustment consistent with the change in the Consumer Price Index. I have enclosed a proposed price scale which includes meal prices based on the 2020 annual adjustment for the CPI, Food Away From Home, for the Washington-Arlington-Alexandria, DC-VA-MD-WV region (4.3%).

If this meets with your approval, please sign and return the enclosed confirmation copy of this letter for our files. Thank you for the opportunity to be of service to you and your staff. We always strive to exceed our client's expectations and I urge you to contact me should you ever have any questions or concerns regarding the food service at your Center.

Very truly yours,

Greg Beniston
Senior Project Manager
Phone: 717-497-5609
Email:greg.beniston@trinityservicesgroup.com

Approved:

_____
Herbert Dennis, Warden
Date: _____

IN WITNESS WHEREOF, the parties hereto have hereunto set their hands and seals effective as of the day and year first above written.

Kent County	Trinity Services Group, Inc.
By: P. Thomas Mason	By:_____
Name: P. Thomas Mason	Name: David M. Miller
Title: President	Title: Chief Operating Officer
Date: June 22, 2021	Date:_____

TRINITY SERVICES
GROUP, INC.

Schedule 1

Kent County, MD Pricing Scale
February 15, 2021 thru February 14, 2022

Number of Meals Served	Current Price Per Meal	Updated Price Per Meal
121 and above	$2.07	$2.16
101 – 120	$2.16	$2.25
91 – 100	$2.58	$2.69
81 – 90	$2.84	$2.96
71 – 80	$3.08	$3.21
61 – 70	$3.39	$3.54
51 – 60	$3.77	$3.93
41 – 50	$4.37	$4.56
Staff Meals	Same as inmate meal price	

U.S. BUREAU OF LABOR STATISTICS

Databases, Tables & Calculators by Subject

Change Output Options: From: 2015 To: 2021 GO
include graphs include annual averages More Formatting Options

Data extracted on: February 16, 2021 (9:43:55 AM)

CPI for All Urban Consumers (CPI-U)

Series Id: CUURS35ASEFV
Not Seasonally Adjusted
Series Title: Food away from home in Washington-Arlington-Alexandria, DC-VA-MD-WV, all urban consumers, not seasonally adjusted
Area: Washington-Arlington-Alexandria, DC-VA-MD-WV
Item: Food away from home
Base Period: 1982-84=100

Download: .xlsx

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual	HALF1	HALF2
2015	249.724		250.021		250.671		250.779		252.258		253.190		251.114	250.139	252.089
2016	253.480		255.245		256.384		258.522		258.568		262.037		257.397	255.049	259.746
2017	261.660		259.364		263.991		264.045		265.637		266.420		263.534	261.695	265.373
2018	267.370		266.695		267.640		268.502		269.106		270.445		268.287	267.239	269.336
2019	270.709		272.855		273.439		274.167		273.881		276.898		273.657	272.334	274.980
2020	278.852		280.506		283.206		284.894		291.645		293.464		285.441	280.875	290.008
2021	296.055														

12-Month Percent Change
Series Id: CUURS35ASEFV
Not Seasonally Adjusted
Series Title: Food away from home in Washington-Arlington-Alexandria, DC-VA-MD-WV, all urban consumers, not seasonally adjusted
Area: Washington-Arlington-Alexandria, DC-VA-MD-WV
Item: Food away from home
Base Period: 1982-84=100

Download: .xlsx

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual	HALF1	HALF2
2015	2.6		2.4		1.6		1.5		2.0		1.8				
2016	1.5		2.1		2.3		3.1		2.5		3.5		2.5	2.0	3.0
2017	3.2		1.6		3.0		2.1		2.7		1.7		2.4	2.6	2.2
2018	2.2		2.8		1.4		1.7		1.3		1.5		1.8	2.1	1.5
2019	1.2		2.3		2.2		2.1		1.8		2.4		2.0	1.9	2.1
2020	3.0		2.8		3.6		3.9		6.5		6.0		4.3	3.1	5.5
2021	6.2														

U.S. BUREAU OF LABOR STATISTICS Postal Square Building 2 Massachusetts Avenue NE Washington, DC 20212-0001
Telephone:1-202-691-5200_ Federal Relay Service:1-800-877-8339_ www.bls.gov Contact Us

Herbert Dennis, Warden, Detention Center
6/22/2021
County Commissioners Meeting

Item Summary:
Trinity Services Group, LLC Food Service Agreement

ATTACHMENTS:

Description

06.22.21 Amendment to Food Service Agreement, Trinity Services Group, Inc., Food Service for Kent County Detention Center

AMENDMENT TO FOOD SERVICE AGREEMENT

This Amendment to Food Service Agreement is made effective March 31, 2021 by and between Kent County (hereinafter referred to as "Client"), and the successor in interest to Compass Group USA, Inc., Trinity Services Group, Inc., a Florida corporation with principal offices at 477 Commerce Boulevard, Oldsmar, FL 34677 (hereinafter referred to as "Trinity").

WHEREAS, Trinity's predecessor, Compass Group USA, Inc., through its Canteen Correctional Services Division and Client have previously entered into a Manual Food Service Agreement made the 16th day of December 2011 (the "Agreement"), and

WHEREAS, Trinity, which was an entity affiliated with Compass Group USA, Inc., has assumed all of the rights and obligations of Compass Group USA, Inc., under the Agreement, and

WHEREAS, the parties desire to amend the Agreement to (1) extend the term through June 30, 2022 such that all future renewals will be effective from July 1st through June 30th to coincide with Client's fiscal year, and (2) change the "anniversary date" for purposes of price adjustments from February 15th to July 1st of each contract year, effective July 1, 2021.

NOW, THEREFORE, in consideration of the mutual covenants and agreements hereinafter set forth, the parties, intending to be legally bound, agree as follows:

1. The foregoing recitations are true and correct and are by this reference made a part of this Amendment.

2. The parties agree that the term of the Agreement is extended from February 15, 2021 through June 30, 2022. Thereafter, the term shall extend for consecutive one (1) year periods from July 1st through June 30th, unless sooner terminated as provided in the Agreement, with the "anniversary date" for purposes of price adjustments being July 1st of each contract year (no longer February 15th), commencing July 1, 2021.

3. Except as expressly stated herein, all of the terms and conditions of the Agreement, as previously amended, shall remain in full force and effect.

THE PARTIES SIGNATURES APPEAR ON THE FOLLOWING PAGE

IN WITNESS WHEREOF, the parties hereto have hereunto set their hands and seals effective as of the day and year first above written.

Kent County	Trinity Services Group, Inc.
By: P. Thomas Mason	By:_____
Name: P. Thomas Mason	Name: David M. Miller
Title: President	Title: Chief Operating Officer
Date: June 22, 2021	Date:_____

Herbert Dennis, Warden, Detention Center
6/22/2021
County Commissioners Meeting

Item Summary:
Conmed, Inc., Correct Care Solutions, LLC Contract

ATTACHMENTS:

Description

06.22.21 Agreement, Conmed, LLC, Renewal for Inmate Medical Services

December 1, 2020

Warden Herbert Dennis
Kent County Detention Center
104 Vickers Drive, Unit A
Chestertown, MD 21620

RE: 2021 – 2022 Renewal for Inmate Medical Services Agreement

Greetings Warden Dennis:

Conmed, LLC ("Conmed") is pleased to be your partner in the delivery of medical care services at the Kent County Detention Center and we value the opportunity to continue our partnership.

Annual Renewal & Price Adjustment

The current term of our agreement will end June 30, 2021. Conmed seeks mutual agreement to extend the contract for an additional one-year period, beginning July 1, 2021 and ending on June 30, 2022.

Conmed requests an annual increase in accordance with the Consumer Price Index (CPI) for Urban Consumers – US City Average, Medical Care Services Component, currently 3.7% for October 2020. Application of the 3.7% increase revises the base amount for professional medical services rendered at the Kent County Detention Center from **$31,420.05** per month to **$32,582.59** or **$390,991.07** annually.

PRN Staffing Coverage

To ensure the same level of nursing coverage during periods of planned or unplanned absences, Conmed will utilize PRN Registered Nurse (RN) staffing should the need arise. Utilization of the PRN RN staffing is at no additional cost to the County and is provided to maintain coverage in the absence of the Health Services Administrator (HSA). Our PRN staff completes ongoing training consistent with our full-time team members to ensure they are capable and ready to provide continuity of services.

The current contractual matrix for medical services shown has been updated to now include PRN RN staffing. The matrix has also been updated to now reflect only the medical care staff positions.

MEDICAL STAFFING MATRIX Kent, MD									
POSITION	**Mon**	**Tue**	**Wed**	**Thu**	**Fri**	**Sat**	**Sun**	**Hrs/WK**	**FTE**
DAY SHIFT									
Health Service Administrator - RN	8	8	8	8	8			40	1.000
PRN RN+									
CMT/Certified Nursing Assistant	8			8	4	8	8	36	0.900
Medical Director			1					1	0.025
Nurse Practitioner/Physician Assistant	2			2				4	0.100
TOTAL HOURS/FTE-Day								***81***	***2.025***
EVENING SHIFT									
CMT/Certified Nursing Assistant	8	8	8	8	8	8	8	56	1.400
Total Hours/FTE - Evening								***56***	***1.400***
WEEKLY TOTAL									
TOTAL HOURS/FTE per week								***137***	***3.425***

+To ensure coverage in the absence of the HSA, Conmed will backfill with PRN RN staffing as needed

1283 Murfreesboro Road, Suite 500
Nashville, TN 37217

If the County agrees to the proposed changes, please sign the following page and email a signed copy to Andrea Knox, Retention Specialist, at ***akknox@wellpath.us***. Upon receipt of the signed letter, our Legal Department will draft a formal contract amendment and route to the appropriate County individuals for signature. All other terms of the current Agreement, including any changes detailed above, shall remain in full force and effect.

We greatly appreciate our years of partnership and look forward to another successful year working together. Please feel free to contact Michelle Autrey, Regional Director of Operations for Kent County, at 443-944-2131 with any additional questions or concerns you may have.

Sincerely,



Linda Pansulla
Regional Vice President

Cc: *Michelle Autrey, Regional Director of Operations*
Adolfo Cisnero, Senior Director, Partner Services

The undersigned is authorized by Kent County to accept the above terms:

P. Thomas Mason
Authorized Kent County Representative

June 22, 2021
Date Signed

P. Thomas Mason
Print Name

President
Title

PLEASE NOTE: Final delivery of the contract amendment will be via email. If hard copies with original signatures are required, please indicate the number of copies needed: 1.

1283 Murfreesboro Road, Suite 500
Nashville, TN 37217

Herbert Dennis, Warden, Detention Center
6/22/2021
County Commissioners Meeting

Item Summary:
Mid-Shore Behavioral Health Grant

ATTACHMENTS:

Description

06.22.21 Mid Shore Behavioral Health FY2022 Fixed Price Contract Maryland Community Criminal Justice Treatment Program, Agreement of Renewal and Extension

Appendix scope of work

MID SHORE
BEHAVIORAL HEALTH

FY 2022
FIXED PRICE CONTRACT
MARYLAND COMMUNITY CRIMINAL JUSTICE TREATMENT PROGRAM – KENT COUNTY

AGREEMENT OF RENEWAL AND EXTENSION

This Agreement, made this 30th day of June, 2021 by and between, Mid Shore Behavioral Health, Inc. ("MSBH"), a non-stock corporation organized under the laws of the State of Maryland, and County Commissioners of Kent County ("Provider").

RECITALS

WHEREAS, MSBH and Provider are parties to an Agreement which began July 1, 2019 with the Maryland Department of Health ("MDH"), as the Core Service Agency ("CSA") as that term is defined in Section 10-1201 *et seq*. of the Health General Article of the Annotated Code of Maryland for Caroline, Dorchester, Kent, Queen Anne's and Talbot Counties; and

WHEREAS, MSBH has the option to renew that Agreement with Provider, and has given Provider written notice of its intent to renew the Agreement in order to continue to provide the services referenced in the Agreement; and

WHEREAS, MSBH and Provider both desire to renew the Agreement for an additional fiscal year from July 1, 2021 through June 30, 2022 (the "Contract Period") pursuant to the terms set forth in this Agreement of Renewal and Extension.

NOW, THEREFORE, in consideration of the mutual benefits and promises and legally adequate consideration, MSBH and Provider hereby mutually agree as follows:

A. The Agreement shall be renewed and extended and shall remain in full force and effect for the Contract Period commencing July 1, 2021 and continuing until June 30, 2022.

B. Payments under this Agreement of Renewal and Extension, which shall replace and supersede Section 3(b) of the Agreement, shall be as follows:

> The contract price will not exceed $50, 000. MSBH shall pay the rate as noted for the Service upon receipt of approved contract deliverables and an Invoice (Appendix 3). All services as noted above will be paid in monthly installments, unless otherwise specified in Contract Deliverables (Appendix 2). Such payments shall be made for the services rendered during the previous month(s). Provider's right to compensation and MSBH'S duty to compensate Provider are subject to Provider's complying with the terms of Paragraph 4 of the FY20 Contract.

C. In all other respects, all provisions in the Agreement, including all Appendices attached to the Agreement, shall remain in full force and effect, except to the extent modified by such updated Appendices as are attached to this Agreement of Renewal and Extension.

D. In executing this Agreement of Renewal and Extension, Provider hereby covenants, warrants and affirms that it has complied with, remains in compliance with, and shall continue to remain in compliance with all obligations, responsibilities and requirements under the Agreement and Appendices thereto. Provider specifically covenants, warrants and affirms that it is fully in compliance with all provisions related to liability insurance, licensure and compliance with applicable laws and regulations and a lapse in compliance in these areas shall entitle MSBH to immediately terminate the Agreement and Agreement of Renewal and Extension.

E. To the extent there are inconsistencies between the Agreement and this Agreement of Renewal and Extension, the provisions of this Agreement of Renewal and Extension (including any Appendices attached hereto) shall control.

IN WITNESS WHEREOF, the parties hereto have set their hands on the date and year first above written, intending to be legal bound thereby.

WITNESS/ATTEST:

MID SHORE BEHAVIORAL HEALTH, INC.

_____

By: _____
Kathryn G. Dilley, Executive Director

Date: _____

PROVIDER:

Lacey I. Cox

By: P. Thomas Mason

Date: June 22, 2021

MID SHORE
BEHAVIORAL HEALTH

APPENDIX 1

FY22 MCCJTP – Kent County
Scope of Work

County Commissioners of Kent County, Maryland agrees to:

1. Contract for the provision of behavioral health services to individuals who are incarcerated in the detention center:
   a. Screen justice involved individuals for behavioral health treatment.
   b. Assess and identify individuals in the detention center who meet the priority population criteria for serious mental illness (SMI) and/or are at risk for re-institutionalization. A Serious Mental Illness (SMI) is defined as having a diagnosable mental, behavioral, or emotional disorder that meets criteria in the DSM-V and that results in functional impairment that substantially interferes with or limits one or more major life activities. Per Maryland's Public Behavioral Health System, an individual with an SMI is 18 years old or older and meets the DSM V criteria for the following diagnostic codes: F20.81, F25.0, F25.1, F20.9, F31.3, F31.2, F31.4, F31.5, F31.0, F31.2, F31.5, F31.9, F31.81, F32.2, F32.3, F33.2, F33.3, F22, F29, F21, F60.3.
      - For the sole purpose of jail-based behavioral health treatment, an individual under the age of 18 detained as an adult who meets the priority population diagnosis/SMI criteria is eligible for treatment.
   c. Deliver behavioral health treatment services to individuals identified in Section 1a and 1b as detailed above:

2. Contract with a Maryland licensed psychiatrist and/or a Maryland licensed Certified Registered Nurse Practitioner-Psychiatric Mental Health (CRNP-PMH) who shall provide psychiatric treatment:
   a. A psychiatrist and/or Certified Registered Nurse Practitioner-Psychiatric Mental Health (CRNP-PMH) shall be employed for a minimum of two (2) hours a week (104 hours annually).
   b. Through tele-psychiatry, when appropriate, to eligible inmates as referred and recommended by a Maryland licensed behavioral health professional employed by the detention center. Tele-psychiatry may be used as a primary service provided the following:
      i. Documentation must be included in the individual's chart and show that the inmate was made aware of the tele-psychiatric services he/she was to receive and consent was obtained.
      ii. Tele-psychiatry was appropriate clinical treatment for the individual inmate.
      iii. Electronic transmission of the individual's session, including any information that identifies the individual, fully complies with HIPAA regulations.

MID SHORE
BEHAVIORAL HEALTH

FY22 MCCJTP – Kent County
Scope of Work

7. Participate in 3 of 4 Quarterly Eastern Shore Behavioral Health Services Network (BHSN) meetings in addition to attending BHSN workgroups on an ongoing basis (either in person or via alternative options provided by MSBHS) to address service delivery issues in the region. The minutes from the BHSN meeting will be provided to the Coordinator of Special Programs at the Office of Crisis and Criminal Justice Services upon request.

8. Provide a copy of contract with service provider to Mid Shore Behavioral Health, Inc. (MSBH).

9. Onsite detention center designee to attend annual SIMS meeting as scheduled.

10. Ensure that detention center staff members and those involved with MCCJTP participants receive training in effective methods to work with participants; report on trainings to MSBH in Annual Narrative.

11. Demonstrate efforts to attain co-occurring capability as an organization/agency or advocate for access to co-occurring services.

12. Attend all MSBH contract meetings as scheduled.

13. Submit a copy of agency's disaster preparedness plan.

14. Strive to transform their agency to be fully equitable for all people; regardless of race, ethnicity, national origin, age, sexual identity, faith, gender and persons who are differently abled.

MID SHORE
BEHAVIORAL HEALTH

FY21 MCCJTP – Kent County
Contract Deliverables

Provider: County Commissioners of Kent County
Term: July 1, 2021 to June 30, 2022

	Deliverable Description	Due Date
1.	Confirmation of current behavioral health professionals' licenses and certifications. **Copies maintained and available on site.**	Site Visit
2.	Maintenance of all appropriate Insurance Coverages. **Copies maintained and available on site.**	Site Visit
3.	Complaint Procedure: **Provide only if there have been updates or changes.**	Upon Contract Signing
4.	Program Narrative: **Provide only if there have been updates or changes.** a. Outline of services to be provided b. Hours of operation c. Outline of staff and training they have received	Upon Contract Signing
5.	Copy of Contract with Behavioral Health Service Provider.	Upon Contract Signing
6.	Plan outlining your efforts to divert consumers/clients from local Emergency Departments and Acute Inpatient units. The plan must be inclusive of somatic care and detail how you will measure your success. Report on outcomes in Annual Narrative Report (Appendix 8). **Provide only if there have been updates or changes.**	Upon Contract Signing
7.	Signed Confidentiality MOU between Mid Shore Behavioral Health and Community Service Providers. See Appendix 7	Upon Contract Signing
8.	Contact Information Form. See Appendix 9	Upon Contract Signing
9.	Mental Health Service Provider's latest audited Annual Report from independent Auditing Accountants	By February 1, 2022
10.	Participate in 3 of 4 Quarterly Eastern Shore Behavioral Health Services Network (BHSN) meetings in addition to attending BHSN workgroups on an ongoing basis (either in person or via alternative options provided by MSBHS) to address service delivery issues in the region.	As Scheduled
11.	Attend all MSBH contract meetings	As Scheduled
12.	Submission via email of Consumer Satisfaction statistical results. See Appendix 6 for Consumer Satisfaction report	April 10, 2022
13.	Submission via email of Invoice (Appendix 3) **No invoice amounts will be considered after July 31, 2022.**	By the 10th of each month beginning August 10, 2021

APPENDIX 3

MID SHORE
BEHAVIORAL HEALTH

FY22 MCCJTP – Kent County
Invoice

To: **Mid Shore Behavioral Health, Inc.**
28578 Mary's Court, Suite 1
Easton, Maryland 21601

From: **Correctional Care Solutions**
1283 Murfreesboro Rd, Ste 500
Nashville, TN 37217

For: Month of _____

Date: _____

Amount: $4,167.00

Date of Service	Service Description	Total Hours of Service	Amount

Invoice submitted by: _____

MCCITP QUARTERLY REPORT
4th Qtr FY 2022

County Reporting:
Person Reporting:
This report is for services funded by MCCITP
Please mark "N/A" for any questions that do not pertain to your program.

DO NOT MAKE ANY ADDITIONS OR DELETIONS TO THIS FORM!

This report is for which report quarter?

1	July - Sept. due by Oct. 15th
2	Oct. - Dec. due by Jan. 15th
3	Jan. - Mar. due by Apr. 15th
4	Apr. - June due by July 15th

1. Facility Based Services (information is for this reporting period only)

A. At your facility, which of the following mental health services are available?

[Mark with an "X" all that apply]

Mental Health Screening	
Mental Health Assessment	
Case Management	
Group Therapy	
Individual Therapy	
Referral to Community Services	
Trauma Treatment	
Medication Management	
Telepsychiatry	
Other (please specify in the box below)	

B. At your facility, which of the following services are funded by MCCITP?
(Mark with an "X" all that apply)

Case Management	
Group Therapy	
Individual Therapy	
Referral to Community Services	
Trauma Treatment	
Medication Management	
Other (please specify in the box below)	

C. Number of NEW inmates referred to the jail mental health program

D. Referral Source: (please enter a number for each category)

1	Classification/Intake	
2	Medical	
3	Correctional Officer	
4	Other Staff	
5	Family	
6	Inmates	
7	Self Referral	
8	Other (please specify in the box below)	

The sum of 1D1 through 1D8 equals 1C

Total by Referral Source	0
Total by Source equals Number Referred	True

E. Referral Reason/Status: (please enter a number for each category)

1	Number of those referred inmates who were identified as having only mental health issues
2	Number of those referred inmates who were identified as dual diagnosis (mental health & substance abuse issues)
3	Number of referred inmates who were eligible but refused treatment/services.
4	Number of referred inmates who were eligible but released prior to receiving treatment/services.
5	Number of referred inmates currently on psychiatric medications.

Expected number of new inmates

6	Number of units (hours) of psychiatric services this quarter.
7	Number of units (hours) of individual psychotherapy services this quarter (number of hours spent in one-on-one sessions this quarter)
8	Number of units (hours) of group psychotherapy services this quarter. (number of hours spent conducting group sessions this quarter)
9	Number of units (hours) of case management this quarter. (active interaction with client and/or provider)
10	Number of NEW inmates actually served through MCCITP this quarter.

This number may not exceed the number reported in 1C — True

F. For this quarter, how many of your clients were hospitalized for psychiatric reasons?

G.

1	For this quarter, how many telepsychiatry sessions took place?	
2	How many telepsychiatry recipients were male, female or transgender?	
	male	
	female	
	transgender	
3	How many individuals seeking telepsychiatry services reentered the community this quarter?	

2. Demographics

A. Please provide the following racial breakdown information for inmates being

The total number by race equals the number reported in 1E10.

1	American Indian or Alaska Native
2	Asian/Pacific Islander
3	Black or African American
4	Native Hawaiian or Other Pacific Islander
5	White/Hispanic
6	Other (please specify in the box provided below)

Total by race	0

B. Please provide the following participant identified gender break down information for inmates

The total number by gender equals the number reported in 1E10.

1	Male
2	Female
3	Transgender

Total by gender	0
Race = Gender	True

C. Please provide the following age breakdown information for inmates being treated/case managed in the jail during this reporting period:

The total number by age equals the number reported in 1E10.

1	< 18 years of age
2	18-25 years of age
3	26-35 years of age
4	36-45 years of age
5	46-55 years of age
6	over 56 years of age

Total by age	0
Gender = Age	True

D. Veteran Status: Please provide the number of inmates being

1	OIF/OEF
2	Vietnam
3	Other

3. Aftercare Planning

1	Number of clients released into community this quarter	
1.1	Number of clients released into the community who were veterans	

Upon release from your facility, what was the destination of your clients?
Please provide the number of clients for each category:

1	Own House/Apartment	
2	Shelter Plus Care Housing	
3	Staying with friend/relative	
4	Inpatient Substance Abuse Treatment	
5	Psychiatric Hospital	
6	Transitional Housing	
7	Other County Detention Center	
8	Department of Corrections	
9	Other Please specify in the box	

Total by Destination	0
Total by Dest. equals 3.1	True

4. Homelessness reporting

1	Number of people who identified as being homeless prior to incarceration.	
1.1	Number of people who identified as being homeless and are reentering to the community as homeless.	
1.2	Number of people reentering the community as homeless after incarceration of 90 days or less.	
1.3	Number of people connected to a housing program (e.g. Continuum of Care)	
1	C. Number of released clients who were referred to mental health aftercare programs.	
2	D. Number of clients mandated to MH treatment per parole and probation.	

5. Community Based Services

A. Does your MCCJFP program provide community based services?

Yes No

1 If yes, what services do you supply? (check all that apply)

1	Case Management	
2	Group Therapy	
3	Individual Therapy	
4	Crisis Intervention/Outreach	
5	Other (please specify in the box)	

2 If no, do you track clients in the community?

Yes No

B. For the MCCJFP programs that provide community-based services and/or track clients in the community.

1	Were hospitalized in psychiatric facility	
2	Are currently employed	
3	Are living in Shelter Plus Care Housing	
4	Were re-arrested	
5	Were re-incarcerated	

C. Recidivism of those re-incarcerated:

1	Number re-incarcerated in detention center	
2	Number re-incarcerated in prison	
	Total re-incarcerated	0

D. Reasons for re-incarcerations:

1	Number with New charge	
2	Number with Violation of parole/probation	
3	Other (specify in the box)	
	Total by Reason	0
	Total by re-incarcerated equals total by Reason	True

E. Previously reported MCCJFP clients you are currently serving:

1	Number of clients in the detention center	
2	Number clients in community	
3	Total number of previously reported clients (1+2) served by you	

4E is a little tricky. It has nothing to do with new inmates. For item 4E1, report the number

Optional (The section below may be used to assist with the Annual State Planning Process)

Based on your professional experience, what are the gaps/barriers that have been identified for clients accessing community services

Appendix 6
Consumer Satisfaction Survey
Instructions

1. Perform Satisfaction Surveys with consumers.
2. Tally responses on Consumer Satisfaction Survey – Appendix 6.
3. List consumer comments in the comments section of the form.
4. Retain individual forms for review by contract monitor during site visits.
5. Email 1 copy of Consumer Satisfaction Survey – Appendix 6 totaling all responses with Contract Deliverables due April 10.

Mid Shore Behavioral Health, Inc.

MEMORANDUM OF UNDERSTANDING

between

Mid Shore Behavioral Health and Community Service Providers

1. The purpose of this Memorandum of Understanding is to create an understanding with respect to the sharing of consumer information between service providers who are contracted by Mid Shore Behavioral Health to provide services to the residents of the nine counties of the Eastern Shore which are Caroline, Cecil, Dorchester, Kent, Queen Anne's, Somerset, Talbot, Wicomico, and Worcester counties.

2. Permitted Uses and Disclosures under the HIPAA Privacy Rule allow for a covered entity to use and disclose protected health information as follows: a) to the individual consumer or b) for the treatment, payment, or health care operations, as permitted by and in compliance with HIPAA regulation 164.506.

3. Providers agree to maintain a HIPAA agency policy that is current and compliant at all times.

4. Providers understand and agree that their HIPAA agency policy will apply to this Memorandum of Understanding in the sharing of consumer information.

5. Consumer information to be shared will include whatever is deemed necessary and appropriate to the situation/crisis in order to stabilize the consumer and provide for care in the least restrictive environment.

6. Providers agree to hold in confidence all discussions and actions on behalf of the consumer as appropriate.

7. The term of this Memorandum of Understanding will become effective upon signing and remain in effect through the duration of the contract, including any renewal or extension thereof.

8. Mid Shore Behavioral Health reserves the right to terminate a provider contract if the terms of this Memorandum of Understanding are not fulfilled.

_____

HIPAA Privacy Officer

_____

Date

_____

Agency

_____

Program Name

MID SHORE BEHAVIORAL HEALTH, INC.
FY22 Annual Narrative Report
Program Name _____
Signature _____

Please complete *all* of the following (incomplete reports will be returned for completion). If one of the items does not apply please state 'Not Applicable':

1. Summary of services provided, including analysis of outcome measurement data:

2. Summary of the integration of mental health, substance abuse, cognitive disabilities and somatic health care services, additionally, integration within the local Public Behavioral Health System:

3. Report on Hospital Diversion Plan that was submitted with contract:

4. Achievements:

5. Challenges:

6. Program change recommendations:

MID SHORE
BEHAVIORAL HEALTH

APPENDIX 9

FY22 Contact Form

Provider:

Contract:

ACTION	NAME	EMAIL	PHONE NUMBER
Sign Contracts			
Fiscal Questions			
Deliverables Questions			
Program Questions			
Contract Related Meetings Notification			

Comments: _____

_____

_____

_____

_____

_____

_____

Signature: _____

Virginia Gregg, Emergency Planner, Emergency Services
6/22/2021
County Commissioners Meeting

Item Summary:
Kent County Hazard Mitigation Plan

ATTACHMENTS:

Description

Hazard Mitigation Plan Briefing

Municipal adoption request

06.22.21 Resolution 2021-13 A Resolution to Adopt the 2021 Kent County Hazard Mitigation Plan

05.19.21 Sarah Wolfe, Branch Chief, Floodplain Management and Insurance Branch, Federal Emergency Management Agency (FEMA) Completed Review of Kent County Hazard Mitigation Plan



Hazard Mitigation is sustained action taken to reduce or eliminate the long-term risk to life and property from hazards. The Federal Emergency Management Agency (FEMA) requires local hazard mitigation plans to be updated. This is an update to the previous 2014 Hazard Mitigation Plan. The Office of Emergency Services was the lead agency for this planning effort. Through the update of the ***Kent County Hazard Mitigation Plan***, the County is poised to further advance hazard mitigation policy, planning, and action.

Planning Process

As part of the plan update, the Office of Emergency Services placed special emphasis on understanding citizens' concerns regarding hazards. Community members input to the process was incredibly valuable. An online public survey was used to collect citizen insight and perspective on hazards. The survey consisted of 9 questions that took an average of 4 minutes or less to complete. Results of the survey were integrated into the plan and used for both hazard risk ranking and the development of new mitigation actions.

As part of the public outreach process new website content specific to hazard mitigation and the plan update was developed. The Kent County government website was used as a tool for continuous public engagement throughout the plan development process. The Kent County Hazard Mitigation Plan website content was available to the public beginning in June of 2020. The website contained four separate tabs, as follows:

- Project Overview;
- Engage in the Planning Process;
- Hazard Risk & Vulnerability; and,
- Hazard Mitigation Activities & Risk Reduction.

At this time, the draft 2021 Kent County Hazard Mitigation Plan is available for public review and comment on the County's website. In fact, the draft plan has been available for review for several months. Comments received to date have been integrated and the most recent version of the Plan is available.

In addition to public outreach, a stakeholder committee was assembled to help guide the planning process. The planning committee was expanded from that used in the previous plan to include stakeholders from additional departments, agencies, organizations, municipalities, and members of the public. Large stakeholder meetings occurred throughout the plan development process, as follows:

- June 9, 2020- Stakeholder Meeting #1: Hazard Identification, Risk, Public Engagement Strategy, and 2014-2020 Mitigation Status Report;
- July 13, 2020- Stakeholder Meeting #2: Hazard Vulnerability, Website Content, Public & Stakeholder Surveys, and New Mitigation Ideas; and,
- August 27, 2020- Stakeholder Meeting #3 Capability Assessment and New Mitigation Ideas.

Topical small group meetings were held, as well, throughout the development of the plan.

Planning Review and Adoption

The plan has been reviewed and approved by the Federal Emergency Management Agency (FEMA) pending local adoption. The last step in the planning process is the formal adoption of the plan by Kent County and participating municipalities. Following the adoption of the ***Kent County Hazard Mitigation Plan,*** FEMA will provide an official approval, which will ensure that the County and participating municipalities remain eligible for FEMA grant programs.

Kent County Office of Emergency Services

Wayne Darrell
Director
410-778-7458



104 Vickers Dr.
Chestertown MD 21620
www.kentcounty.com/oes

TO: Municipalities of Kent County, Maryland

FROM: Wayne Darrell, Director, Office of Emergency services

RE: 2021 Kent County Hazard Mitigation Plan

DATE: *June 15, 2021*

The ***2021 Kent County Hazard Mitigation Plan*** has been completed and is available for review and download on the County Website at:
https://www.kentcounty.com/images/oes/HMP2020/5.18.2021_653026_2021_Kent_County_Hazard_Mitigation_Plan_Update_Master_Plan.pdf.

This Plan is an update to the *2014 Kent County Hazard Mitigation Plan*. The information obtained from your jurisdiction during the plan development process has been included in the Plan document. Furthermore, participating municipalities will be covered under the County Plan and will not be obligated to complete a municipal Hazard Mitigation Plan, as stipulated under the Federal *Disaster Mitigation Act of 2000*. In order for your jurisdiction to be covered under the County's Plan, a municipal resolution of adoption must occur, and subsequent documentation (copy of signed resolution) should be forwarded to the Wayne Darrell, Director, Kent County Office of Emergency Services.
I have included, as an attachment to this memorandum, a sample municipal resolution. At this time, we are requesting that each municipality complete the municipal adoption process for their jurisdiction and return to my office either by standard mail or email, by July 15, 2021. Please see the contact information below.

Wayne Darrell, Director
Kent County Office of Emergency Services
400 High Street
Chestertown, MD 21620
Phone: 410-778-7458
Email: wdarrell@kentgov.org

Please do not hesitate to contact me, if you should have any questions or concerns.

RESOLUTION 2021-13
COUNTY COMMISSIONERS OF KENT COUNTY, MARYLAND

A RESOLUTION TO ADOPT THE 2021 KENT COUNTY HAZARD MITIGATION PLAN

WHEREAS, the 2021 Kent County Hazard Mitigation Plan, is based on the standards contained in 44CRF, Part 201, as authorized by the Disaster Mitigation Act of 2000 (DMA2K). These criteria addresses the planning process, hazard identification and risk assessment, mitigation strategy and plan maintenance requirements; and

WHEREAS, the Board of County Commissioners understand that the 2021 Kent County Hazard Mitigation Plan has received a satisfactory rating by the Federal Emergency Management Agency (FEMA) for all required criteria; and

WHEREAS, the Board of County Commissioners are dedicated to supporting the DMA2K and are committed to reducing future disaster losses and building community resiliency; and

WHEREAS, the Board of County Commissioners have reviewed the 2021 Kent County Hazard Plan and support its adoption; and

WHEREAS, the appropriate County processes were completed for the advertisement and adoption of the plan by resolution.

NOW, THEREFORE, BE IT RESOLVED, the County Commissioners of Kent County, Maryland hereby adopt the 2021 Kent County Hazard Mitigation Plan, attached hereto as Exhibit A, based on the standards contained in 44CFR, Part 201, as authorized by the Disaster Mitigation Act of 2000 (DMA2K),

BE IT FURTHER RESOLVED; the 2021 Kent County Hazard Mitigation Plan shall become effective immediately upon passage of this resolution.

ATTEST:

Sondra M. Blackiston, Clerk

THE COUNTY COMMISSIONERS
OF KENT COUNTY, MARYLAND

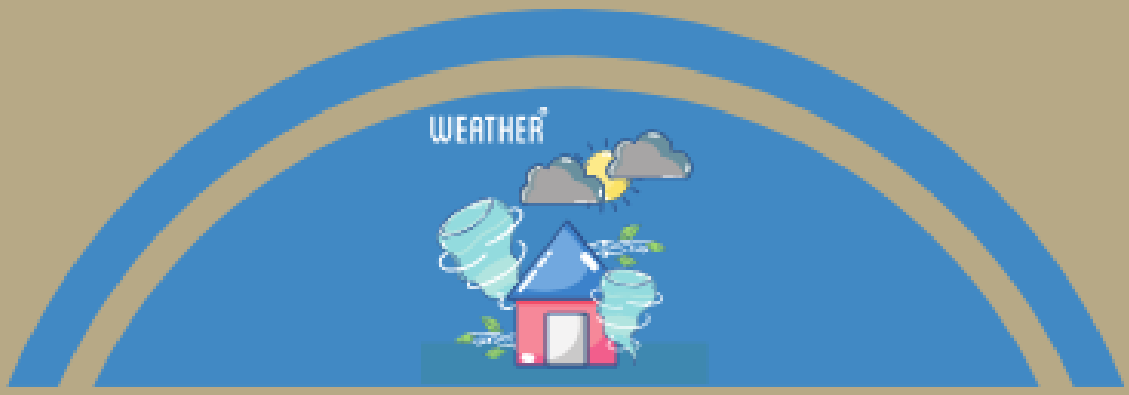
P. Thomas Mason, President

Ronald H. Fithian, Member

Robert N. Jacob, Jr., Member

ADOPTED: June 22, 2021

Exhibit A



HAZARD MITIGATION PLAN

KENT COUNTY, MARYLAND



Prepared for:

Kent County
Office of Emergency Services
104 Vickers Drive, Unit D
Chestertown, Maryland 21620

Prepared by:

Smith Planning & Design
76 Baltimore Street
Cumberland, MD 21502

May 2021

Acknowledgements

This plan was prepared on behalf of the Kent County Board of Commissioners for the Office of Emergency Services.

Kent County Board of County Commissioners

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A special thank you to the members of the Hazard Mitigation Planning Committee and participating municipalities.

Towns of:
Betterton, Mayor Donald E. Sutton
Chestertown, Mayor Christopher M. Cerino
Galena, Mayor John T. Carroll
Millington, Mayor Claude J. Morales, Jr.
Rock Hall, Mayor Dawn E. Jacobs

To all the individuals and organizations who gave time and thought to participate in the Kent County Hazard Mitigation Plan process. The plan is better and stronger because of your involvement.

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SECTION 1



SECTION 1 TOPICS

- INTRODUCTION
- ORGANIZING THE PLANNING PROCESS
- ASSESS RISK & CAPABILITIES
- DEVELOP A MITIGATION STRATEGY
- ADOPT & IMPLEMENT THE PLAN

PLAN UPDATE HIGHLIGHTS

New laws passed to enhance the Stafford Act have been included and with links to these laws.

2020 Stakeholder Committee more than doubled than that listed in previous plan.

Public engagement was encouraged with the development of the Kent County Hazard Mitigation Plan website for this planning process. The website informed the public of Stakeholder meetings, provided information on the plan update, and provided mitigation activities to reduce risk.

Additional new opportunities for public input was sought through an online public survey.

Hazards Profiled in 2014 Hazard Mitigation Plan were reviewed and ranked for the 2020 Plan Update.

Conducted an Enhanced Hazard Risk Assessment that includes past occurrences and future probability, as well as community perspective survey results.

New Capability Assessment using FEMA Local Mitigation Planning Handbook was included. Completed Capability Assessments for the County, and all five (5) towns were added to the plan update.

Planning Area profile included updated map, new population estimates and projections, and updated employment data.

Several meetings were conducted to develop, review, and prioritize new action items. Action items were included in appropriate hazard specific sections.

The plan update will be reviewed, and the list of action items and prioritized projects will be updated annually, with the Office of Emergency Services as the lead agency.

Introduction

The following Hazard Mitigation Plan for Kent County and its five (5) municipalities (Betterton, Chestertown, Galena, Millington, and Rock Hall) is a collaborative effort and is meant to satisfy the requirements of the following:

- Robert T. Stafford Disaster Relief and Emergency Assistance Act (Stafford Act) - legally requires state, local, tribal, and territorial governments to develop and adopt FEMA-approved hazard mitigation plans as a condition for receiving certain types of non-emergency disaster assistance.
- Disaster Mitigation Act of 2000 - 44 CFR, Part 201.6 (Code of Federal Regulations) - the Code of Federal Regulations (CFR) contain requirements and procedures to implement the hazard mitigation planning provisions of the Stafford Act.

Since the Stafford Act, additional laws have been passed that help to shape hazard mitigation policy as it stands today. These revisions are included in the Sandy Recovery Improvement Act (SRIA) of 2013, the National Flood Insurance Act of 1968, and the Water Infrastructure Improvements for the Nation (WIIN) Act of 2016.

The ongoing implementation of this Plan represents the essential aspect of comprehensive disaster mitigation planning through evaluation and understanding of potential hazards, vulnerabilities, and risks.

FEMA Hazard Mitigation Planning Process

State, **local**, tribal, and territorial governments engage in hazard mitigation planning to identify risks and vulnerabilities associated with natural disasters and develop long-term strategies for protecting people and property from future hazard events.

Kent County used the FEMA planning process to update the 2021 hazard mitigation plan. The four core steps in completing a hazard mitigation plan update included the following:



Organizing the Planning Process

At the start, Kent County and its participating municipalities focus was on assembling the resources needed for a successful mitigation plan update process. This included securing technical expertise, defining the planning area, and identifying key individuals, agencies, neighboring jurisdictions, businesses, and/or other stakeholders to participate in the process. The planning process also included opportunities for the public to participate and comment on the plan.

2020 Stakeholder Committee

A new 2020 Stakeholder Committee was assembled for this plan update. The planning committee was expanded from that used in 2014 to include stakeholders from additional departments, agencies, organizations, and members of the public.

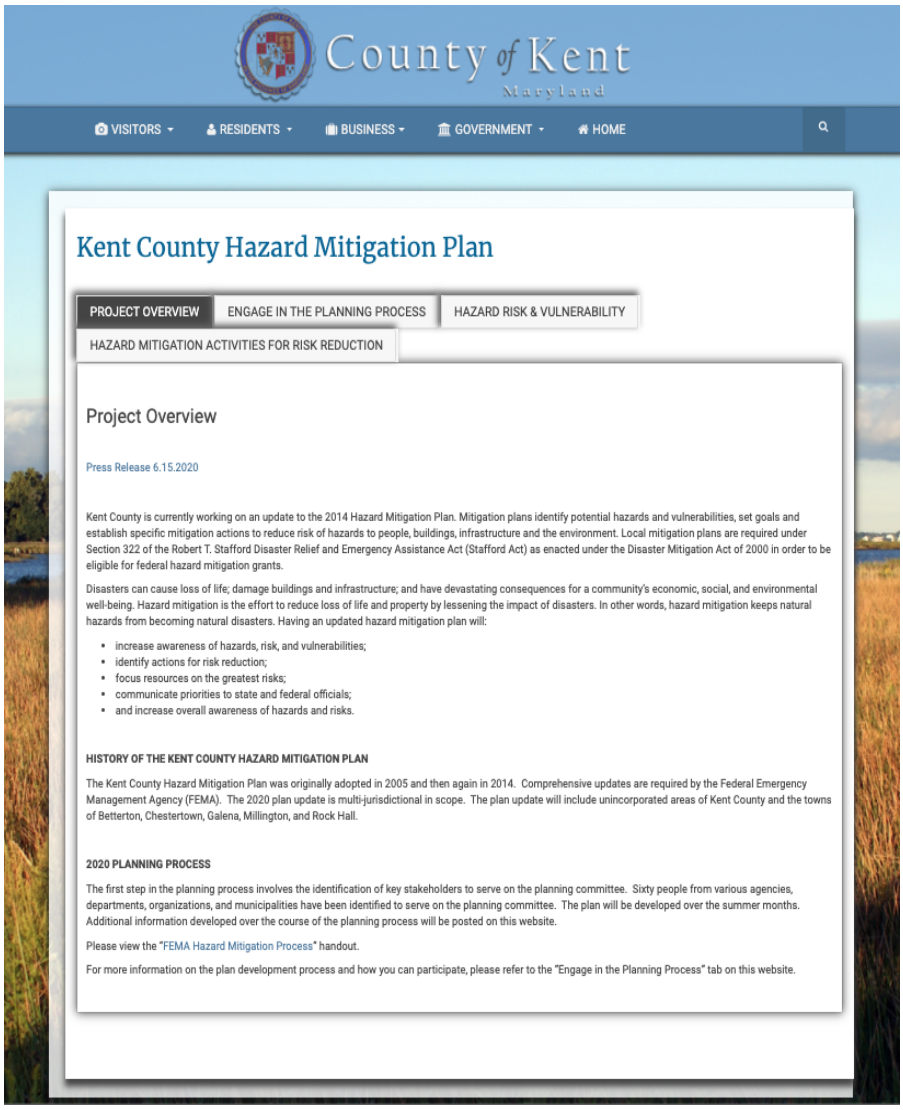
Table 1-1: 2020 Hazard Mitigation Planning Committee

Local Government	
Name	Department/Agency
P. Thomas Mason	Kent County Commissioner's Office
Ronald Fithian	
Robert N. Jacob, Jr.	
Lee Ann Myers	Kent County Human Resources & Kent County Public Information Officer
Shelley L. Heller	Kent County Administrator
Virginia Gregg	Kent County Office of Emergency Services
Wayne Darrell	
Todd McGinnis	
David Rice	
Rob Tracey	Kent County Planning, Housing, and Zoning
Stephanie Jones	
Mike Bitting	
Carla Gerber William Mackey	
Daniel Voshell	Kent County DPW - Roads
Myra S. Butler	Kent County Parks & Recreation
Bernadette Bowman	Kent County Office of Tourism
Karen Miller	Soil Conservation District
Jamie Williams	Kent County Economic Development
Education	
Name	Department/Agency
Joe Goetz	Kent County Public School Board
Tracey Williams	Kent County Public Schools - Student Services
Vandrick Hamlin	Kent County Public Schools - Mental Health & Safety Coordinator
Candace Wannamaker	Washington College

Police & Corrections	
Name	Department/Agency
Brandon McFayden	Washington College Office of Public Safety
Sheriff John Price	Kent County Sheriff's Office
John Dolgos	Chestertown Police Department
Bill Dempsey	Rock Hall Police Department
Robert Connolly	Maryland State Police
Brian Gill Jessie Haas	
Herb Dennis	Kent County Detention Center
Steve O'Melia	
Fire & Rescue	
Name	Department/Agency
Dan Menchey	Betterton Volunteer Fire Department
Allan Schauber	Kent & Queen Anne's Rescue Squad
Otis Darling	Chestertown Volunteer Fire Company
Chris Powell	Galena Volunteer Fire Department
Richard McIntyre	Millington Volunteer Fire Company
Jimmy Price	Kennedyville Volunteer Fire Company
Troy White	Rock Hall Volunteer Fire Company
Hospital & Medical	
Name	Department/Agency
Beth Coop Ron Lewis	Shore Regional Health Systems
Sharon Jefferson-Hawkins	American Red Cross
Bill Webb	Kent County Health Department
Charlene Perry	
John Beskid	
State Government	
Name	Department/Agency
Kathy Nolan	Maryland Department of Social Services
Shelly Neal-Edwards	
William Hildebrand	Maryland Emergency Management Agency (MEMA)
John Barto	Maryland Institute for Emergency Medical Services Systems (MIEMSS) - Region IV
Michael Parsons	
Geoff Donahue	Maryland Department of Environment (MDE)

Private Sector	
Name	Department/Agency
Robert Jackson	Heron Point
Lulu Hurtt	
Dawn Hofstetter David Martin	LaMotte Chemical
Richard Budden	Radio Amateur Civil Emergency Service (RACES)
Eric Reynolds	Kent County Humane Society
Barbara Jorgenson	Kent County Historical Society
Jeffrey Baggett	Private Citizen
Jim Bass	Eastern Shore Land Conservatory
Tim Trumbauer	ShoreRivers
Towns	
Name	Department/Agency
Elizabeth Greenwell	Town of Betterton
William S. Ingersoll	Town of Chestertown
Kees deMooy	Town of Chestertown
Kathleen Billmire	Town of Galena
Warren Walters	Town of Galena
Elizabeth J. Manning	Town of Millington
CJ Morales	Town of Millington
Robert S. Resele	Town of Rock Hall

Opportunities for Stakeholder & Public Engagement Throughout the Process



The Kent County government website was used as a tool for continuous public engagement throughout the plan development process. The Kent County Hazard Mitigation Plan site was available to the public beginning in June of 2020. The website contained four separate tabs, as follows:

- Project Overview
- Engage in the Planning Process
- Hazard Risk & Vulnerability
- Hazard Mitigation Activities & Risk Reduction

The public was invited to attend each of the Stakeholder Meetings, a WebEx Link was provided along with of meeting details in advance of each meeting. In addition, each meeting was recorded, and those recordings were made available on the website, along with meeting notes. This information was integrated under the "Engage in the Planning Process" tab.

Stakeholder meetings occurred throughout the plan development process, as follows:

- June 9, 2020- Stakeholder Meeting #1: Hazard Identification, Risk, Public Engagement Strategy, and 2014-2020 Mitigation Status Report;
- July 13, 2020- Stakeholder Meeting #2: Hazard Vulnerability, Website Content, Public & Stakeholder Surveys, and New Mitigation Ideas; and,
- August 27, 2020- Stakeholder Meeting #3 Capability Assessment and New Mitigation Ideas.

Minutes from each of the Stakeholder Meetings were distributed to stakeholder committee members and posted Kent County Hazard Mitigation Plan webpage. Voice recordings of each meeting were posted on the webpage, as well. Meeting minutes have been included in *Appendix C: Stakeholder and Public Engagement.*

In addition to Stakeholder Meetings, which were open to the public, other opportunities for public input were sought. An online public survey was posted on the website in June of 2020.



Excerpt from the Public Survey:

The Kent County Hazard Mitigation Plan is a project that aims to ensure the County is prepared for all kinds of hazards. The Office of Emergency Services is placing special emphasis on understanding citizens' concerns regarding hazards. Community members input to the process is incredibly valuable. This survey is being used to collect your insight and perspective.

The survey consists of 9 questions and will take an average of 4 minutes or less to complete.

We thank you sincerely for your time.

This will not be your only opportunity to provide input. You may provide your contact information at the end of the survey for additional information regarding the plan.

Public survey results collected from June through October of 2020 have been tabulated and are included in *Appendix C: Stakeholder and Public Engagement*. A total of 202 citizens participated in the survey.

A full listing of stakeholder and public engagement opportunities has been included in *Appendix C: Stakeholder and Public Engagement.*

Next, Kent County and its participating municipalities identified the characteristics and potential consequences of hazards. The plan update included geographic areas each hazard might impact and what people, property, or other assets might be vulnerable. In addition, capabilities to undertake local mitigation were documented in order to identify available resources to reduce losses, as well as any potential gaps that exist.

Assess Risk & Capabilities

Hazard Identification & Risk Assessment

The hazard identification process for Kent County involved investigating various types of natural hazards faced by the County over the past several decades. Since it is assumed that hazards experienced by the County in the past may be experienced in the future, the hazard identification process includes a history and an examination of various hazards and their occurrences. Information of past hazards was based on

history and research from historical documents and newspapers; County plans and reports; conversations with County residents; and Internet websites. Data and maps that were available online included sources such as the United States Geological Survey (USGS) and the National Weather Service. Profiling hazards involved determining the frequency or probability of future events, their severity, and factors that may affect their severity. Each hazard type has unique characteristics that can impact the County. For example, no two flood events will impact a community in the same manner. Also, the same hazard events can affect different communities in different ways based on geography, development, population distribution, age of buildings, etc. Developing hazard event profiles enables us to answer the question "how bad could a hazard get?" These profiles have been included in the various plan sections.

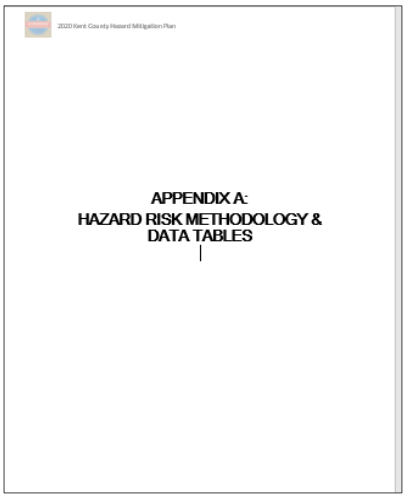
Hazard risk and vulnerability information provides the factual basis for activities proposed in the strategy portion of the hazard mitigation plan update. Understanding hazard risk and vulnerability informs proposed actions by focusing attention and resources on hazards that pose the greatest risks. One of the first steps in assessing hazard risk and vulnerability is investigating various types of natural hazards faced by the County over the past several decades. The following hazards have been documented as affecting Kent County and were assessed for inclusion in the 2021 Kent County Hazard Mitigation Plan Update. The table below provides information on hazards identified in the previous 2014 plan, and any modifications made during this plan update process.

Table 1-2: 2020 Review of Hazards Profiled in 2014 HMP

2014 Hazards	Status	2020 Update Notes	2020 Hazard
Riverine & Coastal Flooding	Changed	Renamed to Flood	**Flood** (Flood, Flash, Heavy Rain, Coastal Storm, Storm Surge/Tide)
Hurricanes	Continued	N/A	**Hurricane** (Tropical Storm, Hurricanes, Tropical Depression)
Winter Storm/Winter Weather	Changed	Renamed to Snow & Ice Storms	**Snow & Ice Storms** (Winter Storm, Winter Weather, Blizzard, Frost/Freeze, Heavy Snow, Sleet)
Other Severe Storms ((Thunderstorms, Lightning, Hail)	Changed	Renamed to Severe Storms	**Severe Storms** (Thunderstorm Wind, Lightning, Hail)
Extreme Heat	Changed	Renamed to Extreme Temperatures and combined with Excessive Cold/ Wind Chill	**Extreme Temperatures** (Excessive Heat, Heat, Excessive Cold/ Wind Chill)
Tornadoes	Continued	N/A	**Tornado** (Tornado & Funnel Cloud)
Earthquakes	Continued	N/A	**Earthquakes**
Not Identified	New	N/A	**High Wind** (Derecho, Straight-line Winds, Strong Wind)
Not Identified	New	N/A	**Climate Adaptation** (Erosion & Sea Level Rise)
Not Identified	New	N/A	**Pandemic & Emerging Infectious Disease**
Drought, Soil Movement/ Steep Slopes, & Wildfire	Removed- Low priority hazards		

In order to assess the hazard risk for the ten (10) hazards identified in this plan update a composite score method was undertaken. The composite score method was based on a blend of quantitative and qualitative factors extracted from the National Centers for Environmental Information (NCEI), Maryland Department of Health - Maryland's NEDSS And PRISM Databases, stakeholder survey, and other available data sources. These included:

- Historical impacts, in terms of human lives and property;
- Geographic extent;
- Historical occurrence;
- Future probability, and;
- Local community perspective.


APPENDIX A:
HAZARD RISK METHODOLOGY &
DATA TABLES

Detailed information is available within *Appendix A: Hazard Risk Methodology, Hazard Ranking Results, and Hazard Data Tables.*

The following table provides the hazard risk ranking update results. Severe storms and emergency infectious diseases were ranked as “High” risk hazards. Flood, hurricane, extreme temperatures, and high wind were ranked as “Medium High” risk hazards.

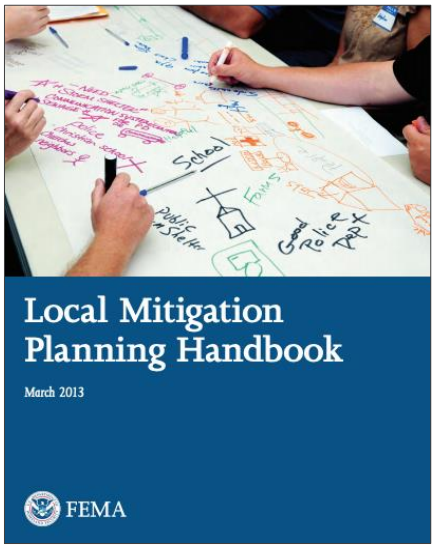
Table 1-3: New Hazard Ranking Results

Hazards	Composite Score	HAZARD RANINKG
Flood (Flood, Flash, Heavy Rain, Coastal Storm, Storm Surge/Tide)	22.5	Medium High
Hurricane (Tropical Storm, Hurricanes, Tropical Depression)	20.5	Medium High
Extreme Temperatures (Excessive Heat, Heat, Excessive Cold/Wind Chill)	22	Medium High
Tornado (Tornado & Funnel Cloud)	13.5	Medium Low
Snow & Ice Storms (Winter Storm, Winter Weather, Blizzard, Cold Wind/Chill, Frost/Freeze, Heavy Snow, Sleet)	17	Medium
Severe Storms (Thunderstorm Wind, Lightning, Hail)	25	High
High Wind (Derecho & Straight-line Winds, High Winds, Strong Wind)	22	Medium High
Earthquake	14	Medium Low
Climate Adaptation (Erosion & Sea Level Rise)	19	Medium
Emerging Infectious Diseases	27	High

Capability Assessment

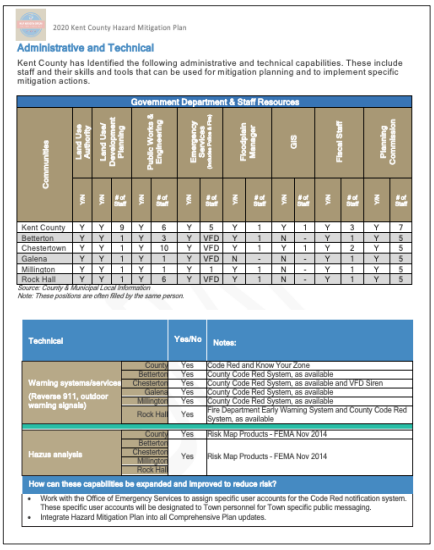
Each community has a unique set of capabilities, including authorities, policies, programs, staff, funding, and other resources available to accomplish mitigation and reduce long term vulnerability. The primary types of capabilities for reducing long-term vulnerability through mitigation planning are the following:

- Planning and regulatory
- Administrative and technical
- Financial
- Education and outreach



In order to perform a detailed capability assessment, which was not available in the previous plan version, the *FEMA Local Mitigation Planning Handbook* (Handbook), which is the official guide for local governments to develop, update and implement local mitigation plans, was utilized. The sample worksheets provided in the *FEMA Handbook-Appendix A: Capability Assessment Worksheets* were used.

The FEMA Handbook worksheets were modified slightly for County and Town participation. The worksheets were converted into PDF Fillable Forms, for ease of use by participants. In addition, each of the five (5) towns participated in separate planning meetings with Kent County Office of Emergency Services and SP&D staff in order discuss current capabilities and identify gaps.


2020 Kent County Hazard Mitigation Plan

Administrative and Technical

Kent County has Identified the following administrative and technical capabilities. These include staff and their skills and tools that can be used for mitigation planning and to implement specific mitigation actions.

Government Department & Staff Resources

Communities	Land Use Authority		Land Use/ Development Planning		Public Works & Engineering		Emergency Services (Police/Fire/EMS)		Floodplain Manager		GIS		Fiscal Staff		Planning Commission	
	Y/N		Y/N		Y/N		Y/N		Y/N		Y/N		Y/N		Y/N	
Kent County	Y	Y	9	Y	6	Y	5	Y	1	Y	1	Y	3	Y	7	
Betterton	Y	Y	1	Y	3	Y	VFD	Y	1	N	-	Y	1	Y	5	
Chestertown	Y	Y	1	Y	10	Y	VFD	Y	1	Y	1	Y	2	Y	5	
Galena	Y	Y	1	Y	1	Y	VFD	N	-	N	-	Y	1	Y	5	
Millington	Y	Y	1	Y	1	Y	1	Y	1	N	-	Y	1	Y	5	
Rock Hall	Y	Y	1	Y	6	Y	VFD	Y	1	N	-	Y	1	Y	5	

Source: County & Municipal Local Information
Note: These positions are often filled by the same person.

Technical		Yes/No	Notes:
Warning systems/services (Reverse 911, outdoor warning signals)	County	Yes	Code Red and Know Your Zone
	Betterton	Yes	County Code Red System, as available
	Chestertown	Yes	County Code Red System, as available and VFD Siren
	Galena	Yes	County Code Red System, as available
	Millington	Yes	County Code Red System, as available
	Rock Hall	Yes	Fire Department Early Warning System and County Code Red System, as available
Hazus analysis	County	Yes	Risk Map Products - FEMA Nov 2014
	Betterton	Yes	Risk Map Products - FEMA Nov 2014
	Chestertown		
	Millington		
	Rock Hall		

How can these capabilities be expanded and improved to reduce risk?

- Work with the Office of Emergency Services to assign specific user accounts for the Code Red notification system. These specific user accounts will be designated to Town personnel for Town specific public messaging.
- Integrate Hazard Mitigation Plan into all Comprehensive Plan updates.

Town meetings occurred on the following dates:

- August 18, 2020- Town of Rock Hall;
- September 16, 2020- Town of Millington;
- September 17, 2020- Town of Chestertown;
- September 22, 2020- Town of Betterton; and,
- September 29, 2020- Town of Galena.

Completed capability assessments for the County, and all five (5) towns have been included in *Appendix D: Capability Assessment* of this plan. In addition, capabilities are highlighted for both the county and the five (5) towns within the hazard specifics sections of the plan update.

Planning Area Profile

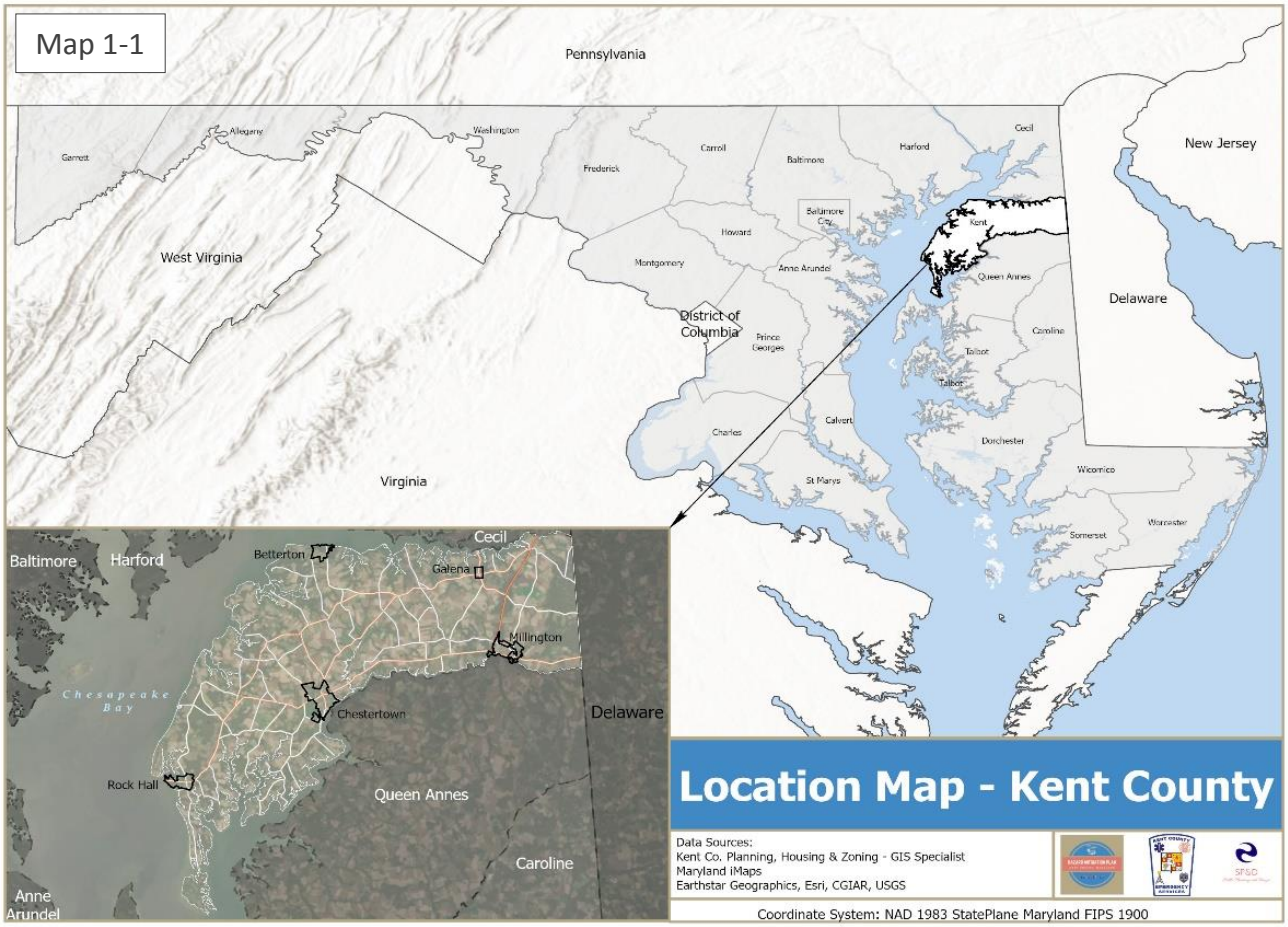
Physical Condition

Kent County, founded in 1642, is the second oldest County in Maryland. Prior to European colonization, the area was inhabited by a mosaic of different native societies, including the Tockwoghs and Wicomisses. Early settlers were greeted with the magnificent expanse of the Chesapeake Bay, the beautiful Chester and Sassafras Rivers, waters teeming with fish, myriads of

waterfowl, mighty forests, and rich soil. Although much has changed since then, much remains the same. The hallmarks of Kent County continue to be the Chesapeake Bay, its tributaries, and rich farmland. These resources shaped much of the County's economy, culture and character and they continue to serve as the foundation of the Comprehensive Plan.

Kent County is located on the northern portion of the Delmarva Peninsula on the eastern side of the Chesapeake Bay directly opposite Baltimore. The County is bordered on the north by the Sassafras River, which separates it from Cecil County, and on the south by the Chester River, which separates it from Queen Anne's County. The western border is formed by the Chesapeake Bay, and the eastern boundary is formed by the Delaware State Line. The County has a total land area of 178,428 acres or approximately 281 square miles and has 79,006 acres of water within its boundaries. Five (5) incorporated towns–Betterton, Chestertown, Galena, Millington, and Rock Hall–are located in Kent County. Chestertown is the County seat.

A railroad line runs from Chestertown north to Worton and eastward through the County to Delaware and points north. Both Maryland Route 213 (Chesapeake Country National Scenic Byway) and U.S. Route 301 cross the County in a generally north-south direction. These highways are parts of the main connection to the Baltimore-Washington area by way of the Bay Bridge and U.S. Route 40 and Interstate 95.



The Development Pattern

The early development of Kent County was devoted almost exclusively to the conversion of wooded land to agricultural use. Several early settlements were established on waterways as shipping points for agricultural products. These settlements grew into the towns of Chestertown on the Chester River, Rock Hall on the Bay, and Georgetown and Betterton on the Sassafras River. Betterton later grew more as a resort center than as a trade center or shipping point. As more land was converted to agriculture, small trading communities formed in the central County at crossroads, or later where roads crossed the Pennsylvania Railroad. Galena, Still Pond, and Fairlee are examples of the former; Massey, Kennedyville and Worton grew up at railroad crossings. Rock Hall, with a good harbor off the Bay, grew as a center for fishing and boat building. Millington grew around a grain mill near the headwaters of the Chester River. Chestertown, as the County seat, became the largest town and principal trade and business center for the County and later home to Washington College and some agriculture-related industry.

In addition to the residences clustered around the towns, small groups of houses grew in isolated locations originally in strips along existing roads and later in subdivisions. Some of these were occupied by farm workers, but an increasing number were occupied by families supported by jobs in the towns. The scattered pattern of rural, non-farm residences is supplemented by a substantial number of dwellings along the waterfront. This scattered pattern of development continued as Kent County's population began to increase and the interest in vacation and retirement homes increased. In particular, the number of waterfront and rural subdivisions increased. The desire for large rural lots increased with the desire for second homes.

Main elements of the commercial pattern are located in the towns and along the highways on the outskirts of the towns. Other small spots of commerce are located along highways or at crossroads in outlying areas. Most industry is also located near the towns and villages. Larger public and semi- public uses include the country club golf courses near Chestertown and at Great Oak on Fairlee Creek, Worton Park, Betterton Beach, Turners Creek Park, and the four wildlife reservations: the federal area on Eastern Neck Island, the two state areas – Sassafras Natural Resources Management area and the Millington Wildlife Management Area and Chesapeake Farms, a private demonstration area on the west fork of Langford Creek.

Land Use/Land Cover data from the Maryland Department of Planning is shown in Table 1-4. Between 2002 and 2010, the County saw a 9.5% increase in developed lands but only a 0.8% decrease in resource lands. Overall, the County has been successful in encouraging development in areas where it is appropriate and out of the countryside.

Table 1-4: Land Use

	Land Use in Acres		Land Use Change	
	2002[3]	2010[2]	2002-2010	
	Acres	Acres	Acres	Percent
Very Low Density Residential[1]	3,681	4,397	716	19.5%
Low Density Residential	6,096	6,371	275	4.5%

Medium Density Residential	1,987	2,128	141	7.1%
High Density Residential	165	227	62	37.9%
Commercial	887	994	107	12.1%
Industrial	38	38	0	0.0%
Other Developed Lands/ Institutional /Transportation[1]	1,465	1,518	53	3.6%
Total Developed Lands[5]	**14,319**	**15,673**	**1,354**	**9.5%**
Agriculture	117,228	116,313	-915	-0.8%
Forest	42,460	41,997	-464	-1.1%
Extractive/Barren/Bare	49	49	0	0.0%
Wetland	4,372	4,397	24	0.6%
Total Resource Lands[5]	**164,109**	**162,755**	**-1,354**	**-0.8%**
Total Land	178,428	178,428		
Water	79,006	79,006		

Source: Maryland Department of Planning, Land Use/Land Cover

1. *Two new categories have been added to the 2010 Land Use/Land Cover layer update: very low-density residential development (191,192) and transportation (80).*
2. *Updates/modifications to the 2010 land use/land cover layers used the 2007 NAIP aerial imagery and parcel information from Maryland Property View 2008.*
3. *The original 2002 data were mapped using geo-rectified LANDSAT satellite imagery and 2000 MD Property View. In 2010 two new land use categories were added, transportation and very low density residential making it necessary to modify the 2002 land use/land cover layer to incorporate these categories for comparative purposes. Additionally, better imagery and property data information were used to make further modifications. The enhanced 2002 dataset is available upon request.*
4. *Very low density residential was not mapped in 1973, so there is no data associated with changes. Transportation was not mapped in 1973.*
5. *As noted above, new land use categories were added in 2010 and associated adjustments were made to 2002 data. Similar adjustments were not made to 1973 data, making it impossible to know how much change from 1973 is due to new development since then, versus misclassified land uses at that time. For these reasons, we suggest reliance only on change statistics for the aggregate land use categories, Total Developed and Total Resource Lands.*

Note: Check out the Land Use/Land Cover Report for additional data

Natural Features

Located in the Atlantic Coastal Plain, Kent County is comparatively low-lying, with relief seldom exceeding 80 feet. The eastern and central portions of the County are characterized by a broad, gently rolling plain; the northwestern section is deeply incised by streams. These streams have steep banks along their shorelines and in some cases bluffs 20 to 80 feet high. The character of the southwestern portion of the County is one of flat plains and terraces sloping toward the water.

Kent County is underlain by deposits of sand, clay, sandy clay and silt, greensand, and marls resting on crystalline rocks. These rocks slope to the south and southeast at the rate of 60-150 feet per mile. The depth of the Coastal Plain sediments ranges from 900 feet in the northeastern portion to 2,200 feet in the southeastern portion.

Soils

The open, flat expanses of rich fertile soil that blankets the County is a gift of immeasurable value. Approximately 57% of the County is defined as prime farmland as compared with 23% of Maryland as a whole. The County has some of the best farmland in the United States and this combined

with the proximity to a variety of markets makes Kent County an ideal location for agribusinesses to thrive.

Natural, Historic, and Cultural Resources

The natural resources important to Kent County are clean air, prime agricultural land, tidal marshes, non-tidal wetlands, woodlands, large forests, ground water, the Chesapeake Bay, the Chester River, the Sassafras River and their tributaries, ponds, mineral resources, landscapes of agriculture, waterfront, open space, historic sites, dark nighttime skies and a peaceful, unhurried atmosphere.

The County also values its diverse ecosystems. The County has hedgerows, cropped fields, shorelines, meadows, forests, wetlands, submerged aquatic vegetation, and other plants. The varied wildlife includes deer, small mammals, reptiles and amphibians, waterfowl, game birds, songbirds, colonial nesting water birds, raptors, fish, crabs, and many species of shellfish.

The Chesapeake Bay, Chester and Sassafras Rivers and their major tributaries are the most significant water bodies in the County. Kent is in the Upper Eastern Shore Watershed which may be divided into the Sassafras, Still Pond/Fairlee, Langford, Lower Chester, Middle Chester, and Upper Chester sub watersheds. Each of these sub watersheds has a diverse assemblage of sensitive species, wetlands, forest, and other significant habitat areas.

Kent County is one of the oldest working landscapes in North America and one of the last intact colonial and early American landscapes anywhere. Archeological sites, historic buildings, old churches, and traditional landscapes are all evidence of Kent County's long and significant history. These historic sites and structures remind us of our cultural richness and provide a reassuring sense of time and place. The importance of these resources has been recognized by the state and federal governments through the designation of Maryland Routes 213, 20, and a portion of 445 as a National Scenic Byway and the inclusion of the majority of the County in the Stories of the Chesapeake Heritage Area.

Current and Projected Demographic Characteristics

Kent County continues to have the lowest population of any county in Maryland. According to the U.S. Census Bureau Population Division, July 1, 2019 population estimate of 19,422 for Kent County represents approximately a 3.8% decrease since 2010. This growth rate has been significantly lower than nearby counties in the Upper Eastern Shore region since 2010. The Maryland Department of Planning projects Kent County's population will reach 21,600 by the year 2025, 22,100 by the year 2030, 22,550 by the year 2035, 23,000 by the year 2040 and 23,450 by 2045.

The County’s population density (people per square mile) did not change significantly from 1960 to 1980. However, the County’s population density has increased slightly from 2000 to 2010 to 72.9 people per square mile. Between 2010 and 2019, the State of Maryland’s population has increased 4.7%, while Kent County’s population has decreased by -3.8%. However, the Towns of Betterton, Rock Hall, and Galena populations have increased, 11.3%, 3.9%, and 15.9%, respectively.

Table 1-5: Population			
State/Jurisdiction	2010 Census	Population Estimates	Percent Change 4/2010*-7/1/2019
State of Maryland	5,773,552	6,045,680 (July 2019)	4.7%
Upper Eastern Shore	239,951	243,245 (July 2019	1.4%
Kent County	20,197	19,422 (July 2019)	-3.8%
**Betterton	345	384 (2018 ACS)	11.3%
**Chestertown	5,252	5,113 (2018 ACS)	-2.6%
**Galena	612	708 (2018 ACS)	15.9%
**Millington	642	600 (2018 ACS)	-6.5%
**Rock Hall	1,310	1,361 (2018 ACS)	3.9%

Source: Census of Population 2010 and Population Division, U.S. Census, Release date March 26, 2020
**2010 Census estimates base reflects changes to the April 1, 2010 population due to the Census County Question Resolution Program.*
***2018 American Community Survey (ACS) 5 Year Estimates*

Kent County's population reflects an out-migration of young adults and an in-migration of older age groups, especially those of retirement age. Since 2010, there has been a slow but steady decline in the number of school-age children, while the number of citizens over 65 has continued to increase. The Maryland Department of Planning projects this trend to continue. In 2010, the median age was 45.6 compared to 38 years for the State. Over 27.1% of the County's population was over 65 years old compared to almost 15.9% for the State.

Table 1-6: Population Projections by Age								
	2010	2015	2020	2025	2030	2035	2040	2045
Age	Pop.	Pop.	Pop.	Pop.	Pop.	Pop.	Pop.	Pop.
0-4	995	757	772	736	755	791	808	815
5-19	3,436	3,224	3,416	3,258	3,084	3,077	3,147	3,296
20-44	5,503	5,109	5,092	5,185	5,217	4,956	4,910	5,086
45-64	5,866	5,640	5,861	5,625	5,286	5,395	5,620	5,660
65+	4,397	4,875	5,755	6,794	7,758	8,329	8,511	8,600
Total	**20,197**	**19,605**	**20,896**	**21,598**	**22,100**	**22,548**	**22,996**	**23,457**

Source: Census of Population, Maryland Department of Planning, January 2018

Business and Economic Characteristics

According to the Maryland Department of Labor, Office of Workforce Information and Performance (civilian employees only, in 2018, the county's 723 businesses employ 7,969 workers. Such diverse businesses as Chester River Health System, Washington College, Dixon Valve & Coupling and David A. Bramble call Kent County home. In addition, in 2018 Maryland State Department of Education; Maryland Higher Education Commission reports Washington College, offers over 25 major fields of study in both undergraduate and graduate programs to 1,334 students.

Kent County encourages growth and development of clean industrial and agriculture-related businesses. Close proximity to the Chesapeake Bay and major tributaries offers opportunities for environmental, aquaculture and tourism businesses.

Table 1-7: Top 10 Employers (2018-2019)		
Employer	Product /Service	Employment
Washington College	Higher education	550
Dixon Valve & Coupling	Valves and couplings	385
UM Shore Medical Center at Chestertown	Medical services	270
LaMotte	Chemical testing equipment	240
Heron Point of Chestertown	Nursing care	225
David A. Bramble	Paving and road constr.	210
Kent Center	Services for the disabled	175
Gillespie & Son and Gillespie Precast	Concrete products	135
YMCA Camp Tockwogh*	Recreation facility	130
Angelica Nurseries*	Plants and flowers	115

Source: "Brief Economic Facts, Kent County, Maryland," Maryland DBED, 2018-2019
Excludes post offices, state, and local governments; includes higher education
** Includes seasonal workers*

Future Trends

As development in the county and population density increase, natural hazards may present an increased threat to the people and structures of the County and also an increased need to mitigate. Between 2010 and July 2019, the County's population decreased by -3.8%. The U.S. Census projects a 2.31 percent increase from 2020 to 2045.

Building codes currently in place do not always address extreme conditions occasionally experienced in the County. Older structures built before 1940 or the establishment of building codes are particularly susceptible to damage. Natural hazards can also cause power supply disruptions and upset transportation systems.

The entire county may be affected by natural hazards. However, aged, dilapidated, and poorly constructed buildings, and buildings not constructed to applicable building codes are more susceptible to weather hazards. According to the *2018 American Community Survey 5-Year Estimates*, Kent County consists of a total of 10,065 housing units. Approximately 2,505 (+/-293) of those housing units were built prior to 1940, approximately 23.5 percent of the County's housing units. Manufactured housing units are especially susceptible to extreme weather events.

Develop a Mitigation Strategy

Mitigation strategies from the *2014 Kent County Hazard Mitigation Plan* were assessed early in the plan update process. Responsible entities listed for each of the previously identified mitigation action items were provided individualized fillable PDF's for status update purposes. Responses were reviewed and discussed by the planning committee. A *2014-2020 Mitigation Status Report* was developed as a result of this update effort and is included in *Appendix B.* Mitigation action items that were incomplete were later reviewed for applicability and potential inclusion the new mitigation strategy portions of the plan update.

During this plan update, Kent County and its participating municipalities set priorities and developed long-term strategies and action items for avoiding or minimizing the undesired effects of disasters. The new mitigation strategy portions of the plan update address how the mitigation actions identified will be implemented and administered.

In order to develop, review, and prioritize new action items, stakeholders were divided into various groups and a series of mitigation workshops were held, as follows:

- October 15, 2020- Public Awareness and Education;
- October 15, 2020- Emergency Services;
- October 16, 2020- Prevention, Property and Natural Resources Protection; and,
- October 26, 2020- Public Health and Emergency Medical Group Workshop.

The new mitigation action items have been included in the hazard specific sections of the plan and in *Appendix E: 2020-2025 Mitigation Action Items & Prioritization*.

Adopt & Implement the Plan

Kent County adopted and approved the plan on? The adopted County Plan is posted on the Kent County Government website. The Towns of Betterton, Galena, Rock Hall, Millington and Chestertown are in the process of Plan adoption.

To ensure success, the plan will remain a relevant, living document through routine maintenance over the course of the five-year planning cycle. The plan will be updated every five (5) years, however, a review and update of the County's list of action items and prioritized projects will occur annually, with the Office of Emergency Services as the lead agency. In order to complete a review of municipal actions items, Emergency Services staff will attend at least one (1) regularly scheduled monthly meeting with representatives from all five (5) towns annually. Subsequently, a status report will be submitted to the Kent County Commissioners annually. During the first 5-year cycle, the County did not complete annual evaluations of the Plan; however, the County will strive to ensure that annual reviews occur during the next cycle.

The Plan's annual review is also identified in the Kent County Comprehensive Plan. The County, as required by State laws, has prepared and continues to prepare a variety of specific plans and ordinances (Comprehensive Water and Sewerage, Solid Waste, Zoning Ordinance, Subdivision Regulations, Sediment Control, Stormwater Management, etc.). While providing more detailed information and policy, all plans and laws shall be in compliance with, and conform to, the Comprehensive Plan. The Comprehensive Plan provides policy direction and guides the development of these other plans.

The Hazard Mitigation Plan will augment the County Comprehensive Plan in a number of ways. The Comprehensive Plan addresses the County's accelerated erosion by high winds and high tides, overland flow, and identifies strategies to reduce erosion along Kent County's 268 miles of tidal shoreline. Both plans also emphasize the maintenance, enforcement, and strengthening of floodplain regulations and participation in the Community Rating System. All county projects will be evaluated for consistency with both the Comprehensive Plan and the Hazard Mitigation Plan.

Public comment and input will be sought as the Hazard Mitigation Plan is implemented over the five-year planning cycle.

SECTION 2



SECTION 2 TOPICS

- FLOOD HAZARD
- HISTORY & FUTURE RISK
- VULNERABILITY
- CAPABILITIES
- MITIGATION STRATEGIES

PLAN UPDATE HIGHLIGHTS

The hurricane hazard has been continued from the 2014 Plan into the 2020 Hazard Mitigation Plan.

This section focused on 1% annual chance flood event for riverine and coastal hazards.

A new table was added to provide descriptions for the SFHAs and new mapping to depict each flood zone's location within the northern and southern portions of Kent County.

Hazard Risk Assessment Data tables were updated using data from the 2016 State of Maryland Hazard Mitigation Plan and the National Centers for Environmental Information (NCEI) – Storm Events Database.

Vulnerability analysis for 1% annual chance flood event risk assessment and loss estimations were completed using FEMA Flood Zones – Effective Date: 2014 data. New maps were generated for the northern and southern parts of County, municipalities, and structures at risk to the inundation area. New At-Risk Structures to 1% Annual Chance Floodplain and Loss Estimations Per Community tables were developed and included.

Critical & Public Facilities at risk to the 1% annual chance flood event were analyzed. Facilities at risk were provide in table and mapping formats.

Updated flood insurance policy information obtained from FEMA was provided. Information the Kent County Nuisance Flood Plan was integrated as well as the dam inventory for Kent County.

New capabilities provided by stakeholders were discussed.

New goals and objectives were developed for this plan section. New 2020-2025 Mitigation Action Items provided by stakeholders were included. Action items ranked "High" were further detailed to include discussion, potential funding sources, and a timeline for implementation.

Flood Hazard

Hazard

Floods are described in terms of their extent (including the horizontal area affected and the vertical depth of floodwaters) and the related probability of occurrence. The probability of a flood is based on a statistical chance of a particular size flood (expressed as cubic feet per second of water flow) occurring in any given year. The annual flood is usually considered the single greatest event expected to occur in any given year. Flood studies use historical records to determine the probability of occurrence for different extents of flooding.

Flood zones are geographic areas that the FEMA has defined according to varying levels of flood risk. These zones are depicted on a community's Flood Insurance Rate Map (FIRM) or Flood Hazard Boundary Map. Each zone reflects the severity or type of flooding in the area. Table 2.1 provides a description for each flood zone, while Maps 2.1 and 2.2 depict each flood zone's location within the northern and southern portions of Kent County.

Table 2-1: FEMA Special Flood Hazard Areas

Flood Zone	Description
A	Areas with a **1% annual chance of flooding** and a 26% chance of flooding over the life of a 30-year mortgage. Because detailed analyses are not performed for such areas; no depths or base flood elevations are shown within these zones.
AE	Areas with a 1**% annual chance of flooding** and a 26% chance of flooding over the life of a 30-year mortgage. Base flood elevations derived from detailed analyses are provided. AE Zones are now used on new format FIRMs instead of A1-A30 Zones.
VE	Coastal areas with a **1% or greater chance** of flooding and an additional hazard associated with storm waves. These areas have a 26% chance of flooding over the life of a 30-year mortgage. Base flood elevations derived from detailed analyses are shown at selected intervals within these zones.
AO	River or stream flood hazard area, and areas with a **1% or greater chance** of swallow flooding each year, usually in the form of sheet flow, with an average depth ranging from 1-3 feet. These areas have a 26% chance of flooding over the life of a 30-year mortgage.
X Shaded	An area of moderate flood hazard that is determined to be outside the Special Flood Hazard Area between the limits of the base flood and the **0.2% annual chance** (or 500-year) flood.

Most of the SFHA is designated as "AE" zone; the National Flood Insurance Program (NFIP) uses this label for riverine/inland areas of the SFHA where base flood elevations (BFEs), the elevations of the 1% annual chance floodplain (100-year floodplain), are determined. In Kent County, within much of this AE zone, floodwater levels are controlled by tidal influences and storm surge levels. Kent County also has areas in the western part of the County designated as VE zones, or Coastal High Hazard Areas. VE zones are parts of the SFHA that are prone to velocity/wave action at least 3 feet in height during a 1% annual chance flood event. The wave action that occurs during flooding in these zones generally causes more severe damage to structures, as well as erosion, than what is experienced in nearby AE zones and riverine flooding areas.

The County's Flood Insurance Rate Maps (FIRMs) show that the majority of the County's land mass in the northern, western, and the southeastern rim lie within the 1% annual chance flood (100-year floodplain) or Special Flood Hazard Area (SFHA). The National Flood Insurance Program (NFIP) uses these general labels to mark areas subject to riverine and inland flooding (AE zones) and coastal flooding (VE zones) where flood hazards include velocity flows, wave action, and erosion. While the BFE has been identified in much of the County, the northeastern rim of the County has holes in its BFE documentation. Several of the county's streams are also regulated floodways in which the channel and adjacent land areas must be reserved in order to discharge the base flow without increasing the base flood elevation by more than one foot.

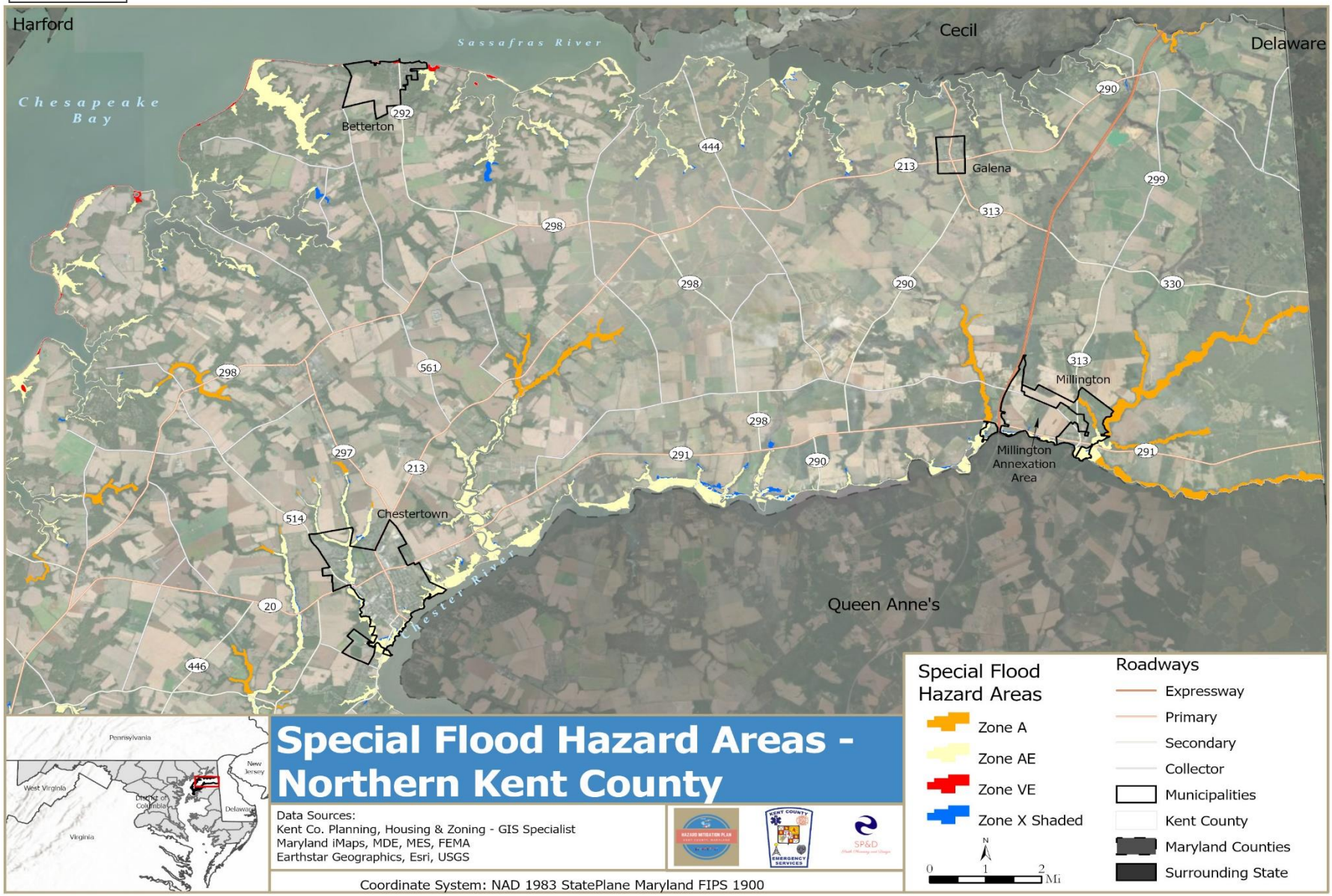
The floodplain map below for the County indicates floodplains intersecting urban areas in Chestertown, Millington, Rock Hall, and the Chesapeake Bay in general. The low lying, relatively undisturbed topography, high seasonal water tables, poor drainage and high runoff characteristics of the soils combine to expose Kent County with a high potential to be flooded. When heavy rainfall and a high river discharge combine with storm tides, low lying areas adjacent to rivers and estuaries become inundated with saltwater.

The areas within the County that are not within the 1% annual chance floodplain (100-year floodplain) have a relatively smaller risk of being flooded. However, flood risks could also arise from one or more of the following: drainage areas of less than one square mile; sewer backup; drainage system backup; dam breaches; and storm water runoff problems.

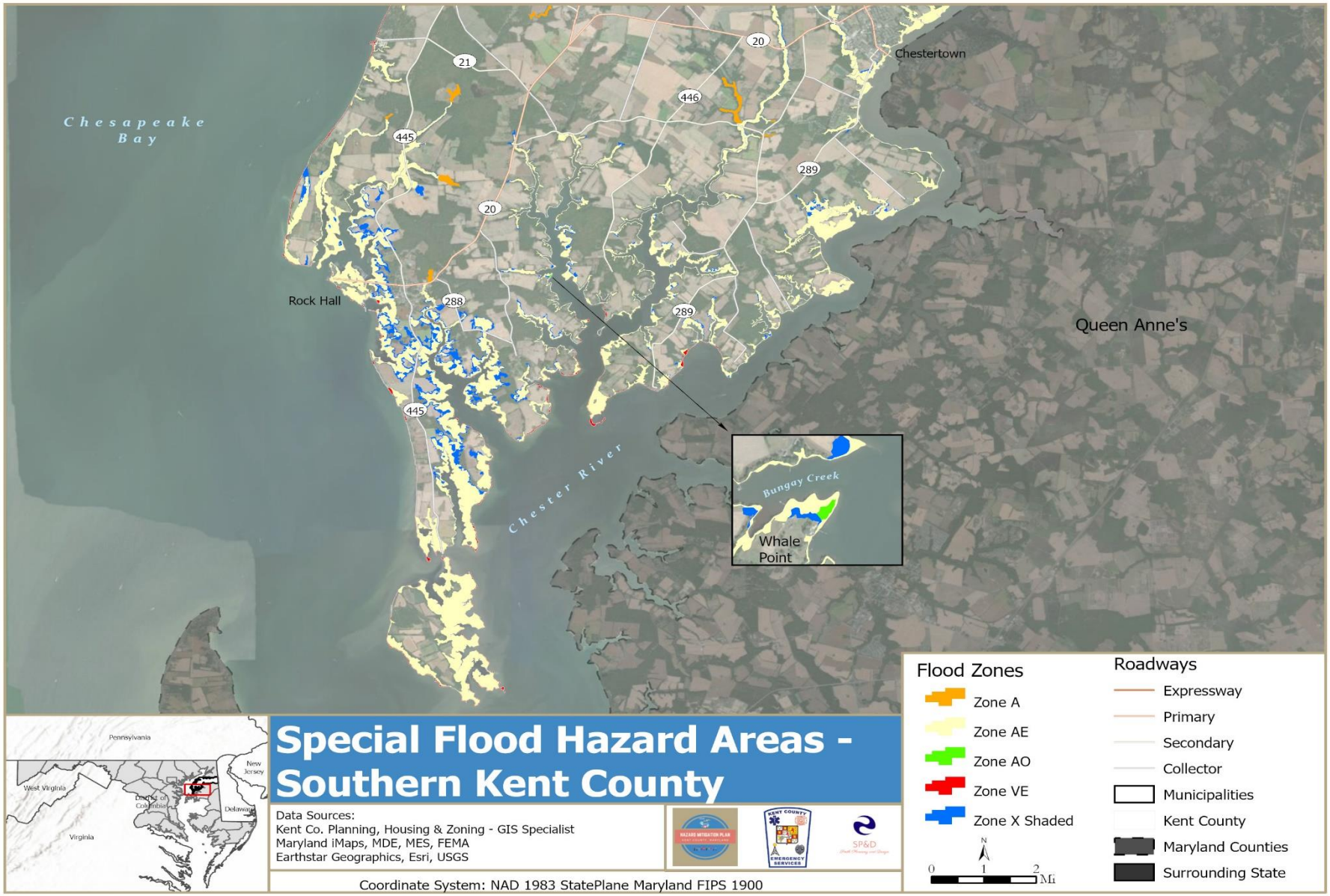
While not all riverine flooding events are hurricane-related, most coastal flooding events are related to hurricane events. Three of the documented coastal flooding events were declared federal disasters. Along with the tidal surges associated with hurricane events, direct results of coastal flooding events include power outages, wind damage to structures, downed trees, and interruption of services.

Hardest hit by coastal flooding events are residents of the Town of Rock Hall and residents of all low-lying areas around Rock Hall and the following creeks: Grays Inn, Church, Herrington, and Langford's East and West Forks.

Map 2-1


Harford
Cecil
Delaware
Sassafras River
Chesapeake Bay
Betterton
Galena
Millington
Millington Annexation Area
Chestertown
Queen Anne's
Chester River
292
444
213
290
299
313
298
330
561
297
291
514
20
446
Special Flood Hazard Areas - Northern Kent County
Data Sources:
Kent Co. Planning, Housing & Zoning - GIS Specialist
Maryland iMaps, MDE, MES, FEMA
Earthstar Geographics, Esri, USGS
Coordinate System: NAD 1983 StatePlane Maryland FIPS 1900
Special Flood Hazard Areas
Zone A
Zone AE
Zone VE
Zone X Shaded
Roadways
Expressway
Primary
Secondary
Collector
Municipalities
Kent County
Maryland Counties
Surrounding State
0 1 2 Mi
Pennsylvania
New Jersey
West Virginia
District of Columbia
Delaware
Virginia

Map 2-2


Chesapeake Bay
Chester River
Rock Hall
Chestertown
Queen Anne's
Bungay Creek
Whale Point
21
20
446
445
289
288
Special Flood Hazard Areas - Southern Kent County
Data Sources:
Kent Co. Planning, Housing & Zoning - GIS Specialist
Maryland iMaps, MDE, MES, FEMA
Earthstar Geographics, Esri, USGS
Coordinate System: NAD 1983 StatePlane Maryland FIPS 1900
Flood Zones
Zone A
Zone AE
Zone AO
Zone VE
Zone X Shaded
Roadways
Expressway
Primary
Secondary
Collector
Municipalities
Kent County
Maryland Counties
Surrounding State
0 1 2 Mi
Pennsylvania
New Jersey
West Virginia
Virginia
Delaware

Riverine and Flash Flooding

Riverine floods are described in terms of their extent (including the horizontal area affected and the vertical depth of floodwaters) and the related probability of occurrence. Flooding is exacerbated by low lying, relatively undisturbed topography, high water tables, poor drainage, constrictions from filling or other obstructions and certain soil characteristics. Flood studies use historical records to determine the probability of occurrence for different extents of flooding. The probability of occurrence is expressed as the percentage chance that a flood of a specific extent will occur in any given year.

On the other hand, flash floods cannot be predicted accurately and happen whenever there are heavy storms. Flash floods are more likely to occur in places with steep slopes and narrow stream valleys, and along small tributary streams. In urban areas, parking lots and other impervious surfaces that shed water rapidly contribute to flash floods. In rugged, hilly, and steep terrain, the high-velocity flows and short warning time make these floods hazardous and very destructive. Flash floods can also be a result of improper drainage.

Flash floods, as the name suggests, occur suddenly after a brief but intense downpour. They move fast and terminate quickly. Although the duration of these events is usually brief, the damages can be quite severe. Flash floods also result as a secondary effect from other types of disasters including large wildfires and dam breaks. Wildfires remove vegetative cover and alter soil characteristics, increasing the quantity and velocity of stormwater runoff and dam breaks release large quantities of water into receiving drainageways in a very short timeframe. Flash floods are the number one weather-related killer. For the period of 1988-2012, there was an average of 80 deaths each year due to the direct results of flash flooding and flood events across the United States.

Coastal Flooding

Coastal flooding is the inundation of land areas along the coast caused by waters over and above normal tidal action that may originate from the ocean front, back bays, sounds, tidal inlets, or other bodies of water. When this inundation occurs, the surrounding landmass is flooded. Ocean storms can unload significant amounts of water on a coast, raising the sea level in that area. These are known as storm surges and cause coastal flooding.

Coastal flooding usually occurs as a result of severe storms, either tropical or winter storms. Ocean waves intensify on the open ocean, and these storms make surface water more severe than normal. Raging winds can create huge waves that crash on unprotected beaches.

Coastal flooding can result from a combination of tide and surge levels that exceed the height of sea walls but is more commonly due to wave action in combination with high water levels. Close to the shore the maximum wave height is closely related to the water depth and the amount of wave run-up and overtopping is a function of the nature and configuration of the shoreline.

History & Future Risk

Kent County is prone to various forms of flooding, which include riverine, flash, and coastal flooding. They have caused extensive damage in the past to parts of Kent County. Most of the damage has occurred near a body of water. Erosion and its impact on shorelines and roads are the most significant problem associated with flooding in the County.

The flood hazard was continued from the 2014 planning cycle and was given a ranking of "Medium High" during the 2020 planning cycle. In order to assess the hazard risk identified, a composite score method was undertaken. The composite score method was based on a blend of quantitative and qualitative factors extracted from the National Centers for Environmental Information (NCEI), stakeholder survey, and other available data sources. These included:

- Historical impacts, in terms of human lives and property;
- Geographic extent;
- Historical occurrence;
- Future probability; and
- Local community perspective.

Detailed information is available within *Appendix A: Hazard Risk Methodology, Hazard Ranking Results, and Hazard Data Tables.*

Information obtained for Kent County using both the *2016 State of Maryland Hazard Mitigation Plan* and the National Centers for Environmental Information (NCEI) – Storm Events Database between January 1950 and December 31, 2019 for Flood Hazard include: Flood, Flash Flood, Heavy Rain, Coastal Storm, and Storm Surge/Tide. There has been a total of seventy-nine Flood Events between 1996-2020, with an annualized rate of 3.16. These storms have produced $2,260,000 million in property damage and a geographic extent of 13.33%.

Total Flood Hazard Risk Assessment Data Table
Hazards included within this table from NCEI Data:
Flood, Flash Flood, Heavy Rain, Coastal Storm, and Storm Surge/Tide.

Injuries & Deaths		Property & Crop Damage		Geographic Extent	Events 1996-2020
0	0	2.260M	0	% in 100-yr Flood Zone (A, AE, AO & VE) = 13.33%	Total = 79 Annualized = 3.16

Source: National Centers for Environmental Information, as of December 31, 2019 & 2016 State of Maryland Hazard Mitigation Plan

Flood Data Table

Injuries & Deaths		Property & Crop Damage		Geographic Extent	Events 2001-2020
0	0	1.150M	0	% in 100-yr Flood Zone (A, AE, AO & VE) = 13.33%	Total = 3 Annualized =0.15

Source: National Centers for Environmental Information, as of December 31, 2019 & 2016 State of Maryland Hazard Mitigation Plan

Legend: There are three designators: C - County/Parish; Z - Zone; and M - Marine Zone.

Based on NCEI definitions/criteria: Flood (C). *Any high flow, overflow, or inundation by water which causes damage. In general, this would mean the inundation of a normally dry area caused by an increased water level in an established watercourse, or ponding of water, that poses a threat to life or property. If the event is considered significant, it should be entered into Storm Data, even if it only*

affected a small area. Refer to the Flash Flood event (Section 14) for guidelines for differentiating between Flood and Flash Flood events.

Flash Flood Data Table					
Injuries & Deaths		Property & Crop Damage		Geographic Extent	Events 1999-2020
0	0	1.010M	0	% in 100-yr Flood Zone (A, AE, AO & VE) = 13.33%	Total = 18 Annualized = 0.82

Source: National Centers for Environmental Information, as of December 31, 2019 & 2016 State of Maryland Hazard Mitigation Plan

Legend: There are three designators: C - County/Parish; Z - Zone; and M - Marine Zone.

Based on NCEI definitions/criteria: Flash Flood (C). *A life-threatening, rapid rise of water into a normally dry area beginning within minutes to multiple hours of the causative event (e.g., intense rainfall, dam failure, ice jam). Ongoing flooding can intensify to the shorter-term flash flooding in cases where intense rainfall results in a rapid surge of rising flood waters. Flash flooding, such as dangerous small stream or urban flooding and dam or levee failures, requires immediate action to protect life and property. Conversely, flash flooding can transition into flooding as rapidly rising waters abate. The Storm Data preparer uses professional judgment in determining when the event is no longer characteristic of a Flash Flood and becomes a Flood.*

Heavy Rain Data Table					
Injuries & Deaths		Property & Crop Damage		Geographic Extent	Events 1996-2020
0	0	0	0	% in 100-yr Flood Zone (A, AE, AO & VE) = 13.33%	Total = 52 Annualized = 2.08

Source: National Centers for Environmental Information, as of December 31, 2019 & 2016 State of Maryland Hazard Mitigation Plan

Legend: There are three designators: C - County/Parish; Z - Zone; and M - Marine Zone.

Based on NCEI definitions/criteria: Heavy Rain (C). *Unusually large amount of rain which does not cause a Flash Flood or Flood event, but causes damage, e.g., roof collapse or other human/economic impact. Heavy Rain will no longer be acceptable as a means to record low-impact or isolated flood events.*

Coastal Flood Data Table					
Injuries & Deaths		Property & Crop Damage		Geographic Extent	Events 1996-2020
0	0	100K	0	% County in risk area= 87.00%	Total = 6 Annualized = 0.24

Source: National Centers for Environmental Information, as of December 31, 2019 & 2016 State of Maryland Hazard Mitigation Plan

Legend: There are three designators: C - County/Parish; Z - Zone; and M - Marine Zone.

Based on NCEI definitions/criteria: Coastal Flood (Z). *Flooding of coastal areas due to the vertical rise above normal water level caused by strong, persistent onshore wind, high astronomical tide, and/or low atmospheric pressure, resulting in damage, erosion, flooding, fatalities, or injuries. Coastal areas are defined as those portions of coastal land zones (coastal county/parish) adjacent to the waters, bays, and estuaries of the oceans. Farther inland, the Storm Data preparer determines the boundary between coastal and inland areas, where flood events will be encoded as Flash Flood or Flood rather than Coastal Flood. Terrain (elevation) features will determine how far inland the coastal flooding extends.*

Future Risk

Future probability was factored into the hazard risk vulnerability and ranking for each identified hazard, as detailed *Appendix A: Hazard Risk Methodology, Hazard Ranking Results, & Data Tables*. Results for the flood hazard indicate a future probability ranking of “highly likely”.

Vulnerability

Vulnerability

Vulnerability to flood events is difficult to determine because local terrain, soil conditions, and construction play a role in how much storm water is able to run off, percolate into the soil, or cause flash flooding. Flood vulnerability is described in terms of the community assets that lay in the path of flood waters. The flood hazard vulnerability assessment for Kent County focuses on the 1% annual chance flood event, though floods of both greater and lesser flood depths are possible.

The probability of occurrence is expressed as the percentage chance that a flood of a specific extent will occur in any given year. The extent of flooding associated with a 1% annual probability of occurrence, the base flood, which is used as the regulatory boundary by various agencies. Also referred to as the Special Flood Hazard Area (SFHA), this boundary is a convenient tool for assessing vulnerability and risk in flood prone communities since many communities have maps available that show the extent of the base flood and likely depths that will be experienced. The base flood is often referred to as the "100-year flood." Experiencing a 100-year flood does not mean a similar flood cannot happen for the next 99 years; rather, it reflects the probability that over a long period of time, a flood of that magnitude should occur in only 1% of all years. Smaller floods occur more often than larger and more widespread ones. Table 2-2 shows a range of flood recurrence intervals and their probabilities of occurrence. So, every year, a 10-year flood has a greater likelihood of occurring (10% chance) than a 100-year flood (1% chance). Flood Insurance Rate Maps (FIRMs) show that 29.4 square miles (9.5%) of the County's land mass lies within the 100-year floodplain, or 1% annual chance floodplain.

Table 2-2: Flood Probability Terms

Flood Recurrence Intervals	Chance of occurrence in any given year
10-year	10%
50-year	2%
100-year	1%
500-year	0.2%

Risk Assessment & Loss Estimations

The vulnerability analysis for at-risk structures, including critical and public facilities, in Kent County was completed utilizing the following GIS data layers:

- Kent County Addressable Building Layer
  - The dataset contains addressable buildings for Kent County, MD.
- Maryland Department of Planning's MdProperty View – Kent County 2017
  - The Maryland Department of Planning developed the MdProperty View products to assist users in accessing parcel data. For each parcel, numerous attributes are provided such as account identification, improvement value, year built, etc.
- Maryland Six Inch Imagery - Imagery flown in 2019 for the Eastern Shore
  - The six-inch resolution aerial imagery for the State of Maryland is composed of imagery flown in 2019 (Eastern Shore) and 2017 (Western Shore).
- FEMA Flood Zones – Effective Date: 2014
  - Flood mapping is an important part of the National Flood Insurance Program (NFIP), as it is the basis of the NFIP regulations and flood insurance requirements.
- Flood Depth Grids for 1% annual chance Special Flood Hazard Areas (SFHAs) – Risk MAP Product – 2014

- Depth grids were created for all mapped 1-percent-annual-chance floodplains in the county, whereby flood depth is a function of the difference between the calculated water surface elevation (including overland wave propagation for coastal areas) and the ground.

Structure replacement values are useful for loss estimation. Replacement value is a necessary component in estimating the dollar amount of losses in a flood and, when combined with a range of flood probabilities from the 1% annual chance flood event, can help in describing the costs and benefits of mitigation actions in monetary terms. To determine loss estimations for at-risk structures, improvement values provided within the MdProperty View parcel database where used. At-risk structures are structures located within the 1% annual chance floodplain. The floodplain was overlaid on the addressable buildings and MdProperty View parcels to determine which structures were at-risk. The Maryland imagery was used to validate. For the critical and public facilities risk assessment, the flood depth grids were used to determine the depth of flood for those facilities at-risk to the 1% annual chance flood event.

At-Risk Structures

A total of 614 structures are located in the 1% annual chance floodplain. The 1% annual chance floodplain is not located within the Town of Galena, therefore there are no at-risk structures within the town limits.

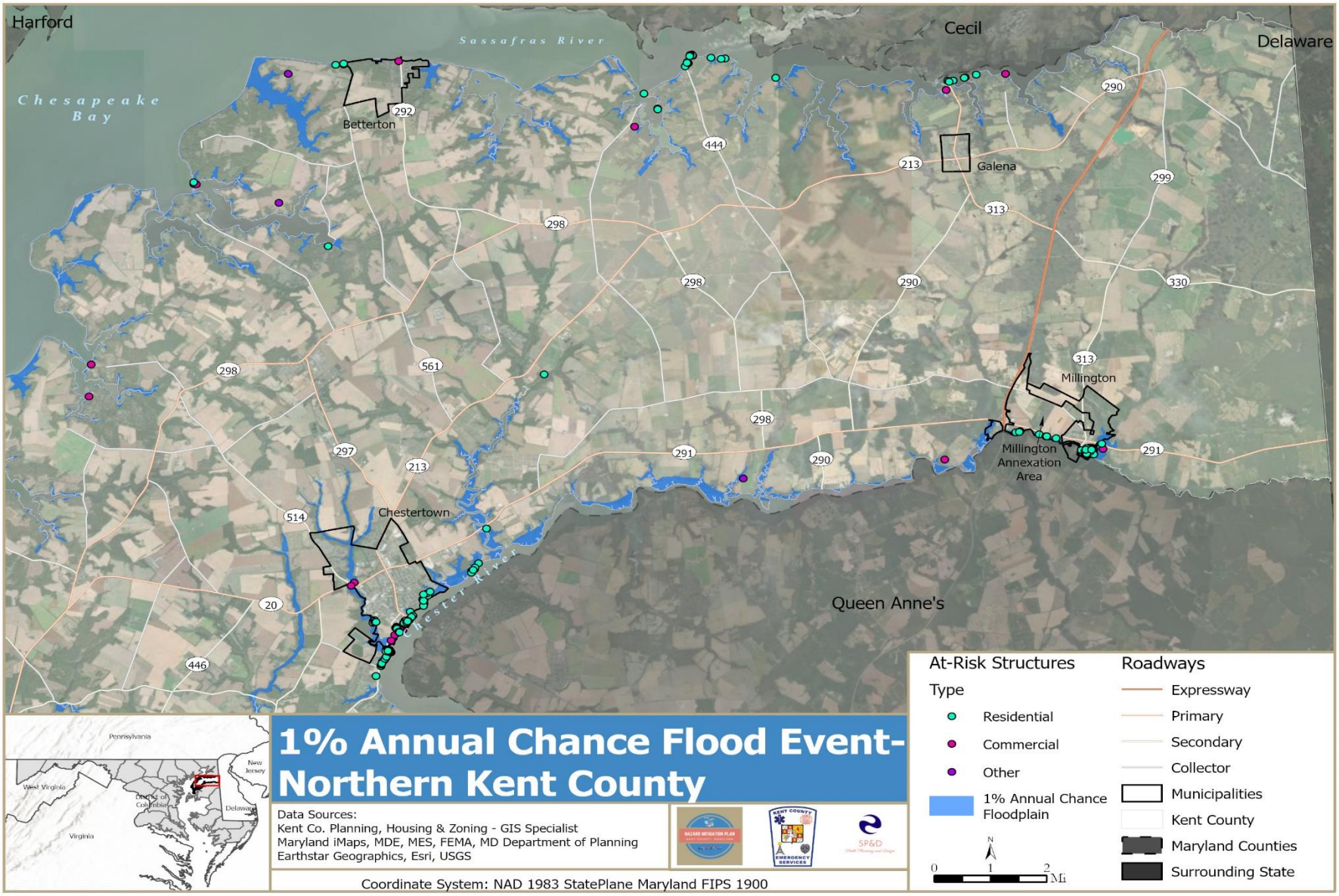
Table 2-3: At Risk Structures to 1% Annual Chance Floodplain

Location	Structure Type						At-Risk Structures Total	Building Value Total
	Residential		Commercial		Other			
	# of Structures	Building Values	# of Structures	Building Values	# of Structures	Building Values		
Unincorporated Kent County	204	$29,938,800	19	$12,859,700	17	$5,070,600	204	$47,869,100
Betterton	0	0	1	$161,300	0	0	1	$161,300
Chestertown	111	$25,174,900	9	$5,123,700	0	0	120	$30,298,600
Millington	29	$2,230,400	0	0	0	0	29	$2,230,400
Rock Hall	231	$30,050,700	29	$8,451,600	0	0	260	$38,502,300
Total	**575**	**$87,394,800**	**58**	**$26,596,300**	**17**	**$5,070,600**	**614**	**$119,061,700**

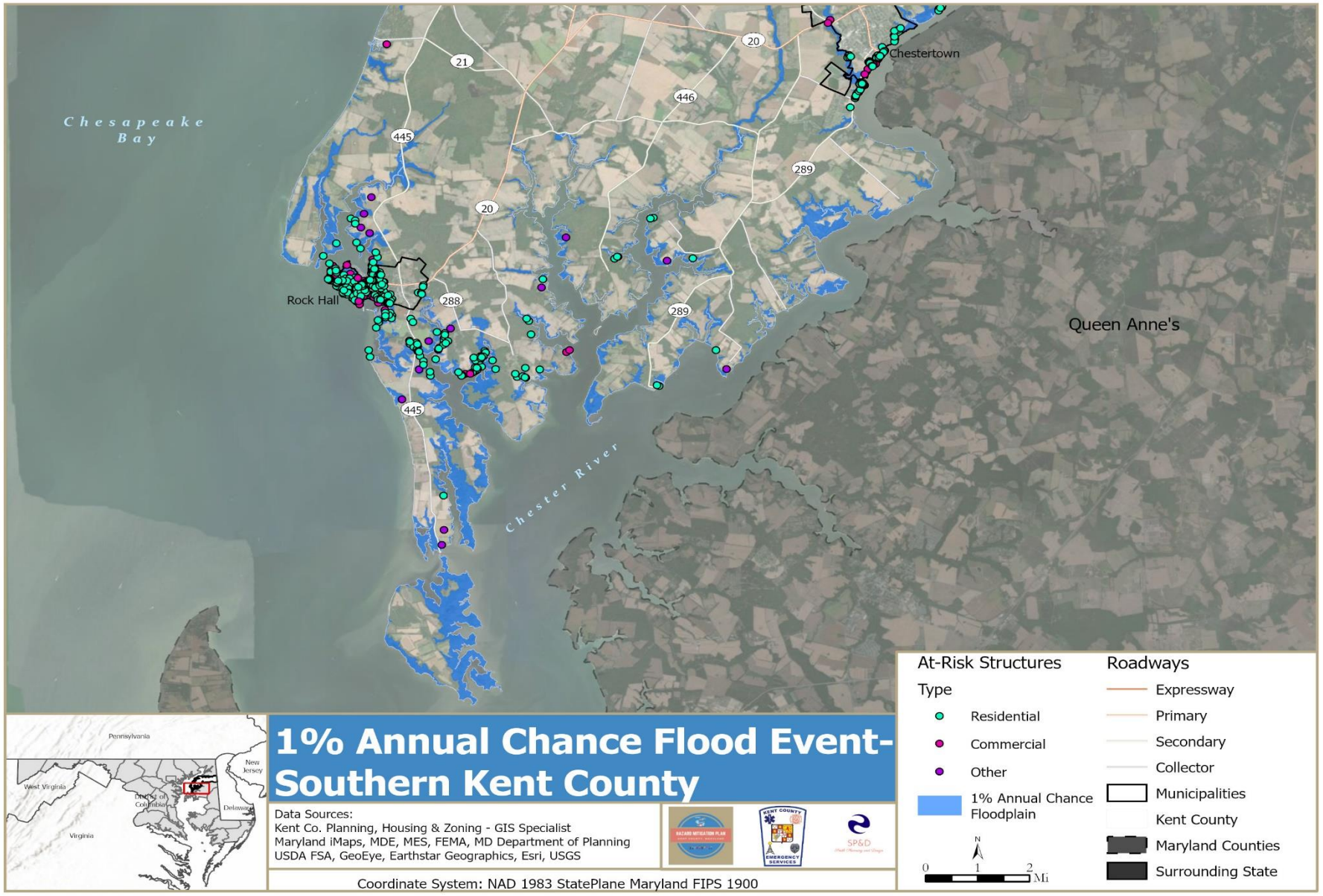
Source: Smith Planning & Design, FEMA Flood Zones - Effective Date: 2014, Kent County Address Layer, MdProperty View
NOTE: Residential includes: Residential, Commercial Condominium, Commercial/Residential, Residential Condominium, and Apartments
Commercial includes: Commercial, Exempt Commercial
Other includes: Agricultural

The Town of Rock Hall contains the majority of at-risk structures with a total of 260. Rock Hall is a waterfront town surrounded in the by The Haven, the west by Swan Creek, and the southern portion by Rock Harbor. Floods have been and will continue to be a significant threat to the economic and social well-being of selected areas of Kent County. In particular, the towns have more population and economic assets that are vulnerable to flood damages. Exacerbating the effects of flooding in the County are areas with steep slopes or obstructions in the floodplain.

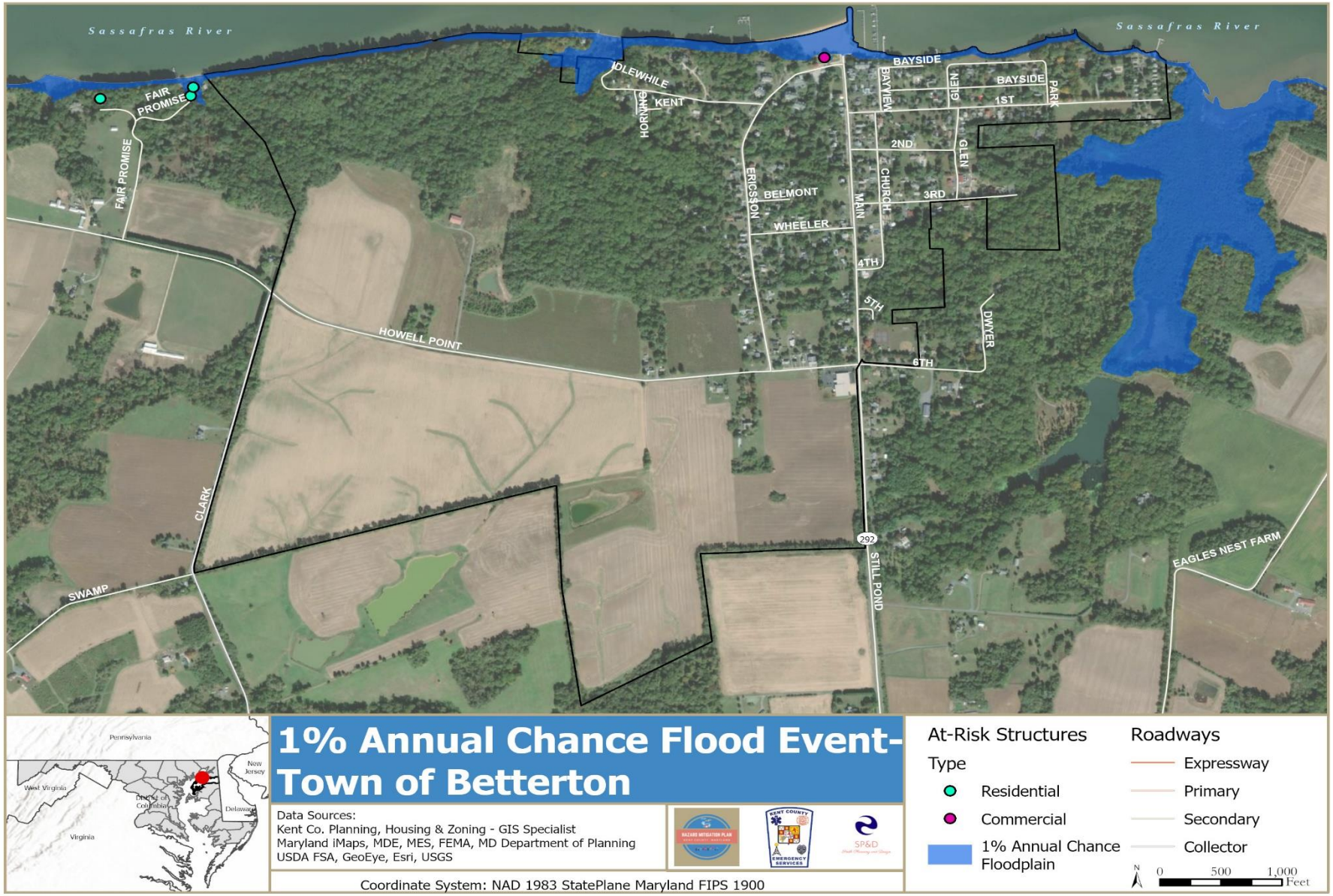
Map 2-3


Harford
Cecil
Delaware
Queen Anne's
Sassafras River
Chesapeake Bay
Chester River
Betterton
Galena
Millington
Millington Annexation Area
Chestertown
292
444
213
290
299
313
298
330
561
297
291
514
20
446
At-Risk Structures
Type
Residential
Commercial
Other
1% Annual Chance Floodplain
Roadways
Expressway
Primary
Secondary
Collector
Municipalities
Kent County
Maryland Counties
Surrounding State
0 1 2 Mi
Pennsylvania
New Jersey
West Virginia
Virginia
Delaware
1% Annual Chance Flood Event-Northern Kent County
Data Sources:
Kent Co. Planning, Housing & Zoning - GIS Specialist
Maryland iMaps, MDE, MES, FEMA, MD Department of Planning
Earthstar Geographics, Esri, USGS
Coordinate System: NAD 1983 StatePlane Maryland FIPS 1900

Map 2-4


Chesapeake Bay
Chester River
Rock Hall
Chestertown
Queen Anne's
21
20
446
445
289
288
At-Risk Structures
Type
Residential
Commercial
Other
1% Annual Chance Floodplain
Roadways
Expressway
Primary
Secondary
Collector
Municipalities
Kent County
Maryland Counties
Surrounding State
0
1
2
Mi
Pennsylvania
New Jersey
West Virginia
Virginia
Delaware
1% Annual Chance Flood Event-Southern Kent County
Data Sources:
Kent Co. Planning, Housing & Zoning - GIS Specialist
Maryland iMaps, MDE, MES, FEMA, MD Department of Planning
USDA FSA, GeoEye, Earthstar Geographics, Esri, USGS
Coordinate System: NAD 1983 StatePlane Maryland FIPS 1900

Map 2-5


Sassafras River
Sassafras River
FAIR PROMISE
FAIR PROMISE
IDLEWHILE
HORNING
KENT
BAYSIDE
BAYVIEW
GLEN
BAYSIDE
1ST
PARK
2ND
GLEN
ERICSSON
BELMONT
MAIN
CHURCH
3RD
WHEELER
4TH
5TH
DWYER
6TH
HOWELL POINT
CLARK
292
STILL POND
EAGLES NEST FARM
SWAMP
Pennsylvania
New Jersey
West Virginia
Maryland
District of Columbia
Delaware
Virginia
1% Annual Chance Flood Event- Town of Betterton
Data Sources:
Kent Co. Planning, Housing & Zoning - GIS Specialist
Maryland iMaps, MDE, MES, FEMA, MD Department of Planning
USDA FSA, GeoEye, Esri, USGS
Coordinate System: NAD 1983 StatePlane Maryland FIPS 1900
At-Risk Structures
Type
Residential
Commercial
1% Annual Chance Floodplain
Roadways
Expressway
Primary
Secondary
Collector
N
0
500
1,000
Feet

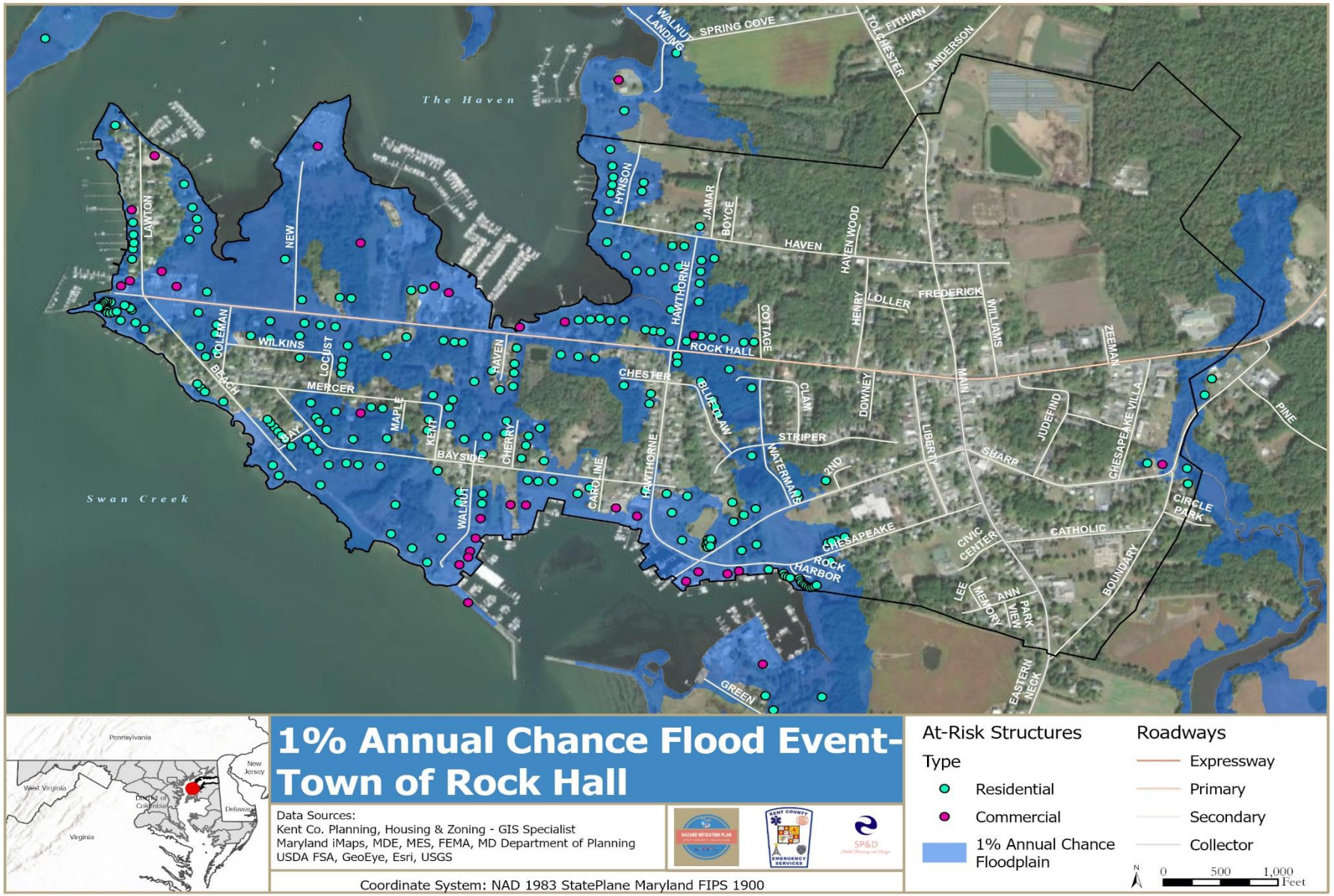
Map 2-6


1% Annual Chance Flood Event-
Town of Chestertown
Data Sources:
Kent Co. Planning, Housing & Zoning - GIS Specialist
Maryland iMaps, MDE, MES, FEMA, MD Department of Planning
Earthstar Geographics, Esri, USGS
Coordinate System: NAD 1983 StatePlane Maryland FIPS 1900
At-Risk Structures
Type
Residential
Commercial
1% Annual Chance Floodplain
Roadways
Expressway
Primary
Secondary
Collector
Maryland Counties
0 1,250 2,500 Feet
Chester River
Queen Anne's
Queen Anne's
Pennsylvania
New Jersey
West Virginia
District of Columbia
Delaware
Virginia
STOCKTON START
CROMWELL CLARK
FLATLAND
CAMELOT
TRAFFORD
DEVON
ADELA
MAYFAIR
LEEDS
KENNEDY
LINCOLN
VICKERS
HILLTOP
ORCHARD
MEADOWVIEW
GATEWAY
SOUTHGATE
CRESTVIEW
FOXVIEW
WASHINGTON
MANOR
MALONE
HAACKE
WARNER
ISLAND
LARK
SILVER
HEEL
JIMSTOWN
SCHEELER
ACORN
CONLEY
WASHINGTON
HADAWAY
HOLLY
CEDAR
BELL
PINE
ELM
GREENWOOD
VALLEY
SCHOOL
ROLLING
REED
GIBSON
TALBOT
SPEER
HIGH
PROSPECT
COLLEGE
MOUNT VERNON
CAMPUS
BROWN
RIVERSIDE
SASSAFRAS
GUILFORD
CLIPPER
SCHAUBER
BROOKYARD
MORGNEC
MALLARD
BOHEMIA
CREEK
AMERICAN LEGION
MAIDEN LOT FARM
BIRCH
RUN
CEDAR
CHASE
DAVID
BARROW
WALDO
BYFORD
RICHARD
KENT
HORSEY
RIVERSIDE
MAPLE
CHURCH
QUEEN
WATER
CROSS
PHILOSOPHERS
LINCHBURG
CALVERT
CANNON
MILL
PARK
DIXON
RADCLIFFE
ALDAN
QUAKER NECK
LANDING
JOHN HANSON
AIRY HILL
BRICES MILL
FOXCHASE
BEAVER
GARFIELD
BROAD NECK
PIPPIN HILL
CHESTERTOWN
20
514

Map 2-7


CHESTERVILLE BRIDGE MEMORIAL
BLUE STAR MEMORIAL
CARROLL CLARK
313
SPEER
GALENA
MILLINGTON
KENT MILL
EDGE
HOWARD JOHNSON
RAMP - to NB 301
RAMP from NB 301
CHESTER
RIVER PARK
RIVER BEND
RIVER
SASSAFRAS
EMBERT
SCHOOL
CARVILLE
HURTT
COMEGYS
BACK
RAILROAD
CRANE
CYPRESS
HAZEL
Chester River
Queen Anne's
WEST
MIDDLE
RACE
SUNFLOWER
DAISY
Pennsylvania
New Jersey
West Virginia
District of Columbia
Delaware
Virginia
1% Annual Chance Flood Event- Town of Millington
Data Sources:
Kent Co. Planning, Housing & Zoning - GIS Specialist
Maryland iMaps, MDE, MES, FEMA, MD Department of Planning
USDA FSA, GeoEye, Esri, USGS
Coordinate System: NAD 1983 StatePlane Maryland FIPS 1900
At-Risk Structures
Type
Residential
Commercial
1% Annual Chance Floodplain
Roadways
Expressway
Primary
Secondary
Collector
Maryland Counties
N
0
500
1,000
Feet

Map 2-8


The Haven
Swan Creek
WALNUT LANDING
SPRING COVE
TOLCHESTER
FITHIAN
ANDERSON
HYNSON
JAMAR
BOYCE
HAVEN
HAVEN WOOD
HENRY
LOLLER
FREDERICK
WILLIAMS
ZEEMAN
PINE
LAWTON
NEW
COLEMAN
WILKINS
LOCUST
BEACH
MERCER
MAPLE
KENT
CHERRY
BAYSIDE
OTIS BAY
HAVEN
HAWTHORNE
COTTAGE
ROCK HALL
CHESTER
BLUE CLAW
CLAM
DOWNEY
MAIN
STRIPER
WATERMANS
2ND
LIBERTY
SHARP
JUDEFIND
CHESAPEAKE VILLA
CIRCLE PARK
CAROLINE
HAWTHORNE
WALNUT
CHESAPEAKE
ROCK HARBOR
CIVIC CENTER
CATHOLIC
BOUNDARY
LEE MEMORY
ANN
PARK VIEW
EASTERN NECK
GREEN
Pennsylvania
New Jersey
West Virginia
District of Columbia
Delaware
Virginia
1% Annual Chance Flood Event-Town of Rock Hall
Data Sources:
Kent Co. Planning, Housing & Zoning - GIS Specialist
Maryland iMaps, MDE, MES, FEMA, MD Department of Planning
USDA FSA, GeoEye, Esri, USGS
Coordinate System: NAD 1983 StatePlane Maryland FIPS 1900
At-Risk Structures
Type
Residential
Commercial
1% Annual Chance Floodplain
Roadways
Expressway
Primary
Secondary
Collector
N
0
500
1,000
Feet

Critical & Public Facilities

Critical and public facilities are vulnerable to flooding, but their vulnerability is dependent on their specific terrain and soil type and the amount of excess runoff from neighboring areas. Since flash floods frequently occur outside of established floodplains, one cannot say with absolute certainty that future development in a specific location in the county will be subjected to flash floods.

Critical (or essential) facilities as defined and identified within the State of Maryland Hazard Mitigation Plan include five (5) facility types: Emergency Operation Centers (EOC), fire/EMS stations, hospital and medical clinics, police stations, and schools (K-12, colleges). Public facilities include county owned, state owned, water treatment plants (WTP), and wastewater treatment plants (WWTP).

A vulnerability assessment was conducted to determine which critical and public facilities were at-risk to the 1% annual chance flood event. The results indicated seven (7) public facilities are at-risk and have a potential loss estimation of $1,131,700.00.

Table 2-4: Critical & Public Facilities – At Risk to 1% Annual Chance Flood Event

Category	Name	Address	City	Zip Code	Year Built	Building Value	Flood Zone	Coastal Flood Depth
County Owned	Bayside Landing Park	20927 Bayside Avenue	Rock Hall	21661	Not Available	$259,100	AE	0.90’
County Owned	Marina	Bayside Avenue	Rock Hall	21661	Not Available	$45,200	AE	0.50’
County Owned	Cliff City Boat Ramp	Cliff City Road	Chestertown	21620	Not Available	Not Available	AE	3.40’
County Owned	Water Tower	Rock Hall Road	Rock Hall	21661	Not Available	$89,500	AE	0.90’
County Owned	Coast Guard Dock at Still Pond	24188 Still Pond Neck Road	Worton	21678	1970	$161,900	AE	2.90’
Washington College Owned	Chestertown Armory	509 Cross Street	Chestertown	21620	1930	$576,000	AE	1.10’
WWTP	Millington WWTP	227 Sassafras Street	Millington	21651	Not Available	Not Available	AE	6.10’

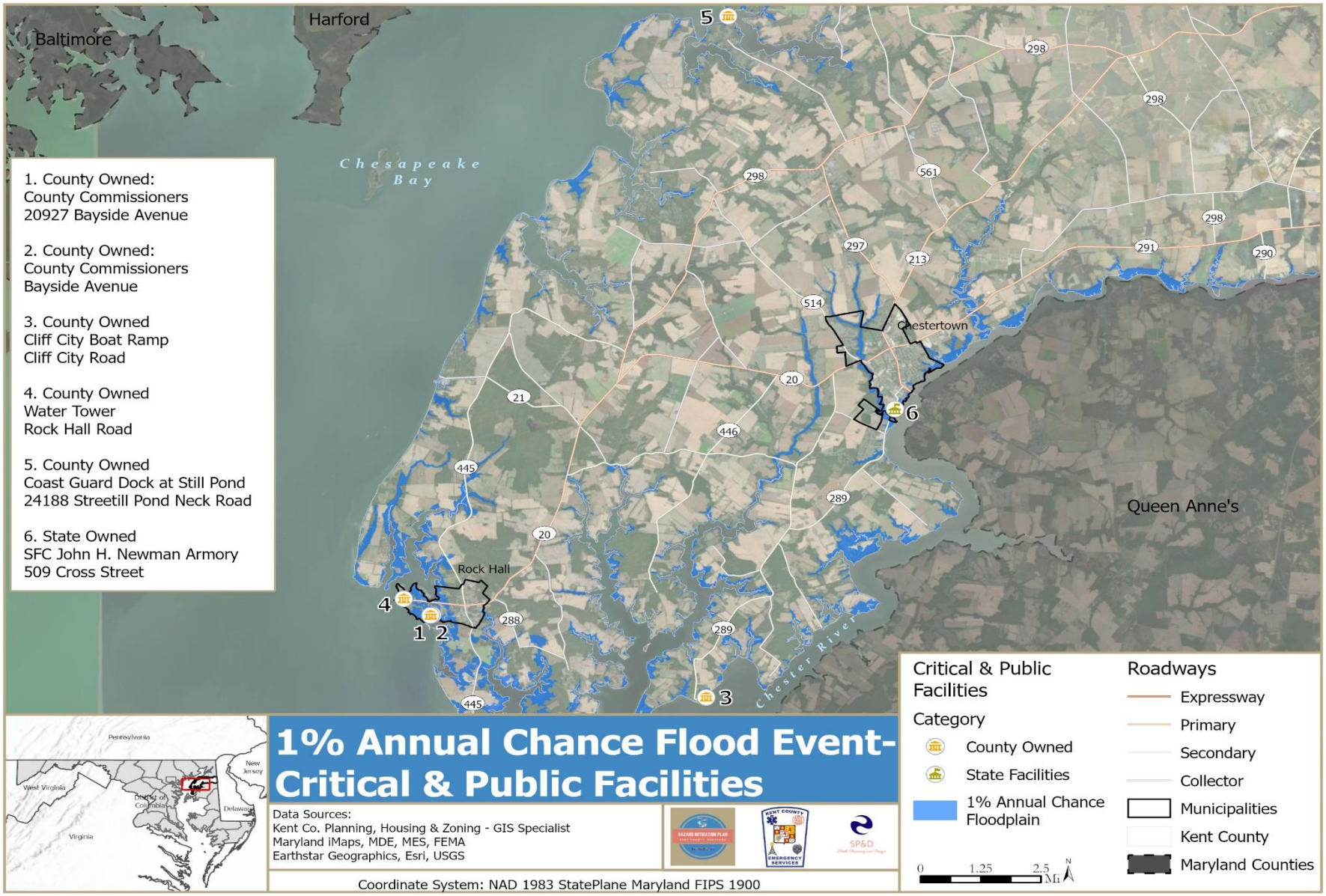
Source: Smith Planning & Design, FEMA Flood Zones - Effective Date: 2014, Kent County Database, MdProperty View

Utilizing the 1% annual chance flood depth grid, flood depths at the lowest adjacent grade of the structures were provided for each facility. The Millington Wastewater Treatment Plant has the highest flood depth at 6.1 feet. The Millington WWTP is located in Queen Anne’s County and identified in the *2018 Queen Anne’s County Hazard Mitigation Plan*. Map 2.1 depicts the location of the six (6) critical & public facilities impacted by the 1% annual chance flood event.



Source: Town of Millington- WWTP Flooded

Map 2-9


1. County Owned:
County Commissioners
20927 Bayside Avenue
2. County Owned:
County Commissioners
Bayside Avenue
3. County Owned
Cliff City Boat Ramp
Cliff City Road
4. County Owned
Water Tower
Rock Hall Road
5. County Owned
Coast Guard Dock at Still Pond
24188 Streetill Pond Neck Road
6. State Owned
SFC John H. Newman Armory
509 Cross Street
Baltimore
Harford
Chesapeake Bay
Chestertown
Queen Anne's
Rock Hall
Chester River
1% Annual Chance Flood Event-
Critical & Public Facilities
Data Sources:
Kent Co. Planning, Housing & Zoning - GIS Specialist
Maryland iMaps, MDE, MES, FEMA
Earthstar Geographics, Esri, USGS
Coordinate System: NAD 1983 StatePlane Maryland FIPS 1900
Critical & Public Facilities
Category
County Owned
State Facilities
1% Annual Chance Floodplain
Roadways
Expressway
Primary
Secondary
Collector
Municipalities
Kent County
Maryland Counties
0 1.25 2.5 Mi
N

NFIP Policies

Flood insurance policy information was obtained from Joshua Norris, FEMA shown on Table 2-5. Data indicates that as of September 28, 2020, there were no policies filed in the Town of Betterton, which is no different than that reported in the 2014 Plan. The Flood insurance policies for Chestertown increased since the last Plan, however policies decreased in Rock Hall and in the unincorporated areas of the County.

Table 2-5: Total Structures within the Floodplain & Flood Insurance Policies as of September 28, 2020

Table 2-5: Total Structures within the Floodplain & Flood Insurance Policies as of September 28, 2020			
Community Name (Number)	Total Policy Count	Total Coverage	Total Net Dollars Paid
Betterton, Town Of (240095)	-	$0	$303,618
Chestertown, Town Of (240046)	95	$27,954,700	$934,492
Kent County * (240045)	218	$63,451,500	$3,430,281
Millington, Town Of (240058)	-	$0	$104,824
Queen Anne's County* (240054)	2	$500,000	$118,779
Rock Hall, Town Of (240048)	229	$60,009,800	$3,213,265
Unknown (Unknown)	26	$6,580,500	-
Grand Total	570	$158,496,500	$8,105,259

Source: FEMA, Joshua Norris, provided to MEMA and Kent County on October 27, 2020

Note: Flood insurance is available to anyone in the County and even those structures outside of the mapped floodplain area. Therefore, in some cases, the number of policies includes polices for structures that are outside the mapped floodplain. Likewise, not all structures located within the mapped floodplain areas have flood insurance policies.

Nuisance Flood Locations

The *Kent County Nuisance Flood Plan* was developed in response to Maryland Senate Bill (SB) 1006. The amended Bill states that "on or before October 1, 2020, a local jurisdiction that experiences nuisance flooding shall develop a plan to address nuisance flooding." The legislation further specifies that the plan must be submitted to the Maryland Department of Planning, published on the local jurisdiction's website, and updated at least every five years. Kent County completed this planning effort in March of 2019.

In Kent County, nuisance flooding occurs most predominately in locations near or adjacent to major bodies of water. Along the Chester River, nuisance flooding is common on residential and commercial properties. The Town of Chestertown has made major investments in flood mitigation at the municipal marina, park, and walkways along the riverbank. Elsewhere in the County, nuisance flooding is experienced as debris from farm fields washes into ditches and eventually settles on roadways as ditches overflow. Culverts in low-lying areas may have difficulty conveying water adequately, causing ponding on low-lying roadways throughout the County. Both roads and bridges subject to nuisance flood conditions are identified in various tables and maps within the Nuisance Flood Plan.

Thresholds are maintained for Kent County which direct a set of actions based on a particular inundation level or frequency of flooding. These thresholds are meant to supplement actions directed by the *Kent County Emergency Operations Plan*. When flooding reaches such a severity that life safety, critical infrastructure, and key resources are threatened, "nuisance" flooding levels have been exceeded. Below are response concepts consistent with the Kent County Emergency Operations Plan which may become necessary as flood waters rise beyond nuisance levels.

Table 2-6: Flood Response Thresholds

Threshold	Response Level	Required Action
Forecast data from the NWS or NOAA tide gauge indicates likely nuisance flooding impacts	Level I – Public Warning	Make the public aware of nuisance flooding threat via mass notification emails, social media, etc.
Flood waters are present below nuisance levels and are rising	Level II – Monitor Inundation	Deploy DPW and SHA personnel to monitor flood levels as needed and place high water signs at impacted locations.
Flood waters are high enough to warrant temporary road closures	Level III – Flood Response	Place additional DPW and SHA personnel on standby; close roads and reroute traffic as flooding reaches hazardous levels

Source: Kent County Emergency Operations Plan

In terms of future considerations, the areas impacted by nuisance flooding will increase gradually in the coming years as changing climate elevates water levels and drives precipitation patterns to new extremes. This shift, however, is likely to accelerate gradually over time. New areas will also become impacted, leading to an increased number of businesses, residents, and critical infrastructure at risk. Public services will also be more frequently impaired as flooding increases. Kent County will maintain a level of awareness of data made available by NOAA, the State of Maryland, the University of Maryland Center for Environmental Science, and other scientific institutions as it pertains to the community and local flood risks. These risks of increased nuisance flooding will be communicated appropriately to residents and decision makers and direct them to take appropriate action in the areas of emergency response and hazard mitigation. Elected officials and County staff will utilize venues such as County Commissioners' meetings and Planning Commission meetings to communicate information on long-term flood risks. Future projections of sea level change and nuisance flooding should also be integrated into land use planning, floodplain management, comprehensive planning, and capital investment planning.

Dam Inventory

According to the USACE National Inventory of Dams, seventeen (17) dams are located in Kent County, three (3) of which have Emergency Action Plans. There are no High Hazard Potential Dams (HHPD) located in Kent County. Hazard classifications related to dams throughout Maryland are available through MDE's Dam Safety Division.

Table 2-7: USACE National Inventory of Dams - Kent County, MD				
Name	Owner Type	Purpose	River	Emergency Action Plan (EAP)
Big Meadows Farm Dam	Private	Irrigation	Mill Creek-Trib.	Not Required
Carpenter Farm Pond	Private	Irrigation	Swan Creek	Not Required
Chestertown Stabilization Pond No. 1	Local Government	Lagoon	Offstream-Radcliffe Creek	Not Required
Chestertown Stabilization Pond No. 2	Local Government	Lagoon	Offstream-Radcliffe Creek	Not Required
Eaton-Raimond Pond	Private	Recreation	Stillpond Creek-Trib.	Not Required
Elgin Farm Pond	Private	Recreation	Morgan Creek-Trib.	Not Required
Fairlee Lake	Private	Recreation	Fairlee Creek-Trib.	Not Required
Richard Smith Dam	Private	Recreation	Herring Branch	Not Required
Riley Mill Dam - Lower Pond	Private	Recreation	Mill Creek	Not Required
Riley Mill Pond	Private	Recreation	Mill Creek	Not Required
Sassafras Mill Dam	Private	Recreation	Herring Branch	Yes
Shellman Farm Dam	Private	Recreation	Chester River-Trib.	Not Required
St. Pauls Millpond	Private	Recreation	West Fork, Langford Creek	Yes
Stillpond Creek Dam	Private	Recreation	Stillpond Creek	Yes
Teels Lake Dam	Private	Recreation	Swantown Creek	Not Required
Urieville Dam (Augustine Herman Hwy)	State	Recreation	Morgan Creek-Trib.	Not Required
Watts Farm Pond	Private	Recreation	Mill Creek	Not Required

Source: USACE National Inventory of Dams - http://nid.usace.army.mil/cm_apex/f?p=838:7:0::NO

Capabilities

Capabilities

During the 2014-2020 planning cycle several notable projects were completed.

In 2014, the Town of Betterton was awarded $91,045 through the *Maryland Sea Grant - Green Streets-Green Jobs.* Funding was awarded for the Greener Wheeler Avenue Project. Grant funds from this program were used for the design and initial implementation of the project. The project included stormwater infiltration benefits, basically slowing stormwater flow and filtering permeated rainwater.



2018 panorama photo of the Chestertown Marina during high tide, which was prior to the completion of renovations that raised the grade by about two feet. *Photo Source:* Kees de Mooy

The Town of Chestertown continuously experienced nuisance flooding during rain events, extreme high tide events, and both full and new moon time periods. In a recent effort to mitigate, the Chestertown Marina was recently renovated. This renovation included raising the grade by two feet, the installation of new bulkheads along the entire shoreline, and the installation of pervious paved plazas to help with stormwater runoff. Given the frequent occurrence of extreme tide events in this area, the new floating docks have enhanced the resiliency of this marina.



Photo Source: Sam Shoge

Through grant funding the Town of Galena has received Cares Funding approval for a mobile electronic board to be placed on the corner of MD313 and MD290. According to the *2019 Kent County Nuisance Flood Plan,* MD 313 was identified as having flooding at the Chester River bridge during Hurricane type storms. MD 290, north of Chestertown has documented flooding issues during heavy rain events.

Appendix D: Capability Assessment of this document contains more extensive information.

Mitigation Strategies

Mitigation goals, objectives, and action items were identified throughout the plan development process for the unincorporated areas of the county and each of the five (5) towns. Following the review and discussion of risk and vulnerability, stakeholders identified and prioritized new action items for this plan update. Action items identified and designated as "all-hazards" and "flood" related are listed below. Those flood mitigation action items listed as a "High" priority have been further detailed table below and include discussion, potential funding sources, and a timeline for implementation.

Section 2 Goal: Minimize the loss of life, property, and adverse environmental impacts due to Flooding in Kent County.

Objective 1: Increase the sustainability of public and private property as it relates to the effect of flooding.
Objective 2: Continue to promote public awareness to the dangers of flooding
Objective 3: Educate property owners and the public about risk and about mitigation measures to protect homes and businesses.

Action Items	Hazard(s)	Category	Responsible Entity(s)	Priority Ranking
Promote awareness of assets and resources located within the 0.2% chance ("500-year") floodplain that may become increasingly at risk due to sea level rise. Currently, properties located within the 0.2% chance floodplain are neither required to meet floodplain requirements nor carry flood insurance. A disclosure regarding such properties should be developed to better-inform residents of their vulnerability and protection options.	**Flood & Climate Adaptation**	Prevention & Natural Resource Protection	Kent County Dept. of Planning, Housing & Zoning	Low
Host and conduct Regional Incident Command Training courses including multi-disciplines. Encourage cross-training among various hazard response and mitigation disciplines. Consider the 0305 All-Hazard Incident Management Course for a group training multi-day event.	**All-Hazards**	Emergency Services	Kent County Office of Emergency Services	Low
Create a prioritized list of properties for land acquisition for flood mitigation and conservation	**Flood & Climate Adaptation**	Prevention & Natural Resource Protection	Kent County Dept. of Planning, Housing & Zoning	Medium

Design with additional elevation when repairing or upgrading county bulkheads, retaining walls, jetties, riprap, and docks to preserve function with rising water levels.	**Flood & Climate Adaptation**	Prevention & Natural Resource Protection	Kent County Dept. of Public Works	Medium
Review county owned critical & public facilities within the FEMA regulated 1% annual-chance flood event area listed on Table 2-4. Five (5) properties were identified and are located within Rock Hall, Chestertown, and Worton.	**Flood**	Property Protection	Kent County Office of Emergency Services, Dept. of Public Works	Medium
Renovate and include flood protection for the Kent County **Detention Center.** Relocate the **Emergency Operations Center**, as appropriate**.** This facility is particularly vulnerable because it has a groundwater spring located nearby. A set of pumps keeps the water table at least 12 feet below the building's foundation. However, during wet or rainy periods the pumps cannot keep up and the basement floors get wet. This is a problem because the **Emergency Operations Center and communications equipment** is housed in the basement.	**Flood & Climate Adaptation**	Prevention	Kent County Office of Emergency Services, Kent County Detention Center, Dept. of Public Works, Kent County Dept. of Planning, Housing & Zoning	High
Pursue funding and conceptual design for stream restoration project(s) along the Chester River at Little Chester Bridge. Both sides display bridge abutment scour issues.	**Flood & Climate Adaptation**	Property & Natural Resource Protection	Town of Millington	Medium
Determine potential flood impacts to the WWTP located within the FEMA regulated 1% annual-chance flood event area listed on Table 2-4.	**Flood**	Property Protection	Town of Millington	Medium
Install back-up generators at public utility facilities, Town Hall, and VFD.	**All-Hazards**	Property Protection	Town of Millington	Medium
Place fixed high-water signage on vulnerable bridges & roads.	**Flood**	Prevention & Natural Resource Protection	Kent County Office of Emergency Services, Dept. of Public Works	High

Discussion: Repetitive flood locations, both bridges and roads, identified in the Kent County Nuisance Flood Plan should be further reviewed and prioritized for high water signage. Priority consideration should be given to these roadways, considering, they are evacuation routes. Also, during a flood hazard event, certain essential facilities might become inaccessible.



Barricades are often deployed to these locations, however, new signage that includes water level data collection would enable staff to monitor and quickly response to these areas, as needed.



Flood Detection Systems & Warning Systems with Gate Closure



Possible Funding Sources: FEMA - Building Resilient Infrastructure and Communities (BRIC), Local Government Infrastructure Financing Program

Timeline for Implementation: 1-3 yrs.

Investigate Ericsson Avenue storm water management issues. Potential Streetscape Project- project is multi-faceted.	**Flood**	Property Protection	Town of Betterton	**High**

Discussion: Revitalization projects may include streetscapes including lighting, sidewalks, facade enhancements, and other physical upgrades. These upgrades will include stormwater design enhancements to improve water conveyance and mitigate roadway flooding.

Possible Funding Source: Maryland Department of Transportation- State Highway Administration and Community Legacy

Timeline for Implementation: 3-5 yrs.

Provide flood insurance and flood related regulations training area contractors, real estate agents and insurance providers.	**Flood**	Prevention	Kent County Dept. of Planning, Housing & Zoning, Town of Millington	**High**

Discussion: Hosting flood insurance workshop(s) insurance and real estate agents become more informed, which will encourage them to share more about the need to purchase flood insurance, regardless of where the home or business is located with the public. Workshops will focus discussion on modernization of flood maps and the differences between policy coverage. Continuing Education Credits (CEU's) should be offered to attendees. For additional training, promote *FEMA's NFIP Key Fundamentals of Flood Insurance for Agents*, two-day webinar.

Training Resources:

FloodSmart Website
FloodSmart Resources for Agents
NFIP Agent Field Guide

National Flood Insurance Program Website
NFIP Flood Insurance Manual
NFIP Community Status Book
Helping Clients Understand the Newly Mapped Procedure
FEMA Elevation Certificate
NFIP Summary of Coverage
How to Print a FIRMette and Download a FIRM Panel
FEMA Map Service Center

Elevation Certificates: Who Needs Them and Why
NFIP Claims Handbook
NFIP Increased Cost of Compliance Overview
How to File a Flood Insurance Claim
Insurance Outreach Publications and Resources
Map Changes and Flood Insurance
Office of the Flood Insurance Advocate
Hurricane Season Campaign
Disasters and Assistance
Risk Rating 2.0
Answers to Questions about the NFIP
WYO Companies Actively Writing Flood Insurance
Understanding Mudflow and the NFIP
Flood Insurance: It's Worth It

Possible Funding Source: Free FEMA/MDE Instructor/Technical Advisors

Timeline for Implementation: 1 yr.

Expand public information capabilities by hosting regional training and workshops. Continue Joint Information Center initiative.	**All-Hazards**	Public Education & Awareness	Kent County Office of Emergency Services	**High**

Discussion: Hazards impacting Kent County, specifically flood-related hazards, oftentimes are also impacting the surrounding jurisdictions. Forming a Joint Information Center (JIC), in this case a virtual center, provides an opportunity for Public Information Officers (PIOs) to come together to coordinate and disseminate accurate, consistent and timely messages during an emergency. Coordinating prior to an incident through workshops, exercise, and drills will enable regional PIOs to get to know one another prior to a real-life incident. In addition, having PIO contacts in other jurisdictions, opens the opportunity to request assistance, as available, from contacts that are known and work in the Region.



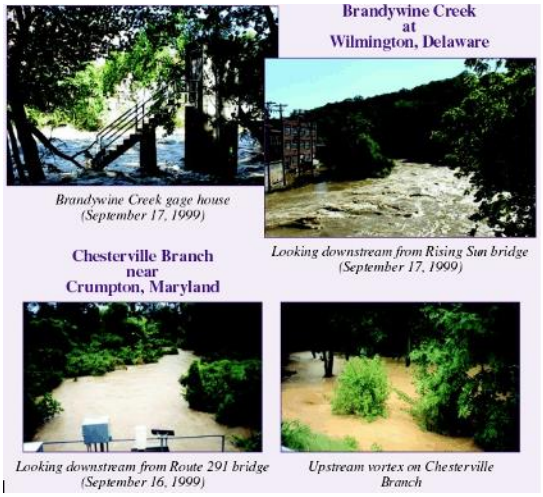
Possible Funding Sources: Staff Time

Timeline for Implementation: 1-2 yrs.

Consider pursuing FEMA's Community Rating System to lower flood insurance costs for property owners and provide outreach to at-risk properties. Review Map 2-3 thru 2-8 for at-risk structures.	**Flood**	Public Education & Awareness	Town of Chestertown	**N/A**
			Town of Rock Hall	**High**
			Town of Millington	**Medium**
			Town of Betterton	**Medium**
			Kent County Dept. of Planning, Housing & Zoning	**Medium**
Discussion: The National Flood Insurance Program's (NFIP) Community Rating System (CRS) is a voluntary incentive program that recognizes and encourages community floodplain management activities that exceed the minimum NFIP requirements. According to the FEMA flood Insurance policy data provided on Table 2-5, there are 570 policies in-force county-wide, of which 229 are within the Town of Rock Hall. Total net losses for the Town of Rock Hall is $3,213,265. Participation in CRS and the completion of activities by Rock Hall will result in credit points awarded. Based on awarded points and CRS rating, flood insurance discounts will be provided to all flood insurance policy holders. A 10% discount based on the total premiums for Rock Hall would result in a total cost savings of $20,900.00 using the data found in Table 2-5. **Possible Funding Sources:** Staff Time **Timeline for Implementation:** 2-3 yrs.				
Obtain and strategically deploy mobile message sign boards throughout the county.	**All-Hazards**	Emergency Services	Kent County Office of Emergency Services, Washington College	**High**
Discussion: Mobile or variable message sign boards are easily deployable and highly effective for public safety warning and notification. Due to the land area size of the county and potential for various hazard impacts, particularly widespread flooding, multiple sign boards are needed. Approximately $12K per board. **Possible Funding Sources:** FEMA - Building Resilient Infrastructure and Communities (BRIC) and Local Government Infrastructure Financing Program **Timeline for Implementation:** 2-3 yrs.  InstAlert 24 on ATS 5 Trailer				

Establish a working group to complete a field visit to identify potential stream restoration project locations.	**Flood & Climate Adaptation**	Natural Resource Protection	Town of Rock Hall, University of MD	**High**
			Town of Millington	**Medium**

Discussion: Maryland Sea Grant Extension is a partnership between Maryland Sea Grant and University of Maryland Extension. Maryland Sea Grant's Extension specialists and agents are experts in a wide variety of fields. Those include aquaculture, business, food safety, and watershed restoration. We facilitate workshops and training seminars, produce publications, and conduct applied research that can help solve practical problems.



Watershed Restoration: Managing Stormwater, Restoring Natural Habitats

- Our staff of five watershed restoration specialists help Marylanders install green design projects – like stream restoration projects and rain gardens – that are based on sound practices.
- These measures can manage the flow of stormwater locally by soaking up water (to limit flooding) and treating it (to remove pollutants).
- We also work to help groups and communities restore natural habitats that can help to improve water quality Bay-wide. Those include wetlands, streams, and forest buffers, which are trees planted along a waterway.
- Our specialists assist five Watershed Stewards Academies around Maryland to train volunteers to lead and find funding for community-based watershed restoration projects.
- We help communities and individuals find technical assistance and funding to support their watershed restoration activities. For more information on sources of funding for water quality improvement projects, check out our Maryland Watershed Restoration Assistance Directory.

Possible Funding Sources: Maryland Sea Grant and University of Maryland Extension

Timeline for Implementation: 1-2 yrs.

Explore (10) tideflex valve installation.	**Flood**	Property Protection	Town of Rock Hall	**High**

Discussion: Tideflex valves for drains and sewers provide end-of-pipe backflow prevention and flooding protection. Tideflex valves are unibody, rubber check valves which means they do not rust and are resistant to most chemicals found in wastewater.


Tideflex Check Valve
municipalvalve.com


Tideflex Check Valves | Red Valve
redvalve.com

They do not block easily and are self-clearing, so they have a long-life span and require no maintenance, unlike traditional flap valves.

Possible Funding Sources: FEMA - Building Resilient Infrastructure and Communities (BRIC), Emergency Advance Measures for Flood Prevention, Watershed and Flood Prevention Operations Program

Timeline for Implementation: 2-3 yrs.

Develop a Flood Mitigation Plan.	**Flood**	Property Protection	Kent County Office of Emergency Services, Kent County Dept. of Planning, Housing & Zoning	**High**

Discussion: The purpose of a Flood Mitigation Plan (FMP) is to assist State and local governments in funding cost-effective actions that reduce or eliminate the long-term risk of flood damage to human life, buildings, and other insured structures. The long-term goal of FMP is to reduce or eliminate claims under the National Flood Insurance Program (NFIP) through mitigation activities. A Flood Mitigation Plan will articulate a comprehensive strategy for implementing technically feasible flood mitigation activities for the area affected by the plan. The outcome of the project will result in a FEMA-approved and adopted Flood Mitigation Plan that complies with the requirements of 44 CFR Part 78.

At a minimum, the plan will include the following required elements:

a. Description of the planning process and public involvement. Public involvement may include workshops, public meetings, or public hearings.

b. Description of the existing flood hazard and identification of the flood risk, including estimates of the number and type of structures at risk, repetitive loss properties, and the extent of flood depth and damage potential.

c. Identification and description of floodplain management goals for the area covered by the plan.

d. Identification and evaluation of cost-effective and technically feasible mitigation actions considered.

e. Presentation of the strategy for reducing flood risks and continued compliance with the NFIP, and procedures for ensuring implementation, reviewing progress, and recommending revisions to the plan.

f. Documentation of formal plan adoption by the legal entity submitting the plan.

CRS information – The Kent County obtains the maximum points available for completing a Flood Mitigation Plan.

Floodplain Management Planning (FMP): The most credit is for the first element, a community-wide floodplain management plan, credit is also available for multi-hazard mitigation plans, multi-jurisdictional floodplain management and hazard mitigation plans, and hazard mitigation plans, and floodplain management plans prepared for the U.S. Army Corps of Engineers.

Possible Funding Sources: FEMA - Building Resilient Infrastructure and Communities (BRIC) and FEMA - Hazard Mitigation Grant Program (HGMP)

The Flood Mitigation Assistance Program is a competitive grant program that provides funding to states, local communities, federally recognized tribes and territories. Funds can be used for projects that reduce or eliminate the risk of repetitive flood damage to buildings insured by the National Flood Insurance Program. Planning grants are available using FMA grant funding.

Timeline for Implementation: 2-3 yrs.

Add link to MDE's Flood Risk application on the Kent County's Mapping Tools homepage.	**Flood**	Property Protection	Kent County Dept. of Planning, Housing & Zoning	**High**

Discussion: The simple activity of including links on the county's website that assist the public with accessing additional flood information could earn the County CRS points. After review of the County's website, there was no link to the Maryland Department of Environment's Flood Risk Application: MD Floodmaps, https://mdfloodmaps.net/map/. By providing this link, citizens could learn about their property's flood risk and will earn the County CRS points under 300 Public Information Activities: 320 Map Information Services. A max of 90 points could be earned activities such as this.



Possible Funding Sources: Staff Time

Timeline for Implementation: 2 months

SECTION 3



SECTION 3 TOPICS

- HURRICANE HAZARD
- HISTORY & FUTURE RISK
- VULNERABILITY
- CAPABILITIES
- MITIGATION STRATEGIES

PLAN UPDATE HIGHLIGHTS

The hurricane hazard has been continued from the 2014 Plan into the 2020 Hazard Mitigation Plan.

The hurricane hazard includes tropical storms. There are no hurricanes and tropical depressions recorded in the NCEI Database for Kent County.

The Saffir-Simpson Hurricane Wind Scale and NOAA Historical Hurricane Tract were updated with the most current information.

New maps and figures were included to display hurricane tracks and storm surge explanations. Velocity Pressure as a Function of Wind Speed data was included to the plan update.

Hazard Risk Assessment Data tables were updated using data from the 2016 State of Maryland Hazard Mitigation Plan and the National Centers for Environmental Information (NCEI) - Storm Events Database.

Vulnerability analysis for storm surge risk assessment and loss estimations were completed using updated data, 2016 Hurricane Storm Surge GIS data. New maps were generated for the northern and southern parts of County, municipalities, and structures at risk to the inundation area. New Hurricane Storm Surge Rise At-Risk Structures and Loss Estimations Per Community tables were developed and included.

Critical & Public Facilities at risk to hurricane storm surge were analyzed. Facilities at risk were provide in table and mapping formats.

New capabilities provided by stakeholders were discussed.

New goals and objectives were developed for this plan section. New 2020-2025 Mitigation Action Items provided by stakeholders were included. Action items ranked “High” were further detailed to include discussion, potential funding sources, and a timeline for implementation.

Hurricane Hazard

Hazard

Hurricane, tropical storm, and tropical depression are all examples of a tropical cyclone. The categories and associated characteristics are as follows:

- Hurricane: maximum sustained surface wind speed exceeds 73 mph;
- Tropical Storm: maximum sustained surface wind speed from 39-73 mph; and,
- Tropical Depression: maximum sustained wind speed is less than 39 mph.

A hurricane is a type of tropical cyclone, which is a very low-pressure, gyrating weather system that forms over tropical waters. Tropical cyclones that occur in the Atlantic Ocean are known as hurricanes. When such systems begin, they are called tropical depressions. Once winds reach a sustained force of 39 miles per hour, a tropical depression becomes a tropical storm. If the winds reach a sustained force of 74 miles per hour, the tropical storm becomes a hurricane. Their further classification depends on the speed of the winds and storm surge. Damage is not, however, a direct function of windspeed. Usually a combination of hazards within a storm causes the most extensive damage. Hurricane Katrina demonstrated this as it was only a category 3 hurricane, but the storm surge, the extensive rainfall, and the failed levees together resulted in unprecedented damage.

Table 3-1: Saffir-Simpson Hurricane Wind Scale

Category Wind Speed Storm Surge	Effects
Category 1-Weak 74-95 mph	**Very dangerous winds will produce some damage:** Well-constructed frame homes could have damage to roof, shingles, and vinyl siding and gutters. Large branches of trees will snap, and shallowly rooted trees may be toppled. Extensive damage to power lines and poles likely will result in power outages that could last a few to several days.
Category 2-Moderate 96-110 mph	**Extremely dangerous winds will cause extensive damage:** Well-constructed frame homes could sustain major roof and siding damage. Many shallowly rooted trees will be snapped or uprooted and block numerous roads. Near-total power loss is expected with outages that could last from several days to weeks.
Category 3-Major 111-129 mph	**Devastating damage will occur:** Well-built framed homes may incur major damage or removal of roof decking and gable ends. Many trees will be snapped or uprooted, blocking numerous roads. Electricity and water will be unavailable for several days to weeks after the storm passes.
Category 4-Major 130-156 mph	**Catastrophic damage will occur:** Well-built framed homes can sustain severe damage with loss of most of the roof structure and/or some exterior walls. Most trees will be snapped or uprooted, and power poles downed. Fallen trees and power poles will isolate residential areas. Power outages will last weeks to possible months. Most of the area will be uninhabitable for weeks or months.
Category 5-Major >157 mph	**Catastrophic damage will occur:** A high percentage of framed homes will be destroyed, with total roof failure and wall collapse. Fallen trees and power poles will isolate residential areas. Power outages will last for weeks to possibly months. Most of the area will be uninhabitable for weeks or months.

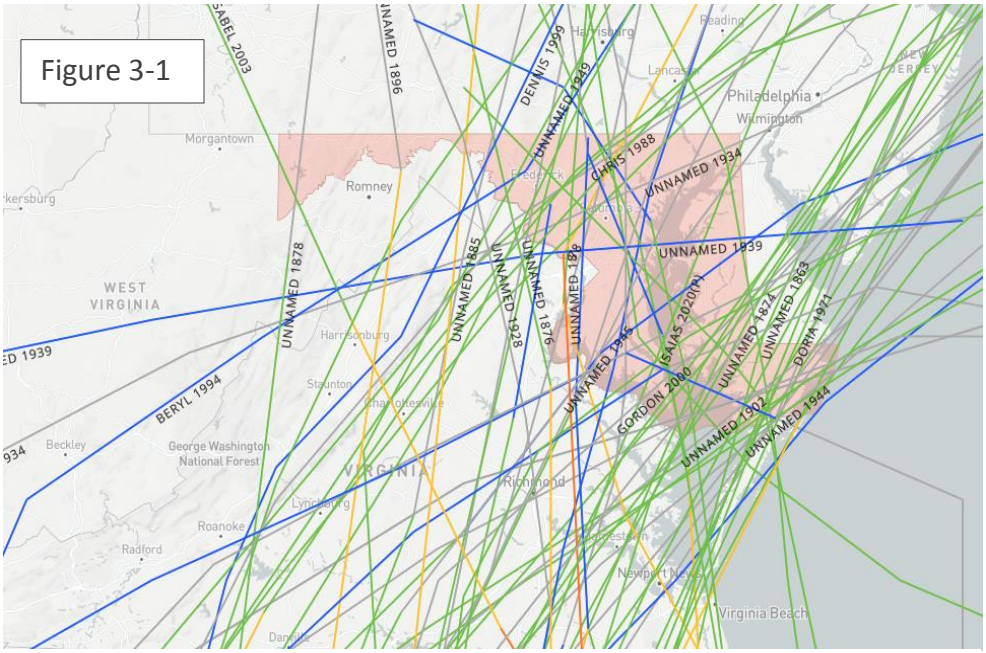
Source: National Hurricane Center, 2012

Hurricanes are classified by the Saffir-Simpson scale which distinguishes hurricanes based on their intensity and damage level; Table 3-1. The categories from 1 to 5 indicate increasing intensity based on the degree of sustained winds, atmospheric pressure, storm surge and anticipated extent of damage.

A hurricane may include one or more of the following effects: storm surge, high winds and heavy rain. The cumulative impact of these can be life threatening and cause catastrophic damage. Several hurricanes or tropical storms travel up the Atlantic Coast each season threatening large areas of the eastern United States and millions of people. Figure 3-1 depicts hurricane tracks across the State of Maryland. Green lines indicate tropical storm, blue are tropical depressions, while yellow are category 1 hurricanes.

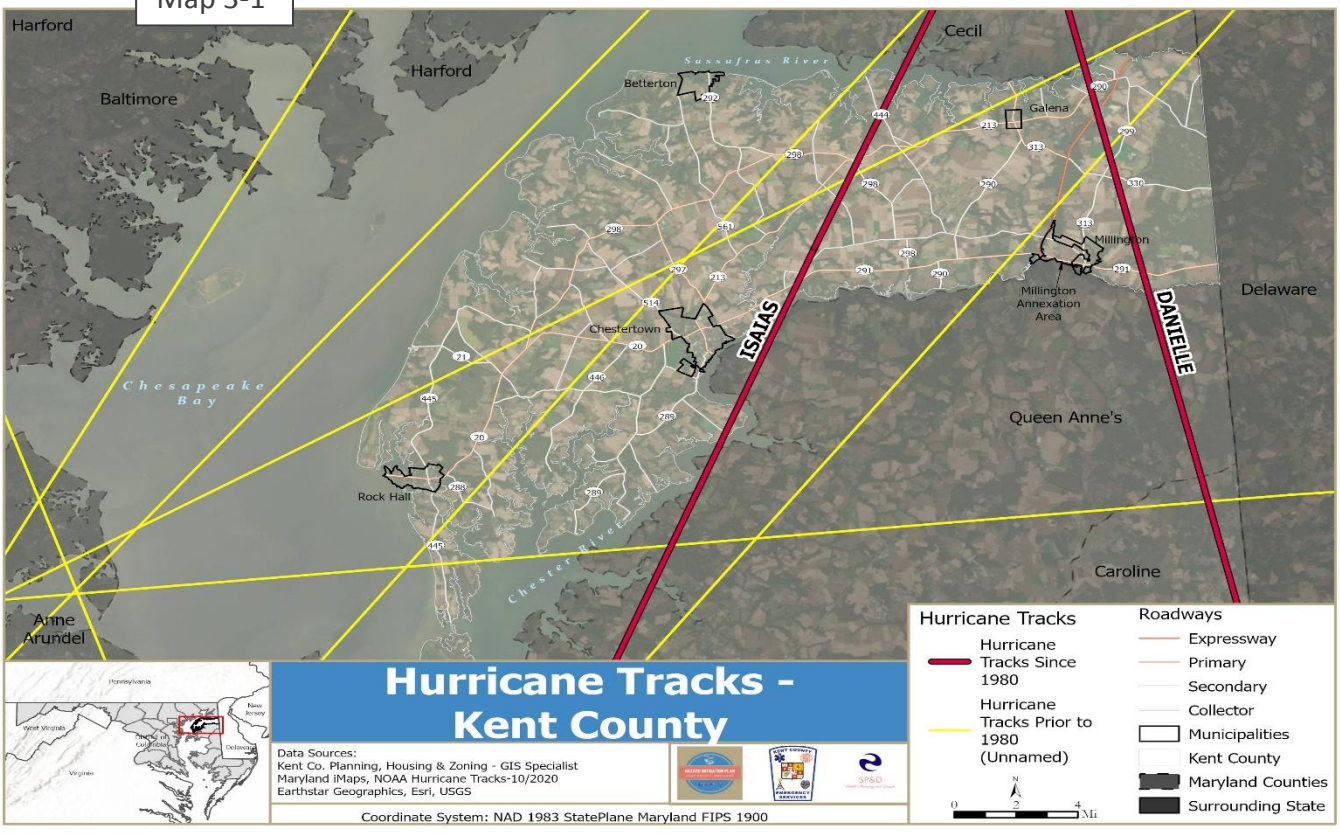
A total of six (6) hurricanes have directly traversed Kent County and one (1) tracked along the western coastline. Since 1980, two (2) hurricanes have passed through the County; Danielle in 1993 and most recently, Isaias in 2020. Map 3-1 shows the hurricane tracks going through or around Kent County.

Figure 3-1



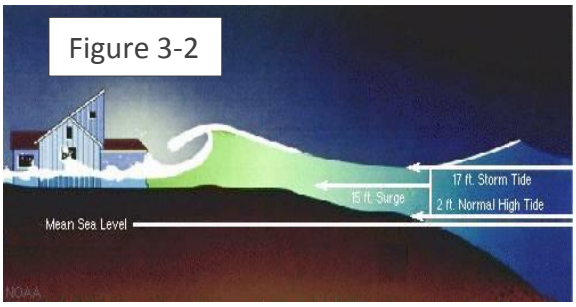
Source: NOAA Historical Hurricane Tracks: https://oceanservice.noaa.gov/news/historical-hurricanes/

Map 3-1



The most destructive of the hurricane's effects is storm surge, an abnormal local rise in sea level. When a hurricane forms and as it moves landward, low barometric pressure and high, gyrating winds create a dome of ocean water that moves under the hurricane's eye. When over open ocean, the volume of this dome of water is absorbed by the great volume of water characteristic of substantial bottom depths.

Storm surge occurs when the hurricane approaches the coast and the depth decreases, the resulting dome of water floods ashore. Storm surge causes nine out of ten hurricane deaths. Storm surge results in a temporary sea level increase. Any wave action is in addition to the storm surge.



The stronger the hurricane and the closer it is perpendicular to its track, in relation to the coastline, the higher the storm surge and resulting destruction will be. The depth of the water along the coastline and the slope of the bottom are other determining factors of storm surge height. "…When surging waters come into contact with the gradually sloping shallow bottom, the speed of the surge decreases, and wave heights increase because of the kinetic energy that is forced upward by the bottom." Because the local continental shelf slopes gradually, storm surge heights will generally be greater than in areas where the slope is more abrupt. Figure 3-2 shows storm surge inundation areas.

The heavy rain that accompanies hurricanes can also be destructive and has a greater area of impact than storm surge. Hurricanes can bring ten (10) to fifteen (15) inches or more of rainfall. This causes flooding and has many secondary impacts. Heavy rain can severely impede the flow of traffic and thus impair evacuation and emergency services. Rainfall, as a symptom of a hurricane can affect inland areas far from the coast.

High winds can also cause a great deal of damage and injuries. The high winds of hurricanes are a threat to the stability of structures including tall buildings, towers, and mobile homes. The destructive wind forces of hurricanes can be divided into several categories:

- Direct pressure and uplift;
- Internal pressurization; and
- Wind-borne debris.

Direct pressure and uplift result from sustained winds against a structure. The speed of the wind has a direct and exponential relationship with the amount of pressure exerted; Table 3-2.

Table 3-2: Velocity Pressure as a Function of Wind Speed

Wind Speed (mph)	75	95	110	130	155	180	200
Velocity Pressure (psf)	19	30.6	41	57.2	81.3	109.7	135

Source: ASCE, 1990

The level of structural damage is a function of its shape and construction. The most common form of damage to structures from wind is uplift that damages or completely separates the roof from the structure. This type of damage is much more likely with gable style roofs.



Source: This Photo by Unknown Author is licensed under CC BY-SA.

Internal pressurization or depressurization results from the entry of wind forces into the structure through openings. If the opening is on the leeward side of the structure, suction is created resulting in depressurization which can cause the roof or its structural components to cave inward. When the opening is on the windward side, the result is an internal pressurization of the structure that can blow windows, doors, and walls outward.

Hurricane winds fling debris at high speeds. Debris can consist of roofing materials, glass from windows, doors, tree branches, lawn furniture, fencing materials, accessory structures, etc. This debris damages anything in its path and, when it hits a structure hard enough, can result in an opening that can cause internal pressurization or depressurization.

Typically, wind speeds are thought to be slowed by land. However, wind speed is not a function of distance inland, rather it is a function of time spent over land. A building that is five (5) miles inland is therefore not exempt from a wind hazard. A weaker storm that is moving 25 mph could wreak as much wind damage inland as a stronger storm that is moving slowly.

Storm Surge

Storm Surge is an abnormal rise of water generated by a storm, over and above the astronomical tide.

Storm Tide is the water level rise during a storm due to the combination of storm surge and the astronomical tide.

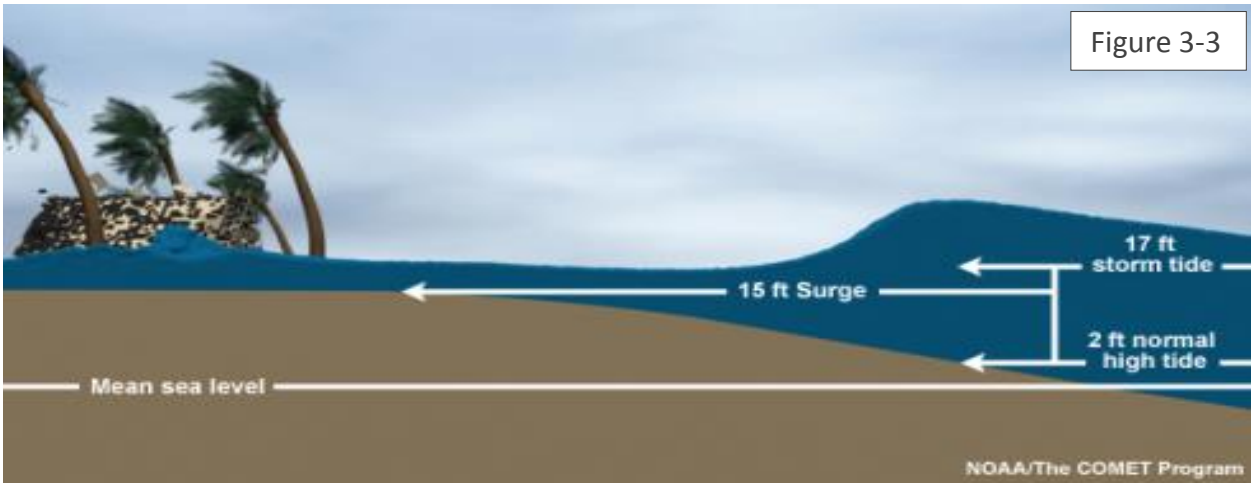


Figure 3-3

Source: nhc.noaa.gov/surge/surge_into.pdf

History & Future Risk

History

As shown on Figure 3-1, tropical depressions, tropical storms, and category 1 hurricanes have tracked in and/or around Kent County. Effects from these storms have impacted all of Kent County, considering the disruptions in power and inundation of roadways, they can and do wreak havoc on the entire community.

In terms of hazard risk, the hurricane hazard was continued from the 2014 planning cycle and was given a ranking of "Medium High" during the 2020 planning cycle. In order to assess the hazard risk identified, a composite score method was undertaken. The composite score method was based on a blend of quantitative and qualitative factors extracted from the National Centers for Environmental Information (NCEI), stakeholder survey, and other available data sources. These included:

- Historical impacts, in terms of human lives and property;
- Geographic extent;
- Historical occurrence;
- Future probability; and
- Local community perspective.

Detailed information is available within *Appendix A: Hazard Risk Methodology, Hazard Ranking Results, and Hazard Data Tables.*

Specific to the hurricane hazard, information obtained for Kent County using both the *2016 State of Maryland Hazard Mitigation Plan* and the National Centers for Environmental Information (NCEI) - Storm Events Database between January 1950 and December 31, 2019 for Hurricane Hazard include: Tropical Storm. There are no Hurricanes and Tropical Depressions in the database for Kent County. There has been a total of three (3) Tropical Storm Events between 2003-2020, with an annualized rate of 0.17. These storms have produced $550,000 in property damage and 87% of the county is in a risk area.

Total Hurricane Hazard Risk Assessment Data Table

Hazards included within this table from NCEI Data: Tropical Storm. There are no Hurricanes and Tropical Depressions recorded in the NCEI Database for this county.

Injuries & Deaths		Property & Crop Damage		Geographic Extent	Events 2003-2020
0	0	550K	0	% County in risk area= 87.00%	Total = 3 Annualized = 0.17

Source: National Centers for Environmental Information, as of December 31, 2019 & 2016 State of Maryland Hazard Mitigation Plan

Tropical Storm Data Table					
Injuries & Deaths		Property & Crop Damage		Geographic Extent	Events 2003-2020
0	0	550K	0	% County in risk area= 87.00%	Total = 3 Annualized = 0.17

Source: National Centers for Environmental Information, as of December 31, 2019 & 2016 State of Maryland Hazard Mitigation Plan

Legend: There are three designators: C - County/Parish; Z - Zone; and M - Marine Zone.

Based on NCEI definitions/criteria: Tropical Storm (Z). *A tropical cyclone in which the 1-minute sustained surface wind ranges from 34 to 63 knots (39 to 73 mph). A Tropical Storm should be included as an entry when these conditions are experienced in the WFO's (Weather Forecast Office) CWA (County Warning Area).*

Federally declared Hurricanes impacting Kent County include Hurricane Isabel in 2003, Hurricane Katrina in 2005, Hurricane Irene in 2011, and Hurricane Sandy in 2012. In 1972, Tropical Storm Agnes impacted Kent County, as a result a Maryland State of Emergency was declared.

According to the National Center for Environmental Information (NCEI), the following hurricanes/tropical storms impacted Kent County:

- **September 18-19, 2003 – Hurricane Isabel** - This storm caused a record-breaking tide and storm surge up the Chesapeake Bay, heavy rain and strong power outage producing winds. A record-breaking high tide of 7.91 feet above mean lower low water was observed at Tolchester Beach (Kent County). The surge was 6.88 feet. Tidal flooding problems began after Midnight EDT on the 19th and continued throughout the day on the 19th. The surge was so strong that it negated the normal tide cycle in the bay. Evacuations occurred near the bay. For example, in Kent County emergency management officials evacuated residents along Eastern Neck Road (State Route 455) from Rock Hall to the Eastern Neck Island. Tidal flooding occurred in and around Rock Hall, Chestertown, Skinners Neck, Piney Neck and Cliffs City. Tidal flooding carried inland on the Chester River to Chestertown. Over 100 homes, vehicles and boats were damaged and/or ruined. In addition, eleven marinas, three restaurants, two hotels, two Bed and Breakfast facilities, one boat building business and one marine railway reported major damage.
- **September 6, 2008 – Tropical Storm Hanna** – This storm brought heavy rain, strong winds and some tidal flooding to the Eastern Shore. Peak wind gusts were 42 mph in Tolchester and a precipitation total of 1.76 inches in Millington. The evening high tide at Tolchester Beach crested at 3.1 feet above mean lower low water and failed to reach minor tidal flooding levels (3.5 feet above mean lower low water).
- **August 27-28, 2011 – Hurricane Irene** – This storm produced heavy flooding rain, tropical storm force wind gusts and caused one wind related death across the Eastern Shore. Multiple parts of Maryland State Routes 20 and 445 were closed. Approximately 30-40% of the Town of Millington was under water and one (1) shelter was opened for one (1) night. Eleven (11) homes sustained major or minor damage which left them uninhabitable, and five (5) homes were affected (some damage but useable without repairs). In addition, there were 42 separate road closures due to downed trees or powerlines, encroaching water, and complete washouts. Gusts of 60 mph were recorded in Tolchester Beach.

Future Risk

Future probability was factored into the hazard risk vulnerability and ranking for each identified hazard, as detailed *Appendix A: Hazard Risk Methodology, Hazard Ranking Results, & Data Tables.* Results for the hurricane hazard indicate a future probability ranking of "occasional" while potential impacts could be significant, indicating a future risk rating of "'medium-high."

Vulnerability

Vulnerability

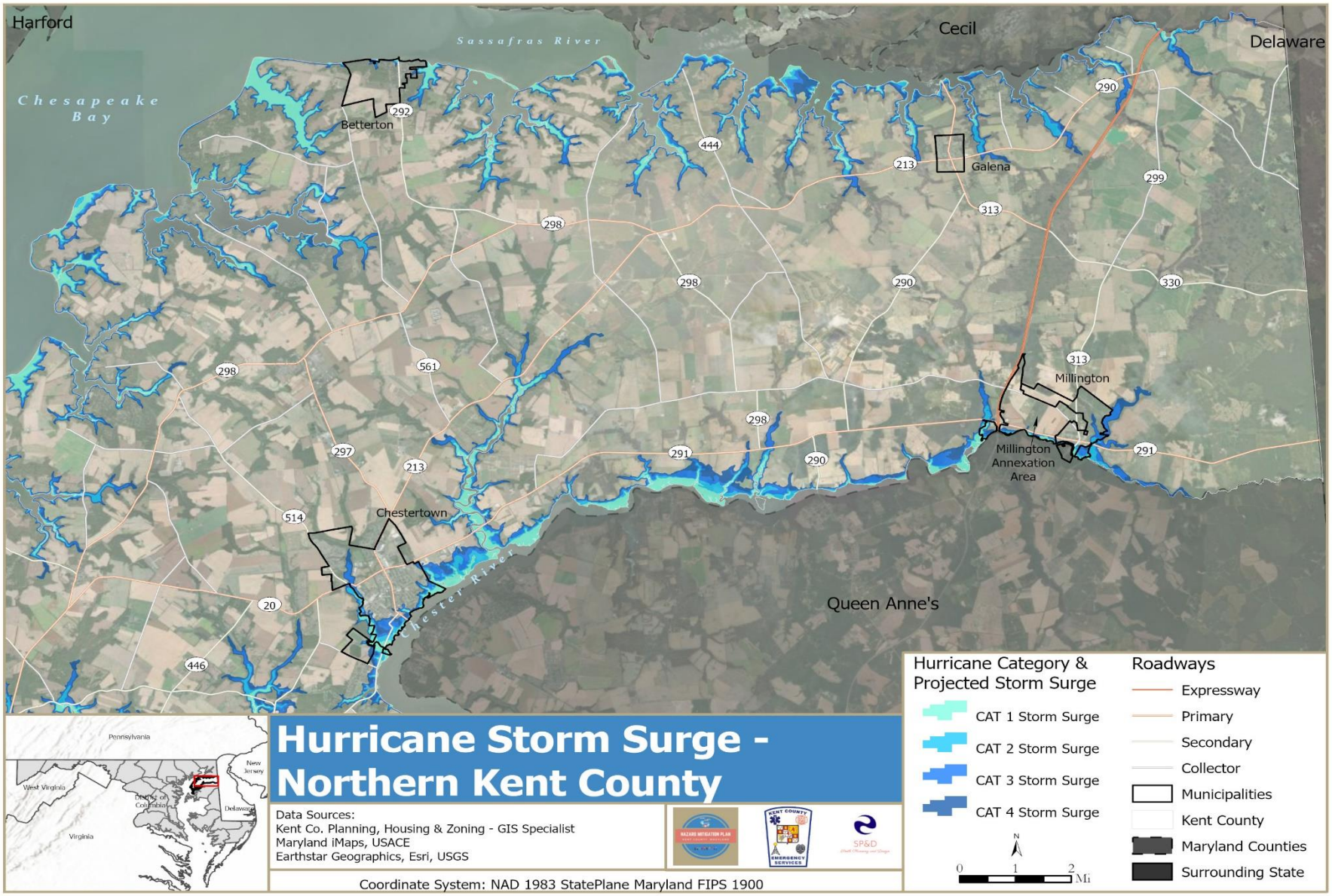
The Chester and Sassafras Rivers run through developed areas with considerable potential for flooding. Communities also sit on the Chesapeake Bay and are susceptible to tidal surge and accretion. Kent County is surrounded by water bodies, most of them tidal. Nearly all the County's municipalities, villages, and communities have been affected by storm affects. However, the Town of Galena is least susceptible to hurricane storm surge, while the Town of Rock Hall and Southern Kent County is most susceptible, refer to Maps 3-2 and 3-3.

Storm Surge Zones (Inundation Areas)

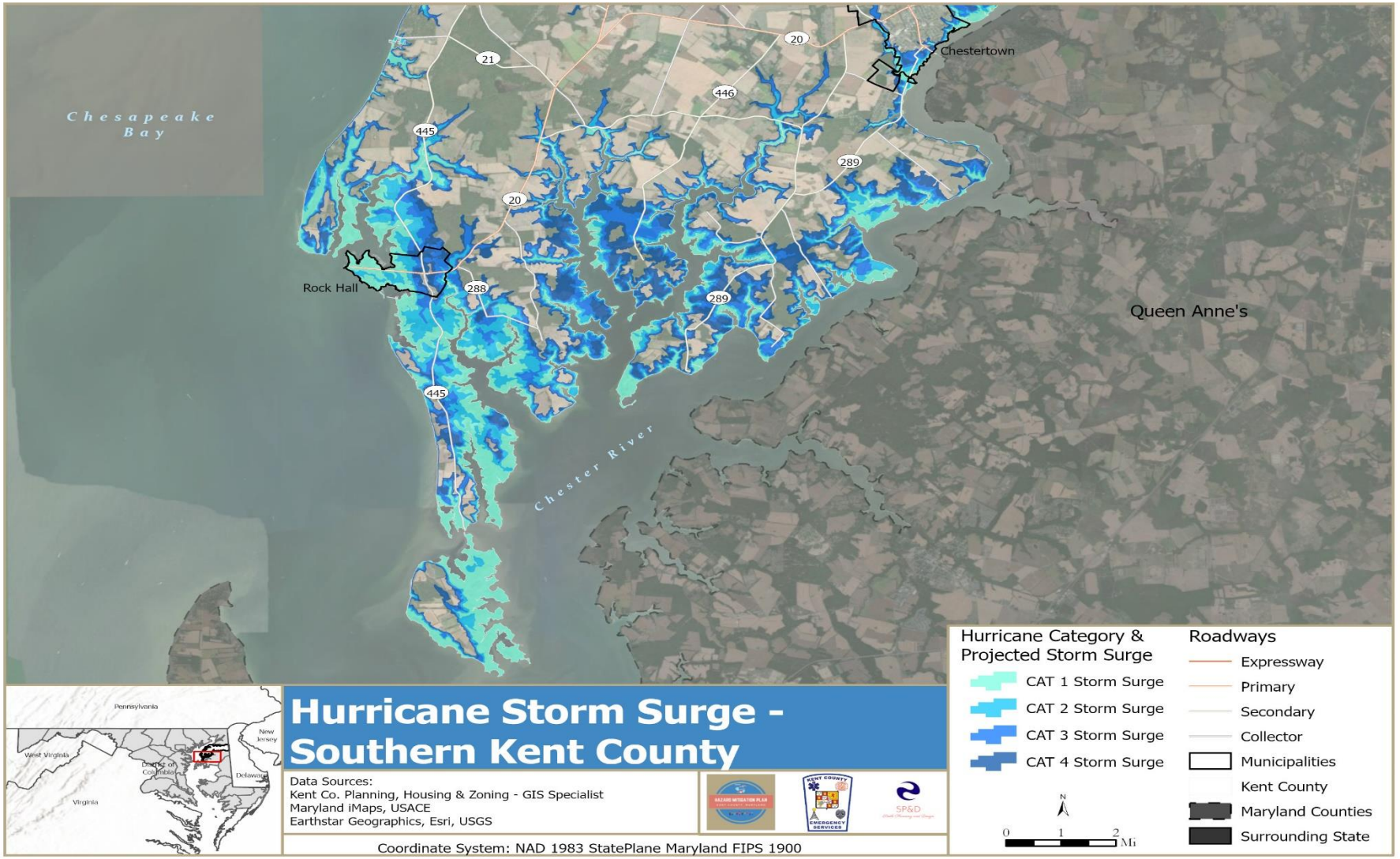
The higher the Saffir-Simpson rating for the hurricane, the farther inland the storm surge zones. The storm surge zones data was generated using the **Sea, Lake, and Overland Surges from Hurricanes (SLOSH) model.** SLOSH is a computerized model run by the National Weather Service to estimate storm surge heights resulting from historical, hypothetical, or predicted hurricanes. The model creates its storm surge zones by analyzing the pressure, size, forward speed, track, and wind data from a hurricane. The method used for this data was a "worst case scenario" for the entire SLOSH basin. Based on the SLOSH Model, the elevation of inundation ("worst case scenario") for Category One, Two, Three, and Four hurricanes were calculated for Kent County. Maps 3-2 and 3-3 depict the hurricane storm surge inundation areas within Kent County. Category 1, the most likely scenario for Maryland and Kent County.

As depicted in Maps 3-2 and 3-3, it may be concluded that the AE and VE zones would be inundated during a Category 1 storm. As the category of the storm increases, more land area will become inundated. Storm surge is a major component of nor'easter storms along the East Coast of the U.S. Because winds are moving from a north and/or eastward position, winds move across the ocean towards shore and form large waves.

Map 3-2


Harford
Cecil
Delaware
Sassafras River
Chesapeake Bay
Betterton
Galena
Millington
Millington Annexation Area
Chestertown
Chester River
Queen Anne's
292
444
213
290
299
313
298
330
561
297
291
514
20
446
Hurricane Storm Surge - Northern Kent County
Data Sources:
Kent Co. Planning, Housing & Zoning - GIS Specialist
Maryland iMaps, USACE
Earthstar Geographics, Esri, USGS
Coordinate System: NAD 1983 StatePlane Maryland FIPS 1900
Hurricane Category & Projected Storm Surge
CAT 1 Storm Surge
CAT 2 Storm Surge
CAT 3 Storm Surge
CAT 4 Storm Surge
Roadways
Expressway
Primary
Secondary
Collector
Municipalities
Kent County
Maryland Counties
Surrounding State
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Pennsylvania
New Jersey
West Virginia
Virginia
Delaware

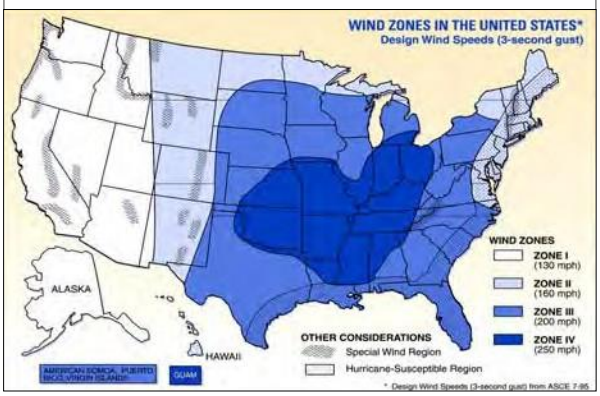
Map 3-3


Chesapeake Bay
Chestertown
Rock Hall
Queen Anne's
Chester River
21
20
446
445
289
288
Hurricane Storm Surge - Southern Kent County
Data Sources:
Kent Co. Planning, Housing & Zoning - GIS Specialist
Maryland iMaps, USACE
Earthstar Geographics, Esri, USGS
Coordinate System: NAD 1983 StatePlane Maryland FIPS 1900
Hurricane Category & Projected Storm Surge
CAT 1 Storm Surge
CAT 2 Storm Surge
CAT 3 Storm Surge
CAT 4 Storm Surge
Roadways
Expressway
Primary
Secondary
Collector
Municipalities
Kent County
Maryland Counties
Surrounding State
0 1 2 Mi
Pennsylvania
New Jersey
West Virginia
District of Columbia
Delaware
Virginia

In addition to flooding, the other significant impact from hurricanes is wind damage. High winds lead to the transport of debris, which can cause casualties and property loss. Another significant hazard caused by winds is the toppling of trees (namely trees with extensive root structures located in highly erodible soils along shorelines). A less probable hazard involves the dislodging of mobile homes from their foundations or displacing vehicles. High winds may also cause damage to poles and lines carrying electric, telephone, and cable television service.

Since high wind events may affect the entire County, it is important to identify specific critical and public facilities and other structures that are most vulnerable to the hazard. Evaluation criteria include age of the building (and what building codes may have been in effect at the time of construction), and type of construction. Data for individual structures was available through Maryland Department of Planning's MDProperty View data. For the plan update, the number and types of structures in Kent County that have a vulnerability to storm surge were determined. These structures could also be considered for having a heightened vulnerability to wind as well.

Figure 3-4: Wind Speed Zones



FEMA's publication, Taking Shelter from the Storm, October 1998, presents a map of four wind zones in the U.S. (Figure 3-4) and provides design wind speeds for shelters and other critical facilities. Zone IV shows the areas of highest wind activity which are situated in the Midwest and Tornado Alley, while Zone I show the areas of lowest activity which are in the western U.S. All of Kent County is mapped in Zone II. For shelters and critical facilities in this zone, a design wind speed of 160 mph is recommended.

Kent County's coastal location lends itself to being somewhat vulnerable to hurricanes originating in the Atlantic and working their way up to the mid-Atlantic region. These hurricanes, although rare in occurrence, bring not only the threat of flooding, but also damage from wind. The American Society of Civil Engineers (ASCE) publication, *Minimum Design Loads for Buildings and Structures*, 1998 (also referred to as ASCE 7-98) shows that for Kent County the design wind speed (3-second gust) for structures ranges from 90 to 100 mph. While most of the continental U.S. is mapped as having a design wind speed of 90 mph, the Atlantic and Gulf Coast areas have design wind speeds ranging from 100 mph to 150 mph (along the tip of the Florida peninsula and a portion of the Gulf Coast).

Risk Assessment & Loss Estimations

The vulnerability analysis for at-risk structures, including critical and public facilities, in Kent County was completed utilizing the following GIS data layers:

- Hurricane Storm Surge Layer – US Army Corps of Engineers (USACE) 2016
  - The data reflects areas with a risk of storm tide flooding from hurricanes, based on potential storm tide heights calculated by the National Weather Service's SLOSH (Sea, Lake, and Overland Surge from Hurricanes) Model.
- Kent County Addressable Building Layer
  - The dataset contains addressable buildings for Kent County, MD.

- Maryland Department of Planning's MdProperty View – Kent County 2017
  - The Maryland Department of Planning developed the MdProperty View products to assist users in accessing parcel data. For each parcel, numerous attributes are provided such as account identification, improvement value, year built, etc.
- Maryland Six Inch Imagery - Imagery flown in 2019 for the Eastern Shore
  - The six-inch resolution aerial imagery for the State of Maryland is composed of imagery flown in 2019 (Eastern Shore) and 2017 (Western Shore).

Building data provided by the Department of Planning, Housing & Zoning – GIS Specialist and MdProperty View parcel data were utilized to analyze the storm surge vulnerability. At-risk structures are structures located within the each of the hurricane storm surge inundation areas; Categories 1-4. The storm surge layer was overlaid on the addressable buildings and MdProperty View parcels to determine which structures were at-risk. The Maryland imagery was used to validate structures in Category 1 storm surge inundation areas, since this is the storm event to historically impacted Kent County. To determine loss estimations for at-risk structures, improvement values provided within the MdProperty View parcel database where used. The storm surge inundation area does not intersect with the Town of Galena, therefore there are no at-risk structures within town limits. The following table provides the number of structures at-risk to hurricane storm surge.

Table 3-3: Hurricane Storm Surge At-Risk Structures per Community

Storm Surge Categories	Category 1			Category 2			Category 3			Category 4		
	Residential	Commercial	Other	Residential	Commercial	Other	Residential	Commercial	Other	Residential	Commercial	Other
Kent County Unincorporated	185	14	15	301	8	45	314	14	46	426	9	66
Betterton	0	0	0	2	1	0	2	0	0	16	1	0
Chestertown	70	8	0	88	8	1	106	51	0	81	67	2
Millington	0	0	0	10	0	0	38	0	0	27	0	0
Rock Hall	308	36	0	218	6	0	82	9	0	156	28	0
TOTAL	563	58	15	619	23	46	542	74	46	706	105	68

Source: Smith Planning & Design, NOAA Hurricane Storm Surge - 2016, Kent County Database, MdProperty View
NOTE: Residential includes: Residential, Commercial Condominium, Commercial/Residential, Residential Condominium, and Apartments
Commercial includes: Commercial, Exempt Commercial
Other includes: Agricultural, Church

Table 3-4: Hurricane Storm Surge Loss Estimations per Community				
Storm Surge Categories	Category 1 Loss Estimations	Category 2 Loss Estimations	Category 3 Loss Estimations	Category 4 Loss Estimations
Kent County Unincorporated	$47,120,600	$75,669,900	$77,419,600	$102,364,200
Betterton	$0	$240,200	$208,900	$1,844,400
Chestertown	$21,526,900	$48,417,200	$27,306,900	$58,190,500
Millington	$0	$904,100	$3,257,600	$2,661,000
Rock Hall	$51,174,900	$23,164,800	$11,681,200	$19,943,200
TOTAL	$119,822,400	$148,396,200	$119,874,200	$185,003,300

Source: Smith Planning & Design, NOAA Hurricane Storm Surge - 2016, Kent County Database, MdProperty View
NOTE: Residential includes: Residential, Commercial Condominium, Commercial/Residential, Residential Condominium, and Apartments
Commercial includes: Commercial, Exempt Commercial
Other includes: Agricultural, Church

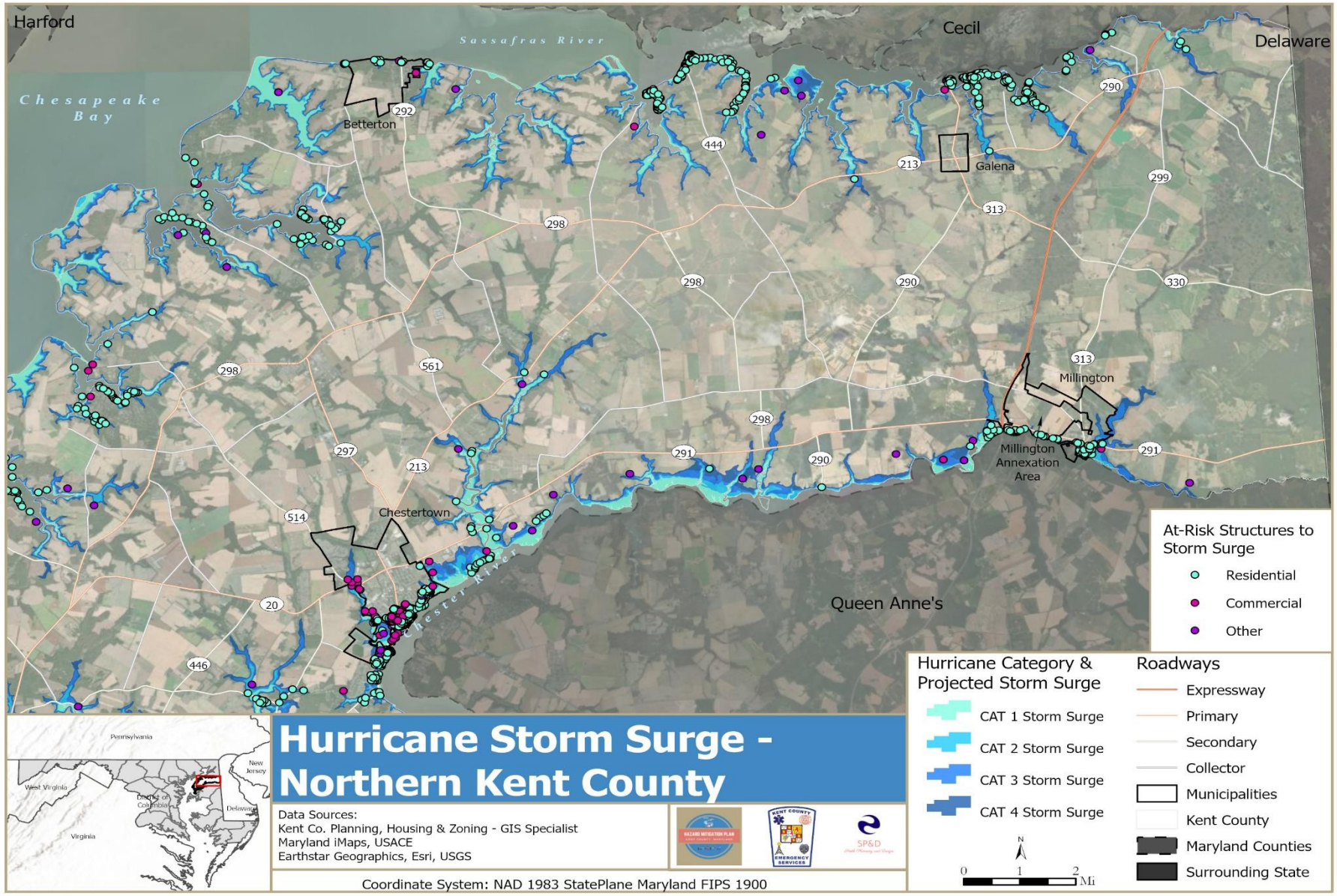
Results from the analysis indicate most structures at-risk to hurricanes scenarios are located in the Town of Rock Hall and throughout the unincorporated areas of Kent County. The Town of Rock Hall and Southern Kent County contain the majority of at-risk structures for hurricane storm surge category 1, the most likely scenario to affect Kent County.



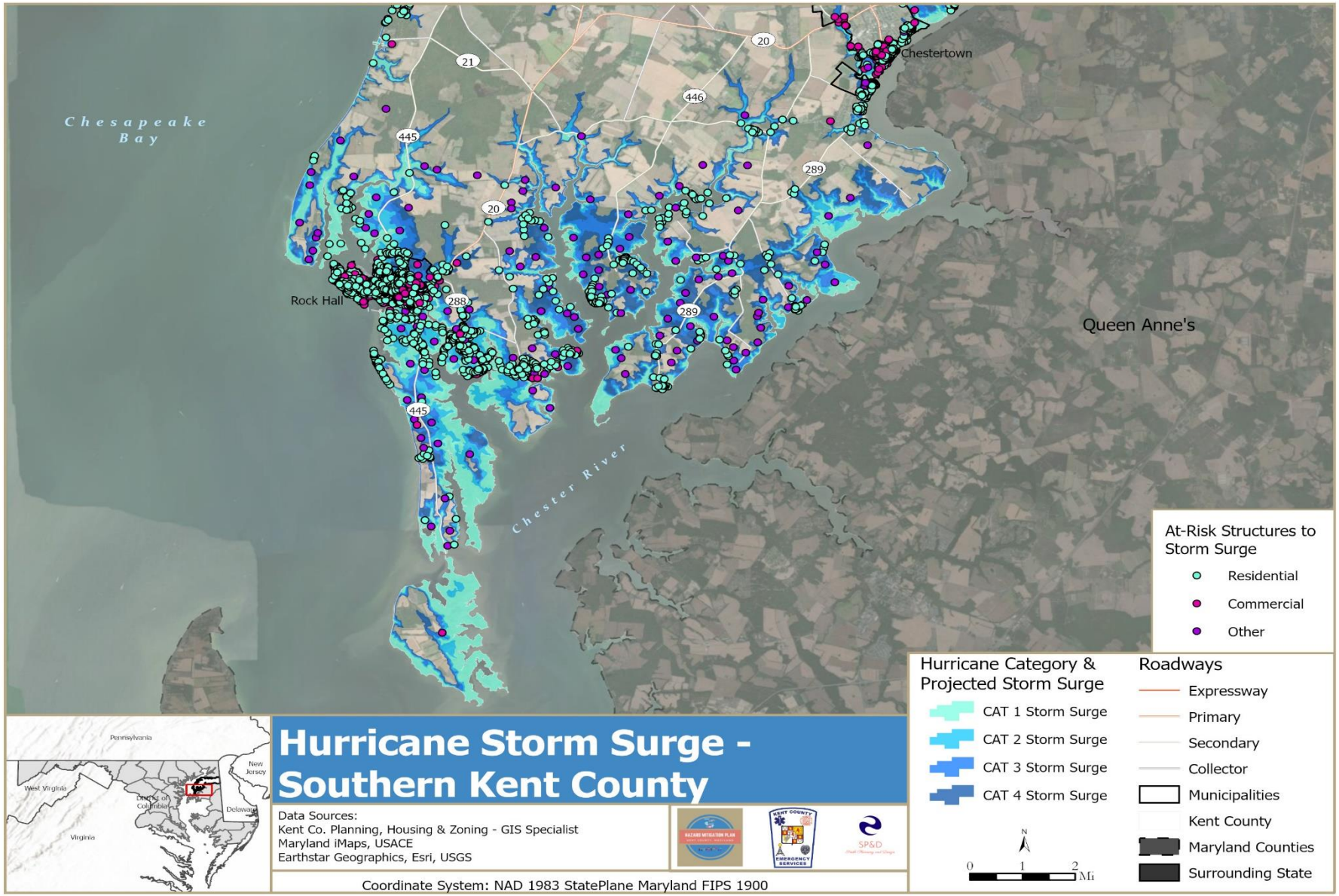


Pictures provided by the Town of Millington show flooding that occurred for Hurricane Irene in August 2011.

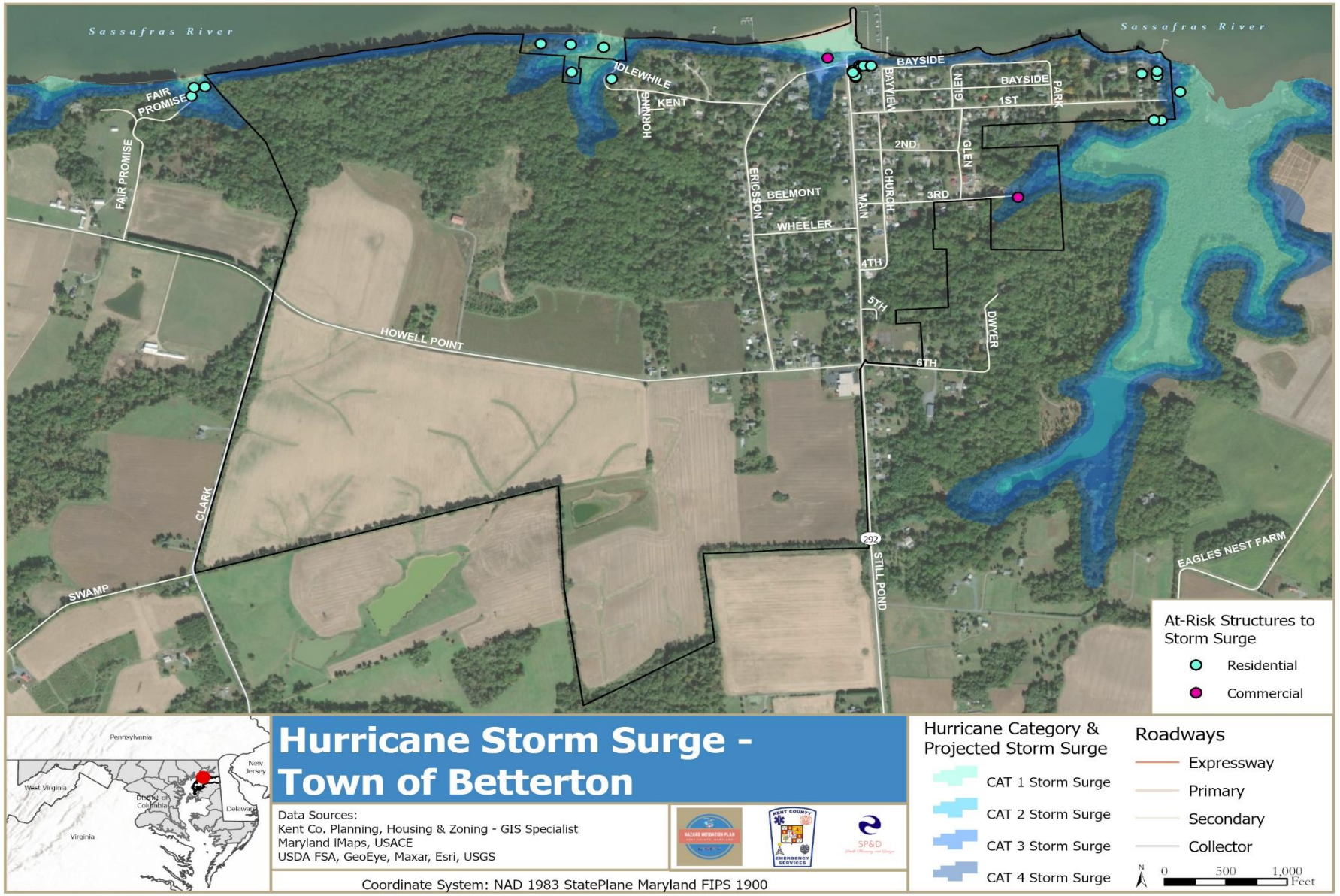
Map 3-4


Harford
Cecil
Delaware
Queen Anne's
Sassafras River
Chesapeake Bay
Chester River
Betterton
Galena
Millington
Millington Annexation Area
Chestertown
292
444
213
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298
330
561
297
291
514
20
446
At-Risk Structures to Storm Surge
Residential
Commercial
Other
Hurricane Category & Projected Storm Surge
CAT 1 Storm Surge
CAT 2 Storm Surge
CAT 3 Storm Surge
CAT 4 Storm Surge
Roadways
Expressway
Primary
Secondary
Collector
Municipalities
Kent County
Maryland Counties
Surrounding State
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Pennsylvania
New Jersey
West Virginia
District of Columbia
Delaware
Virginia
Hurricane Storm Surge - Northern Kent County
Data Sources:
Kent Co. Planning, Housing & Zoning - GIS Specialist
Maryland iMaps, USACE
Earthstar Geographics, Esri, USGS
Coordinate System: NAD 1983 StatePlane Maryland FIPS 1900

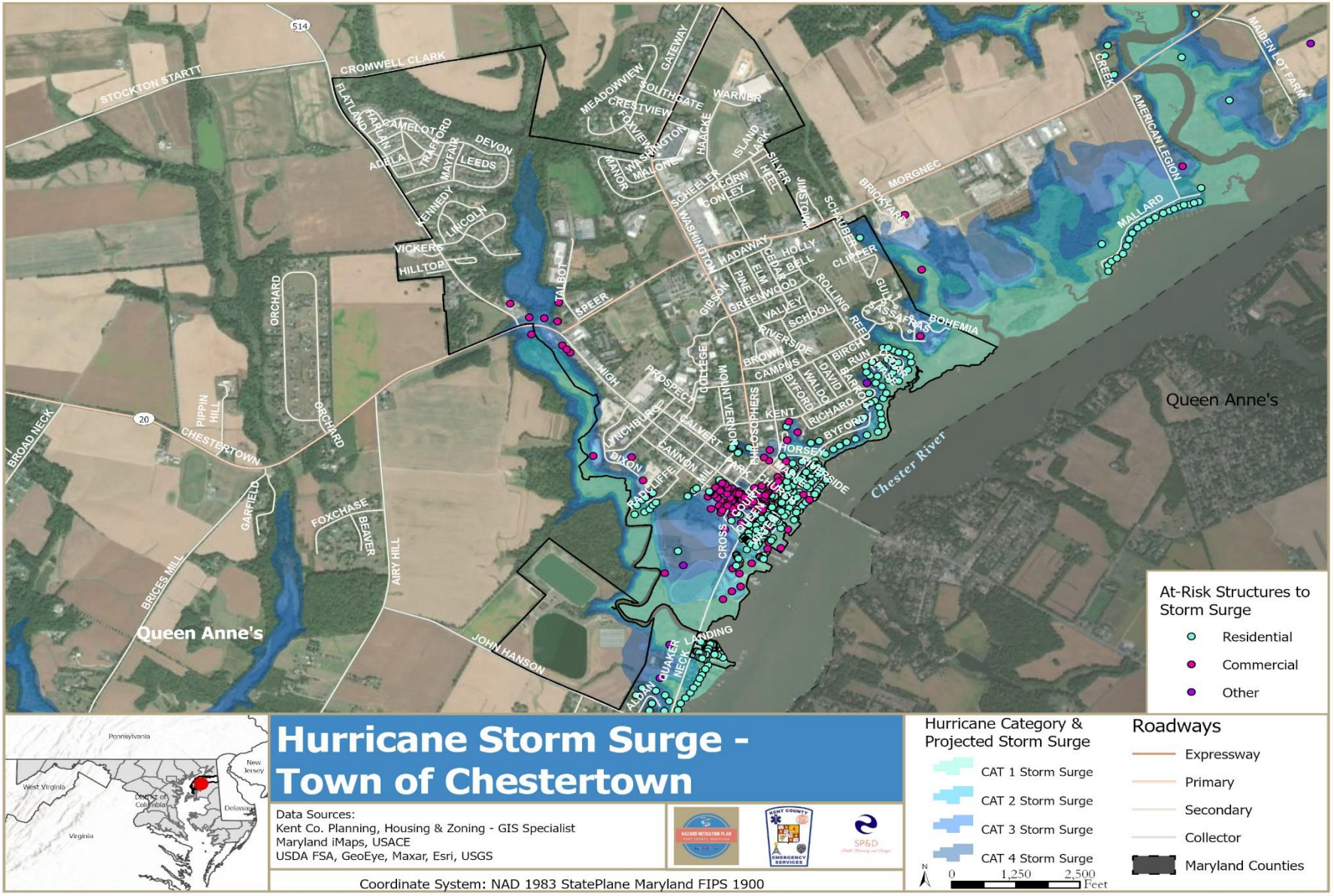
Map 3-5


Chesapeake Bay
Chester River
Chestertown
Rock Hall
Queen Anne's
21
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445
289
288
At-Risk Structures to Storm Surge
Residential
Commercial
Other
Hurricane Category & Projected Storm Surge
CAT 1 Storm Surge
CAT 2 Storm Surge
CAT 3 Storm Surge
CAT 4 Storm Surge
Roadways
Expressway
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Secondary
Collector
Municipalities
Kent County
Maryland Counties
Surrounding State
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Pennsylvania
New Jersey
West Virginia
Delaware
Virginia
Hurricane Storm Surge - Southern Kent County
Data Sources:
Kent Co. Planning, Housing & Zoning - GIS Specialist
Maryland iMaps, USACE
Earthstar Geographics, Esri, USGS
Coordinate System: NAD 1983 StatePlane Maryland FIPS 1900

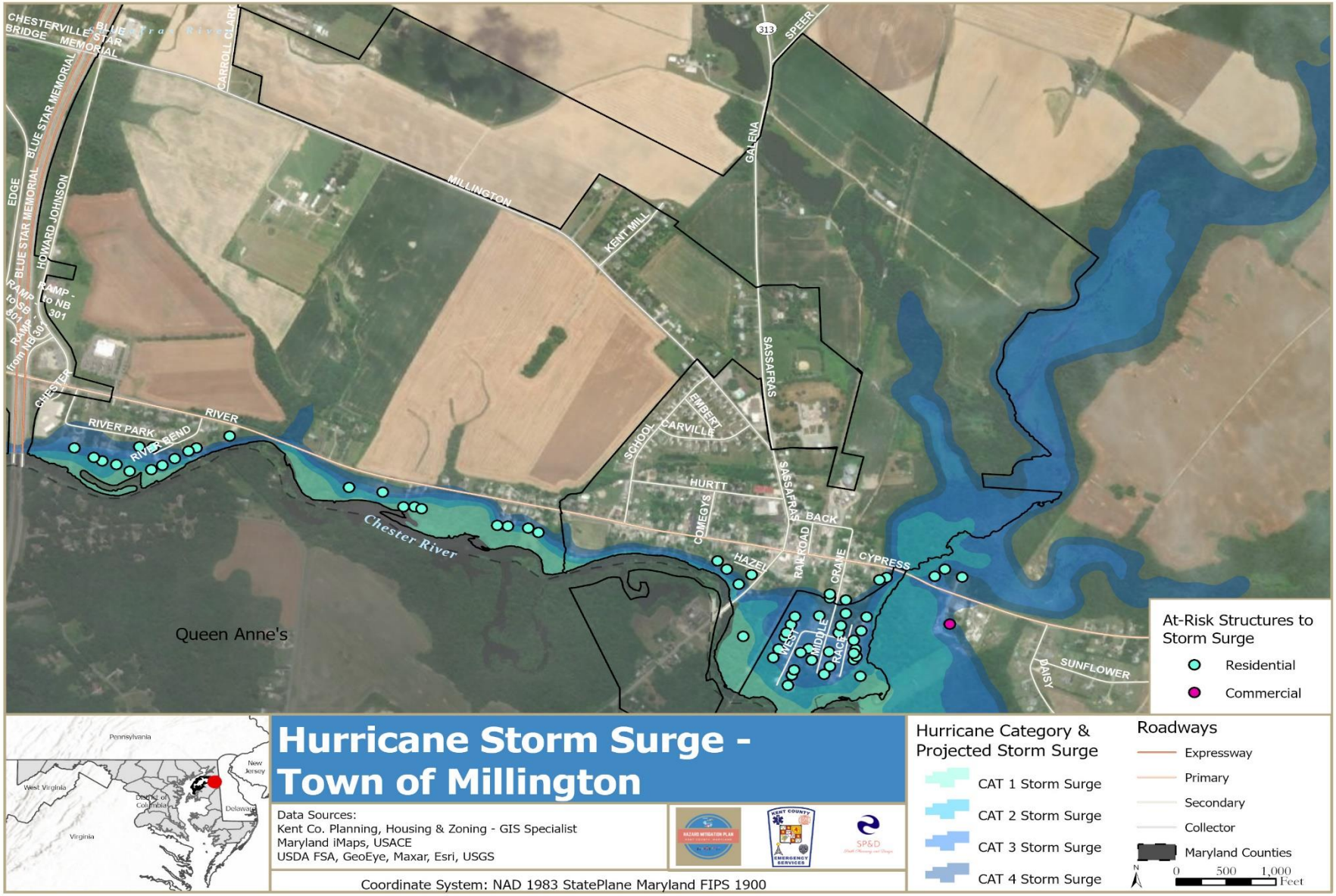
Map 3-6


Sassafras River
Sassafras River
FAIR PROMISE
FAIR PROMISE
IDLEWHILE
HORNING
KENT
BAYSIDE
BAYVIEW
GLEN
BAYSIDE
1ST
PARK
2ND
GLEN
ERICSSON
BELMONT
MAIN
CHURCH
3RD
WHEELER
4TH
5TH
DWYER
6TH
HOWELL POINT
CLARK
SWAMP
292
STILL POND
EAGLES NEST FARM
At-Risk Structures to Storm Surge
Residential
Commercial
Hurricane Storm Surge - Town of Betterton
Pennsylvania
New Jersey
West Virginia
District of Columbia
Delaware
Virginia
Data Sources:
Kent Co. Planning, Housing & Zoning - GIS Specialist
Maryland iMaps, USACE
USDA FSA, GeoEye, Maxar, Esri, USGS
Coordinate System: NAD 1983 StatePlane Maryland FIPS 1900
Hurricane Category & Projected Storm Surge
CAT 1 Storm Surge
CAT 2 Storm Surge
CAT 3 Storm Surge
CAT 4 Storm Surge
Roadways
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Secondary
Collector
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Feet

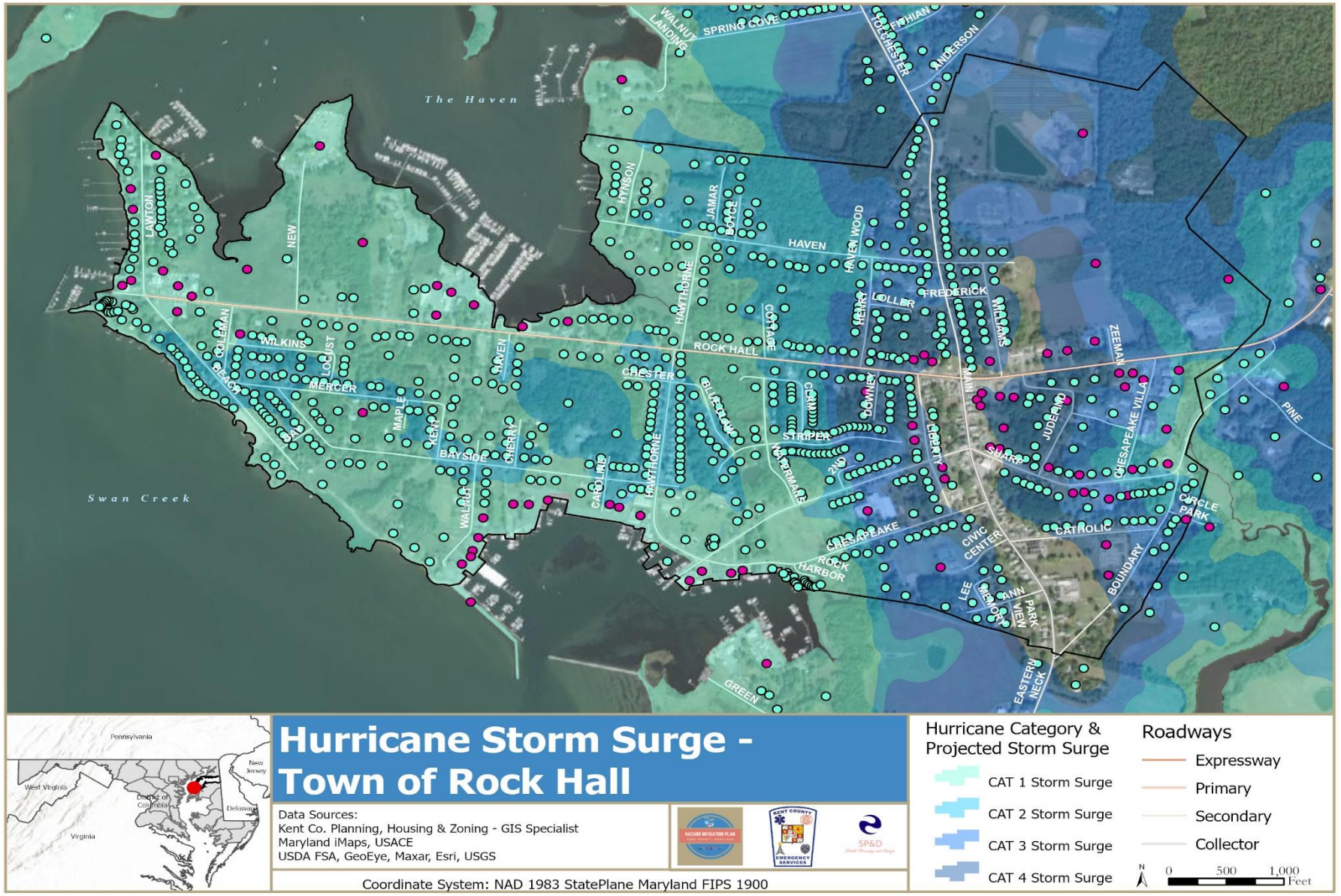
Map 3-7


Hurricane Storm Surge - Town of Chestertown
Data Sources:
Kent Co. Planning, Housing & Zoning - GIS Specialist
Maryland iMaps, USACE
USDA FSA, GeoEye, Maxar, Esri, USGS
Coordinate System: NAD 1983 StatePlane Maryland FIPS 1900
At-Risk Structures to Storm Surge
Residential
Commercial
Other
Hurricane Category & Projected Storm Surge
CAT 1 Storm Surge
CAT 2 Storm Surge
CAT 3 Storm Surge
CAT 4 Storm Surge
Roadways
Expressway
Primary
Secondary
Collector
Maryland Counties
0 1,250 2,500 Feet
Queen Anne's
Chester River
Pennsylvania
New Jersey
West Virginia
District of Columbia
Delaware
Virginia

Map 3-8


CHESTERVILLE BRIDGE
BLUE STAR MEMORIAL
CARROLL CLARK
313
SPEER
GALENA
MILLINGTON
KENT MILL
BLUE STAR MEMORIAL
HOWARD JOHNSON
EDGE
RAMP - to NB 301
RAMP - from NB 301
CHESTER
RIVER PARK
RIVER BEND
RIVER
SASSAFRAS
EMBERT
CARVILLE
SCHOOL
HURTT
COMEGYS
BACK
RAILROAD
CRANE
HAZEL
CYPRESS
Chester River
Queen Anne's
WEST
MIDDLE
RACE
SUNFLOWER
DAISY
At-Risk Structures to Storm Surge
Residential
Commercial
Pennsylvania
New Jersey
West Virginia
District of Columbia
Delaware
Virginia
Hurricane Storm Surge - Town of Millington
Data Sources:
Kent Co. Planning, Housing & Zoning - GIS Specialist
Maryland iMaps, USACE
USDA FSA, GeoEye, Maxar, Esri, USGS
Coordinate System: NAD 1983 StatePlane Maryland FIPS 1900
Hurricane Category & Projected Storm Surge
CAT 1 Storm Surge
CAT 2 Storm Surge
CAT 3 Storm Surge
CAT 4 Storm Surge
Roadways
Expressway
Primary
Secondary
Collector
Maryland Counties
0 500 1,000 Feet

Map 3-9


The Haven
Swan Creek
WALNUT LANDING
SPRING COVE
COLCHESTER
FRIHAN
ANDERSON
HYNSON
JAMAR
BOYCE
HAVEN
HAVEN WOOD
HAWTHORNE
COTTAGE
HENRY
LOLLER
FREDERICK
WILLIAMS
ZEEMAN
ROCK HALL
COLEMAN
WILKINS
LOCUST
MERCER
CHESTER
BILLINGSLEY
CRANE
DOWNEY
STRIPER
MAPLE
CHERRY
BAYSIDE
WALNUT
CAROLINE
WATERMARK
DOCK
MAIN
JUDEFIND
CHESAPEAKE VILLA
PINE
SHARP
CIRCLE PARK
CHESAPEAKE
ROCK HARBOR
CIVIC CENTER
CATHOLIC
BOUNDARY
LEE
ANN
PARK VIEW
MANOR
EASTERN NECK
GREEN
Pennsylvania
New Jersey
West Virginia
District of Columbia
Delaware
Virginia
Hurricane Storm Surge - Town of Rock Hall
Data Sources:
Kent Co. Planning, Housing & Zoning - GIS Specialist
Maryland iMaps, USACE
USDA FSA, GeoEye, Maxar, Esri, USGS
Coordinate System: NAD 1983 StatePlane Maryland FIPS 1900
Hurricane Category & Projected Storm Surge
CAT 1 Storm Surge
CAT 2 Storm Surge
CAT 3 Storm Surge
CAT 4 Storm Surge
Roadways
Expressway
Primary
Secondary
Collector
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Feet

Critical & Public Facilities

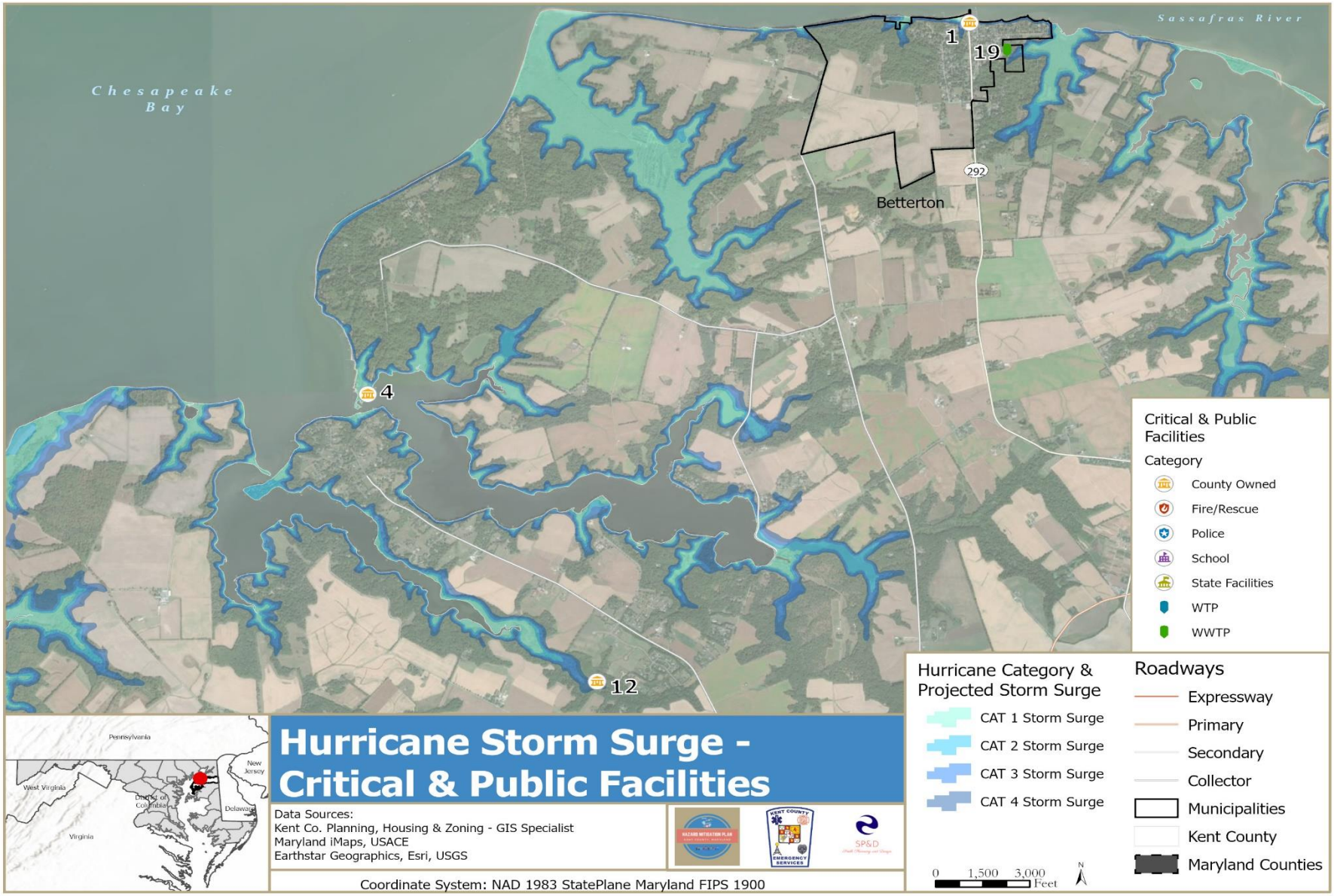
Critical and public facilities are typically vulnerable to wind damage due to the age of construction and possible poor condition, especially in the more rural and isolated areas of the County. No specific critical facilities were identified as vulnerable to strong winds; however, the County's emergency communications capabilities may be vulnerable to disruption. The County has uninterrupted power source (UPS) and generator back-up. There are nineteen (19) critical and public facilities located in the hurricane storm surge inundation areas with a potential loss estimation of $9,898,500.00

Table 3-5: Critical & Public Facilities – At Risk to Hurricane Storm Surge

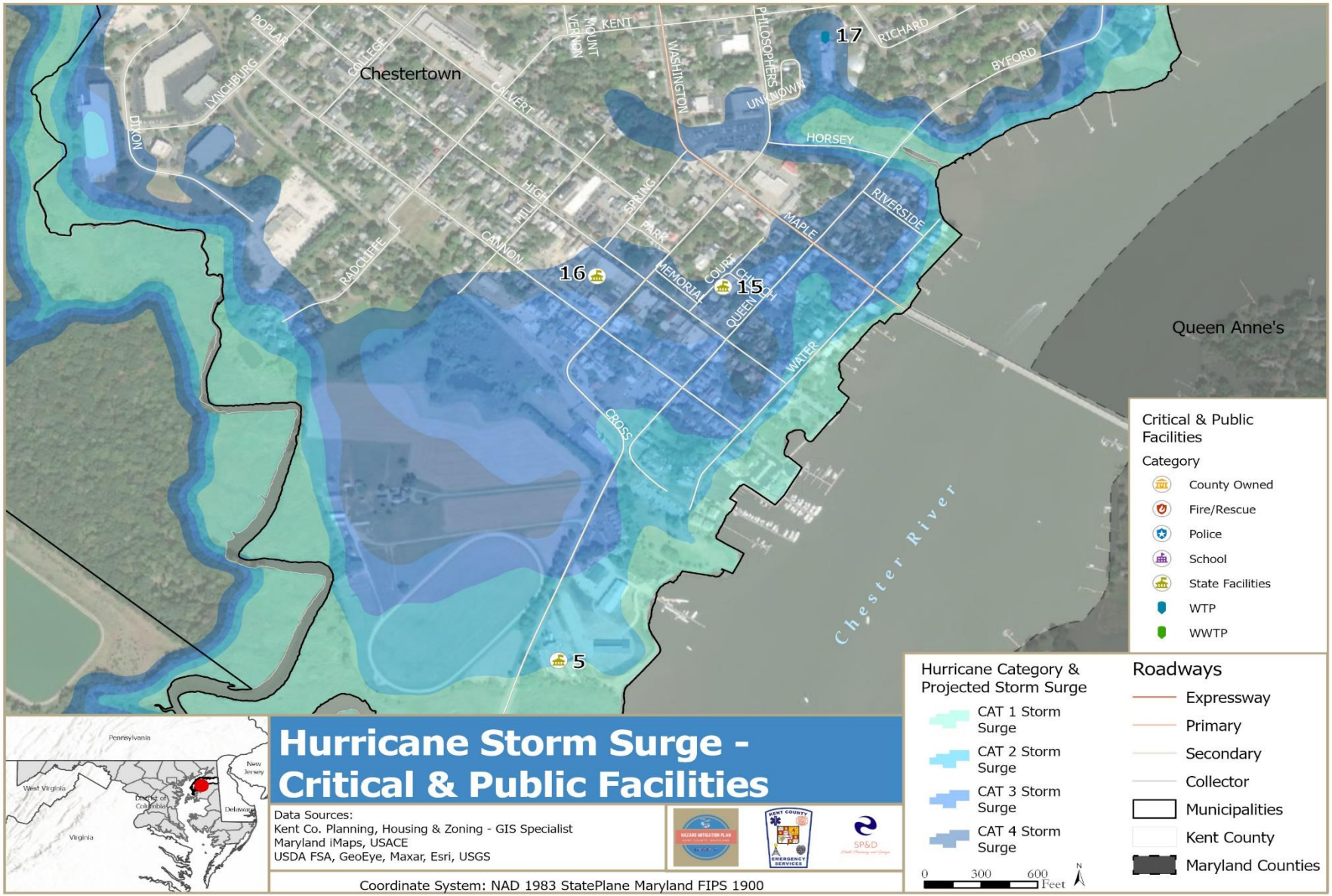
Map ID	Category	Name	Address	City	Year Built	Building Value	# of Stories	CAT 1	CAT 2	CAT 3	CAT 4
1	County Owned	Marina	Bayside Avenue	Rock Hall	Not Available	$45,200	1	Yes	No	No	No
2	County Owned	Cliff City Boat Ramp	Cliff City Road	Chestertown	Not Available	Not Available	1	Yes	No	No	No
3	County Owned	Water Tower	Rock Hall Road	Rock Hall	Not Available	$89,500	1	Yes	No	No	No
4	County Owned	Coast Guard Dock at Still Pond	24188 Still Pond Neck Road	Worton	1970	$161,900	1	Yes	No	No	No
5	Washington College Owned	Chestertown Armory	509 Cross Street	Chestertown	1930	$576,000	2	No	Yes	No	No
6	County Owned	Betterton Beach	Main Street	Betterton	1986	$193,800	1	No	No	Yes	No
7	Fire/Rescue	Rock Hall VFC Station 7	21500 Rock Hall Avenue	Rock Hall	2005	$2,149,700	1	No	No	Yes	No
8	School	Rock Hall Elementary School	21203 W. Sharp Street	Rock Hall	1949	$1,847,200	1	No	No	Yes	No
9	WWTP	Rock Hall	6015 N. Main Street	Rock Hall	2000	$719,100	1	No	No	Yes	No
10	County Owned	Board of Education	5608 Boundary Avenue	Rock Hall	Not Available	$0	1	No	No	No	Yes
11	County Owned	Board of Education	5608 Boundary Avenue	Rock Hall	1975	$2,311,800	1	No	No	No	Yes
12	County Owned	County Commissioners	24938 Montabello Lake Road	Worton	1900	$8,100	1	No	No	No	Yes
13	County Owned	Storage Sheds	Crosby Road	Rock Hall	Not Available	$16,600	1	No	No	No	Yes
14	County Owned	Communications Tower	Sharptown Road	Chestertown	Not Available	$1,100	1	No	No	No	Yes
15	State Facilities	The Public Defender System	115 Court Street	Chestertown	1860	$58,400	1	No	No	No	Yes
16	State Facilities	Department of Juvenile Services - Chestertown Office	315 High Street	Chestertown	1997	$1,062,100	2	No	No	No	Yes
17	WTP	Chestertown	405 N. Kent Street	Chestertown	Not Available	$0	1	No	No	No	Yes
18	WTP	Rock Hall	405 N. Kent Street	Rock Hall	1984	$643,300	1	No	No	No	Yes
19	WWTP	Betterton	28 3rd Avenue	Betterton	Not Available	$14,700	1	No	No	No	Yes

Source: Smith Planning & Design, NOAA Hurricane Storm Surge - 2016, Kent County Database, MdProperty View

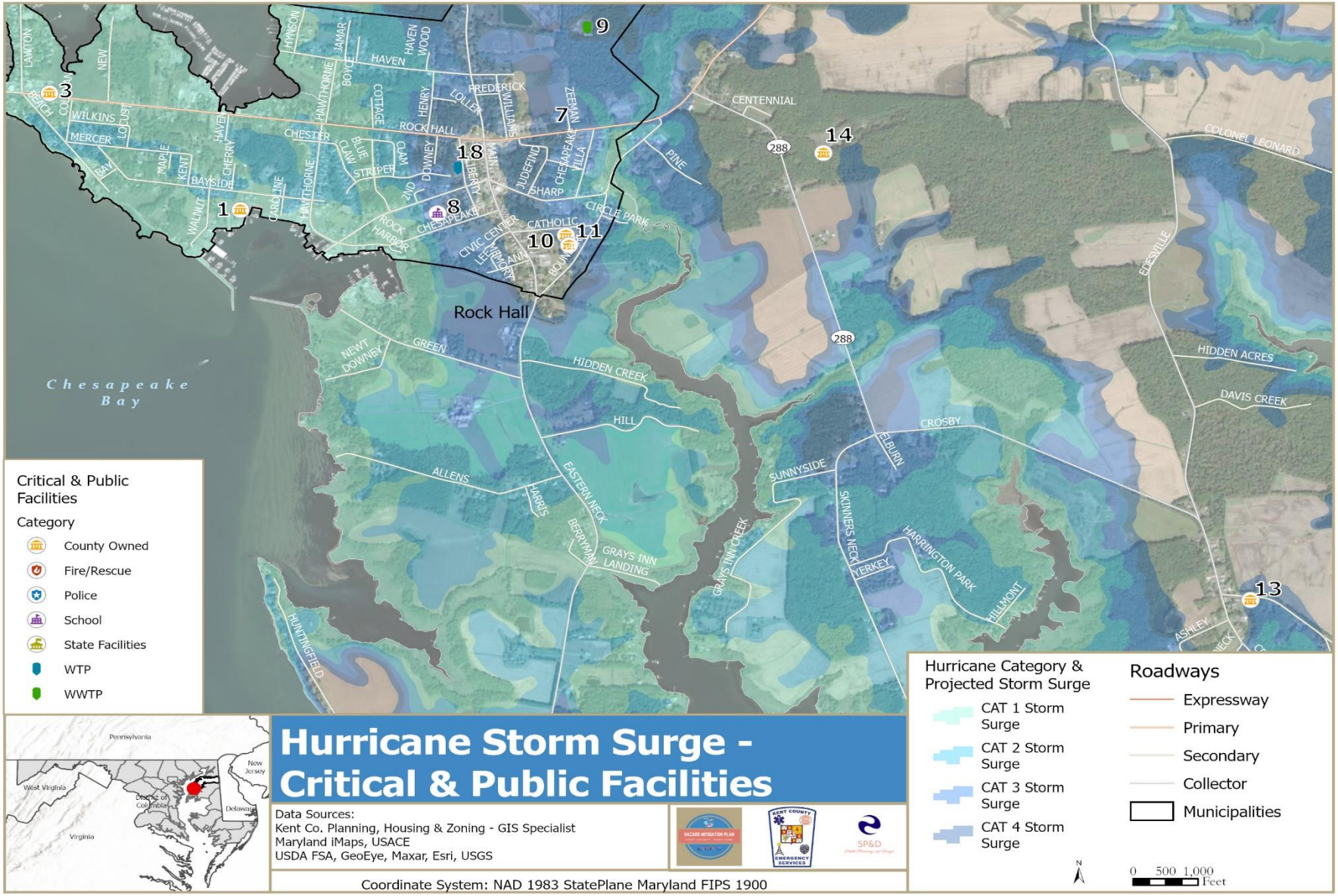
Map 3-10


Chesapeake Bay
Sassafras River
Betterton
292
1
19
4
12
Critical & Public Facilities
Category
County Owned
Fire/Rescue
Police
School
State Facilities
WTP
WWTP
Hurricane Category & Projected Storm Surge
CAT 1 Storm Surge
CAT 2 Storm Surge
CAT 3 Storm Surge
CAT 4 Storm Surge
Roadways
Expressway
Primary
Secondary
Collector
Municipalities
Kent County
Maryland Counties
0 1,500 3,000 Feet
N
Pennsylvania
New Jersey
West Virginia
District of Columbia
Delaware
Virginia
Hurricane Storm Surge - Critical & Public Facilities
Data Sources:
Kent Co. Planning, Housing & Zoning - GIS Specialist
Maryland iMaps, USACE
Earthstar Geographics, Esri, USGS
SP&D
Coordinate System: NAD 1983 StatePlane Maryland FIPS 1900

Map 3-11


Chestertown
Queen Anne's
Chester River
17
16
15
5
POPLAR
COLLEGE
LYNCHBURG
DIXON
CALVERT
KENT
MOUNT VERNON
WASHINGTON
PHILOSOPHERS
UNKNOWN
RICHARD
BYFORD
HORSEY
HIGH
MILL
SPRING
PARK
MAPLE
RIVERSIDE
CANNON
RADCLIFFE
MEMORIAL
COURT
CHURCH
QUEEN
WATER
CROSS
Critical & Public Facilities
Category
County Owned
Fire/Rescue
Police
School
State Facilities
WTP
WWTP
Hurricane Category & Projected Storm Surge
CAT 1 Storm Surge
CAT 2 Storm Surge
CAT 3 Storm Surge
CAT 4 Storm Surge
Roadways
Expressway
Primary
Secondary
Collector
Municipalities
Kent County
Maryland Counties
0 300 600 Feet
Pennsylvania
New Jersey
West Virginia
District of Columbia
Delaware
Virginia
Hurricane Storm Surge - Critical & Public Facilities
Data Sources:
Kent Co. Planning, Housing & Zoning - GIS Specialist
Maryland iMaps, USACE
USDA FSA, GeoEye, Maxar, Esri, USGS
Coordinate System: NAD 1983 StatePlane Maryland FIPS 1900

Map 3-12


Rock Hall
Chesapeake Bay
Critical & Public Facilities
Category
County Owned
Fire/Rescue
Police
School
State Facilities
WTP
WWTP
Hurricane Storm Surge - Critical & Public Facilities
Data Sources:
Kent Co. Planning, Housing & Zoning - GIS Specialist
Maryland iMaps, USACE
USDA FSA, GeoEye, Maxar, Esri, USGS
Coordinate System: NAD 1983 StatePlane Maryland FIPS 1900
Hurricane Category & Projected Storm Surge
CAT 1 Storm Surge
CAT 2 Storm Surge
CAT 3 Storm Surge
CAT 4 Storm Surge
Roadways
Expressway
Primary
Secondary
Collector
Municipalities
0 500 1,000 Feet
Pennsylvania
New Jersey
West Virginia
District of Columbia
Delaware
Virginia

Capabilities

Capabilities

All county departments have developed a *Continuity of Operations Plan*. These plans strive for continued government operations before, during, and after a disaster event, as feasible. In addition, the County and all five (5) Towns have adopted the 2018 International Building and Residential Codes, which includes current wind design speeds for the region. Finally, the countywide emergency warning and notification system has the capability to reach all landlines within the County, and those phone numbers that have been added to the system using the citizen signup located on the County website. *Appendix D: Capability Assessment* of this document contains more extensive information.

Mitigation Strategy

Mitigation goals, objectives, and action items were identified throughout the plan development process for the unincorporated areas of the county and each of the five (5) towns. Following the review and discussion of risk and vulnerability, stakeholders identified and prioritized new action items for this plan update. One (1) action item has been identified and designated as "hurricane" hazard and one (1) "all-hazards" action item applicable to the "hurricane" hazard has been included in the table below. The mitigation action item listed as a "High" priority has been further detailed in the table below and includes discussion, potential funding sources, and a timeline for implementation.

Section 3 Goal: Minimize loss of life and property due to hurricane events in Kent County. Objective 1: Provide public awareness information on the impact of hurricanes to life, property, and business disruption.				
Action Items	**Hazard(s)**	**Category**	**Responsible Entity(s)**	**Priority Ranking**
Conduct public awareness campaign on severe wind through various outreach activities. Improve public awareness of severe wind through outreach activities such as: • Educating homeowners on the benefits of wind retrofits such as shutters, hurricane clips, etc. • Instructing property owners on how to properly install temporary window coverings before a storm. • Educating design professionals to include wind mitigation during building design. Include multiple agencies and organizations in public awareness	Tornado, High Wind, **Hurricane,** Severe Storms	Public Education & Awareness	Kent County Dept. of Planning, Housing & Zoning, Dept. of Economic Development, Historic Society, Towns	Medium

campaign, such as the Historic Society, Kent County Government - Planning, Housing, and Zoning, Municipalities, and the Department of Economic Development.				
Identify and solicit low/no cost partners to create awareness and promote outreach and conduct a business continuity planning workshop to promote disaster resistance, mitigation, and preparedness to help businesses develop contingency plans to minimize loss during disasters.	**All-Hazards**	Public Education & Awareness	Kent County Office of Emergency Services, Dept. of Public Works, Dept. of Economic Development, Historical Society, Heron Point, Towns, Chamber of Commerce	**High**
Discussion: FEMA National Continuity Programs has developed a toolkit to provide partners at all levels of government, private and nonprofit sectors with tools, templates and resources to help implement concepts found in the Continuity Guidance Circular (CGC). In addition, FEMA offers many resources including brochures: https://www.fema.gov/emergency-managers/national-preparedness/continuity/toolkit/brochures, as well as toolkits and user guides at: https://www.fema.gov/emergency-managers/national-preparedness/continuity/toolkit/documents. Distribution of this information and a facilitated discussion to promote continuity of operations planning would ideally work at during an in-person workshop of webinar. **Possible Funding Sources:** Staff Time- FEMA resources are free and available for download. **Timeline for Implementation:** 1-2 years				

SECTION 4

EXTREME TEMPERATURES
HAZARD MITIGATION PLAN

SECTION 4 TOPICS

- EXTREME TEMPERATURES HAZARD
- HISTORY & FUTURE RISK
- VULNERABILITY
- MITIGATION STRATEGIES

PLAN UPDATE HIGHLIGHTS

Modified from Extreme Heat to Extreme Temperatures Hazard as noted on the *2020 Review of Hazards Profiled* in Chapter 1.

Extreme Temperatures hazard now includes Excessive Heat, Excessive Cold, and Wind Chill.

The National Weather Service Forecast Office' s *Heat Disorders* table was included to explain possible effects of heat on these higher risk groups.

Hazard Risk Assessment Data tables were updated using data from the 2016 State of Maryland Hazard Mitigation Plan and the National Centers for Environmental Information (NCEI) – Storm Events Database.

An Observed U.S. Temperature Change map was included to illustrate the trend in rising temperatures and future projections.

Vulnerability analysis updated to reflect 65 and older population estimations. This population subgroup is more susceptible to effects of extreme temperatures. Agriculture land were also discussed as being vulnerability to extreme heat events.

Loss estimations were focused on structures and the impacts associated with extreme temperatures.

New capabilities provided by stakeholders were discussed.

New goals and objectives were developed for this plan section.

New 2020-2025 Mitigation Action Items provided by stakeholders were included. Action items ranked "High" were further detailed to include discussion, potential funding sources, and a timeline for implementation.

Extreme Temperatures Hazard

Excessive Heat

Excessive Heat is defined as a combination of high heat and humidity that can lead to heat related illness, including heat cramps, heat exhaustion, and heat stroke. Heat-related illness can occur when the ability of the body to cool itself is challenged, or when there are insufficient levels of fluid or salt in the body due to sweating or dehydration. Heat-related illnesses increase as the combination of temperature and relative humidity increase, but there are other factors involved as well. Kent County typically enjoys variably moderate temperatures throughout the summer months with occasional peaks of high temperatures and humidity.

Extreme Cold/Wind Chill

Extreme Cold/Wind Chill is defined in the Northeastern part of the United States as temperatures well below zero and with the rate of heat loss on the human body resulting from the combined effect of low temperature and wind. Exposure to cold can cause frostbite or hypothermia and become life-threatening. Infants and elderly people are most susceptible. Kent County is not susceptible to extreme cold/wind chill events.

History & Future Risk

History

In addition to being hazardous to people, livestock and crops, extreme heat can cause water shortages, fire hazards, excessive energy demands, and damage to infrastructure. When the air temperature is above 90°F and the relative humidity is high, the body is under great stress to maintain its normal temperature; heat exhaustion can result, followed by heat stroke.

The National Weather Service headlines the heat index in its forecasts when the index is expected to reach 100°F. At index temperatures of 105°F and greater, a heat advisory is in effect and heat disorders such as cramps, heat exhaustion, and heat stroke are possible. Excessive heat warnings are issued by the National Weather Service or Maryland Department of Health when the heat index reaches 115°F, a stage considered dangerous for a large portion of the population.

The two age groups most vulnerable to extreme temperatures are the elderly (65 and older) and younger (under age 5) populations. An additional high-risk group includes the homeless population. Table 4-1 is from the National Weather Service Forecast Office and shows the possible effects of heat on these higher risk groups.

Table 4-1: Heat Disorders

Classification	Heat Index	Possible heat disorders for people in higher risk groups
Extreme Danger	125 or higher	Heatstroke/sunstroke highly likely
Danger	103-124	Heat cramps or heat exhaustion likely, and heat stroke possible with prolonged exposure and/or physical activity.
Extreme Caution	90-103	Heat stroke, heat cramps, or heat exhaustion possible with prolonged exposure and/or physical activity
Caution	80-90	Fatigue possible with prolonged exposure and/or physical activity

Source: NOAA, NWS

According to the data found within the National Centers for Environmental Information (NCEI), Kent County has only experienced one (1) Extreme Cold/Wind Chill event. Although the county does not experience many extreme cold/wind chill events, according to the U.S. Climate Data, and the National Oceanic and Atmospheric Administration (1981-2010 normals), Kent County's extreme low temperatures are in the months of December, January, and February.

The Extreme Temperatures hazard was continued from the 2014 planning cycle and was given a ranking of "Medium High" during the 2020 planning cycle. In order to assess the hazard risk identified, a composite score method was undertaken. The composite score method was based on a blend of quantitative and qualitative factors extracted from the National Centers for Environmental Information (NCEI), stakeholder survey, and other available data sources. These included:

- Historical impacts, in terms of human lives and property;
- Geographic extent;
- Historical occurrence;
- Future probability; and
- Local community perspective.

Detailed information is available within *Appendix A: Hazard Risk Methodology, Hazard Ranking Results, and Hazard Data Tables.*

Information obtained for Kent County using both the *2016 State of Maryland Hazard Mitigation Plan* and the National Centers for Environmental Information (NCEI) – Storm Events Database between January 1950 and December 31, 2019 for Extreme Temperatures Hazard include: Excessive Heat, Heat, and Excessive Cold/Wind Chill. There has been a total of seventy-six (26) events between 1996-2020, with an annualized rate of 3.04. These storms have produced three (3) injuries and a geographic extent of 81.3%.

Total Extreme Temperatures Hazard Risk Assessment Data Table
Hazards included within this table from NCEI Data: Excessive Heat, Heat, and Excessive Cold/Wind Chill.

Injuries & Deaths		Property & Crop Damage		Geographic Extent	Events 1996-2020
3	0	0	0	% Total Cropland from 2017 Agriculture Census = 83.1%	Total = 76 Annualized = 3.04

Source: National Centers for Environmental Information, as of December 31, 2019 & 2016 State of Maryland Hazard Mitigation Plan, 2017 Census of Agriculture

Excessive Heat Data Table

Injuries & Deaths		Property & Crop Damage		Geographic Extent	Events 2000-2020
0	0	0	0	% Total Cropland from 2017 Agriculture Census = 83.1%	Total = 16 Annualized = 0.76

Source: National Centers for Environmental Information, as of December 31, 2019 & 2016 State of Maryland Hazard Mitigation Plan, 2017 Census of Agriculture

Legend: There are three designators: C - County/Parish; Z - Zone; and M - Marine Zone.
Based on NCEI definitions/criteria: Excessive Heat (Z). *Excessive Heat results from a combination of high temperatures (well above normal) and high humidity. An Excessive Heat event occurs and is reported in Storm Data whenever heat index values meet*

or exceed locally/regionally established excessive heat warning thresholds. Fatalities (directly related) or major impacts to human health that occur during excessive heat warning conditions are reported using this event category. If the event that occurred is considered significant, even though it affected a small area, it should be entered into Storm Data.

Heat Data Table					
Injuries & Deaths		Property & Crop Damage		Geographic Extent	Events 1996-2020
3	0	0	0	% Total Cropland from 2017 Agriculture Census = 83.1%	Total = 59 Annualized = 2.36

Source: National Centers for Environmental Information, as of December 31, 2019 & 2016 State of Maryland Hazard Mitigation Plan, 2017 Census of Agriculture

Legend: There are three designators: C - County/Parish; Z - Zone; and M - Marine Zone.

Based on NCEI definitions/criteria: Heat (Z). *A period of heat resulting from the combination of high temperatures (above normal) and relative humidity. A Heat event occurs and is reported in Storm Data whenever heat index values meet or exceed locally/regionally established advisory thresholds. Fatalities or major impacts on human health occurring when ambient weather conditions meet heat advisory criteria are reported using the Heat event. If the ambient weather conditions are below heat advisory criteria, a Heat event entry is permissible only if a directly related fatality occurred due to unseasonably warm weather, and not man-made environments.*

Excessive Cold/Wind Chill Data Table					
Injuries & Deaths		Property & Crop Damage		Geographic Extent	Events 2014-2020
0	0	0	0	Countywide	Total = 1 Annualized = 0.14

Source: National Centers for Environmental Information, as of December 31, 2019 & 2016 State of Maryland Hazard Mitigation Plan

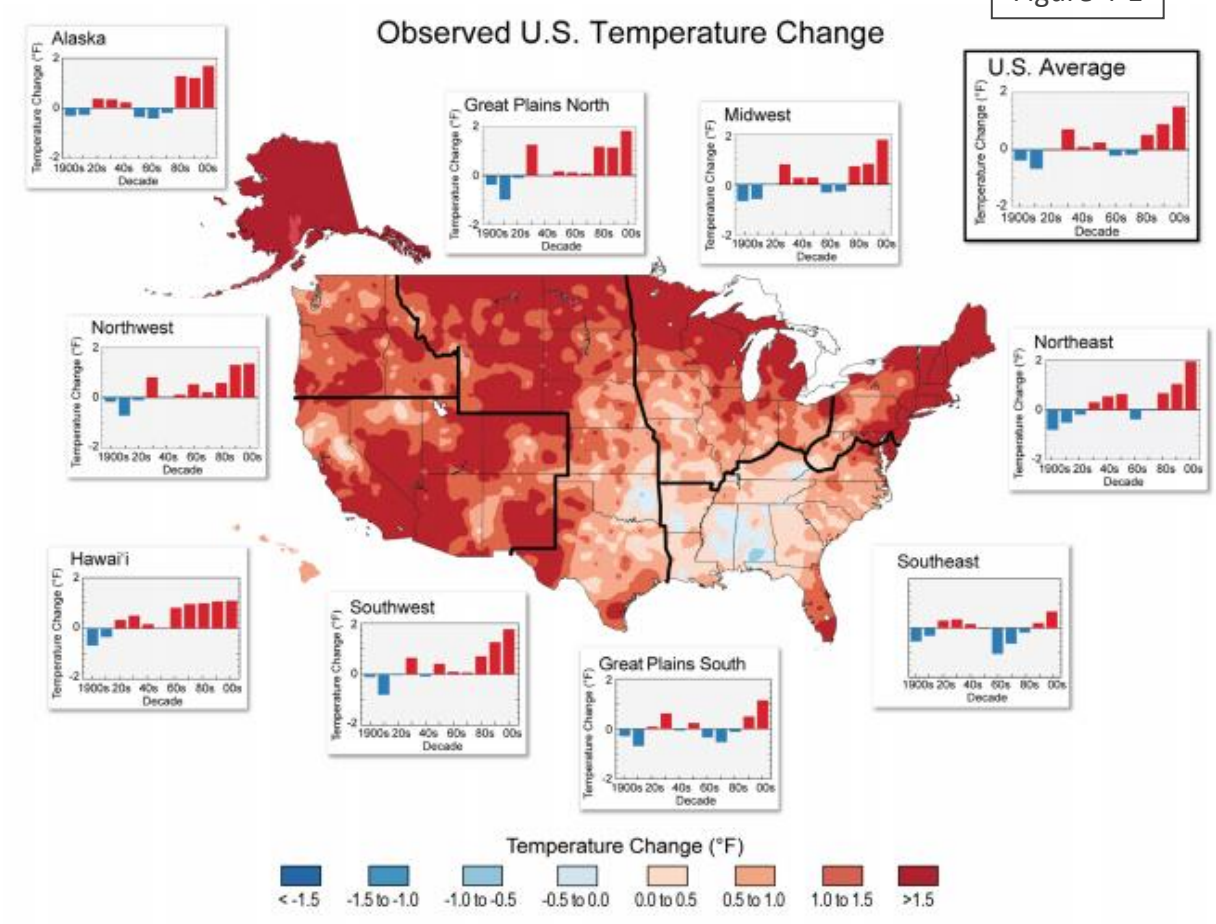
Legend: There are three designators: C - County/Parish; Z - Zone; and M - Marine Zone.

Based on NCEI definitions/criteria: Extreme Cold/Wind Chill (Z). *A period of extremely low temperatures or wind chill temperatures reaching or exceedingly locally/regionally defined warning criteria (typical value around -350F or colder). If the event that occurred is considered significant, even though it affected a small area, it should be entered into Storm Data. Normally these conditions should cause significant human and/or economic impact. However, if fatalities occur with cold temperatures/wind chills but extreme cold/wind chill criteria are not met, the event should also be included in Storm Data as a Cold/Wind Chill event and the fatalities are direct. Use this event only if a fatality/injury does not occur during a winter precipitation event.*

Future Risk

Future probability was factored into the hazard risk vulnerability and ranking for each identified hazard, as detailed *Appendix A: Hazard Risk Methodology, Hazard Ranking Results, & Data Tables*. Results for the Extreme Temperatures hazard indicate a future probability ranking of "highly likely" while impacts are minimal, indicating a future risk rating of "'medium-high".

Figure 4-1



The map shows temperature changes from 1991-2012, compared to the 1901-1960 average (in Alaska and Hawaii, the changes are compared to the 1951-1980 average). The bars on the graph show the average temperature changes by decade for 1901-2012 (relative to the 1901-1960 average) for each region. The far right bar (2000s decade) includes 2011 and 2012. The period from 2001 to 2012 was warmer than any previous decade in every region.

Source: NOAA NCDC / CICS-NC

Considering temperature changes form 1991-2012 compared to the 1901-1960 average, the rise in temperature trend indicated that future average temperatures will be higher for in the Northeast Region.

Vulnerability

Vulnerability

Extreme heat events tend to be regional in occurrence; therefore, there is no hazard or impact zone within the County, aside from agricultural land. There are certain population subgroups which may be more susceptible to the effects of extreme heat and may require relocation in extreme cases. These populations include the elderly and younger people, as well as households that lack air conditioning. According to the 2018 U.S. Population Estimates, 26.7 percent of the County's total population is 65 or over (5,177 people). The county's youth

population (3,897 people 19 and under) makes up 20.1 percent of the total population. A total of 9,074 people in Kent County (or 46.58 percent) are at risk in an extreme heat event.

Based on the 2017 US Census on Agriculture, 81.3 percent of the county's land area was in cropland (109,188 acres). Most of the county falls into the cropland category. Small patches of pastoral land are found in the northern parts of the county. Approximately 81.3 percent of the County's land mass is at risk during an extreme heat event.

Loss Estimations

Loss estimation typically refers to damage to property and/or infrastructure, suspension of utility services, or harm to humans, such as injuries and fatalities. Certain urban systems or building types are overly sensitive to the impacts associated with extreme temperatures. For instance, infrastructure systems are quite sensitive to extreme heat. Energy systems affected by extreme temperatures, typically have additional impacts on other systems and structures. Understanding this, certain facilities including hospitals, emergency shelters, and schools are likely to endure increased financial burdens as normal operation conditions must be maintain operations under more demanding circumstances. Additionally, impacts on critical facilities may be exacerbated by damage to transportation systems, that may occur from shrinking and swelling conditions due to temperature changes.

Capabilities

Capabilities

The **frost line** is the depth at which the ground freezes. It is important to know the **frost line** depth for construction purposes. It is also important that the footings for a **building** or a deck be well below the **frost line,** so the posts don't shift as the ground freezes and thaws. *Appendix D: Capability Assessment* of this document contains more extensive information.

Mitigation Strategies

Mitigation goals, objectives, and action items were identified throughout the plan development process for the unincorporated areas of the county and each of the five (5) towns. Following the review and discussion of risk and vulnerability, stakeholders identified and prioritized new action items for this plan update. Action items identified and designated "extreme temperatures" are listed below. In addition, one (1) "all-hazards" action item applicable to the "extreme temperatures" hazard has been included in the table below. The mitigation action items listed as a "High" priority have been further detailed in the table below and includes discussion, potential funding sources, and a timeline for implementation.

Section 4 Goal: Minimize loss of life and property due to Extreme Temperatures in Kent County. Objective 1: Conduct public outreach campaign specific to extreme temperatures and mitigation action and adaptive measures. Identify points of distribution and delivery method best practices for public outreach.				
Action Items	**Hazard(s)**	**Category**	**Responsible Entity(s)**	**Priority Ranking**
Encourage agricultural community to plant shade trees and/or erect tarp systems for livestock to congregate under extreme heat events.	**Extreme Temperatures**	Natural Resource Protection	Soil Conservation District	Medium
Encourage the planting of shade trees to relieve extreme heat reflected off of concrete services. Consider cool roofing products when replacing existing roof. Target both public and private property.	**Extreme Temperatures**	Natural Resource Protection	Kent County & Area Businesses	Medium
Expand number and locations of cooling and warming centers within the County. Currently, public libraries are used.	**Extreme Temperatures**	Natural Resource Protection	Kent County & Area Businesses	Medium
Establish Vulnerable Population Committee that meets periodically. Maintain updated Committee listing with primary and secondary contacts.	All-Hazards	Emergency Services	Kent County Office of Emergency Services, Health Dept., Dept. of Social Services, Samaritan Group, Kent County Commission on Aging	Medium
Complete application process for the Resilient Maryland Grant Program. Note: projects include distributed energy resource (DER) systems such as, micro grids, advance Combined Heat and Power (CHP) systems, and community resiliency hubs.	**Extreme Temperatures & Climate Adaptation**	Property Protection & Natural Resource Protection	Town of Galena	High
			Town of Chestertown	N/A
			Town of Betterton	N/A
			Town of Millington	Medium
			Town of Rock Hall	Medium
Discussion: Resilient Maryland is a competitive program that provides grants to help offset the costs of analyzing, planning, and designing distributed energy resource (DER) systems including microgrids, advanced Combined Heat and Power (CHP) systems, and community resiliency hubs. This highly successful program was launched as a pilot in Fiscal Year 2020 and awarded 14 unique project proposals from nearly every sector of Maryland's economy. Grant funds are provided to assist entities in the crucial planning and design phases of DER projects and will help bring projects closer to "shovel-ready." The Town of Betterton is currently updating their Comprehensive Plan, Sustainable Communities Plan,				

and Critical Area Ordinance so that they are up to date and include Best Practices.

Possible Funding Sources: Staff Time

Timeline for Implementation: 1-2 years

SECTION 5



SECTION 5 TOPICS

- TORNADO HAZARD
- HISTORY & FUTURE RISK
- VULNERABILITY
- CAPABILITIES
- MITIGATION STRATEGIES

PLAN UPDATE HIGHLIGHTS

The tornado hazard has been continued from the 2014 Plan into the 2020 Hazard Mitigation Plan.

The Enhanced Fujita Scale was included and explained.

Detailed history of tornado events that have impacted Kent County were provided.

Hazard Risk Assessment Data tables were updated using data from the 2016 State of Maryland Hazard Mitigation Plan and the National Centers for Environmental Information (NCEI) – Storm Events Database.

Included a new map illustrating tornado paths that have traversed Kent County and surrounding areas.

The vulnerability analysis reviewed the wind zone for Kent County and how structures are subjected to wind loads that exceed their design. A new figure depicted wind zones was included.

Loss estimations focused on building stock constructed prior to 1939 and agriculture structures.

New capabilities provided by stakeholders were discussed.

New goals and objectives were developed for this plan section.

New 2020-2025 Mitigation Action Items provided by stakeholders were included. Action items ranked “High” were further detailed to include discussion, potential funding sources, and a timeline for implementation.

Tornado Hazard

Hazard

The National Weather Service defines a tornado as a violently rotating column of air, usually pendant to a thunderstorm, with circulation reaching the ground. Tornadoes are generally considered the most destructive of all atmospheric-generated phenomena, with an average of 1,200 being reported annually in the United States. In the southern states, peak tornado season is March through May; peak months in the northern states are during the summer. Additionally, over 30 percent of recorded tornado activity has occurred between the hours of 3:00 pm and 6:00 pm, and an additional estimated 25 percent have occurred between 6:00 pm and 9:00 pm.

History & Future Risk

History

Tornadoes can be ranked by intensity by using the Fujita Scale devised by Dr. Theodore Fujita at the University of Chicago in 1971. The Fujita Damage Scale (F-Scale) is used to determine the tornado strength based on observed damage. The Fujita Tornado Scale assigns a category to tornadoes based on their wind speed and relates this to the general type of damage that is expected. The damage scale increases in intensity from a weak F0 (40 to 70 mph wind) to a F5 (over 260 mph wind). The Fujita scale of tornado intensity indicates that tornadoes at the F0 classification cause light damage to chimneys, tree branches, and signboards. Tornadoes of F1 magnitude can cause moderate damage to road surfaces, automobiles, and mobile homes. The impact of tornadoes primarily depends upon their occurrence in developed areas-tornadoes in undeveloped areas can cause damage only to a few trees and even go unreported.

According to National Oceanic Atmospheric Administration (NOAA), the Enhanced Fujita (EF) Scale has replaced the original Fujita (F) Scale used to rate tornadoes by the NWS. The EF Scale improves upon the limitations of the original F-Scale, which has been used since 1971. The tornado rating categories of the EF Scale range from zero to five, with EF0 as having the lowest wind speed and EF5 as having the highest wind speed. A correlation between the two scales has been developed and this makes it possible to express ratings in term of one scale to the other, thus preserving the historical database. The major improvements of the EF Scale are the more accurate wind speed ranges in each category and an increase in the amount of detail that goes into determining a tornado rating. These improvements will allow for more consistent and accurate tornado ratings by the National Weather Service (NWS).

Table 5-1: Enhanced Fujita (EF) Scale

Fujita Scale			Wind Speed		Typical Damage	
F Number	Fastest 1/4-mile (mph)	3 Second Gust (mph)	EF Number	3 Second Gust (mph)	EF Number	3 Second Gust (mph)
0	40-72	45-78	0	65-85	**0**	**65-85**
1	73-112	79-117	1	86-109	**1**	**86-110**
2	113-157	118-161	2	110-137	**2**	**111-135**
3	158-207	162-209	3	138-167	**3**	**136-165**
4	208-260	210-261	4	168-199	**4**	**166-200**
5	261-318	262-317	5	200-234	**5**	**Over 200**

Source: http://www.spc.noaa.gov/faq/tornado/ef-scale.html

The tornado hazard was continued from the 2014 planning cycle and was given a ranking of "Medium Low" during the 2020 planning cycle. In order to assess the hazard risk identified, a composite score method was undertaken. The composite score method was based on a blend of quantitative and qualitative factors extracted from the National Centers for Environmental Information (NCEI), stakeholder survey, and other available data sources. These included:

- Historical impacts, in terms of human lives and property;
- Geographic extent;
- Historical occurrence;
- Future probability; and,
- Local community perspective.

Detailed information is available within *Appendix A: Hazard Risk Methodology, Hazard Ranking Results, and Hazard Data Tables.*

Kent County has experienced tornadoes and tornado-like storm events throughout its history. Many tornado events are unreported and result in the loss of agricultural buildings or residential damage. Several notable events have been documented by Kent County Office of Emergency Management.

In June 1980, several residences and a business in the Fairlee and Tolchester areas suffered approximately $121,500 in damage caused by a severe storm with tornado-like winds. Downed trees and high winds damaged homes and a local marina. The marina suffered damage to buildings and piers.

In Millington, a tornado touched down on November 16, 1989, resulting in $250,000 in damages. No injuries were reported; however, both a church and a mobile home were destroyed. In addition, hundreds of Millington residents lost electricity.

Tolchester was hit by tornado-like conditions again in October 1990 from a storm bringing heavy rain and damaging winds.

Tornadoes touched down in several areas on July 27,1994. Civil defense sirens were sounded in Chestertown as citizens were warned to take shelter. The tornado made landfall in the Chestertown area, damaging 12 homes and multiple outbuildings, as well as, crops and trees on Smithville Road. Extensive damage to homes, outbuildings, automobiles, and trees was also reported on Flatland Road. The path of the tornado proceeded on a northwesterly course through forested areas and cropland toward Coopers Lane and Still Pond. Twisted trees, downed barns, fences, and roofs were reported in this area. In these and other locations throughout the county, fallen trees damaged automobiles, as well as dwellings. Damage to the agricultural community was extensive in the form of destruction to crops, agricultural buildings and machinery. Further, the roof of the airplane hangar at Scheeler Field located on Route 213 collapsed damaging at least one airplane. No injuries were reported.

Additional information obtained for Kent County from the National Centers for Environmental Information (NCEI) – Storm Events Database between January 1950 and December 31, 2019 for Tornado Hazard include: Tornado and Funnel Cloud. According to this data source, there has been a total of seven (7) recorded Tornado Events between 1950-2020, with an annualized rate of 0.10. These storms have produced $502,500 in property damage and a SVRGIS (intensity & frequency) of 1.

Total Tornado Hazard Risk Assessment Data Table
Hazards included within this table from NCEI Data: Tornado and Funnel Cloud.

Injuries & Deaths		Property & Crop Damage		Geographic Extent	Events 1950-2020
0	0	502.50K	0	SVRGIS (intensity & frequency) = 1	Total = 7 Annualized = 0.10

Source: National Centers for Environmental Information, as of December 31, 2019 & 2016 State of Maryland Hazard Mitigation Plan

Tornado Data Table

Injuries & Deaths		Property & Crop Damage		Geographic Extent	Events 1950-2020
0	0	502.50K	0	SVRGIS (intensity & frequency) = 1	Total = 4 Annualized = 0.06

Source: National Centers for Environmental Information, as of December 31, 2019 & 2016 State of Maryland Hazard Mitigation Plan

Legend: There are three designators: C - County/Parish; Z - Zone; and M - Marine Zone.
Based on NCEI definitions/criteria: Tornado (C). *A violently rotating column of air, extending to or from a cumuliform cloud or underneath a cumuliform cloud, to the ground, and often (but not always) visible as a condensation funnel. For a vortex to be classified as a tornado, it must be in contact with the ground and extend to/from the cloud base, and there should be some semblance of ground-based visual effects such as dust/dirt rotational markings/swirls, or structural or vegetative damage or disturbance.*

Funnel Cloud Data Table

Injuries & Deaths		Property & Crop Damage		Geographic Extent	Events 2006-2020
0	0	0	0	SVRGIS (intensity & frequency) = 1	Total = 3 Annualized = 0.2

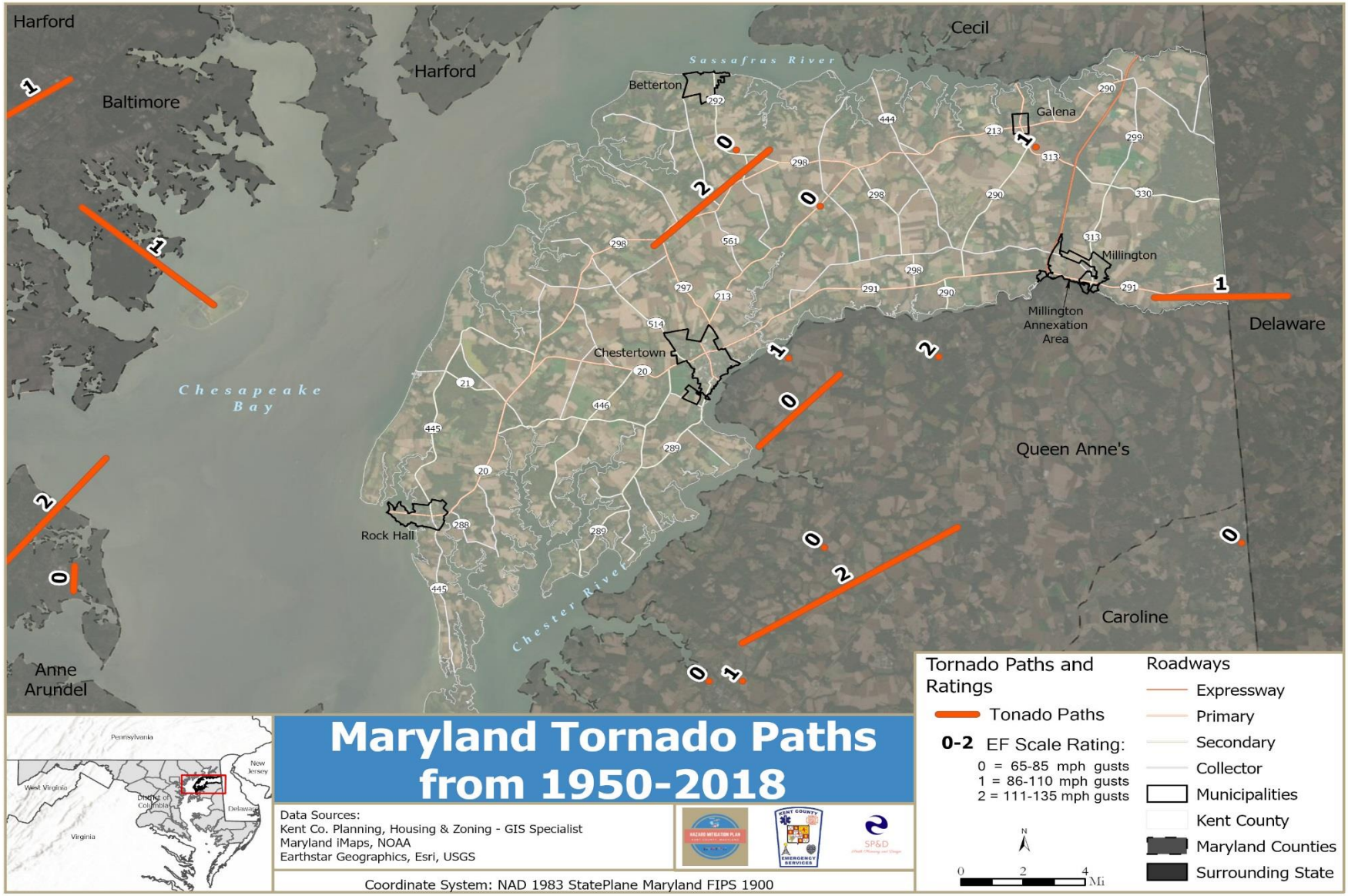
Source: National Centers for Environmental Information, as of December 31, 2019 & 2016 State of Maryland Hazard Mitigation Plan

Legend: There are three designators: C - County/Parish; Z - Zone; and M - Marine Zone.
Based on NCEI definitions/criteria: Funnel Cloud (C). *A rotating, visible extension of a cloud pendant from a convective cloud with circulation not reaching the ground. The funnel cloud should be large, noteworthy, or create strong public or media interest to be entered.*

Unlike some other hazards, mapping tornado risk is not as important because it is unlikely that a community has variable tornado risks within its jurisdiction and tornadoes are not likely to touchdown in the same place each time. In most cases, communities need only to determine if they have a tornado risk and then proceed to determine their design wind speed.

To provide additional reference to location of past tornado events, Map 5-1 below depicts tornado pathways in and around Kent County, Maryland. These paths were obtained from NOAA's Severe Weather Data (SVRGIS).

Map 5-1


Harford
Baltimore
Harford
Cecil
Sassafras River
Betterton
Galena
Millington
Millington Annexation Area
Delaware
Chesapeake Bay
Chestertown
Queen Anne's
Rock Hall
Chester River
Caroline
Anne Arundel
Maryland Tornado Paths from 1950-2018
Data Sources:
Kent Co. Planning, Housing & Zoning - GIS Specialist
Maryland iMaps, NOAA
Earthstar Geographics, Esri, USGS
Coordinate System: NAD 1983 StatePlane Maryland FIPS 1900
Tornado Paths and Ratings
Tonado Paths
0-2 EF Scale Rating:
0 = 65-85 mph gusts
1 = 86-110 mph gusts
2 = 111-135 mph gusts
Roadways
Expressway
Primary
Secondary
Collector
Municipalities
Kent County
Maryland Counties
Surrounding State
0 2 4 Mi

Future Risk

Future probability was factored into the hazard risk vulnerability and ranking for each identified hazard, as detailed *Appendix A: Hazard Risk Methodology, Hazard Ranking Results, & Data Tables*. Results for the tornado hazard indicate a future probability ranking of "occasional". While the magnitude and location of tornadoes are unpredictable, most of those occurring in the County over the last 60 years have been classified as low intensity (F0 and F1). These tornadoes have had no history of fatalities although they have resulted in road blocks and delays, and increased workload from clearing fallen trees and debris.

Vulnerability

Vulnerability

Kent County is located in Wind Zone II (wind speed of 160 miles per hour).

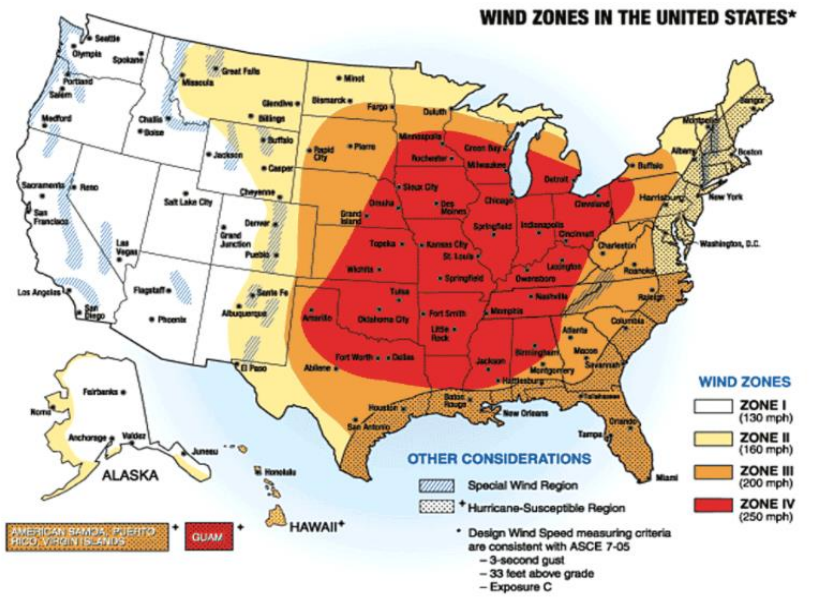


Figure 1A – Safe room wind speed map 2015 (courtesy of the ICC).

Figure 5-1

Source: FEMA- Safe Rooms for Tornadoes and Hurricanes Guidance for Community and Residential Safe Rooms FEMA P-361, Third Edition / March 2015

In assessing vulnerability, the most important factor is how likely structures are to fail when they are subjected to wind loads that exceed their design or to flying debris that penetrates the building. In general, building damages can range from cosmetic to complete structural failure, depending on wind speed and location of the building with respect to the tornado path and can be analyzed by a structural engineer.

Loss Estimations

Approximately one quarter of the County's housing units were built prior to 1939. These older structures may be in poor condition and not be able to weather high winds due to poor building quality, plumbing, etc. and are thus more prone to damage by winds. Approximately 81 percent of the County's total land area is in agricultural use. Crops, farm buildings, and farm equipment are susceptible to tornadoes and strong wind damage due to their exposure to tornadoes and wind conditions.

Since there are not any standard loss estimation models and tables for tornadoes currently, it is difficult to calculate actual losses. In terms of calculating human losses, shelters throughout the community have been assessed by Kent County for their location, capacity,

and strength in order to ensure they are able to house residents and withstand the design wind speed.

Capabilities

Capabilities

Kent County as well as all five (5) Towns have adopted the most recent, 2018 International Building Code (IBC). The International Code Council (ICC) publishes building codes that promote safety and fire prevention in commercial, government and residential structures. These codes are used throughout the US, including enforcement by several federal agencies. While evidenced in this section, the tornado hazard has resulted in approximately $500K in damages historically and is considered a "medium-low" risk hazard both now and into the future. *Appendix D: Capability Assessment* of this document contains more extensive information.

Mitigation Strategies

Mitigation goals, objectives, and action items were identified throughout the plan development process for the unincorporated areas of the county and each of the five (5) towns. Following the review and discussion of risk and vulnerability, stakeholders identified and prioritized new action items for this plan update. Several action items have been identified and designated "Tornado, High Wind, Hurricane, Severe Storms" in which "Tornado" related event impacts result. The mitigation action items listed as "High" priority have been further detailed in the table below.

Section 5 Goal: Minimize the losses of life and property due to Tornado in Kent County. Consider wind mitigation measures countywide.

Objective 1: Assess all fire and rescue Stations to determine if large garage doors meet design standards that protect against building envelope penetration which leads to building failure during a high wind event.

Objective 2: Target mobile communities, which are highly susceptible to high wind hazards.

Objective 3: Minimize the impact of power loss form damaging high wind events. Enforce tie down requirements in the mobile home communities of Rock Hall, Chestertown, and Worton. Identify homes that lack proper tiedowns to reduce their vulnerability to high wind damages.

Action Items	Hazard(s)	Category	Responsible Entity(s)	Priority Ranking
Enforce tie down requirements in the mobile home community in Worton. Identify homes that lack proper tie downs in the (1) mobile home community within the County to reduce vulnerability to high wind damages.	**Tornado, High Wind, Hurricane, Severe Storms**	Prevention	Kent County Dept. of Planning, Housing & Zoning	**Medium**

Enforce tie down requirements in the mobile homes in the Town of Rock Hall. Identify homes that lack proper tie downs in the (2) mobile home communities within the Town to reduce vulnerability to high wind damages.	**Tornado, High Wind, Hurricane, Severe Storms**	Prevention	Town of Rock Hall	**High**
Discussion: High winds can originate from several events: tropical cyclones, other coastal storms, and tornadoes, which generate the most significant wind hazards. High winds are capable of imposing large lateral (horizontal) and uplift (vertical) forces on buildings. Residential buildings including mobile homes can suffer extensive wind damage when they are improperly designed and constructed and when wind speeds exceed design levels. The effects of high winds on a building will depend on several factors: wind speed and duration of high winds, height of building above ground, exposure or shielding of the building relative to wind direction, strength of the structural frame, connections, and envelope (walls and roof), shape of building and building components, number, size and location of openings, and type, quantity and velocity of windborne debris. Based on the ASCE Standard of Minimum Design Loads for Building sand Other Structures, Kent County, Maryland, lies in a 90 mile per hour (mph) wind speed zone and should design and construct all new buildings that will stand up to winds of 90 mph (3 second gust) to resist damage from strong winds. Tie-downs are systems of heavy-duty straps and anchors designed to stabilize manufactured homes (also known as mobile homes) during high winds. Failure to properly install and maintain tie-downs results in reduced capacity to resist sliding and overturning.  **Possible Funding Sources:** Assessment- Staff Time; Wind Retrofit Community Project- FEMA BRIC **Timeline for Implementation:** Grant Application and Project Implementation 2-3 years				
Enforce tie down requirements in the mobile homes in the Town of Chestertown. Identify homes that lack proper tie downs in the (4) mobile home communities within the Town to reduce vulnerability to high wind damages.	**Tornado, High Wind, Hurricane, Severe Storms**	Prevention	Town of Chestertown	**High**
Refer to discussion above for previous mitigation action item.				
Complete a fire and rescue station garage door assessment to determine high wind risk and mitigation needs, if any. Note: Of the (8) stations, (3) were built in or before 1975. Also, evaluate fire and rescue stations to determine the need for protective glass.	**Tornado, High Wind, Hurricane, Severe Storms**	Property Protection	Volunteer Fire & Rescue Stations	**High**
Discussion: Several of the County's fire stations also serve as housing for County emergency service workers. These facilities have been built at different times and to different building performance standards. As a result, some of them can withstand significant flood and wind events while others require building fortification measures. As with most structures, integrity of the building envelope during a wind event is a major concern. Given the size of building openings for most fire stations (doors to truck and vehicle storage areas), they are of concern for fire stations.				

There are seven fire and one rescue stations in Kent County. Consider the age of each fire station, as specified on the table below. While all stations may be assessed, prioritize those stations in or before 1975.

Station	Year Built	Department	Address	City
1	1987	Kent County EMS	104 Vickers Drive	Chestertown
2	1975	Millington Community Vol Fire Co	185 Sassafras ST	Millington
3	1992	Galena Vol Fire Co	90 East Cross ST	Galena
4	1957	Kennedyville Vol Fire Co	11993 Kennedyville RD	Kennedyville
5	1999	Betterton Vol Fire Co	2 Howell Point RD	Betterton
6	1979	Chestertown Vol Fire Co	211 Maple AVE	Chestertown
7	2005	Rock Hall Vol Fire Co	21500 Rock Hall AVE	Rock Hall
8	1971	Kent - Queen Anne's Rescue Squad	140 Morgnec RD	Chestertown

Source: Marylandfirefighters.com/ken

Glass in the fire departments is tempered glass. Replace the existing glass with 1" laminated bullet – impact resistant glass. Protective glass mitigates high wind damage from tornadoes, hurricanes, and other severe storm events. FEMA tornadoes windows:

- FEMA 361-2008 & Hurricane Certified
- Minimum of 6" Aluminum Framing
- 2 ½" x 6" Mullion and Intermediate Horizontal Members Available
- Codes and standards use the term glazing to address all windows and openings containing glass. Specifically, ASCE 7-05 (which is incorporated by reference into both the IBC and IRC).

Possible Funding Sources: Assessment- Staff Time; Wind Retrofit Project- FEMA BRIC, State Homeland Security Grant Program, Pre-Disaster Mitigation Grant Program

Timeline for Implementation: Grant Application and Project Implementation 1-3 years

Provide tornado warning sirens or additional warning sirens for the following Fire Stations: Chestertown, Galena, and Millington,	**Tornado, High Wind, Hurricane, Severe Storms**	Emergency Services	Kent County Office of Emergency Services, Volunteer Fire & Rescue Stations	**Medium**

SECTION 6



SECTION 6 TOPICS

- SNOW & ICE STORMS HAZARD
- HISTORY & FUTURE RISK
- VULNERABILITY
- CAPABILITIES
- MITIGATION STRATEGIES

PLAN UPDATE HIGHLIGHTS

The winter storm/winter weather hazard from the 2014 Plan was carried over into the 2020 Hazard Mitigation Plan and renamed to Snow & Ice Storms.

The following were identified and integrated into the Snow & Ice Storms Section: Winter Storm, Winter Weather, Blizzard, Cold/Wind Chill, Frost/Freeze, Heavy Snow and Sleet

A Maryland Average Annual Snowfall figure was added to illustrate the average snowfall for Kent County.

FEMA Winter Storm Disaster Declarations were updated to include all winter weather events.

Hazard Risk Assessment Data tables were updated using data from the 2016 State of Maryland Hazard Mitigation Plan and the National Centers for Environmental Information (NCEI) – Storm Events Database.

The vulnerability analysis elaborated on the effects winter storms has on buildings, specifically disruptions of emergency and other essential services and critical facilities.

New capabilities provided by stakeholders were discussed. Various Kent County departments and organizations provided their capabilities for dealing with winter weather.

New goals and objectives were developed for this plan section.

New 2020-2025 Mitigation Action Items provided by stakeholders were included. Action items ranked “High” were further detailed to include discussion, potential funding sources, and a timeline for implementation.

Snow & Ice Storms Hazard

Hazard

Winter storms are defined by cold temperatures and heavy snow or ice and include heavy snowstorms, sleet storms, ice storms, blizzards, and severe blizzards. Winter storms may contain one or more types of hazardous weather events, the definitions of which are included below.

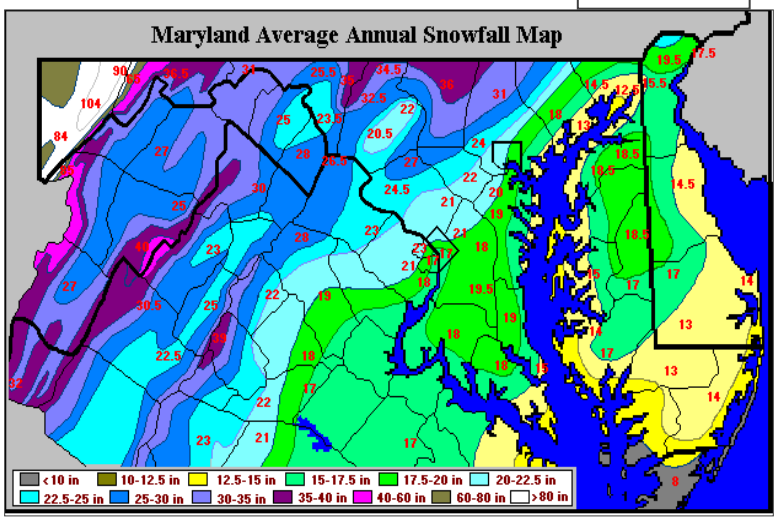
- Heavy snowstorm: Accumulations of four inches or more in a six-hour period; or six inches or more in a 12-hour period. The most common impacts are traffic accidents, interruptions in power supply and communications; and the failure of inadequately designed and/or maintained roofing systems.
- Sleet storm: Significant accumulations of solid pellets that form from the freezing of raindrops or partially melted snowflakes, resulting in slippery surfaces and posing hazards to pedestrians and motorists.
- Ice storm: Significant accumulations of rain or drizzle freezing on objects such as trees, power lines and roadways, causing slippery surfaces and damage from the sheer weight of ice accumulation.
- Blizzard: Wind velocity of 35 miles per hour or more, temperatures below freezing, considerable blowing snow with visibility frequently below one-quarter mile, prevailing over an extended period of time.
- Severe Blizzard: Wind velocity of 45 miles per hour or more, temperatures of 10 degrees or. lower, a high density of blowing snow with visibility frequently measured in inches, prevailing over an extended period of time.

History & Future Risk

History

Snow and winter storms are not uncommon in Kent County. Since the County is subjected to extreme cold weather conditions periodically, there have occasionally been instances of severe winter storms.

Figure 6-1



As illustrated in Figure 6-1, Kent County's annual snowfall is approximately 16.4 inches. Some incidents over the past five decades have been detailed in Table 6-1. Since 2000, five major winter storms have occurred in the County which yielded Declarations of Disaster by FEMA.

Table 6-1: FEMA Disaster Declarations		
Event	**Description**	**Year**
Ice Conditions	Major disaster declaration	January 1977
Severe Snowfall and Winter Storm	Emergency declaration	March 1993
Blizzard of 96	Major disaster declaration: County applied for public assistance	January 1996
Severe Winter Storm	Major disaster declaration: County applied for public assistance	January 2000
Snow	Emergency declaration: MD National Guard and FEMA assisted residents; 30.5 inches of snow in 3-day period	February 2003
Severe Winter Storm and Snowstorm	Major disaster declaration: County applied for public assistance	December 2009
Severe Winter Storms and Snowstorms	Major disaster declaration: County applied for public assistance	February 2010
Severe Winter Storm and Snowstorm	Major disaster declaration: County applied for public assistance	January 2016

Source: FEMA



ALL RECORDS BROKEN

BY BLIZZARD OF 1905

Snow Piled 20 Feet High on Railroad—Seven Engines and 300 Men Battle With Same—Six Days Without Mail—Ice Six Inches on River and Bay—All Night on Train at Lynch's Station — Mercury Reaches Six Degrees Below Zero—All Roads Blocked.

Source: Blizzard February 1905 provided by the Kent County Historical Society- Barbara Jorgenson

Maryland's greatest winter storms are the Nor'easters. The strong northeast winds that rack the coast and inland areas give the storm its name. For Nor'easters to occur in Maryland, an arctic air mass should be in place. While high pressure builds over New England, cold arctic air flows south from the high-pressure area. The dense cold air is unable to move west over the Appalachian Mountains and so it funnels south down the valleys and along the Coastal Plain. Winds around the Nor'easter's center can become intense. The wind builds large waves that batter the coastline and sometimes pile water inland causing major coastal flooding and severe beach erosion. Unlike hurricanes, which usually come and go within one tide cycle, the Nor'easter can linger through several tides, each one piling more and more water on shore and into the bays and dragging more sand away from the beaches.

The snow & ice storms hazard was continued from the 2014 planning cycle and was given a ranking of "Medium" during the 2020 planning cycle. In order to assess the hazard risk identified, a composite score method was undertaken. The composite score method was based on a blend of quantitative and qualitative factors extracted from the National Centers for Environmental Information (NCEI), stakeholder survey, and other available data sources. These included:

- Historical impacts, in terms of human lives and property;
- Geographic extent;
- Historical occurrence;
- Future probability; and
- Local community perspective.

Detailed information is available within *Appendix A: Hazard Risk Methodology, Hazard Ranking Results, and Hazard Data Tables.*

Information obtained for Kent County using both the *2016 State of Maryland Hazard Mitigation Plan* and the National Centers for Environmental Information (NCEI) – Storm Events Database between January 1950 and December 31, 2019 for the Snow and Ice Storms Hazard include: Winter Storm, Winter Weather, Blizzard, Cold/Wind Chill, Frost/Freeze, Heavy Snow and Sleet. There has been a total of 155 Snow & Ice Storm Events between 1996-2020, with an annualized rate of 6.2. These storms have produced $125,000 in property damage and an average snowfall total of 2 inches.

Total Snow & Ice Storms Hazard Risk Assessment Data Table

Hazards included within this table from NCEI Data: Winter Storm, Winter Weather, Blizzard, Cold/Wind Chill, Frost/Freeze, Heavy Snow and Sleet. There are no Ice Storms recorded in the NCEI Database for this county.

Injuries & Deaths		Property & Crop Damage		Geographic Extent	Events 1996-2020
0	0	125K	0	Average Snowfall Total = 2	Total = 155 Annualized = 6.2

Source: National Centers for Environmental Information, as of December 31, 2019 & 2016 State of Maryland Hazard Mitigation Plan

Winter Storm Data Table					
Injuries & Deaths		Property & Crop Damage		Geographic Extent	Events 1996-2020
0	0	125K	0	Average Snowfall Total = 2	Total = 22 Annualized = 0.88

Source: National Centers for Environmental Information, as of December 31, 2019 & 2016 State of Maryland Hazard Mitigation Plan

Legend: There are three designators: C - County/Parish; Z - Zone; and M - Marine Zone.

Based on NCEI definitions/criteria: Winter Storm (Z). *A winter weather event that has more than one significant hazard (i.e., heavy snow and blowing snow; snow and ice; snow and sleet; sleet and ice; or snow, sleet and ice) and meets or exceeds locally/regionally defined 12 and/or 24 hour warning criteria for at least one of the precipitation elements. If the event that occurred is considered significant, even though it affected a small area, it should be entered into Storm Data. Normally, a Winter Storm would pose a threat to life or property.*

Winter Weather Data Table					
Injuries & Deaths		Property & Crop Damage		Geographic Extent	Events 1996-2020
0	0	0	0	Average Snowfall Total = 2	Total = 76 Annualized = 3.04

Source: National Centers for Environmental Information, as of December 31, 2019 & 2016 State of Maryland Hazard Mitigation Plan

Legend: There are three designators: C - County/Parish; Z - Zone; and M - Marine Zone.

Based on NCEI definitions/criteria: Winter Weather (Z). *A winter precipitation event that causes a death, injury, or a significant impact to commerce or transportation, but does not meet locally/regionally defined warning criteria. A Winter Weather event could result from one or more winter precipitation types (snow, or blowing/drifting snow, or freezing rain/drizzle). The Winter Weather event can also be used to document out-of-season and other unusual or rare occurrences of snow, or blowing/drifting snow, or freezing rain/drizzle. If the event that occurred is considered significant, even though it affected a small area, it should be entered into Storm Data.*

Blizzard Data Table					
Injuries & Deaths		Property & Crop Damage		Geographic Extent	Events 2010-2020
0	0	0	0	Average Snowfall Total = 2	Total = 1 Annualized = 0.09

Source: National Centers for Environmental Information, as of December 31, 2019 & 2016 State of Maryland Hazard Mitigation Plan

Legend: There are three designators: C - County/Parish; Z - Zone; and M - Marine Zone.

Based on NCEI definitions/criteria: Blizzard (Z). *A winter storm which produces the following conditions for 3 consecutive hours or longer: (1) sustained winds or frequent gusts 30 knots (35 mph) or greater, and (2) falling and/or blowing snow reducing visibility frequently to less than 1/4 mile. If the event that occurred is considered significant, even though it affected a small area, it should be entered into Storm Data.*

Cold/Wind Chill Hazard Data Table					
Injuries & Deaths		Property & Crop Damage		Geographic Extent	Events 1996-2020
0	0	0	0	Countywide	Total = 24 Annualized = 0.96

Source: National Centers for Environmental Information, as of December 31, 2019 & 2016 State of Maryland Hazard Mitigation Plan

Legend: There are three designators: C - County/Parish; Z - Zone; and M - Marine Zone.

Based on NCEI definitions/criteria: Cold/Wind Chill (Z). *Period of low temperatures or wind chill temperatures reaching or exceeding locally/regionally defined advisory (typical value is -180F or colder) conditions. If the event that occurred is considered significant, even though it affected a small area, it should be entered into Storm Data. There can be situations where advisory criteria are not met, but the combination of seasonably cold temperatures and low wind chill values (roughly 150F below normal)*

may result in a fatality. In these situations, a cold/wind chill event may be documented if the weather conditions were the primary cause of death as determined by a medical examiner or coroner. Normally, cold/wind chill conditions should cause human and/or economic impact. Use this event only if a fatality/injury does not occur during a winter precipitation event.

Frost/Freeze Data Table					
Injuries & Deaths		Property & Crop Damage		Geographic Extent	Events 2007-2020
0	0	0	0	Countywide	Total = 1 Annualized = 0.07

Source: National Centers for Environmental Information, as of December 31, 2019 & 2016 State of Maryland Hazard Mitigation Plan

Legend: There are three designators: C - County/Parish; Z - Zone; and M - Marine Zone.
Based on NCEI definitions/criteria: Frost/Freeze (Z). *A surface air temperature of 32 degrees Fahrenheit (F) or lower, or the formation of ice crystals on the ground or other surfaces, for a period of time long enough to cause human or economic impact, during the locally defined growing season. If the event that occurred is considered significant, even though it affected a small area, it should be entered into Storm Data.*

Heavy Snow Data Table					
Injuries & Deaths		Property & Crop Damage		Geographic Extent	Events 1996-2020
0	0	0	0	Average Snowfall Total = 2	Total = 27 Annualized = 1.08

Source: National Centers for Environmental Information, as of December 31, 2019 & 2016 State of Maryland Hazard Mitigation Plan

Legend: There are three designators: C - County/Parish; Z - Zone; and M - Marine Zone.
Based on NCEI definitions/criteria: Heavy Snow (Z). *Snow accumulation meeting or exceeding locally/regionally defined 12 and/or 24-hour warning criteria. This could mean values such as 4, 6, or 8 inches or more in 12 hours or less; or 6, 8, or 10 inches in 24 hours or less. If the event that occurred is considered significant, even if it affected a small area, it should be entered into Storm Data. In some heavy snow events, structural damage, due to the excessive weight of snow accumulations, may occur in the few days following the meteorological end of the event. The preparer should include this damage as part of the original event and give details in the narrative. Normally, strong winds or other precipitation types are not present in a Heavy Snow event. If they were, then the Winter Storm event should be used.*

Sleet Data Table					
Injuries & Deaths		Property & Crop Damage		Geographic Extent	Events 1997-2020
0	0	0	0	Countywide	Total = 4 Annualized = 0.17

Source: National Centers for Environmental Information, as of December 31, 2019 & 2016 State of Maryland Hazard Mitigation Plan

Legend: There are three designators: C - County/Parish; Z - Zone; and M - Marine Zone.
Based on NCEI definitions/criteria: Sleet (Z). *Sleet accumulations meeting or exceeding locally/regionally defined warning criteria (typical value is ½ inch or more). The Storm Data preparer should include in the narrative the times that sleet accumulation began, met criteria, and ended.*

Future Risk

Future probability was factored into the hazard risk vulnerability and ranking for each identified hazard, as detailed *Appendix A: Hazard Risk Methodology, Hazard Ranking Results, & Data Tables*. Results for the snow and ice storms hazard indicate a future probability ranking of "occasional".

Vulnerability

Vulnerability

All areas of Kent County are subject to the effects of winter storms. They are considered hazards when:

- local capabilities to handle disruptions to emergency services, traffic, communications, and electric power are overwhelmed;
- residents in isolated communities run out of basic supplies, including food and fuel;
- livestock suffer from severe cold and lack of feed; and
- building structural systems fail.

Vulnerability to the effects of winter storms on buildings depends on the age of the building (and the building codes in effect at the time it was built), type of construction, and condition of the structure (how well it has been maintained).

The entire county would be affected by snow, ice and extreme cold. Kent County has a total area of 278.34 square miles and 343 miles of shoreline. Severe winter storms could result in the loss of utilities, expected increase in traffic accidents, impassable roads, and lost income since normal commuting may be hindered.

Snow and ice can be extremely hazardous. It can reduce visibility and when it accumulates on surfaces, it reduces traction and puts strain on power lines, roofs, and other structures. Severe winter storms have been and will continue to be a significant threat to the economic and social well-being of Kent County. Disruptions of emergency and other essential services and critical facilities are the main threats to people and property. Inadequate snow removal equipment could exacerbate the effects of snow events in the County, although it is not an issue at the present time.

Severe storm activity poses a significant threat to unprotected or exposed lifeline systems. Generally, commercial power networks are very susceptible to interruption from lightning strikes, high winds, ice conditions, and hail. Other utilities, including underground pipelines, may be impacted if not protected from exposure.

All critical and public facilities in the County are vulnerable to the effects of severe winter storms, due to the potential disruption of services and transportation systems as well as possible structural failure due to heavy snow loads. The County's critical and public owned facilities are detailed on maps and within the database found in *Appendix F: Critical and Public Owned Facilities*.

Capabilities

Capabilities

Kent County's Building Construction Code provide mechanisms to protect properties against frost damage. Chapter 73-15 Building Construction below states:

§ 73-15Frost protection. [1]

Except when erected upon solid rock or otherwise protected from frost, foundation walls, piers and other permanent supports of all buildings and structures larger than two hundred (200) square feet in area or ten (10) feet in height shall extend below the frost line of the locality, and spread footings of adequate size shall be provided when necessary to properly distribute the load within the allowable bearing value of the soil. Such structures shall be supported on piles or ranging timbers when solid earth or rock is not available. Footings shall not be founded on frozen soils unless such frozen condition is of a permanent character.[2]

[1]*Editor's Note: Former § 73-15, Swimming pools, as amended, was repealed 6-3-2008 by Bill No. 3-2008. This bill also redesignated former §§ 73-16 through 73-20 as §§ 73-15 through 73-19, respectively.*

[2]*Editor's Note: See also Ch. 192, Part 4, Footings.*

Kent County has a winter shelter for homeless residents. It runs January 1st to March 31st and is hosted by local churches and is managed by a nonprofit in conjunction with Social Services. There is a paid manager and volunteers round out the nightly staff and volunteers provide a hot meal each night. The Office of Emergency Services (OES) assists winter shelter operations by ensuring that the sheltering group has current and accurate notifications, are aware of plans for snow emergencies, and any warming center openings.

In addition, to prevent frozen and snow laden tree limbs from affecting utility lines tree trimming is encouraged. Within the Chesapeake Bay Critical Area utility companies apply for Critical Area Utility Line Maintenance Plans and trees are replanted in locations that are better suited.

The Department of Public Works, County Roads, is responsible for snow removal. They re-stock winter storm materials at the end of each season. Finally, dump trucks equipped with plows, loaders, pickup trucks with plows and graders with v-plows. Under extreme conditions, the County has contracted local contractors with loaders. Snow drifts are normally seen in all areas with high back slopes.

In terms of public outreach, there is a plethora of public warning information coming out from Office of Emergency Service (OES) prior to a known storm. At the start of each winter season, OES holds a conversation on WCTR (Kent and Queen Anne's County's Hometown Radio Station) to advise residents of ways to prepare and mitigate winter storm damage. Additional media outlets include radio spots, email, twitter, Facebook and news media.

Currently, the Office of Emergency Service provides "Winter Safety Tips" on their website.

Winter Storm Safety Tips

If you are caught in a winter storm, do the following:

- If you are outside, find a shelter and stay dry. Cover all exposed parts of the body.

- If there is no shelter, prepare a lean-to, windbreak or snow cave for protection from the wind. Build a fire for heat and to attract attention. Place rocks around the fire to absorb and reflect heat.
- Do not eat snow. It will lower your body temperature. Melt it first.
- If you are in a car or truck, stay there. Run the motor about ten minutes each hour for heat. Open the window a little for fresh air to avoid carbon monoxide poisoning and make sure the exhaust pipe is not blocked. Make yourself visible to rescuers by turning on the dome light at night when running the engine. Tie a colored cloth (preferably red) to your antenna or door. Raise the hood indicating trouble after snow stops falling. Exercise from time to time by vigorously moving arms, legs, fingers, and toes to keep blood circulating and to keep warm.
- If you are at home or in a building, stay inside. When using alternative heat from a fireplace, wood, stove, space heater, etc., use fire safeguards and properly ventilate. If there is no heat, close off unneeded rooms, stuff towels or rags in cracks under doors, and cover windows at night. Eat and drink food and wear layers of loose-fitting, lightweight, warm clothing.

Mitigation Strategies

Mitigation goals, objectives, and action items were identified throughout the plan development process for the unincorporated areas of the county and each of the five (5) towns. Following the review and discussion of risk and vulnerability, stakeholders identified and prioritized new action items for this plan update. The action item identified and designated “snow and ice storm” specific is listed below along with two (2) “all-hazards” action items.

Section 6 Goal: Ensure residents are forewarned and prepare County with supplies to face winter storms.

Objective 1: Provide public education (concerning safe driving and driving only if it is required, and also stock up on food, water, batteries, and other supplies) to prepare people for the storm.

Action Items	Hazard(s)	Category	Responsible Entity(s)	Priority Ranking
Develop and use updated delivery methods for winter storm public outreach activities. Topics to include: warming center locations, driving conditions, and other preparedness items.	**Snow & Ice Storms**	Public Education & Awareness	Kent County Office of Emergency Services, Faith Centers & Towns	Medium
Increase citizen participation in the County's hazard warning and notification system - Code Red.	All-Hazards	Public Education & Awareness	Kent County Office of Emergency Services	High

<table>
<tr><td colspan="5">Discussion: This action item is applicable to all hazards identified in the Plan Update. While the Code Red hazard warning and notification system is capable of calling all land lines within a designated geo-referenced area, citizen sign-up is key to enhancing the outreach capacities of the system. Citizen sign-up allows users to identify the scope of hazard messaging received and the number of devices that would like to receive those messages on by inputting their own contact information.

Possible Funding Sources: N/A

Timeline for Implementation: Ongoing</td></tr>
<tr><td rowspan="7">Forward and repost Kent County Office of Emergency Services' hazard related Facebook posts and other social media content.</td><td rowspan="7">All-Hazards</td><td rowspan="7">Public Education & Awareness</td><td>Town of Chestertown</td><td>N/A</td></tr>
<tr><td>Town of Rock Hall,</td><td>High</td></tr>
<tr><td>Town of Millington</td><td>Medium</td></tr>
<tr><td>Town of Betterton</td><td>High</td></tr>
<tr><td>Town of Galena</td><td>High</td></tr>
<tr><td>Historical Society, American Red Cross, Economic Development, Chamber of Commerce, Partnered Media Outlets</td><td>High</td></tr>
<tr><td colspan="5">Discussion: This action item is applicable to all hazards identified in the Plan Update. During the plan update process, discussion on public outreach and awareness highlighted opportunities for further collaboration between the County, Towns, and related organizations.

Possible Funding Sources: N/A

Timeline for Implementation: Ongoing</td></tr>
</table>

SECTION 7



SECTION 7 TOPICS

- SEVERE STORMS HAZARD
- HISTORY & FUTURE RISK
- VULNERABILITY
- CAPABILITIES
- MITIGATION STRATEGIES

PLAN UPDATE HIGHLIGHTS

Other Severe Storms was changed to Severe Storms as noted on the *2020 Review of Hazards Profiled* table in *Section 1: Introduction*.

The Severe Storms Section reviews and discusses the following hazards: Thunderstorm Wind, Lightning, and Hail.

The "Thunderstorm Life Cycle" figure was included to further explain the stages of thunderstorms.

Hazard Risk Assessment Data tables were updated using data from the 2016 State of Maryland Hazard Mitigation Plan and the National Centers for Environmental Information (NCEI) – Storm Events Database.

The vulnerability analysis discussed the effects severe storms have on agricultural lands, buildings, lifeline systems and critical and public facilities.

New capabilities provided by stakeholders were discussed. Detailed information about the lightning rod/protection systems installed throughout the county was provided.

New goals and objectives were developed for this plan section.

New 2020-2025 Mitigation Action Items provided by stakeholders were included. Action items ranked "High" were further detailed to include discussion, potential funding sources, and a timeline for implementation.

Severe Storms Hazard

Hazard

The Severe Storms Hazard includes: **Thunderstorm Wind, Lightning**, and **Hail.** Severe storms impacts include the transport of debris, which could cause casualties and property loss, as well as damages to the poles and lines carrying electric, telephone, and cable television service. Disruption of utilities, injuries to people, and damages to property resulting from severe storms affect Kent County and are a cause for concern.

Thunderstorm Wind

Thunderstorms are forms of convection produced when warm moist air is overrun by dry cool air. As the warm air rises, thunderhead clouds (cumulonimbus) form and cause the strong winds, lightning, thunder, hail, and rain associated with these storms. Instability can be caused by surface heating or upper-tropospheric (≈50,000 feet) divergence of air (rising air parcels can also result from airflows over mountainous areas). Generally, the former “air mass” thunderstorms form on warm-season afternoons and are not severe. The latter “dynamically-driven” thunderstorms generally form in association with a cold front or other regional-scaled atmospheric disturbance. These storms can become severe, thereby producing strong winds, frequent lightning, hail, downbursts and even tornadoes.

Strong winds that can develop from thunderstorms are known as downbursts. Downbursts occur when rapidly descending air beneath a thunderstorm reaches the ground and begins to move horizontally. These winds have been observed in excess of 100 mph and can occur before, during, and after a thunderstorm.

Lightning

Lightning is defined as a sudden and violent discharge of electricity from within a thunderstorm due to a difference in electrical charges and represents a flow of electrical current from cloud-to-cloud or cloud-to-ground. Nationally, lightning causes extensive damage to buildings and structures, kills, or injures people and livestock, starts untold numbers of forest fires and wildfires, and disrupts electromagnetic transmissions. Lightning is extremely dangerous during dry lightning storms because people remain outside due to the lack of precipitation; however, lightning is still present during the storm. Lightning usually occurs because of thunderstorms that move through an area during the summer months. Peak lightning occurs between June and August.

Hail

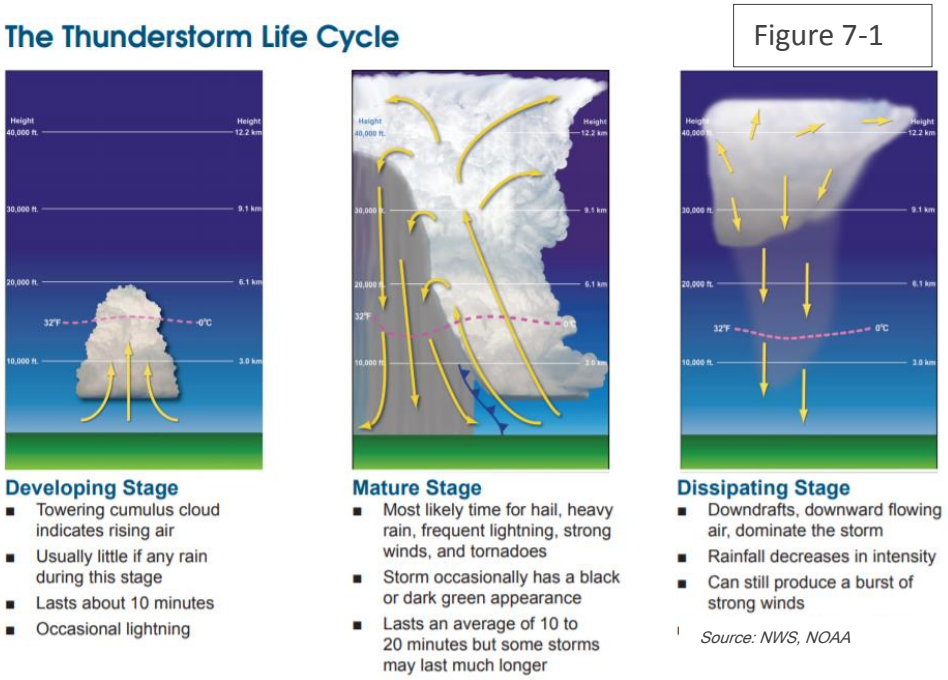
Hailstorms are violent and spectacular phenomena of atmospheric convection, always associated with heavy rain, gusty winds, thunder, and lightning. Hail is a product of strong convection and occurs only in connection with a thunderstorm where the high velocity updrafts carry large raindrops into the upper atmosphere (where the temperature is well below the freezing point of water). Hail stones grow when the frozen droplet is repeatedly blown into the higher elevations. The hailstone ascends if the updraft velocity is high enough to hold the hailstone. As soon the size and weight of the hailstone overcomes the lifting capacity of the updraft, it begins to fall freely under the influence of gravity. The falling of hail stones, under thunderstorm conditions, is accompanied with a cold downdraft of air.

History & Future Risk

History

Thunderstorms, lightning, and hail are common occurrences in Kent County. Thunderstorms have winds ranging from 0 to 69 knots (kts) in magnitude. Thunderstorms can sometimes produce strong winds, dangerous electric storms, prolific hail accumulations, life-threatening flash floods, and occasional tornadoes.

Figure 7-1



Lightning is the most common culprit during power outages either directly by striking transformers or indirectly by striking trees causing limbs to fall into power lines.

Damaging or severe hail (0.75 to 2.00 inches) is most common between the months of June and August, although a significant number of hail reports also occur between April and June. The most extensive damage caused by hail occurs on the County's agricultural lands.

The severe storms hazard was continued from the 2014 planning cycle and was given a risk ranking of "High" during the 2020 planning cycle. In order to assess the hazard risk identified, a composite score method was undertaken. The composite score method was based on a blend of quantitative and qualitative factors extracted from the National Centers for Environmental Information (NCEI), stakeholder survey, and other available data sources. These included:

- Historical impacts, in terms of human lives and property;
- Geographic extent;
- Historical occurrence;
- Future probability; and
- Local community perspective.

Detailed information is available within *Appendix A: Hazard Risk Methodology, Hazard Ranking Results, and Hazard Data Tables.*

Information obtained for Kent County using both the *2016 State of Maryland Hazard Mitigation Plan* and the National Centers for Environmental Information (NCEI) – Storm Events Database between January 1950 and December 31, 2019 for Severe Storms Hazard include: Thunderstorm Wind, Lightning, and Hail. There has been a total of 112 Events between 1996-2020, with an

annualized rate of 4.48. These storms have produced $630,980 in property damage. $1,000 in crop damage, and an ASCE wind design speed of 90.

Total Severe Storms Hazard Risk Assessment Data Table *Hazards included within this table from NCEI Data: Thunderstorm Wind, Lightning, and Hail.*					
Injuries & Deaths		**Property & Crop Damage**		**Geographic Extent**	**Events 1968-2020**
10	0	116.50K	5K	ASCE Wind Design Speed = 90 2"> hail and lightning events with Injuries/Deaths = 2	Total = 173 Annualized = 3.26
Source: National Centers for Environmental Information, as of December 31, 2019 & 2016 State of Maryland Hazard Mitigation Plan					

Thunderstorm Wind Data Table					
Injuries & Deaths		**Property & Crop Damage**		**Geographic Extent**	**Events 1968-2020**
2	0	70.50K	0	ASCE Wind Design Speed = 90	Total = 139 Annualized = 2.62
Source: National Centers for Environmental Information, as of December 31, 2019 & 2016 State of Maryland Hazard Mitigation Plan					

Legend: There are three designators: C - County/Parish; Z - Zone; and M - Marine Zone.
Based on NCEI definitions/criteria: Thunderstorm Wind (C). *Winds, arising from convection (occurring within 30 minutes of lightning being observed or detected), with speeds of at least 50 knots (58 mph), or winds of any speed (non-severe thunderstorm winds below 50 knots) producing a fatality, injury, or damage. Maximum sustained winds or wind gusts (measured or estimated) equal to or greater than 50 knots (58 mph) will always be entered. Events with maximum sustained winds or wind gusts less than 50 knots (58 mph) should be entered as a Storm Data event only if the result in fatalities, injuries, or serious property damage. Storm Data software permits only one event name for encoding severe and non-severe thunderstorm winds. The Storm Data software program requires the preparer to indicate whether the sustained wind or wind gust value was measured or estimated.*

Lightning Data Table					
Injuries & Deaths		**Property & Crop Damage**		**Geographic Extent**	**Events 1997-2020**
8	0	26K	5K	2"> hail and lightning events with Injuries/Deaths = 2	Total = 15 Annualized = 0.63
Source: National Centers for Environmental Information, as of December 31, 2019 & 2016 State of Maryland Hazard Mitigation Plan					

Legend: There are three designators: C - County/Parish; Z - Zone; and M - Marine Zone.
Based on NCEI definitions/criteria: Lightning (C). *A sudden electrical discharge from a thunderstorm, resulting in a fatality, injury, and/or damage.*

Hail Data Table					
Injuries & Deaths		**Property & Crop Damage**		**Geographic Extent**	**Events 1975-2020**
0	0	0	0	2"> hail and lightning events with Injuries/Deaths = 2	Total = 18 Annualized = 0.39
Source: National Centers for Environmental Information, as of December 31, 2019 & 2016 State of Maryland Hazard Mitigation Plan					

Legend: There are three designators: C - County/Parish; Z - Zone; and M - Marine Zone.
Based on NCEI definitions/criteria: Hail (C). *Frozen precipitation in the form of balls or irregular lumps of ice. Hail 3/4 of an inch or larger in diameter will be entered. Hail accumulations of smaller size, which cause property and/or crop damage or casualties, should be entered. Maximum hail size will be encoded for all hail reports entered.*

Future Risk

Future probability was factored into the hazard risk vulnerability and ranking for each identified hazard, as detailed *Appendix A: Hazard Risk Methodology, Hazard Ranking Results, & Data Tables*. Results for the severe storms hazard indicate a future probability ranking of "highly likely". These storms have produced 20 fatalities, with 2 of those fatalities occurring during storms with hail greater than 2". In addition, there have been $212,500 in property damage and $10,000 in crop damage over the past 50 years.

Vulnerability

Vulnerability

Vulnerability to the effects of severe storms on buildings depends on the age of the building (and the building codes in effect at the time it was built), type of construction, and condition of the structure (how well it has been maintained).

The entire county may be affected by thunderstorms, lightning, and hail. Agricultural land suffers the most damage from hailstorms. Kent County has a total area of 278.34 square miles and 343 miles of shoreline. Severe lightning and thunderstorms may result in the loss of utilities, an increase in traffic accidents, impassable roads, lost income since normal commuting may be hindered, and loss to crops.

Thunderstorms, lightning, and hail can all be extremely hazardous. They may reduce visibility and put strain on power lines, roofs, and other structures. Severe storms have been and will continue to be a significant threat to the economic and social well-being of Kent County. Disruptions of emergency and other essential services and critical facilities are the main threats to people and property. Particularly at risk are County crops which fall victim to hailstorms.

Severe storm activity poses a significant threat to unprotected or exposed lifeline systems. Generally, commercial power networks are very susceptible to interruption from lightning strikes, high winds, and hail. Other utilities, including underground pipelines, may be impacted if not protected from exposure.

All critical and public facilities in the County are vulnerable to the effects of severe storms, due to the potential disruption of services and transportation systems as well as possible structure exposure to lightning strikes (directly or by tree limbs). The County's critical and public facilities are mapped and detailed within *Appendix F: Critical & Public Facilities*.

Capabilities

Capabilities

Lightning rod/protection systems are installed at the following locations throughout Kent County:

- Office of Emergency Services, 9-1-1 Communications, Sheriff's Office, and the Detention Center (collocated) – 104 Vickers Drive, Chestertown, Maryland.
- Chestertown Town Hall – 118 N. Cross Street
- Wastewater Treatment Plan – 25792 John Hanson Road
- Water Treatment Plant – 405 N. Kent Street

In addition, lightning rods are installed on water towers throughout Kent County. These rod protect structures from lightning strikes, where it could start a fire, cause electrocution, or result in power outage. *Appendix D: Capability Assessment* of this document contains more extensive information.

Mitigation Strategies

Mitigation goals, objectives, and action items were identified throughout the plan development process for the unincorporated areas of the county and each of the five (5) towns. Following the review and discussion of risk and vulnerability, stakeholders identified and prioritized new action items for this plan update. One (1) action item has been identified and designated "severe storms" and is listed below. In addition, one (1) "all-hazards" action item applicable to the "severe storms" included in the table below. The mitigation action item listed as a "High" priority has been further detailed in the table below and includes discussion, potential funding sources, and a timeline for implementation.

Section 7 Goal: Assess buildings, specifically critical facilities, that may benefit from lightning protection due to hazard risk and probability.

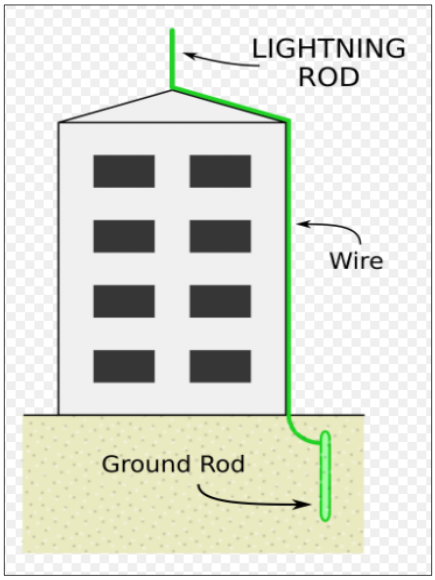
Objective 1: List and prioritize critical facilities for lightning protection using past damages, and potential damages. Upgrade and maintain existing lightning protection systems to prevent roof cover damage and/or install new lightning protection systems at critical facilities.

Action Items	Hazard(s)	Category	Responsible Entity(s)	Priority Ranking
Pursue Storm Ready Certification through the National Weather Service.	All-Weather Related Hazards	Emergency Services	Kent County Office of Emergency Services	Medium
Install lightning rod(s) at Shore Regional Health and Washington College.	Severe Storms	Property Protection	Shore Regional Health, Washington College	High

Discussion: A **lightning rod** is a metal rod mounted on a structure and intended to protect the structure from a lightning strike. If lightning hits the structure, it will preferentially strike the rod and be conducted to ground through a wire, instead of passing through the structure, where it could start a fire or cause electrocution.

In a **lightning protection system**, a lightning rod is a single component of the system. The lightning rod requires a connection to earth to perform its protective function. Lightning rods come in many different forms, including hollow, solid, pointed, rounded, flat strips, or even bristle brush-like. The main attribute common to all lightning rods is that they are all made of conductive materials, such as copper and aluminum.

Lightning rods (and the accompanying protection system) are designed to protect a house or building from a direct lightning strike and, in particular, a lightning-initiated fire. Note that lightning protection systems do not prevent lightning from striking the structure, but rather intercept a lightning strike, provide a conductive path for the harmful electrical discharge to follow (the appropriate UL-listed copper or aluminum cable), and disperse the energy safely into the ground (grounding network). It's very important that these components be properly connected (bonded) to minimize the chances for any sparks or side flashes.



While lightning rods help protect a structure from a direct lightning strike, a complete lightning protection system is needed to help prevent harmful electrical surges and possible fires caused by lightning entering a structure via wires and pipes. A complete system also includes electrical surge protection devices for incoming power, data, and communication lines, and surge protection devices for vulnerable appliances. Lightning protection may also be needed for gas piping.

Any lightning protection system should follow the national safety standards and requirements of the Lightning Protection Institute, National Fire Protection Association, and Underwriters Laboratories.

Possible Funding Sources: FEMA Hazard Mitigation Grant Program (HGMP), FEMA Building Resilient Infrastructure and Communities (BRIC).

Timeline for Implementation: Grant Application and Project Implementation 1-3 years

SECTION 8



SECTION 8 TOPICS

- HIGH WIND HAZARD
- HISTORY & FUTURE RISK
- VULNERABILITY
- CAPABILITIES
- MITIGATION STRATEGIES

PLAN UPDATE HIGHLIGHTS

High wind is a “new” hazard identified during the hazard identification process for the plan update.

The high wind hazard section includes Derecho & Straight-line Winds, High Winds, and Strong Winds.

Hazard Risk Assessment Data tables were developed using data from the 2016 State of Maryland Hazard Mitigation Plan and the National Centers for Environmental Information (NCEI) – Storm Events Database.

A figure illustrating the ASCE design wind speed zones was included and shows the design wind speeds for Kent County.

The vulnerability analysis discusses potential impacts from wind related hazard events, including debris generation.

Loss estimations were provided using data collected by the National Center for Environmental Information.

New capabilities provided by stakeholders were discussed. Kent County along with all five (5) municipalities have adopted the 2018 International Building Code. Wind loads criteria for coastal high hazards areas was provided.

This is a new section, therefore new goals and objectives were developed.

New 2020-2025 Mitigation Action Items provided by stakeholders were included. Action items ranked “High” were further detailed to include discussion, potential funding sources, and a timeline for implementation.

High Wind Hazard

Hazard

The High Wind Hazard for this section includes derecho & straight-line winds, high winds, and strong winds.

Derecho & Straight-Line Winds

These winds are widespread, long-lived windstorms that is associated with a band of rapidly moving showers or thunderstorms. A typical derecho consists of numerous microbursts, downbursts, and downburst clusters. Wind damage swath extends more than 240 miles (about 400 kilometers) and includes wind gusts of at least 58 mph (93 km/h) or greater along most of its length.

High Wind

There are three basic types of damaging high wind events that affect Maryland: synoptic-scale winds, tropical storm winds and thunderstorm winds. Synoptic-scale or large-scale winds are high winds that occur typically with cold frontal passages or Nor'easters and are uncommon in Maryland. The National Weather Service considers a thunderstorm to be severe only if it produces wind gusts of 58 mph or higher.

"Downbursts" cause the high winds in a thunderstorm. Downburst winds result from the sudden descent of cool or cold air toward the ground. As the air hits the ground, it spreads outward, creating high winds. Unlike tornadoes, downburst winds move in a straight line, without rotation. Most wind events in Maryland occur in June and July. High winds generated from coastal storm events cause a significant amount of damage on Maryland's Eastern Shore.

Strong Winds

Strong winds are defined as non-convective winds gusting less than 58 mph, or sustained winds less than 40 mph.

History & Future Risk

History

Information obtained for Kent County using both the *2016 State of Maryland Hazard Mitigation Plan* and the National Centers for Environmental Information (NCEI) – Storm Events Database between January 1950 and December 31, 2019 for High Wind Hazard include: Derecho & Straight-Line Winds, High Winds, and Strong Winds.

There has been a total of 112 High Wind Events between 1996-2020, with an annualized rate of 4.48. These storms have produced $630,980 in property damage, $1,000 in crop damage, and had a SVRGIS (intensity & frequency) of 1.

Total High Wind Hazard Risk Assessment Data Table *Hazards included within this table from NCEI Data: Derecho, High Wind and Strong Wind.*					
Injuries & Deaths		Property & Crop Damage		Geographic Extent	Events 1996-2020
0	0	630.98K	1K	ASCE Wind Design Speed = 90	Total = 112 Annualized = 4.48

Source: National Centers for Environmental Information, as of December 31, 2019 & 2016 State of Maryland Hazard Mitigation Plan

High Wind Data Table					
Injuries & Deaths		Property & Crop Damage		Geographic Extent	Events 1996-2020
0	0	396.50K	0	ASCE Wind Design Speed = 90	Total = 28 Annualized = 1.12

Source: National Centers for Environmental Information, as of December 31, 2019 & 2016 State of Maryland Hazard Mitigation Plan

Legend: There are three designators: C - County/Parish; Z - Zone; and M - Marine Zone.
Based on NCEI definitions/criteria: High Wind (Z). *Sustained non-convective winds of 35 knots (40 mph) or greater lasting for 1 hour or longer, or gusts of 50 knots (58 mph) or greater for any duration (or otherwise locally/regionally defined). In some mountainous areas, the above numerical values are 43 knots (50 mph) and 65 knots (75 mph), respectively. If the event that occurred is considered significant, even though it affected a small area, it should be entered into Storm Data.*

Strong Wind Data Table					
Injuries & Deaths		Property & Crop Damage		Geographic Extent	Events 1997-2020
0	0	214.48K	1K	ASCE Wind Design Speed = 90	Total = 83 Annualized = 3.46

Source: National Centers for Environmental Information, as of December 31, 2019 & 2016 State of Maryland Hazard Mitigation Plan

Legend: There are three designators: C - County/Parish; Z - Zone; and M - Marine Zone.
Based on NCEI definitions/criteria: Strong Wind (Z). *Non-convective winds gusting less than 50 knots (58 mph), or sustained winds less than 35 knots (40 mph), resulting in a fatality, injury, or damage. Consistent with regional guidelines, mountain states may have higher criteria. A peak wind gust (estimated or measured) or maximum sustained wind will be entered.*

Derecho Data Table					
Injuries & Deaths		Property & Crop Damage		Geographic Extent	Events 2012-2020
0	0	20K	0	ASCE Wind Design Speed = 90	Total = 1 Annualized = 0.11

Source: - National Centers for Environmental Information, as of December 31, 2019 & 2016 State of Maryland Hazard Mitigation Plan.

Based on NCEI definitions/criteria: Derecho. *A widespread, long-lived windstorm associated with a band of rapidly moving showers or thunderstorms variously known as a squall line, bow echo, or quasi-linear convective system. Although a derecho can produce destruction similar to that of a tornado, the damage typically occurs in one direction along a relatively straight swath. As a result, the term "straight-line wind damage" sometimes is used to describe derecho damage. By definition, a derecho must include wind gusts of at least 58 mph (50 knots or 93 km/h) or greater along most of its length. A derecho wind damage swath must extend more than 240 miles (about 400 kilometers).*

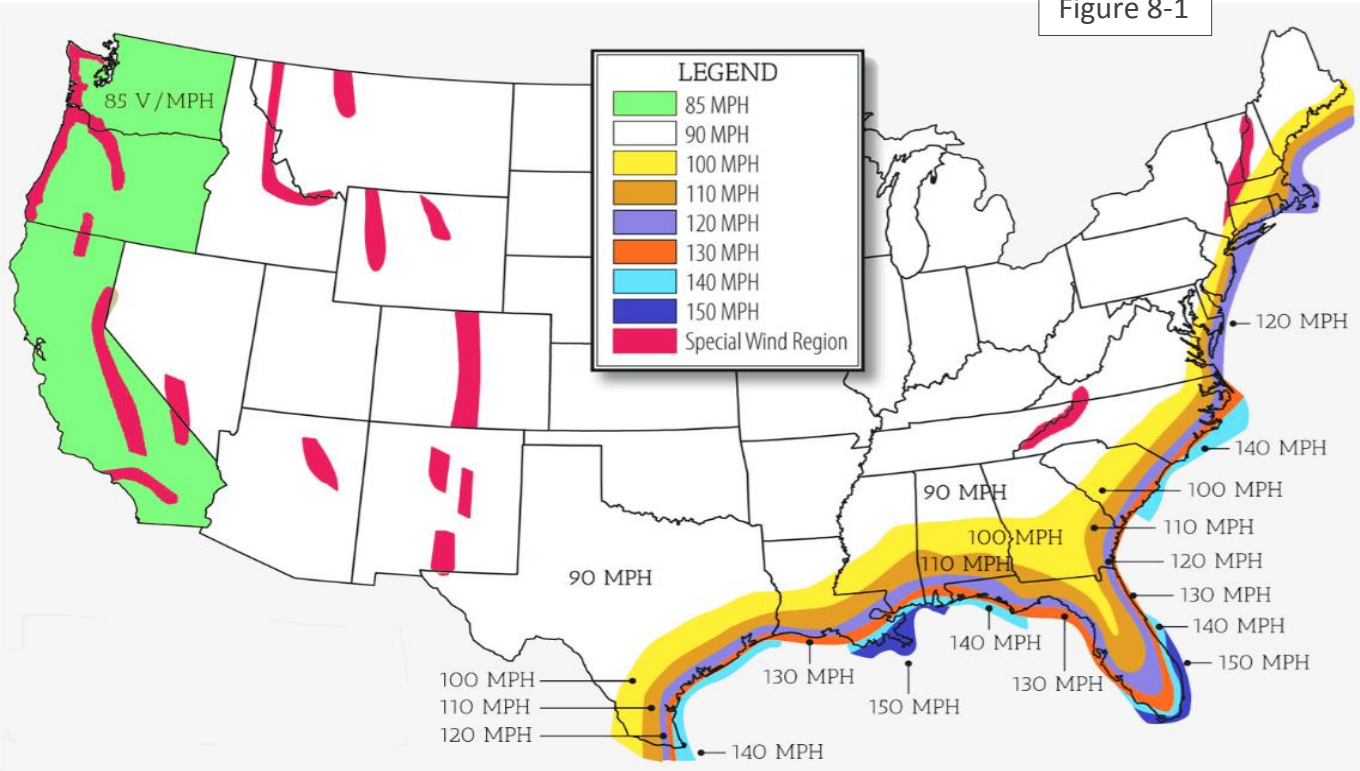
The high wind hazard was identified as a new hazard during the 2020 planning cycle and was given a ranking of "Medium High". In order to assess the hazard risk identified, a composite score method was undertaken. The composite score method was based on a blend of quantitative and qualitative factors extracted from the National Centers for Environmental Information (NCEI), stakeholder survey, and other available data sources. These included:

- Historical impacts, in terms of human lives and property;
- Geographic extent;
- Historical occurrence;
- Future probability; and
- Local community perspective.

Detailed information is available within *Appendix A: Hazard Risk Methodology, Hazard Ranking Results, and Hazard Data Tables.*

According to the ASCE design wind speed zones, the wind design speed zones for Kent County is 90-100 mph, shown below on Figure 8-1.

Figure 8-1



Source: ALP, http://alppoles.com/wind-speed.php Note: 2009 AASHTO LTS-5 specification 3-second gust basic wind speeds mph) with gust effect factor (G) of 1.14- and 25-year design life wind map (ASCE 7-05) is shown above. This wind map should be used to determine wind velocity for your specific location. If you are located between two different velocity isotach lines, the higher velocity should be used.

Future Risk

Future probability was factored into the hazard risk vulnerability and ranking for each identified hazard, as detailed *Appendix A: Hazard Risk Methodology, Hazard Ranking Results, & Data Tables*. Results for the High Wind hazard indicate a future probability ranking of "highly likely".

Vulnerability

Vulnerability

The entire county and five (5) towns have the potential to be impacted by high wind events. Hazard event data indicate that 4 to 5 high winds events occur within the County annually. Both loss of power at critical facilities and potential debris generation are potential impacts from wind related hazard events.

Loss Estimations

Losses totaled to date for all high wind hazards are in excess of $1.2 million dollars according to data collected by the National Center for Environmental Information. The date range for property and crop damage for high wind hazards is 1996 to 2020. Using loss estimations reported during this date range annual projected losses for high wind hazards are $50K.

Capabilities

Capabilities

According to the Capability Assessment (see *Appendix D: Capability Assessment*) completed for this plan update, Kent County along with all five (5) municipalities have adopted the *2018 International Building Code*.

In Coastal High Hazard Areas (V-Zones), the following applies to wind loads:

B. New and substantially improved structures.

(1) All new or substantially improved structures shall be elevated on adequately anchored pilings or columns to resist flotation, collapse and lateral movement due to the effect of the one-hundred-year water loads and **wind loads** acting simultaneously on all building components. Water-loading values shall be those associated with the base flood and **wind-loading values** shall be those required by local building standards. The bottom of the lowest horizontal structural member supporting the lowest floor shall be elevated one (1) foot above the base flood elevation. Building designs and elevations must be certified by a registered professional engineer or architect that the building has been designed to **withstand the water and wind loads and to be anchored properly**. The use of slabs or other at-grade foundation systems shall be prohibited.

(2) The space below the flood protection elevation shall be free of obstruction or may be enclosed with open wood lattice, insert screening or breakaway walls.

(3) Breakaway walls shall be designed to collapse under a **wind and water load** less than would occur during the one-hundred-year flood and have a design safe loading resistance of not less than ten (10) pounds and not more than twenty (20) pounds per square foot. Glass walls shall not be considered breakaway walls. Enclosed areas below the flood protection elevation shall be used solely for the parking of vehicles,

limited storage and building access. If such areas are enclosed, a non-conversion agreement shall be signed.

C. **Manufactured homes** and recreational vehicles. Manufactured homes **shall not be permitted in the coastal high hazard area**.

Damages from high wind events often result in debris, specifically woody debris. The Town of Betterton has free yard waste pick-up March through November, typically during the months when high wind events are most likely to occur.

Mitigation Strategies

Mitigation goals, objectives, and action items were identified throughout the plan development process for the unincorporated areas of the county and each of the five (5) towns. Following the review and discussion of risk and vulnerability, stakeholders identified and prioritized new action items for this plan update. Several action items have been identified and designated "All Weather-Related Hazards" in which "High Wind" related event impacts result. The mitigation action items listed as "High" priority have been further detailed in the table below.

Section 8 Goal: Minimize the losses of life and property due to High Winds in Kent County.

Objective 1: Establish and coordinate the development of the debris management plan with various stakeholders includes representatives from each of the Towns.

Objective 2: Use FEMA guidance documents to review draft plan.

Objective 3: Minimize the impact of power loss form damaging high wind events.

Action Items	Hazard(s)	Category	Responsible Entity(s)	Priority Ranking
Install generator at Washington College campus: Johnson Fitness Center, Hudson Hall & gym. These locations would be where students congregate during a hazard event. Johnson Fitness Center is also used as shelter for several elementary schools. Dining Hall needs a generator to be able to continue to provide meals to students and first responders when necessary.	All-Weather Related Hazards	Emergency Services	Washington College	Medium
Install back-up generators at public utility facilities, Town Hall, and VFD.	All-Weather Related Hazards	Property Protection	Town of Millington	Medium
Install back-up generators at (5) pump stations.	All-Weather Related Hazards	Property Protection	Town of Betterton	High

Discussion: The effects of wind events can last longer than the actual storm itself when it comes to power. With power lines being knocked down and underground lines getting flooded, trees to get out of the way before restoration, it can take days or even weeks before power is fully restored. That much downtime can heavily affect critical utility functions without a backup power supply.

Possible Funding Sources: FEMA BRIC

Timeline for Implementation: Grant Application and Project Implementation 1-3 years

Continue work on the development of the County Debris Management Plan. Coordinate the development of the plan with various stakeholders, specifically the Towns of Betterton, Galena, Rock Hall, Chestertown, and Millington.	**Tornado, High Wind, Hurricane, Severe Storms**	Prevention	Kent County Office of Emergency Services, Dept. of Public Works, Towns	**High**

Discussion: A debris management plan is a written document that establishes procedures and guidelines for managing disaster debris in a coordinated, environmentally responsible, and cost-effective manner. The human, financial, environmental, and political costs associated with insufficient debris management planning can be devastating.

Disaster debris can complicate and delay disaster response activities such as medical care, transportation of victims or relief teams, firefighting, and provision of shelter, food, and water to disaster survivors. Facilitates the quick return of a community to normalcy.
Disaster debris can complicate and delay the short and long-term recovery of the community and its return to normalcy.

In some disaster events, the amount of debris generated can be equivalent to years, if not decades, of normal solid waste production in the affected jurisdictions. Landfill capacities may be overwhelmed, roads may be damaged by debris hauling, debris may be disposed of without adequate controls, and the debris may present a general public health and safety hazard.

An effective debris management plan:

- Facilitates response and recovery activities;
- Facilitates the quick return of a community to normalcy;
- Reduces impacts to humans and the environment;
- Ensures effective use of resources;
- Helps to control and minimize costs; and,
- Aids in complying with applicable local, state/tribal/territorial, and Federal regulations.

Possible Funding Sources: Staff Time

Timeline for Implementation: Project has been started by the Office of Emergency Services- 1 year for collaboration with project partners and plan completion.

SECTION 9



SECTION 9 TOPICS

- EARTHQUAKE HAZARD
- HISTORY & FUTURE RISK
- VULNERABILITY
- CAPABILITIES
- MITIGATION STRATEGIES

PLAN UPDATE HIGHLIGHTS

Earthquake was identified as a new hazard for the 2020 Plan Update and therefore the new Section 9 was developed.

Mercalli magnitude and intensity measures are discussed as well as the history of earthquakes in Maryland.

The vulnerability analysis focused on the U.S Geological Survey's seismic hazard forecast. The 2017 USGS Forecast for Damage from Natural and Induced Earthquakes was added.

Identified and integrated new data sources obtained from the United States Geological Survey, 2014 U.S. Geological Survey (USGS) National Seismic Hazard Maps.

Earthquake Shaking Intensity was discussed and Shaking Intensity figure included.

New capabilities provided by stakeholders were discussed. Kent County adopted the current 2018 International Building Code.

New goals and objectives were developed for this section.

New 2020-2025 Mitigation Action Items provided by stakeholders were included. Action items ranked "High" were further detailed to include discussion, potential funding sources, and a timeline for implementation.

Earthquake Hazard

Hazard

An earthquake is ground shaking caused by a sudden movement of rock in the earth's crust. Such movements occur along faults, which are thin zones of crushed rock separating blocks of crust. When one block suddenly slips and moves relative to the other along a fault, the energy released creates vibrations called seismic waves that radiate up through the crust to the earth's surface, causing the ground to shake. While earthquakes have been felt in and around Kent County, no impacts have been reported.

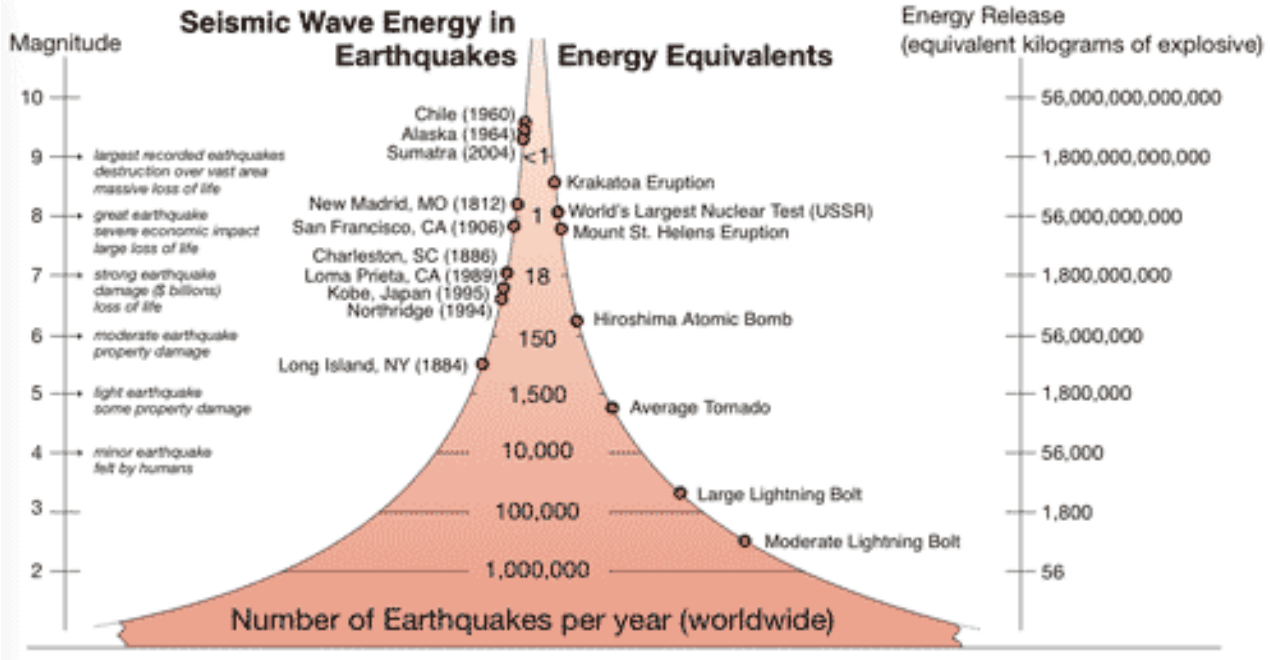
History & Future Risk

History

In general, earthquakes with an epicenter in Maryland are a rare occurrence, especially events with high intensity and/or magnitude. In most cases, earthquakes that are felt in Maryland occur in adjacent states, such as Virginia or Pennsylvania. Earthquakes are measured by their Mercalli magnitude and their intensity. The following table describes both measurements.

Magnitude and **Intensity** measure different characteristics of earthquakes. Magnitude measures the energy released at the source of the earthquake. Magnitude is determined from measurements on seismographs. Intensity measures the strength of shaking produced by the earthquake at a certain location

Figure 9-1



Source: https://www.usgs.gov/natural-hazards/earthquake-hazards/science/earthquake

The table below details earthquake events within and around Maryland that have occurred in the past 24 years.

Table 9-1: Earthquake Events in Maryland			
Date	General Location	Intensity	Magnitude
1996/08/02	Perryville	II-III	2.2
1996/10/17	Rising Sun (epicenter may be in Pennsylvania)	III	2.2, 2.3
1996/12/06	Columbia - Allview Estates	II	<1.5 (est.)
1996/12/14	Columbia - Allview Estates	II	<1.5 (est.)
1996/12/16	Ilchester - Ellicott City	I	about 1 (est.)
1996/12/22	Columbia - Allview Estates	III	2.0, 2.3
2001/12/18	Columbia near US29-MD32	II	1.5-2.0 (est)
2002/03/22	Columbia near US29-MD32	I	1-2 (est.)
2003/12/09	28 miles west of the Richmond in rural Powhatan County, VA	VI	4.5
2005/02/23	Southeastern Baltimore near Fort McHenry, Dundalk, Glen Burnie, Pasadena, Gambrills	II-III	2.0-2.1
2008/12/27	6 miles west of Lancaster, PA.	IV	3.4
2009/07/01	Southwestern New Jersey	III	2.8
2009/09/29	4 miles NNE (15°) from Bel Air North, MD	II	1.6
2010/07/16	Potomac-Shenandoah Region, MD	V	3.4
2011/08/23	5 miles SSW (195°) from Mineral, VA	V-VI	5.8
2017/10/30	Glenelg, Maryland	I	1.52
2017/11/11	0.8 km (0.5 mi) ESE of Roxbury, Maryland	I	1.5

Source: Maryland Geological Survey

The highest intensity and/or magnitude earthquake felt in Maryland was on August 23, 2011, an earthquake struck Mineral, Virginia with a magnitude of 5.8. The earthquake was approximately 164 miles southwest of Chestertown in Kent County and was felt throughout the County; however, no damage was reported.

Future Risk

Future probability was factored into the hazard risk vulnerability and ranking for each identified hazard, as detailed *Appendix A: Hazard Risk Methodology, Hazard Ranking Results, & Data Tables.* Results for the earthquake hazard indicate a future probability ranking of "occasional" while impacts are minimal, indicating a future risk rating of "'low."

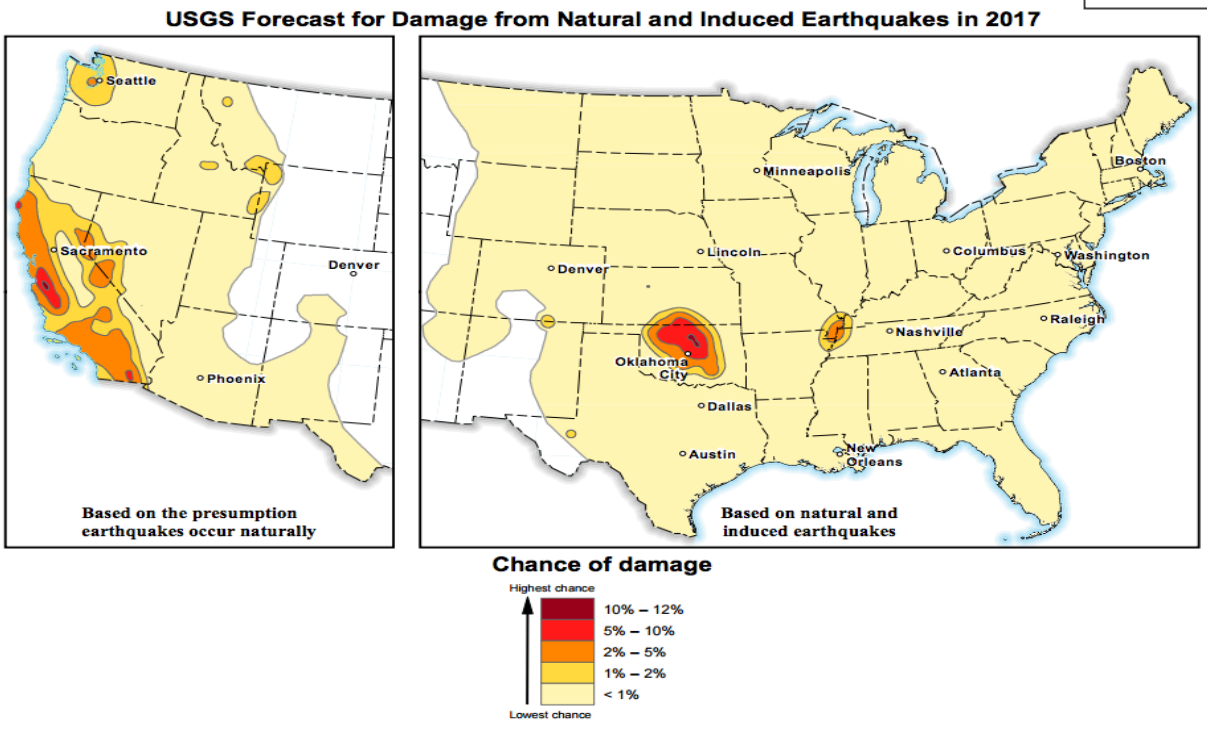
Vulnerability

Vulnerability

According to the Federal Emergency Management Agency (FEMA) seismic hazard levels differ significantly across the United States, both between and within states.

The U.S Geological Survey (USGS) has produced a one-year 2017 seismic hazard forecast for the central and eastern United States from induced and natural earthquakes that updates the 2016 one-year forecast; this map is intended to provide information to the public and to facilitate the development of induced seismicity forecasting models, methods, and data. The 2017 hazard model applies the same methodology and input logic tree as the 2016 forecast, but with an updated earthquake catalog. As shown on the figure below, the eastern Unites States, Maryland specifically, has less than a 1-percent chance of earthquake damage.

Figure 9-2



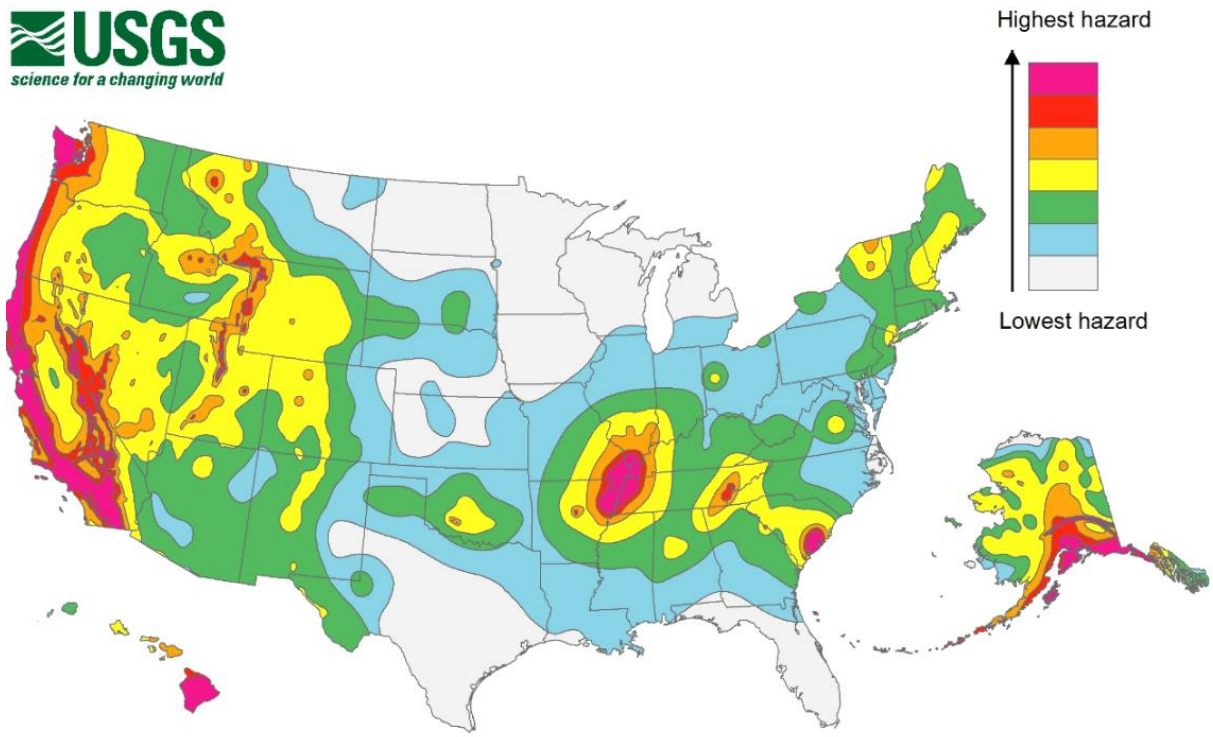
USGS map displaying potential to experience damage from natural or human-induced earthquakes in 2017. Chances range from less than 1 percent to 12 percent.

The following excerpt contains USGS Long-Term 2014 Model information and figure indicates that Kent County is within an earthquake low-risk area.

The 2014 U.S. Geological Survey (USGS) National Seismic Hazard Maps display earthquake ground motions for various probability levels across the United States and are applied in seismic provisions of building codes, insurance rate structures, risk assessments, and other public policy. The updated maps represent an assessment of the best available science in earthquake hazards and incorporate new findings on earthquake ground shaking, faults, seismicity, and geodesy. The USGS National Seismic Hazard Mapping Project developed these maps by incorporating information on potential earthquakes and associated ground shaking obtained from interaction in science and engineering workshops involving hundreds of participants, review by several science organizations and State surveys, and advice from expert panels and a Steering Committee. The new probabilistic hazard maps represent an update of the seismic hazard maps; previous versions were developed by Petersen and others (2008) and Frankel and others (2002), using the methodology developed Frankel and others (1996). Algermissen and Perkins (1976) published the first probabilistic seismic hazard map of the United States which was updated in Algermissen and others (1990).

Figure 9-3

U.S. Earthquake Seismic Hazard Map



According to *FEMA E-74 Reducing the Risk of Nonstructural Earthquake Damage - a Practical Guide* dated December 2012, due to the low risk of earthquake and minimal to low potential for shaking due to seismic activity, the need for seismic anchorage and bracing of non-structural components is not necessary. However, if located in a low level of shaking area and if the facility is not an essential facility, then only parapets and exterior unreinforced masonry walls should be considered for seismic retrofit.

Figure 9-4

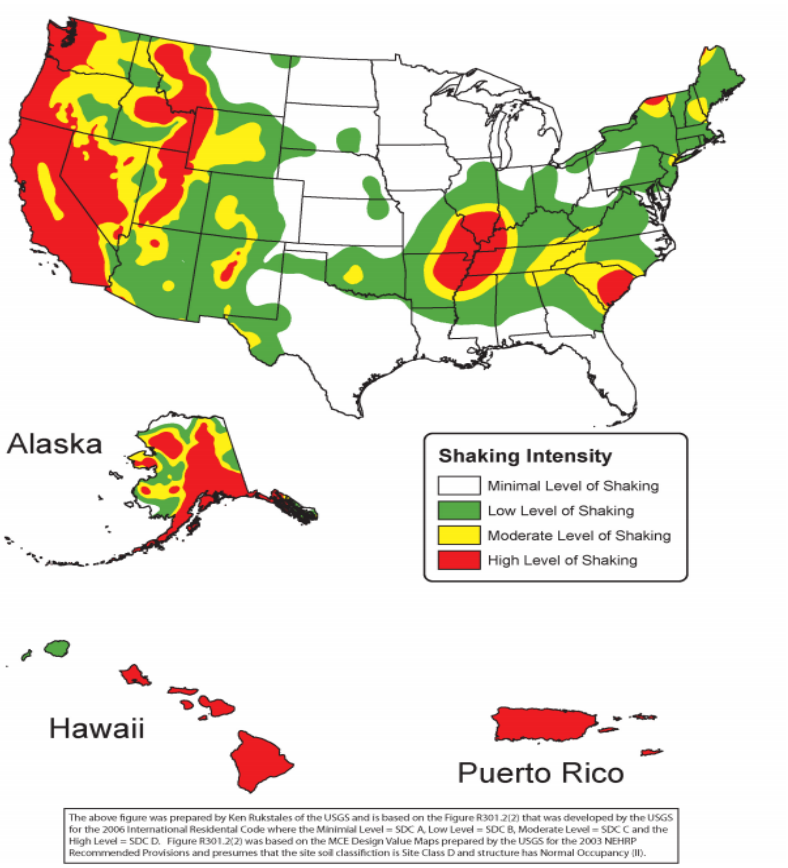


Figure 3.2.1-1 Map of probable shaking intensity in the United States.

Capabilities

Capabilities

Kent County has adopted the most recent, 2018 International Building Code (IBC). The International Code Council (ICC) publishes building codes that promote safety and fire prevention in commercial, government and residential structures. These codes are used throughout the US, including enforcement by several federal agencies. While evidenced in this section, the earthquake hazard has resulted in no damages historically and is considered a “low” risk hazard both now and into the future. Therefore, additional, or higher thresholds for building codes locally have not been deemed warranted. *Appendix D: Capability Assessment* of this document contains more extensive information.

Mitigation Strategies

Mitigation goals, objectives, and action items were identified throughout the plan development process for the unincorporated areas of the county and each of the five (5) towns. Following the review and discussion of risk and vulnerability, stakeholders identified and prioritized new action items for this plan update. Action items identified and designated "earthquake" specific are listed below.

Section 9 Goal: Assess earthquake damage susceptibility.

Objective 1: Determine what facilities, if any, specifically critical facilities, have nonstructural components that need bracing or anchoring.

Action Items	Hazard(s)	Category	Responsible Entity(s)	Priority Ranking
Following the review of FEMA E-74 Practical Guide, examine critical and public facilities for proper anchorage and bracing of non-structural components.	Earthquake	Property Protection	Kent County Office of Emergency Services, Dept. of Public Works, Towns	Low
Continue to participation in The Great Shake Out Drill - Drop.	Earthquake	Property Protection	Kent County Office of Emergency Services, Health Dept.	Medium

SECTION 10



SECTION 10 TOPICS

- CLIMATE ADAPTATION HAZARD
- HISTORY & FUTURE RISK
- VULNERABILITY
- CAPABILITIES
- MITIGATION STRATEGIES

PLAN UPDATE HIGHLIGHTS

Climate Adaptation was added as a "new" hazard for the 2020 Plan Update. The Climate Adaptation section includes shoreline erosion and projected sea level rise.

Recent information from the State of Maryland Climate Change website was included.

Information from the *2019 The Greenhouse Gas Emissions Reduction Act* and *2016 Climate Change and Sea Level Rise Adaptation Report Kent County, Maryland* was reviewed and integrated.

Kent County solar panel permit data obtained from the Department of Planning and Zoning was added.

Sea level rise projections were reviewed and updated in the *2018 Sea Level Rise Projections for Maryland*. Vulnerability analysis for projected sea level rise risk assessment and loss estimations were completed using new data developed by NOAA's Office for Coastal Management. New maps were generated for the northern and southern parts of County, municipalities, and structures at risk to projected sea level rise of 1 to 3 feet. New Project Sea Level Rise At-Risk Structures and Loss Estimations Per Community tables were developed and included.

Critical & Public Facilities at risk to projected sea level rise of 1 to 3 feet were analyzed. Facilities at risk were provide in table and mapping formats.

New capabilities provided by stakeholders were discussed. Several climate change and adaptation reports have been completed for Kent County.

New goals and objectives were developed for this section. New 2020-2025 Mitigation Action Items provided by stakeholders were included. Action items ranked "High" were further detailed to include discussion, potential funding sources, and a timeline for implementation.

Climate Adaptation Hazard

Hazard

According to the State of Maryland's Climate Change website (http://climatechange.maryland.gov/science/), climate change is defined as changes in weather patterns on a global, continental, regional, or local scale. On a global scale, temperatures and sea levels are rising, rainfall patterns are shifting, and wildlife habitats are changing. In addition, there is an increasing number and severity of hurricanes, winter storms, droughts, and other extreme weather events. The effects are already apparent in rising seas, summer heat waves, and more frequent and violent thunderstorms. Climate Change directly affects Marylanders and the state's economy.

Shoreline Erosion

Erosion and accretion are long term, dynamic processes that occur along shorelines. Major erosion/accretion events are usually associated with coastal storms because floodwater forces have the ability to cause significant acts of erosion/accretion in a short time period. Erosion is considered a serious hazard in coastal areas because it can threaten coastal development by eroding beach areas including the flat berm portion and protective dunes. In general, shoreline erosion poses a significant threat to property owners, the public and natural resources, both terrestrial and aquatic.

Sea Level Rise

Sea level rise is an increase in the level of the world's oceans due to the effects of global warming. Burning fossil fuels is one of the causes of global warming because it releases carbon dioxide and other heat-trapping gasses into the atmosphere. The oceans then absorb the majority of this heat. As water becomes warmer, it expands. This results in ocean levels rising worldwide.

Land-based ice, such as glaciers and ice sheets, is greatly affected by global warming, as well. These reserves of ice are located in places like Greenland and Antarctica. Typically, they experience melt during the warmer months of the year and the ice is replenished in colder months. With the average year-round global temperatures rising, however, ice caps and glaciers are experiencing a disproportionate amount of melting at an accelerated rate.

What's the difference between global and local sea level?

Global sea level trends and relative sea level trends are different measurements. Just as the surface of the Earth is not flat, the surface of the ocean is also not flat—in other words, the sea surface is not changing at the same rate globally. Sea level rise at specific locations may be more or less than the global average due to many local factors: subsidence, upstream flood control, erosion, regional ocean currents, variations in land height, and whether the land is still rebounding from the compressive weight of Ice Age glaciers.

Sea level is primarily measured using tide stations and satellite laser altimeters. Tide stations around the globe tell us what is happening at a local level —the height of the water as measured along the coast relative to a specific point on land. Satellite measurements provide us with the average height of the entire ocean. Taken together, these tools tell us how our ocean sea levels are changing over time.

Sea level rise poses a serious threat to coastal life around the world. Consequences include increased intensity of storm surges, flooding, and damage to coastal areas. In many cases, this is where large population centers are located, in addition to fragile wildlife habitats. Therefore, people may become displaced and will need to seek safer homes. Even life farther inland is threatened because rising seas can contaminate soil and groundwater with salt.

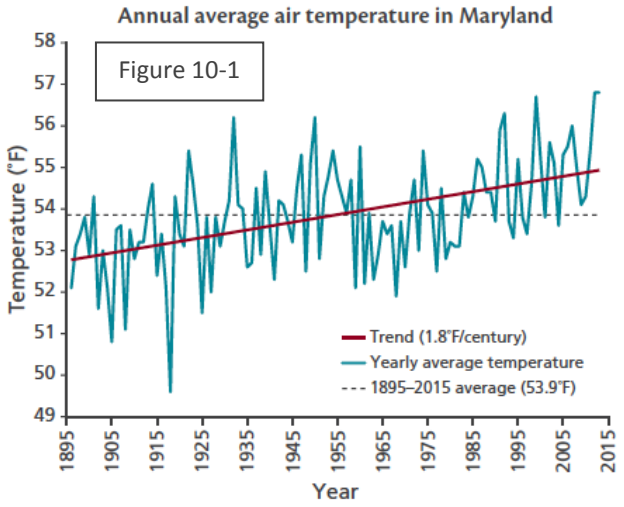
History & Future Risk

History

According to the State of Maryland Climate Change website, within Maryland, temperatures and coastal sea levels are rising, and extreme events are more frequent. The increases in temperatures are related to increases in greenhouse gas emissions over the last 50 years. Long-term temperature data shows that average temperatures in Maryland have risen in the last century and will continue to rise in the future.

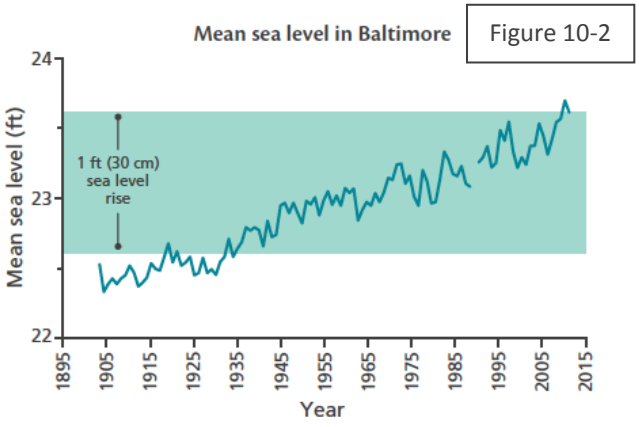
The State of Maryland is experiencing warmer winter days, more intense heat and humidity in the summer, and more damage due to storms. Figure 10-1, annual average air temperature in Maryland shows that the temperature has increased 1.8°F per century since 1895.

Figure 10-1



Source http://climatechange.maryland.gov/science/

Figure 10-2



Source http://climatechange.maryland.gov/science/

Historic tide gauge records demonstrate that sea levels are rising along Maryland's coast. Due to a combination of global sea level rise and land subsidence, sea levels have risen about one foot within Maryland's waters during the last 100 years. As our climate changes, sea levels are expected to continue to rise, potentially twice as fast as during the 1900s. Maryland is at risk of experiencing another one-foot rise in sea level by 2050 and as much as a three-foot rise by 2100, contributing to higher storm wave heights, greater flooding in low-lying coastal areas, exacerbated shoreline erosion, and damage to property and infrastructure. The long-term tide gauge in Baltimore Harbor shows a steady rise in sea level since the early 1900s.

Maryland is experiencing more frequent extreme rain and storm events and more flooding as a result of sea level rise and coastal storms. Increasing temperatures, which allow air to trap more moisture, will make these storm events more common. Extreme events affect human health both directly and indirectly. Warmer temperatures and poor air quality increase respiratory illness and other health problems in our vulnerable populations. Extreme events can directly damage infrastructure such as water treatment and supply, transportation, and electricity systems.

Shoreline Erosion

A large percentage of Kent County's shorelines incur erosion accelerated by high winds, high tides, overland flow, and shoreline cliff sluffing. The greatest numbers of incidences occur during the fall and winter months. A small number of damaging wind events coupled with abnormally high tides, causing shoreline erosion to occur each year.

Much of the County's soils are highly erodible and susceptible to storm damage. With shoreline cliffs and steep banks along the Sassafras and the Chesapeake Bay, overland flow meets storm surge events halfway and causes unique erosion problems for landowners. Highly erodible soils along the Sassafras River and county creeks also cause unique challenges for property owners.

All shorelines in the County are subject to the effects of erosion. The most severe impacts occur along those shorelines with the longest fetch or exposed distance over water in front of the shore. Although erosion is a natural process, it can create significant problems for property owners, businesses, and the public, especially when inappropriate planning and design activities either increase natural erosion rates or compound the impact of natural erosion processes. The Maryland Geological Survey (MGS) began to quantify the problem in 1914, documenting major reductions of various islands throughout the State such as Sharp, James and Tilghman Islands.

Sea Level Rise

According to the Maryland Department of the Environment, *2019 The Greenhouse Gas Emissions Reduction Act*, in the Northeast, the rate of sea level rise already observed is greater than the global average, having increased about one-foot since 1990 (average is 8 inches), likely due to both increased ice loss as well as changes in regional currents and land subsidence. Maryland has experienced an increase in annual average temperature of 1.5°F since the beginning of the 20th century. Also, a winter warming trend reflected in the average of less than one day per year of nights below 0°F since the mid 1990's, as compared to an average of two nights per year between 1950 and 1994. Annual precipitation, though more variable, increased by approximately 0.39 inches per decade in the Northeast during this same time, with Maryland's annual mean precipitation having been above average for the past two decades. The climate in this region is generally expected to continue trending warmer and wetter over the next century, accompanied by an increase in extreme heat waves and precipitation events.

According to the *2016 Climate Change and Sea Level Rise Adaptation Report Kent County, Maryland,* the average annual temperature in Kent County has increased by 1.5°F compared to the first half of the 20th century. The Chesapeake region, which is expected to warm faster than the global average, could be up to 8°F warmer by the end of this century.

According to FEMA's *Guide to Expanding Mitigation: Making the Connection to Electric Power,* experts predict that extreme weather will continue to jeopardize electric power systems. Therefore, the need to transition to renewable power sources, including solar power, should be considered. Solar power not only assists in mitigating future hazard impacts, but it also provides redundancy during a disaster if it has battery backup, and reduces the emissions from the electric power sector, which contributes to climate change impacts.

Permit data was obtained from the Kent County Department of Planning and Zoning. Data was gathered from January 1, 2015 to October 19, 2020. Within the data, permits for solar panel was extrapolated. Solar panel data on Table 10-1 below, indicates that an average of 32.5 solar panel permits per year for this date range.

Table 10-1: Kent County Permit Data	
Year	# of Solar Panel Permits
2015	49
2016	51
2017	30
2018	30
2019	24
2020	11

Source: Kent County Permit Data, as of October 19, 2020

Future Risk

Climate change is exacerbating environmental conditions in Kent County and increasing the risk of certain natural hazards. Climate change is altering the likelihood of extreme conditions (heat, precipitation, and flooding) in Kent County today and in the future. The climate adaptation hazard is new for the 2020 planning cycle and was given a ranking of "Medium". Community perspective survey results indicate that respondents are "concerned". Future probability was factored into the hazard risk vulnerability and ranking for each identified hazard, as detailed *Appendix A: Hazard Risk Methodology, Hazard Ranking Results, & Data Tables*. Results for the climate adaptation hazard indicate a future probability ranking of "highly likely."

Vulnerability

Vulnerability

Erosion historically occurs along the County's 268 miles of tidal shoreline. Soils found in the northern shorelines along the Sassafras River and its creeks and tributaries are dominated by moderately sloping to steep, well-drained soils formed from loamy materials. The western and southern shorelines located along the Chesapeake Bay and its many creeks and tributaries are dominated by nearly level to moderately sloping, moderately well-drained and poorly drained soils formed from clayey and silty materials. This clay layer often acts as a conduit to stop infiltration and to cause erosion in the form of sluffing along shoreline cliffs. The south-eastern shorelines located along the Chester River and its creeks and tributaries are dominated by level, poorly drained marsh soils formed from organic and mineral materials. Shorelines in this area are also nearly level to moderately sloping with well and poorly drained clayey and silty soils.

According to the Environmental Protection Agency, the climate for the northeast has changed with an average temperature rise of 2 degrees Fahrenheit and an increase of 4 degrees Fahrenheit in winter temperatures. Precipitation events have also increased in magnitude and frequency. Rain events now exceed snow events for the northeast region of the United States. With an increase in rain events, influences to sea level rise are likely to

increase as well. Sea level rise, storm surge, erosion, and the destruction of important coastal ecosystems will likely contribute to an increase in coastal flooding events, including the frequency of the current one-percent annual chance flood event (100-year flood) levels.

Maryland has been at the forefront of states taking action to address the consequences of climate change beginning in 2000 with the development of the *Sea Level Rise Response Strategy*. The state went on to pass the Healthy Air and Clean Cars Acts (2006, 2007, and 2019), join the Regional Greenhouse Gas Initiative (2007), and pass the 2009 and 2016 Greenhouse Gas Emissions Reduction Acts (GGRA). The Maryland Commission on Climate Change (MCCC) was established by Executive Order (01.01.2007.07) in 2007 and charged with developing an action plan and timetable for mitigation and adaptation to the likely consequences and impacts of climate change in Maryland.

According to the *July 2020 Center for Disease Control (CDC) Climate and Health Program*, the health impacts from climate change in the North Eastern United States include:

- Temperature-Related Death and Illness
- Extreme Events
- Water-Related Illness
- Food Safety, Nutrition and Distribution
- Mental Health and Well-Being
- Populations of Concern

The Maryland Department of Health is a CDC funded jurisdiction since 2012 and is a Climate-Ready States and Cities Initiative (CRSCI) recipient.

Maryland Department of Health, CRSCI Recipient, funded by CDC since 2012

The Maryland Climate Change Health Adaptation Program is the lead for integration of health adaptation into the state's response to a changing climate. Located in the Maryland Department of Health, the program provides a health focus to climate response efforts across the state, through technical assistance, development of epidemiologic tools and data products, and education and outreach. The program primarily addresses extreme heat, air quality and respiratory illness, water-borne diseases, and extreme weather events, such as hurricanes and tornadoes. The program, which is closely integrated with the Maryland Commission on Climate Change, includes education and outreach for school age youth (K-12), minority groups, community health workers, and informal healthcare networks. Among the products of the program is a climate change training curriculum for community health workers and extension workers. The training increases competency among informal healthcare networks in order to advise patients and community members on how to understand climate impact on themselves and their health. The program's Climate Ambassador program, which is a program targeted at school age youth in Maryland, provides students with tools and information to educate and empower themselves and their communities to respond to the impacts of a changing climate.

According to the *2016 Climate Change and Sea Level Rise Adaptation Report for Kent County*, the County is naturally vulnerable to elevated water levels and heavy rainstorms. Surrounded on three sides by water, the county has low-lying areas that are exposed to flooding during times of high water in the Chesapeake Bay and two of its tributaries, the Chester and Sassafras Rivers. Poor drainage due to flat terrain and clay soils make the county naturally susceptible to precipitation-driven flooding. Recommendations from the 2016 Climate Change and Sea Level Rise Adaptation Report have been reviewed and integrated into this plan update.

Risk Assessment & Loss Estimations

Current standard loss estimation models and tables for erosion damages are not available. Structural damage to buildings could be simplified as either undamaged or severely damaged due to erosion. Although slight or moderate damage could occur due to erosion, the likelihood of this level of damage is considered small. The estimated structure loss from erosion is based on factors such as: past experience, location of the structure within the hazard area, rate of erosion, and the structure replacement value. The same applies to content damage as well. Relevant data should be collected to complete the vulnerability analysis for this hazard.

Sea level rise projections were reviewed and updated in 2018 for the State of Maryland. According to the *2018 Sea Level Rise Projections for Maryland*, the Likely range (66% probability) of the relative rise of mean sea level expected in Maryland between 2000 and 2050 is 0.8 to 1.6 feet, with about a one-in-twenty chance it could exceed 2.0 feet and about a one-in one hundred chance it could exceed 2.3 feet.

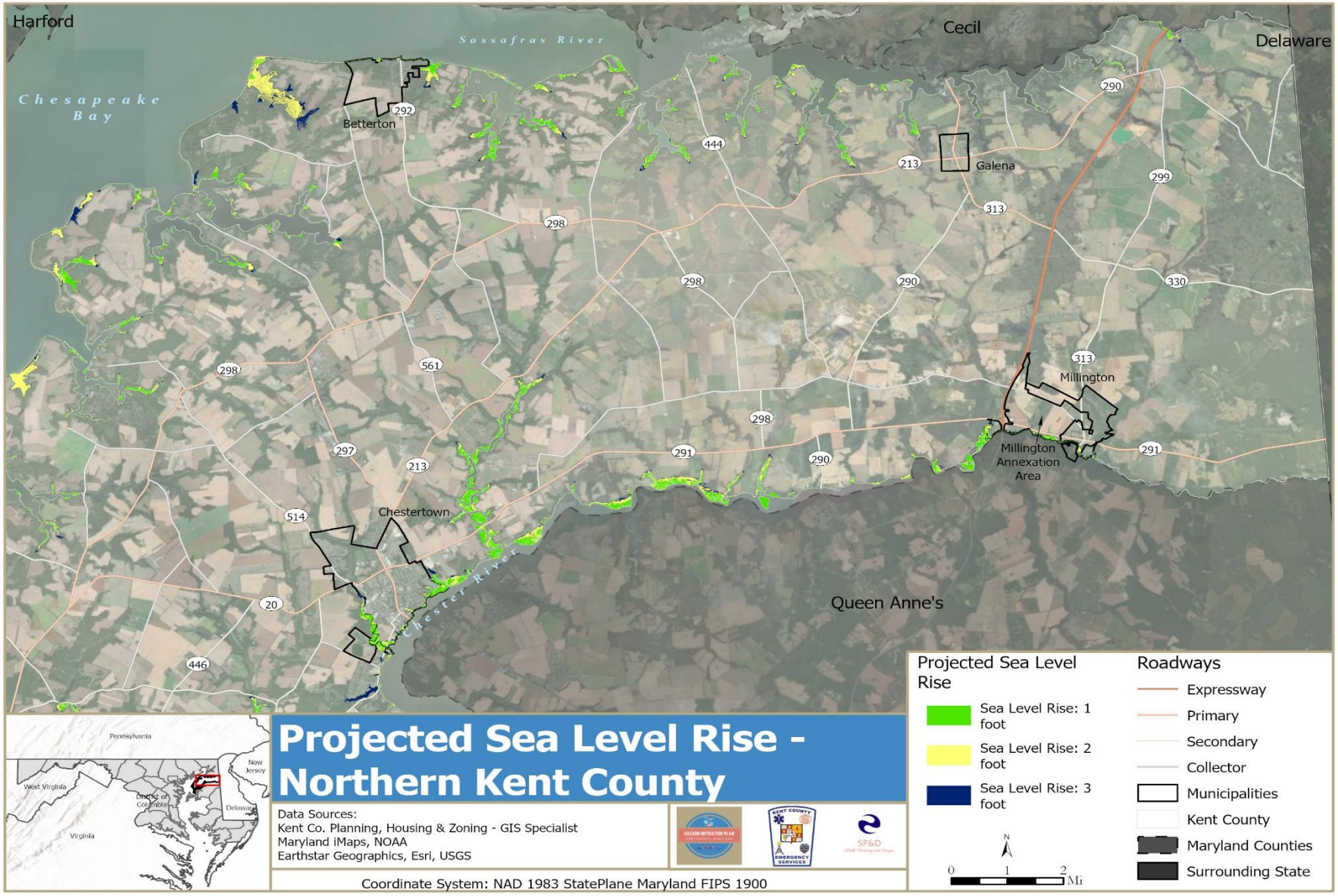
In March 2019, NOAA's Office for Coastal Management released new Sea Level Rise data. The sea level rise layers show inland extent and relative depth of inundation above mean higher high water (MHHW). Mean higher high water is the average height of the highest tide recorded at a tide station each day during the recording period. The sea level rise inundation areas are illustrated during the highest high tides (excludes wind-driven tides) with the sea level rise amount. These layers are projections and do not consider natural processes such as erosion, subsidence, or future construction. *(NOAA Digital Coast Sea Level Rise Viewer, January 2017: Frequent Questions)*

The *2016 Climate Change and Sea Level Rise Adaptation Report* states that Kent County experiences a semidiurnal tide; two high tides and two low tides every day. The two high tides differ from each other by 3-6 inches depending upon location in the county. The low tides also differ from each other in a similar manner. The 19-year average height of the higher of the two high tides is the Mean Higher High Water (MHHW) for Kent County.

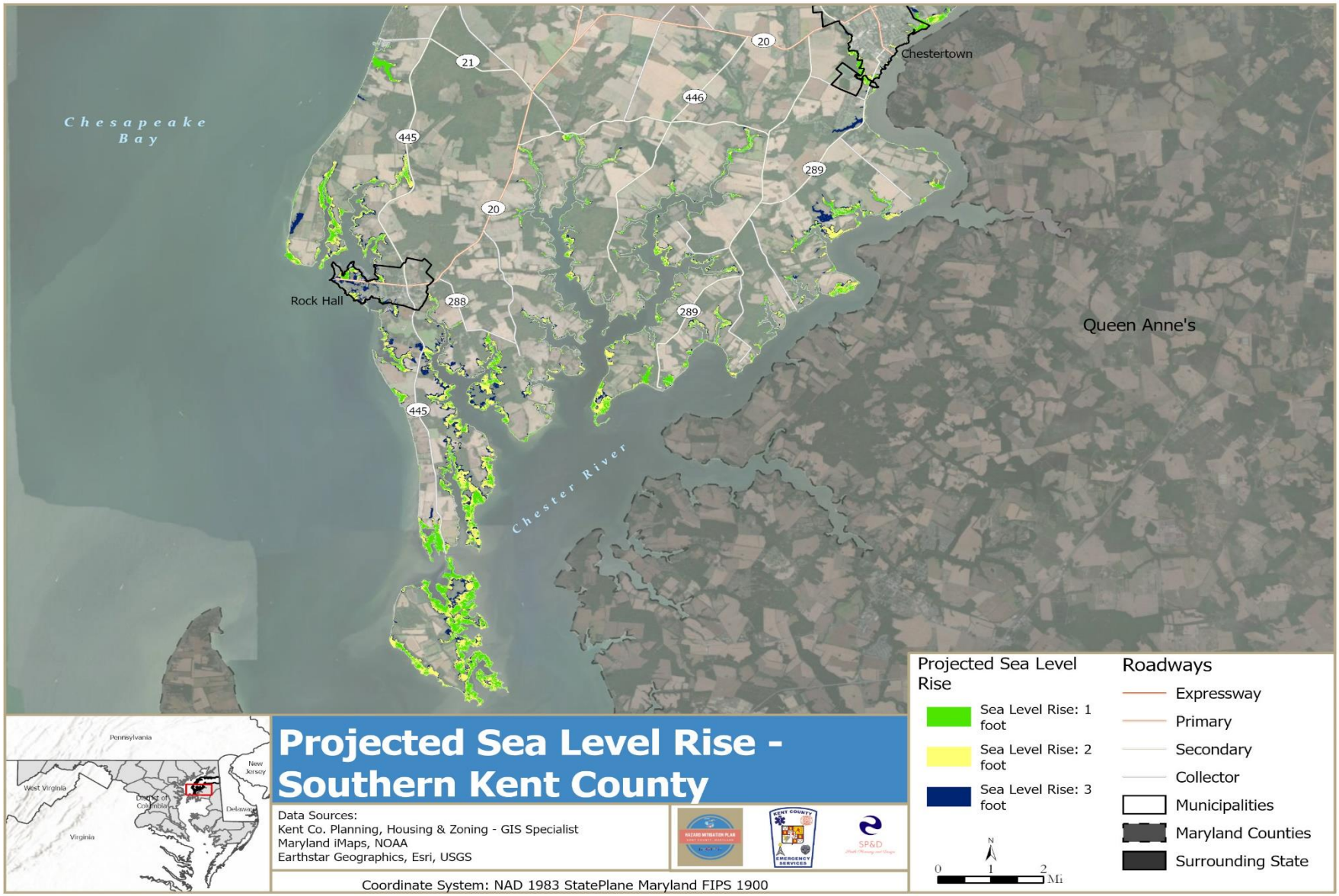
For the vulnerability assessment, sea level rise projections for from 1 to 3 feet were utilized considering the Likely range of the relative mean sea level rise expected by 2050. Maps 10-1 and 10-2 illustrate the geographic extent for sea level rise projections, 1 to 3 feet, within Kent County.

According to the study completed for the *2016 GIS Data Products to Support Climate Change Adaption Planning,* Kent County is moderately impacted by sea-level change through 2050. However, by 2100, rising levels of the Bay and subsidence of the land surface will create some local negative impacts. Specifically, the area north of Worton, Chestertown, Millington and most significantly, Rock Hall and Eastern Neck National Wildlife Refuge will see the most significant negative impacts, particularly during spring tides.

Map 10-1


Harford
Cecil
Delaware
Sassafras River
Chesapeake Bay
Betterton
Galena
Millington
Millington Annexation Area
Chestertown
Chester River
Queen Anne's
292
444
213
290
299
313
298
330
561
297
291
514
20
446
Projected Sea Level Rise - Northern Kent County
Data Sources:
Kent Co. Planning, Housing & Zoning - GIS Specialist
Maryland iMaps, NOAA
Earthstar Geographics, Esri, USGS
Coordinate System: NAD 1983 StatePlane Maryland FIPS 1900
Pennsylvania
New Jersey
West Virginia
District of Columbia
Delaware
Virginia
Projected Sea Level Rise
Sea Level Rise: 1 foot
Sea Level Rise: 2 foot
Sea Level Rise: 3 foot
Roadways
Expressway
Primary
Secondary
Collector
Municipalities
Kent County
Maryland Counties
Surrounding State
N
0
1
2
Mi

Map 10-2


Chesapeake Bay
Chester River
Rock Hall
Chestertown
Queen Anne's
21
20
446
445
289
288
Projected Sea Level Rise - Southern Kent County
Data Sources:
Kent Co. Planning, Housing & Zoning - GIS Specialist
Maryland iMaps, NOAA
Earthstar Geographics, Esri, USGS
Coordinate System: NAD 1983 StatePlane Maryland FIPS 1900
Projected Sea Level Rise
Sea Level Rise: 1 foot
Sea Level Rise: 2 foot
Sea Level Rise: 3 foot
Roadways
Expressway
Primary
Secondary
Collector
Municipalities
Maryland Counties
Surrounding State
0
1
2
Mi
Pennsylvania
New Jersey
West Virginia
Virginia
Delaware

The vulnerability analysis for at-risk structures, including critical and public facilities, in Kent County was completed utilizing the following GIS data layers:

- Maryland North Sea Level Rise Data – NOAA's Office for Coastal Management 2019
  - The sea level rise layers show inland extent and relative depth of inundation above mean higher high water (MHHW).
- Kent County Addressable Building Layer
  - The dataset contains addressable buildings for Kent County, MD.
- Maryland Department of Planning's MdProperty View – Kent County 2017
  - The Maryland Department of Planning developed the MdProperty View products to assist users in accessing parcel data. For each parcel, numerous attributes are provided such as account identification, improvement value, year built, etc.
- Maryland Six Inch Imagery - Imagery flown in 2019 for the Eastern Shore
  - The six-inch resolution aerial imagery for the State of Maryland is composed of imagery flown in 2019 (Eastern Shore) and 2017 (Western Shore).

The Maryland North Sea Level Rise data set was to analyze at-risk structures located within the projected sea level rise inundation areas; 1-3 feet. The sea level rise layer was overlaid on the addressable buildings and MdProperty View parcels to determine which structures were at-risk. Loss estimations for at-risk structures were determined using the total improvement values provided within the MdProperty View parcel database. The projected sea level rise does not intersect with the Town of Galena, therefore there are no at-risk structures within town limits. The projected sea level rise does enter town limits for Betterton and Millington; however, no structures were impacted. The following table provides the number of structures at-risk to the projected sea level rise.

Table 10-2: Projected Sea Level Rise At-Risk Structures per Community

Projected Sea Level Rise	Sea Leve Rise – 1 foot			Sea Leve Rise – 2 feet			Sea Leve Rise – 3 feet		
	Residential	Commercial	Other	Residential	Commercial	Other	Residential	Commercial	Other
Kent County Unincorporated	4	7	1	18	3	0	49	3	2
Chestertown	1	2	0	4	0	0	28	5	0
Rock Hall	6	7	0	12	6	0	66	10	0
TOTAL	11	16	1	34	9	0	143	18	2

Source: Smith Planning & Design, 2019 Maryland North Sea Level Rise, Kent County Address Layer, MdProperty View
NOTE: Residential includes: Residential, Commercial Condominium, Commercial/Residential, Residential Condominium, and Apartments
Commercial includes: Commercial, Exempt Commercial
Other includes: Agricultural, Church

Table 10-3 provides the loss estimations for each community affected by sea level rise and the unincorporated areas of the County. The unincorporated areas of the county have the greatest loss estimates from one (1) foot of sea level rise with a total of $6,285,300.00. the Town of Rock Hall is expected to have a greater impact from 2 feet of sea level rise with a loss estimation of $6,188,800.00.

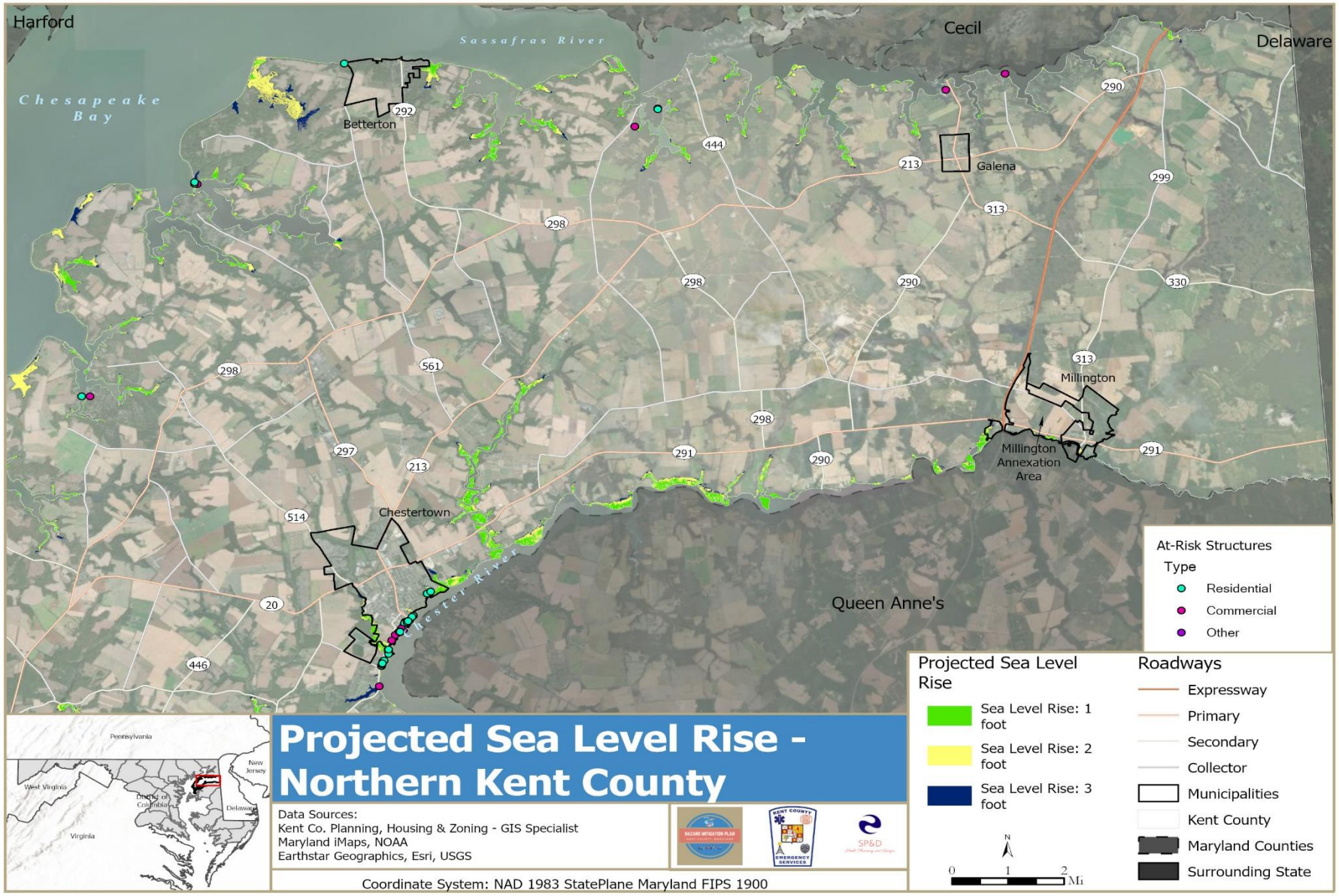
Table 10-3: Projected Sea Level Rise Loss Estimations per Community

Projected Sea Level Rise	Sea Leve Rise - 1 foot	Sea Leve Rise - 2 feet	Sea Leve Rise - 3 feet
Kent County Unincorporated	$6,285,300	$3,527,400	$10,048,300
Chestertown	$1,241,000	$1,307,600	$10,236,400
Rock Hall	$3,419,800	$6,188,800	$10,125,800
TOTAL	$10,946,100	$11,023,800	$30,410,500

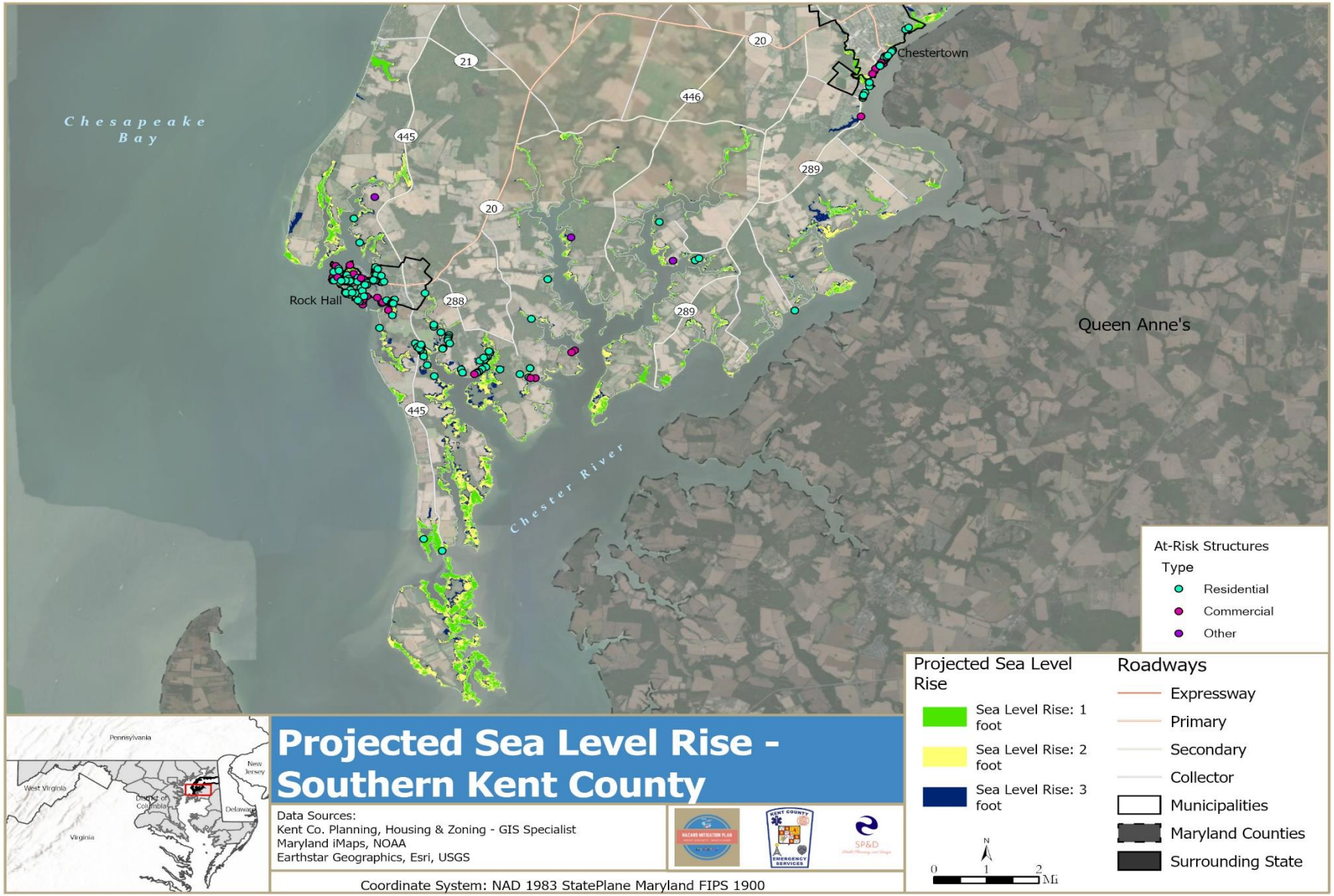
Source: Smith Planning & Design, 2019 Maryland North Sea Level Rise, MdProperty View

The following maps depict the projected sea level rise inundation areas for 1-3 feet and the at-risk structures.

Map 10-3


Harford
Cecil
Delaware
Queen Anne's
Sassafras River
Chesapeake Bay
Chester River
Betterton
Galena
Millington
Millington Annexation Area
Chestertown
292
444
213
290
299
313
298
330
561
297
291
514
20
446
At-Risk Structures
Type
Residential
Commercial
Other
Projected Sea Level Rise
Sea Level Rise: 1 foot
Sea Level Rise: 2 foot
Sea Level Rise: 3 foot
Roadways
Expressway
Primary
Secondary
Collector
Municipalities
Kent County
Maryland Counties
Surrounding State
0 1 2 Mi
Pennsylvania
New Jersey
West Virginia
District of Columbia
Delaware
Virginia
Projected Sea Level Rise - Northern Kent County
Data Sources:
Kent Co. Planning, Housing & Zoning - GIS Specialist
Maryland iMaps, NOAA
Earthstar Geographics, Esri, USGS
Coordinate System: NAD 1983 StatePlane Maryland FIPS 1900

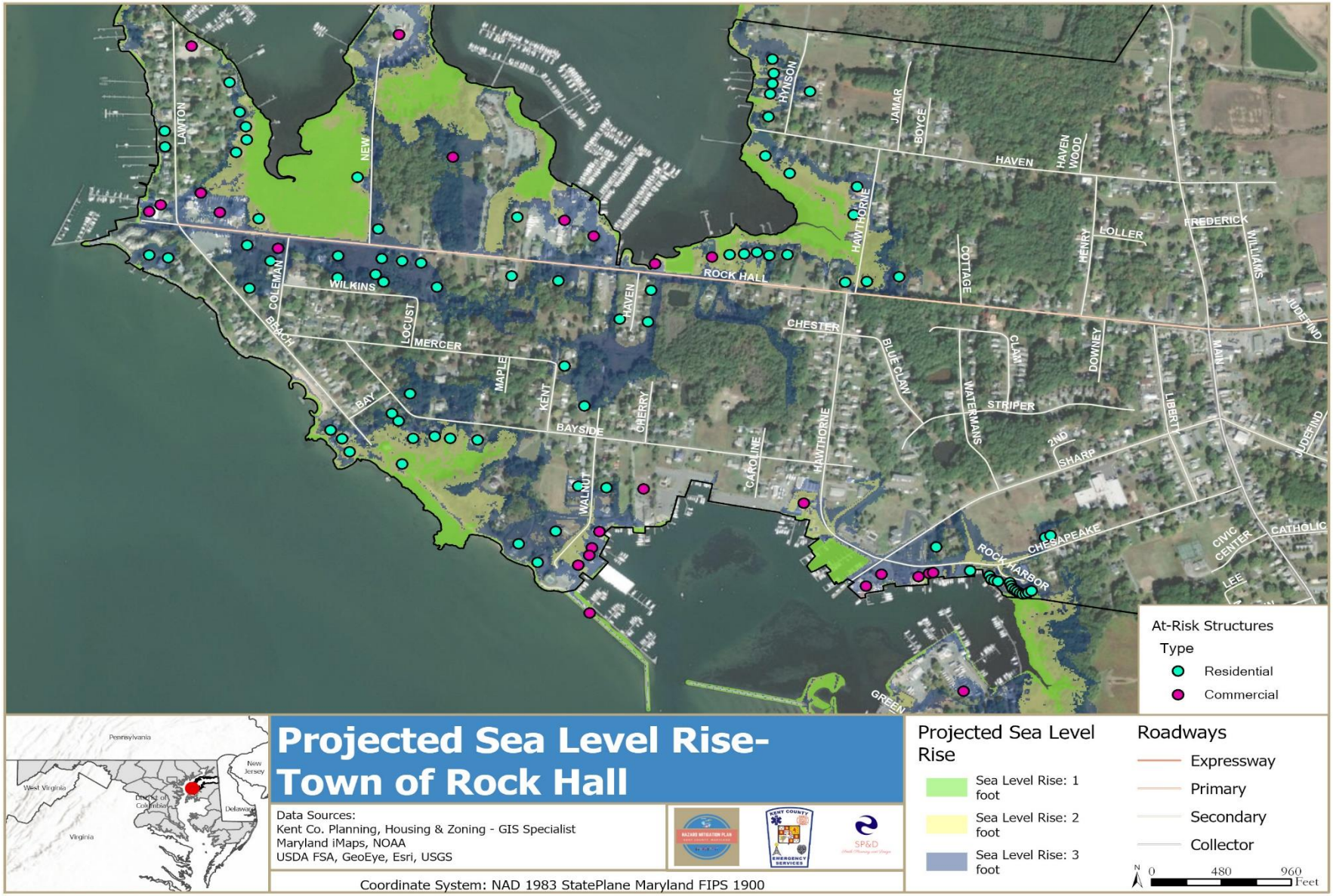
Map 10-4


Chesapeake Bay
Chester River
Rock Hall
Chestertown
Queen Anne's
20
21
445
446
289
288
At-Risk Structures
Type
Residential
Commercial
Other
Projected Sea Level Rise
Sea Level Rise: 1 foot
Sea Level Rise: 2 foot
Sea Level Rise: 3 foot
Roadways
Expressway
Primary
Secondary
Collector
Municipalities
Maryland Counties
Surrounding State
0 1 2 Mi
Pennsylvania
New Jersey
West Virginia
District of Columbia
Delaware
Virginia
Projected Sea Level Rise - Southern Kent County
Data Sources:
Kent Co. Planning, Housing & Zoning - GIS Specialist
Maryland iMaps, NOAA
Earthstar Geographics, Esri, USGS
Coordinate System: NAD 1983 StatePlane Maryland FIPS 1900

Map 10-5


HIGH
RIVERSIDE
CEDAR
SASSAFRAS
BROWN
CAMPUS
ROBERTS
BIRCH RUN
CEDAR CHASE
BARROLL
DAVID
WALDO
BYFORD
COLLEGE
WASHINGTON
MOUNT VERNON
PROSPECT
ELMER HAWKINS
HAWKINS
HIGH
KENT
RICHARD
BYFORD
DIXON
CALVERT
PHILOSOPHERS
HORSEY
SPRING
RIVERSIDE
MILL
PARK
COURT
MAPLE
QUEEN
WATER
CANNON
RADCLIFFE
CROSS
Queen Anne's
Chester River
LANDING
LITTLE HARBOR
JOHN HANSON
QUAKER NECK
RADCLIFFE
PEARCE
CARRIAGE
ALDAN
At-Risk Structures
Type
Residential
Commercial
Pennsylvania
New Jersey
West Virginia
District of Columbia
Delaware
Virginia
Projected Sea Level Rise - Town of Chestertown
Data Sources:
Kent Co. Planning, Housing & Zoning - GIS Specialist
Maryland iMaps, NOAA
USDA FSA, GeoEye, Esri, USGS
Coordinate System: NAD 1983 StatePlane Maryland FIPS 1900
Projected Sea Level Rise
Sea Level Rise: 1 foot
Sea Level Rise: 2 foot
Sea Level Rise: 3 foot
0 500 1,000 Feet
Roadways
Expressway
Primary
Secondary
Collector
Maryland Counties

Map 10-6


LAWTON
NEW
HYNSON
JAMAR
BOYCE
HAVEN
HAVEN WOOD
HAWTHORNE
COTTAGE
HENRY
LOLLER
FREDERICK
WILLIAMS
JUDEFIND
ROCK HALL
COLEMAN
WILKINS
BEACH
LOCUST
MERCER
HAVEN
CHESTER
BLUE CLAW
CLAM
DOWNEY
MAIN
LIBERTY
MAPLE
KENT
BAY
BAYSIDE
CHERRY
CAROLINE
HAWTHORNE
WATERMANS
STRIPER
2ND
SHARP
WALNUT
CHESAPEAKE
ROCK HARBOR
CIVIC CENTER
CATHOLIC
LEE
GREEN
At-Risk Structures
Type
Residential
Commercial
Pennsylvania
New Jersey
West Virginia
District of Columbia
Delaware
Virginia
Projected Sea Level Rise-
Town of Rock Hall
Data Sources:
Kent Co. Planning, Housing & Zoning - GIS Specialist
Maryland iMaps, NOAA
USDA FSA, GeoEye, Esri, USGS
Coordinate System: NAD 1983 StatePlane Maryland FIPS 1900
Projected Sea Level Rise
Sea Level Rise: 1 foot
Sea Level Rise: 2 foot
Sea Level Rise: 3 foot
Roadways
Expressway
Primary
Secondary
Collector
N
0
480
960
Feet

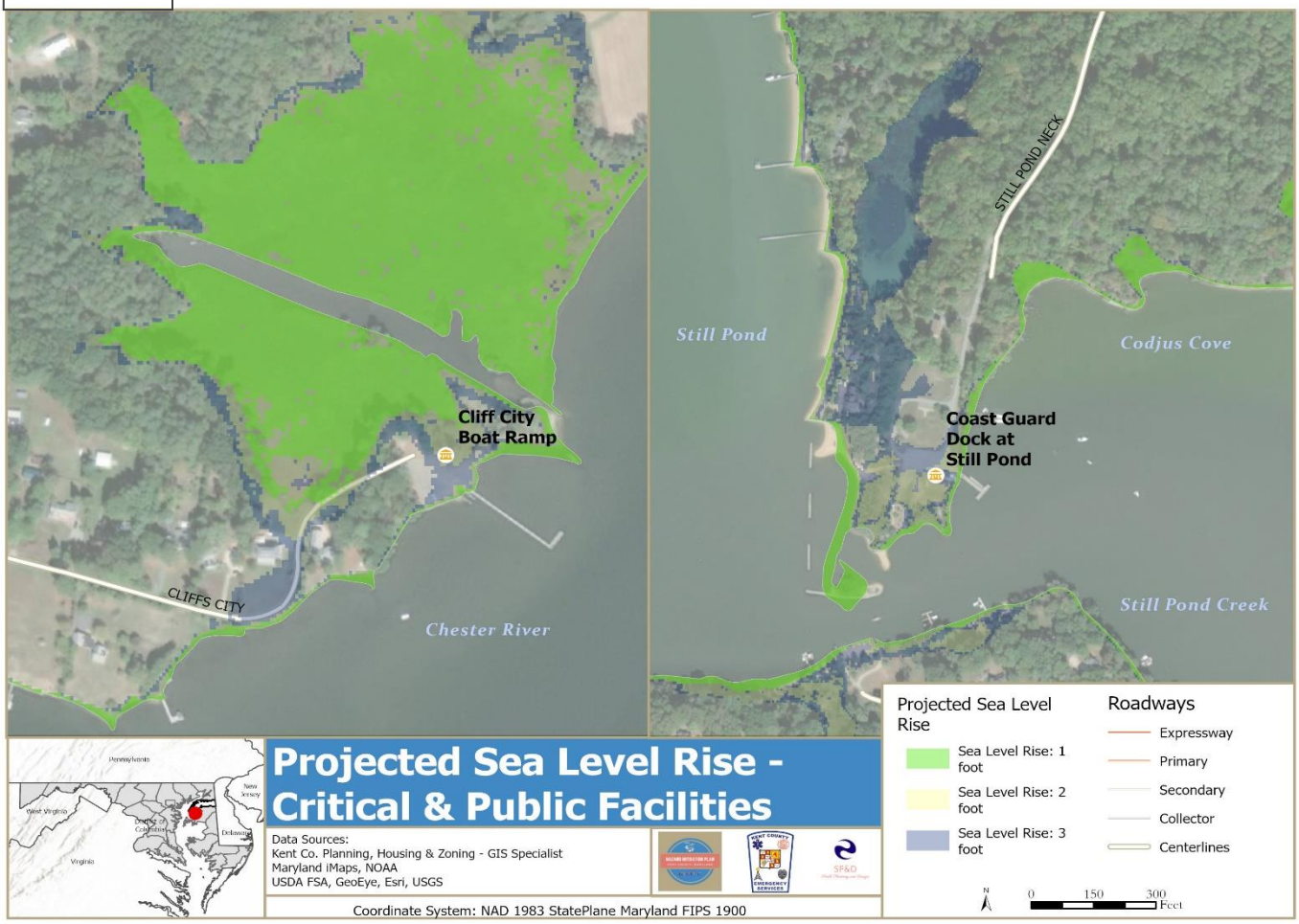
Critical & Public Facilities

Results from the Sea Level Rise (SLR) vulnerability assessment indicated that two (2) public facilities will be affected. The Cliff City Boat Ramp and Coast Guard Dock at Still Pond will be impacted based on sea level rise projections. Cliff City Boat Ramp will be impacted by the projected sea level rise of two (2) feet; and the Coast Guard Dock at Still Pond will be impacted three (3) feet or more of sea level rise. Both facilities are also impacted by coastal flooding and hurricane storm surge inundation, as well.

Table 10-4: Critical & Public Facilities - At Risk to Projected Sea Level Rise

Category	Name	Address	City	Year Built	Building Value	SLR-1 ft	SLR-2 ft	SLR-3 ft
County Owned	Cliff City Boat Ramp	Cliff City Road	Chestertown	Not Available	Not Available	No	Yes	Yes
County Owned	Coast Guard Dock at Still Pond	24188 Still Pond Neck Road	Worton	1970	$161,900	No	No	Yes

Map 10-7



In addition, the *2016 Climate Change and Sea Level Rise Adaptation Report for Kent County* prepared by the Eastern Shore Land Conservancy included the following vulnerability information: The Kent County Detention Center is particularly vulnerable because it has a groundwater spring located nearby. A set of pumps keeps the water table at least 12 feet below the building's foundation. However, during wet or rainy periods the pumps cannot keep up and the basement floors get wet. This is a problem because the Emergency Operations Center and communications equipment is housed in the basement. The public works building at 709 Morgnec Road had groundwater come up through the floors due to the heavy rain during tropical storm Isabel in 2003, indicating that it too is vulnerable to extreme rain events. Kent County relies on 17 major pump stations and nearly a thousand smaller, residential grinder pumps to move water through the stormwater system. These pumps will need the capacity to accommodate increasing flows during wetter wet seasons and heavier downpours.

Capabilities

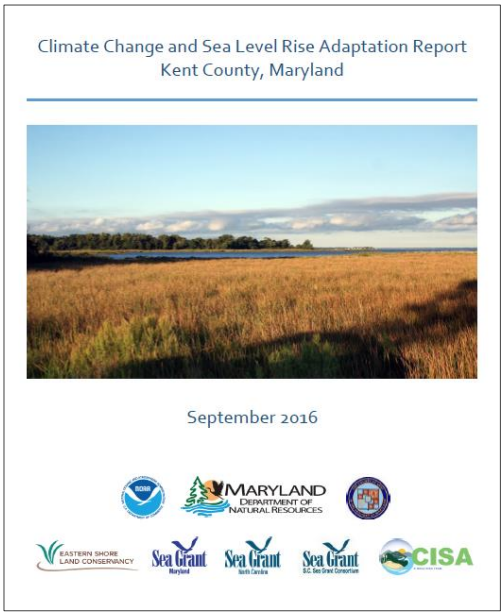
Capabilities

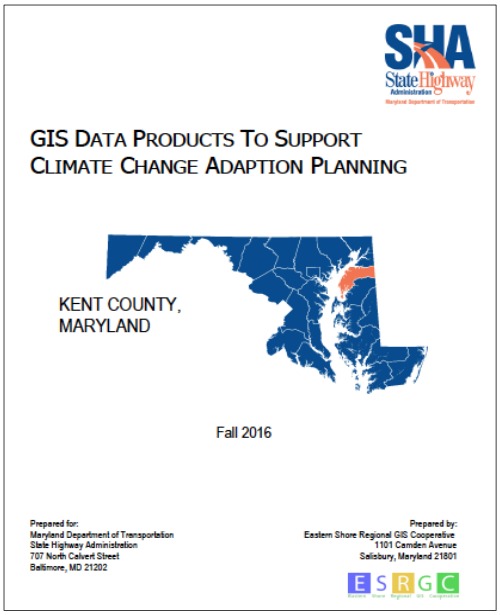
Maryland's *Climate Action Plan* includes two climate change adaptation strategies that are currently being used to guide state-level adaptation planning efforts. The first strategy (Phase 1) addresses the impacts associated with sea level rise and coastal storms. The second strategy (Phase II), released as a complement to the Climate Action Plan, addresses changes in precipitation patterns and increased temperature, and the likely impacts to human health, agriculture, forest and terrestrial ecosystems, bay and aquatic environments, water resources, and nonprofit, and private sectors participated in a series of meetings from the purpose of interpreting the most recent climate change literature, evaluating adaptation options, and recommending strategies to reduce Maryland's overall climate change vulnerability.

The strategies provide the basis for guiding and prioritizing State-level activities with respect to both climate science and adaptation policy over the near and loner terms. A variety of projects designed to implement components of the strategies is well underway and additional efforts have been identified as high priorities for early action.

In addition, several climate change and adaptation reports have been completed specifically for Kent County including:

- ***2016 GIS Data Products to Support Climate Change Adaption Planning***; Kent County, MD prepared by Maryland Department of Transportation, State Highway Administration and the Eastern Shore Regional GIS Cooperative; and,
- ***2016 Climate Change and Sea Level Rise Adaptation Report for Kent County*** prepared by the Eastern Shore Land Conservancy.





On October 5, 2020, The Town of Betterton registered to become Sustainable Maryland Certified. In addition, the Town of Chestertown was awarded The Sustainable Maryland Certification in 2012 and 2015.

Over 10 years ago, the National Oceanic Atmospheric Administration (NOAA) Living Shoreline Project funded the Town of Chestertown with $15,000 to remove a section of bulkhead in their town park and replace it with the living shoreline, reestablishing about 0.40 acres of tidal wetlands along the 276 feet of waterfront.





The Town of Betterton has approximately 400 year-round citizens. As demonstrated by the projects discussed on the following page, it is committed to making both the town and county a Sustainable place to live and visit. The town is a model to other municipalities, proving even small towns with limited resources can succeed.

The town has just completed at $10.1 million-dollar WWTP upgrade. Betterton received the 2019 Wastewater System of the Year award by Maryland Rural water for exceeding standards and their ongoing commitment to significantly reduce Nitrogen and Phosphorus to the Bay. This project also resulted in a reduction of impervious surface within the service area.

In addition, the town also completed the Greener Wheeler Avenue Project. This $1.1 million dollar project was fully funded by US Department of Agriculture and the Community Development Block Grant (CDBG). The design narrowed the road, added permeable sidewalks, a rain garden, plunge pool, and other Best Management Practices (BMP's) to reduce stormwater runoff in and around Wheeler Avenue.



The town has also received a grant from FEMA for erosion control on the steep bank located on Bayside Boulevard. The engineering is complete. This is planned to be a multi-phase project with the first phase of work slated to begin in late 2020. Additional phases will be developed as the project begins.









In addition to erosion control, the town has received a Watershed Assistance Grant to design additional stormwater BMPs on Wheeler Avenue and Bayside Alley. The engineering designs are currently in progress.

Finally, the town has collaborated with Kent County on the removal of invasive species along the shoreline. The most recent project includes the removal of invasive species along bank area by Rigbie steps, regrading the bank, and replanting native species.

Appendix D: Capability Assessment of this document contains more extensive information.

Mitigation Strategies

Mitigation goals, objectives, and action items were identified throughout the plan development process for the unincorporated areas of the county and each of the five (5) towns. Following the review and discussion of risk and vulnerability, stakeholders identified and prioritized new action items for this plan update. Action items identified and designated "climate adaptation" are listed below. The mitigation action items listed as a "High" priority have been further detailed in the table below and includes discussion, potential funding sources, and a timeline for implementation.

Section 10 Goal: Minimize the potential losses of life and property due to Climate Adaptation in Kent County.

Objective 1: To educate the citizens of Kent County on methods to reduce the effects of climate change.

Objective 2: Coordinate and partner with various agencies, department, and organizations to mitigate the effects of climate change and develop adaptation strategies.

Action Items	Hazard(s)	Category	Responsible Entity(s)	Priority Ranking
Consider adopting an expanded floodplain (i.e. including the 0.2% chance "500-year" floodplain) or a "coastal resilience overlay zone" for greater protection from sea level rise and an increased margin of safety against errors in FEMA flood risk maps.	**Climate Adaptation**	Prevention & Natural Resource Protection	Kent County Dept. of Planning, Housing & Zoning	Medium
Consider adopting an expanded floodplain (i.e. including the 0.2% chance "500-year" floodplain) or a "coastal resilience overlay zone" for greater protection from sea level rise and an increased margin of safety against errors in FEMA flood risk maps.	**Climate Adaptation**	Prevention & Natural Resource Protection	Town of Betterton	Medium
			Town of Chestertown	Medium
			Town of Rock Hall	High
			Town of Millington	Medium
Develop a 5-year maintenance and upgrade plan (modeled after the county's water infrastructure maintenance plan) for major building systems (e.g. HVAC, groundwater elevation control) with additional capacity for higher outdoor temperatures, higher cooling loads from electronics, and increased precipitation rates.	**Climate Adaptation**	Prevention & Natural Resource Protection	Kent County Dept. of Public Works	Medium
Complete Sustainable Maryland certification and/or recertification.	**Climate Adaptation**	Natural Resource Protection	Town of Galena	High
			Town of Chestertown	High
			Town of Betterton	Medium

			Town of Millington	Medium

Discussion: Municipalities in Maryland can currently work toward one level of certification. Certification means a municipality has made a commitment to sustainability and succeeded in implementing significant first steps, and municipalities are encouraged to exceed the minimum requirements and make ongoing progress in additional sustainability categories to become a state-wide and national leader. There are a variety of actions municipalities within Kent County can take to become more green and sustainable to earn certification with Sustainable Maryland.

As indicated, priority actions must be completed, and can be chosen from the following actions:

- Community Gardens
- Municipal Energy Audits
- Municipal Carbon Footprint
- Evaluate Current Purchasing Practices
- Green Purchasing Policy
- Vendor Preference Statement
- Stormwater Management Program
- Create a Watershed Plan

Sustainable Maryland registered towns get special priority access and notification of incentives and grants. On October 5, 2020, The Town of Betterton registered to become Sustainable Maryland Certified. In addition, the Town of Chestertown was awarded The Sustainable Maryland Certification in 2012 and 2015.

Possible Funding Sources: Building Blocks for Sustainable Communities, Comprehensive Flood Management Grant Program (FMG), FEMA-Flood Mitigation Assistance Program (FMA), FEMA - Building Resilient Infrastructure and Communities (BRIC), Emergency Coastal Resilience Fund, Five Star and Urban Waters Restoration Grant Program, Local Government Infrastructure Financing Program, Maryland Energy Administration (MEA) -Resilient Maryland, Maryland Energy Administran (MEA) - Combined Heat and Power (CHP) Grant Program, Maryland Sea Grant (NOAA), Watershed and Flood Prevention Operations Program, Capacity Building Grant Coordination & Collaboration Grant, Climate Change Strategy Grant, Innovative Nutrient and Sediment Reduction Grants, Small Watershed Grants, Watershed Assistance Program. These Program can be used specifically to the eight priority items listed above.

Timeline for Implementation: 1-2 years

Strictly enforce sediment erosion control regulations. Pursue grants for planting projects to stabilize soil and mitigate erosion.	**Climate Adaptation**	Prevention & Natural Resource Protection	Town of Rock Hall	**High**

Discussion: There are many potential opportunities for erosion control/planting projects in and around the Town of Rock Hall. These projects could be a part of a larger Green Infrastructure Initiative. Green infrastructure is an important component of many types of local plans at the neighborhood and town levels, including those for water resource management, hazard mitigation, climate adaptation and resilience, sustainability, environmental justice, and economic development. Identifying specific locations for planting projects and mapping these locations is a logical next step. Hold a community meeting to review locations and discuss ideas and options.

Possible Funding Sources: U.S. Department of Housing and Urban Development's Community Development Block Grant (CDBG) Program- Eligible to fund stormwater and green infrastructure; Urban Waters Small Grants Program The Program can be used specifically for innovative or new green

<table>
<tr><td colspan="5">infrastructure practices that improve water quality; state, local, and tribal governments, as well as universities and nonprofit organizations, are eligible to apply.

Timeline for Implementation: 1-2 years</td></tr>
<tr><td>Install Rain Garden into landscaping plan around Cerino Center.</td><td>Climate Adaptation</td><td>Natural Resource Protection</td><td>Town of Chestertown</td><td>High</td></tr>
<tr><td colspan="5">Discussion: Rain gardens are an easy way to capture rainwater that otherwise may lead to flooding and increased pollution. This is because as rainwater flows across our yards, patios, parking lots, and other hard surfaces, the water picks up oil, pet waste, fertilizer, sediments, and other pollutants. This polluted stormwater runoff courses into storm drains and eventually dumps into our stream, rivers and other waterways.

Possible Funding Sources: Outreach & Restoration Grant Program and the Watershed Assistance Program

Timeline for Implementation: 1-2 years</td></tr>
<tr><td>Bayside erosion issues identified by the Town. Note: Partial funding has been obtained for erosion mitigation project by FEMA 2021; project includes revetment and riparian planting.</td><td>Climate Adaptation</td><td>Natural Resource Protection</td><td>Town of Betterton</td><td>High</td></tr>
<tr><td colspan="5">Discussion: The town has received a grant from FEMA for erosion control on the steep bank located on Bayside Boulevard. The engineering is complete. This is planned to be a multi-phase project with the first phase of work slated to begin in late 2020. Additional phases will be developed as the project begins.

Possible Funding Sources: FEMA BRIC, Watershed and Flood Prevention Operations Program

Timeline for Implementation: Multi-Year Project</td></tr>
</table>

SECTION 11



SECTION 11 TOPICS

- EMERGING INFECTION DISEASE HAZARD
- HISTORY & FUTURE RISK
- VULNERABILITY
- CAPABILITIES
- MITIGATION STRATEGIES

PLAN UPDATE HIGHLIGHTS

Emerging Infectious Disease is a new hazard identified during the 2020 Plan Update.

Emerging infectious disease section focused on the following: **Pandemics** (Novel Covid-19 Virus, Novel Influenza A (H1N1), and Severe Acute Respiratory Syndrome (SARS)) and **Epidemics** (Zika Virus and Ebola Virus).

The difference between Epidemic and Pandemic was discussed.

The history for pandemics and epidemics identified were provided. New data obtained from public health stakeholders was integrated.

The vulnerability analysis discussed the risk of contracting an infectious disease and how to reduce this risk.

New capabilities provided by stakeholders were discussed. The Health Department provided information on Kent County's participate in mosquito control for reducing the spread of the Zika Virus. The Health Department also conducts ICS training and maintains the *Kent County Emerging Infectious Disease Plan.*

This is a new section, therefore new goals and objectives were developed.

New 2020-2025 Mitigation Action Items provided by stakeholders were included. Action items ranked "High" were further detailed to include discussion, potential funding sources, and a timeline for implementation.

Emerging Infectious Disease Hazard

Hazard

The *Maryland Department of Health's Emerging Infectious Plan* defines Emerging Infectious Diseases as follows:

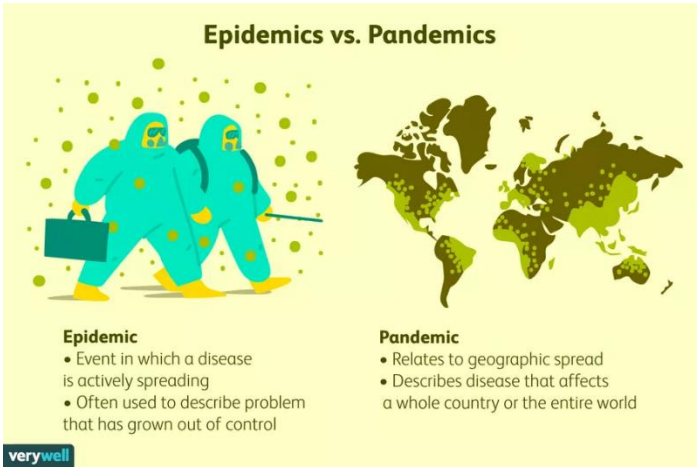
a) an infectious disease that is novel or new to a geographic area;
b) an existing infectious disease that is causing a marked increase in cases or geographic spread; or
c) a biological agent used to cause harm or death in a population (bioterrorism).

Pandemic

The World Health Organization (WHO) defines a pandemic as the worldwide spread of a new disease. A pandemic happens when a new strain of a virus appears for which people have little or no immunity. As a result, it spreads easily from person to person around the world, causing widespread illness and death. Individuals, families, caregivers, healthcare workers and teachers can all take steps to get ready for a pandemic before it happens.

Epidemic

The World Health Organization (WHO) defines an epidemic as the occurrence in a community or region of cases of an illness, specific health-related behavior, or other health-related events clearly more than normal expectancy. The community or region and the period in which the cases occur are specified precisely. The number of cases indicating the presence of an epidemic varies according to the agent, size, and type of population exposed, previous experience or lack of exposure to the disease, and time and place of occurrence.



Source: www.verywellhealth.com

Within emerging infectious disease section, we will be focusing on the following:

- Pandemics
  - Novel Covid-19 Virus,
  - Novel Influenza A (H1N1), and
  - Severe Acute Respiratory Syndrome (SARS),
- Epidemics
  - Zika Virus, and
  - Ebola Virus

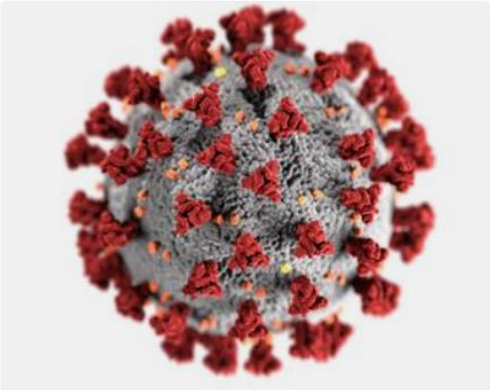
History & Future Risk

History

Novel COVID-19 Pandemic

The Novel COVID-19 pandemic has exploded since cases were first reported in Wuhan, Hubei Province, China in December 2019. As of October 2020, more than 43 million cases of COVID-19–caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infection–have been reported globally, including >1,156,212 deaths. Cases have been reported in more than 189 countries, including all 50 states of the United States.

Individuals of all ages are at risk for infection and severe disease. However, the probability of fatal disease is highest in people aged ≥65 years and those living in a nursing home or long-term care facility. Others at highest risk for COVID-19 are people of any age with certain underlying conditions, especially when not well-controlled. In addition, COVID-19 can spread between people who are in close contact with one another (within about 6 feet), through respiratory droplets produced when an infected person coughs, sneezes or talks, and by persons who are asymptomatic. Symptoms, or a combination of symptoms, can appear 2-14 day after exposure. *Note: COVID-19 is an evolving pandemic. Symptoms are being updated as experts learn more about this virus.*



Source: World Health Organization (WHO)

2009 Novel Influenza A (H1N1) Pandemic

According to the Center for Disease Control, 2009 H1N1 (sometimes called "swine flu") is a new influenza virus causing illness in people. This new virus was first detected in people in the United States in April 2009. This virus was spreading from person-to-person worldwide, probably in much the same way that regular seasonal influenza viruses spread. On June 11, 2009, the World Health Organization (WHO) declared that a pandemic of 2009 H1N1 flu was underway.

Severe Respiratory Acute Syndrome (SARS) Pandemic

According to the World Health Organization (WHO), severe acute respiratory syndrome (SARS) is a viral respiratory disease caused by a SARS-associated coronavirus. It was first identified at the end of February 2003 during an outbreak that emerged in China and spread to 4 other countries. SARS is an airborne virus and can spread through small droplets of saliva in a similar way to the cold and influenza. It was the first severe and readily transmissible new disease to emerge in the 21st century and showed a clear capacity to spread along the routes of international air travel. In addition, it can be spread indirectly via surfaces that have been touched by someone who is infected with the virus.

Most patients identified with SARS were previously healthy adults aged 25-70 years. A few suspected cases of SARS have been reported among children under 15 years. Symptions of SARS usually begins with a high fever (temperature greater than 100.4°F), while some have mild respiratory symptoms at the onset. Others include headache, an overall feeling of discomfort, and body aches. About 10 percent to 20 percent of patients have diarrhea. After 2 to 7 days, SARS patients may develop a dry cough, with most patients developing pneumonia.

Zika Virus Epidemic



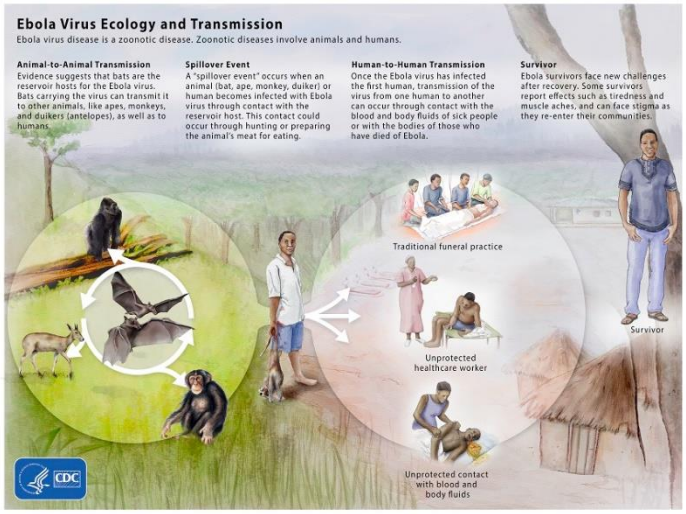
According to the Maryland Department of Health, the Zika virus is an arboviral infection that is spread primarily through the bite of certain species of infected *Aedes* mosquitoes, sexually transmitted, or through blood transfusion (likely but not confirmed). Zika virus has been identified as an illness that causes multiple birth defects including microcephaly, which is defined as abnormal smallness of the head, a congenital condition associated with incomplete brain development. There is no identified vaccine or medication that can be taken to prevent Zika infection. The Eastern Shore has been affected by the Zika virus in the recent past, particularly from 2015-2016 with nine cases reported. As of June 2017, one Zika cases has been reported on the Eastern Shore, a decrease from the year prior.

Ebola Virus Epidemic

According to the Center for Disease Control, Ebola Virus Disease (EVD) is a rare and deadly disease in people and nonhuman primates. The viruses that cause EVD are located mainly in sub-Saharan Africa. People can get EVD through direct contact with an infected animal (bat or nonhuman primate) or a sick or dead person infected with Ebola virus. It is caused by an infection with a group of viruses within the genus *Ebolavirus*:

- Ebola virus (species *Zaire ebolavirus*)
- Sudan virus (species *Sudan ebolavirus*)
- Taï Forest virus (species *Taï Forest ebolavirus*, formerly *Côte d'Ivoire ebolavirus*)
- Bundibugyo virus (species *Bundibugyo ebolavirus*)
- Reston virus (species *Reston ebolavirus*)
- Bombali virus (species *Bombali ebolavirus)*

Of these, only four (Ebola, Sudan, Taï Forest, and Bundibugyo viruses) are known to cause disease in people. Reston virus is known to cause disease in nonhuman primates and pigs, but not in people. It is unknown if Bombali virus, which was recently identified in bats, causes disease in either animals or people.



Ebola symptoms usually include:

- Fever,
- headache,
- diarrhea,
- vomiting,
- weakness,
- joint and muscle aches,
- stomach pain,
- lack of appetite, and
- bleeding.

The symptoms can be similar to other, more common, infections. Symptoms appear 2-21 days after exposure to the virus, but most commonly occur 8-10 days after exposure. Individuals who do not have a fever are not contagious and cannot transmit the disease to another person. The Ebola virus is transmitted through direct contact with the blood or body fluids of an infected person with symptoms or through exposure to objects (such as needles) contaminated by infected body fluids. Transmission can also occur from directly handling bats, rodents, or primates in areas where Ebola occurs. To date, there have been no cases of the disease acquired in Maryland.

Future Risk

Future probability was factored into the hazard risk vulnerability and ranking for each identified hazard, as detailed *Appendix A: Hazard Risk Methodology, Hazard Ranking Results, & Data Tables*. Results for the emerging Infectious diseases hazard indicate a future probability ranking of "highly likely".

Vulnerability

Vulnerability

Traveling abroad can put you at risk for infectious diseases that are not widespread in the United States. Travelers who become ill in a country where treatment for these diseases may be somewhat limited are even more at risk. All people planning travel should become informed about the potential hazards of the countries they are traveling to. Further information to reduce their risk of getting these diseases (https://www.hopkinsmedicine.org/health/conditions-and-diseases/emerging-infectious-diseases).

Loss Estimations

Data collected on as of October 13, 2020 for COVID-19 indicates that 132,343 cases have been confirmed within the State of Maryland, of those confirmed cases, 325 are Kent County residents. Total confirmed deaths reported for the State of Maryland to date is at 3,868, of those, 22 were residents of Kent County.



Capabilities

On June 10, 2020, the Federal Emergency Management Agency (FEMA) released *The Mass Care/Emergency Assistance Pandemic Planning Considerations* to assist state, tribal, and territorial governments in planning mass care delivery. The guide provides information on sheltering, feeding, evacuation and the federal resource request process. It was developed using health and safety planning information and requirements outlined by the Department of Health and Human Services (DHHS) and the Centers for Disease Control and Prevention (CDC).

This document provided planning considerations for jurisdictions that are responding to a pandemic or responding to a pandemic occurring concurrently with a natural, technological and/or human caused disaster. For planning purposes, the document includes only mass care and emergency assistance functions and planning considerations in the context of a pandemic. The delivery of mass care and emergency assistance may vary due to the health and safety planning requirements put forth by DHHS and the CDC.

Concept of operations is based on two types of events: a pandemic without a disaster event and a pandemic during a disaster event.

Response to Concurrent Pandemic and Disaster Event(s)

A natural, technological, or human-caused disaster has occurred in an area disproportionately affected by a pandemic outbreak or a pandemic event emerges during disaster response.

As a direct result of the natural or human-caused disaster, it is necessary to provide mass care and emergency assistance services to affected individuals and emergency responders. In addition, evacuations may be necessary to a neighboring jurisdiction(s) as well as the provision of public health and medical services to individuals affected by the pandemic. This could place an additional burden on neighboring states or tribes providing mass care to the affected populations. Some jurisdictions may not be willing to accept survivors who have, or potentially have been, infected by illness.

NOTE: Depending on the magnitude of the disaster event, a Stafford Act declaration for major disaster may be issued to provide federal financial assistance to the state or tribe and affected survivors in accordance with existing regulations.

Source: The Mass Care/Emergency Assistance Pandemic Planning Considerations

Response to a Pandemic Event Only

Viruses may cause moderate to severe illness and spread easily from person to person. Due to the pandemic outbreak, a range of actions have been established to prevent further spread of the disease, including social distancing, shelter-in-place, travel restrictions and cancellation of large gatherings.

A jurisdiction may experience an outbreak of disease that is beyond the capacity of the state, tribe, territory or affected local government. The affected jurisdiction should initially seek state or tribal assistance. If a state or tribe is unable to provide adequate resources, the state or tribe should request federal assistance.

Homeless populations residing in congregate shelters across the country are at risk, due to lack of space for social distancing and increased risk of cross contamination

FEMA recognizes that non-congregate sheltering will be necessary during a pandemic in an effort to save lives, to protect property and public health and to ensure public safety, as well as to lessen or avert the threat of a catastrophe. In accordance with section 502 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act, eligible emergency protective measures taken to respond to a pandemic emergency at the direction or guidance of state, local, tribal and territorial public health officials may be reimbursed under Category B of FEMA's Public Assistance program.

Source: The Mass Care/Emergency Assistance Pandemic Planning Considerations

The following assistance components are included in the National Response Framework (NRF), 4th Edition Annex for ESF #6, Mass Care, Emergency Assistance, Temporary Housing and Human Assistance.

Mass Care

- Sheltering
- Feeding
- Distribution of Emergency Supplies
- Reunification

Emergency Assistance

- Assistance to People with Disabilities, and Others with Access and Functional Needs, Including those with disabilities
- Household Pets, Services and Support Animals
- Mass Evacuee Support

For details on each of these components, please refer to the Appendices in *The Mass Care/Emergency Assistance Pandemic Planning Considerations at: https://www.fema.gov/media-library/assets/documents/188597*.

In addition, funding from FEMA programs is an important resource to support COVID-19 response and recovery. Given that the Federal supplemental funding to address COVID-19 goes well beyond FEMA authorities, FEMA and other departments and agencies have worked together to create resource guides to help our partners better understand and maximize the available resources.

The interagency resource guides publshed in 2020 for state, local, territorial and tribal governments: COVID-19 Resource Summary Report; and COVID-19 Resource Roadmaps for Education and Food and Nutrition.

Zika Virus Epidemic

Multiple agencies collaborated to create the prevention strategies to limit the spread of Zika infection throughout all communities. The primary goal of the Maryland Department of Agriculture Mosquito Control Program is to prevent mosquito-borne diseases in humans, pets, and domestic livestock. Different mosquitoes can carry and transmit different diseases, and the methods for combating one species can differ from how the department combats another. Managing mosquito populations across the state generally requires the department to undertake several tasks:

- Monitor and test mosquitoes for diseases that pose a threat to public health. These efforts determine whether a threat exists and give a good idea of how big the threat is. This information helps staff decide how to combat a threat.
- Reduce mosquito breeding grounds.
- Larval mosquito control.

The following communities in Kent County participated in mosquito control services during 2020:

- Bayshore Campground, LLC
- Betterton
- Camp Tockwogh
- Carvill Road/Great Oak
- Chestertown
- Cliff Road/Great Oak Landing
- Easter Seals Camp Fairlee
- Forrest Lane/Great Oak
- Galena
- Great Oak Manor
- Kent County Parks & Recreation
- Kentmore Park
- Langford Bay Road
- Little Neck Farms
- Millington
- Pig Neck/Fox Point
- Rock Hall
- Skinner's Neck
- Wymont

The primary goal of Maryland Department of Health is reducing Zika transmission in humans through education on transmission precautions to include the following:

- Educate public on safe sexual practices as Zika is spread through sexual activity;
- Educate public on safe-travel practices to areas where Zika is endemic;
- Wear appropriate clothing that will prevent mosquito bites;
- Dump water from containers around home; and,
- Distribute Zika awareness kits that included condoms, educational flyers, insect repellent, screen repair kits.

In 2016, Governor Larry Hogan declared the week of April 24-30 as "Zika Virus Awareness Week" to urge people to stay informed. Emphasis was placed on information about how to avoid the Zika Virus.

Additional information about the Zika virus can be found at the Maryland Department of Agriculture's website, especially FAQs, at: http://mda.maryland.gov/plants-pests/Pages/Zika.aspx or contact the Somerset County Health Department.

Ebola Epidemic

Several actions protect Marylanders from Ebola:

- First, there are restrictions on travel for individuals in affected nations who are ill.
- Second, there are efforts to screen passengers upon arrival in the United States.
- Third, our health care system can identify potential cases, isolate the individuals, and perform testing.
- Fourth, if there is a case in Maryland, hospitals can isolate the ill person and provide supportive care that may be lifesaving. MDH will provide extra support to hospitals to protect the safety of our healthcare workers.
- Fifth, our public health system can track down contacts of cases and prevent further spread.
- Sixth, MDH is monitoring emergency departments and working closely with hospitals and the CDC.

Because of these steps -- while it is possible that additional cases might appear in the United States, including Maryland -- it is very unlikely that there will be a significant outbreak here. Strict adherence to infection control practices prevents the spread of the virus in health care settings. MDH will continue to work closely with leaders in infection control and CDC to support health care workers.

Local capabilities include Incident Command System (ICS) training for all Health Department Command Center Staff. The Health Department has made this a requirement and utilizes ICS during both large and small incidents. For example, ICS is used during flu vaccine clinics, thereby improving the efficiency and improved coordination of staff.

In addition, the University of Maryland Shore Medical Center at Chestertown has deployed a mobile field unit behind the hospital during the COVID-19 incident. The mobile field hospital increases the current capabilities of the hospital to treat patients.

Finally, the Health Department has developed and maintains the Kent County Emerging Infectious Disease Plan. The plan outlines the county's preparedness, response, and containment of emerging infectious diseases.

Appendix D: Capability Assessment of this document contains more extensive information.

Mitigation Strategies

Mitigation goals, objectives, and action items were identified throughout the plan development process for the unincorporated areas of the county and each of the five (5) towns. Following the review and discussion of risk and vulnerability, stakeholders identified and prioritized new action items for this plan update. Action items identified and designated "emerging infectious disease" are listed below. In addition, one (1) "all hazards" action item relevant to "emerging infectious disease" is listed below. The mitigation action items listed as a "High" priority have been further detailed in the table below and includes discussion, potential funding sources, and a timeline for implementation.

Section 2 Goal: Recognize and respond to new and reemerging infections.

Objective 1: Incorporate applied research to understand and combat emerging infectious disease threats into planning documents;

Objective 2: Provide training to staff for preparedness, response, and recovery from emerging infectious disease.

Action Items	Hazard(s)	Category	Responsible Entity(s)	Priority Ranking
Host and promote training courses such as DHS and FEMA certified courses, specifically related to pandemic/emerging infectious disease.	Emerging Infectious Diseases	Emergency Services	Kent County Health Dept., Office of Emergency Services, and Towns	Medium
Prepare an After Action Report and Improvement Plan (AAR/IP) for COVID-19 incident.	Emerging Infectious Diseases	Emergency Services	Health Department, Office of Emergency Services	Medium
Consider additional training such as Incident Command System (ICS), Incident Management Team (IMT), and Public Information for public health personnel.	All-Hazards	Emergency Services	Kent County Health Dept., Office of Emergency Services, and Towns	High
Discussion: While ICS is promoted within the County, oftentimes training above the introduction level is not undertaken by a large proportion of staff. For instance, the command level staff at the Health Department is required to take ICS training, including 300 and 400 level, however ICS training is not a				

requirement for all staff. Hosting additional training courses and reviewing current training credentials of all staff, will identify training gaps and provide information for a multi-year training plan.

In addition to the health department, personnel at the county and towns should be encouraged to take this training. This training will improve the ability of all staff to communicate and back-fill staff shortages, when necessary, as in the case of extended operational periods.
Finally, increase the number of staff within the county who have taken ICS Train-the-Trainer courses, to provide availability and flexibility for the training plan.

Possible Funding Sources: Many of these courses are offered on-line free of charge.
MEMA/FEMA/DEMA and the Maryland Fire and Rescue Institute offer higher level ICS training courses free of charge. Minimal cost is associated with this action item, aside from potential travel cost.

Timeline for Implementation: Ongoing

APPENDIX A:
HAZARD RISK METHODOLOGY & DATA TABLES

Methodology

Hazard risk for the ten (10) identified hazards was determined by using the composite score method. The composite score method was based on a blend of quantitative factors extracted from the National Centers for Environmental Information (NCEI) and other available data sources. These included:

- Historical impacts, in terms of human lives and property
- Geographic extent;
- Historical occurrence;
- Future probability, and;
- Community perspective.

The following eight (8) ranking parameters were used to develop the composite risk score, which provide the hazard rankings results for the ten (10) identified hazards. Each parameter was rated on a scale of one (1) through four (4).

Injuries & Death Ranking	
Death	4
N/A	3
Injury	2
None	1

Data Source: National Centers for Environmental Information, as of December 31, 2019

Crop Damage Ranking	
> 2M	4
501K	3
50K	2
0	1

Data Source: National Centers for Environmental Information, as of December 31, 2019

Probability & Future Ranking	
Highly Likely	4
Likely	3
Occasional	2
Unlikely	1

Data Source: National Centers for Environmental Information Data Tables: Annualized Events

Property Damage Ranking	
> 2M	4
501K	3
50K	2
0	1

Data Source: National Centers for Environmental Information, as of December 31, 2019

Annualized Events Ranking	
2.51	4
1.01	3
0.11	2
0	1

Data Source: National Centers for Environmental Information, as of December 31, 2019; Maryland Department of Health - Maryland's NEDSS And PRISM Databases, as 201-2018

Community Perspective Ranking	
Very Concerned	4
Concerned	3
Somewhat Concerned	2
Not Concerned	1

Data Source: Kent County Hazard Mitigation Plan Update: Public Survey, https://www.surveymonkey.com/r/HLV9L3F

Max Geographical Extent (Hazard Dependent) Ranking								
Ranking	Coastal & Climate Change	Drought	Flood	Thunderstorm	Tornado & Earthquake	Wildfire	Wind	Winter Storm
1	0.00	0	0.00	0-2 events	0-10 events	0	0.00	10”-19”
2	25.00	0.18	10.00	3-5 events	11-17 events	0.4674	60.00	20”-29”
3	50.00	0.3421	20.00	6-8 events	18-22 events	2.1545	74.00	30”-39”
4	75.00	0.49	30.00	>9 events	>23 event	3.9041	95.00	>40”
Source:	*COASTAL: Risk Area*	*DROUGHT: CDL MD*	*FLOOD: DFIRMS*	*THUNDERSTORM: NCDC*	*TORNADO: NCDC EARTHQUAKE: Maryland Geological Survey*	*WILDFIRE: MD DNR Forest Service Risk Assessment Layer*	*WIND: ASCE*	*WINTER STORM: National Weather Service*
Calculated Using:	*% of Coastal Land Area*	*% Crop Area*	*% Area in 100-yr Floodplain*	*Average number based on: Number of events, 2"> hail and lightning events with Injuries/Deaths*	*Sum of all tornados weighted by F-scale (F1*1.5, F2*2, F3*3, F4*4); Number of Earthquake Events*	*% Area in High and Med-High*	*ASCE Design Wind Speeds*	*Average Snowfall Total*

Source: 2016 State of Maryland Hazard Mitigation Plan

The following weighted risk factors were used in the equation below to determine the composite risk score for each identified hazard.

Weighted Risk Factors:

WEIGHTING		
Injuries	*IN*	1
Deaths	*DT*	1
Property Damage	*PD*	1
Crop Damage	*CD*	1
Geographic Extent (Hazard Dependent)	*GE*	1.5
Events (Annualized)	*EV*	1
Future Probability	*FP*	1
Community Perspective	*CP*	1.5

Equation:

Composite Score = IN + DT + PD + CD + (GE*1.5) + EV + FP + (CP*1.5)

Data Tables

The following data tables were developed and used populating five (5) of the eight (8) parameters: Injuries, Death, Property Damage, Crop Damage, and Annualized Events.

Total Flood Hazard Risk Assessment Data Table *Hazards included within this table from NCEI Data:* *Flood, Flash Flood, Heavy Rain, Coastal Storm, and Storm Surge/Tide.*					
Injuries & Deaths		**Property & Crop Damage**		**Geographic Extent**	**Events 1996-2020**
0	0	2.260M	0	% in 100-yr Flood Zone (A, AE, AO & VE) = 13.33%	Total = 79 Annualized = 3.16

Source: National Centers for Environmental Information, as of December 31, 2019 & 2016 State of Maryland Hazard Mitigation Plan

Flood Hazard Data Table					
Injuries & Deaths		**Property & Crop Damage**		**Geographic Extent**	**Events 2001-2020**
0	0	1.150M	0	% in 100-yr Flood Zone (A, AE, AO & VE) = 13.33%	Total = 3 Annualized =0.15

Source: National Centers for Environmental Information, as of December 31, 2019 & 2016 State of Maryland Hazard Mitigation Plan

Legend: There are three designators: C - County/Parish; Z - Zone; and M - Marine Zone.

Based on NCEI definitions/criteria: Flood (C). *Any high flow, overflow, or inundation by water which causes damage. In general, this would mean the inundation of a normally dry area caused by an increased water level in an established watercourse, or ponding of water, that poses a threat to life or property. If the event is considered significant, it should be entered into Storm Data, even if it only affected a small area. Refer to the Flash Flood event (Section 14) for guidelines for differentiating between Flood and Flash Flood events.*

Flash Flood Data Table					
Injuries & Deaths		**Property & Crop Damage**		**Geographic Extent**	**Events 1999-2020**
0	0	1.010M	0	% in 100-yr Flood Zone (A, AE, AO & VE) = 13.33%	Total = 18 Annualized = 0.82

Source: National Centers for Environmental Information, as of December 31, 2019 & 2016 State of Maryland Hazard Mitigation Plan

Legend: There are three designators: C - County/Parish; Z - Zone; and M - Marine Zone.

Based on NCEI definitions/criteria: Flash Flood (C). *A life-threatening, rapid rise of water into a normally dry area beginning within minutes to multiple hours of the causative event (e.g., intense rainfall, dam failure, ice jam). Ongoing flooding can intensify to the shorter-term flash flooding in cases where intense rainfall results in a rapid surge of rising flood waters. Flash flooding, such as dangerous small stream or urban flooding and dam or levee failures, requires immediate action to protect life and property. Conversely, flash flooding can transition into flooding as rapidly rising waters abate. The Storm Data preparer uses professional judgment in determining when the event is no longer characteristic of a Flash Flood and becomes a Flood.*

Heavy Rain Data Table					
Injuries & Deaths		**Property & Crop Damage**		**Geographic Extent**	**Events 1996-2020**
0	0	0	0	% in 100-yr Flood Zone (A, AE, AO & VE) = 13.33%	Total = 52 Annualized = 2.08

Source: National Centers for Environmental Information, as of December 31, 2019 & 2016 State of Maryland Hazard Mitigation Plan

Legend: There are three designators: C - County/Parish; Z - Zone; and M - Marine Zone.

Based on NCEI definitions/criteria: Heavy Rain (C). *Unusually large amount of rain which does not cause a Flash Flood or Flood event, but causes damage, e.g., roof collapse or other human/economic impact. Heavy Rain will no longer be acceptable as a means to record low-impact or isolated flood events.*

Coastal Flood Data Table					
Injuries & Deaths		Property & Crop Damage		Geographic Extent	Events 1996-2020
0	0	100K	0	% County in risk area= 87.00%	Total = 6 Annualized = 0.24

Source: National Centers for Environmental Information, as of December 31, 2019 & 2016 State of Maryland Hazard Mitigation Plan

Legend: There are three designators: C - County/Parish; Z - Zone; and M - Marine Zone.

Based on NCEI definitions/criteria: Coastal Flood (Z). *Flooding of coastal areas due to the vertical rise above normal water level caused by strong, persistent onshore wind, high astronomical tide, and/or low atmospheric pressure, resulting in damage, erosion, flooding, fatalities, or injuries. Coastal areas are defined as those portions of coastal land zones (coastal county/parish) adjacent to the waters, bays, and estuaries of the oceans. Farther inland, the Storm Data preparer determines the boundary between coastal and inland areas, where flood events will be encoded as Flash Flood or Flood rather than Coastal Flood. Terrain (elevation) features will determine how far inland the coastal flooding extends.*

Total Hurricane Hazard Risk Assessment Data Table *Hazards included within this table from NCEI Data: Tropical Storm. There are no Hurricanes and Tropical Depressions recorded in the NCEI Database for this county.*					
Injuries & Deaths		Property & Crop Damage		Geographic Extent	Events 2003-2020
0	0	550K	0	% County in risk area= 87.00%	Total = 3 Annualized = 0.17

Source: National Centers for Environmental Information, as of December 31, 2019 & 2016 State of Maryland Hazard Mitigation Plan

Tropical Storm Hazard Data Table					
Injuries & Deaths		Property & Crop Damage		Geographic Extent	Events 2003-2020
0	0	550K	0	% County in risk area= 87.00%	Total = 3 Annualized = 0.17

Source: National Centers for Environmental Information, as of December 31, 2019 & 2016 State of Maryland Hazard Mitigation Plan

Legend: There are three designators: C - County/Parish; Z - Zone; and M - Marine Zone.

Based on NCEI definitions/criteria: Tropical Storm (Z). *A tropical cyclone in which the 1-minute sustained surface wind ranges from 34 to 63 knots (39 to 73 mph). A Tropical Storm should be included as an entry when these conditions are experienced in the WFO's (Weather Forecast Office) CWA (County Warning Area).*

Total Extreme Temperatures Hazard Risk Assessment Data Table *Hazards included within this table from NCEI Data: Excessive Heat, Heat, and Excessive Cold/Wind Chill.*					
Injuries & Deaths		Property & Crop Damage		Geographic Extent	Events 2000-2020
3	0	0	0	% Crop from 2012 Agriculture Census = 74.77%	Total = 76 Annualized = 3.62

Source: National Centers for Environmental Information, as of December 31, 2019 & 2016 State of Maryland Hazard Mitigation Plan

Excessive Heat Hazard Data Table					
Injuries & Deaths		Property & Crop Damage		Geographic Extent	Events 2000-2020
0	0	0	0	% Crop from 2012 Agriculture Census = 74.77%	Total = 16 Annualized = 0.76

Source: National Centers for Environmental Information, as of December 31, 2019 & 2016 State of Maryland Hazard Mitigation Plan

Legend: There are three designators: C - County/Parish; Z - Zone; and M - Marine Zone.

Based on NCEI definitions/criteria: Excessive Heat (Z). *Excessive Heat results from a combination of high temperatures (well above normal) and high humidity. An Excessive Heat event occurs and is reported in Storm Data whenever heat index values meet or exceed locally/regionally established excessive heat warning thresholds. Fatalities (directly related) or major impacts to human health that occur during excessive heat warning conditions are reported using this event category. If the event that occurred is considered significant, even though it affected a small area, it should be entered into Storm Data.*

Heat Hazard Data Table					
Injuries & Deaths		Property & Crop Damage		Geographic Extent	Events 1996-2020
3	0	0	0	% Crop from 2012 Agriculture Census = 74.77%	Total = 59 Annualized = 2.36

Source: National Centers for Environmental Information, as of December 31, 2019 & 2016 State of Maryland Hazard Mitigation Plan

Legend: There are three designators: C - County/Parish; Z - Zone; and M - Marine Zone.

Based on NCEI definitions/criteria: Heat (Z). *A period of heat resulting from the combination of high temperatures (above normal) and relative humidity. A Heat event occurs and is reported in Storm Data whenever heat index values meet or exceed locally/regionally established advisory thresholds. Fatalities or major impacts on human health occurring when ambient weather conditions meet heat advisory criteria are reported using the Heat event. If the ambient weather conditions are below heat advisory criteria, a Heat event entry is permissible only if a directly related fatality occurred due to unseasonably warm weather, and not man-made environments.*

Excessive Cold/Wind Chill Hazard Data Table					
Injuries & Deaths		Property & Crop Damage		Geographic Extent	Events 2014-2020
0	0	0	0	Countywide	Total = 1 Annualized = 0.14

Source: National Centers for Environmental Information, as of December 31, 2019 & 2016 State of Maryland Hazard Mitigation Plan

Legend: There are three designators: C - County/Parish; Z - Zone; and M - Marine Zone.

Based on NCEI definitions/criteria: Extreme Cold/Wind Chill (Z). *A period of extremely low temperatures or wind chill temperatures reaching or exceeding locally/regionally defined warning criteria (typical value around -350F or colder). If the event that occurred is considered significant, even though it affected a small area, it should be entered into Storm Data. Normally these conditions should cause significant human and/or economic impact. However, if fatalities occur with cold temperatures/wind chills but extreme cold/wind chill criteria are not met, the event should also be included in Storm Data as a Cold/Wind Chill event and the fatalities are direct. Use this event only if a fatality/injury does not occur during a winter precipitation event.*

Total Tornado Hazard Risk Assessment Data Table *Hazards included within this table from NCEI Data: Tornado and Funnel Cloud.*					
Injuries & Deaths		Property & Crop Damage		Geographic Extent	Events 1950-2020
0	0	502.50K	0	SVRGIS (intensity & frequency) = 1	Total = 7 Annualized = 0.10

Source: National Centers for Environmental Information, as of December 31, 2019 & 2016 State of Maryland Hazard Mitigation Plan

Tornado Hazard Data Table					
Injuries & Deaths		Property & Crop Damage		Geographic Extent	Events 1950-2020
0	0	502.50K	0	SVRGIS (intensity & frequency) = 1	Total = 4 Annualized = 0.06

Source: National Centers for Environmental Information, as of December 31, 2019 & 2016 State of Maryland Hazard Mitigation Plan

Legend: There are three designators: C - County/Parish; Z - Zone; and M - Marine Zone.

Based on NCEI definitions/criteria: Tornado (C). *A violently rotating column of air, extending to or from a cumuliform cloud or underneath a cumuliform cloud, to the ground, and often (but not always) visible as a condensation funnel. For a vortex to be classified as a tornado, it must be in contact with the ground and extend to/from the cloud base, and there should be some semblance of ground-based visual effects such as dust/dirt rotational markings/swirls, or structural or vegetative damage or disturbance.*

Funnel Cloud Hazard Data Table					
Injuries & Deaths		Property & Crop Damage		Geographic Extent	Events 2006-2020
0	0	0	0	SVRGIS (intensity & frequency) = 1	Total = 3 Annualized = 0.2

Source: National Centers for Environmental Information, as of December 31, 2019 & 2016 State of Maryland Hazard Mitigation Plan

Legend: There are three designators: C - County/Parish; Z - Zone; and M - Marine Zone.

Based on NCEI definitions/criteria: Funnel Cloud (C). *A rotating, visible extension of a cloud pendant from a convective cloud with circulation not reaching the ground. The funnel cloud should be large, noteworthy, or create strong public or media interest to be entered.*

Snow & Ice Storms Hazard Risk Assessment Data Table *Hazards included within this table from NCEI Data: Winter Storm, Winter Weather, Blizzard, Cold/Wind Chill, Frost/Freeze, Heavy Snow and Sleet. There are no Ice Storms recorded in the NCEI Database for this county.*					
Injuries & Deaths		Property & Crop Damage		Geographic Extent	Events 1996-2020
0	0	125K	0	Average Snowfall Total = 2	Total = 155 Annualized = 6.2

Source: National Centers for Environmental Information, as of December 31, 2019 & 2016 State of Maryland Hazard Mitigation Plan

Winter Storm Hazard Data Table					
Injuries & Deaths		Property & Crop Damage		Geographic Extent	Events 1996-2020
0	0	125K	0	Average Snowfall Total = 2	Total = 22 Annualized = 0.88

Source: National Centers for Environmental Information, as of December 31, 2019 & 2016 State of Maryland Hazard Mitigation Plan

Legend: There are three designators: C - County/Parish; Z - Zone; and M - Marine Zone.

Based on NCEI definitions/criteria: Winter Storm (Z). *A winter weather event that has more than one significant hazard (i.e., heavy snow and blowing snow; snow and ice; snow and sleet; sleet and ice; or snow, sleet and ice) and meets or exceeds locally/regionally defined 12 and/or 24 hour warning criteria for at least one of the precipitation elements. If the event that occurred is considered significant, even though it affected a small area, it should be entered into Storm Data. Normally, a Winter Storm would pose a threat to life or property.*

Winter Weather Hazard Data Table					
Injuries & Deaths		Property & Crop Damage		Geographic Extent	Events 1996-2020
0	0	0	0	Average Snowfall Total = 2	Total = 76 Annualized = 3.04

Source: National Centers for Environmental Information, as of December 31, 2019 & 2016 State of Maryland Hazard Mitigation Plan

Legend: There are three designators: C - County/Parish; Z - Zone; and M - Marine Zone.

Based on NCEI definitions/criteria: Winter Weather (Z). *A winter precipitation event that causes a death, injury, or a significant impact to commerce or transportation, but does not meet locally/regionally defined warning criteria. A Winter Weather event could result from one or more winter precipitation types (snow, or blowing/drifting snow, or freezing rain/drizzle). The Winter Weather event can also be used to document out-of-season and other unusual or rare occurrences of snow, or blowing/drifting snow, or freezing rain/drizzle. If the event that occurred is considered significant, even though it affected a small area, it should be entered into Storm Data.*

Blizzard Hazard Data Table					
Injuries & Deaths		Property & Crop Damage		Geographic Extent	Events 2010-2020
0	0	0	0	Average Snowfall Total = 2	Total = 1 Annualized = 0.09

Source: National Centers for Environmental Information, as of December 31, 2019 & 2016 State of Maryland Hazard Mitigation Plan

Legend: There are three designators: C - County/Parish; Z - Zone; and M - Marine Zone.

Based on NCEI definitions/criteria: Blizzard (Z). *A winter storm which produces the following conditions for 3 consecutive hours or longer: (1) sustained winds or frequent gusts 30 knots (35 mph) or greater, and (2) falling and/or blowing snow reducing visibility frequently to less than 1/4 mile. If the event that occurred is considered significant, even though it affected a small area, it should be entered into Storm Data.*

Cold/Wind Chill Hazard Data Table					
Injuries & Deaths		Property & Crop Damage		Geographic Extent	Events 1996-2020
0	0	0	0	Countywide	Total = 24 Annualized = 0.96

Source: National Centers for Environmental Information, as of December 31, 2019 & 2016 State of Maryland Hazard Mitigation Plan

Legend: There are three designators: C - County/Parish; Z - Zone; and M - Marine Zone.

Based on NCEI definitions/criteria: Cold/Wind Chill (Z). *Period of low temperatures or wind chill temperatures reaching or exceeding locally/regionally defined advisory (typical value is -180F or colder) conditions. If the event that occurred is considered significant, even though it affected a small area, it should be entered into Storm Data. There can be situations where advisory criteria are not met, but the combination of seasonably cold temperatures and low wind chill values (roughly 150F below normal) may result in a fatality. In these situations, a cold/wind chill event may be documented if the weather conditions were the primary cause of death as determined by a medical examiner or coroner. Normally, cold/wind chill conditions should cause human and/or economic impact. Use this event only if a fatality/injury does not occur during a winter precipitation event.*

Frost/Freeze Hazard Data Table					
Injuries & Deaths		Property & Crop Damage		Geographic Extent	Events 2007-2020
0	0	0	0	Countywide	Total = 1 Annualized = 0.07

Source: National Centers for Environmental Information, as of December 31, 2019 & 2016 State of Maryland Hazard Mitigation Plan

Legend: There are three designators: C - County/Parish; Z - Zone; and M - Marine Zone.

Based on NCEI definitions/criteria: Frost/Freeze (Z). *A surface air temperature of 32 degrees Fahrenheit (F) or lower, or the formation of ice crystals on the ground or other surfaces, for a period of time long enough to cause human or economic impact, during the locally defined growing season. If the event that occurred is considered significant, even though it affected a small area, it should be entered into Storm Data.*

Heavy Snow Hazard Data Table					
Injuries & Deaths		Property & Crop Damage		Geographic Extent	Events 1996-2020
0	0	0	0	Average Snowfall Total = 2	Total = 27 Annualized = 1.08

Source: National Centers for Environmental Information, as of December 31, 2019 & 2016 State of Maryland Hazard Mitigation Plan

Legend: There are three designators: C - County/Parish; Z - Zone; and M - Marine Zone.

Based on NCEI definitions/criteria: Heavy Snow (Z). *Snow accumulation meeting or exceeding locally/regionally defined 12 and/or 24-hour warning criteria. This could mean values such as 4, 6, or 8 inches or more in 12 hours or less; or 6, 8, or 10 inches in 24 hours or less. If the event that occurred is considered significant, even if it affected a small area, it should be entered into Storm Data. In some heavy snow events, structural damage, due to the excessive weight of snow accumulations, may occur in the few days following the meteorological end of the event. The preparer should include this damage as part of the original event and give details in the narrative. Normally, strong winds or other precipitation types are not present in a Heavy Snow event. If they were, then the Winter Storm event should be used.*

Sleet Hazard Data Table					
Injuries & Deaths		Property & Crop Damage		Geographic Extent	Events 1997-2020
0	0	0	0	Countywide	Total = 4 Annualized = 0.17

Source: National Centers for Environmental Information, as of December 31, 2019 & 2016 State of Maryland Hazard Mitigation Plan

Legend: There are three designators: C - County/Parish; Z - Zone; and M - Marine Zone.

Based on NCEI definitions/criteria: Sleet (Z). *Sleet accumulations meeting or exceeding locally/regionally defined warning criteria (typical value is ½ inch or more). The Storm Data preparer should include in the narrative the times that sleet accumulation began, met criteria, and ended.*

Severe Storms Hazard Risk Assessment Data Table *Hazards included within this table from NCEI Data: Thunderstorm Wind, Lightning, and Hail.*					
Injuries & Deaths		Property & Crop Damage		Geographic Extent	Events 1968-2020
10	0	116.50K	5K	ASCE Wind Design Speed = 90 2"> hail and lightning events with Injuries/Deaths = 2	Total = 173 Annualized = 3.26

Source: National Centers for Environmental Information, as of December 31, 2019 & 2016 State of Maryland Hazard Mitigation Plan

Thunderstorm Wind Hazard Data Table					
Injuries & Deaths		Property & Crop Damage		Geographic Extent	Events 1968-2020
2	0	70.50K	0	ASCE Wind Design Speed = 90	Total = 139 Annualized = 2.62

Source: National Centers for Environmental Information, as of December 31, 2019 & 2016 State of Maryland Hazard Mitigation Plan

Legend: There are three designators: C - County/Parish; Z - Zone; and M - Marine Zone.

Based on NCEI definitions/criteria: Thunderstorm Wind (C). *Winds, arising from convection (occurring within 30 minutes of lightning being observed or detected), with speeds of at least 50 knots (58 mph), or winds of any speed (non-severe thunderstorm winds below 50 knots) producing a fatality, injury, or damage. Maximum sustained winds or wind gusts (measured or estimated) equal to or greater than 50 knots (58 mph) will always be entered. Events with maximum sustained winds or wind gusts less than 50 knots (58 mph) should be entered as a Storm Data event only if the result in fatalities, injuries, or serious property damage. Storm Data software permits only one event name for encoding severe and non-severe thunderstorm winds. The Storm Data software program requires the preparer to indicate whether the sustained wind or wind gust value was measured or estimated.*

Lightning Hazard Data Table					
Injuries & Deaths		Property & Crop Damage		Geographic Extent	Events 1997-2020
8	0	26K	5K	2"> hail and lightning events with Injuries/Deaths = 2	Total = 15 Annualized = 0.63

Source: National Centers for Environmental Information, as of December 31, 2019 & 2016 State of Maryland Hazard Mitigation Plan

Legend: There are three designators: C - County/Parish; Z - Zone; and M - Marine Zone.

Based on NCEI definitions/criteria: Lightning (C). *A sudden electrical discharge from a thunderstorm, resulting in a fatality, injury, and/or damage.*

Hail Hazard Data Table					
Injuries & Deaths		Property & Crop Damage		Geographic Extent	Events 1975-2020
0	0	0	0	2"> hail and lightning events with Injuries/Deaths = 2	Total = 18 Annualized = 0.39

Source: National Centers for Environmental Information, as of December 31, 2019 & 2016 State of Maryland Hazard Mitigation Plan

Legend: There are three designators: C - County/Parish; Z - Zone; and M - Marine Zone.

Based on NCEI definitions/criteria: Hail (C). *Frozen precipitation in the form of balls or irregular lumps of ice. Hail 3/4 of an inch or larger in diameter will be entered. Hail accumulations of smaller size, which cause property and/or crop damage or casualties, should be entered. Maximum hail size will be encoded for all hail reports entered.*

Derecho (High Wind) Hazard Risk Assessment Data Table *Hazards included within this table from NCEI Data: Derecho, High Wind and Strong Wind.*					
Injuries & Deaths		Property & Crop Damage		Geographic Extent	Events 1996-2020
0	0	630.98K	1K	ASCE Wind Design Speed = 90	Total = 112 Annualized = 4.48

Source: National Centers for Environmental Information, as of December 31, 2019 & 2016 State of Maryland Hazard Mitigation Plan

High Wind Hazard Data Table					
Injuries & Deaths		Property & Crop Damage		Geographic Extent	Events 1996-2020
0	0	396.50K	0	ASCE Wind Design Speed = 90	Total = 28 Annualized = 1.12

Source: National Centers for Environmental Information, as of December 31, 2019 & 2016 State of Maryland Hazard Mitigation Plan

Legend: There are three designators: C - County/Parish; Z - Zone; and M - Marine Zone.

Based on NCEI definitions/criteria: High Wind (Z). *Sustained non-convective winds of 35 knots (40 mph) or greater lasting for 1 hour or longer, or gusts of 50 knots (58 mph) or greater for any duration (or otherwise locally/regionally defined). In some mountainous areas, the above numerical values are 43 knots (50 mph) and 65 knots (75 mph), respectively. If the event that occurred is considered significant, even though it affected a small area, it should be entered into Storm Data.*

Strong Wind Hazard Data Table					
Injuries & Deaths		Property & Crop Damage		Geographic Extent	Events 1997-2020
0	0	214.48K	1K	ASCE Wind Design Speed = 90	Total = 83 Annualized = 3.46

Source: National Centers for Environmental Information, as of December 31, 2019 & 2016 State of Maryland Hazard Mitigation Plan

Legend: There are three designators: C - County/Parish; Z - Zone; and M - Marine Zone.

Based on NCEI definitions/criteria: Strong Wind (Z). *Non-convective winds gusting less than 50 knots (58 mph), or sustained winds less than 35 knots (40 mph), resulting in a fatality, injury, or damage. Consistent with regional guidelines, mountain states may have higher criteria. A peak wind gust (estimated or measured) or maximum sustained wind will be entered.*

Derecho Hazard Data Table					
Injuries & Deaths		Property & Crop Damage		Geographic Extent	Events 2012-2020
0	0	20K	0	ASCE Wind Design Speed = 90	Total = 1 Annualized = 0.11

Source: - National Centers for Environmental Information, as of December 31, 2019 & 2016 State of Maryland Hazard Mitigation Plan.

Based on NCEI definitions/criteria: Derecho. *A widespread, long-lived windstorm associated with a band of rapidly moving showers or thunderstorms variously known as a squall line, bow echo, or quasi-linear convective system. Although a derecho can produce destruction similar to that of a tornado, the damage typically occurs in one direction along a relatively straight swath. As a result, the term "straight-line wind damage" sometimes is used to describe derecho damage. By definition, a derecho must include wind gusts of at least 58 mph (50 knots or 93 km/h) or greater along most of its length. A derecho wind damage swath must extend more than 240 miles (about 400 kilometers).*

Cases of Selected Notifiable Conditions Reported Kent County, Maryland 2014-2018					
Condition	2014	2015	2016	2017	2018
Animal Bites	81	65	58	53	64
Campylobacteriosis	0	4	4	8	1
Chlamydia	59	35	58	33	73
Creutzfeldt-Jakob Disease	0	0	N/A	N/A	0
Cryptosporidiosis	0	2	0	1	0
Cyclosporiasis	0	0	1	0	0
Ehrlichiosis	0	1	1	0	1
Giardiasis	2	0	1	1	1
Gonorrhea	5	10	0	16	7
H. Influenzae - Invasive Disease	0	0	14	0	0
Kawasaki Syndrome	0	0	0	1	0
Legionellosis	1	0	1	0	0
Lyme Disease	15	19	15	12	9
Meningitis, Aseptic	0	0	0	0	1
Mycobacteriosis, Other Than Tb & Leprosy	2	0	3	1	2
Pertussis	0	0	1	0	0
Rabies - Animal	0	5	5	1	2
Salmonellosis - Other Than Typhoid Fever	7	4	4	7	9
Shiga Toxin Producing E. Coli (STEC)	0	0	1	0	0
Shigellosis	0	0	1	0	0
Spotted Fever Rickettsiosis	0	0	0	2	2
Strep Group B - Invasive Disease	1	1	2	1	7
Strep Pneumoniae - Invasive Disease	2	1	1	3	2
Syphilis - Congenital	0	1	0	0	0
Syphilis - Primary and Secondary	0	0	1	1	0
Tuberculosis	0	0	0	0	1
Vibriosis (Non-Cholera)	0	0	1	0	1

Data Sources: Maryland Department of Health - Maryland's NEDSS And PRISM Databases. These are active databases and counts may vary slightly over time, as well as differ slightly from counts published by the Centers for Disease Control and Prevention (CDC). HIV/AIDS data are not included here but available at http://phpa.dhmh.maryland.gov/OIDEOR/CHSE/SitePages/statistics.aspx.
Data for 2014 is current as of July 10, 2015, Data for 2015 is current as of November 8, 2018, Data for 2016 is current as of January 9, 2018, Data for 2017 is current as of November 8, 2018, Data for 2018 is current as of June 19, 2019.

Hazard Ranking Results

Using the data tables above to populate the parameters, the composite score was determined for each identified hazard; below. Hazard Rankings were assigned accordingly using the Composite Score chart. The following table provides parameter information and scoring, composite score and hazard risk ranking for each hazard.

Composite Score

Score (>=)	*Hazard Ranking*
0	Medium-Low
15	Medium
20	Medium-High
25	High

Composite Score

Hazards	Injuries & Deaths		Property & Crop Damage	Geographic Extent	Total Events Annualized	Future Probability	Community Perspective	Composite Score	HAZARD RANINKG
Flood (Flood, Flash, Heavy Rain, Coastal Storm, Storm Surge/Tide)	0 = 1	0 = 1	2.260M = 4	0 = 1	13.33% = 2	3.16 = 4	Highly Likely = 4	Concerned = 3	22.5	Medium High
Hurricane (Tropical Storm, Hurricanes, Tropical Depression)	0 = 1	0 = 1	550K = 3	0 = 1	87.00% = 4	0.17 = 2	Occasional = 2	Concerned = 3	20.5	Medium High
Extreme Temperatures (Excessive Heat, Heat, Excessive Cold/Wind Chill)	3 = 2	0 = 1	0 = 1	0 = 1	74.77% = 4	3.62 = 4	Highly Likely = 4	Somewhat Concerned = 2	22	Medium High
Tornado (Tornado & Funnel Cloud)	0 = 1	0 = 1	502.50K = 3	0 = 1	1 = 1	0.10 = 1	Occasional = 2	Somewhat Concerned = 2	13.5	Medium Low
Snow & Ice Storms (Winter Storm, Winter Weather, Blizzard, Cold Wind/Chill, Frost/Freeze, Heavy Snow, Sleet)	0 = 1	0 = 1	125K = 2	0 = 1	2 = 1	6.2 = 4	Occasional = 2	Concerned = 3	17	Medium
Severe Storms (Thunderstorm Wind, Lightning, Hail)	10 = 2	0 = 1	116.50K = 2	5k = 1	90 = 3 2 = 1	3.26 = 4	Highly Likely = 4	Concerned = 3	25	High
High Wind (Derecho & Straight-line Winds, High Winds, Strong Wind)	0 = 1	0 = 1	630.98K = 2	1k = 1	90 = 3	4.48 = 4	Highly Likely = 4	Concerned = 3	22	Medium High
Earthquake	0 = 1	0 = 1	<50K = 1	0 = 1	17 = 2	0.77 = 2	Occasional = 2	Somewhat Concerned = 2	14	Medium Low
Climate Change (Erosion & Sea Level Rise)	0 = 1	0 = 1	0 = 1	0 = 1	87% = 4	*0.08 = 1	Highly Likely = 4	Concerned = 3	19	Medium
Pandemic & Emerging Infectious Diseases	** 204 = 2	** 22 = 4	0 = 1	0 = 1	*** 100% = 4	**** 1.64 = 3	Highly Likely = 4	Very Concerned = 4	27	High

*Climate Change Annualized Events: According to the *2016 Climate Change and Sea Level Rise Adaptation Report Kent County, Maryland,* Kent County, the observed increase in precipitation is between 5% and 10% over the past six decades. Therefore, eight percent was used for the "Total Events/Annualized" category.
**Injuries & Deaths were based on *Coronavirus Disease 2019 (COVID-19) Outbreak* data provided by Maryland Department of Health as of July 2020
***Pandemic & Emerging Infectious Diseases' geographic extent is countywide (100%).
**** Total Events/Annualized based on Cases of Selected Notifiable Conditions Reported Kent County, Maryland 2014-2018. *Source: Maryland Department of Health - Maryland's NEDSS And PRISM Databases*

APPENDIX B:
2014 – 2020 MITIGATION ACTIONS STATUS REPORT

Hurricane Mitigation	Hurricane Project	Responsible Organization
Ensure adequate protection of critical facilities and infrastructure throughout the County.	**#1 -** Install early warning devices.	Kent County Emergency Management, Municipalities
	Comments: **OES** - Code Red has been established as our early warning mechanism. There is an ever-present campaign to encourage residents & frequent visitors to sign up. Other options have been pursued, such as the use of warning sirens. All existing ones are privately owned, operated and managed and they are not interested in assisting in this campaign, due to an overwhelming number of complaints from residents of the loud noise generated from these sirens, so this is no longer being pursued. – Ongoing **MILLINGTON** - The Town of Millington does not have any early warning devices available. – Incomplete	
	High Priority #2 - Engineering services should provide specifications for backup generators and fuel tanks to provide the municipalities and County with a continuous source of electrical power.	Kent County Planning, Kent County Emergency Management, Municipalities
	Comments: **OES** - Backup generators are available in the KC Community Center & KC High School (our emergency animal shelter) so that these sites may be used as emergency shelter locations. Some fire houses have backup generators. There are generators in the 9-1-1 center & its backup location to ensure uninterrupted operations. There is an on-going quest for additional funding for generators in other locations, such as Washington College. - Partial **PLANNING** - DPHZ (Department of Planning, Housing, and Zoning) was of the understanding that this project has been completed and critical facilities and pump stations have backup generators. It was handled by the Departments of Public Works and Information Technology. – Complete **CHESTERTOWN** - Wastewater Treatment Plant, Water Plan and Police have emergency generators. – Complete **MILLINGTON** - The Town of Millington does not have any backup generators nor backup fuel tanks. – Incomplete	
Increase public understanding, support, and demand for hurricane mitigation.	**#3 -** Identify and solicit low/no cost partners to create awareness and promote outreach and conduct a business continuity planning workshop to promote disaster resistance, mitigation, and preparedness to help businesses develop contingency plans to minimize loss during disasters.	Kent County Emergency Management, Kent County Public Works, Municipalities
	Comments: **OES** - The importance of COOP planning has been brought to the attention of our local municipalities through luncheon meetings with mayors. COOP plans have also been presented to the leadership of the local Chamber of Commerce. Work is ongoing on all of these fronts. KC Government has re-done all COOP plans (2015) with an annual review for updates. – Ongoing **CHESTERTOWN** - Incomplete **MILLINGTON** – Incomplete **HISTORIC SOCIETY –** Historic Society could assist with promoting outreach, etc.	

Hurricane Mitigation cont.	Hurricane Project	Responsible Organization
Increase public understanding, support, and demand for hurricane mitigation. Continued	**#4 -** Provide the Delmarva Emergency Task Force guidance document for public review in the county libraries and at County offices.	Kent County Emergency Management, Kent County Public Works, Municipalities
	Comments: **CHESTERTOWN** - Incomplete **MILLINGTON** - Have no record of such document. - Incomplete	
Ensure County residents are aware of evacuation procedures.	**#5 -** Office of Emergency Services should have available all information needed for residents and visitors to make informed decisions regarding evacuating the County.	Kent County Emergency Management, Kent County Public Works, Municipalities
	Comments: **OES** - The entire state of MD re-evaluated our evacuation plans in 2018-19. This information was announced to the public in summer of 2019 via a WCTR recording as well as in press releases to local media. The Know Your Zone campaign has been in effect since 2018, and with it, we encourage all residents & visitors to know their evacuation zones and routes. This has become an on-going campaign, and stressed during June - November, to coincide with hurricane season. - Ongoing **CHESTERTOWN** - Not sure whether this has been done. - Incomplete **MILLINGTON** – Incomplete **HISTORIC SOCIETY –** We have a database of 200+ local families. We would be able to share emergency information with OES.	

Flooding Mitigation	Flood Project	Responsible Organization
Ensure that existing structures in the floodplain are resistant to flood related damage.	High Priority #6 - Conduct an assessment of all structures in the 100-year floodplain and obtain data to determine the best flood protection measure that will keep the character of the structure intact. Project costs and benefits will be considered when projects are prioritized.	Kent County Assessment Office, Kent County Planning, Kent County Emergency Management, Middle Dept. Inspection Agency, and the Towns of Betterton, Chestertown, Millington, and Rock Hall
	Comments: **PLANNING** - The Climate Change and Sea Level Rise Adaptation Report maps indicated structures in the FP, but no assessments have been completed to determine necessary mitigation projection measures - Partial **CHESTERTOWN** - All buildings in the Historic District have been surveyed, including those in the floodplain. Flood mitigation measures - Partial **MILLINGTON** - Incomplete	
	High Priority #7 - Identify older homes (built prior to 1940) and pre-FIRM residential structures in the flood plain that are in need of substantial improvement in order to bring them into compliance.	Kent County Assessment Office, Kent County Planning, Kent County Emergency Management, Middle Dept. Inspection Agency, and the Towns of Betterton, Chestertown, Millington, and Rock Hall
	Comments: **PLANNING** - Structures are identified and assessed when owners apply for building permits to alter their homes. - Ongoing **CHESTERTOWN** - Assume that this is being done on an individual basis by property owners in response to insurance requirements, especially post Hurricane Isabel. - Ongoing **MILLINGTON** - Incomplete **HISTORIC SOCIETY** - Our organization can assist in identifying these older homes. Our landmark book, Historical Houses of Kent County, identifies most structures from the 1700's to 1860. We can also survey our members to help identify such properties and structures.	
	#8 - Inform owners of the remaining 2 repetitive loss properties in the County when funding is available and explore mitigation options with them.	Kent County Assessment Office, Kent County Planning, Kent County Emergency Management, Middle Dept. Inspection Agency, and the Towns of Millington and Rock Hall
	Comments: **OES** - Town of Betterton has taken great advantage of this and is in the midst of mitigating erosion, through a FEMA grant, along the Chesapeake Bay within town limits. - Ongoing **PLANNING** - Ongoing, **MILLINGTON** - Incomplete	

Flooding Mitigation cont.	Flood Project	Responsible Organization
Ensure that existing structures in the floodplain are resistant to flood related damage. Continued.	**#9 -** Develop a system for recording and storing elevation certificates and first-floor elevation data using County GIS and database technology.	Kent County Assessment Office, Kent County Planning, Municipalities
	Comments: **PLANNING** - All elevation certificates are kept with building permits, but the information is not stored within the County GIS. - Partial **CHESTERTOWN** - Is this GIS data that is available through Kent County Planning? If so, I have GIS and would like to have that GIS layer. - Incomplete **MILLINGTON** - Incomplete	
Create awareness among county residents of the potential hazards associated with floodplain areas and the ways they can protect themselves and their properties from flood events.	**#10 -** Targeted mailings could be used to inform residents, while detailed information should be made available at the public library.	Kent County Public Works, Kent County Planning, Middle Dept. Inspection Agency, Municipalities
	Comments: **PLANNING** - When a property owner, or prospective owner, inquiries about a property, they are notified of floodplain information that is relevant to that property. Targeted mailings have not been sent. - Partial **CHESTERTOWN** - Incomplete **MILLINGTON** - Incomplete **HISTORIC SOCIETY -** Our organization can easily make this information available to our membership by email.	
	High Priority **#11 -** Provide floodplain regulation seminars to area contractors, real estate agents, and insurance providers on an annual basis.	Kent County Public Works, Kent County Planning, Middle Dept. Inspection Agency, Municipalities
	Comments: **PLANNING** - Training for real estate agents has been conducted by DPHZ, but it hasn't been done annually. - Partial **CHESTERTOWN** - Best done by County personnel, as they deal with the regulations on a more regular basis. - Incomplete **MILLINGTON** - Incomplete	

Flooding Mitigation cont.	Flood Project	Responsible Organization
Protect critical facilities in the 100-year flood plain.	High Priority #12 - For the following critical facilities located within the floodplain, a technical report should be completed. Mitigation measures and a detailed benefit/cost analysis should be conducted as well. * Washington College, Custom House * Washington College, Armory * Water tower in Rock Hall	Kent County Public Works, Kent County Planning, Middle Dept. Inspection Agency, Washington College, State Highway Administration, Towns of Chestertown and Rock Hall
	Comments: **PLANNIG** - These facilities are not located within the unincorporated areas of the County. DPHZ should not be involved with this strategy. **CHESTERTOWN** - I'm curious why only the Custom House and Armory are listed in Chestertown, and why those are identified as critical facilities? What are the criteria for making it onto that list? - Incomplete **HISTORIC SOCIETY** - How were these sites identified as "critical facilities?	
Protect critical facilities in the 100-year flood plain. Continued	**#13 -** Explore tide flex valves in the Town of Rock Hall.	Town of Rock Hall
	Comments:	
	#14 - Develop an enhanced flood warning system to include the use of GIS and loss estimation software (such as FEMA's HAZUS-MH software) in the development of flood stage forecast maps, flood depth maps and images of vulnerable structures linked to parcels and flood stage maps.	Kent County Public Works, Kent County Planning, Municipalities
	Comments: **PLANNING** - DPHZ staff completed HAZUS-MH training, but use of the software has not been implemented by the County. - Partial **CHESTERTOWN** - I assume that this is something that the State is doing. We do not have the staff expertise to do this. - Incomplete **MILLINGTON** - Incomplete	
Prepare/update stormwater management plans for areas in the County.	**#15 -** Prepare a Drainage Plan and a subsequent stormwater management plan to outline a method of evaluating and managing the entire drainage system.	Kent County Public Works, Kent County Planning, Kent County Soil and Water Conservation District, Municipalities
	Comments: **CHESTERTOWN** - Stormwater analysis for the Town has been done piecemeal over the years, starting with a walk-around study by Chester River Association (now ShoreRivers) in the early 2000's. Another study is currently under way with a grant being administered by ShoreRivers. - Partial **MILLINGTON** - Incomplete	

Winter Storm Mitigation	Winter Storm Project	Responsible Organization
Maintain high construction standards by ensuring current building codes and standards follow FEMA's basic guidelines and are properly enforced.	**#16 -** The County, municipalities, or concerned property owners should identify homes that are in need of tie- downs to reduce the vulnerability to high wind damages.	Kent County Planning, Middle Dept. Inspection Agency, Municipalities
	Comments: **PLANNING** - DPHZ has not taken any steps to identify homes that are in need of tie-downs. - **Ongoing** **CHESTERTOWN** - Not sure that this is a viable project. Earthquake damage is more likely. **-** **Incomplete** **MILLINGTON** - **Incomplete** **HISTORIC SOCIETY -** Our organization can survey our members for this information.	
	#17 - Building codes specific to high wind resistance and resilience to heavy rooftop loads in high wind zones must be followed by contractors and enforced by building inspectors.	Kent County Planning, Middle Dept. Inspection Agency, Municipalities
	Comments: **PLANNING** - All building permits are required to meet the 2018 International Building Code. - **Complete** **CHESTERTOWN** - This has already been implemented with the building codes, including solar panels that must be able to withstand certain wind loads. - **Complete** **MILLINGTON - Incomplete**	
Ensure residents are forewarned and prepare County with supplies to face winter storms.	**#18 -** Stock adequate quantities of salt and sand to expedite road clearing.	Kent County Roads, Kent County Emergency Management, State Highway Administration
	Comments: **OES -** We have not had any shortages of salt/sand for road issues **-** **Ongoing** **ROADS DEPT** - **Complete** **CHESTERTOWN** - **Complete**	
	High Priority #19 - Identify areas of frequent snow drifting and install snow fencing in those areas.	Kent County Roads, Kent County Emergency Management, State Highway Administration
	Comments: **OES** - Still working on this. There has been only 1 significant snow event in the last 5 years (Jan 2016) in which we had more than 6" of snow. **-** **Incomplete** **ROADS DEPT** - **Complete**	

Winter Storm Mitigation cont.	Winter Storm Project	Responsible Organization
Ensure residents are forewarned and prepare County with supplies to face winter storms. Cont.	**#20 -** Provide public education (concerning safe driving and driving only if it is required, and also stock up on food, water, batteries, and other supplies) to prepare people for the storm.	Kent County Roads, Kent County Emergency Management, State Highway Administration
	Comments: **OES** - There is always a plethora of public warning information coming out from KC OES prior to a known storm. At the start of each winter season, KC OES holds a conversation on WCTR to advise residents of ways to prepare and mitigate winter storm damage. Media include radio spots, email, twitter, Fb and news media – Ongoing **ROADS DEPT** – Incomplete **HISTORIC SOCIETY –** Our organization can distribute this information.	
	#21 - Vegetation that lies in close proximity to utilities must be examined and trimmed on a regular basis by local utility companies, particularly during the winter. Wherever possible, power lines should be installed underground.	Kent County Roads, Kent County Emergency Management, State Highway Administration, Utility Companies, Kent County Planning
	Comments: **OES** - This is addressed each season of mowing. New high-speed Internet lines have been installed throughout the county in 2018-2019-2020 and all have been laid underground- Ongoing **PLANNING** - Within the Chesapeake Bay Critical Area utility companies apply for Critical Area Utility Line Maintenance Plans and trees are replanted in locations that are better suited. – Ongoing **ROADS DEPT** – Incomplete	

Severe Storm Mitigation	Severe Storm Project	Responsible Organization
Maintain high construction standards by ensuring current building codes and standards follow FEMA's basic guidelines and are properly enforced.	**#22 -** The County, municipalities, or property owners should identify homes in need of tie-downs to reduce the vulnerability to high wind damages.	Kent County Planning, Middle Dept. Inspection Agency, Municipalities
	Comments: **PLANNIING** - DPHZ has not taken any steps to identify homes that are in need of tie-downs. – Ongoing **HISTORIC SOCIETY –** Our organization can survey our members for this information.	
	#23 - Building codes specific to high wind resistance and resilience to heavy rooftop loads in high wind zones must be followed by contractors and enforced by building inspectors.	Kent County Planning, Middle Dept. Inspection Agency, Municipalities
	Comments: **PLANNING** - All building permits are required to meet the 2018 International Building Code. – Complete **CHESTERTOWN** - This is part of the Town's adoption of the most recent building codes, both the IRC and IBC. – Complete **MILLINGTON -** Incomplete	
Ensure residents are forewarned, and prepared to face high winds, hail, or lightning strikes.	**#24 -** Provide public education (concerning safe driving and driving only if it is required, and stock up on food, water, batteries, and other supplies) to prepare people for the storm.	Kent County Roads, Kent County Emergency Management, State Highway Administration
	Comments: **OES**- There is always a plethora of public warning information coming out from KC OES prior to a known storm. At the start of each winter season, KC OES holds a conversation on WCTR to advise residents of ways to prepare and mitigate storm damage. Media include radio spots, email, twitter, Fb and news media – Ongoing **ROADS DEPT** – Incomplete **HISTORIC SOCIETY –** Our organization can distribute this information.	
	#25 -Vegetation that lies in close proximity to utilities must be examined and trimmed on a regular basis by local utility companies, particularly during the winter. Wherever possible, power lines should be installed underground.	Kent County Roads, Kent County Emergency Mgmt., SHA, Utility Companies, Kent County Planning
	Comments: **OES** - This is addressed each season of mowing. New high-speed Internet lines have been installed throughout the county in 2018-2019-2020 and all have been laid underground – Ongoing **PLANNING** - Within the Chesapeake Bay Critical Area utility companies apply for Critical Area Utility Line Maintenance Plans and trees are replanted in locations that are better suited – Ongoing **ROADS DEPT** – Incomplete	

Severe Storm Mitigation cont.	Severe Storm Project	Responsible Organization
Ensure residents are forewarned, and prepared to face high winds, hail, or lightning strikes. Continued	**#26 -** Support farmland crop insurance through education and outreach.	Kent County Planning, Kent County Extension Office; Kent County Soil and Water Conservation District
	Comments: **PLANNING** - DPHZ works in conjunction with other agencies in need of information and support. The Comprehensive Plan supports agriculture. – Ongoing	

Drought Mitigation	Drought Project	Responsible Organization
Introduce farmers and residents on water saving methods and devices through an education process.	**#27 -** Through a public education process, introduce residents and the farming community to a wide variety of water conservation measures outlined in the Plan.	Kent County Planning, Kent County Emergency Management, Kent County Soil and Water Conservation District, American Red Cross
	Comments: **PLANNING** - DPHZ would refer someone interested in this matter to the Kent County Soil and Water Conservation District and the Maryland Extension Office. – Ongoing **HISTORIC SOCIETY** – Our organization could co-sponsor a seminar on this topic.	
Encourage participation in the NRCS's irrigation grant program.	**#28 -** Encourage those members of the agricultural community who use irrigation practices to participate in the Natural Resources Conservation Service's irrigation grant program to upgrade existing irrigation systems to include water conservation measures.	Natural Resources Conservation Service
	Comments:	

rosion Mitigation	Erosion Project	Responsible Organization
Reduce sediment and erosion at the Chester River, Sassafras River, Chesapeake Bay, and Creeks and Tributaries.	**#29 -** Work with Natural Resources Conservation Service to implement Best Management Practices on farms.	Kent County Planning, Kent County Soil and Water Conservation District, Municipalities
	Comments: **PLANNING** - DPHZ works hand in hand with the Kent County Soil and Water Conservation District reviewing permits and variances that may be needed for the construction of BMP. The Comprehensive Plan supports agriculture, the Kent Soil and Water Conservation District, and best management practices. – Ongoing **MILLINGTON** - Incomplete	
	#30 - Strictly enforce sediment control regulations.	Kent County Planning, Kent County Soil and Water Conservation District, Municipalities
	Comments: **PLANNING** - Building permits and sediment control permits are reviewed and inspected by DPHZ. On-site inspections are completed when a project is under construction. – Ongoing **CHESTERTOWN** - Already part of the project approval process. – Complete **MILLINGTON** - Incomplete	
	High Priority #31 - Continue to work with the Department of Natural Resources and County residents in the Shore Erosion Control Program.	Kent County Planning, Kent County Soil and Water Conservation District, Municipalities
	Comments: **PLANNING** - The Comprehensive Plan supports shore erosion protection. Sediment control permits are reviewed and inspected. Ongoing **CHESTERTOWN** – Wilmer Park Living Shoreline Project. - Complete **MILLINGTON** - Incomplete	
	#32 - Continue to identify steep cliffs County waterways and to enforce Shoreline Cliff regulations found in the Kent County Land Use Ordinance.	Kent County Planning, Kent County Soil and Water Conservation District
	Comments: **PLANNING** – Ongoing	

Wildfire Mitigation	Wildfire Project	Responsible Organization
Reduce damage and loss to existing community assets including residential structures, critical facilities, and infrastructure due to wildfires.	**#33 -** Conduct a county-wide assessment to identify structures located in areas where trees are thick and recommend fire- resistant walls or glass that can withstand higher temperatures.	Kent County Emergency Management, Fire Departments
	Comments: **OES** - I do not think that this project has been undertaken. While a worthy goal, a dwindling volunteer fire fighter population makes this a challenge – Incomplete	
Reduce the exposure of residences and infrastructure to wildfire hazard incidents.	**#34 -** Introduce residents to the concept of defensible space practices in urban interface areas that requires trees around new homes to be thinned or cut down, creating a buffer zone to reduce the potential for damage from wildfire.	Kent County Emergency Management, Fire Departments
	Comments: **OES** - I don't think this project has been undertaken - Incomplete	
	#35 - Integrate procedures (prepared by County's Office of Emergency Services Department in conjunction with local Fire Departments) regarding training, suppression efforts, use of incident command systems during fire events, and the roles of various local, State and Federal agencies during wildfire events into a single document.	Kent County Emergency Management, Fire Departments
	Comments: **OES** - This type of training is frequent and on-going – Ongoing	

Extreme Heat Mitigation	Extreme Heat Project	Responsible Organization
Educate the public regarding heat index and energy conservation measures.	**#36 -** Encourage residents to heed advice on air quality on extreme heat days.	Kent County Emergency Management, Local Media
	Comments: **OES** - This info is provided to residents via email and social media outlets frequently and via seasonal conversations on WCTR – **Ongoing** **HISTORIC SOCIETY –** Our organization can distribute this information.	
	High Priority #37 - Encourage local media sources to announce air quality and heat indexes and to relay warnings and recommendations.	Kent County Emergency Management, Local Media
	Comments: **OES** - Local media outlets are wonderful partners in helping us to spread our outreach info on social media – **Ongoing** **HISTORIC SOCIETY –** Our organization can distribute this information.	
	#38 - Encourage elderly residents and families without air conditioning to have relocation sites with air conditioning during extreme heat events.	Kent County Emergency Management, Local Media
	Comments: **OES**- This info is encouraged through social media and our partner organizations, especially public health and senior organizations – **Ongoing** **HISTORIC SOCIETY –** Our organization can distribute this information.	
	#39 - Encourage residents to make provisions for pets during extreme heat waves (shade, water, air conditioning when appropriate).	Kent County Emergency Management, Local Media
	Comments: **OES** - Pets are part of the family, and we encourage residents to prepare for pet safety in all kinds of weather. The Pet Rescue Trailer is open for public inspection on several occasions throughout the year to assist in promotion of making pet provisions and accentuating public awareness of the need to consider pets in emergency plans – **Ongoing** **HISTORIC SOCIETY –** Our organization can distribute this information.	
	#40 - Encourage local citizens to heed advice on water restrictions and inform county officials of cases that consistently disregard the mandate.	Kent County Emergency Management, Local Media
	Comments: **OES** - Water restrictions have not been an issue in the last 5 years, but we would absolutely use our email blasts, social media, news media partners and WCTR (radio) to assist in getting this message out – **Ongoing**	
	#41 - Encourage local citizens to heed advice on electricity conservation during extreme heat events due to increased demand on utilities and emergency services.	Kent County Emergency Management, Local Media
	Comments: **OES** - Partnering with local utilities, we share this info regularly during events when there is increased demand for utilities and scarce supply. - **Ongoing**	

Extreme Heat Mitigation	Extreme Heat Project	Responsible Organization
Educate the public regarding the benefits of natural and man-made shade.	High Priority #42 - Encourage businesses to plant shade trees in parking areas to relieve extreme heat reflected off concrete surface.	Agricultural Community, Local Businesses
	Comments: **LOCAL BUISNESS** - Always looking for places to add new growth and/or replace dead and damaged tree. Very active Building and Grounds committee. - Ongoing	
	#43 - Encourage the agricultural community to plant shade trees and/or erect tarp systems for livestock to congregate under during extreme heat events.	Agricultural Community, Local Businesses
	Comments:	

Tornado Mitigation	Tornado Project	Responsible Organization
Improve the County's ability to identify structures that are vulnerable to high winds.	**#44 -** Conduct further assessment to identify structures with high risk/ vulnerability to wind and determine if an increase in the number of Permits and Inspections officers is required to assess the vulnerability of structures.	Kent County Emergency Management, Middle Dept. Inspection Agency
	Comments: **OES** - I don't believe that this project has been undertaken yet; partnership needs to be made with P&Z dept - Incomplete	
	#45 - Conduct engineering inspections of Kent County's fire stations and schools to assess each facility's ability to sustain damage from both flood and wind events and recommend specific retrofitting measures for each building as appropriate to better protect them from flooding and high winds.	Kent County Emergency Management, Middle Dept. Inspection Agency
	Comments: **OES** - Schools are subject to regular inspections for this purpose to ensure safety of children and staff. Fire companies are continually ensuring that their structures are safe for public events, and also for impromptu safe havens in weather events. - Ongoing	
	#46 - Include strengthening measures to all improvements to critical facilities to withstand wind speeds greater than 90 mph.	Kent County Emergency Management, Middle Dept. Inspect. Agency, Municipalities
	Comments: **OES** - Funding-dependent, based upon local governmental budgets – Ongoing **CHESTERTOWN** – Complete **MILLINGTON** - Incomplete	

Tornado Mitigation	Tornado Project	Responsible Organization
Consider actions for wind mitigation wherever appropriate.	**#47 -** Enforce the county and municipal Floodplain Ordinance design standards in high wind areas (velocity zones). Enforce tie down requirements in the mobile home communities in Chestertown, Rock Hall and Worton and identify homes that are in need of tie-downs.	Kent County Emergency Management, Middle Dept. Inspection Agency, Kent County Planning, Municipalities
	Comments: **PLANNING** - The Floodplain Ordinance is enforced in all situations. Specific homes have not been identified. – **Ongoing** **CHESTERTOWN** – **Complete** **MILLINGTON** - **Incomplete**	
	#48 - Increase community awareness and introduce the concept of buffers (pruning back overhanging branches) and windbreaks (planting tall trees to reduce wind velocity or low shrubs to trap snow) to protect against winds.	Kent County Emergency Management, Middle Dept. Inspection Agency, Kent County Planning, Municipalities
	Comments: **OES** - Ongoing public education via WCTR, media partners and social media partners – **Ongoing** **PLANNING** – **Ongoing** **CHESTERTOWN** – **Complete** **MILLINGTON** - **Incomplete**	

Source: 2014 Kent County Hazard Mitigation Plan

APPENDIX C:
STAKEHOLDER & PUBLIC ENGAGEMENT

Stakeholder & Public Engagement

Througthout the planning process for the 2021 Kent County Hazard Mitigation Plan Update, public engagement was encouraged. Multiple outlets were used to provide opportunities for the public to be involved and provide input. These outlets included: Kent County Hazard Mitigation Plan website, stakeholder meetings, and online public survey. The full listing of stakeholder and public engagement opportunities are provided in the table below. Public Survey results are at the provided at the end of the appendix.

Kent County Hazard Mitigation Planning, Training, and Outreach Initiatives				
2020 Dates	Meeting, Training, or Outreach Activity	Target Audience	Materials Provided	Comments/Input
29-May-20	Kent County Government Directors' Meeting	Kent County Government Staff	Ways to Engage tab - advertised Stakeholder Meeting #1 and Public Survey	Leadership made aware of project and planning process, Website: https://www.kentcounty.com/kenthmp2020
3-Jun-20	Website Content	Public	Ways to Engage tab - advertised Stakeholder Meeting #1 and Public Survey	Survey Results, Website: https://www.kentcounty.com/kenthmp2020; Meeting Notes distributed.
9-Jun-20	HMPC Kick-Off Meeting	Stakeholder Group & Public	Agenda, Hazard Identification Worksheet, Hazard Data Tables, Mitigation Action Status Update	Consensus on 2020 Hazard Identification, Feedback & Additional Event Data, Mitigation Status & New Ideas
9-Jun-20	Kent County Commissioners Meeting	Kent County Commissioners, Kent County Government Staff, Public	Ways to Engage tab - advertised Stakeholder Meeting #1 and Public Survey	Leadership made aware of project and planning process, Website: https://www.kentcounty.com/kenthmp2020
10-Jun-20	Stakeholder Survey	Stakeholder Group	2014 Mitigation Action Items Status Update	Survey Results
10-Jun-20	Website Content	Public	Project Overview, Hazard Risk, Activities for Risk Reduction tab content	Website Views/Analytics
11-Jun-20	Kent County Chamber of Commerce Virtual Meeting	KC Chamber Members & Public	Ways to Engage tab - advertised Stakeholder Meeting #1 and Public Survey	Business community and public made aware of the project and ways to engage, Website: https://www.kentcounty.com/kenthmp2020
15-Jun-20	Press Release Sent	Readers of Chestertown Spy, Kent County News, Tidewater Trader & Listeners to WCTR	Ways to Engage tab - advertised Stakeholder Meeting #1 and Public Survey	Public made aware of the project and ways to engage, Website: https://www.kentcounty.com/kenthmp2020
13-Jul-20	HMPC Meeting #2	Stakeholder Group & Public	Agenda, Appendix A: Hazard Risk Ranking Methodology & Data Tables, 2014-2020 Mitigation Action Item Status Update	Public Outreach, 2020 Hazard Risk Ranking Feedback, 2014 Mitigation Status & New Ideas, Capabilities. Metting Notes distributed.

2020 Dates	Meeting, Training, or Outreach Activity	Target Audience	Materials Provided	Comments/Input
14-Jul-20	Public Survey Outreach	Historic Society	Barbara Jorgenson of the Historic Society provided information on plan update and survey link to all members.	Increased survey participation.
15-Jul-20	Web Content	Public	Stakeholder Meeting #2 Notes. Updated Hazard Risk tab with new 2020 Hazard Riak Rankings.	Website Views/Analytics
15th & 19th July, 2020	(2) Email Blast	Public	Town of Betterton sent out two email blasts with the public survey link.	Increased survey participation.
21-Jul	Social Media Post Public Survey	Public	County Facebook Page	Increased survey participation.
22-Jul	Social Media Post Public Survey	Public	Humane Society Facebook Page	Increased survey participation.
21-Jul-20	Social Media Post Public Survey	Public	Town of Betterton Facebook Page	Increased survey participation.
28-Jul-20	Kent County Commissioners Meeting	Commissioners, KC Government, Public	Verbal Update	Provided update to the Commissioners on progress and plans for upcoming meetings & public outreach. Meeting is open to public, so all information discussed was available to the public as well.
5-Aug-20	Social Media Post Public Survey	Social Media Post Public Survey	Town of Betterton Facebook Page	Increased survey participation.
17-Aug-20	Social Media Post Public Survey	Public	County Facebook Page	Increased survey participation.
11-Aug-20	Planning Meeting	Town of Rock Hall	WebEx Meeting	Mitigation Action Items Status Updates & Capabilities; Discussed Stream Assessment
27-Aug-20	HMPC Meeting #3	Stakeholder Group & Public	Agenda, Capability Table, Critical Facilities Database & Map	Added Town Capabilities, Review of Critical Facility Data, and Next Steps
8-Sep-20	Mayor & Town Council	Town of Betterton	Town Hall Meeting	Update on the KC Hazard Mitigation Plan provided by Elizabeth Greenwell, Town Manager & member of the Hazard Mitigation Planning Committee
8-Sep-20	HMP Survey on FB	FB Public	HMP Survey Link	Increased survey participation.

2020 Dates	Meeting, Training, or Outreach Activity	Target Audience	Materials Provided	Comments/Input
14-Sep-20	Planning Commission	Town of Betterton	Town Hall Meeting	Update on the KC Hazard Mitigation Plan provided by Elizabeth Greenwell, Town Manager & member of the Hazard Mitigation Planning Committee
16-Sep-20	Planning Meeting	Town of Millington	WebEx Meeting	Capabilities Assessment, Current Projects, & New Mitigation Ideas
16-Sep-20	Kent County Council of Governments (COG)	Mayors of all Kent County municipalities	Conference Call	Emphasized the importance of having all KC municipalities involved in the HMP Update process & the benefits to the municipalities & the County
22-Sep-20	Planning Meeting	Town of Betterton	WebEx Meeting	Capabilities Assessment, Current Projects, & New Mitigation Ideas
23-Sep-20	Planning Meeting	Town of Chestertown	WebEx Meeting	Capabilities Assessment, Current Projects, & New Mitigation Ideas
29-Sep-20	Planning Meeting	Town of Galena	WebEx Meeting	Capabilities Assessment, Current Projects, & New Mitigation Ideas
15-Oct-20	Mitigation Workshop	Stakeholder Sub-Group: Public Education & Awareness	WebEx Meeting	Mitigation Strategies Workhop- Review of new mitigation strategies and priortization
15-Oct-20	Mitigation Workshop	Stakeholder Sub-Group: Emergency Services	WebEx Meeting	Mitigation Strategies Workhop- Review of new mitigation strategies and priortization
16-Oct-20	Mitigation Workshop	Stakeholder Sub-Group: Prevention & Property Protection	WebEx Meeting	Mitigation Strategies Workhop- Review of new mitigation strategies and priortization
16-Oct-20	Mitigation Workshop	Stakeholder Sub-Group: Public Health & Emergency Medical	WebEx Meeting	Mitigation Strategies Workhop- Review of new mitigation strategies and priortization
20-Oct-20	Kent County Council of Governments (COG)	Mayors of all Kent County municipalities	Conference Call	Emphasized the importance of having all KC municipalities involved in the HMP Update process & the benefits to the municipalities & the County
2-Nov-20	Web Content	Public	Hazard Mitigation Activities for Risk Reduction Tab	2020-2025 Mitigation Action Items & Prioritization
12-Nov-20	Outreach Meeting	Fire Chiefs Meeting	Review of new HMP & Mitigation Strategy	2020-2025 Mitigation Action Items & Prioritization

2020 Dates	Meeting, Training, or Outreach Activity	Target Audience	Materials Provided	Comments/Input
24-Nov-20	Local Plan Review	Stakeholder Group & Public	Draft Hazard Mitigation Plan	Draft Plan Comments
24-Nov-20	Plan Review	Maryland Emergency Manangement Agency (MEMA)	Draft Hazard Mitigation Plan	Crosswalk Review Comments

Municipal Outreach

Kent County Hazard Mitigation Planning, Training, and Outreach Initiatives				
2020 Dates	Meeting, Training, or Outreach Activity	Target Audience	Materials Provided	Comments/Input
15-Jun-20	Press Release Sent	Readers of Chestertown Spy, Kent County News, Tidewater Trader & Listeners to WCTR	Ways to Engage tab - advertised Stakeholder Meeting #1 and Public Survey	Public made aware of the project and ways to engage, Website: https://www.kentcounty.com/kenthmp2020
21-Jul-20	Social Media Post Public Survey	Public	Town of Betterton Facebook Page	Increased survey participation.
5-Aug-20	Social Media Post Public Survey	Social Media Post Public Survey	Town of Betterton Facebook Page	Increased survey participation.
11-Aug-20	Planning Meeting	Town of Rock Hall	WebEx Meeting	Mitigation Action Items Status Updates & Capabilities; Discussed Stream Assessment
8-Sep-20	Mayor & Town Council	Town of Betterton	Town Hall Meeting	Update on the KC Hazard Mitigation Plan provided by Elizabeth Greenwell, Town Manager & member of the Hazard Mitigation Planning Committee
14-Sep-20	Planning Commission	Town of Betterton	Town Hall Meeting	Update on the KC Hazard Mitigation Plan provided by Elizabeth Greenwell, Town Manager & member of the Hazard Mitigation Planning Committee
16-Sep-20	Planning Meeting	Town of Millington	WebEx Meeting	Capabilities Assessment, Current Projects, & New Mitigation Ideas
16-Sep-20	Kent County Council of Governments (COG)	Mayors of all Kent County municipalities	Conference Call	Emphasized the importance of having all KC municipalities involved in the HMP Update process & the benefits to the municipalities & the County
22-Sep-20	Planning Meeting	Town of Betterton	WebEx Meeting	Capabilities Assessment, Current Projects, & New Mitigation Ideas
23-Sep-20	Planning Meeting	Town of Chestertown	WebEx Meeting	Capabilities Assessment, Current Projects, & New Mitigation Ideas
29-Sep-20	Planning Meeting	Town of Galena	WebEx Meeting	Capabilities Assessment, Current Projects, & New Mitigation Ideas
20-Oct-20	Kent County Council of Governments (COG)	Mayors of all Kent County municipalities	Conference Call	Emphasized the importance of having all KC municipalities involved in the HMP Update process & the benefits to the municipalities & the County

Town of Betterton Mitigation Action Items

Mitigation Action Items 1 to 8 are new actions developed during the 2020 Kent County Hazard Mitigation Plan Update that include your town. For each mitigation action, please answer the two (2) questions that follow.

The survey consists of 8 mitigation actions and will take less than 5 minutes to complete.

We sincerely thank you for your time.

Action Item #1: Forward and repost Kent County Office of Emergency Services' hazard related Facebook posts and other social media content.

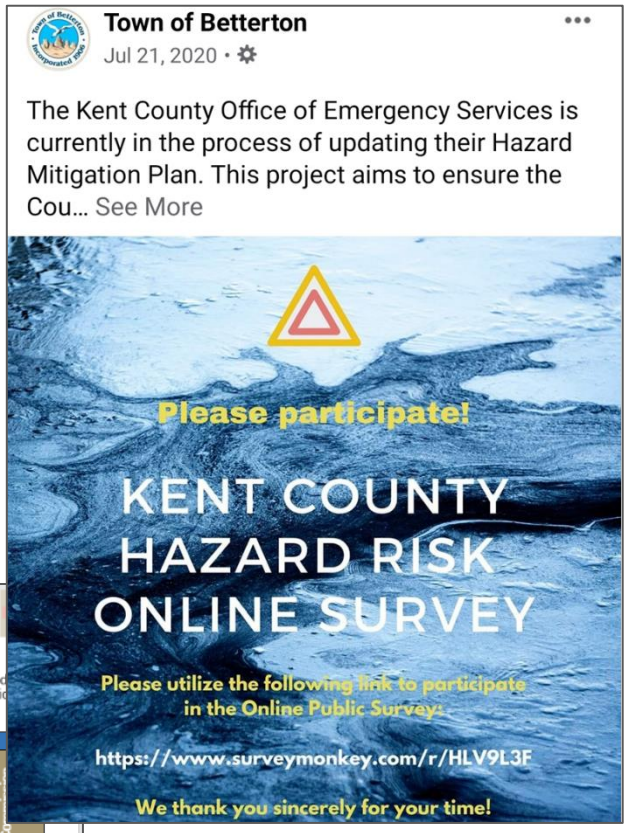
Is this action item applicable to your town?
- (●) Yes
- ( ) No

Is this action item a "high" priority for your town?
- (●) Yes
- ( ) No

Action Item #2: Work with the Office of Emergency Services to assign specific user accounts for the Code Red notification system. These specific user accounts will be designated to Town personnel for Town specific public messaging.

Is this action item applicable to your town?
- (●) Yes
- ( ) No

Is this action item a "high" priority for your town?
- (●) Yes
- ( ) No



2020 Kent County Hazard Mitigation Plan

Administrative and Technical

Kent County has Identified the following administrative and technical capabilities. These includ staff and their skills and tools that can be used for mitigation planning and to implement specific mitigation actions.

Government Department & Staff Resources

Communities	Land Use Authority		Land Use/ Development Planning		Public Works & Engineering		Emergency Services		Floodplain Manager		GIS		Fiscal Staff		Planning Co	
	Y/N		Y/N	# of. Staff	Y/N	# of. Staff	Y/N	# of. Staff	Y/N	# of. Staff	Y/N	# of. Staff	Y/N	# of. Staff	Y/N	# of. Staff
Kent County	Y		Y	9	Y	6	Y	5	Y	1	Y	1	Y	3	Y	7
Betterton	Y		Y	1	Y	3	Y	VFD	Y	1	N	-	Y	1	Y	5
Chestertown	Y		Y	1	Y	10	Y	VFD	Y	1	Y	1	Y	2	Y	5
Galena	Y		Y	1	Y	1	Y	VFD	N	-	N	-	Y	1	Y	5
Millington	Y		Y	1	Y	1	Y	1	Y	1	N	-	Y	1	Y	5
Rock Hall	Y		Y	1	Y	6	Y	VFD	Y	1	N	-	Y	1	Y	5

Source: County & Municipal Local Information
Note: These positions are often filled by the same person.

Technical		Yes/No	Notes:
Warning systems/services (Reverse 911, outdoor warning signals)	County	Yes	Code Red and Know Your Zone
	Betterton	Yes	County Code Red System, as available
	Chestertown	Yes	County Code Red System, as available and VFD Siren
	Galena	Yes	County Code Red System, as available
	Millington	Yes	County Code Red System, as available
	Rock Hall	Yes	Fire Department Early Warning System and County Code Red System, as available
Hazus analysis	County	Yes	Risk Map Products - FEMA Nov 2014
	Betterton	Yes	Risk Map Products - FEMA Nov 2014
	Chestertown		
	Millington		
	Rock Hall		

How can these capabilities be expanded and improved to reduce risk?

- Work with the Office of Emergency Services to assign specific user accounts for the Code Red notification system. These specific user accounts will be designated to Town personnel for Town specific public messaging.
- Integrate Hazard Mitigation Plan into all Comprehensive Plan updates.

Stakeholder Meeting Notes

Kent County Stakeholder Meeting #1
Webex Meeting

Date: June 9, 2020 **Start Time: 1:30 PM**

Agenda Items

- Hazard Mitigation Planning Process
- Kent County Hazard Identification
- Hazard Risk-Preliminary Data Tables
- 2014-Present Mitigation Action Status

In attendance: Virginia Gregg-Office of Emergency Services; Wayne Darrell-Office of Emergency Services; Shelley Heller-Kent County Administrator; Stephanie Jones-Planning & Zoning; Carla Gerber-Planning & Zoning; Mike Bitting-Planning & Zoning; Benadette Bowman-Tourism; Jamie Williams-Economic Development; Barbara Jorgenson-Historic Society; Vandrick Hamlin-Public Schools; Jesse Haas-MSP; Beth Copp-Shore Regional Health Systems; Bill Webb-Kent County Health Dept; Charlene Perry-Kent County Health Dept; John Beskid-Kent County Health Dept; Sharon Jefferson-Hawkins-American Red Cross; Shelly Neal-Edwards-Kent County DSS; Kathy Nolan-Kent County DSS; Bill Hildebrand-MEMA; Jeffrey Baggett-Citizen; Kees DeMooy-Town ofChestertown; CJ Morales-Town of Millington; Elizabeth Greenwell-Town of Betterton; Warren Walters- Town of Galena.

Meeting Notes

County Project Manager: Virginia Gregg-Office of Emergency Services
Meeting Facilitators: Michele King & Virginia Smith, SP&D

Traditionally hazard mitigation stakeholder meetings have been held in-person, however given the ongoing COVID-19 incident, will be conducted throughout the plan update process. At a minimum, (3) stakeholder webex meetings will be held over the summer months.

Stakeholder involvement includes:

- meeting attendance;
- review of meeting materials and feedback;
- completion of requested fillable PDF's and survey;
- mitigation action and/or project ideas;
- submittal of requested agency, department, or organization data and information; and,
- draft plan review and comment.

In addition to the (3) stakeholder meetings, targeted individual or small group discussions will be held. Stakeholders will be contacted directly for scheduling purposes, as applicable.

Attachments included as 'read ahead" material were discussed in further detail during the webex. Several next step items were identified and include:

- completion of Community Perspective Survey;
- 2014-Present Mitigation Action Status Fillable PDF;
- additional content for 2020 hazard mitigation plan section of Kent County website under the Office of Emergency Services;
- Stakeholder webex meeting #2- July;
- Stakeholder webex meeting #3- August-September.

Doodle polling will be sent in order to determine Stakeholder Meeting #2 date/time.

For additional information or questions, please contact Virginia Gregg, HMP Project Manager-Office of Emergency Services at: vgregg@kentgov.org

Kent County Stakeholder Meeting #2
WebEx Meeting

Date: July 13, 2020 **Start Time: 1:30 PM**

Agenda Items

- Stakeholder Hazard Risk Survey Results
- New Hazard Risk Ranking & Methodology
- 2014-2020 Mitigation Action Items Status Update
- New Hazard: Pandemic & Emerging Infectious Diseases
- Capability Assessment
- Next Steps

In attendance: Virginia Gregg-Office of Emergency Services; Wayne Darrell-Office of Emergency Services; Todd McGinnis- Office of Emergency Services; Shelley Heller-Kent County Administrator; Stephanie Jones-Planning & Zoning; Michael Mouldes-Public Works; Benadette Bowman-Tourism; Jamie Williams-Economic Development; Barbara Jorgenson-Historic Society; Karen Miller-Soil Conservation District; Vandrick Hamlin-Public Schools; Herb Dennis-Detention Center; Beth Copp-Shore Regional Health Systems; Shelly Neal-Edwards-Kent County DSS; Kathy Nolan-Kent County DSS; Bill Hildebrand-MEMA; Eric Reynolds-Humane Society; Kees DeMooy-Town of Chestertown; Robert Resele-Town of Rock Hall; Elizabeth Greenwell-Town of Betterton; Kathleen Billmire- Town of Galena.

Meeting Notes

County Project Manager: Virginia Gregg-Office of Emergency Services
Meeting Facilitators: Michele King & Virginia Smith, SP&D

For this WebEx meeting, a PowerPoint presentation was reviewed and is attached for your convenience.

The results from the hazard risk section of the survey were used for the Community Perspective portion of the Hazard Risk Ranking and Methodology (Appendix A). Hazard Risk Ranking resulted in Pandemic & Emerging Infectious Diseases and Severe Storms as “High Risk.”

In an effort to distribute the survey to the public, Stakeholder members were asked to include the survey link on various media, such as, Town websites, Facebook, Twitter, Community Newsletters. Sample language for media outlets:

The Kent County Office of Emergency Services is currently in the process of updating their Hazard Mitigation Plan. This project aims to ensure the County is prepared for all kinds of hazards, such as floods, hurricanes, etc. The Office of Emergency Services is placing special emphasis on understanding citizens' concerns regarding hazards. Community members input to the process is incredibly valuable. Therefore, a Public Survey has been developed to collect the citizens’ insight and perspective. The survey consists of 9 questions and will take an average of 4 minutes or less to complete. Please use the link the following link to participate in the survey: https://www.surveymonkey.com/r/HLV9L3F. *Thank you for your time!*

The survey’s direct link: https://www.surveymonkey.com/r/HLV9L3F or though the County’s Hazard Mitigation Plan Update website: https://www.kentcounty.com/kenthmp2020 can be used to distribute the survey.

Members were asked to provide information on all outreach initiatives, including discussions on the

hazard mitigation plan during department/agency meetings or publications hazard mitigation planning was included. Information will be collected and included in the *Kent County Hazard Mitigation Planning, Training, and Outreach Initiatives* table; attached. Members can use this table to provide the necessary information to Virginia Gregg.

Appendix B 2014 – 2020 Mitigation Actions Status Report was provided as referenced material and discussed. Members were asked to review the mitigation actions and current status updates. Please provide suggestions for 2014 mitigation action items that could be carried over into the 2020 Plan update and any new mitigation action item ideas.

The new hazard Pandemic & Emerging Infectious Diseases and Capability Assessment were discussed. Targeted emails will be sent in order to obtain necessary information on both subjects.

Next step items were identified and include:

- Hazard Chapter Highlights
- Vulnerability Assessments
- Capability Assessment Results
- New Mitigation Action Ideas

Doodle polling will be sent in order to determine Stakeholder Meeting #3 date/time.

For additional information or questions, please contact Virginia Gregg, HMP Project Manager-Office of Emergency Services at: vgregg@kentgov.org

Kent County Stakeholder Meeting #3
Webex Meeting

Date: August 27, 2020 **Start Time: 1:30 PM**

Agenda Items

- Public Survey
- Critical & Public Facilities
- Hazard Section Preview
- Capability Assessment & Table
- Next steps

In attendance: Virginia Gregg-Office of Emergency Services; Wayne Darrell-Office of Emergency Services; Shelley Heller-Kent County Administrator; Stephanie Jones-Planning & Zoning; Carla Gerber-Planning & Zoning; Barbara Jorgenson-Historic Society; Karen Miller-Soil Conservation District; Beth Copp-Shore Regional Health Systems; Shelly Neal-Edwards-Kent County DSS; Bill Hildebrand-MEMA; Eric Reynolds-Humane Society; Jim Bass-Eastern Shore Land Conservancy; Tim Trumbauer-Chester River Riverkeepers; Jo Manning-Town of Millington; Elizabeth Greenwell-Town of Betterton.

Meeting Notes

County Project Manager: Virginia Gregg-Office of Emergency Services
Meeting Facilitators: Michele King & Virginia Smith, SP&D

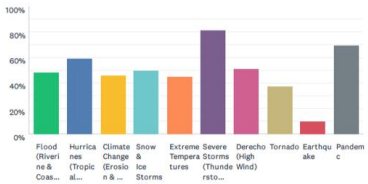
Traditionally hazard mitigation stakeholder meetings have been held in-person, however given the ongoing COVID-19 incident, webex meetings have been conducted throughout the plan update process. Three stakeholder webex meetings have been held over the summer months. Meeting recordings have been added to the Kent County website under the Office of Emergency Services.

Public Survey

Results of the public survey were presented during the meeting. Survey highlights include:

- 177 surveys completed;
- Public survey results are consistent with stakeholder committee survey results used for the hazard risk assessment under the "community perspective" rating category.
- When asked for concern of additional hazards no "new" natural hazards were identified. Note: human-caused and other technological hazards were identified and a "new" mitigation strategy for the development of a Threat Hazard Identification Risk Assessment (THIRA) will be included in the plan update.

Which hazard events you feel may particularly affect your area of the county or town?



ANSWER CHOICES	RESPONSES
Flood (Riverine & Coastal)	48.19%
Hurricanes (Tropical Storms)	59.04%
Climate Change (Erosion & Sea Level Rise)	45.78%
Snow & Ice Storms (Winter Storm/Weather)	49.40%
Extreme Temperatures	45.18%
Severe Storms (Thunderstorm Wind, Lightning & Hail)	81.33%
Derecho (High Wind)	51.20%
Tornado	37.35%
Earthquake	10.24%
Pandemic	69.28%

Screenshot of Survey Results from Presentation

Critical & Public Facilities

A geodatabase of critical and public facilities has been created for this plan update. Critical facilities are facilities that should **remain operational** before, during, and after a disaster event. These facilities are considered **priorities** for hazard mitigation grant funding. In addition, other government owned and operated "public" facilities have been included.

Both the database and overall critical and public facility map was displayed during the meeting. Vulnerability columns for each facility have been included:

- FEMA Flood Zone;
- Depth of Flooding (1% annual chance flood scenario)
- Hurricane Storm Surge; and
- Projected Sea Level Rise Inundation.

Additional facility information from Maryland PropertyView has been included in database for use during various hazard vulnerability analysis and plan sections, such as:

- Building Material Type;
- Number of Floors;
- Improvement Value; and,
- Year Built.

Hazard Section Preview

During the presentation plan section were displayed. While the plan is considered an "update", the plan format and organization has been changed. Working draft plan sections will be sent to the stakeholder group for preview and comment.

Capability Assessment

Each community has a unique set of capabilities, including authorities, policies, programs, staff, funding, and other resources available to accomplish mitigation and reduce long term vulnerability.

A capability assessment table was discussed. Both the county and the towns were asked to review and add information, as available.

Next Steps

- Schedule Town WebEx Meeting (1 mtg. per)

A separate email will be sent to each town requesting meeting date/time availability.

- Vulnerability Assessments

SP&D will continue work on vulnerability for each hazard section of the plan. Additional vulnerability assessment information will be presented at the next stakeholder meeting in September.

- New Mitigation Action Ideas- Work Session

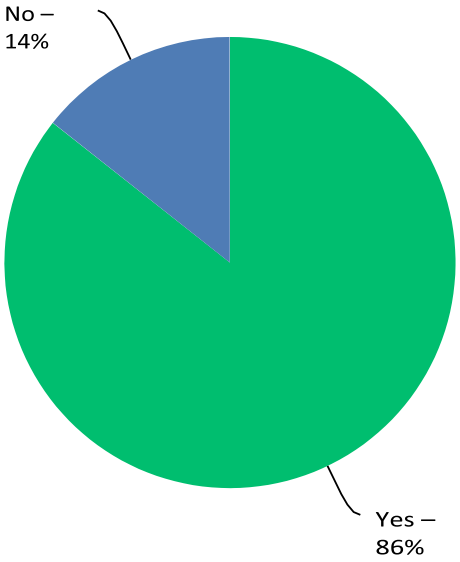
Virginia Gregg is working on gathering stakeholder input on the type of meeting that is best for the September Stakeholder meeting.

- Working draft plan sections will be distributed to stakeholders for review.

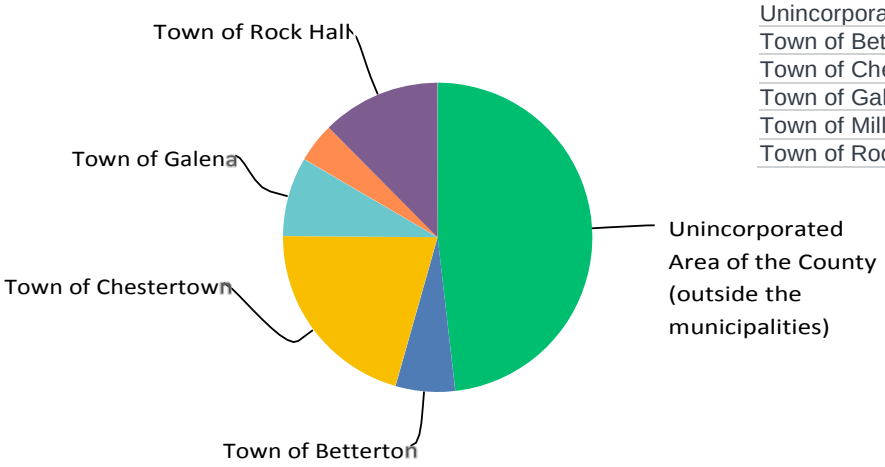
For additional information or questions, please contact Virginia Gregg, HMP Project Manager-Office of Emergency Services at: vgregg@kentgov.org

Public Survey Results

Are you a resident of Kent County?



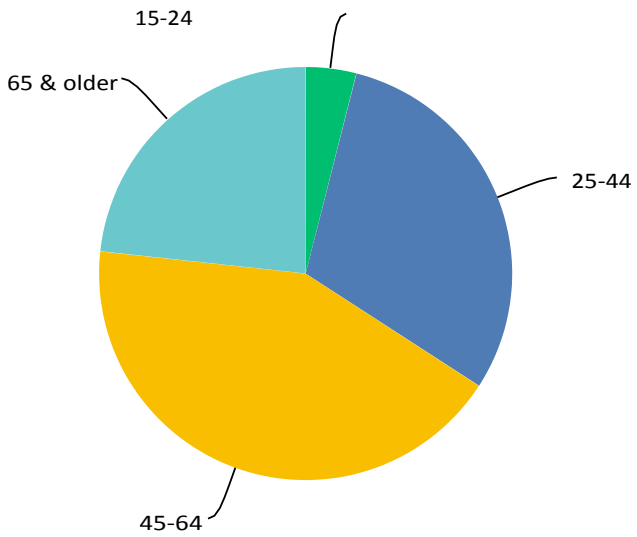
Kent County has an unincorporated area and 5 municipalities. Please select the area where you currently live.



Unincorporated Area	48.19%
Town of Betterton	6.22%
Town of Chestertown	20.73%
Town of Galena	8.29%
Town of Millington	4.15%
Town of Rock Hall	12.44%

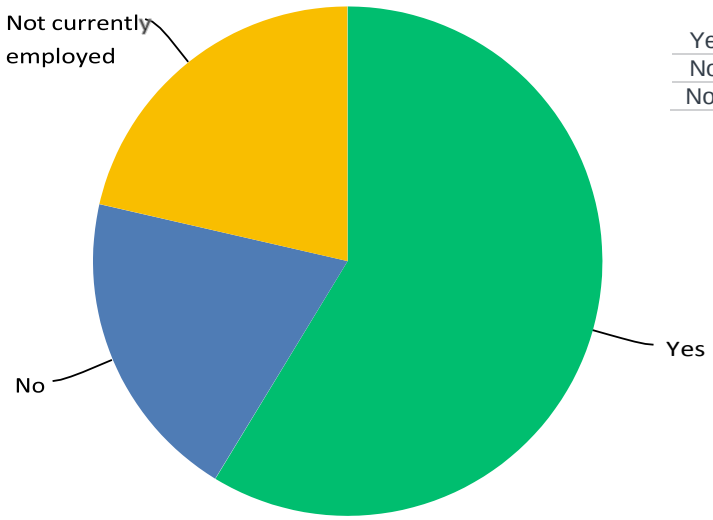
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In what age group do you belong?



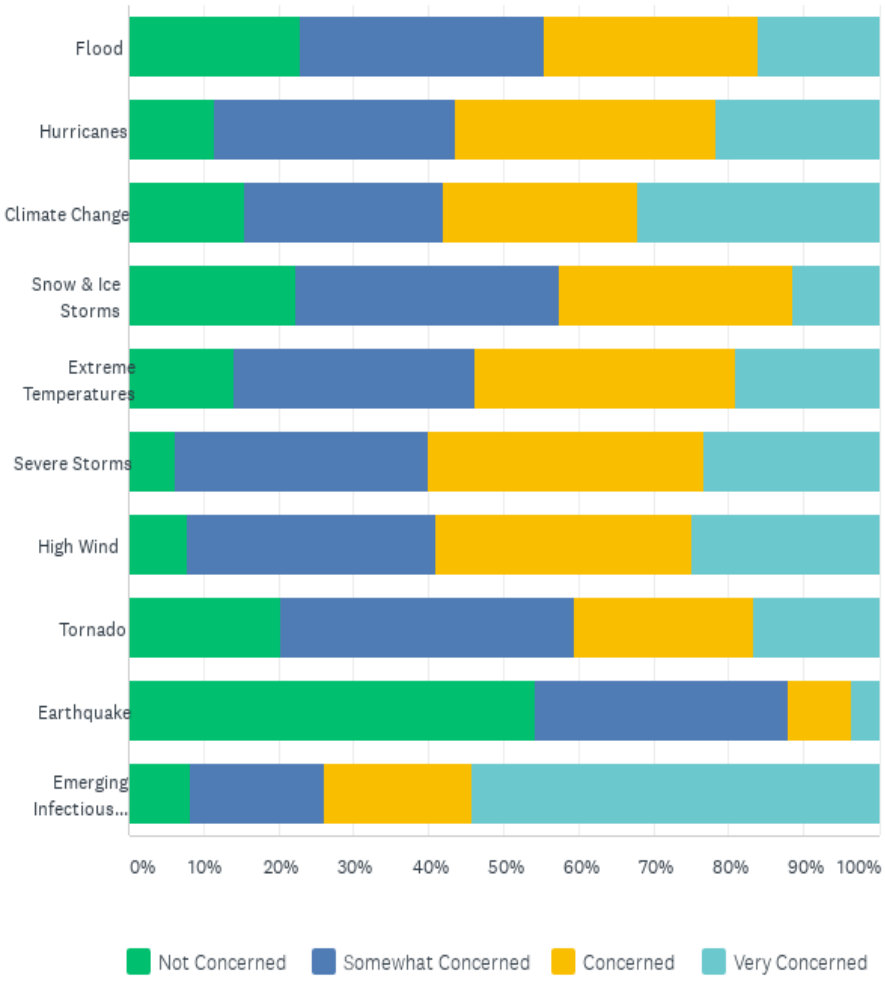
15-24	3.96%
25-44	30.20%
45-64	42.57%
65 & older	23.27%

Do you work in Kent County?

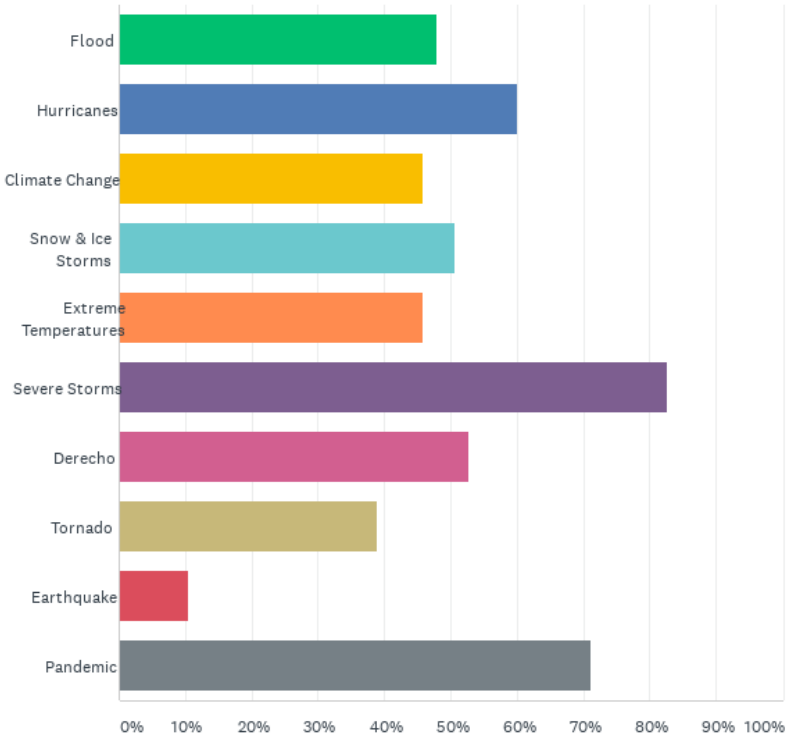


Yes	58.71%
No	19.90%
Not currently employed	21.39%

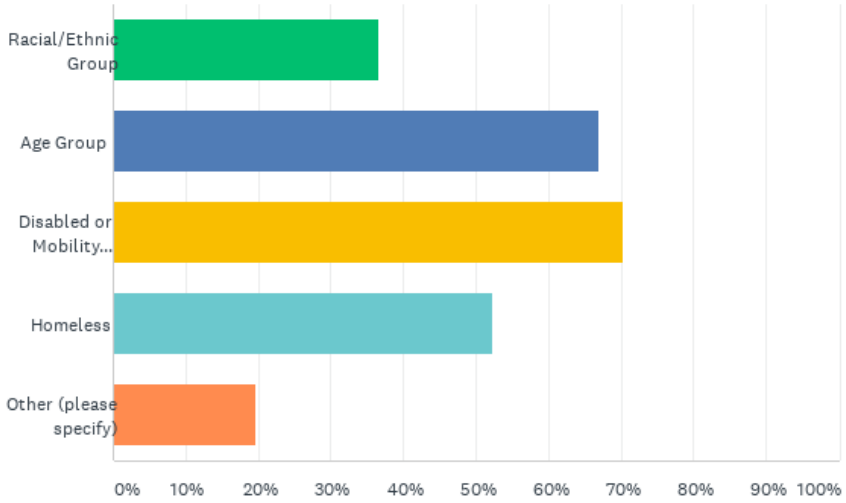
Please indicate your level of concern for each hazard. If you are unsure or unfamiliar with any of the following hazards, please read the definition provided for each hazard.



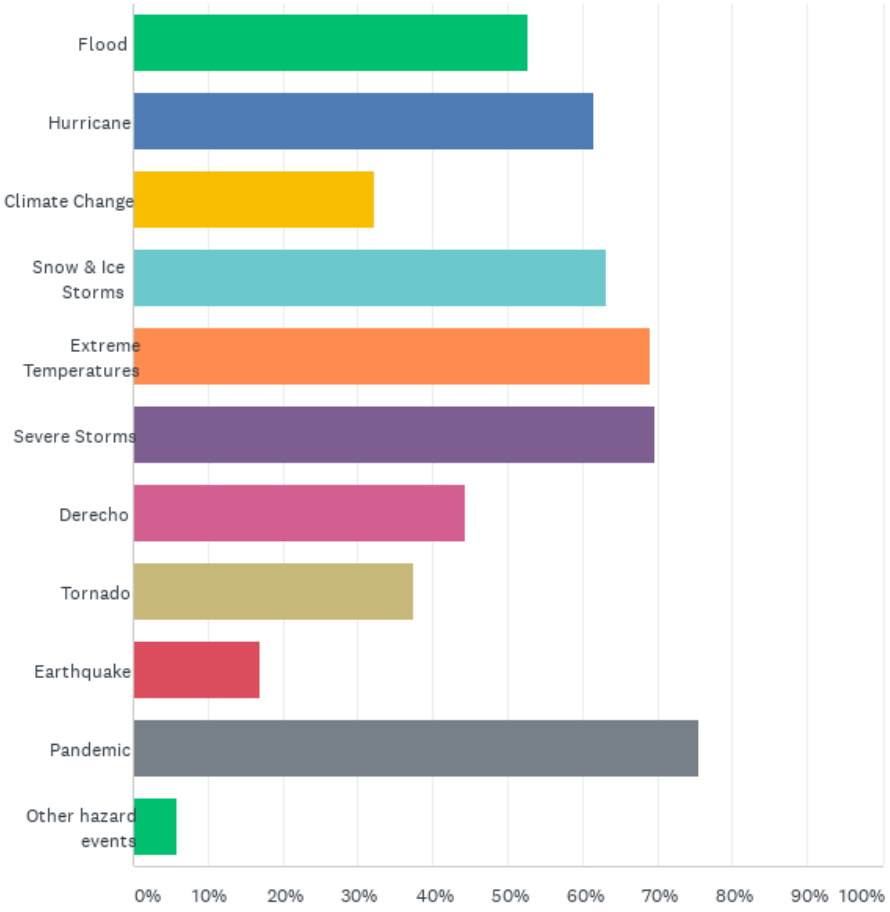
Please choose from the below list to indicate which hazard events you feel may particularly affect your area of the county or town. (Please check all that apply.)



Please indicate the group(s) on which you based your answer, if it is listed, or describe it in the box below. (The listed groups are only meant to serve as initial ideas.)



Based on the group(s) you have selected in the previous question, please select which hazard events you feel may particularly affect those group? (Multiple options may be chosen.)



APPENDIX D:
CAPABILITY ASSESSMENT

Planning and Regulatory

Planning and Regulatory

Kent County has identified capabilities for plans, policies, codes, and ordinances that prevent and reduce the impacts of hazards.

Plans		Yes/No Year	Notes:
Comprehensive/ Master Plan	County	Yes-2018	Critical areas and sensitive areas as identified, both of which include floodplains.
	Betterton	Yes-2009	Update slated for 2022
	Chesterton	Yes-2015	Includes Sustainability Projects/Critical & Sensitive Areas
	Galena	Yes-2009	Updates expected in late 2020 or early 2021
	Millington	Yes-2014	Update 2021 – Potential Annexation area identified which includes flood-prone areas.
	Rock Hall	Yes-2011	
Capital Improvements Plan	County	Yes-FY2021	Annual
Local Emergency Operations Plan	County	Yes-2013	Adopted w/amendments in 2016 & 2019. Hazards impacting county identified in plan.
	Betterton	No	
	Chesterton	No	
	Galena	No	
	Millington	No	However, they have an Memorandum of understanding (MOU) to use the Volunteer Fire Department (VFD) as Emergency Operations Center.
	Rock Hall	No	
Continuity of Operations Plan	County	Yes-2016	All county departments.
	Betterton	No	Working Remotely during COVID-19/Fire Hall available
	Chesterton	No	Back-Up Data and Remote Working.
	Galena	No	
	Millington	No	Memorandum of Agreement w/Fire Company for emergency operations. Reviewed annually. Includes line of succession.
	Rock Hall	No	
Transportation Plan	County	Yes-2018	Comprehensive Plan - Transportation Element
Stormwater Management Plan	County	Yes	Sediment & Erosion Control and Stormwater Management
	Towns	Yes	Follows County - Sediment & Erosion Control and Stormwater Management
Building Code, Permitting, and Inspections		**Yes/No**	**Notes:** **Version/Year:**
Building Code	County	Yes	2018 International Building Codes
	Betterton	Yes	2018 International Building Codes - Statement within code. Automatically adopts updated revisions and codes.
	Chesterton		
	Galena		
	Millington		
	Rock Hall		
Zoning ordinance	County	Yes-2002	Amendments; Comprehensive Zoning Update in development includes sensitive and critical areas.
	Betterton	Yes-2009	Critical Area ½ Town
	Chesterton	Yes-2012	Update due soon
	Galena	Yes-2020	Updated Land Subdivision
	Millington	Yes	w/ (2) amendments to date. Update 2022
	Rock Hall	Yes	

Land Use Planning and Ordinances cont'd		Yes/No	Notes:
Floodplain Ordinance	County	Yes	Section 7 Amendment 2014- 2 ft above Base Flood Elevation (BFE)
	Betterton	Yes	No residential structures located in the floodplain
	Chesterton	Yes	Revise site plans
	Galena	No	No floodplain
	Millington	Yes	Floodplain permits- Note: only (1) permit issued within floodplain in the last 20 years.
	Rock Hall	Yes	2014; Chapter 117 Floodplain Management adopted Maryland Department of Environment (MDE) model floodplain ordinance
Land Use Planning and Ordinances cont'd		**Yes/No**	**Notes:**
Acquisition of land for open space and public recreation uses	County	Yes	Land Preservation and Recreation Plan
	Betterton	No	2019 Critical Areas Plan
	Chesterton	Yes	2020 Critical Areas Plan
	Galena	Yes	Community Park
	Millington	Yes	Flood-prone Areas - 2020 Plan
	Rock Hall	No	

How can these capabilities be expanded and improved to reduce risk?

- Floodplain Management Ordinance currently states that all new development or substantial improvement be built 2 feet above base flood elevation (BFE). Consider amending ordinance to 3 feet above base flood elevation (BFE).
- Consider adopting an expanded floodplain (i.e. including the 0.2% chance "500-year" floodplain) or a "coastal resilience overlay zone" for greater protection from sea level rise and an increased margin of safety against errors in FEMA flood risk maps.
- Include hazard mitigation and climate adaptation strategies into the Capital Improvement Plan process.
- Future projections of sea level change and nuisance flooding should also be integrated into land use planning, floodplain management, comprehensive planning, and capital investment planning.

Administrative and Technical

Administrative and Technical

Kent County has Identified the following administrative and technical capabilities. These include staff and their skills and tools that can be used for mitigation planning and to implement specific mitigation actions.

Government Department & Staff Resources															
Communities	Land Use Authority	Land Use/ Development Planning		Public Works & Engineering		Emergency Services (Includes Police & Fire)		Floodplain Manager		GIS		Fiscal Staff		Planning Commission	
	Y/N	Y/N	# of Staff	Y/N	# of Staff	Y/N	# of Staff	Y/N	# of Staff	Y/N	# of Staff	Y/N	# of Staff	Y/N	# of Staff
Kent County	Y	Y	9	Y	6	Y	5	Y	1	Y	1	Y	3	Y	7
Betterton	Y	Y	1	Y	3	Y	VFD*	Y	1	N	-	Y	1	Y	5
Chestertown	Y	Y	1	Y	10	Y	VFD*	Y	1	Y	1	Y	2	Y	5
Galena	Y	Y	1	Y	1	Y	VFD*	N	-	N	-	Y	1	Y	5
Millington	Y	Y	1	Y	1	Y	1	Y	1	N	-	Y	1	Y	5
Rock Hall	Y	Y	1	Y	6	Y	VFD*	Y	1	N	-	Y	1	Y	5

Source: County & Municipal Local Information
Note: These positions are often filled by the same person.
**Volunteer Fire Department*

Technical		Yes/No	Notes:
Warning systems/services (Reverse 911, outdoor warning signals)	County	Yes	Code Red and Know Your Zone
	Betterton	Yes	County Code Red System, as available
	Chesterton	Yes	County Code Red System, as available and VFD* Siren
	Galena	Yes	County Code Red System, as available
	Millington	Yes	County Code Red System, as available
	Rock Hall	Yes	Fire Department Early Warning System and County Code Red System, as available
Hazus analysis	County	Yes	Risk Map Products - FEMA Nov 2014
	Betterton	Yes	Risk Map Products - FEMA Nov 2014
	Chesterton		
	Millington		
	Rock Hall		

How can these capabilities be expanded and improved to reduce risk?

- Work with the Office of Emergency Services to assign specific user accounts for the Code Red notification system. These specific user accounts will be designated to Town personnel for Town specific public messaging.
- Integrate Hazard Mitigation Plan into all Comprehensive Plan updates.

**Volunteer Fire Department*

Financial

Financial

Kent County determined its eligibility and access to the following funding resources for hazard mitigation projects.

Funding Resources		Access/ Eligibility (Yes/No)	Notes:
Capital improvements project funding	County	Yes-FY2021	
	Betterton	No	Grant fund used almost exclusively
	Chesterton		
	Galena		
	Millington		
	Rock Hall		
Authority to levy taxes for specific purposes	County	Yes	
	Betterton	Yes	$150 - Owns Land to Offset Water & Sewer System
	Chesterton	Yes	Not Used
	Galena	Yes	Proposed in 2016- Special Sewer District
	Millington	Yes	Special Tax District - Used for Stormwater Pond
	Rock Hall	Yes	
Impact fees for new development	County	Yes	New Single-Family Dwellings $0.15 per square foot, minimum of $200 Two Family Dwelling/Duplex (2 bedrooms) $0.15 per square foot, minimum of $235.00 per unit - Each additional bedroom $25.00 Townhouse/Condo (3 Bedrooms) $0.15 per square foot, minimum of $235.00 -1st unit; each additional unit $85.00 - Each additional bedroom $25.00 Multi-Family Dwelling (2 bedrooms) $.015 per square foot, minimum of $295.00 1st unit; each additional unit $80 - Each additional bedroom $25.00
	Betterton	Yes	Larger Development
	Chesterton	Yes	
	Galena	No	Considering with Comprehensive Plan Update
	Millington	No	
	Rock Hall	No	
Storm water utility fee	County	Yes-July 2009	Stormwater Review Fee - Standard $25 Stormwater Review Fee - Formal Plan - Minor Subdivision or Site Plan $50 per acre of disturbance Stormwater Review Fee - Formal Plan - Major Subdivision or Site Plan $250 Stormwater Review Fee - Waiver $50
	Betterton	No	
	Chesterton	No	
	Galena	No	
	Millington	Yes	$100
	Rock Hall	No	
Community Development Block Grant	County	Yes	
	Betterton	Yes	Wheeler Avenue Reconstruction & Streetscape
	Chesterton	No	Applied for grant but did not receive.
	Galena	Yes	Residential/Covered Facade
	Millington	Yes	Working on Grant for Senior Housing
	Rock Hall	Yes	

How can these capabilities be expanded and improved to reduce risk?
• Secure funding for hazard mitigation and climate adaptation projects and initiatives. Leverage special taxes and impact fees, as applicable.

Education and Outreach

Education and Outreach

Kent County Identified education and outreach programs and methods already in place that could be used to implement mitigation activities and communicate hazard-related information.

Program/Organization		Yes/No	Notes:
Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access, and functional needs populations, etc.	County	Yes	Eastern Shore Land Conservatory, Non-Profits: Chester River Health Foundation, Sultana Education Foundation, United Way of Kent County, Women in Need, Inc.
	Betterton	Yes	Betterton Community Group
	Chesterton	Yes	Shore Rivers, Town Environmental Committee, Washington College Environmental
	Galena	No	
	Millington	No	
	Rock Hall	No	
Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	County	Yes	Upper Shore Workforce Investment Board, Continuing Education - Chesapeake College, Maryland Apprenticeship Programs, and the Washington College Federal Work Study
	Betterton	Yes	Volunteer Fire Department (VFD)/Social Media Sharing/Quarterly Newsletter for Preparedness
	Chesterton	Yes	Social Media Posts for Preparedness
	Galena	Yes	Installed Water Meters. View and Receive Water Alerts. Informing Citizens of High-Water Usage - View Through Smart Devices.
	Millington	No	
	Rock Hall	Yes	
StormReady certification	County	No	
	Towns	No	

How can these capabilities be expanded and improved to reduce risk?

- Encourage partnership and collaboration with local citizens groups.
- Pursue Storm Ready Certification from the National Weather Service.
- Consider funding foundation sources for hazard mitigation and climate adaptation. Examples include:
    - Bloomberg Philanthropies
    - Kresge Foundation
    - Resilient Communities Program

APPENDIX E:
2020-2025 MITIGATION ACTION ITEMS & PRIORITIZATION

Mitigation actions form the core of the *2021 Kent County Hazard Mitigation Plan*. The mitigations actions were grouped into the following six (6) broad categories.

- **Public Education and Awareness.** Actions to inform and educate citizens, elected officials, and property owners about potential ways to mitigate for hazards that can occur in the County. Such actions include outreach programs, projects, real estate disclosure, hazard information centers, and school-age and adult education programs.

- **Prevention.** Government administrative or regulatory actions or processes that influence the way land and buildings are developed and built. These actions also include public activities to reduce hazard losses. Examples include planning and zoning, building codes, capital improvement programs, open space preservation, and storm water management regulations.

- **Property Protection.** Actions that involve the modification of existing critical and public facilities, buildings, structures, and public infrastructure to protect them from hazards. Examples include acquisition, elevation, relocation, structural retrofits, storm shutters, and infrastructure modification.

- **Natural Resource Protection.** Actions that, in addition to minimizing hazard losses also preserve or restore the functions of natural protection systems. These actions include sediment and erosion control, stream corridor restoration, watershed management, forest and vegetation management, and wetland restoration preservation.

- **Emergency Services.** Actions that protect people and property during and immediately after a disaster or hazard event. Services include warning systems and emergency response services.

- **Structural Projects.** Actions that involve the construction of structures to reduce the impact of a hazard event. Such structures include dams, levees, floodwalls, seawalls, retaining walls, barrier islands, and safe rooms.

Mitigation Action Items & Prioritization				
Action Items	**Hazard(s)/ Sections**	**Category**	**Responsible Entity(s)**	**Ranking**
SECTION 2 FLOOD				
Identify and solicit low/no cost partners to create awareness and promote outreach and conduct a business continuity planning workshop to promote disaster resistance, mitigation, and preparedness to help businesses develop contingency plans to minimize loss during disasters.	All-Hazards/ Sections 2, 3, 4, 5, 6, 7, 8, 9, 10, 11	Public Education & Awareness	Kent County Office of Emergency Services, Dept. of Public Works, Dept. of Economic Development, Historical Society, Heron Point, Towns, Chamber of Commerce	High
Forward and repost Kent County Office of Emergency Services' hazard related Facebook posts and other social media content.	All-Hazards/ Sections 2, 3, 4, 5, 6, 7, 8, 9, 10, 11	Public Education & Awareness	Town of Chestertown	N/A
			Town of Rock Hall	High
			Town of Millington	Medium
			Town of Betterton	High
			Town of Galena	High
			Historical Society, American Red Cross, Economic Development, Chamber of Commerce, Partnered Media Outlets	High
Create awareness among county residents of the potential hazards associated with floodplain areas and the ways they can protect themselves and their properties from flood events.	Flood/ Section 2	Public Education & Awareness	Kent County Office of Emergency Services, Historical Society	High
Consider pursuing FEMA's Community Rating System to lower flood insurance costs for property owners and provide outreach to at-risk properties. Review Map 2-3 thru 2-8 for at-risk structures.	Flood/ Section 2	Public Education & Awareness	Town of Chestertown	N/A
			Town of Rock Hall	High
			Town of Millington	Medium
			Town of Betterton	Medium
			Kent County Dept. of Planning, Housing & Zoning	Medium
Conduct public awareness campaign on severe wind through various outreach activities.	Tornado, High Wind, Hurricane, Severe Storms/ Sections 3, 5, 7, 8	Public Education & Awareness	Kent County Dept. of Planning, Housing & Zoning, Dept. of Economic Development, Historic Society, Towns	Medium
Develop and use updated delivery methods for winter storm public outreach activities. Topics to include warming center locations, driving conditions, and other preparedness items.	Snow & Ice Storms/ Section 6	Public Education & Awareness	Kent County Office of Emergency Services, Faith Centers & Towns	Medium
Expand public information capabilities by hosting regional training and workshops. Continue Joint Information Center initiative.	All-Hazards/ Sections 2, 3, 4, 5, 6, 7, 8, 9, 10, 11	Public Education & Awareness	Kent County Office of Emergency Services	High
Increase citizen participation in the County's hazard warning and notification system - Code Red.	All-Hazards/ Sections 2, 3, 4, 5, 6, 7, 8, 9, 10, 11	Public Education & Awareness	Kent County Office of Emergency Services	High

Action Items	Hazard(s)/ Sections	Category	Responsible Entity(s)	Ranking
Pursue Storm Ready Certification through the National Weather Service.	All-Weather Related Hazards/ Sections 2, 3, 4, 5, 6, 7, 8, 9, 10	Emergency Services	Kent County Office of Emergency Services	Medium
Work with the Office of Emergency Services to assign specific user accounts for the Code Red notification system. These specific user accounts will be designated to Town personnel for Town specific public messaging.	All-Hazards/ Sections 2, 3, 4, 5, 6, 7, 8, 9, 10, 11	Emergency Services	Town of Betterton	High
			Town of Galena	High
			Town of Chestertown	N/A
			Town of Millington	Medium
			Washington College	Medium
Host and conduct Regional Incident Command Training courses including multi-disciplines. Encourage cross-training among various hazard response and mitigation disciplines. Consider the 0305 All-Hazard Incident Management Course for a group training multi-day event.	All-Hazards/ Sections 2, 3, 4, 5, 6, 7, 8, 9, 10, 11	Emergency Services	Kent County Office of Emergency Services	Low
Continue work on the development of the County Debris Management Plan. Coordinate the development of the plan with various stakeholders.	Tornado, High Wind, Hurricane, Severe Storms/ Sections 3, 5, 7, 8	Prevention	Kent County Office of Emergency Services, Dept. of Public Works, Towns	High
Complete a fire and rescue station garage door assessment to determine high wind risk and mitigation needs, if any. Note: Of the (8) stations, (3) were built in or before 1975.	Tornado, High Wind, Hurricane, Severe Storms/ Sections 3, 5, 7, 8	Property Protection	Volunteer Fire & Rescue Stations	High
Install lightning rod(s) at Shore Regional Health and Washington College.	Severe Storms/ Section 7	Property Protection	Shore Regional Health, Washington College	High
Following the review of FEMA E-74 Practical Guide, examine critical and public facilities for proper anchorage and bracing of non-structural components.	Earthquake/ Section 9	Property Protection	Kent County Office of Emergency Services, Dept. of Public Works, Towns	Low
Continue to participation in The Great Shake Out Drill - Drop.	Earthquake/ Section 9	Property Protection	Kent County Office of Emergency Services, Health Dept.	Medium
Install generator at Washington College campus: Johnson Fitness Center, Hudson Hall & gym. These locations would be where students congregate during a hazard event. Johnson Fitness Center is also used as shelter for several elementary schools. Dining Hall needs a generator to be able to continue to provide meals to students and first responders when necessary.	All-Hazards/ Sections 2, 3, 4, 5, 6, 7, 8, 9, 10, 11	Emergency Services	Washington College	Medium
Obtain and strategically deploy mobile message sign boards throughout the county.	All-Hazards/ Sections 2, 3, 4, 5, 6, 7, 8, 9, 10, 11	Emergency Services	Kent County Office of Emergency Services, Washington College	High

Action Items	Hazard(s)/ Sections	Category	Responsible Entity(s)	Ranking
Establish Vulnerable Population Committee that meets periodically. Maintain updated Committee listing with primary and secondary contacts.	All-Hazards/ Sections 2, 3, 4, 5, 6, 7, 8, 9, 10, 11	Emergency Services	Kent County Office of Emergency Services, Health Dept., Dept. of Social Services, Samaritan Group, Kent County Commission on Aging	Medium
Consider adopting an expanded floodplain (i.e. including the 0.2% chance "500-year" floodplain) or a "coastal resilience overlay zone" for greater protection from sea level rise and an increased margin of safety against errors in FEMA flood risk maps.	Climate Adaptation/ Section 10	Prevention & Natural Resource Protection	Kent County Dept. of Planning, Housing & Zoning	Medium
Consider adopting an expanded floodplain (i.e. including the 0.2% chance "500-year" floodplain) or a "coastal resilience overlay zone" for greater protection from sea level rise and an increased margin of safety against errors in FEMA flood risk maps.	Climate Adaptation/ Section 10	Prevention & Natural Resource Protection	Town of Betterton	Medium
			Town of Chestertown	Medium
			Town of Rock Hall	High
			Town of Millington	Medium
Promote awareness of assets and resources located within the 0.2% chance ("500-year") floodplain that may become increasingly at risk due to sea level rise. Currently, properties located within the 0.2% chance floodplain are neither required to meet floodplain requirements nor carry flood insurance. A disclosure regarding such properties should be developed to better-inform residents of their vulnerability and protection options.	Flood & Climate Adaptation/ Sections 2 & 10	Prevention & Natural Resource Protection	Kent County Dept. of Planning, Housing & Zoning	Low
Create a prioritized list of properties for land acquisition for flood mitigation and conservation	Flood & Climate Adaptation/ Sections 2 & 10	Prevention & Natural Resource Protection	Kent County Dept. of Planning, Housing & Zoning	Medium
Enforce tie down requirements in the mobile homes community in Worton. Identify homes that lack proper tie downs in the (1) mobile home community within the County to reduce their vulnerability to high wind damages.	Tornado, High Wind, Hurricane, Severe Storms/ Sections 3, 5, 7, 8	Prevention	Kent County Dept. of Planning, Housing & Zoning	Medium
Enforce tie down requirements in the mobile homes in the Town of Rock Hall. Identify homes that lack proper tie downs in the (2) mobile home communities within the Town to reduce their vulnerability to high wind damages.	Tornado, High Wind, Hurricane, Severe Storms/ Sections 3, 5, 7, 8	Prevention	Town of Rock Hall	High
Enforce tie down requirements in the mobile homes in the Town of Chestertown. Identify homes that lack proper tie downs in the (4) mobile home communities within the Town to reduce their vulnerability to high wind damages.	Tornado, High Wind, Hurricane, Severe Storms/ Sections 3, 5, 7, 8	Prevention	Town of Chestertown	High
Develop a 5-year maintenance and upgrade plan (modeled after the county's water infrastructure maintenance plan) for major building systems (e.g. HVAC, groundwater elevation control) with additional capacity for higher outdoor temperatures, higher cooling loads from electronics, and increased precipitation rates.	Climate Adaptation/ Section 10	Prevention & Natural Resource Protection	Kent County Dept. of Public Works	Medium

Action Items	Hazard(s)/ Sections	Category	Responsible Entity(s)	Ranking
Design with additional elevation when repairing or upgrading county bulkheads, retaining walls, jetties, riprap, and docks to preserve function with rising water levels.	Flood & Climate Adaptation/ Sections 2 & 10	Prevention & Natural Resource Protection	Kent County Dept. of Public Works	Medium
Review county owned critical & public facilities within the FEMA regulated 1% annual-chance flood event area listed on Table 2-4. (5) properties were identified and are located within Rock Hall, Chestertown, and Worton.	Flood/ Section 2	Property Protection	Kent County Office of Emergency Services, Dept. of Public Works	Medium
Place fixed high-water signage on vulnerable bridges & roads.	Flood/ Section 2	Prevention & Natural Resource Protection	Kent County Office of Emergency Services, Dept. of Public Works	High
The Kent County Detention Center is particularly vulnerable because it has a groundwater spring located nearby. A set of pumps keeps the water table at least 12 feet below the building's foundation. However, during wet or rainy periods the pumps cannot keep up and the basement floors get wet. This is a problem because the Emergency Operations Center and communications equipment is housed in the basement.	Flood & Climate Adaptation/ Sections 2 & 10	Prevention	Kent County Office of Emergency Services, Kent County Detention Center, Dept. of Public Works, Kent County Dept. of Planning, Housing & Zoning	High
Encourage agricultural community to plant shade trees and/or erect tarp systems for livestock to congregate under extreme heat events.	Extreme Temperatures/ Section 4	Natural Resource Protection	Soil Conservation District	Medium
Bayside erosion issues identified by the Town. Note: Partial funding has been obtained for erosion mitigation project by FEMA 2021; project includes revetment and riparian planting.	Climate Adaptation/ Section 10	Natural Resource Protection	Town of Betterton	High
Install back-up generators at pump stations.	All-Weather Related Hazards/ Sections 2, 3, 4, 5, 6, 7, 8, 9, 10	Property Protection	Town of Betterton	High
Investigate Ericsson Avenue storm water management issues. Potential Streetscape Project- project is multi-faceted.	Flood/ Section 2	Property Protection	Town of Betterton	High
Install Rain Garden into landscaping plan around Cerino Center.	Climate Adaptation/ Section 10	Natural Resource Protection	Town of Chestertown	High
Provide flood insurance and flood related regulations training area contractors, real estate agents and insurance providers.	Flood/ Section 2	Prevention	Town of Millington	Medium
			Kent County Dept. of Planning, Housing & Zoning	High
Pursue funding and conceptual design for stream restoration project(s) along the Chester River at Little Chester Bridge. Both sides display bridge abutment scour issues.	Flood & Climate Adaptation/ Sections 2, 10	Property & Natural Resource Protection	Town of Millington	Medium
Install back-up generators at public utility facilities, Town Hall, and VFD.	All-Weather Related Hazards/ Sections 2, 3, 4, 5, 6, 7, 8, 9, 10	Property Protection	Town of Millington	Medium

Action Items	Hazard(s)/ Sections	Category	Responsible Entity(s)	Ranking
Determine potential flood impacts to the WWTP located within the FEMA regulated 1% annual-chance flood event area listed on Table 2-4.	Flood/ Section 2	Property Protection	Town of Millington	Medium
Complete Sustainable Maryland certification and/or recertification.	Climate Adaptation/ Section 10	Natural Resource Protection	Town of Galena	High
			Town of Chestertown	High
			Town of Betterton	Medium
			Town of Millington	Medium
Complete application process for the Resilient Maryland Grant Program. Note: projects include distributed energy resource (DER) systems such as, micro grids, advance Combined Heat and Power (CHP) systems, and community resiliency hubs.	Climate Adaptation & Extreme Temperatures/ Sections 4, 10	Property & Natural Resource Protection	Town of Galena	High
			Town of Betterton	N/A
			Town of Chestertown	N/A
			Town of Millington	Medium
Establish a working group to complete a field visit to identify potential stream restoration project locations.	Flood & Climate Adaptation/ Sections 2 & 10	Natural Resource Protection	Town of Millington	Medium
			Town of Rock Hall, University of MD	High
Strictly enforce sediment erosion control regulations. Pursue grants for planting projects to stabilize soil and mitigate erosion.	Climate Adaptation/ Section 10	Prevention & Natural Resource Protection	Town of Rock Hall	High
Explore (10) tide flex valve installation.	Flood/ Section 2	Property Protection	Town of Rock Hall	High
Install snow fences at strategic locations identified by the Town.	Snow & Ice Storms/ Section 6	Property Protection & Natural Resource Protection	Town of Rock Hall	Medium
Develop a Flood Mitigation Plan.	Flood/ Section 2	Property Protection	Kent County Office of Emergency Services, Kent County Dept. of Planning, Housing & Zoning	High
Add link to MDE's Flood Risk application on the Kent County's Mapping Tools homepage.	Flood/ Section 2	Property Protection	Kent County Dept. of Planning, Housing & Zoning	High
Encourage the planting of shade trees to relieve extreme heat reflected off concrete services. Target both public and private property.	Extreme Temperatures/ Section 1	Natural Resource Protection	Kent County & Area Businesses	Medium
Expand number and locations of cooling and warming centers within the County. Currently, public libraries are used.	Extreme Temperatures/ Section 4	Emergency Services	DSS, OES, HD, Aging	Medium
Host and promote training courses such as DHS and FEMA certified courses.	Emerging Infectious Diseases/ Section 11	Emergency Services	Kent County Health Dept. and Office of Emergency Services	Medium

Action Items	Hazard(s)/ Sections	Category	Responsible Entity(s)	Ranking
Prepare an After-Action Report and Improvement Plan for COVID-19 incident.	Emerging Infectious Diseases/ Section 11	Emergency Services	Health Department, Office of Emergency Services	Medium
Consider additional training such as Incident Command System (ICS), Incident Management Team (IMT), and Public Information for public health personnel.	All-Hazards/ Sections 2, 3, 4, 5, 6, 7, 8, 9, 10, 11	Emergency Services	Health Department	High

APPENDIX F:
CRITICAL & PUBLIC FACILITIES

Critical & Public Facilities

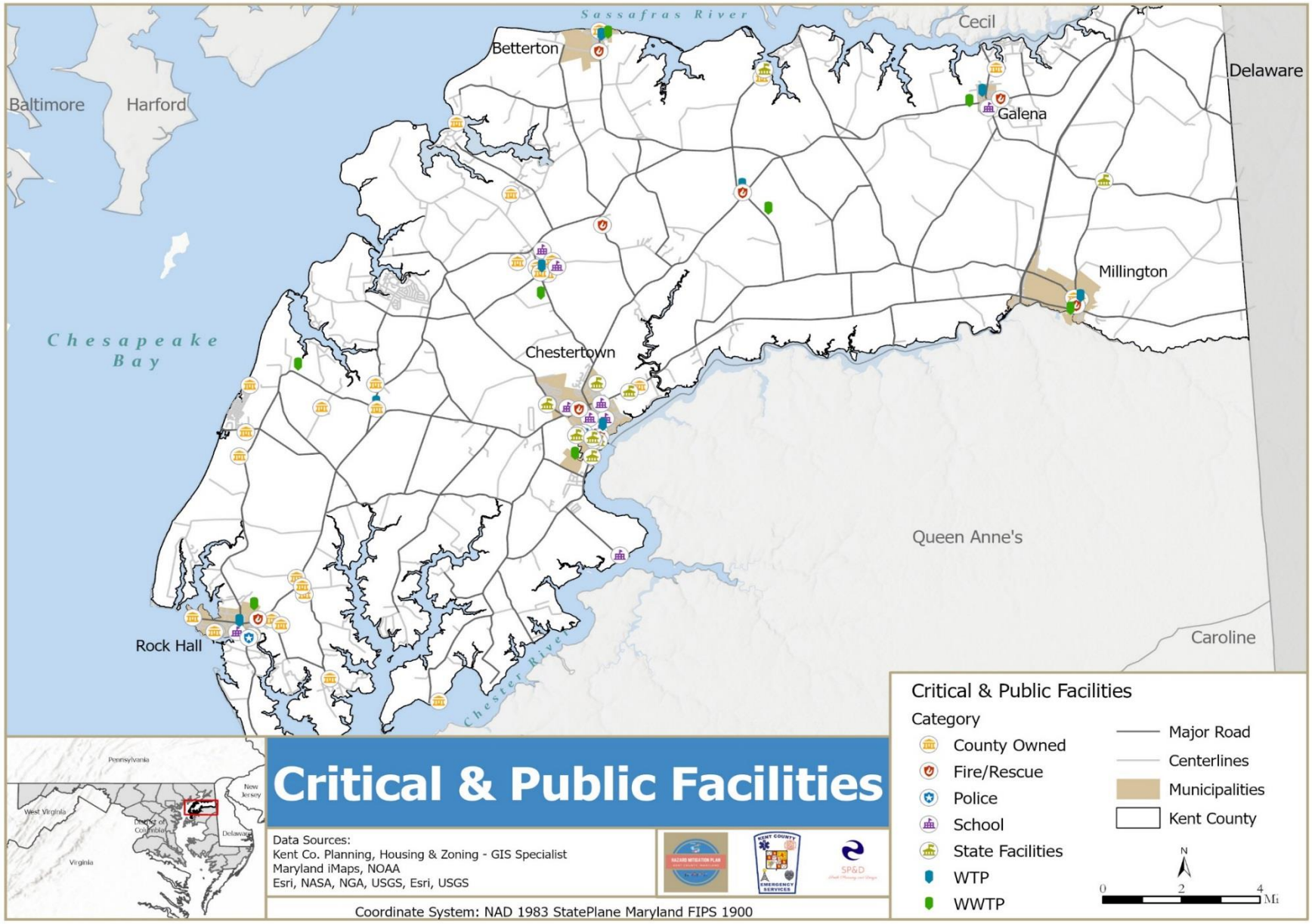
A new inventory of Critical and Public Facilities was compiled for the 2021 Plan Update. In order to develop the facilities listing, GIS data was obtained from Kent County's Planning, Housing and Zoning's GIS Specialist. The data was reviewed for the following categories: County Owned, Fire Stations, Educational, Medical, Police Stations, State Facilities, Water Treatment Plants, Wastewater Treatment Plan. A total of 84 critical and public facilities were identified during the planning process. The following table provides all new critical and public facilities identified and information obtained during the vulnerability assessment. This table should be viewed in a large format and printed on ledger paper, 11X17. Following the Critical and Public table are maps depicting facility location.

Critical & Public Facilities																				
Account ID	Category	Name	Address	City	Zip Code	Year Built	Square Feet	Building Value	# of Stories	Flood Zone	Coastal Flood Depth	Storm Surge CAT 1	Storm Surge CAT 2	Storm Surge CAT 3	Storm Surge CAT 4	SLR-1ft	SLR-2ft	SLR-3ft	SLR-4ft	SLR-5ft
1505024684	County Owned	Bayside Landing Park	20927 Bayside Avenue	Rock Hall	21661		1144	259100	1	AE	0.90	No	No	No	No	No	No	No	No	Yes
1505026393	County Owned	Marina	Bayside Avenue	Rock Hall	21661		0	45200	1	AE	0.50	Yes	No	No	No	No	No	No	No	No
1503024466	County Owned	Betterton Beach	Main Street	Betterton	21610	1986	951	193800	1	X	0.00	No	No	Yes	No	No	No	No	No	No
1505020166	County Owned	Board of Education	5608 Boundary Avenue	Rock Hall	21661		0	0	1	X	0.00	No	No	No	Yes	No	No	No	No	No
1505023335	County Owned	Board of Education	5608 Boundary Avenue	Rock Hall	21661	1975	29206	2311800	1	X	0.00	No	No	No	Yes	No	No	No	No	No
1503030970	County Owned	Water Tower	25021 Heather Lane	Worton	21678		0	1000000	1	X	0.00	No	No	No	No	No	No	No	No	No
1504018567	County Owned	Kent County Public Library	408 High Street	Chestertown	21620	1978	12434	1544400	1	X	0.00	No	No	No	No	No	No	No	No	No
1504017781	County Owned	County Commissioners	207 Calvert Street	Chestertown	21620	1958	720	21100	1	X	0.00	No	No	No	No	No	No	No	No	No
1507338580	County Owned	Cliff City Boat Ramp	Cliff City Road	Chestertown	21620		0	0	1	AE	3.40	Yes	No	No	No	No	Yes	Yes	Yes	Yes
1504018362	County Owned	Circuit Court for Kent County	103 N Cross Street	Chestertown	21620	1870	23568	1952500	2	X	0.00	No	No	No	No	No	No	No	No	No
1505026598	County Owned	County Commissioners	Edesville-Piney Neck	Rock Hall	21661		0	38200	1	X	0.00	No	No	No	No	No	No	No	No	No
1505026326	County Owned	Water Tower	Lovers Lane	Rock Hall	21661		0	509400	1	X	0.00	No	No	No	No	No	No	No	No	No
1506026575	County Owned	Storage Building	Raleigh Road	Chestertown	21620	1992	1800	171900	1	X	0.00	No	No	No	No	No	No	No	No	No
1503015394	County Owned	County Commissioners	24938 Montabello Lake Road	Worton	21678	1900	1150	8100	1	X	0.00	No	No	No	Yes	No	No	No	No	No
1506014925	County Owned	County Commissioners	Georgetown Road	Chestertown	21620		0	301400	1	X	0.00	No	No	No	No	No	No	No	No	No
1504018354	County Owned	Kent County Economic Development	400 High Street	Chestertown	21620	1901	19304	808300	3	X	0.00	No	No	No	No	No	No	No	No	No
1506026486	County Owned	County Fairgrounds	21349 Tolchester Beach Road	Chestertown	21620	1950	20366	762700	1	X	0.00	No	No	No	No	No	No	No	No	No
1501010778	County Owned	Vacant School	172 Sassafras Street	Millington	21651	1974	36377	2655900	1	X	0.00	No	No	No	No	No	No	No	No	No
1501012088	County Owned	Millington Pool	154 Millington Road	Millington	21651	1969	1225	82200	1	X	0.00	No	No	No	No	No	No	No	No	No
1506026583	County Owned	Solar Farm	9274 Fish Hatchery Road	Chestertown	21620		0	0	1	X	0.00	No	No	No	No	No	No	No	No	No
1506013406	County Owned	Stone Materials	8208 Tolchester Road	Chestertown	21620		0	417600	1	X	0.00	No	No	No	No	No	No	No	No	No
1504000188	County Owned	Public Works	709 Morgnec Road	Chestertown	21620	1976	28798	1320700	2	X	0.00	No	No	No	No	No	No	No	No	No
1505028191	County Owned	Storage Sheds	Crosby Road	Rock Hall	21661		0	11800	1	X	0.00	No	No	No	No	No	No	No	No	No
1505025524	County Owned	Storage Sheds	Crosby Road	Rock Hall	21661		0	16600	1	X	0.00	No	No	No	Yes	No	No	No	No	No
1503023281	County Owned	Storage Sheds	Worton-Muddy Branch Road	Worton	21678		0	800	1	X	0.00	No	No	No	No	No	No	No	No	No
1505005728	County Owned	Storage Sheds	22099 Johnson Avenue	Rock Hall	21661		0	44300	1	X	0.00	No	No	No	No	No	No	No	No	No
1505020344	County Owned	Water Tower	Rock Hall Road	Rock Hall	21661		0	89500	1	AE	0.90	Yes	No	No	No	No	No	No	No	Yes
1506024041	County Owned	Storage Sheds	Vermont Avenue	Chestertown	21620		0	13900	1	X	0.00	No	No	No	No	No	No	No	No	No
1505023351	County Owned	Communications Tower	Sharptown Road	Chestertown	21620		0	1100	1	X	0.00	No	No	No	Yes	No	No	No	No	No
1503020827	County Owned	Coast Guard Dock at Still Pond	24188 Streetill Pond Neck Road	Worton	21678	1970	11726	161900	1	AE	2.90	Yes	No	No	No	No	No	Yes	Yes	Yes
1501028650	County Owned	Toal Park	13753 Augustine Herman Hwy	Galena	21635		0	28500	1	X	0.00	No	No	No	No	No	No	No	No	No
1502013061	County Owned	Turner Creek Park	13681 Turners Creek Road	Kennedyville	21645	1990	874	261400	2	X	0.00	No	No	No	No	No	No	No	No	No
1503002969	County Owned	Park & Recreations Department	10932 Worton Road	Worton	21678	1959	13225	243200	1	X	0.00	No	No	No	No	No	No	No	No	No
1503020886	County Owned	Kent County Parks and Recreation	Worton Road	Worton	21678	1992	22108	5548000	1	X	0.00	No	No	No	No	No	No	No	No	No
1504000978	County Owned	Kent County EOC/OES	104 Vickers Drive	Chestertown	21620	1987	20244	0	1	X	0.00	No	No	No	No	No	No	No	No	No
1503004538	County Owned	Garage	10837 Worton Road	Worton	21678	1983	4360	142300	1	X	0.00	No	No	No	No	No	No	No	No	No
1503017087	Fire/Rescue	Kent County EMS - Lynch	11528 Lynch Road	Worton	21678	1950	914	98300	1	X	0.00	No	No	No	No	No	No	No	No	No
1505007933	Fire/Rescue	Rock Hall VFC Station 7	21500 Rock Hall Avenue	Rock Hall	21661	2005	29430	2149700	1	X	0.00	No	No	Yes	No	No	No	No	No	No
1504019121	Fire/Rescue	Kent & Queen Anne's Rescue Squad	140 Morgnec Road	Chestertown	21620	1971	10445	426600	1	X	0.00	No	No	No	No	No	No	No	No	No

Account ID	Category	Name	Address	City	Zip Code	Year Built	Square Feet	Building Value	# of Stories	Flood Zone	Coastal Flood Depth	Storm Surge CAT 1	Storm Surge CAT 2	Storm Surge CAT 3	Storm Surge CAT 4	SLR-1ft	SLR-2ft	SLR-3ft	SLR-4ft	SLR-5ft
1504018664	Fire/Rescue	Chestertown VFC Station 6	211 Maple Avenue	Chestertown	21620	1979	13562	627000	1	X	0.00	No	No	No	No	No	No	No	No	No
1502013304	Fire/Rescue	Kennedyville VFC Station 4	11993 Kennedyville Road	Kennedyville	21645	1957	5760	116500	1	X	0.00	No	No	No	No	No	No	No	No	No
1503024954	Fire/Rescue	Betterton VFC Station 5	11993 Kennedyville Road	Betterton	21610	1999	19829	784500	1	X	0.00	No	No	No	No	No	No	No	No	No
1501025376	Fire/Rescue	Galena VFC Station 3	90 E Cross Street	Galena	21635	1992	18000	1246600	1	X	0.00	No	No	No	No	No	No	No	No	No
1501020927	Fire/Rescue	Millington VFC Station 2	90 E Cross Street	Millington	21651	1975	13067	532400	1	X	0.00	No	No	No	No	No	No	No	No	No
1504000978	Police	Kent County Sheriff's Office	104 Vickers Drive	Chestertown	21620	1987	20244	3548400	1	X	0.00	No	No	No	No	No	No	No	No	No
1505020182	Police	Rock Hall Police Department	5585 N Main Street	Rock Hall	21661	1945	19045	1064100	1	X	0.00	No	No	No	No	No	No	No	No	No
1504005066	Police	Chestertown Police Department	601 High Street	Chestertown	21620	2003	9272	1103700	2	X	0.00	No	No	No	No	No	No	No	No	No
1501010794	School	Galena Elementary/Middle School	114 S Main Street	Galena	21635	1960	57717	2596400	1	X	0.00	No	No	No	No	No	No	No	No	No
1504018494	School	HH Garnet Elementary School	320 Calvert Street	Chestertown	21620	1948	46810	3506600	2	X	0.00	No	No	No	No	No	No	No	No	No
1503020851	School	Kent County High School	25301 Lambs Meadow Road	Worton	21678	1971	226134	14757000	1	X	0.00	No	No	No	No	No	No	No	No	No
1504018508	School	Kent County Middle School	402 E Campus Avenue	Chestertown	21620	1950	66271	2609000	1	X	0.00	No	No	No	No	No	No	No	No	No
1505023343	School	Rock Hall Elementary School	21203 W Sharp Street	Rock Hall	21661	1949	56709	1847200	1	X	0.00	No	No	Yes	No	No	No	No	No	No
1504019547	School	Chestertown Christian Academy	401 Morgnec Road	Chestertown	21620	1980	29274	2269300	1	X	0.00	No	No	No	No	No	No	No	No	No
1501010794	School	Chesapeake College (GED Or ESL)	114 S Main Street	Galena	21635	1960	57717	2596400	1	X	0.00	No	No	No	No	No	No	No	No	No
1503028151	School	Friendship Montessori School	25528 Worton Lynch Road	Worton	21678		2208	30000	1	X	0.00	No	No	No	No	No	No	No	No	No
1507007841	School	Kent School	6788 Wilkins Lane	Chestertown	21620	1998	30208	1183500	1	X	0.00	No	No	No	No	No	No	No	No	No
1504026535	School	Radcliffe Creek School	201 Talbot Blvd	Chestertown	21620		2963	1747100	1	X	0.00	No	No	No	No	No	No	No	No	No
1504022688	School	Chester River Adventist School	305 N Kent Street	Chestertown	21620		0	0	1	X	0.00	No	No	No	No	No	No	No	No	No
1504019008	School	Washington College	300 Washington Avenue	Chestertown	21620	2016	556902	49900700	4	X	0.00	No	No	No	No	No	No	No	No	No
1504000978	State Facilities	Kent County Detention Center	104 Vickers Drive	Chestertown	21620	1987	20244	0	1	X	0.00	No	No	No	No	No	No	No	No	No
1504027175	State Facilities	Maryland State Department of Assessments and Taxation	114-A Lynchburg Street	Chestertown	21620	1991	15844	625500	1	X	0.00	No	No	No	No	No	No	No	No	No
1504015916	State Facilities	The Public Defender System	115 Court Street	Chestertown	21620	1860	750	58400	1	X	0.00	No	No	No	Yes	No	No	No	No	No
1504027183	State Facilities	Kent County Health Department	125 S Lynchburg Street	Chestertown	21620	1987	18288	1159900	3	X	0.00	No	No	No	No	No	No	No	No	No
1502013088	State Facilities	Sassafras NRMA	13761 Turners Creek Road	Kennedyville	21620		0	127500	1	X	0.00	No	No	No	No	No	No	No	No	No
1504004051	State Facilities	J. DeWeese Carter Youth Facility	300 Scheeler Road	Chestertown	21620	1980	78579	6008700	1	X	0.00	No	No	No	No	No	No	No	No	No
1504009339	State Facilities	Department of Juvenile Services - Chestertown Office	315 High Street	Chestertown	21620	1997	19416	1062100	2	X	0.00	No	No	No	Yes	No	No	No	No	No
1504005791	State Facilities	Kent County Department of Social Services - Maryland Health Benefit Exchange	350 High Street	Chestertown	21620	1945	8250	538500	1	X	0.00	No	No	No	No	No	No	No	No	No
1504019466	State Facilities	Chestertown Shop	615 Morgnec Road	Chestertown	21620	1983	35704	2186700	1	X	0.00	No	No	No	No	No	No	No	No	No
0000000000	State Facilities	Massey Maintenance Shed	12193 Massey Road	Massey	21650		0	0	1	X	0.00	No	No	No	No	No	No	No	No	No
1504018311	Washington College Owned	Chestertown Armory	509 Cross Street	Chestertown	21620	1930	11930	576000	2	AE	1.10	No	Yes	No	No	No	No	No	No	Yes
1502005409	WTP	Kennedyville	12000 Kennedyville Road	Kennedyville	21645	1996	750	333900	1	X	0.00	No	No	No	No	No	No	No	No	No
1503022609	WTP	Worton	Worton-Catts Cor Road	Worton	21678		0	130000	1	X	0.00	No	No	No	No	No	No	No	No	No
1503020983	WTP	Betterton	3Road Avenue	Betterton		1983	1452	124700	1	X	0.00	No	No	No	No	No	No	No	No	No
1501027697	WTP	Galena	S Boxwood Lane	Galena	21635		0	92200	1	X	0.00	No	No	No	No	No	No	No	No	No
1504018613	WTP	Chestertown	405 N Kent Street	Chestertown	21620		0	0	1	X	0.00	No	No	No	Yes	No	No	No	No	No
1505023386	WTP	Rock Hall	405 N Kent Street	Rock Hall	21661	1984	1520	643300	1	X	0.00	No	No	No	Yes	No	No	No	No	No
1501338552	WTP	Millington	E/S Sassafras Street	Millington	21651		0	0	1	X	0.00	No	No	No	No	No	No	No	No	No

Account ID	Category	Name	Address	City	Zip Code	Year Built	Square Feet	Building Value	# of Stories	Flood Zone	Coastal Flood Depth	Storm Surge CAT 1	Storm Surge CAT 2	Storm Surge CAT 3	Storm Surge CAT 4	SLR-1ft	SLR-2ft	SLR-3ft	SLR-4ft	SLR-5ft
1506027369	WWTP	Fairlee-Tolchester	22010 Bay Shore Road	Chestertown	21620	1996	6264	282100	1	X	0.00	No	No	No	No	No	No	No	No	No
1502016036	WWTP	Kennedyville	11651 Kennedyville Road	Kennedyville	21645	2006	1953	115900	1	X	0.00	No	No	No	No	No	No	No	No	No
1503023117	WWTP	Worton	25300 Chinquapin Road	Worton	21678	1995	500	2068300	1	X	0.00	No	No	No	No	No	No	No	No	No
1503020959	WWTP	Betterton	28 3Road Avenue	Betterton	21610		672	14700	1	X	0.00	No	No	No	Yes	No	No	No	No	No
1501010832	WWTP	Galena	13265 Augustine Herman Hwy	Chestertown	21661		672	0	1	X	0.00	No	No	No	No	No	No	No	No	No
1507006608	WWTP	Chestertown	25792 John Hanson Road	Chestertown	21620		672	0	1	X	0.00	No	No	No	No	No	No	No	No	No
1505023408	WWTP	Rock Hall	6015 N Main Street	Rock Hall	21661	2000	12633	719100	1	X	0.00	No	No	Yes	No	No	No	No	No	No
1807012241	WWTP	Millington	227 Sassafras Street	Millington	21651		0	0	1	AE	6.10	No	No	No	No	No	No	No	No	No

Abbreviation	Explanation
EOC	Emergency Operations Center
OES	Office of Emergency Services
EMS	Emergency Medical Services
VFC	Volunteer Fire Company
GED	General Educational Development
ESL	English as a Second Language
WTP	Water Treatment Plant
WWTP	Wastewater Treatment Plant


Sassafras River
Cecil
Betterton
Delaware
Baltimore
Harford
Galena
Millington
Chesapeake Bay
Chestertown
Queen Anne's
Rock Hall
Caroline
Chester River
Critical & Public Facilities
Data Sources:
Kent Co. Planning, Housing & Zoning - GIS Specialist
Maryland iMaps, NOAA
Esri, NASA, NGA, USGS, Esri, USGS
Coordinate System: NAD 1983 StatePlane Maryland FIPS 1900
Critical & Public Facilities
Category
County Owned
Fire/Rescue
Police
School
State Facilities
WTP
WWTP
Major Road
Centerlines
Municipalities
Kent County
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APPENDIX G:
FUNDING SOURCES

Note: The following table should be viewed in a large format and printed on ledger paper, 11x17.

Funding Program Name	Contact Information	Key Words	Eligible Activities	Cost Share Requirements	Other Program Characteristics	Application Due Date
Animals: Emergency Haying and Grazing	USDA Farm Services Administration Emergency and Non-insured Assistance Programs FSA USDA 1400 Independence Ave, SW Washington, DC 20013 202-720-4053	agriculture; Conservation Reserve Program; CRP; disaster; drought; farm; FSA; haying; grazing; livestock; natural disaster; rural; USDA	Haying and grazing on Conservation Reserve Program (CRP) acreage to provide emergency relief to livestock producers due to certain natural disasters. Emergency haying and grazing on CRP acreage to provide relief to livestock producers in areas affected by a severe drought or similar natural disaster.	No information provided	Producers must be enrolled in the USDA Farm Service Agency's Conservation Reserve Program. For more information on the program, visit: https://www.fsa.usda.gov/programs-and-services/conservation-programs/conservation-reserve-program/index	Anytime
Building Blocks for Sustainable Communities	U.S. Environmental Protection Agency (EPA) Office of Community Revitalization (MC 1807T) 1200 Pennsylvania Ave NW Washington, D.C. Abby Hall at hall.abby@epa.gov or 202-631-5915 https://www.epa.gov/smartgrowth/building-blocks-sustainable-communities	EPA; local government; nonprofits; smart growth	FY20 Applications should focus on regional projects that address a disaster risk faced by those communities. Projects should align with and support related efforts and local hazard mitigation plans. Eligible applicants: local, county, or tribal governments, nonprofit organizations.	N/A	This program provides technical assistance to communities using a variety of tools (e.g. smart growth, climate change, disaster resiliency and recovery, etc.). The EPA provides technical assistance through uses teams of experts who conduct workshops in communities related to the tools. Grant focus changes yearly. FY20 Grants must focus on helping regions to build large-scale resilience to natural disasters, aligning resilience priorities across federal, state, and local planning requirements and funding sources.	November 8, 2019
Capital Project Financial Assistance / Water Quality Improvement Projects (Maryland Water Quality Financing Administration, MWQFA)	Maryland Department of the Environment (MDE) For assistance, please contact Elaine Dietz at elaine.dietz@maryland.gov https://mde.maryland.gov/programs/water/WQFA/Pages/index.aspx	Chesapeake Bay; drinking water; MS4; MWQFA; restoration; revolving loan; septic system; sewer extension; stormwater; wastewater; wastewater treatment; water quality	Water Quality State Revolving Loan Fund - Low interest rate loan and loan principal forgiveness (if eligible) for publicly-owned treatment works projects and publicly or privately-owned non-treatment works projects. Drinking Water State Revolving Fund – Low interest rate loan and loan principal forgiveness (if eligible) for public or privately-owned drinking water projects. Bay Restoration Fund Wastewater Program - Grant funds for · ENR upgrade at major or minor wastewater treatment plants · Improvements to existing wastewater conveyance systems · Sewer extension to connect homes on septic systems to a BNR/ENR wastewater treatment plant · Nitrogen reducing BAT upgrade at shared community septic systems · Stormwater (MS4) projects by local governments with a system of charges Water Supply Financial Assistance - Grant funds not to exceed $1.5 million for drinking projects at publicly-owned facilities, based on system size, compliance, and affordability.	No information provided; N/A for loans	If your project will be ready-to-proceed to construction by December 2022, please complete a separate application for each capital project for which you are seeking financial assistance and submit to MDE per instructions provided in the application. If you previously applied for financial assistance and your project was only partially or not funded, a new/updated application is required. (Applicants with stormwater projects to meet MS4 permits may (and are strongly encouraged to) submit multiple BMP projects that will start construction within 12 - 18 months of notification of funding as a "program" of projects using a single funding application, as opposed to submitting individual BMP projects in separate applications.) Projects in construction prior to MDE's verification of competitive procurement and compliance with all programmatic requirements will not be funded. Do not submit applications for projects in construction that have not already have had these reviews completed by MDE.	January 31, 2020
Certified Local Government (CLG) Program	Maryland Historical Trust (MHT) 100 Community Place, 3rd Floor Crownsville, MD 21032 Nell Ziehl, Chief, Office of Planning, Education and Outreach, nell.ziehl@maryland.gov 410-697-9592	archaeology; archeology; CLG; certified local government; cultural resources; documentation; education; evaluation; heritage; historic; historic building; historic preservation; historic structure; nomination; NPS; National Park Service; NRHP; National Register of Historic Places; planning; preservation; preservation planning; research; studies; training	There are two grant tracks: Education and Training and Projects. Education and Training grants are available for attendance at training, workshops, and conferences. Project grants are available for research, survey, documentation, conservation, planning and educational activities involving historic, architectural, archeological or cultural resources (i.e., the tangible remains of Maryland's past). Only Certified Local Governments are eligible to apply for funding.	N/A	Education and Training Grant awards do not exceed $1,000 per Certified Local Government and Program Grants do not exceed $25,000. Individual awards for Program Grants generally range from $5,000 to $15,000. Hazard mitigation planning for cultural resources (historic structures, historic communities, archeological sites) in CLGs may be fundable under this program. Contact Program Administrator prior to submitting a hazard mitigation planning grant to verify project eligibility.	January or February

Funding Program Name	Contact Information	Key Words	Eligible Activities	Cost Share Requirements	Other Program Characteristics	Application Due Date
State FY21 Clean Water Commerce Act Grant	Maryland Department of the Environment (MDE) Walid.Saffouri walid.saffouri@maryland.gov 410-537-3757 https://mde.maryland.gov/programs/water/WQFA/Pages/index.aspx	Chesapeake Bay; Clean Water Act; environmental; nutrient reduction; sediment load reduction; sediment; sediment reduction; water quality	The Clean Water Commerce Act (CWCA) passed by the Maryland General Assembly during the 2017 Session (SB314/HB417) expanded the uses of the Bay Restoration Fund to include the costs associated with the purchase of cost-effective nitrogen, phosphorus, or sediment load reductions in support of the State's efforts to restore the health of the Chesapeake Bay, not to exceed $6,000,000 in fiscal year 2019, and $10,000,000 in fiscal years 2020 and 2021. The nitrogen, phosphorus, and sediment load reductions purchased cannot come from the agriculture sector and must be created by July 1, 2017.	No information provided	MDE may enter into any contract until June 30, 2021. The contract may last as long as the expected life of the environmental practice resulting from nutrient load reductions.	January 31, 2020
Community Assistance Program - State Support Services Element (CAP-SSSE)	Maryland Department of the Environment 160 South Water Street Frostburg, MD 21532 For more information contact: Kevin Wagner Community Assistance Program Coordinator kevin.wagner@maryland.gov 301-689-1495 https://www.fema.gov/community-assistance-program-state-support-services-element	flood; flooding; flood insurance; flood mitigation; flood openings; flood risk reduction; floodplain management; floodplain mapping; floodplain regulations; hazard mitigation; NFIP; technical assistance	The Maryland Department of the Environment will provide technical assistance on the National Flood Insurance Program (NFIP). Assist with questions about construction in the floodplain, flood insurance, and floodplain mapping to local governments and municipalities.	N/A	N/A	N/A
Community Development Block Grants / Disaster Recovery	U.S Department of Housing and Urban Development (HUD) Office of Block Grant Assistance 451 7th Street, SW Washington, DC 20410-7000 202-708- 1112	CDBG-DR; community; communities; disaster; economic revitalization; housing; HUD; infrastructure; recovery	State and local governments may apply for funding. Eligible activities include "…necessary expenses related to disaster relief, long-term recovery, and restoration of infrastructure, housing, and economic revitalization." Each activity must meet these three requirements: (1) Address a disaster-related impact (direct or indirect) in a Presidentially declared area for the covered disaster (2) Be a CDBG eligible activity and (3) Meet a CDBG national objective	No information	Citizen participation procedures must be followed. At least 70 percent of funds must be used for activities that principally benefit persons of low and moderate income. Formula grants to States for non-entitlement communities.	After a Presidential Disaster Declaration
Community Legacy	Maryland Department of Housing and Community Development (DHCD) Contacts vary by region. Community Legacy Contact List available here: https://dhcd.maryland.gov/Communities/Pages/programs/CL.aspx	acquisition; business; business retention; community; community development; communities; demolition; development; DHCD; economic revitalization; improvements; open space; revitalization; Sustainable Communities; sustainable; sustainability	Projects should help the local government's implementation of their Sustainable Communities Action Plan. Typical projects/activities include (but are not limited to): mixed-use development consisting of residential, commercial and/or open space; business retention, expansion and attraction initiatives; streetscape improvements; increasing homeownership and home rehabilitation among residents; residential and commercial façade improvement programs; real estate acquisition, including land banking, and strategic demolition.	State - 100%	Projects must be located in a one of Maryland's designated Sustainable Communities. Eligible applicants are local governments, community development organizations (county councils, community development corporations, main street organizations, downtown partnerships), and groups of local governments sharing a common purpose or goal.	Late Spring

Funding Program Name	Contact Information	Key Words	Eligible Activities	Cost Share Requirements	Other Program Characteristics	Application Due Date
Comprehensive Flood Management Grant Program (FMG)	Maryland Department of the Environment (MDE) 1800 Washington Blvd Baltimore, MD 21230 For more information, please contact Cheryl Reilly at cheryl.reilly@maryland.gov	acquisition; capital projects; elevation; flood; flood control; flood damage; flood management plan; flood mitigation; MDE; mitigation; plan; planning relocation; watershed management; watershed studies; watershed	The grant funds the development of local flood management plans, studies of watersheds, and supports capital projects for flood control and watershed management. This program also provides grants to Maryland counties and municipalities after flood events to implement flood control projects, and for acquisition of flood-damaged owner-occupied dwellings. Elevation and relocation of homes are also eligible for funding. Acquired land is converted to open space in perpetuity.	When federal funds do not participate in the cost of a project, the FMG may fund up to 75% of the cost of the project and the local share would be 25%. If federal funds are participating in the project cost, the FMG can provide 50% of the match requirement and the local share would be 50%.	Only county and municipal governments are eligible to receive grants. During the 2019 Session of the Maryland General Assembly HB 428/SB 269 was passed, which requires at least $3 million in both fiscal year 2021 and fiscal year 2022, and for fiscal year 2023 at least $2 million be appropriated.	January 31, 2020
Conservation Reserve Program	USDA Farm Services Administration (FSA) https://www.fsa.usda.gov/programs-and-services/conservation-programs/conservation-reserve-program/	agriculture; conservation; CRP; erosion; habitat; habitat restoration; land conservation; open space; protection; restoration; soil erosion protection; soil erosion; USDA; water quality; wildlife habitat	For land to be eligible it must be: Cropland that has been planted or considered planted to an agricultural commodity 4 of the 6 years between 2008 and 2013; and Physically and legally capable of being planted in a normal manner to an agricultural commodity. Alfalfa or other multiyear grasses and legumes grown in a rotation, not to exceed 12 years, also may be eligible. Also, cropland must meet one of the following criteria: Have a weighted average Erodibility Index of eight, or greater; Be expiring CRP; or Be located in a national or State conservation priority area.	N/A	Contracts for land enrolled in CRP are 10-15 year in length.	Summer, Announcement in late Spring
Continuing Authorities Program (CAP)	U.S. Army Corps of Engineers (USACE) 441 G Street, NW Washington, DC 20314 202-761-0011 https://www.nae.usace.army.mil/Missions/Public-Services/Continuing-Authorities-Program/	beaches; beach erosion; beneficial use of dredged materials; channel clearing; dredged materials; environmental; erosion; flood control; hazard mitigation; hazard protection; natural hazards; storm damage reduction; navigation improvements; mitigation; protection; public services; public works; streams; streambank; shoreline; USACE; water resources	USACE will plan, design, and implement certain types of water resources projects. Activities are section-dependent: streambank and shoreline erosion protection of public works and non-profit public services; beach erosion and hurricane and storm damage reduction; navigation improvements; shore damage prevention or mitigation caused by Federal navigation projects; beneficial uses of dredged materials; flood control; aquatic ecosystem restoration; removal of obstructions, clearing channels for flood control; project modifications for the improvement of the environment	The feasibility phase is Federally funded up to $100,000, any remaining feasibility costs are shared 50/50 with the Non-Federal sponsor. The implementation phase costs phase are shared per the authorizing legislation for that section.	A local sponsor must identify the problem and request assistance. Small flood control projects are also available. Baltimore District, USACE General Information: 1-800-434-0988	Anytime

Funding Program Name	Contact Information	Key Words	Eligible Activities	Cost Share Requirements	Other Program Characteristics	Application Due Date
Emergency Advance Measures for Flood Prevention	U.S. Army Corps of Engineers (USACE) 441 G Street, NW Washington, DC 20314 202-761-0011	advance measures; contamination; disaster; drought; emergency operations; emergency; water; flood control; flood response; post-flood response; preparedness; rehabilitation; response; shoreline protection; USACE	The USACE is authorized to undertake activities including disaster preparedness, Advance Measures, emergency operations (Flood Response and Post Flood Response), rehabilitation of flood control works threatened or destroyed by flood, protection or repair of federally authorized shore protective works threatened or damaged by coastal storm, and provisions of emergency water due to drought or contaminated source.	No information provided	There must be an immediate threat of unusual flooding present before advance measures can be considered. Any work performed under this program will be temporary in nature and must have a favorable benefit cost ratio.	Governor of State must request assistance
Emergency Watershed Protection (EWP) Program - Recovery Assistance	Natural Resources Conservation Service (NRCS) 1400 Independence Avenue SW Washington, DC 20250 Shawn Anderson, Acting EWP Program Manager, shawn.anderson@wdc.usda.gov, 202-720-5795	debris removal; conservation; erosion protection; EWP; levee repair; NRCS; recovery; streams; streambank erosion; streambank protection; USDA; watershed	Debris removal from stream channels, roads culverts, and bridges; reshape and protect eroded streambanks; correct damaged drainage facilities; establish vegetative cover on critically eroding lands; repair levees and structures; repair conservation practices	Federal - 75% Non-Federal - 25%	Public and private landowners can apply for assistance for EWP Program - Recovery projects through a local sponsor, or a legal subdivision of state or tribal government. Eligible sponsors include cities, counties, towns, conservation districts, flood and water control districts, or any federally recognized Native American tribe or tribal organization. Does not fund operation and maintenance work or repair private or public transportation facilities or utilities. Any work performed under this program cannot adversely affect downstream water rights and funds cannot be used to install measures not essential to the reduction of hazards.	TBD - Post disaster
Emergency Watershed Protection (EWP) Floodplain Easement Program - Floodplain Easement Option (EWPP-FPE)	Natural Resources Conservation Service (NRCS) Emergency Watershed Protection Program-Floodplain Easement (EWPP-FPE) Program Manager Jeff Williams Easement Programs Division, jeff.williams3@usda.gov 202-720-6268 Contact Local NRCS Field Office: https://offices.sc.egov.usda.gov/locator/app?service=page/CountyMap&state=MD&stateName=Maryland&stateCode=24	acquisition; demolition; easements; EWP; EWPP-FPE; floodplain; floodplain enhancement; floodplain restoration; NRCS; open space; relocation; restoration; USDA	Permanent easements are available for eligible lands: Agricultural or open lands; lands primarily used for residential house. Individuals and communities can directly contact NRCS about this program.	N/A	A project sponsor is required for lands primarily used for residential housing and for the purchase of the remaining lot after structures are removed. NRCS may purchase EWPP-FPE permanent easements in floodplains for the following reasons: 1) The land has been damaged by flooding at least once during the previous calendar year or subject to flood damage at least twice within the previous 10 years 1. 2) Other lands within the floodplain may be eligible if they contribute to the restoration of floodwater storage and flow, offer a way to control erosion, or improve the practical management of the floodplain easement. 3) Lands that would be inundated or adversely impacted as a result of a dam breach. 1If FPE is being offered as recovery for a specific natural disaster, at least one instance of flooding must have occurred because of that natural disaster.	Anytime

Funding Program Name	Contact Information	Key Words	Eligible Activities	Cost Share Requirements	Other Program Characteristics	Application Due Date
Federal Emergency Management Agency, Flood Mitigation Assistance Program (FMA)	Maryland Emergency Management Agency (MEMA) 5401 Rue Saint Lo Drive Reisterstown, MD 21136 Contact: mitigation.mema@maryland.gov	aquifer; critical facilities; FEMA; FMA; flood; flood control; flood damage; flood mitigation; flood mitigation plan; flood protection; floodwater storage; floodwater diversion; HMA; infrastructure; MEMA; mitigation; NFIP; plan; planning; protection; recovery; repetitive loss; RL; restoration; sanitary sewer system; severe repetitive loss; streams; stream restoration; SRL; stormwater; stormwater management; water system; wetlands; wetland restoration	Infrastructure protective measures; floodwater storage and diversion; utility protective measures; stormwater management; wetland restoration/creation; aquifer storage and recovery; localized flood control project to protect critical facility; floodplain and stream restoration; water and sanitary sewer system protective measures	Federal - 75% Non-Federal - 25% RL: Federal - 90% Non-Federal - 10% SRL: Federal - 100% Non-Federal - 0% Small, Impoverished Community: Federal - 90% Non-Federal - 10% RL = Repetitive Loss Property SRL = Severe Repetitive Loss Property	Projects must be cost effective, environmentally sound and solve a problem. Repetitive and Severe Repetitive Loss properties are a high priority. Program is nationally competitive. *Sub applicants must submit a Notice of Intent (NOI) to MEMA to apply for funding under this grant and must coordinate with MEMA prior to submission.* MEMA submits all grants for the State of Maryland (including sub-grants to local governments). Applicants (the State of Maryland) and sub applicants (local government) must have a FEMA approved hazard mitigation plan as of the application deadline and at the time of obligation of funding for project grants. Some projects may require the property be covered by a flood insurance policy for the life of the structure upon project completion. Local government must be in compliance with the National Flood Insurance Program to be eligible.	NOIs due to MEMA - August 2019 Applications due to MEMA - November 15, 2019
Federal Emergency Management Agency, Hazard Mitigation Grant Program (HGMP)	Maryland Emergency Management Agency (MEMA) 5401 Rue Saint Lo Drive Reisterstown, MD 21136 Contact: mitigation.mema@maryland.gov	acquisition; code enforcement; demolition; disaster; elevation; FEMA; flood; flood risk reduction; floodproofing; generators; hazard mitigation; hazard mitigation plan; hazard mitigation planning; hazard mitigation project; HMA; HMGP; management costs; mitigation; MEMA; NFIP; planning; plans; protection; reconstruction; relocation; retrofitting; safe rooms; soil stabilization; wildfire; wildfire mitigation; wind retrofit; 5 percent initiative	Acquisition, demolition, relocation, elevation, reconstruction, dry floodproofing, generator purchase, flood risk reduction projects, retrofitting, safe room construction, wind retrofits (1- and 2-family residences), soil stabilization, wildfire mitigation, hazard mitigation planning, management costs, post-disaster code enforcement, 5 percent initiative projects, hazard mitigation planning related planning activities	Federal - 75% Non-Federal - 25%	Projects must be cost effective, environmentally sound and solve a problem. Sub applicants must submit a Notice of Intent (NOI) to MEMA to apply for funding under this grant and must coordinate with MEMA prior to submission. *MEMA submits all grants for the State of Maryland (including sub-grants to local governments). Applicants (the State of Maryland) and sub applicants (local government) must have a FEMA approved hazard mitigation plan at the time of obligation of funding for project grants. Some projects may require the property be covered by a flood insurance policy for the life of the structure upon project completion.*	After a Presidential Disaster Declaration

Funding Program Name	Contact Information	Key Words	Eligible Activities	Cost Share Requirements	Other Program Characteristics	Application Due Date
Federal Emergency Management Agency, Building Resilient Infrastructure and Communities (BRIC)	Applications are processed through the FEMA GO system. To access the system, go to https://go.fema.gov/. Hard copies of the NOFO can be downloaded at Grants.gov or For a hardcopy of the full NOFO, please submit a request to: Kayed Lakhia Director, Hazard Mitigation Assistance Division, Mitigation Directorate Federal Insurance and Mitigation Administration Federal Emergency Management Agency 400 C Street, SW Washington, DC 20472	acquisition; demolition; elevation; FEMA; flood; flood risk reduction; floodproofing; generators; hazard mitigation; hazard mitigation plan; hazard mitigation planning; hazard mitigation project; HMA; management costs; mitigation; MEMA; NFIP; PDM; planning; plans; protection; reconstruction; relocation; retrofitting; safe rooms; soil stabilization; wildfire; wildfire mitigation; wind retrofit	To achieve these principles, FEMA will provide financial assistance to eligible BRIC Applicants for the following activities: (1) Capability- and Capacity-Building (C&CB) - activities which enhance the knowledge, skills, expertise, etc., of the current workforce to expand or improve the administration of mitigation assistance. This includes activities in the following sub-categories: building codes activities, partnerships, project scoping, mitigation planning and planning-related activities, and other activities; (2) Mitigation Projects - cost-effective projects designed to increase resilience and public safety; reduce injuries and loss of life; and reduce damage and destruction to property, critical services, facilities, and infrastructure; and (3) Management Costs - financial assistance to reimburse the Recipient and subrecipient for eligible and reasonable indirect costs, direct administrative costs, and other administrative expenses associated with a specific mitigation measure or project in an amount up to 15 percent of the total amount of the grant award, of which not more than 10 percent of the total award amount may be used by the Recipient and 5 percent by the subrecipient for such costs. FEMA will also provide non-financial Direct Technical Assistance to communities to build a community's capacity and capability to improve its resiliency to natural hazards and to ensure stakeholders are capable of building and sustaining successful mitigation programs, submitting high-quality applications, and implementing new and innovative projects that reduce risk from a wide range of natural hazards.	Federal - 75% Non-Federal - 25% Small Impoverished Community: Federal - 90% Non-Federal - 10% Insular Areas:	The Building Resilient Infrastructure and Communities (BRIC) program makes federal funds available to states, U.S territories, Indian tribal governments, and local communities for pre-disaster mitigation activities. The guiding principles of the program are to (1) support state and local governments, tribes, and territories through capability and capacity-building to enable them to identify mitigation actions and implement projects that reduce risks posed by natural hazards; (2) encourage and enable innovation while allowing flexibility, consistency, and effectiveness; (3) promote partnerships and enable high-impact investments to reduce risk from natural hazards with a focus on critical services and facilities, public infrastructure, public safety, public health, and communities; (4) provide a significant opportunity to reduce future losses and minimize impacts on the Disaster Relief Fund; and (5) support the adoption and enforcement of building codes, standards, and policies that will protect the health, safety, and general welfare of the public, take into account future conditions, and have long-lasting impacts on community risk reduction, including for critical services and facilities and for future disaster costs.	Application Start Date: 9/30/2020 Application Submission Deadline: 1/29/2021 by 3:00 PM EST
Fire Management Assistance Program Fire Management Assistance Grant	Federal Emergency Management Agency (FEMA) FEMA Region III 615 Chestnut Street One Independence Mall, Sixth Floor Philadelphia, PA 19106-4404 215-931-5500	disaster; FEMA; fire; fire control; forests; grassland; grassland mitigation; management; mitigation; private land; public land; wildfire	Provides real-time assistance for the suppression of any fire on public (non-Federal) or privately owned forest or grassland that threatens to become a major disaster. Eligible costs may include, but are not limited to, expenses for: field camps, equipment use, equipment repair and replacement, tools, materials, supplies, and mobilization and demobilization activities.	Federal - 75% State - 25%	Prior to award, the State must demonstrate that the total eligible costs for the declared fire meet or exceed the individual fire cost threshold.	After Fire Management Assistance declaration
Oil Spill Liability Trust Fund	U.S. Coast Guard (USCG) Director, USCG National Pollution Funds Center Stop 7605 2703 Martin Luther King Jr. Avenue, SE Washington, DC 20593-7605 202-795-6000 Visit this website for more information: https://www.uscg.mil/Mariners/National-Pollution-Funds-Center/Response/	cleanup; contamination; disposal; haz mat; hazardous materials; NPFC; oil spill; Oil Spill Act; OPA; removal; USCG	Compensation may be available under the Oil Spill Act (OPA) if the claim meets the requirements and all costs and damages from the spill are documented. Funding can be used for Federal removal costs including payment to cleanup contractors, overtime for government personnel, equipment used in removal operations, testing to identify the type and source of oil, disposal of recovered oil and oily debris, and preparation of associated cost documentation.	Reimbursement for eligible activities, cost share does not apply	These agencies/organizations can access the fund: all Federal on-scene coordinators (FOSCs); Federal, State, local, and Tribal government agencies assisting the FOSC; natural resources trustees (designated by the President of the United States, state, territorial governor, or Indian tribal governing authority), claimants (individuals, corporations, and government entities) can submit claims for uncompensated removal costs and OPA damages caused by the oil spill to the USCG's National Pollution Funds Center (NPFC) if the responsible party (RP) does not satisfy their claims.	Anytime

Funding Program Name	Contact Information	Key Words	Eligible Activities	Cost Share Requirements	Other Program Characteristics	Application Due Date
Local Government Infrastructure Financing Program	Maryland Department of Housing and Community Development (DHCD) Charles Day, Program Manager 7800 Harkins Road Lanham, MD 20706 301-429-7891	DHCD; equipment; facilities; infrastructure; infrastructure improvements; landscaping; loan; public services; public safety; public land; refinancing; stormwater; sidewalks; street lighting; vehicles; water treatment; water storage	Project must support an essential physical element of a municipality's public service system. Projects may include (but are not limited to): street lighting, landscaping, sidewalks, and public space improvements; public safety vehicles and equipment; water production, treatment, storage, and distribution systems; stormwater control, and sewer collection and treatment facilities; government office and meeting facilities; police, fire, transportation, education, health, recreation, maintenance, and other service related facilities; refinancing of existing debt for eligible projects as listed above.	N/A (loan) Through funding raised through tax-exempt bonds issued on behalf of counties, municipalities, and/or their instrumentalities, the State uses the bond proceeds to issue a *loan* to the local government (interest rate depends on market conditions at time of loan issuance).	All Maryland counties, municipalities and/or their agencies are eligible, provided they have legal authority necessary for: constructing, operating and maintaining the proposed project; pledging security for and repaying the proposed loan, and; pledging income tax payments and various other shared revenue from the state. Local governments must secure local legislative approval(s) to incur the debt, certify the capacity to inspect the project's construction progress, and agree to submit periodic status reports. Additionally, they must ensure adequacy and sufficiency in the project's design and construction, and they must meet credit requirements sufficient to satisfy rating agencies and secure a favorable credit rating.	Applications accepted on an ongoing basis
Maryland Business Recovery Loan Program	Maryland Department of Housing and Community Development (DHCD) Neighborhood Business Works Program 7800 Harkins Road, 4th Floor Lanham, MD 20706 Colleen Cord-Malone Business Lending Programs, Manager II 301-429-7517 Toll Free: 1-800-756-0119 colleen.cord-malone@maryland.gov Aisha K. Taylor Business Lending Programs, Loan Underwriter 301-429-7721 Toll free: 1-800-756-0119 aisha.taylor@maryland.gov	DHCD; disaster; equipment; fixtures; furniture; inventory; leasing expenses; loan; lost revenue; lost operating expenses; nonprofits; recovery; renovation; repair; replacement; small business; working capital	Renovations; repairs and replacement of furniture, fixtures, and equipment; inventory replacement; loss of revenue/operating and leasing expense assistance; certain other costs associated with recovery of a small business, including working capital. Eligible businesses include retail, manufacturing, goods and services. Business must be located in Baltimore City, Baltimore County, Frederick County, Howard County, or Washington County.	N/A (loan)	Offers assistance up to $50,000 (amount based on damage assessment) at an interest rate of zero percent (0%). Higher amounts will be considered on a case-by-case basis. Financing may be used in conjunction with other financing, insurance proceeds, etc., and the target loan term is 1-5 years, depending on loan size and affordability.	Available when activated after state declaration of emergency.
Maryland Disaster Housing Assistance Program	Maryland Department of Housing and Community Development (DHCD) Gregory Hare Deputy Director, Multifamily Housing 7800 Harkins Road, Lanham, MD 20706 301-429-7775	assistance; DHCD; disaster; disaster assistance; emergency assistance; emergency rental assistance; housing; housing assistance; housing voucher; MDHAP; rental assistance; voucher	Eligible recipients: Families or individuals are assisted on a referral basis through referrals made by MEMA, DHR, local government human resources or emergency management offices, or other designated disaster relief agencies. Generally, all families or individuals displaced by a natural disaster are eligible and can be referred to the program.	None: State funds 100% of costs	The term of the voucher is 90 days, extensions will be considered if the home is not ready for occupancy at the end of 90 days.	Available when activated after state declaration of emergency.

Funding Program Name	Contact Information	Key Words	Eligible Activities	Cost Share Requirements	Other Program Characteristics	Application Due Date
Maryland Energy Administrant (MEA), Resilient Maryland	Questions and feedback regarding the Resilient Maryland program should be directed to Brandon Bowser, CHP & Energy Resilience Program Manager, at BrandonW.Bowser@Maryland.gov or via phone at (443) 306-0304.	MEA; clean; efficient; affordable; energy; vulnerable populations.	At a minimum, eligible projects must: Be located within the State of Maryland; Clearly demonstrate the organizational and/or societal benefits of system implementation; Include an Applicant contribution that can be at a minimum an amount of donated work hours (excluding administrative duties related to Grant reporting); Demonstrate clean energy systems that achieve greenhouse gas reductions; and Permit showcasing of project findings and installations by MEA to the public. Applicants must be in Good Standing with the Maryland State Department of Assessments and Taxation (SDAT), when applicable.	Resilient Maryland provides direct funding for project planning and design and connects eligible projects with other MEA programs that provide funding for equipment or installation.		ALL APPLICATIONS DUE BY 11:59 P.M. EST, FRIDAY, JANUARY 29, 2021
Maryland Energy Administrant (MEA), Combined Heat and Power (CHP) Grant Program	Questions or comments regarding the FY21 CHP Grant Program should be directed to Brandon Bowser, CHP & Energy Resilience Program Manager. He can be reached via email at BrandonW.Bowser@Maryland.gov or via phone at (443) 306-0304.	CHP; capital costs; energy resilience; energy efficiency; renewable natural gas; RNG;	Commercial businesses Nonprofit organizations Critical infrastructure Industrial and manufacturing Chemical and pharmaceutical Institutional (colleges, universities, etc.) Public and private education Multifamily housing Agricultural Maryland State and local government	Up to $1.65 million is available to eligible entities in Round 1, and is divided between two (2) Areas of Interest (“AOIs”): AOI 1: CHP for Energy Resilience AOI 2: CHP for Energy Efficiency		ALL ROUND 1 APPLICATIONS DUE BY 11:59 P.M. EDT, FRIDAY, OCTOBER 30, 2020
Maryland Housing Rehabilitation Program (Single Family; 1-4 Family Rental Units)	Maryland Department of Housing and Community Development (DHCD) Single Family Housing 7800 Harkins Road, Lanham, MD 20706 singlefamilyhousing.dhcd@maryland.gov 301-429-7821 Toll Free (Maryland Only): 800-638-7781 TTY 711 or 1-800-735-2258	DHCD; homeowners; landlords; loan; single family; rehabilitation; rental properties	Eligible Applicants: Household income of owner-occupants of single-family homes and all residents of financed rental housing cannot exceed 80 percent of the statewide or Washington, D.C. Metropolitan Statistical Area median income.	Community/Campus Microgrid	$100,000	Open and ongoing

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Maryland Sea Grant (NOAA)	NOAA, Sea Grant Maryland Fredrika Moser, Director moser@mdsg.umd.edu Michael Allen, Associate Director for Research and Administration mallen@mdsg.umd.edu 301-405-7500	aquaculture; climate change; coastal; coastal ecosystems; ecosystems; economy; economic equity; equity; estuary; fisheries; land use; natural hazards; nutrient reduction; outreach; pollution abatement; research; resiliency; resilience; resilient communities; resilient economies; resiliency; restoration; seafood safety; sediment; sediment reduction; socioeconomic equity; social equity; sustainable; sustainability; sustainable fisheries; sustainable aquaculture; watershed; water quality	Eligible activities are research proposals that provide scientific and socioeconomic information that can inform policy decisions for fisheries management and sustainable aquaculture, climate change adaptation, coastal community resilience, and ecosystem restoration in coastal systems in Maryland. Projects must demonstrate a connection between the proposed research and the focus areas and strategies (one or more) highlighted in the RFP. A proposal must demonstrate integration among its scientific approaches, research outcomes, and outreach plan. Eligible applicants: Principal Investigators (PIs) must be affiliated with an academic institution or research laboratory in Maryland or the District of Columbia. Co-Principal Investigators (Co-PIs) on projects can be from institutions outside of Maryland or the District of Columbia. Single investigators and multiple investigator research teams from different institutions are encouraged to apply. Maryland Sea Grant extension personnel are welcome to serve as Co-PIs or senior personnel but are restricted from requesting salary support.	Resilient Facility Power System	$25,000	Pre-proposal: January 30, 2019 Full proposal: mid-June 2019 This is for the billing cycle Feb 1, 2020 to Jan 31, 2022
National Estuary Program Coastal Watersheds Grant Program	EPA & Restore America's Estuaries Suzanne Simon NEP Coastal Watersheds Grant Program Director ssimon@estuaries.org 413-695-8922 https://estuaries.org/initiatives/watershedgrants/	adaptation; aquatic; aquatic invasive species; climate adaptation; climate change; climate vulnerability; comprehensive conservation and management plan; CCMP; ecosystems; estuary; green infrastructure; habitat; invasive species; nutrient reduction; pollution reduction; restoration; TMDL; water quality; wetlands	Activities may include: protecting and restoring up to 100,000 acres of estuarine habitat; protecting and restoring estuarine water quality in NEP study areas; supporting core Clean Water Act programs; conducting vulnerability assessments and/or implementing climate adaptation strategies in over 50% of NEP study areas and collaborating with other EPA programs and with agencies like NOAA to build regional, local, and tribal coastal community resilience to impacts of climate change on coastal ecosystems, public health, and economies; building local capacity to reach out to and involve urban community residents who typically may not have had access to water bodies in NEP study areas nor have been actively engaged in urban water body protection and restoration. Eligible applicants include state agencies; public and nonprofit agencies; institutions; organizations and individuals (Section 320(g)(l)). Profit making organizations are not eligible for grants.	Advanced CHP System	$10,000	Appears to be December/ Winter
National Flood Insurance Program (NFIP)	Maryland Department of the Environment (MDE) 1800 Washington Blvd Baltimore, MD 21230	financial protection; flood; flood insurance; floodplain; floodplain regulations; insurance; MDE; NFIP; regulations	Provides financial protection by enabling persons to purchase insurance against floods, mudslide or flood related erosion. *Anyone can purchase flood insurance. You do NOT need to be in a regulatory floodplain to purchase flood insurance*.	Community Resiliency Hub	$10,000	Anytime
National Flood Insurance Program - Increased Cost of Compliance (ICC)	Maryland Department of the Environment (MDE) 1800 Washington Blvd Baltimore, MD 21230	acquisition; compliance; demolition; elevation; flood; flood damage; flood insurance; floodplain; floodplain regulations; floodproofing; ICC; increased cost of compliance; insurance; MDE; mitigation; NFIP; regulations; relocation; repetitive loss; RL; SFHA; substantial damage	Bringing the building into compliance with the community's floodplain regulations and reduce future flood risk. Generally, this is one of four options: demolition, elevation, dry floodproofing, or relocation. Eligible applicants must have flood insurance (with ICC coverage) and the property in question must be declared substantially damaged or meet the definition of a Repetitive Loss Property.	*Subject to funding availability and may be adjusted by MEA.		After a building in the SFHA is declared substantially damaged or meets the definition of a Repetitive Loss property

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Neighborhood Business Works Program	Maryland Department of Housing and Community Development (DHCD) Business Lending Team 7800 Harkins Road Lanham, MD 20706 dhcd.businesslending@maryland.gov 301-429-7408	acquisition; commercial; community; communities; construction; development corporations; DHCD; loan; mixed use; new construction; nonprofits; Priority Funding Areas; rehabilitation; residential; SBA; soft costs; small business; Sustainable Communities; sustainable; sustainability	Eligible projects and uses of funds include: mixed-use projects combining residential and commercial uses in the same building; new construction or rehabilitation; machinery and equipment; certain other costs associated with opening or expanding a small business; real estate acquisition; manufacturing; service providers, and; retail. Projects must be located in a designated Maryland Sustainable Community or Priority Funding Area. Priority is given to projects that strengthen neighborhood commercial districts and are part of a greater revitalization strategy. Eligible applicants include Maryland-based small businesses (as defined by the SBA), local development corporations, and nonprofit organizations.			Open and ongoing
Non-Capital Historic Preservation Projects Grant	Maryland Historical Trust (MHT) 100 Community Place, 3rd Floor Crownsville, MD 21032 Contacts: Archeology - Matt McKnight, 410-697-9572 matthew.mcknight@maryland.gov Architectural Survey - Heather Barrett, 410-697-9536 heather.barrett@maryland.gov All other projects - Karen Golder, 410-697-9550 karen.golder@maryland.gov	archaeology; archeology; architecture; conservation; cultural resources; documentation; education; historic; historic building; historic preservation; historic structure; MHT; planning; research; survey	Non-Capital grants are available for research, survey, documentation, conservation, planning and educational activities involving historic, architectural, archeological or cultural resources (i.e., the tangible remains of Maryland's past). It is strongly recommended that you contact MHT staff to discuss the project prior to submission of an application.	Entities seeking additional capital support for the equipment and installation of the planned DER system are encouraged to explore other MEA programs that provide funding for equipment and installation incentives.		Intent to Apply - July 12, 2019 Application due September 3, 2019
Small Business Administration (SBA) Predisaster Mitigation Loan Program	Small Business Administration (SBA) James Rivera, Office of Disaster Assistance 409 3rd Street, SW, STE 6050 Washington, DC 20416 202-205-6734	business; disaster; economic injury; equipment; homeowners; inventory; loan; military duty; mitigation; machinery; operating expenses; personal property; real estate; SBA	Business or home must have been affected by disaster. Eligible activities include repairs and replacements of physical assets damaged in a declared disaster (real estate and personal property) and small business operating expenses (machinery and equipment, economic injury, inventory), and active military duty.	Grants will be awarded on a competitive basis. Award announcements for these funds are expected sometime in quarter 1 (Q1) of 2021.		After SBA disaster declaration
Strategic Demolition Fund - Statewide	Maryland Department of Housing and Community Development (DHCD) Contacts vary by region. Regional Contact List available here: https://dhcd.maryland.gov/Communities/Documents/SRP/PM-Map-ContactInfo.pdf	community; communities; demolition; DHCD; Sustainable Communities; sustainable; sustainability	Eligible projects include demolition of derelict structures; site acquisition and assembly to create redevelopment-sized parcels for solicitation or planned development; site development, and; construction-level architectural and engineering designs.	State - 100%	Projects must be located within in a designated Maryland Sustainable Community except Baltimore City. The programs help catalyze activities that accelerate economic development and job production in existing Maryland communities, aims to improve the economic viability of grey field development, which often faces more barriers than sprawling, green field development. The fund focuses on those projects that can have a high economic and revitalization impact in their existing communities.	Varies - once per State Fiscal Year

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Strategic Demolition Fund - Project C.O.R.E.	Maryland Department of Housing and Community Development (DHCD) Contacts vary by region. Regional Contact List available here: https://dhcd.maryland.gov/Communities/Documents/SRP/PM-Map-ContactInfo.pdf	Baltimore; CORE; community; communities; DHCD; demolition; Sustainable Communities; sustainable; sustainability	Eligible projects include demolition of derelict structures; site acquisition and assembly to create redevelopment-sized parcels for solicitation or planned development; site development, and; construction-level architectural and engineering designs. Lead applicants for Strategic Demolition Fund - Project C.O.R.E. are Maryland Stadium Authority and nonprofit community development organizations working Baltimore City.	State - 100%	Projects must be located within Baltimore City. The programs help catalyze activities that accelerate economic development and job production in existing Maryland communities, aims to improve the economic viability of grey field development, which often faces more barriers than sprawling, green field development. The fund focuses on those projects that can have a high economic and revitalization impact in their existing communities.	Varies - once per State Fiscal Year
Transportation: Emergency Relief Program	Federal Highway Administration (FHA) 1200 New Jersey Avenue Washington, DC 20590 202-366-4043	bridges; critical infrastructure; damage; disaster; DOT; Federal aid roads; Federal land; FHWA; highway; infrastructure; MDOT; repair; roads; route; transportation	Repair work within the right of way along federal aid highways is generally eligible. Engineering, right of way, and indirect costs may also be eligible. Funding is intended to address immediate needs and to restore damaged facilities to pre-disaster conditions. Permanent construction can cover repairs to bring facilities to current standards and expected traffic requirements. Improvements (betterments) may be eligible if costs are justified.	Emergency Repairs conducted within 180 days of disaster: Federal - 100% Nonfederal - 0% Emergency Repairs conducted after 180 days of disaster: Federal - 80-90% Nonfederal - 20-10%	Application is submitted by the MDOT for damages to Federal-aid highway routes, and by the applicable Federal agency for damages to roads on Federal lands. Cause of damages can be due to a natural disaster or a catastrophic failure of bridges or other infrastructure due to external causes. Cost threshold: estimated Federal share for all repairs for an event should be at least $700,000 and each individual repair should be at least $5,000 to be eligible.	After serious damage to Federal-aid roads or roads on Federal lands caused by a natural disaster or by catastrophic failure.
U.S Economic Development Administration (EDA), Public Works and Development Facilities	U.S. Department of Commerce Economic Development Administration Curtis Center 601 Walnut Street, Ste 140 South Philadelphia, PA 19106-3323 215-597-4603	access roads; critical infrastructure; economic development; EDA; infrastructure; port improvements; rail spurs; roads; sewer; technology; water	Water and sewer, Industrial access roads, rail spurs, port improvements technological and related infrastructure	Federal - 50-70% Non-Federal - 30-50%	Documenting economic distress, job impact and projects that is consistency with a Comprehensive Economic Development Strategy are important funding selection criteria.	Quarterly Basis
U.S. Economic Development Administration, Economic Adjustment Program	U.S. Department of Commerce Economic Development Administration Curtis Center 601 Walnut Street, Ste 140 South Philadelphia, PA 19106-3323 215-597-4603	critical facilities; economic development; EDA; improvements; public facilities; reconstruction; research	Improvements and reconstruction of public facilities after a disaster or industry closing. Research studies designed to facilitate economic development.	Federal - 50-70% Non-Federal - 30-50%	Documenting economic distress, job impact and proposing a project that is consistent with a Comprehensive Economic Development Strategy are important funding selection criteria.	Anytime
Watershed and Flood Prevention Operations Program	Natural Resources Conservation Service (NRCS) 1400 Independence Avenue, SW Washington, DC 20250 J'Que C. Jones, Maryland State Conservation Engineer jque.jones@wdc.usda.gov 443-482-5543	conservation; erosion; erosion control; flood; flood control; flood damage; flood prevention; land management; natural hazards; natural resources protection; NRCS; protection; sediment; sediment control; sediment reduction; USDA; water quality; watershed; watershed management; watershed protection	NRCS offers financial and technical assistance for these purposes: erosion and sediment control; watershed protection; flood prevention; water quality improvements; rural, municipal, and industrial water supply, water management, fish and wildlife habitat enhancement, and hydropower sources. Federal, state, local, and tribal government entities eligible to apply.	Varies due to project type.	Watershed area must not exceed 250,000 acres. Capacity of a single structure is limited to 25,000 acre-feet of total capacity and 12,500 acre-feet of floodwater detention capacity.	January or February

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Watershed Rehabilitation	Natural Resources Conservation Service (NRCS) 1400 Independence Avenue, SW Washington, DC 20250 Jesse Wilson National Watershed Rehabilitation Program Manager jesse.wilson@wdc.usda.gov 202-720-0189	dam; dam rehabilitation; NRCS; plan; planning; rehabilitation; watershed; watershed plan; watershed rehabilitation; USACE	Rehabilitation of aging dams reaching the end of their 50-year design lives.	Cost share exists, but not quantified	Requires development of a watershed plan to address environmental impacts, costs, benefits, planned conservation practices, and responsibilities of each party to complete the rehabilitation project. NRCS provides financial and technical assistance to project sponsors and assists them with the planning, design, and construction of the project.	Anytime
BUILD Transportation Grant Program	U.S. Department of Transportation (US DOT) Office of Infrastructure Finance and Innovation Office of the Secretary of Transportation 1200 New Jersey Ave, SE Washington, DC 20590 United States BUILDgrants@dot.gov 202-366-0301 https://www.transportation.gov/BUILDgrants	bridges; capital projects; DOT; freight rail; infrastructure; intermodal; local government; metropolitan planning organizations; MPO; passenger rail; port authorities; ports; port infrastructure; rail; roads; state government; transportation; transit agencies; Tribal government	Eligible projects for BUILD Transportation Grants are capital projects that include, but are not limited to: road or bridge projects eligible under title 23, United States Code; public transportation projects eligible under chapter 53 of title 49, United States Code; passenger and freight rail transportation projects; port infrastructure investments (including inland port infrastructure and land ports of entry); and intermodal projects. Eligible applicants: State, local and tribal governments, including U.S. territories, transit agencies, port authorities, metropolitan planning organizations (MPOs), and other political subdivisions of State or local governments.	BUILD Transportation grants may be used for up to 80 percent of the costs of projects located in an urban area and up to 100 percent of the costs of a project located in a rural area. For a project located in an urban area, total Federal assistance for a project receiving a BUILD grant may not exceed 80 percent.	please note that research, demonstration, or pilot projects are eligible only if they result in long-term, permanent surface transportation infrastructure that has independent utility. A BCA is needed to determine the independent utility. If a project is located within an Urbanized Area (UA) as designated by the U.S. Census, the urban or rural designation under BUILD 2019 is based on the population of that UA. If the UA had a population greater than 200,000 in the 2010 Census, the project will be designated as urban.	NOFO release: Spring Application Due: Summer
Alcoa Foundation Grant Program	Alcoa World Location Grants Coordinator 100 Bethlehem Blvd Edgemere, MD 21219 Alcoa Forgings & Extrusions Location Grants Coordinator 1954 Halethorpe Farms Rd, #800 Halethorpe, MD 21227 410-737-6980 Alcoa Concrete & Masonry Location Grants Coordinator 4908 46th Ave Hyattsville, MD 20781 301-699-9300 Alcoa Concrete & Masonry Location Grants Coordinator 786 Sunny Chapel Rd Odenton, MD 21113 301-912-3515	adaptation; Alcoa; capital projects; biodiversity; climate adaptation; climate change; emissions reduction; environmental; environmental literacy; habitat; habitat protection; habitat restoration; natural resources; nonprofits; prevention; protection; resilience; resiliency; restoration; recycling; STEM; sustainability	Promote prevention and resilience of climate change and restore and preserve biodiversity. Projects or organizations must serve communities where Alcoa has operating plants or offices: Edgemere, Halethorpe, Hyattsville, Odenton Nonprofit-focused, local governments may apply if funds are used for charitable purposes.	N/A	Minimum grant award is $15,000. Projects must fall with Alcoa Foundation themes and subthemes.	Anytime

Funding Program Name	Contact Information	Key Words	Eligible Activities	Cost Share Requirements	Other Program Characteristics	Application Due Date
Chesapeake Initiative	Campbell Foundation Chesapeake Office 410 Severn Avenue, Suite #210 Annapolis, MD 21403 410-990-0900	capacity building; capital campaign; Chesapeake Bay; environmental; habitat; habitat preservation; habitat restoration; nonprofits; preservation; nutrient reduction; restoration; stormwater; water quality	Activities that promote the health of the Chesapeake Bay region. Grants may be used for general support, capacity building, capital campaigns, and more. Nonprofits only.	N/A	More information, including a list of past grantees and projects is available here: https://www.campbellfoundation.org/chesapeake-what-we-fund/	Cycle 1 - Late Winter/Early Spring Cycle 2 - Late Summer/Early Fall
Capacity Building Grant Coordination & Collaboration Grant	Climate Resilience Fund https://www.climateresiliencefund.org/contact	adaptation; capacity building; climate adaptation; climate change; climate resiliency; collaboration grants; coordination grants; environmental; resiliency; resilience; sustainability; sustainable	Two grant tracks: Capacity Building and Coordination & Collaboration. Climate resilience planning; policy guidance; adaptation training; funding to facilitate the use of climate service tools and resources. Nonprofits only.	N/A	View past grantees and projects here: https://www.climateresiliencefund.org/grants	No information provided, contact organization
Community Support	Coca-Cola Foundation, Inc. https://www.coca-colacompany.com/stories/community-requests-guidelines-application	capital projects; clean water; environmental; gray water; nonprofits; water; water capture; water conservation; water quality; recycling; reuse	Eligible projects align with these three Priority Areas: empowering women (economic empowerment and entrepreneurship); protecting the environment (access to clean water, water conservation, and recycling); and enhancing communities (education, youth development, other community and civic initiatives). Nonprofits only.	N/A	Fundable project includes but are not limited to access to clean water, water conservation, recycling; capital projects; nonprofits; capital projects like water capture and grey water reuse.	Anytime
Conservation Acquisition Revolving Fund Conservation Loans Natural Capital Investment Fund Working Forest Fund	Conservation Fund, the 1655 N. Fort Myer Drive, Suite 1300 Arlington, VA 22209 703-525-6300 webmaster@conservationfund.org	acquisition; conservation; environmental; forests; forest management; loan; plans; revolving loan; stewardship	Land acquisition and conservation; development and implementation of sustainable forest management plans; transfer of forestland to private ownership.	N/A (revolving fund; loan)	Revolving Fund for land acquisition (conservation). Conservation loans. Working Forest Fund provides bridge capita for projects.	Anytime
U.S. Natural Climate Solutions Accelerator Grant	Nature Conservancy, The (TNC) www.nature.org/ncsaccelerator Contact: NCSAccelerator@TNC.org	adaptation; agriculture; carbon storage; climate change; coastal; coastal wetlands; conservation; emissions reduction; environmental; forests; grassland; greenhouse gas reduction; land management; natural climate solutions; NCS; nature-based solutions; nonprofits; reforestation; restoration; soil health; wetlands	Carbon capture through natural climate solutions (NCS). Examples include, but are not limited to improving soil health, reforestation, coastal wetlands restoration, and other management practices for natural and working lands (forests, agricultural lands, grasslands, wetlands).	N/A	Applicants may request up to $250,000 per project. Nonprofit organizations only.	Early 2020
Climate Change Strategy Grant	Oak Foundation USA http://oakfnd.org/application-process.html	air quality; clean energy; climate change; community; communities; community resilience; community resiliency; disadvantaged communities; environmental; nonprofits; policy; policy development; resilience; resiliency; transportation; vulnerable populations	Climate Change Strategy Grant - Projects that: increase energy efficiency and integrate clean energy solutions into poverty-reduction programs; develop energy-efficient mobility systems in urban areas; promote cleaner transport methods; encourage financing and regulations to improve public transit systems safe for women, children, and the elderly; and collect and monitor data to measure improvements or assess deficits in air quality.	Oak Foundation - 50% Grant Recipient - 50%	International organization focused on human-rights and gender-equity mainly in the EU, Africa, and India. Climate Change Strategy Grants do not appear to be tied to a location. Unsolicited proposals from nonprofits through a letter of inquiry. Marine Conservation Grant only available to projects that benefit communities in the EU, the Arctic, East Asia, and Africa. Wildlife Conservation Grants only protects rhinoceros and elephant populations from illegal wildlife trade.	N/A - Accepts unsolicited proposals via Letter of Enquiry

Funding Program Name	Contact Information	Key Words	Eligible Activities	Cost Share Requirements	Other Program Characteristics	Application Due Date
Acres for America	National Fish & Wildlife Foundation (NFWF) Kimberly Shriner Coordinator, Conservation Programs Kimberly.Shriner@nfwf.org https://www.nfwf.org/acresforamerica/Pages/home.aspx	acquisition; conservation; open space; connecting land; connectivity; easements; forests; habitat; local economy; local government; migration; migration routes; migratory; local government; nonprofits; open space; ranching; recreation; state government; Tribal government	Land conservation of critical habitats, connecting protected lands to unify wild places and protect migration routes; provide access for people to enjoy the outdoors; ensure the future of local economies that depend upon forestry, ranching, and recreation. Project must be linked to a national or state conservation priority. Eligible applicants: nonprofits; state government agencies; local governments; municipal governments; Indian tribes, and educational institutions.	1:1 Cost share - Federal/Applicant (cash, in-kind contribution of goods and services, and/or donated land value) Federal funds may be used as a match	Competitive grant: full proposal is by invite-only. Acquired land goes into a perpetual conservation easement.	RFP due March Pre-Proposal due April Proposal due June
Atlantic Flyway Shorebird Initiative	National Fish & Wildlife Foundation (NFWF) Ian Davidson Director, Bird Biology and Conservation Ian.Davidson@nfwf.org C. Scott Hall Senior Scientist, Bird Conservation, Scott.Hall@nfwf.org https://www.nfwf.org/amoy/Pages/home.aspx	American oystercatcher; Atlantic; birds; Chesapeake Bay; beaches; coastal; business; conservation; dunes; educational institutions; habitat; habitat management; individuals; international organizations; migration; migratory; migratory birds; North Atlantic; ocean; red knot; restoration; shorebirds; whimbrel; local government; nonprofits; open space; ranching; recreation; state government; Tribal government	Focus is on conserve and restore the habitat of the American oystercatcher, red knot, and whimbrel and improve habitat management. Eligible applicants: nonprofits; state government agencies; local governments; municipal governments; Indian tribes, educational institutions, businesses, unincorporated individuals, and international organizations.	1:1 Cost share - Federal/Applicant (match - cash and/or in-kind services)	American oystercatcher lives on beaches, mud flats, and exposed oyster bars along the lower Chesapeake Bay. Red Knots migrate through Maryland and Delaware on their way north in the spring, feeding on horseshoe crabs' eggs. Whimbrel migrate along the Chesapeake Bay and Atlantic Coast of Maryland. The majority of awards will range between $50,000 and $250,000.	RFP due January
Bring Back the Natives	National Fish & Wildlife Foundation (NFWF) Kate Morgan, Coordinator, Water Investments Katherine.Morgan@nfwf.org https://www.nfwf.org/bbn/Pages/home.aspx	American shad; assessment; Chesapeake Bay; Chesapeake Bay watershed; Delaware watershed; connectivity; conservation; environmental; habitat; habitat restoration; instream habitat; instream; marine; marine resources; local government; native fish; nonprofits; restoration; riparian; riparian habitat; river herring; rivers; schools; special districts; state government; streams; Tribal government; universities; water quality; watershed	Conservation strategies for native fish of eastern U.S. rivers, especially river herring and American shad in the Chesapeake and Delaware watersheds, particularly: restoring connectivity, riparian and instream habitat, and water quality. Invasive species management; and the development of decision support tools and innovative approaches to fish conservation, including landscape-scale assessments, piloting innovative restoration techniques, and identification of key flow restoration thresholds that enhance fish habitat and water quality in low-flood systems.	1:1 Cost share - Federal/Applicant (matching - cash, in-kind donations and/or volunteer labor)	Grant awards generally range from $50,000 to $100,000.	Pre-Proposal due June 27, 2019 Proposal due August 22, 2019

Funding Program Name	Contact Information	Key Words	Eligible Activities	Cost Share Requirements	Other Program Characteristics	Application Due Date
Central Appalachia Habitat Stewardship Program	National Fish & Wildlife Foundation (NFWF) Amanda Bassow, Director, Northeastern Regional Office Amanda.Bassow@nfwf.org John Wright, Manager, Northeastern Regional Office John.Wright@nfwf.org https://www.nfwf.org/centralapps/Pages/home.aspx	Appalachia; assessment; cerulean warbler; connectivity; diversity; eastern brook trout; eastern hellbender; educational institutions; environmental; forests; forest management; freshwater; freshwater mussels; golden winged warbler; habitat; habitat diversity; habitat restoration; Laurel Highlands; local government; mussels; native birds; native fish; nonprofits; planning; restoration; riparian; rivers; species; state government; streams; technical assistance; Tribal government; trout; warbler; water quality; wood thrush	Restoration of forest blocks and forest management (assessment/planning - forest management decision support tools). Outreach and technical assistance to engage private landowners in adopting forest management practices. Create forest demonstration projects to accelerate adoption of forest management to improve species habitat and diversity. Eligible applicants: nonprofit organizations, state agencies, local governments, municipal governments, tribal governments, and educational institutions.	Federal/Non-Federal match: 1:1 (match - cash, contributed goods and services, volunteer hours, and/or property raised/or secured and spent for the project during the period of performance)	The program supports projects in portions of the Appalachian regions of Maryland (Garrett County - Laurel Highlands). Grants will range from $50,000 to $200,000.	Proposal due July 11, 2019
Chesapeake Bay Stewardship Fund	National Fish & Wildlife Foundation (NFWF) Jake Reilly, Program Director, Chesapeake Bay jake.reilly@nfwf.org Stephanie Heidbreder, Manager, Chesapeake Programs stephanie.heidbreder@nfwf.org Sydney Godbey, Coordinator Regional Programs (Northeast Region) sydney.godbey@nfwf.org https://www.nfwf.org/chesapeake/Pages/home.aspx	Chesapeake Bay; Chesapeake Bay watershed; habitat; habitat restoration; nutrient reduction; restoration; sediment; sediment reduction; water quality; watershed	See below under Innovative Nutrient and Sediment Reduction Grants and Small Watershed Grants		There are two competitive grant programs; the Innovative Nutrient and Sediment Reduction Grant Program and the Small Watershed Grants Program. These programs benefit the communities, farms, habitats and wildlife of the Chesapeake Bay region.	

Funding Program Name	Contact Information	Key Words	Eligible Activities	Cost Share Requirements	Other Program Characteristics	Application Due Date
Innovative Nutrient and Sediment Reduction Grants	National Fish & Wildlife Foundation (NFWF) Sydney Godbey, Coordinator, Regional Programs (Northeast Region) Sydney.Godbey@nfwf.org 202-857-0166 https://www.nfwf.org/chesapeake/Pages/2020-insr-rfp.aspx	agriculture; agricultural runoff; Chesapeake Bay; Chesapeake watershed; collaboration; connectivity; conservation; educational institutions; estuary; estuarine habitat; farms; floodplain; floodplain connection; freshwater habitat; green infrastructure; habitat; habitat improvement; habitat restoration; local government; management; local government; Native American Tribal groups; nonprofits; nutrient management; nutrient reduction; partnership; planning; pollution reduction; restoration; riparian; riparian habitat; runoff; sediment; sediment reduction; soil health; soil management; state government; stormwater; stormwater improvements; streams; stream restoration; urban; urban runoff; tidal; tidal habitat; Tribal governments; water quality; wetlands; wetland reconnection; whole farm conservation; whole farm; watershed	Through collaboration and partnership, projects that conduct watershed and habitat planning; manage upland agricultural runoff through farm-scale conservation systems and solutions; manage upland urban runoff through green stormwater infrastructure improvements; and/or restore riparian and freshwater habitats through forested buffers, estuarine and tidal habitat restoration, conservation, and management; floodplain and wetland reconnection, stream restoration, and habitat improvement. Eligible applicants include nonprofit organizations, state government agencies, local governments, municipal governments, Indian tribes, and educational institutions.	1:1 match (Federal / Non-Federal)	This is a competitive grant focused on achieving success through collaboration and partnerships among stakeholders focused on improving water quality in the Chesapeake Bay watershed. All eligible projects must occur wholly within the Chesapeake Bay watershed (which only excludes the western half of Garrett County), and projects located within NFWF's Targeted Rivers and Watersheds will be prioritized. These locations were identified by NFWF as having significant opportunities for shared water quality improvement, habitat restoration and species recovery outcomes.	Applicant Webinar: Thursday, January 9, 2020, 1:00pm EDT FieldDoc Webinar: Thursday March 5,2020, 10:30am EDT Pre-Proposal Due Date: Friday, February 28,2020, 11:59 PM EDT Full Proposal Invitation: Monday, March 16, 2020 Full Proposal Due Date: Friday, May 1, 2020, 11:59 PM EDT Awards Announced: September 2020 (anticipated)

Funding Program Name	Contact Information	Key Words	Eligible Activities	Cost Share Requirements	Other Program Characteristics	Application Due Date
Small Watershed Grants	National Fish & Wildlife Foundation (NFWF) Jake Reilly, Program Director, Chesapeake Bay Jake.Reilly@nfwf.org Stephanie Heidbreder, Manager, Chesapeake Program, Stephanie.Heidbreder@nfwf.org Sydney Godbey, Coordinator, Regional Programs (Northeast Region) Sydney.Godbey@nfwf.org https://www.nfwf.org/chesapeake/Pages/2019-insr-rfp.aspx	American black duck; capacity building; Chesapeake; Chesapeake Bay; Chesapeake watershed; connectivity; conservation; eastern brook trout; eastern oyster; educational institutions; erosion; green infrastructure; habitat; habitat planning; habitat protection; habitat restoration; K-12; livestock exclusion; local government; marshes; marsh restoration; local government; Native American Tribal groups; nonprofits; nutrient reduction; planning; protection; oyster reefs; restoration; river herring; sediment; sediment reduction; shoreline erosion; state government; stormwater; stormwater improvements; streams; stream restoration; tidal marsh; Tribal governments; water quality; watershed; wetlands; whole farm; watershed	Projects that: manage upland agricultural runoff through farm-scale conservation systems and solutions; manage upland urban runoff through green stormwater infrastructure Improvements including the adoption of new technologies and management approaches; restore riparian and freshwater habitats through forested buffers, floodplain and wetland reconnection, and stream restoration and habitat improvements; increase habitat integrity for Eastern Brook Trout; improve riparian management through livestock exclusion; conserving high-quality riparian corridors; restore large-scale oyster reefs; restoring river herring habitat connectivity; restore and conserve wetland and tidal marsh habitat for American Black Duck; manage shoreline erosion and marsh loss; build capacity for landscape-scale watershed and habitat outcomes, and conduct watershed and habitat planning, prioritization, design, and permitting. SWG-I Eligible Applicants: nonprofit organizations, local governments, municipal governments, Indian tribes, K-12 educational institutions SWG-PTA Eligible Applicants: nonprofit organizations, state government agencies, local governments, municipal governments, Indian tribes, educational institutions, and for-profit entities	SWG-I - Federal 70% Non-Federal 30% (in 2019) SWG-PTA - No match requirement (in 2019)	There are two programs under this grant: SWG-Implementation (SWG-I) and SWG-Planning and Technical Assistance (SWG-PTA). All eligible projects must occur wholly within the Chesapeake Bay watershed. Projects located within NFWF's Targeted Rivers and Watersheds will be prioritized. In 2019, SWG-I grant awards ranged from $20,000 to $200,000 and SWG-PTA awards were capped at no more than $50,000.	
Fisheries Innovation Fund	National Fish & Wildlife Foundation (NFWF) Erika Feller, Director, Marine and Coastal Conservation Erika.Feller@nfwf.org https://www.nfwf.org/fisheriesfund/Pages/home.aspx	aquaculture; business; capacity building; bycatch reduction; educational institutions; environmental; fisheries; individuals; international organizations; local government; marine; marine aquaculture; mitigation; monitoring; local government; Native American Tribal groups; nonprofits; operations; planning; protection; recreational fisheries; reporting; risk reduction; seabed; siting; state government; Tribal governments	Projects should develop or pilot innovative ideas and implement proven ideas at-scale for bycatch reduction and capacity building; address needs identified for recreational fisheries in the NOAA Fisheries National Saltwater Recreational Fisheries Policy Implementation Plan; planning projects and implementation of risk mitigation strategies that help minimize risk factors for marine aquaculture and protect the seabed; planning to improve siting of marine aquaculture operations and avoid environmental risks; and projects that implement regional-scale electronic monitoring and reporting strategies. Eligible applicants include nonprofit organizations; state government agencies; local governments; municipal governments; Indian tribes; educational institutions; businesses; international organizations, and unincorporated individuals.	1:1 match (Federal / Non-Federal) Non-Federal can be cash and in-kind	The Fisheries Innovation Fund releases two requests for proposals (RFPs) each year to work towards sustainable fisheries in the United States: a Fisheries Innovation Fund RFP and an Electronic Monitoring and Reporting Grant Program RFP. Can be used for all commercial or recreational fisheries in the U.S., but priority is given to projects in the New England groundfish fishery, the Gulf of Mexico reef fish fishery, and the Gulf of Alaska halibut and groundfish fisheries. Marine aquaculture projects can be proposed for fisheries anywhere in the U.S., but priority is given to projects within the four priority areas: New England, Southern California, the Gulf of Mexico, and Alaska.	Fisheries Innovation Fund and Electronic Monitoring and Reporting Grant Program due July
Fishing for Energy	National Fish & Wildlife Foundation (NFWF) Erika Feller, Director, Marine and Coastal Conservation Ericka.Feller@nfwf.org Michelle Pico, Program Director Marine Conservation, Pico@nfwf.org Kaity Goldsmith, Manager, Marine Conservation Kaitlin.Goldsmith@nfwf.org https://www.nfwf.org/fishingforenergy/Pages/home.aspx	blue crabs; Chesapeake Bay; coastal; commercial; conservation; derelict fishing gear; derelict fishing gear removal; education and outreach; educational institutions; for-profit; habitat; habitat improvement; individuals; local government; locating derelict gear; marine; local government; Native American Tribal groups; prevention; removal; state government; Tribal governments	Identification of gear accumulation sites and species/habitat concerns for removal; removal of accumulated gear; development of prevention strategies for abandonment of gear; planning that links conservation activities with removal of derelict gear; outreach to raise awareness of the effects of derelict gear on the environment and engagement with local public and fishing communities. Eligible applicants include nonprofit organizations; state or territorial government agencies; local government; municipal governments; Indian tribes; educational institutions; commercial (for profit) organizations, or unincorporated individuals.	Non-Federal match not required, but encouraged	This is a competitive grant, targeting coastal waters. Priority is given to projects within five focus areas, one of which is the Chesapeake Bay with targeted benefits to the blue crab. Awards generally fall within $30,000 to $300,000.	Proposal due April

Funding Program Name	Contact Information	Key Words	Eligible Activities	Cost Share Requirements	Other Program Characteristics	Application Due Date
Five Star and Urban Waters Restoration Grant Program	National Fish & Wildlife Foundation (NFWF) Carrie Clingan, Program Director, Community Stewardship and Youth Carrie.Clingan@nfwf.org Chloe Elberty, Coordinator, Community Stewardship Programs Chloe. Elberty@nfwf.org https://www.nfwf.org/fivestar/Pages/home.aspx	BMPs; best management practices; capacity building; coastal; conservation; education and outreach; educational institutions; green infrastructure; habitat; habitat restoration; invasive species; invasive species removal; livestock fencing; local government; local government; Native American Tribal groups; nonprofits; partnership; riparian; restoration; runoff; stormwater; stormwater improvements; stormwater management; stormwater runoff; state government; training; Tribal governments; wetlands; wetlands; wetland restoration	Projects must involve five or more partners (public and private entities, including the applicant). Eligible activities include but are not limited to restoration or creation of wetlands, coastal or riparian areas; outreach, education, and/or training involving the restoration or creation activities that advance local watershed and conservation goals. Eligible applicants include nonprofit organizations, state government agencies, local governments, municipal governments, Indian tribes and educational institutions.	1:1 match (Federal / Non-Federal) at a minimum (in-kind staff contributions, volunteer time, work performed, materials and services donated, cash or other tangible contributions are allowed for the non-federal match)	Under this grant program, three sub-programs are applicable to areas in Maryland: US EPA Five Star Restoration Training Program - available to all communities. The Urban Waters Federal Partnership, US EPA/USDA Forest Service Funding has two eligible locations: the Anacostia Watershed and the Patapsco Watershed (Baltimore Region). The US FWS Urban Partner Funding is available to locations in Maryland within +/- 25 miles of the Service lands or nearby offices in Baltimore City and Washington, D.C. Grant awards under the entire Five Star and Urban Waters Restoration Grant Program range from $20,000 to $50,000, with roughly 40-50 grants award per year.	Proposal due January
Hurricane Sandy Coastal Resiliency Competitive Grant Program	National Fish & Wildlife Foundation (NFWF) Amanda Bassow, Director, Northeastern Regional Office Amanda.Bassow@nfwf.org Lynn Dwyer, Program Director, Northeast-Coastal Lynn.Dwyer@nfwf.org Claire Flynn, Manager, Northeastern Region Claire.Flynn@nfwf.org https://www.nfwf.org/hurricanesandy/Pages/home.aspx	coastal hazards; coastal storms; disaster; disaster funding; ecosystem protection; ecosystems; education; flood; hazard mitigation; habitat; habitat protection; mitigation; natural hazards; outreach; protection; resiliency; resilience; sea level rise; storm surge; wave velocity reduction	Reduce impacts of coastal storms, sea level rise and associated natural hazards on coastal and inland communities; strengthen ecological integrity and functionality of coastal/inland ecosystems to protect communities and enhance fish and wildlife and their associated habitats; conduct outreach/education to enhance understanding of impacts of storm events; and identify cost-effective resilience tools to mitigate the effects of future storms.	N/A	*Obviously closed, only included here to show that NWFW does occasionally offer grants for disaster assistance. Four projects were award in Maryland: two in central Maryland, one in Southern Maryland, and one on the Eastern Shore.*	N/A
Monarch Butterfly and Pollinators Conservation Fund - Habitat Improvement	National Fish & Wildlife Foundation (NFWF) Todd Hogrege, Director, Central Regional Office Todd.Hogrefe@nfwf.org Crystal Boyd, Manager, Pollinator Programs Crystal.Boyd@nfwf.org Daley Burnes, Regional Program Coordinator Daley.Burnes@nfwf.org https://www.nfwf.org/monarch/Pages/home.aspx	butterfly; conservation; educational institutions; federal government; habitat; habitat conservation; habitat restoration; local government; milkweed; monarch butterfly; local government; Native American Tribal groups; native plants; nonprofits; open space; pollinators; restoration; Tribal governments	Restore or enhance monarch butterfly and pollinator habitat; increase native milkweed and native plant resources supply. Eligible applicants include nonprofit organizations, US federal government agencies, state government agencies, local governments, municipal governments, Indian tribes and educational institutions.	1:1 match (Federal / Non-Federal) Non-Federal can be cash, in-kind contributions of staff and volunteer time, work performed, materials and services donated, or other tangible contributions to the project objectives and outcomes	Competitive grant. Project must be within the monarch butterfly range in the U.S. Priority is given to projects East of the Rockies in these states: Arkansas, Illinois, Indiana, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, Oklahoma, South Dakota, Texas, and Wisconsin. Priority is given to projects in the West located on or adjacent to working lands, important monarch butterfly overwintering sites, and US Forest Service and Bureau of Land Management lands.	Pre-Proposal due May Proposal due July

Funding Program Name	Contact Information	Key Words	Eligible Activities	Cost Share Requirements	Other Program Characteristics	Application Due Date
Monarch Butterfly and Pollinators Conservation Fund - Technical Assistance for Private Working Lands	National Fish & Wildlife Foundation (NFWF) Todd Hogrege, Director, Central Regional Office Todd.Hogrefe@nfwf.org Crystal Boyd, Manager, Pollinator Programs Crystal.Boyd@nfwf.org Daley Burnes, Regional Program Coordinator Daley.Burnes@nfwf.org https://www.nfwf.org/monarch/Pages/home.aspx	butterfly; conservation; conservation plans; educational institutions; employment; federal government; habitat; habitat conservation; habitat restoration; job creation; job support; landowners; local government; milkweed; monarch butterfly; local government; Native American Tribal groups; native plants; nonprofits; open space; private landowners; pollinators; restoration; Tribal governments; working lands	Increasing the number of private landowners engaged in monarch butterfly and pollinator conservation practices on working lands; creation of conservation plans. Proposed projects would support full time employee (FTE) equivalents. Eligible applicants include nonprofit organizations, US federal government agencies, state government agencies, local governments, municipal governments, Indian tribes and educational institutions.	1:1 match (Federal / Non-Federal) Non-Federal can be cash, in-kind contributions of staff and volunteer time, work performed, materials and services donated, or other tangible contributions to the project objectives and outcomes	Competitive grant. Project must be within the monarch butterfly range in the U.S. Priority is given to projects East of the Rockies in these states: Arkansas, Illinois, Indiana, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, Oklahoma, South Dakota, Texas, and Wisconsin. Priority is given to projects in the West located on or adjacent to working lands, important monarch butterfly overwintering sites, and US Forest Service and Bureau of Land Management lands.	Pre-Proposal due May Proposal due July
National Coastal Resilience Fund	National Fish & Wildlife Foundation (NFWF) Erika Feller, Director, Marine and Coastal Conservation Ericka.Feller@nfwf.org Michelle Pico, Program Director, Marine Conservation Pico@nfwf.org Mandy Chesnutt, Director, Program Operations Mandy.Chesnutt@nfwf.org Kaity Goldsmith, Manager, Marine Conservation, Kaitlin.Goldsmith@nfwf.org https://www.nfwf.org/coastalresilience/Pages/home.aspx	assessment; barrier islands; beaches; capacity building; coastal; coastal erosion; coastal storms; commercial; connectivity; conservation; coral reefs; design; dunes; educational institutions; fish; flood; flooding; floodplain; forests; for-profit; habitat; habitat protection; instream restoration; instream; local government; marshes; marsh restoration; monitoring; local government; Native American Tribal group; natural systems; nonprofits; oyster reefs; permitting; project monitoring; protection; restoration; sea level rise; site assessment; streams; wetlands; wetland restoration; wildlife	Projects that create, expand, and restore natural system in areas that will both increase protection for communities from coastal storms, sea level rise, flood, and coastal erosion, while improving habitat for fish and wildlife species. The grant supports three focus areas: project preliminary design and site assessment; project final design and permitting; and project restoration and monitoring. Eligible applicants include nonprofit organizations; state and territorial government agencies, local governments, municipal governments, Native Tribal governments, educational institutions, and commercial (for-profit) organizations.	1:1 match (Federal / Non-Federal) Non-Federal match = cash and/or in-kind services	Eligible project areas include all coastal Hydrologic Unit Code (HUC) 8 watersheds that drain to the sea and any adjacent HUC 8 Watersheds that are particularly low-lying or tidally influenced. Project awards (in 2019) expected to range from $125,000 to $3,000,000.	Pre-Proposal due April Proposal due May

Funding Program Name	Contact Information	Key Words	Eligible Activities	Cost Share Requirements	Other Program Characteristics	Application Due Date
Emergency Coastal Resilience Fund	National Fish & Wildlife Foundation (NFWF) Jay Jensen, Director, Southern Regional Office Jay.Jensen@nfwf.org Suzanne Sessine, Program Director, Southern Coastal Programs Suzanne.Sessine@nfwf.org https://www.nfwf.org/coastalresilience/emergency/Pages/home.aspx	aquatic; aquatic connectivity; beaches; beach restoration; capacity building; coastal; coastal ecosystems; coastal plain; coastal storms; connectivity; coral reefs; debris flow; design; disaster; disaster declaration; dunes; dune restoration; ecosystems; educational institutions; fish; flood; floodplain; floodplain restoration; flooding; forests; habitat; habitat protection; habitat restoration; instream restoration; instream; local government; marshes; marsh restoration; local government; Native American Tribal group; nonprofits; oyster reef; passage improvements; planning; protection; recovery; reforestation; resiliency; resilience; restoration; runoff; sea level rise; state government; storm surge; stormwater; stormwater runoff; streams; Tribal government; wave velocity; wetlands; wetland restoration; wildlife	Ecosystem restoration projects, and the construction of natural, nature-based and green-gray (hybrid) infrastructure to improve community resilience and conserve natural areas. Projects may include, but are not limited to, marsh, beach and dune restoration, living shorelines, stream restoration, including aquatic connectivity projects that reduce flood risk, and innovative stormwater management. In limited instances this program may consider projects that advance community planning and technical assistance to address barriers and increase the capacity of eligible communities to implement projects where there is a demonstrated need in an affected geography. Eligible applicants include nonprofit organizations, state and territorial government agencies, local governments, municipal governments, Native American tribal governments, and educational institutions.	N/A	Closed. Similar program to the Hurricane Sandy Coastal Resiliency Competitive Grant Program. The ECRF was established to increase the resilience of coastal communities located within federally declared disaster areas impacted by hurricanes Florence and Michael, Typhoon Yutu and wildfires in 2018. Included on this list to show that disasters may be funded through a similar program and that potential applicants should check the NFWF website for emergency funds after a Presidential Disaster Declaration after a major disaster. The grant funds projects located in the Coastal Plain Physiographic Province in Maryland.	N/A
National Wildlife Refuge Friends	National Fish & Wildlife Foundation (NFWF) Project Specific Grants Crystal Boyd, Manager, Pollinator Programs crystal.boyd@nfwf.org	blackwater; capacity building; eastern neck; fishing; friends group; habitat; habitat restoration; NWR; hunting; national wildlife refuge; Patuxent; peer to peer; public access; operational support; restoration	Eligible applicants in Maryland include: Friends of Blackwater; Friends of Eastern Neck; Friends of Patuxent Different activities funded under this grant program include: Nonprofit Capacity Building Grants; Project Specific Grants; Peer-to-Peer Coaching; Public Access Enhancements and Increasing Hunting and Fishing Experiences on National Wildlife Refuges;	Not required, but Friends organizations are encouraged to contribute 1:1 non-federal matching contribution.	Only nonprofit funds friend group projects. A project specific grant could be used to support a larger habitat restoration project. Project Specific Grants - providing funds to refuge Friends organizations seeking support for projects initiated and managed by the Friends in support of the refuge. Projects must be completed within two years of award date. Grant awards range from $1,500 to $15,000.	Proposal due August
Resilient Communities Program	National Fish & Wildlife Foundation (NFWF) Carrie Clingan, Program Director, Community Stewardship and Youth Carrie.Clingan@nfwf.org Chloe Elberty, Coordinator, Community Stewardship Program Chloe.Elberty@nfwf.org https://www.nfwf.org/resilientcommunities/Pages/home.aspx https://www.nfwf.org/programs/resilient-communities-program/resilient-communities-2020-request-proposals	aquatic; aquatic migration connection; capacity building; coastal; coastal habitat; community; communities; community resiliency; connectivity; demonstration projects; dunes; dune restoration; ecosystems; ecosystem protection; flood; flood mitigation; flood resiliency; habitat; habitat restoration; living shorelines; local government; migration; migratory; mitigation; Native American Tribal groups; nonprofits; protection; resilience; resiliency; restoration; sea level rise; storm surge; Tribal governments; wetlands; wetland restoration	Include: • Dune Habitat Restoration • Wetland Restoration • Bird and Wildlife Habitat Restoration • Living Shorelines • Aquatic Migration Connection Eligible applicants include nonprofit organizations; local governments; and Indian tribes	Federal/Non-Federal match: 1:1 (match - cash, in-kind contributions of staff and volunteer time, work performed, materials and services donated or other tangible contributions to the project objectives and outcomes)	**4-year initiative - ENDS 2021**; High-impact resiliency adaptations to help communities prepare for sea-level rise on the Eastern seaboard. Restore wetlands, coastal habitats and other ecosystems to help communities address floods, storm events and sea level-rise; Project Types: Dune Habitat Restoration; Wetland Restoration; Bird and Wildlife Habitat Restoration; Living Shorelines; Aquatic Migration Connection. Grants will be offered once a year to support priority projects in states and communities associated with Wells Fargo operations. 2019 grant awards ranged from $200,000 to $500,000. Projects should be completed within 2 years from the start date.	Pre- Proposal due February 18, 2020 Proposal (Invite Only) due April

Funding Program Name	Contact Information	Key Words	Eligible Activities	Cost Share Requirements	Other Program Characteristics	Application Due Date
Non-Tidal Wetlands Grant Program	Chesapeake Bay Trust https://cbtrust.org/grants/ Non-Tidal Wetland Program Grants Manager: Sarah Koser, skoser@cbtrust.org, 410-974-2941, ext. 106	CBT; Chesapeake Bay Trust; creation; conservation; endangered species; faith-based organizations; for-profit; habitat; improvements; local government; nonprofits; nontidal; nontidal wetlands; preservation; protection; restoration; threatened species; wetlands; wetlands creation; wetlands preservation; wetlands protection; wetlands restoration	Activities include, but are not limited to: projects that create wetlands; improving the functions of existing wetlands (especially farmed wetlands, partially drained wetlands, or wetlands providing habitat for threatened or endangered species); preservation/protection of existing wetlands if part of a project that includes wetlands creation or restoration. Eligible applicants: nonprofit organizations, local government, for-profit entities, faith-based organizations "and more."	Not required, but cash or in-kind services match is strongly encouraged	Award amounts of up to $500,000. Eligible Locations: Primary watersheds - Isle of Wight Bay; Secondary watersheds - West River, Severn River, Magothy River, South River, Western Branch, Patuxent River (lower), Assawoman Bay, Sinepuxent Bay, Newport Bay; Tertiary watersheds - Youghiogheny River, Casselman River, Northeast River, Deep Creek Lake, Little Youghiogheny River, Eastern Bay, Brighton Dam, Rocky Gorge Dam, Lower Chester River, Miles River	Summer
Green Streets, Green Jobs, Green Towns (G3) Grant Program	Chesapeake Bay Trust https://cbtrust.org/grants/green-streets-green-jobs-green-towns/ G3 Program Grants Manager: Jeffrey Popp, jpopp@cbtrust.org, 410-974-2941, ext. 103	CBT; charrette; Chesapeake Bay; Chesapeake Bay Trust; community; communities; community associations; design; G3; green infrastructure; green streets; implementation; local government; neighborhood associations; nonprofits; planning; project design; project implementation; runoff; stormwater; stormwater runoff; urban; vacant lots; visioning; white paper	Activities include but are not limited to green street project design, implementation of green street projects, white papers on innovative ideas for green infrastructure, charrettes to vision/plan a green street project with key stakeholders (incl. citizens). Eligible applicants: nonprofit organizations, local governments, neighborhood/community associations	Not required, but cash or in-kind services match is strongly encouraged	Applicants applying for implementation/construction and greening of vacant lots must use the G3 Implementation Project Calculator. Grant funding can be applied anywhere in the Chesapeake Bay watershed portion of EPA Region 3. Program goals: reduce stormwater runoff, increase number and amount of green spaces in urban areas, improve the health of local streams and the Chesapeake Bay, enhance quality of life and community livability. Award amounts of up to $15,000 for conceptual plans; up to $30,000 for engineered designs, up to $100,000 for implementation projects, up to $50,000 for greening communities and urban vacant lots, up to $20,000 for white papers.	Spring
Outreach and Restoration Grant Program	Chesapeake Bay Trust https://cbtrust.org/grants/outreach-and-restoration/ Questions & Technical Support: Bre'Anna Brooks, bbrooks@cbtrust.org, 410-974-2941, ext. 112 or Sarah Koser, skoser@cbtrust.org, 410-974-2941, ext. 106	agricultural; agricultural best management practices; best management practices; BMPs; community; communities; community engagement; connectivity; engagement; floodplain; floodplain connection; forests; green infrastructure; habitat; habitat establishment; habitat improvement; invasive plant removal; invasive species; meadow; meadow habitat; native plantings; native plants; outreach; plant removal; rain barrels; rain garden; reforest; restoration; riparian buffer; riparian; runoff; streams; stream restoration; shoreline erosion prevention; stormwater; stormwater runoff; volunteers; water quality; water quantity; wetlands; wetland restoration	Activities such as community outreach and engagement increase stewardship ethic of natural resources; restoration activities that demonstrate restoration techniques and engage citizens in the restoration and protection of the Chesapeake Bay and its rivers. Eligible applicants: nonprofit organizations, community and homeowner associations, faith-based organizations, "and more"	Not required, but cash or in-kind services match is strongly encouraged	Grant sponsored in partnership with City of Baltimore Dept of Public Works, Charles Co, Harford Co, Howard Co, the City of Gaithersburg, Queen Anne's Co, and the City of Salisbury and funds projects in partner areas and throughout Maryland. Applicants can request funds from one of the following tracks. Track 1: Outreach: up to $30,000 for projects focused on education and awareness as project outcomes, up to $50,000 for behavior change projects. Track 2: Restoration: up to $50,000 for implementation projects Track 3: Outreach and Restoration: up to $75,000 for projects that combine restoration and outreach elements to measurably build knowledge within the community served.	Late Summer / Early Fall

Funding Program Name	Contact Information	Key Words	Eligible Activities	Cost Share Requirements	Other Program Characteristics	Application Due Date
Watershed Assistance	Chesapeake Bay Trust https://cbtrust.org/grants/watershed-assistance/ Questions & Technical Support: Emily Stransky, estransky@cbtrust.org, 410-974-2941, ext. 101	action plan; agricultural; agricultural water quality best management practices; BMPs; best management practices; bioretention cells; CBT; Chesapeake Bay; Chesapeake Bay Trust; living shorelines; local government; LID; low impact development; marshes; marsh creation; nonprofits; ordinances; plan; planning; program development; rain garden; streams; stream restoration; stormwater; stormwater management; water quality; water quantity; watershed; watershed action plan; watershed assessment; watershed characterization; watershed planning; watershed restoration; wetlands; wetlands restoration; zoning	Project design for watershed restoration projects identified in WIP milestones, which may include, but are not limited to: bioretention cells, large-scale rain gardens, other low impact development stormwater techniques, environmental site designs, stream restoration, wetland and marsh creation, and agricultural water quality best management practices. Watershed Planning and Program Development projects identified in the existing programmatic milestones submitted to MDE by local governments, including, but not limited to watershed characterization, survey, and stakeholder engagement; creation of watershed action plans; policy development or enhancement to support watershed action plans (e.g. development/enhancement of ordinances or other tools); and development for new programs, enhancement of existing programs, or establishing new institutional frameworks that promote internal and external stakeholder coordination. Eligible applicants; nonprofits, local governments	Not required, but cash or in-kind services match is strongly encouraged	Projects must support implementation of local milestones developed to advance the Watershed Implementation Plan (WIP) strategies. For project design, funding requests will be less than $75,000, but stream restoration design projects may request up to $200,000. Watershed planning and program development funding requests will be less than $75,000.	Late Summer / Early Fall
Exelon Grant	https://www.exeloncorp.com/community/grants	afterschool programs; arts; beautification; clean energy; conservation; education; endangered species; environmental; environmental quality; events; green infrastructure; health; human services; local government; mathematics; membership dues; neighborhoods; nonprofits; preservation; program development; program support; science; STEM; workforce skills; water quality	The grant funds programs that deliver measurable, sustainable improvements in the communities served by Exelon in four areas: education, environment, arts & culture, and neighborhood development. Funds may be used to an event, dues/membership or in-kind requests, and program support/development. Eligible applicants: 501c3 nonprofit organizations; only those organizations which do not discriminate based on age, political affiliation, national origin, ethnicity, gender, gender identity, sexual orientation, disability, HIV/AIDS status or religious belief. Grants are only available to nonprofits in the communities where Exelon has facilities. Grants are only available to organizations that have not received a grant from Exelon or its subsidiaries within the past 12 months. Although only nonprofits are called out as eligible applicants, local governments are among the list of past grant recipients.	No information provided	Education: Programs that encourage students to stay in school and develop their full potential, promote math and science, improve workforce skills, and encourage personal development through scholarships, mentoring and internships. Environment: Programs that improve the quality of our environment; promote environmental education, conservation and preservation; develop cleaner sources of energy; protect endangered species; and beautify neighborhoods. Arts & Culture: Cultural institutions with broad public exposure and programs designed to make arts and culture more accessible to a wider and more diverse audience. Neighborhood Development: The company makes a limited amount of grants to local nonprofit organizations for programs and nonprofit organizations that support a range of offerings from health and human services to after-school programming .	Anytime

APPENDIX H: SOURCES

Sources

Section 1 Introduction

Robert T. Stafford Disaster Relief and Emergency Assistance Act (Public Law 93-288) as amended. Website: https://www.fema.gov/robert-t-stafford-disaster-relief-and-emergency-assistance-act-public-law-93-288-amended.

Prepared by Federal Emergency Management Agency (FEMA), Local Mitigation Planning Handbook. Available at: https://www.fema.gov/sites/default/files/2020-06/fema-local-mitigation-planning-handbook_03-2013.pdf. March 2013.

Maryland Department of Planning, Land Use/Land Cover. Available at: https://planning.maryland.gov/Documents/OurProducts/landuse/Kent.pdf. 2010.

"U.S. Census Bureau-American Fact Finder". Available at: www.census.gov. 2010.

"U.S. Census Bureau-American Fact Finder." Available at: www.census.gov. 2018 Population Estimates.

"U.S. Census Bureau, 2014-2018 American Community Survey 5-Year Estimates" and the Maryland Department of Planning, Planning Data Services. Available at: https://planning.maryland.gov/MSDC/pages/pop_estimate/popest_cnty.aspx. July 2019.

"Brief Economic Facts, Kent County, Maryland," Maryland DBED, 2018-2019. Available at: https://commerce.maryland.gov/Documents/ResearchDocument/KentBef.pdf. 2020.

Section 2 Flood

Definitions of FEMA Flood Zone Designations. Available at http://msc.fema.gov/. 2020.

National Oceanic and Atmospheric Administration. National Centers for Environmental Information – Storm Events. Available at: https://www.ncdc.noaa.gov/stormevents/. July 2019.

Prepared by Maryland Emergency Management Agency. 2016 State of Maryland Hazard Mitigation Plan. 2016. Available at: https://mema.maryland.gov/community/Documents/2016_Maryland_Hazard_Mitigation_Plan_final_2.pdf.

Prepared by Maryland Department of Transportation, State Highway Administration, and the Eastern Shore Land Conservatory – Kent County Nuisance Flooding Plan. March 2019. Available at: https://www.kentcounty.com/images/pdf/planning/KC_Nuisance_Flooding_Plan.pdf.

Prepared by Smith Planning and Design. 2018 Queen Anne's County Hazard Mitigation Plan. Available at: https://qac.org/1328/Hazard-Mitigation. 2018.

Prepared by Kent County Office of Emergency Services. Kent County Emergency Operations Plan.

US Army Corp of Engineers (USACE) - National Inventory of Dams. Available at: *http://nid.usace.army.mil/cm_apex/f?p=838:7:0::NO*.

SECTION 3 HURRICANE

National Hurricane Center – Saffir-Simpson Hurricane Wind Scale, 2012. Available at: http://www.nhc.noaa.gov/aboutsshws.php.

NOAA Historical Hurricane Tracks: https://oceanservice.noaa.gov/news/historical-hurricanes/.

Prepared by America Society of Engineers. Velocity Pressure as a Function of Wind Speed. 1990. Available at: https://www.asce.org/.

National Hurricane Center – Storm Surge vs. Storm Tide. Available at: https://www.nhc.noaa.gov/surge/.

National Oceanic and Atmospheric Administration. National Centers for Environmental Information – Storm Events. Available at: https://www.ncdc.noaa.gov/stormevents/. July 2019.

Prepared by Maryland Emergency Management Agency. 2016 State of Maryland Hazard Mitigation Plan. 2016. Available at: https://mema.maryland.gov/community/Documents/2016_Maryland_Hazard_Mitigation_Plan_final_2.pdf.

Prepared by Federal Emergency Management Agency. Taking Shelter from the Storm. December 2014. Available at: https://www.fema.gov/sites/default/files/2020-07/building-safe-room-home-small-business.pdf.

SECTION 4 EXTREME TEMPERATURES

National Oceanic and Atmospheric Administration - National Weather Service. Heat Index. Website: https://www.weather.gov/safety/heat-index.

"Brief Economic Facts, Kent County, Maryland," Maryland DBED, 2018-2019. Available at: https://commerce.maryland.gov/Documents/ResearchDocument/KentBef.pdf. 2020.

National Oceanic and Atmospheric Administration. National Centers for Environmental Information – Storm Events. Available at: https://www.ncdc.noaa.gov/stormevents/. July 2019.

Prepared by Maryland Emergency Management Agency. 2016 State of Maryland Hazard Mitigation Plan. 2016. Available at:

https://mema.maryland.gov/community/Documents/2016_Maryland_Hazard_Mitigation_Plan_final_2.pdf.

Prepared by NOAA NCDC/CISC – NC. US Observed Temperature Change Map. Available at: https://www.globalchange.gov/browse/multimedia/observed-us-temperature-change. 2020.

Prepared by Maryland Department of Planning. U.S. Census on Agriculture. Available at: https://planning.maryland.gov/MSDC/pages/S6_Econ_Agri_Census.aspx. 2017.

SECTION 5 TORNADO

National Weather Service. Available at: https://www.weather.gov/. 2020.

National Oceanic and Atmospheric Administration - National Weather Service. Enhanced Fujita Scale. Available at: http://www.spc.noaa.gov/efscale/ef-scale.html.

National Oceanic and Atmospheric Administration. National Centers for Environmental Information – Storm Events. Available at: https://www.ncdc.noaa.gov/stormevents/. July 2019.

Prepared by Maryland Emergency Management Agency. 2016 State of Maryland Hazard Mitigation Plan. 2016. Available at: https://mema.maryland.gov/community/Documents/2016_Maryland_Hazard_Mitigation_Plan_final_2.pdf.

Prepared by Federal Emergency Management Agency - Safe Rooms for Tornadoes and Hurricanes Guidance for Community and Residential Safe Rooms FEMA P-361, Third Edition. March 2015. Available at: https://www.fema.gov/sites/default/files/2020-07/safe-rooms-tornadoes-hurricanes.pdf.

SECTION 6 SNOW & ICE STORMS

Maryland Average Annual Snowfall Map. Available at: http://www.colinbeaven.com/Writing/More/Historic%20Snowstorms/Historic%20Snowstorms.html. 2011.

Federal Emergency Management Agency – Disaster Declarations. Available at: https://www.fema.gov/disasters/disaster-declarations.

National Oceanic and Atmospheric Administration. National Centers for Environmental Information – Storm Events. Available at: https://www.ncdc.noaa.gov/stormevents/. July 2019.

Prepared by Maryland Emergency Management Agency. 2016 State of Maryland Hazard Mitigation Plan. 2016. Available at: https://mema.maryland.gov/community/Documents/2016_Maryland_Hazard_Mitigation_Plan_final_2.pdf.

Section 7 Severe Storms

Thunderstorm Life Cycle. Available at: www.srh.noaa.gov/jetstream/tstorms/life.htm. 2017.

National Oceanic and Atmospheric Administration. National Centers for Environmental Information – Storm Events. Available at: https://www.ncdc.noaa.gov/stormevents/. July 2019.

Prepared by Maryland Emergency Management Agency. 2016 State of Maryland Hazard Mitigation Plan. 2016. Available at: https://mema.maryland.gov/community/Documents/2016_Maryland_Hazard_Mitigation_Plan_final_2.pdf.

Section 8 High Wind

National Oceanic and Atmospheric Administration. National Centers for Environmental Information – Storm Events. Available at: https://www.ncdc.noaa.gov/stormevents/. July 2019.

Prepared by Maryland Emergency Management Agency. 2016 State of Maryland Hazard Mitigation Plan. 2016. Available at: https://mema.maryland.gov/community/Documents/2016_Maryland_Hazard_Mitigation_Plan_final_2.pdf.

American LitePole - Design Speed Wind Zones. *http://alppoles.com/wind-speed.php.* 2009.

Section 9 Earthquake

U.S. Geological Survey – Earthquake Magnitude and Intensity. Available at: https://earthquake.usgs.gov/learn/topics/mag_vs_int.php. 2020.

U.S. Geological Survey - National Seismic Hazard Maps. Available at: https://www.usgs.gov/natural-hazards/earthquake-hazards/seismic-hazard-maps-and-site-specific-data. 2020.

Maryland Geological Survey - Earthquake chronology of Maryland. Available at: http://www.mgs.md.gov/geology/geohazards/earthquakes_and_maryland.html. 2020.

Prepared by Federal Emergency Management Agency. Reducing the Risk of Nonstructural Earthquake Damage –a Practical Guide. December 2012. Available at: https://www.fema.gov/sites/default/files/2020-07/fema_earthquakes_reducing-the-risks-of-nonstructural-earthquake-damage-a-practical-guide-fema-e-74.pdf.

Section 10 Climate Adaptation

State of Maryland - Climate Change Maryland. Available at: http://climatechange.maryland.gov/science/. 2020.

Maryland Department of the Environment – The Greenhouse Gas Emissions Reduction Act. 2019. Available at: https://mde.maryland.gov/programs/Air/ClimateChange/Documents/2019GGRAPlan/2019%20GGRA%20Draft%20Plan%20(10-15-2019)%20POSTED.pdf.

Prepared by the Eastern Shore Land Conservancy - Climate Change and Sea Level Rise Adaptation Report Kent County, Maryland. 2016. Available at: https://www.eslc.org/wp-content/uploads/docs/coastal-resilience/kent-county-climate-change-adaptation-report-2016.pdf.

Kent County Department of Planning & Zoning - Permit Data. Available at: https://www.kentcounty.com/planning. October 19, 2020.

Center for Disease Control - Center for Disease Control (CDC) Climate and Health Program. Available at: https://www.cdc.gov/climateandhealth/default.htm. July 2020.

Prepared by the University of Maryland Center for Environmental Science - 2018 Sea Level Rise Projections for Maryland. Available at: https://www.umces.edu/sites/default/files/Sea-Level%20Rise%20Projections%20for%20Maryland%202018_1.pdf.

Prepared by Maryland Department of Transportation, State Highway Administration, and the Eastern Shore Regional GIS Cooperative. GIS Data Products to Support Climate Change Adaption Planning, Kent County, MD. 2016. Available at: https://www.eslc.org/wp-content/uploads/docs/coastal-resilience/kent-county-climate-change-adaptation-report-2016.pdf.

SECTION 11 EMERGING INFECTIOUS DISEASES

Prepared by Maryland Department of Health. The Maryland Department of Health's Emerging Infectious Plan.

World Health Organization (WHO). Available at: https://www.who.int/. 2020.

Maryland Department of Health (MDH). Available at: https://health.maryland.gov/pages/home.aspx. 2020.

Center for Disease Control and Prevention (CDC). Available at: https://www.cdc.gov/. 2020.

Kent County Health Department. Available at: http://kenthd.org/. 2020.

Johns Hopkins University & Medicine, Emerging Infectious Diseases. Available at: (https://www.hopkinsmedicine.org/health/conditions-and-diseases/emerging-infectious-diseases). 2020.

Johns Hopkins University & Medicine, Corona Virus Resource Center. Available at: https://coronavirus.jhu.edu/map.html. November 2020.

Prepared by Federal Emergency Management Agency (FEMA), The Mass Care/Emergency Assistance Pandemic Planning Considerations . Available at: https://www.fema.gov/media-library-data/1591805537743-dd381cfb5c45eea9999dac1637815716/MCEA_Pandemic_Planning_Considerations_Guide_508.pdf. June 2020.

Prepared by Federal Emergency Management Agency (FEMA), COVID-19 Resource Summary Report. Available at: https://www.fema.gov/sites/default/files/2020-09/COVID19_Resource_Summary_Report_9.4.20.pdf. September 2020.

Prepared by Federal Emergency Management Agency (FEMA), COVID-19 Resource Roadmaps for Education and Food and Nutrition. Available at: https://www.fema.gov/media-collection/resource-roadmaps. 2020.

Maryland Department of Agriculture. Available at: http://mda.maryland.gov/plants-pests/Pages/Zika.aspx. 2020.

GIS Data Used Throughout the Plan

Prepared by Kent County Planning, Housing & Zoning – GIS Specialist. Kent County GIS Database. 2019.

Prepared by Maryland Department of Planning. MdProperty View – Kent County. 2017. Available at: https://planning.maryland.gov/Pages/OurProducts/DownloadFiles.aspx.

Prepared by Maryland Statewide Imagery Program. Maryland Six Inch Imagery. 2019. Available at: https://imap.maryland.gov/Pages/imagery.aspx.

Prepared by Federal Emergency Management Agency. FEMA Flood Zones – Effective Date: 2014. Available at: https://msc.fema.gov/portal/advanceSearch.

Prepared by Federal Emergency Management Agency. Flood Depth Grids – Risk MAP Product. 2014. Available at: https://msc.fema.gov/portal/advanceSearch.

Prepared by US Army Core of Engineers. NOAA Hurricane Storm Surge – GIS Data. 2016. Available at: https://www.nhc.noaa.gov/gis/.

Prepared by NOAA's Office for Coastal Management. Maryland North Sea Level Rise Data. 2019. Available at: https://coast.noaa.gov/slrdata/.

U.S. Department of Homeland Security
Region 3
One Independence Mall, Sixth Floor
615 Chestnut Street
Philadelphia, PA 19106-4404

FEMA

May 19, 2021

JaLeesa Tate, CFM
State Hazard Mitigation Officer
Maryland Emergency Management Agency
5401 Rue Saint Lo Drive
Reisterstown, Maryland 21136

Dear Ms. Tate:

The Federal Emergency Management Agency (FEMA) has completed our review of Kent County's Hazard Mitigation Plan, based on the standards contained in 44 Code of Federal Regulations (CFR), Part 201, as authorized by the Disaster Mitigation Act of 2000 (DMA2K). These criteria address the planning process, hazard identification and risk assessment, mitigation strategies and plan maintenance requirements.

The plan received a "satisfactory" rating for all required criteria and is approvable pending adoption. However, prior to formal approval, each participating jurisdiction in Kent County's Hazard Mitigation Plan is required to provide FEMA with a resolution of adoption.

We commend you for your dedication demonstrated in supporting the DMA2K and your commitment to reduce future disaster losses. If you have questions, please contact Sarah Wolfe, Branch Chief, Floodplain Management & Insurance Branch, at (215) 931-5532.

Sincerely,

Sarah Wolfe, Branch Chief
Floodplain Management and Insurance Branch
FEMA Region 3

Enclosure

cc: Kayhla Cornell, Senior Hazard Mitigation Specialist, MEMA
Wayne Darrell, Director, Office of Emergency Services, Kent County
Virginia Gregg, County Project Manager, Office of Emergency Services, Kent County

Local Mitigation Plan Review Tool Annex
Recommendations for Improvement

FEMA Region III

Jurisdiction:	Title of Plan:	Date of Plan:
Kent County, Maryland	Hazard Mitigation Plan	May 2021

Element A: Planning Process



☒	Promote open and inclusive public awareness of the Hazard Mitigation Plan and seek public comment by utilizing social media and online outreach opportunities.
☐	Create an Executive Summary that can be used for outreach to citizens, elected officials and the media.
☐	Expand the planning team to include a broad range of stakeholders such as watershed organizations, business owners, regional planning councils, conservation districts, academia, utility providers, and other partners that can assist with mitigation implementation and community outreach.
☐	Add detail to how the Plan was prepared and who was involved in the planning process. Include contact information, position held by participant, methodologies, and detail of how and from whom data was collected.
☒	Consider engaging the local media to help increase public awareness and participation.
☒	Standardize long-term monitoring of hazard-related activities, integrate mitigation principles into community officials' daily job responsibilities and department roles, and maintain momentum through continued engagement and accountability in the Plan's progress during the five-year planning cycle. Share reviews with state and FEMA for training, funding, and mitigation actions.
☒	Include documentation of the annual Plan review meetings that should occur over the next five-year planning cycle. Sign-in sheets, agendas, meeting minutes, and progress reports can be added to an appendix.
☒	Integrate and incorporate the mitigation strategy into existing local planning mechanisms and provide documentation about how this was done. Utilize the document 'Plan Integration: Linking Local Planning Efforts' to step through the process of connecting local planning mechanisms. The mitigation strategy should be incorporated into the local comprehensive Plan in a way that informs land use and future development.
☒	**Have a prominent place on the splash or introduction page of the county website for the Hazard Mitigation Plan.**
☒	**Keep good records of participants' comments, questions, and issues raised at any meetings, whether virtual or in-person.**

Element B: Hazard Identification and Risk Assessment		
	☐	Compare National Flood Insurance Program (NFIP) Insurance Policies in Force with insurable structures in the Special Food Hazard Area (SFHA) for analysis of flood insurance coverage.
	☒	**Identify historic properties and/or cultural resources being incorporated into the Plan. Include mapping of at-risk historic structures, sites, and National ScenicByways.**
	☒	Incorporate and document new data obtained and/or developed into the next Plan update. Vulnerable structure data (i.e., lowest floor elevation, value, building materials) and other similar information can be used for mitigation grant applications. Be sure do document differing data sets (i.e. TEIF vs. HAZUS).
	☐	Consider using Non-Regulatory Flood Risk products (NRFRP) to establish opportunities for discussion with local officials to attain a greater understanding of specific structure's vulnerabilities within the planning area and potential mitigation opportunities.
	☐	Identify gaps or inaccuracies in existing data (i.e., such as natural hazards data, GIS mapping, and research on successful risk reduction methods) and develop mitigation actions to fill those gaps. Public agencies, such as regional planning agencies, geological surveys, forestry divisions, emergency management offices, dam safety agencies, and weather service offices, at the regional, State, and Federal government levels are key resources for data and technical information. Online resources, such as the National Climatic Data Center (part of NOAA), are also useful sources for hazard-related data.
	☐	Provide more detailed citations for data sources used for tables, figures, and assessments which inform the risk and vulnerability analyses. In addition to validating the assessment, this will also make the next Hazard Mitigation Plan update easier.
	☒	Assess the potential impacts of future conditions, such as changes in population, land use, weather, and natural disaster frequency and severity. Include a discussion about how changing conditions could impact long-term community resilience.
	☐	Consider profiling additional hazards based on the State Hazard Mitigation Plan or other identified risks.
	☐	

Local Mitigation Plan Review Tool Annex
Recommendations for Improvement

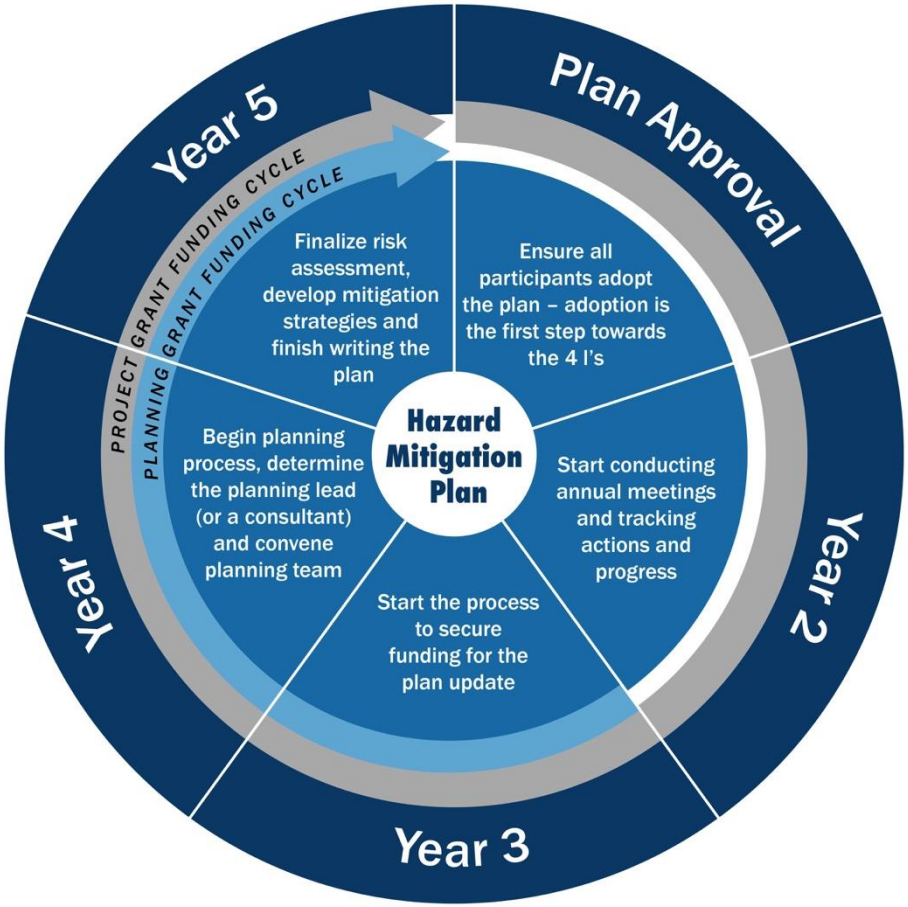
FEMA Region III

Element C: Mitigation Strategy		
	☐	Include detailed information on how each community manages the NFIP to ensure compliance with the local floodplain ordinance. Each floodplain manager should complete the NFIP Survey to identify how their communities are continuing to comply with floodplain requirements and regulations.
	☐	Increase community-level interactions and risk-based discussions, by improving descriptions and connections between the outcome of the risk assessment/vulnerability analysis with non-regulatory Flood Risk Products and the mitigation strategy. Content should flow from problem identification (risk/vulnerability) to mitigation strategy (goals/objectives/actions).
	☒	Incorporate the four overarching hazard mitigation techniques (Local Plans and Regulations; Structure and Infrastructure; Natural Systems Protection; and Education and Awareness). Ensure the mitigation action plan includes actions that fall under all four categories to achieve a more robust mitigation strategy.
	☐	Provide specific information about why mitigation actions could not be completed (funding, staffing, political, etc.) to help document barriers or obstacles to successful implementation.
	☒	**Provide sufficient information on recently-implemented, underway, and pending mitigation projects to provide a clear picture of the what is or will be taking place. Include plans and photographs showing the improvements.**
	☒	**Organize a <u>Mitigation Action Items & Prioritization</u> table systematically, giving each *Action Item* an appropriate numerical or alphanumerical designation.**
	☐	

Local Mitigation Plan Review Tool Annex
Recommendations for Improvement

Element D: Plan Review, Evaluation, and Implementation

☒	Utilize the 5-Year Planning Wheel, which reflects the continuous development, implementation and enhancement of your Hazard Mitigation Plan.
☒	Submit annual progress reviews and plan discussion to state and FEMA
☐	
☐	



Additional Comments

☐	
☐	
☐	
☐	
☐	
☐	

April Bitter, Project Manager, Information Technology
6/22/2021
County Commissioners Meeting

Item Summary:
Renewal of Verizon PRI Contract

ATTACHMENTS:

Description

06.22.21 Verizon Service Agreement Primary Rate Interface Quote ID 593299

verizon

SERVICE AGREEMENT

(ICB-Matrix)

Customer Name:	KENT COUNTY (MD) ("Customer")	Main Billing Tel. No:	4107783384
Address:	400 HIGH ST, CHESTERTOWN , MD, 21620	ICB-M Case No. /Price Quote ID	593299

Services. Customer hereby requests and agrees to purchase from the Verizon company(ies) identified in the applicable Exhibit(s) ("Verizon") and Verizon agrees to furnish the services identified in the Exhibit(s) (the "Service") attached to this Service Agreement, including Schedule A as applicable, (the "Agreement") or added by a fully executed Amendment to this Agreement, subject to Verizon's receipt of any necessary regulatory and other governmental approvals required to provide the Service under the terms hereof. The Services are further described in Verizon's applicable tariffs, which are incorporated into this Agreement by reference (the "Tariff(s)"), and Verizon's guides for detariffed local services provided by incumbent local exchange carriers, including but not limited to the Administrative Guidelines and Product Guide, (hereinafter individually and collectively referred to as the "Guide") which are incorporated into this Agreement by reference. The Tariffs and Guides can be viewed at: http://www.verizon.com/tariffs/productguide. References made to "Tariff", "Tariffs" and "Tariffed rates, terms and conditions" in the Agreement and Exhibits shall include the applicable Guide except where the context indicates the reference is not applicable to de-tariffed Service. Each Verizon company providing Services under this Agreement is responsible only for the performance of the Services it is providing as set out in each Exhibit hereto and is not responsible for the performance of any other entity's obligations under this Agreement.

Term of Agreement; Service Period. The term of this Agreement shall commence as of the date this Agreement is executed by both parties and shall continue until terminated by either party upon thirty (30) days notice to the other party (the **"Term"**). Customer shall purchase the Services identified in each Exhibit for the period of time stated in the Exhibit (the **"Service Period"**). The Service Period will commence and expire as set forth in the Exhibit. If either party terminates this Agreement as provided above, the terms and conditions of this Agreement will remain in full force and effect with respect to any Services provided hereunder for which, in accordance with the Exhibit(s), the Service Period is renewed or until the then current Service Period has expired. For those Services which, in accordance with the Exhibit, continue to be provided on a month-to-month basis upon expiration of the Service Period, this Agreement will remain in full force and effect with respect to such Services until the Services are disconnected by either party upon notice to the other. Such notification by Customer will be effective on thirty (30) days notice; such notification by Verizon will be effective on sixty (60) days notice.

Charges. Customer will pay the rates and charges set forth in the attached Exhibit(s) and also shall pay all applicable taxes, fees, and charges, including but not limited to Federal End User Common Line Charges, charged pursuant to applicable law, regulations, or Tariffs in connection with the Service. If Customer cancels or terminates this Agreement or any Service prior to expiration of the Service Period, Customer will promptly pay to Verizon termination charges as set forth in the applicable Exhibit(s). Any Tariffed backbilling limitations otherwise applicable to the Services shall not apply under this Agreement.

Notices. Notices under this Agreement shall be sent by first-class U.S. mail, postage prepaid, to Customer at the address specified above, and to Verizon at Verizon Business Services, 6415-6455 Business Center Drive, Highlands Ranch, Colorado 80130, Attn: Customer Service, with a copy to Verizon Business Services, Attn: Vice President, Legal, 500 Summit Lake Drive, Office 4-04, Valhalla, NY 10595. Notices shall be deemed effective five (5) business days after such mailing.

Miscellaneous

(a) Neither party will disclose the terms of this Agreement to any other person without the prior written consent of the other party, except as may be necessary to comply with applicable law, regulation, or filing requirements.

(b) In the event of any claim or dispute, the laws of the jurisdiction in which Verizon provides to Customer the particular Service that is the subject of such claim or dispute shall apply. This Agreement and its provisions shall not be construed or interpreted for or against any party hereto because that party drafted or caused that party's legal representative to draft any of its provisions.

(c) No liability shall result from Service failures caused by fires, floods, severe weather, acts of government or third parties, strikes, labor disputes, inability to obtain necessary equipment or services, or other causes beyond such party's reasonable control.

(d) If any provision of this Agreement or the provision of any Service under the terms hereof is illegal, invalid, or otherwise prohibited under applicable law or regulation in any state or jurisdiction, or does not receive any governmental or regulatory approval required by law in any state or jurisdiction, then this Agreement shall be construed as if not

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containing such provision or requiring the provision of such invalid, illegal, prohibited, or unapproved Service in such state or jurisdiction.

(e) Verizon may assign or transfer part or all of this Agreement to any affiliate or successor to substantially all of its assets in the locations where Service is provided hereunder. Upon reasonable prior written notice to Verizon, Customer may assign or transfer this Agreement to any company that is the successor to substantially all of its assets, provided all charges for Service provided prior to such transfer or assignment are paid in full when due. Except as otherwise required by applicable law or regulation, all other attempted assignments shall be void without the prior written consent of the other party.

(f) Except as otherwise required by applicable law or regulation, the Service provided hereunder may not be resold by Customer.

(g) Termination of this Agreement or a Service for any cause shall not release either party from any liability which at the time of termination had already accrued or which thereafter accrues for any act or omission occurring prior to the termination or from an obligation which, by its nature, survives termination.

(h) The terms and conditions of this Agreement, including Schedule A and the Exhibit(s), will not be modified or amended by any purchase order document issued by Customer (whether signed by one or both parties). Any terms and conditions contained in such Customer purchase order document shall be void and of no effect.

(i) A party may bring no action or claim arising out of this Agreement, including any claim for under-billing or overbilling, more than one (1) year after the cause of action has accrued. The parties waive the right to invoke any different limitation on the bringing of actions under state or federal law.

Customer Consent to Use of CPNI (Not Applicable to Arizona Customers). The Verizon Companies ("Verizon"), which includes Verizon Business Network Services Inc. and all of its corporate affiliates, desire to give you the best digital and connected experience and the most reliable Products and Services. Verizon protects all your Customer information, but may need to share your Customer information with our affiliates, and with our partners, vendors, and agents, in order to offer and provide Products and Services to you, our Customer. The Federal Communications Commission, and various states, requires Verizon, and indeed all telecommunications providers, to protect Customer Proprietary Network Information (CPNI). CPNI is information that identifies the quantity, technical configuration, type, destination, location, and amount of use of a Customer's telecommunications and interconnected VoIP services purchased from a provider, and related local and toll billing information. Verizon respects our Customers' rights to the protections afforded by these laws. By signing below, Customer grants Verizon permission to use, give access to, and share, Customer's CPNI between and among the Verizon Companies, and with their agents, contractors, and partners, solely so Verizon and its affiliates can offer Customer our current and future Products and Services; and to disclose any of Customer's current and future affiliates' CPNI to Customer upon Customer's request. Additionally, the signature below represents that the individual signing this consent has the authority to grant this permission to the Verizon Companies. You, our Customer, may withdraw or limit your consent at any time via email at cpni-notices@verizon.com. Please note that your consent will remain valid until Verizon receives a notice withdrawing consent. Withdrawal or limitation of consent will not affect existing service delivery.

Protection of Customer CPNI and Provision of Customer CPNI to Authorized Customer Representatives.

(a) Verizon will protect the confidentiality of Customer CPNI in accordance with applicable laws, rules and regulations. Verizon may access, use, and disclose Customer CPNI as permitted or required by applicable laws, rules, and regulations or this Agreement.

(b) Provided that Customer is served by at least one dedicated Verizon representative under the Service Agreements (that can be reached by Customer by means other than calling through a call center) and as permitted or required by applicable law, Verizon may provide Customer CPNI (including, without restriction, call detail) to representatives authorized by Customer ("Authorized Customer Representatives" as defined below) in accordance with the following.

(c) Verizon may provide Customer CPNI to Authorized Customer Representatives via any means authorized by Verizon that is not prohibited by applicable laws, rules, or regulations, including, without restriction: to the Customer's email address(es) of record (if any) or other email addresses furnished by Authorized Customer Representatives, to the Customer's telephone number(s) of record or other telephone numbers provided by Authorized Customer Representatives, to the Customer's postal (US Mail) address(es) of record or to other postal addresses furnished by Authorized Customer Representatives, or via Verizon's on-line customer portal or other on-line communication mechanism.

(d) Authorized Customer Representatives include Customer employees, Customer agents, or Customer contractors, other than Verizon, who have existing relationships on behalf of Customer with Verizon customer service, account, or other Verizon representatives and all other persons authorized in written notice(s) (including email) from Customer to Verizon. Authorized Customer Representatives shall remain such until Customer notifies Verizon in writing that they are no longer Authorized Customer Representatives as described below. Customer agrees, and will cause Authorized Customer Representatives, to abide by reasonable authentication and password procedures developed by Verizon in connection with disclosure of Customer CPNI to Authorized Customer Representatives.

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(e) Customer's notices of authorization or deauthorization must be sent to your service or account manager, and must contain the following information:

- the name, title, postal address, email address, and telephone number of the person authorized or deauthorized
- that the person is being authorized, or is no longer authorized, (as applicable) to access CPNI
- the full corporate name of the Customer whose CPNI (and whose affiliates' CPNI) the person can access (or can no longer access, if applicable)

(f) During the Service Agreements, Customer will at all times have designated, below, in an attachment containing the same data elements listed below, or in a separate writing sent to the service manager or account manager, up to three representatives ("CPNI Authorizers") with the power to authorize Customer representatives to access CPNI under this Agreement. Additions or removals of CPNI Authorizers will be effective within a reasonable period after Verizon has received a signed writing of the change, including the affected person(s)' name, title, postal address, email address and telephone number.

Name	Title	Tel. No.	Email	Postal Address
Scott Boone	Director	410.778.5315	itdirector@Kentgov.org	400 High St. Chestertown, MD 21620
April Bitter	Proj. Manager	410 778.5315	abitter@kentgov.org	" "
Chris Bannister	Network Eng.	410.778.5315	help@Kentgov.org	" "

Tariffs and Limitation of Liability. The terms and conditions that shall apply in connection with the Service, and the rights and liabilities of the parties, shall be as set forth herein and in all applicable Tariffs now or hereafter filed with the applicable state regulatory commission and/or the Federal Communications Commission. Notwithstanding any other provision in the Tariffs or herein, in no event shall either party be liable to the other party for any special, indirect, incidental, or consequential damages arising in connection with this Agreement or the provision of any Service, whether claim is sought in contract, tort (including negligence), strict liability or otherwise even if the party knew or should have known of the possibility of such damages. The foregoing does not affect Customer's payment obligation of amounts owed to Verizon for Services provided under this Agreement. The terms of this Agreement, Schedule A (if applicable) and any Exhibit hereto shall supersede any conflicting Tariff provisions to the extent permitted by law and subject to receipt of any necessary regulatory or other governmental approvals. The contractual relationship between Verizon and Customer is governed by the following order of precedence with the item following (i) given the highest order of precedence in resolving conflicts in terms: (i) Service Exhibits; (ii) Schedule A (if applicable); (iii) the terms and conditions of this Agreement; (iv) the Tariffs. This Agreement (including Schedule A and the Exhibit(s) attached hereto) and all applicable Tariffs constitute the entire agreement between the parties and shall supersede all prior oral or written quotations, communications, negotiations, representations, understandings or agreements made by or to any employee, officer, or agent of any party on the subject matter hereof. This Agreement may not be modified or rescinded except by a writing signed by authorized representatives of each party.

AGREED AND ACCEPTED:

KENT COUNTY (MD)(Customer)

By P. Thomas Mason

Name/Title P. Thomas Mason, President

Date June 22, 2021

Verizon Business Network Services Inc,
on behalf of the Verizon company(ies)
identified in the attached exhibit(s)

By _____

Name/Title Anthony Recine, Vice President
Pricing/Contract Management

Date _____

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Schedule A

The terms and conditions of this Schedule A apply to detariffed Intrastate Exchange Services in the States of Delaware, Maryland, Massachusetts, New Jersey, New York, Pennsylvania, Rhode Island, and Virginia excluding 911 services in Maryland, New Jersey, New York, Pennsylvania, and Virginia.

Invoices and Payment. Verizon shall invoice Customer monthly and payment will be due net (thirty) 30 days from the invoice date unless a different due date appears on the invoice. Undisputed charges paid after the due date may be subject to late payment charges as set out in the Tariff until Customer's account is current. Should Customer have a bona fide billing dispute, Customer must provide notice to Verizon in writing within thirty (30) days of the invoice date with an explanation of the disputed invoiced amount, and Customer shall pay the undisputed portion.

Customer Responsibilities. Customer agrees to provide Verizon with any access and support necessary for the implementation, maintenance and provision of the Services requested hereunder. Customer is responsible for taking all steps necessary to interconnect the Services at Customer's location(s) including ensuring proper interconnection with the facilities and equipment provided by Verizon, paying all costs associated with interconnection, securing any necessary licenses, right of ways and permits and providing proper space, electrical power, heating, ventilation and cooling. Verizon shall not be liable for any damages or losses caused by the failure of equipment, inside wire or other facilities provided by Customer or a third party, and Customer shall be liable if such facilities cause damage to Verizon, its network, customers, equipment and/or Verizon's providers. Customer is solely responsible for the selection, implementation and maintenance of security features for protection against unauthorized or fraudulent use of the Service(s) and Verizon shall have no liability therefor. Customer shall be responsible, and, to the extent authorized under applicable law, shall indemnify Verizon: (i) for any damages as a result of the use or misuse of the Services by Customer, Customer's employees, or third parties, including charges for unauthorized or fraudulent use of the Services; (ii) liability resulting from the content of communication such as defamation, fraud or invasion of privacy; or, (iii) any combination of the Services with other products or services not provided by Verizon, any modification of the Services or any infringement of intellectual property as a result of such combination or modification.

Suspension of Services. In addition to Verizon's right to suspend Service for non-payment of undisputed charges, Verizon may suspend or limit use of any Services under this Agreement without liability and with notice to Customer under other conditions as provided in the applicable Tariffs, including use of the Service in an unauthorized or fraudulent manner.

Guide Modifications. Verizon may modify the Guide from time to time, and any modification will be binding upon Customer, as provided in the Guide. Customer will be notified of such changes via a bill insert, as a message on a Customer's bill, in a separate mailing, by email, or by any other reasonable method at Verizon's discretion. If Verizon makes any changes to the Guide (other than changes to charges billed to Customer pursuant to applicable law, regulations or Tariffs.) that affect Customer in a material and adverse manner, Customer may discontinue the affected Service without liability for termination charges by providing Verizon with written notice of discontinuance within sixty (60) days of the date the change is posted on the applicable website, unless within sixty (60) days of receiving Customer's discontinuance notice, Verizon agrees to remove the material adverse effect on Customer. Customer shall remain responsible for the payment for Services rendered until the effective date of the termination.

Warranty Disclaimer. EXCEPT AS OTHERWISE EXPRESSLY PROVIDED IN THE APPLICABLE TARIFF OR GUIDE, VERIZON DISCLAIMS ANY AND ALL REPRESENTATIONS AND WARRANTIES, EXPRESS, IMPLIED OR ARISING BY COURSE OF PERFORMANCE, DEALING, CUSTOM OR TRADE USAGE, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE (EVEN IF VERIZON KNEW OR SHOULD HAVE KNOWN OF SUCH PURPOSE) AND NON-INFRINGEMENT. CUSTOMER AGREES THAT THE SERVICES PROVIDED HEREUNDER ARE PROVIDED ON AN "AS IS" AND "AS AVAILABLE" BASIS. VERIZON DOES NOT WARRANT THAT THE SERVICES WILL MEET CUSTOMER'S NEEDS, OR WILL BE UNINTERRUPTED, ERROR-FREE, OR SECURE.

Limitation of Liability. EACH PARTY'S MAXIMUM TOTAL LIABILITY TO THE OTHER PARTY IN CONNECTION WITH THIS AGREEMENT OR THE SERVICES, FOR ANY AND ALL CAUSES OF ACTION AND CLAIMS, SHALL BE:

(A) FOR DAMAGES DUE TO FAILURES OR DISRUPTIONS IN THE SERVICES CAUSED BY THE PARTY'S NEGLIGENCE OR BREACH OF OBLIGATIONS UNDER THE AGREEMENT, THE CHARGES FOR THE AFFECTED SERVICES FOR THE PERIOD OF THE FAILURE;

(B) FOR DAMAGE TO REAL OR PERSONAL PROPERTY OR BODILY INJURY OR DEATH TO ANY PERSON PROXIMATELY CAUSED BY THE PARTY'S NEGLIGENCE, THE AMOUNT OF DIRECT DAMAGES PROVEN;

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(C) FOR ANY DAMAGES ARISING IN TORT OUT OF THE WILLFUL OR INTENTIONAL MISCONDUCT OF THE PARTY, THE AMOUNT OF DIRECT DAMAGES PROVEN;

(D) FOR ALL OTHER DAMAGES NOT SET FORTH ABOVE AND NOT EXCLUDED UNDER THIS AGREEMENT, THE TARIFF OR GUIDE, THE LESSER OF (i) DIRECT DAMAGES PROVEN, OR (ii) THE AMOUNT PAID BY CUSTOMER TO VERIZON UNDER THE AGREEMENT FOR THE ONE MONTH PERIOD PRIOR TO ACCRUAL OF THE MOST RECENT CAUSE OF ACTION.

NOTHING IN THIS SECTION LIMITS CUSTOMER'S PAYMENT OBLIGATIONS UNDER THE AGREEMENT.

IP Indemnification. Verizon agrees at its own cost to indemnify Customer and to defend or, at its option, to settle, any claim or suit brought against Customer and pay any claim or judgment against Customer alleging that the Service or Customer's use of such Service as authorized herein infringes any valid United States patent, trademark, copyright, or other third party proprietary rights, provided that Customer: (1) notifies Verizon promptly in writing of any such claim or suit, (2) gives Verizon or its designee relevant information and assistance, the reasonable costs and/or expenses of which shall be borne by Verizon, to settle and/or to defend any such claim or suit, and (3) gives Verizon or its designee full authority to control the defense and/or settlement of any such claim or suit. Verizon shall not be liable for any such costs and/or expenses incurred without Verizon's prior written authorization. If such claim has occurred or in Verizon's judgment is likely to occur, Customer agrees to allow Verizon at Verizon's option and expense, to procure the right for Customer to continue using the applicable Service or to replace or to modify such Service so that it becomes non-infringing, or to terminate the infringing Service without liability to either party, except that Customer shall remain obligated to pay for such Services rendered prior to the termination pursuant to this paragraph. Verizon obligations under this paragraph shall not apply to any claim arising out of Customer's modification of the Services or combination of the Services with other services or products of others when such claim would not have arisen but for the combination. The foregoing states the entire obligation of Verizon to Customer, and is Customer's sole and exclusive remedy with respect to any claim of infringement of any intellectual property right of any kind, and Verizon disclaims all other warranties and obligations with respect to any such claims.

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EXHIBIT A

Verizon company name: Verizon Maryland LLC. (referred to in this Exhibit as "Verizon")
State: MD
Customer name: KENT COUNTY (MD)
ICB-M Case No.: N/A

PRIMARY RATE INTERFACE RATE SCHEDULE

1. Service and Rates. Customer agrees to purchase Integrated Services Digital Network ("ISDN") PRI service (the "Service") from Verizon at the rates and in quantities set forth below ("Minimum Quantity") for the Service Period identified below. Any other work, services or facilities required will be provided subject to prevailing Tariff rates and charges or, if no Tariff is applicable, other commission authorized rates, terms and conditions then in effect. Customer shall provide to Verizon at each Customer location suitable and secure space, with suitable environmental conditions and uninterruptible power supply, building entrance facilities and conduit, for placement of the facilities and equipment to be used by Verizon to provide such Service.

Minimum Commitment Quantity	Service Item	Monthly Unit Rate w/Corporate Rewards/CSP (Ea)*	Monthly Unit Rate w/o Corporate Rewards/CSP (Ea)	Non-Recurring Charges
3	PRI Interface Arrangement Volume II and Primary Rate Access Facility Volume II	$448.91	$518.70	N/A
0	PRI Interface Arrangement Volume II	$348.91	$418.70	N/A
	PRI Optional Features			
0	Redirecting Number	$39.57	$39.57	N/A
0	Features Package II	$134.57	$134.57	N/A
0	PRI Centrex Intercom Capability Package	$89.57	$89.57	N/A
3	Calling Line Identification with Name	$35.83	$35.83	N/A

(i) FX mileage is additional and provided at Tariff rates
(ii) Nonrecurring charges are not applicable for initial Service installation. Applicable Tariff nonrecurring charges will apply to any move or relocation of an existing Service or change to initial Customer configuration including PRI Optional Features installation

*This column lists the applicable Monthly Unit Rate if Customer subscribes to and maintains, under separate agreement or Tariff arrangement at all times during the Service Period, Verizon's Corporate Rewards Plan (the "Plan") or Customer Specific Pricing arrangement ("CSP") in accordance with all of the provisions of Verizon's applicable Tariffs, as such tariffs may be amended from time-to-time and agreements applicable to the Plan or CSP. If Customer fails to subscribe to or fails to maintain, as applicable, the Plan or CSP at all times during the Service Period, Customer's Monthly Unit Rate for the Service shall be re-rated to the Monthly Unit Rate without Corporate Rewards/CSP (Ea) as set forth above.

2. Effective Date; Service Period; Billing Commencement; Additional Service.
2.1 This Exhibit will be effective on the date the Agreement is last signed ("Effective Date").
2.2 The Service Period is twelve (12) months and shall commence on the Effective Date if any of the Services were previously installed, unless the Services are currently provided by Verizon in which case the Service Period will commence on the day after the date that the service period or other term commitment of the current service arrangement expires, otherwise the Service Period will commence on the date that the Services are installed and cut over ("Service Period").
2.3 Billing for the Services at the rates and charges contained herein shall commence in an individual state on the Effective Date for any Services that were previously installed unless the Services are currently provided by Verizon in which case billing at the rates and charges herein will commence on the day after the date that the service period or other term commitment of the current service arrangement expires and upon installation for Services not previously installed and cutover.
2.4

3. Ramp-Up Period. Customer may not request a delay in Verizon's installation of the Minimum Quantity ordered hereunder that would not be consistent with the following: the Minimum Quantity of Service ordered hereunder shall be scheduled to be installed before the completion of three (3) months of the Service Period.

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4. Minimum Quantity and Shortfall. The rates herein are contingent upon Customer purchasing at least the quantity of Service set forth above as the Minimum Quantity at all times during the Service Period including any extension thereof. The Minimum Quantity shall not apply to optional features. The Minimum Quantity may be satisfied by any quantity combination of the types of PRI Services identified above (e.g., Port Only, Port + Access). Verizon will review Customer's account on a periodic basis and if the quantity of Service installed is less than the Minimum Quantity set forth herein, Customer shall pay to Verizon an amount equal to $400 per PRI, per month for the difference between the quantity of Service in-service and the Minimum Quantity. The Minimum Quantity shall not apply during the Ramp-Up period. Hereinafter, such amounts due Verizon shall be referred to as the "Shortfall Amount". Shortfall Amounts will not be assessed against units of Service where termination charges have been imposed or units of Service that have been upgraded under the provisions of the Tariff. Verizon will issue an invoice to Customer for any Shortfall Amount due hereunder.

5. Cancellation and Termination Charges. If Customer cancels Service in whole or in part, after the Effective Date , but prior installation of such Service, Customer shall pay a cancellation charge of $500.00 per affected PRI. Cancellation must be in writing to Verizon in accordance with the Notice provision of the Agreement. If at any time during the Service Period or any optional extension of the Service Period Customer terminates this Agreement in whole or terminates any Service , Customer shall pay to Verizon a termination charge equal to twenty five percent (25%) of the applicable monthly rate for the terminated Service multiplied by the number of months remaining in the unexpired portion of the Service Period. Customer will also pay Verizon its actual incurred costs of provisioning any associated Special Construction up to the point of such cancellation. Any such cancellation charge, termination charge or Special Construction charge as applicable shall be due and payable in one lump sum within thirty (30) days of billing. Optional Features shall not be subject to termination charges. PRIs that are disconnected and subject to termination charges will count towards the satisfaction of the Minimum Quantity during the Service Period including any optional extension thereof. PRIs that are the subject of a physical move within the same location or which are relocated from one Location to another (within the state covered by this Exhibit) or PRIs that are modified from one type of PRI Service to another (for example. PRI Port Plus Access to PRI Port) shall not be subject to termination charges for the PRI circuit that was disconnected in order to be moved, relocated or modified.

6. Additional Provisions

a. Conditions. The parties acknowledge that the rates and other terms of this Agreement are premised on Customer's commitments, unique network design requirements, and Customer's service mix, usage patterns and concentration, and other characteristics.

b. Service Continuation. (i) If, at the time of expiration of the Service Period, a new agreement or Tariffed service arrangement with Verizon for the Services is not effective as defined above and Customer has not requested, in writing, disconnection of the Services, then the Services will be reverted to applicable Tariff or other Commission-authorized rate(s) for the minimum service commitment period available. The applicable Tariff or other Commission-authorized service arrangement will govern the service arrangement prospectively, including rates, terms and conditions, which may include charges for termination prior to the end of the minimum tariff service commitment period. If there is no applicable Tariff or other Commission-authorized service arrangement, then the Service will be subject to disconnection upon the expiration of the Service Period of this Agreement. If, upon expiration of the Service Period, there is a delay in reverting rates to the applicable Tariff or other Commission-authorized rate(s), or in disconnecting the Services if no Tariff or Commission-authorized service arrangement is available, the Service Period shall be deemed temporarily extended on a month-to-month basis until such reversion of rates or disconnection of Services is completed. (ii) If Customer indicates to Verizon in writing that it desires to negotiate a new contract or Tariffed service arrangement to continue or replace the Services provided for herein, the Service Period shall automatically be extended for a period not to exceed 60 days from the end of the initial Service Period to allow the parties to finalize a new agreement or to transition to a Tariffed service arrangement. Written notice must be provided by Customer at least 30 days prior to the end of the Service Period. For purposes of this paragraph only, written notice may be by facsimile or electronic mail.

c. Detariffing. In the event any of the Services are hereafter detariffed, then the terms of the Tariffs in effect immediately prior to such detariffing shall be deemed to be incorporated by reference and shall continue to apply to the provision of the Service to the same extent as such Tariffs applied hereunder prior to such detariffing.

d. Facilities. The Service is available only from offices which have the necessary facilities to provide ISDN on the standard ISDN platform. Additional charges may be required if suitable facilities are not available to provide Services at any locations, or if any additional work, services, or quantities of Services are provided. In the event installation of additional network facilities is required to provide Services, Verizon will inform Customer of such applicable charges, and Verizon will install such facilities only upon mutual written agreement of the parties to such additional charges. If Customer does not agree to pay such additional charges, then this Agreement will be subject to termination, in whole or in part, by Verizon without application of the termination charges described above.

e. Network Transformation. Customer acknowledges that Verizon may, over the Service Period set forth in this Exhibit, implement various product and network transformation programs to offer more advanced solutions based on newer

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technologies operating from next generation platforms. In this regard, Verizon reserves the right to grandfather and decommission certain products and services, including those covered under this Exhibit ("Affected Services"). Verizon will comply with all applicable legal requirements regarding notice for any grandfathering or decommissioning actions taken by Verizon. Verizon will also inform Customer of the availability of alternative services, if any, that can replace the Affected Service. Such alternative services will be subject to their own rates, terms and conditions. Verizon does not make any representations that the rate for the alternative service will remain the same as the Affected Service being replaced. For the purposes of this section, grandfathering means that Verizon will continue to support this Exhibit for the Affected Services until the Service Period expires. Once the Service Period expires, Verizon will not agree to any extensions or renewals covering the Affected Services and will not offer the Affected Services under a new agreement with Customer. Verizon also reserves the right to prohibit moves, adds or changes to Customer's existing Affected Services during the grandfathering period. When Verizon decommissions a service, the product is discontinued and the services are terminated

f. Verizon, at its discretion, may increase the rates for these Services if this Agreement is not signed and dated by Customer on or before July 28, 2021.

7. Locations. The Service shall be provided to Customer under the terms hereof at the following locations (Location(s)"). Other Customer locations may be added to this Agreement only upon written or electronic request (an amendment is not required) by the Customer and provided that such locations are within the Tariffed in-franchise incumbent local exchange service areas of the subject Verizon provider covered by this Exhibit A.

Quantity	Service Item	Address	City/State/Zip
1	PRI Interface Arrangement Volume II and Primary Rate Access Facility Volume II	400 HIGH ST, Floor No:1	CHESTERTOWN, MD 21620
1	PRI Interface Arrangement Volume II and Primary Rate Access Facility Volume II	104 VICKERS DR, Floor No:1	CHESTERTOWN, MD 21620
1	PRI Interface Arrangement Volume II and Primary Rate Access Facility Volume II	709 MORGNEC RD, Floor No:1	CHESTERTOWN, MD 21620

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April Bitter, Project Manager, Information Technology
6/22/2021
County Commissioners Meeting

Item Summary:
Third Year Central Square Contract

ATTACHMENTS:

Description

Contract with Central Square

SUPERION A CENTRALSQUARE COMPANY

Solutions Agreement

This Solutions Agreement (the **"Agreement"**), effective as of the latest date shown on the signature block below (the **"Effective Date"**), is entered into between Superion LLC, a Delaware Limited Liability Company (**"Superion"**) and **Kent County, MD** (**"Customer"**), together with Superion, the **"Parties"**, and each, a **"Party"**.

WHEREAS, Superion licenses and provides access to software applications (**"Solutions"**) for its customers and also provides maintenance, support, migration, installation and other professional services; and

WHEREAS, Customer desires to license and/or gain access to certain Solutions and/or receive professional services described herein, and Superion desires to grant and provide Customer license and access to such offerings as well as to support them with professional services, subject to the terms and conditions set forth in this Agreement.

NOW, THEREFORE, in consideration of the mutual covenants, terms, and conditions set forth herein, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, by the signatures of their duly authorized representative below, the Parties intending to be legally bound, agree to all of the following provisions and exhibits of this Agreement:

SUPERION, LLC	Kent County
1000 Business Center Dr. Lake Mary, FL 32746	400 High Street Chestertown, MD 21620
By: Tom Amburgey	By: P. Thomas Mason
Print Name: Tom Amburgey	Print Name: P. Thomas Mason
Print Title: General Manager	Print Title: President, County Commissioners
Date Signed: March 5, 2019	Date Signed: 06/18/19

1. **Solution: Public Administration (ASP Renewal)**
2. **Term.**
   - 2.1. Initial Term. The Initial Term of this Agreement commences July 1, 2019 and will continue in effect for five (5) years from such date unless terminated earlier pursuant to any of the Agreement's express provisions (the **"Initial Term"**).
   - 2.2. Renewal Term. This Agreement will automatically renew for additional successive one (1) year terms unless earlier terminated pursuant to any of the Agreement's provisions (a **"Renewal Term"** and, collectively, with the Initial Term, the **"Term"**).
   - 2.3. Non-Renewal. Either party may elect to end renewal of the contract by issuing a notice of non-renewal, in writing, to the other party six (6) months prior to the expiration of the current contract term.
3. **Fees.** In consideration of the rights and services granted by Superion to Customer under this Agreement, Customer shall make payments to Superion pursuant to the amounts and payment terms outlined in Exhibit 1 (the **"Project Cost Summary"**).
4. **Definitions.** Capitalized terms not otherwise defined in this Agreement have the meanings set forth below:
   - 4.1. **"Action"** means any claim, action, cause of action, demand, lawsuit, arbitration, inquiry, audit, notice of violation, proceeding, litigation, citation, summons, subpoena, or investigation of any nature, civil, criminal, administrative, regulatory or other, whether at law, in equity, or otherwise.
   - 4.2. **"Affiliate"** of a Person means any other Person that directly or indirectly, through one or more intermediaries, controls, is controlled by, or is under common control with, such Person.
   - 4.3. **"Authorized User"** means Customer's employees, consultants, contractors, and agents who are authorized by Customer to access and use the Solutions under the rights granted to Customer pursuant to this Agreement, and for whom access to the Solutions has been purchased.
   - 4.4. **"Baseline"** means the version of a Solution updated to the particular time in question through Superion's warranty services and maintenance, but without any other modification whatsoever.

4.5. **"Component System"** means any one of the Solutions identified in Exhibit 1, including all copies of Source Code, Object Code and all related specifications, Documentation, technical information, and all corrections, modifications, additions, development work, improvements and enhancements to and all Intellectual Property Rights for such Component System.

4.6. **"Customer Data"** means information, data, and content, in any form or medium, collected, downloaded, or otherwise received, directly or indirectly from Customer, an Authorized User or end-users by or through the Solutions, provided the data is not personally identifiable and not identifiable to Customer.

4.7. **"Custom Modification"** means a change that Superion has made at Customer's request to any Component System in accordance with a Superion-generated specification, but without any other changes whatsoever by any Person.

4.8. **"Customer Systems"** means the Customer's information technology infrastructure, including computers, software, hardware, databases, electronic systems (including database management systems), and networks, whether operated by Customer or through the use of third-party services.

4.9. **"Defect"** means a material deviation between the Baseline Solution and its Documentation, for which Defect Customer has given Superion enough information to enable Superion to replicate the deviation on a computer configuration that is both comparable to the Customer Systems and that is under Superion's control. Further, with regard to each Custom Modification, Defect means a material deviation between the Custom Modification and the Superion-generated specification and documentation for such Custom Modification, and for which Defect Customer has given Superion enough information to enable Superion to replicate the deviation on a computer configuration that is both comparable to the Customer Systems and that is under Superion's control.

4.10. **"Documentation"** means any manuals, instructions, or other documents or materials that Superion provides or makes available to Customer in any form or medium and which describe the functionality, components, features, or requirements of the Solutions, including any aspect of the installation, configuration, integration, operation, use, support, or maintenance thereof.

4.11. **"Enhancements"** means general release (as opposed to custom) changes to a Baseline Component System or Custom Modification which increase the functionality of the Baseline Component System or Custom Modification in question.

4.12. **"Harmful Code"** means any software, hardware, device or other technology, including any virus, worm, malware, or other malicious computer code, the purpose or effect of which is to (a) permit unauthorized access to, or to destroy, disrupt, disable, distort, or otherwise harm or impede any (i) computer, software, firmware, hardware, system, or network; or (ii) any application or function of any of the foregoing or the security, integrity, confidentiality, or use of any data Processed thereby; or (b) prevent Customer or any Authorized User from accessing or using the Solutions as intended by this Agreement.

4.13. **"Intellectual Property Rights"** means any and all registered and unregistered rights granted, applied for, or otherwise now or hereafter in existence under or related to any patent, copyright, trademark, trade secret, database protection, or other intellectual property rights laws, and all similar or equivalent rights or forms of protection, in any part of the world.

4.14. **"Maintenance"** means optimization, error correction, modifications, and updates to Vendor Systems to correct any known Defects and improve performance. Maintenance will be provided for each Component System, the hours and details of which are described in Exhibit 2 (**"Support Standards"**).

4.15. **"New Releases"** means new editions of a Baseline Component System or Custom Modification.

4.16. **"Person"** means an individual, corporation, partnership, joint venture, limited liability entity, governmental authority, unincorporated organization, trust, association, or other entity.

4.17. **"Personal Information"** means any information that does or can identify a specific individual or by or from which a specific individual may be identified, contacted, or located. Personal Information includes all "nonpublic personal information" as defined under the Gramm-Leach-Bliley Act, "protected health information" as defined under the Health and Insurance Portability and Accountability Act of 1996, "Personal Data" as defined in the EU General Data Protection Regulation (GDPR 2018), "Personal Information" as defined under the Children's Online Privacy Protection Act of 1998, and all rules and regulations issued under any of the foregoing.

4.18. **"Professional Services"** means installation, implementation, development work, training or consulting services including custom modification programming, support relating to custom modifications, on-site support services, assistance with data transfers, system restarts and reinstallations provided by Superion.



4.19. **"Representatives"** means, with respect to a party, that party's employees, officers, directors, agents, subcontractors, and legal advisors.

4.20. **"Superion Personnel"** means all individuals involved in the performance of Support Services and Professional Services as employees, agents, Subcontractors or independent contractors of Superion.

4.21. **"Solution(s)"** means the Component Systems, Documentation, Custom Modifications, development work, Vendor Systems and any and all other information, data, documents, materials, works, and other content, devices, methods, processes, hardware, software, technologies and inventions, including any deliverables, technical or functional descriptions, requirements, plans, or reports, provided or used by Superion or any Subcontractor in connection with Professional Services or Support Services rendered under this Agreement.

4.22. **"Vendor Systems"** means the information technology infrastructure used by or on behalf of Superion to deliver Solutions, including all computers, software, hardware, databases, electronic systems (including database management systems), and networks, whether operated directly by Superion or through the use of third-party services.

4.23. **"Support Services"** means Maintenance, Enhancements, implementation of New Releases, and general support efforts to respond to incidents reported by Customer in accordance with the detailed Support Standards outlined in Exhibit 2.

4.24. **"Third-Party Materials"** means materials and information, in any form or medium, including any software, documents, data, content, specifications, products, related services, equipment, or components of or relating to the Solutions that are not proprietary to Superion.

5. License, Access & Services.

5.1. License Grant. Subject to and conditioned on the payment of Fees and compliance with all other terms and conditions of this Agreement, Superion hereby grants to Customer a non-exclusive, non-sublicenseable, and non-transferable license to the current version of the Solutions outlined in Exhibit 1 at the time of this Agreement's execution.

5.2. Access and Scope of Use. Subject to and conditioned on Customer and their Authorized Users' compliance with the terms and conditions of this Agreement, Superion hereby grants Customer a non-exclusive, non-transferable right to access and use the Solutions, solely by Authorized Users. Such use is limited to Customer's internal use.

5.3. Delivery. Superion shall deliver by (a) electronic delivery, by posting it on Superion's network for downloading, or similar suitable electronic file transfer method, or (b) physical shipment, such as on a disc or other suitable media transfer method. Physical shipment is on FOB-Superion's shipping point (except with respect to Third-Party Materials, which are FOB-applicable third party shipping point), and electronic delivery is deemed effective at the time Superion provides Customer with access to download the Solutions. The date of such delivery shall be referred to as the **"Delivery Date."**

5.4. Documentation License. Superion hereby grants to Customer a non-exclusive, non-sublicenseable, non-transferable license to use the Documentation during the Term solely for Customer's internal business purposes in connection with its use of the Solutions.

5.5. Service and System Control. Except as otherwise expressly provided in this Agreement:

5.5.1. Superion has and will retain sole control over the operation, provision, maintenance, and management of the Solutions; and

5.5.2. Customer has and will retain sole control over the operation, maintenance, and management of, and all access to and use of, the Customer Systems, and sole responsibility for access to and use of the Solutions by any Person by or through the Customer Systems or other means controlled by Customer or any Authorized User, including any reports or results obtained from any use of the Solutions, and conclusions, decisions, or actions based on such use.

5.6. Limitations. Customer must provide Superion with such facilities, equipment and support as are reasonably necessary for Superion to perform its obligations herein, including if required, remote access to Customer Systems. Superion is not responsible or liable for delay or failure of performance caused in whole or in part by Customer delay or Customer's failure to perform any obligations under this Agreement.

5.7. Exceptions. Superion has no obligation to provide Support Services relating to any Defect with the Solutions that, in whole or in part, arise out of or result from any of the following:

5.7.1. software, or media on which provided, that is modified or damaged by Customer or third party;

5.7.2. any operation or use of, or other activity relating to, the Solutions other than as specified in the Documentation, including any incorporation, or combination, operation or use of the Solutions in or with, any technology (software, hardware, firmware, system, or network) or service not specified for Customer's use in the Documentation;

5.7.3. any negligence, abuse, misapplication, or misuse of the Solutions other than by Superion personnel, including any Customer use of the Solutions other than as specified in the Documentation or expressly authorized in writing by Superion;

5.7.4. any Customer's failure to promptly install any New Releases that Superion has previously made available to Customer;

5.7.5. the operation of, or access to, Customer's or a third party's system, materials or network;

5.7.6. any relocation of the Solutions other than by Superion personnel;

5.7.7. any beta software, software that Superion makes available for testing or demonstration purposes, temporary software modules, or software for which Superion does not receive a fee;

5.7.8. any breach of or noncompliance with any provision of this Agreement by Customer or any of its Representatives or any Force Majeure Event (including abnormal physical or electrical stress).

5.8. Reservation of Rights. Except for the specified rights outlined in this Section, nothing in this Agreement grants any right, title, or interest in or to any Intellectual Property Rights in or relating to the Support Services, Professional Services, Solutions, or Third-Party Materials, whether expressly, by implication, estoppel, or otherwise. All right, title, and interest in the Solutions, and the Third-Party Materials are and will remain with Superion and the respective rights holders.

5.9. Changes. Superion reserves the right, in its sole discretion, to make any changes to the Support Services and Solutions that it deems necessary or useful to: (a) maintain or enhance the quality or delivery of Superion's services to its customers, the competitive strength of or market for Superion's services, or the Support Services' cost efficiency or performance; or (b) to comply with applicable law. Without limiting the foregoing, either party may, at any time during the Term, request in writing changes to particular Support Services, Professional Services or their product suite of Solutions. The parties shall evaluate and, if agreed, implement all such requested changes. No requested changes will be effective unless and until memorialized in either a Superion issued Add-On Quote signed by the Customer, or a written change order or amendment to this agreement signed by both parties.

5.10. Subcontractors. Superion may from time to time in its discretion engage third parties to perform Professional Services or Support Services (each, a **"Subcontractor"**).

5.11. Security Measures. The Solutions may contain technological measures designed to prevent unauthorized or illegal use of the Solutions. Customer acknowledges and agrees that: (a) Superion may use these and other lawful measures to verify compliance with the terms of this Agreement and enforce Superion's rights, including all Intellectual Property Rights, in and to the Solutions; (b) Superion may deny any individual access to and/or use of the Solutions if Superion, in its reasonable discretion, believes that person's use of the Solutions would violate any provision of this Agreement, regardless of whether Customer designated that person as an Authorized User; and (c) Superion may collect, maintain, process, use and disclose technical, diagnostic and related non-identifiable data gathered periodically which may lead to improvements in the performance and security of the Solutions.

6. **Use Restrictions.** Customer shall not, and shall not permit any other Person to, access or use the Solutions except as expressly permitted by this Agreement. For purposes of clarity and without limiting the generality of the foregoing, Customer shall not, except as this Agreement expressly permits:

6.1. copy, modify, or create derivative works or improvements of the Solutions, or rent, lease, lend, sell, sublicense, assign, distribute, publish, transfer, or otherwise make available any Solutions to any Person, including on or in connection with the internet or any time-sharing, service bureau, software as a service, cloud, or other technology or service;

6.2. reverse engineer, disassemble, decompile, decode, adapt, or otherwise attempt to derive or gain access to the source code of the Solutions, in whole or in part;

6.3. bypass or breach any security device or protection used by Solutions or access or use the Solutions other than by an Authorized User through the use of his or her own then valid access;



6.4. input, upload, transmit, or otherwise provide to or through the Vendor Systems, any information or materials that are unlawful or injurious, or contain, transmit, or activate any Harmful Code;

6.5. damage, destroy, disrupt, disable, impair, interfere with, or otherwise impede or harm in any manner the Vendor Systems, or Superion's provision of services to any third party, in whole or in part;

6.6. remove, delete, alter, or obscure any trademarks, Specifications, Documentation, warranties, or disclaimers, or any copyright, trademark, patent, or other intellectual property or proprietary rights notices from any Documentation or Solutions, including any copy thereof;

6.7. access or use the Solutions in any manner or for any purpose that infringes, misappropriates, or otherwise violates any Intellectual Property Right or other right of any third party, or that violates any applicable law;

6.8. access or use the Solutions for purposes of competitive analysis of the Solutions, the development, provision, or use of a competing software service or product or any other purpose that is to Superion's detriment or commercial disadvantage or otherwise access or use the Solutions beyond the scope of the authorization granted under this Section.

7. Customer Obligations.

7.1. Customer Systems and Cooperation. Customer shall at all times during the Term: (a) set up, maintain, and operate in good repair all Customer Systems on or through which the Solutions are accessed or used; (b) provide Superion Personnel with such access to Customer's premises and Customer Systems as is necessary for Superion to perform the Support Services in accordance with the Support Standards and Specifications; and (c) provide all cooperation as Superion may reasonably request to enable Superion to exercise its rights and perform its obligations under and in connection with this Agreement.

7.2. Effect of Customer Failure or Delay. Superion is not responsible or liable for any delay or failure of performance caused in whole or in part by Customer's delay in performing, or failure to perform, any of its obligations under this Agreement.

7.3. Corrective Action and Notice. If Customer becomes aware of actual or threatened activity prohibited by Section 6, Customer shall, and cause its Authorized Users to, immediately: (a) take all reasonable and lawful measures within their respective control necessary to stop the activity or threatened activity and to mitigate its effects (including, where applicable, by discontinuing and preventing any unauthorized access to the Solutions and permanently erasing from their systems and destroying any data to which any of them gained unauthorized access); and (b) notify Superion of any such actual or threatened activity.

8. Professional Services.

8.1. Compliance with Customer Policies. While Superion Personnel are performing services at Customer's site, Superion will ensure that such personnel comply with Customer's reasonable security procedures and site policies that are generally applicable to Customer's other suppliers providing similar services and that have been provided to Superion in writing or in advance. Customer shall promptly reimburse Superion for any out-of-pocket costs incurred in complying with such procedures and policies.

8.2. Contributed Material. In the process of Superion's performing Professional Services, Customer may, from time to time, provide Superion with designs, plans, or specifications, improvements, works or other material for inclusion in, or making modifications to, the Solutions, the Documentation or any other deliverables (**"Contributed Material"**). Customer grants to Superion a nonexclusive, irrevocable, perpetual, transferable right, without the payment of any royalties or other compensation of any kind and without the right of attribution, for Superion, Superion's Affiliates and Superion's licensees to make, use, sell and create derivative works of the Contributed Material.

9. Confidentiality.

9.1. Confidential Information. **"Confidential Information"** means information in any form or medium (whether oral, written, electronic, or other) that the Disclosing Party considers confidential or proprietary, including information relating to the Disclosing Party's technology, trade secrets, know-how, business operations, plans, strategies, customers, pricing, and information with respect to which the Disclosing Party has contractual or other confidentiality obligations. Without limiting the foregoing, Confidential Information of Superion includes the Solutions, all software provided with the Solutions, algorithms, methods, techniques, and processes revealed by the Source Code of the Solutions and any software provided with the Solutions. In connection with this Agreement each party (as the **"Disclosing Party"**) may disclose or make available Confidential Information to the other party (as the **"Receiving Party"**).

9.2. Exclusions. Confidential Information does not include information that: (a) was rightfully known to the Receiving Party without restriction on use or disclosure prior to being disclosed or made available to the

Receiving Party in connection with this Agreement; (b) was or becomes generally known by the public other than by the Receiving Party or any of its Representatives' noncompliance with this Agreement; (c) was or is received by the Receiving Party on a non-confidential basis from a third party that was or is independently developed by the Receiving Party without reference or use of any Confidential Information.

9.3. Protection of Confidential Information. As a condition to being provided with any disclosure of or access to Confidential Information, the Receiving Party shall:

9.3.1. not access or use Confidential Information other than as necessary to exercise its rights or perform its obligations under and in accordance with this Agreement;

9.3.2. not disclose or permit access to Confidential Information other than to its Representatives who: (i) need to know such Confidential Information for purposes of the Receiving Party's exercise of its rights or performance of its obligations under and in accordance with this Agreement; (ii) have been informed of the confidential nature of the Confidential Information and the Receiving Party's obligations under this Section; and (iii) are bound by written confidentiality or restricted use obligations at least as protective of the Confidential Information as the terms in this Section;

9.3.3. safeguard the Confidential Information from unauthorized use, access, or disclosure using at least the degree of care it uses to protect its sensitive information and in no event less than a reasonable degree of care;

9.3.4. ensure its Representatives' compliance with, and be responsible and liable for any of its Representatives' non-compliance with, the terms of this Section.

9.4. Compelled Disclosures. If the either Party or any of its Representatives is compelled by applicable law to disclose any Confidential Information then, to the extent permitted by law, that Party shall: (a) promptly, and prior to such disclosure, notify the other Party in writing of such requirement so that they can seek a protective order or other remedy or waive its rights under Section .3; and (b) provide reasonable assistance to the Disclosing Party in opposing such disclosure or seeking a protective order or other limitations on disclosure. If the Disclosing Party waives compliance or, after providing the notice and assistance required under this Section, the Receiving Party remains required by law to disclose any Confidential Information, the Receiving Party shall disclose only that portion of the Confidential Information that the Receiving Party is legally required to disclose.

9.5. Trade Secrets. Notwithstanding any other provisions of this Agreement, the Receiving Party's obligations under this Section with respect to any Confidential Information that constitutes a trade secret under any applicable law will continue until such time, if ever, as such Confidential Information ceases to qualify for trade secret protection under one or more such applicable laws other than as a result of any act or omission of the Receiving Party or any of its Representatives.

10. Security.

10.1. Superion will implement commercially reasonable administrative, technical and physical safeguards designed to ensure the security and confidentiality of Customer Data, protect against any anticipated threats or hazards to the security or integrity of Customer Data, and protect against unauthorized access or use of Customer Data. Superion will review and test such safeguards on no less than an annual basis.

10.2. Customer shall maintain, in connection with the operation or use of the Solutions, adequate technical and procedural access controls and system security requirements and devices necessary for data privacy, confidentiality, integrity, authorization, authentication, non-repudiation, virus detection and eradication.

10.3. To the extent that Authorized Users are permitted to have access to the Solutions, Customer shall maintain reasonable procedures with such Authorized Users that adequately protect the confidentiality and Intellectual Property Rights of Superion in the Solutions and Documentation, and disclaim any liability or responsibility of Superion with respect to such Authorized Users.

11. Personal Data. If Superion processes or otherwise has access to any personal data or personal information on Customer's behalf when performing Superion's obligations under this Agreement, then:

11.1. Customer shall be the data controller (where "**data controller**" means an entity which alone or jointly with others determines purposes for which and the manner in which any personal data are, or are to be, processed) and Superion shall be a data processor (where "**data processor**" means an entity which processes the data only on behalf of the data controller and not for any purposes of its own);



11.2. Customer shall ensure that it has obtained all necessary consents and it is entitled to transfer the relevant personal data or personal information to Superion so that Superion may lawfully use, process and transfer the personal data and personal information in accordance with this Agreement on Customer's behalf, which may include Superion processing and transferring the relevant personal data or personal information outside the country where Customer and the Authorized Users are located in order for Superion to provide the Solutions and perform its other obligations under this Agreement; and

11.3. Superion shall process personal data and information only in accordance with lawful and reasonable instructions given by Customer and as set out in and in accordance with the terms of this Agreement; and

11.4. each party shall take appropriate technical and organizational measures against unauthorized or unlawful processing of the personal data and personal information or its accidental loss, destruction or damage so that, having regard to the state of technological development and the cost of implementing any measures, the measures taken ensure a level of security appropriate to the harm that might result from such unauthorized or unlawful processing or accidental loss, destruction or damage in relation to the personal data and personal information and the nature of the personal data and personal information being protected. If necessary, the parties will cooperate to document these measures taken.

12. Representations and Warranties.

12.1. Software Warranty. Superion warrants to Customer that for a period of twelve (12) months from the Execution Date, the Solutions (as delivered to Customer by Superion and when properly used for the purpose and in the manner specifically authorized by this Agreement), will perform as described in the Documentation in all material respects, including being free from any viruses or Harmful Code.

12.2. Professional Services Representation and Warranty. Superion represents, warrants, and covenants to Customer that during the Term, Superion will perform Professional Services using personnel of required skill, experience, and qualifications and in a professional and workmanlike manner in accordance with generally recognized industry standards for similar services and will devote adequate resources to meet its obligations under this Agreement. If Customer reasonably believes that any Professional Services were performed in violation of this warranty, it will notify Superion within twenty (20) days of service performance describing the issue, together with adequate supporting documentation and data. Upon receipt of such notice, Superion's obligation will be to re-perform the particular Professional Services affected as soon as commercially reasonable at no additional charge.

12.3. Support Services Representation and Warranty. Superion represents, warrants, and covenants to Customer that during the Term, Superion will perform the Support Services using personnel of required skill, experience, and qualifications and in a professional and workmanlike manner in accordance with both generally recognized industry standards for similar services, and the specific guidance for support found in Exhibit 2, and will devote adequate resources to meet its obligations under this Agreement. If Customer reasonably believes that any Support Services failed to meet this warranty, they will follow their preferred escalation path outlined in the Support Standards below, including receipt of service credit.

12.4. DISCLAIMER OF WARRANTIES. **EXCEPT FOR THE EXPRESS LIMITED WARRANTIES SET FORTH ABOVE, SUPERION MAKES NO WARRANTIES WHATSOEVER, EXPRESSED OR IMPLIED, WITH REGARD TO THE SOLUTIONS, PROFESSIONAL SERVICES, SUPPORT SERVICES, AND/OR ANY OTHER MATTER RELATING TO THIS AGREEMENT, AND THAT SUPERION DISCLAIMS ALL WARRANTIES, WHETHER EXPRESS, IMPLIED, STATUTORY, OR OTHER, INCLUDING ALL WARRANTIES ARISING FROM COURSE OF DEALING, USAGE OR TRADE PRACTICE, AND SPECIFICALLY DISCLAIMS IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, TITLE, AND NON-INFRINGEMENT. FURTHER, SUPERION EXPRESSLY DOES NOT WARRANT THAT ANY SOLUTIONS, ANY CUSTOM MODIFICATION OR ANY IMPROVEMENTS WILL BE USABLE BY CUSTOMER IF THE SOLUTIONS OR CUSTOM MODIFICATION HAS BEEN MODIFIED BY ANYONE OTHER THAN SUPERION PERSONNEL, OR WILL BE ERROR FREE, WILL OPERATE WITHOUT INTERRUPTION OR WILL BE COMPATIBLE WITH ANY HARDWARE OR SOFTWARE TO THE EXTENT EXPRESSLY SET FORTH IN THE DOCUMENTATION. ALL THIRD-PARTY MATERIALS ARE PROVIDED "AS-IS" AND ANY REPRESENTATION OR WARANTY OF OR CONCERNING ANY OF THEM IS STRICTLY BETWEEN CUSTOMER AND THE THIRD-PARTY OWNER. THIS AGREEMENT DOES NOT AMEND, OR MODIFY SUPERION'S WARRANTIES UNDER ANY AGREEMENT OR ANY CONDITIONS, LIMITATIONS, OR RESTRICTIONS THEREOF.**

13. **Notices.** All notices and other communications required or permitted under this Agreement must be in writing and will be deemed given when delivered personally, sent by United States registered or certified mail, return receipt requested; transmitted by facsimile or email confirmed by United States first class mail, or sent by overnight courier. Notices must be sent to a Party at its address shown below, or to such other place as the Party may subsequently designate for its receipt of notices in writing by the other Party.

If to Superion:
Superion
1000 Business Center Dr.
Lake Mary, FL.
Phone: 407-304-3235 **email:** info@Superion.com
Attention: Contracts Department / General Counsel

If to Customer:
Kent County
400 High Street
Chestertown, MD 21620
Phone: 410.778.5315 **email:** itdirector@kentgov.org
Attention: Patricia Merritt

14. **Force Majeure.**

14.1. No Breach or Default. Neither Party will be liable to the other for any failure or delay in fulfilling or performing any term of this Agreement (except for any payment obligation) when and to the extent such failure or delay is caused by any circumstances beyond such Party's reasonable control (a "**Force Majeure Event**"), including Acts of God, flood, fire, earthquake, explosion, war, terrorism, invasion, national or regional emergency, riot or other civil-unrest, labor disruption, acts and omissions of third parties, governmental and judicial action (including embargoes, export or import restrictions) not the fault of the Party failing or delaying in performance.

14.2. Affected Party Obligations. In the event of any failure or delay caused by a Force Majeure Event, the affected Party shall give prompt written notice to the other Party stating the period of time the occurrence is expected to continue and use commercially reasonable efforts to end the failure or delay and minimize the effects of such Force Majeure Event.

15. **Mutual Indemnification.**

15.1. Superion Indemnification. Superion shall indemnify, defend, and hold harmless Customer and Customer's officers, elected officials, directors, employees, agents, successors, and assigns from and against any and all losses incurred by or resulting from any Action by a third party (other than an Affiliate of Customer) that Customer's use of the Solutions in accordance with this Agreement infringes or misappropriates such third party's US Intellectual Property Rights, US patents, copyrights, or trade secrets. The foregoing obligation does not apply to the extent that the alleged infringement arises from:

15.1.1. Third-Party Materials or Customer Data;

15.1.2. access to or use of the Solutions in combination with any hardware, system, software, network, or other materials or service not provided or specified for Customer's use in the Documentation;

15.1.3. modification of the Solutions other than: by or on behalf of Superion or with Superion's written approval in accordance with Superion's written specification;

15.1.4. failure to timely implement any modifications, upgrades, replacements, or enhancements made available to Customer by or on behalf of Superion; or

15.1.5. act, omission, or other matter described in Section 15.2 below, whether or not the same results in any Action against or losses by any Superion Indemnitee.

15.2. Customer Indemnification. Customer shall indemnify, defend, and hold harmless Superion and its officers, directors, employees, agents, successors, and assigns from and against any and all losses incurred by Superion resulting from any Action by a third party (other than an Affiliate of Superion) that arise out of or result from, or are alleged to arise out of or result from:

15.2.1. Customer Data, including any Processing of Customer Data by or on behalf of Superion in accordance with this Agreement;

15.2.2. Gross negligence or more culpable act or omission (including recklessness or willful misconduct) by Customer, any Authorized User, or any third party on behalf of Customer or any Authorized User, in connection with this Agreement.

15.3. Procedure. Each party shall promptly notify the other party in writing of any Action for which such party believes it is entitled to be indemnified. The party seeking indemnification shall cooperate with the other party at that party's sole cost and expense. The indemnitor shall promptly assume control of the defense and shall employ counsel of its choice that is reasonably acceptable to the indemnitee to handle and defend the same.

15.4. Sole Remedy. THIS SECTION SETS FORTH CUSTOMER'S SOLE REMEDIES AND SUPERION'S SOLE LIABILITY AND OBLIGATION FOR ANY ACTUAL, THREATENED, OR ALLEGED CLAIMS THAT THE SOLUTIONS OR SUBJECT MATTER OF THIS AGREEMENT INFRINGES, MISAPPROPRIATES, OR OTHERWISE VIOLATES ANY INTELLECTUAL PROPERTY RIGHTS OF ANY THIRD PARTY.

16. Termination. This Agreement may be terminated:

16.1. For cause by either Party. By written notice to the other Party, if the other Party materially breaches this Agreement and: (i) is incapable of cure; or (ii) being capable of cure, remains uncured thirty (30) days after the non-breaching Party provides the breaching Party with written notice of such breach.

16.2. For lack of payment. By written notice to Customer, if Customer's failure to pay amounts due under this Agreement has continued more than ninety (90) days after delivery of written notice of non-payment.

16.3. Budgetary Appropriations. Superion acknowledges that continued performance and funding is dependent upon amounts being budgeted, appropriated, or otherwise legally available to the Customer in the future. Customer represents and warrants to Superion that it has appropriated sufficient funds due to Superion under this Agreement and hereby certifies that it will make appropriate requests for budget appropriations to meet continued obligations herein in subsequent fiscal years. If a funding or budgetary issue arises, Customer agrees to notify Superion as soon as commercially reasonable. If Superion and Customer cannot resolve the funding issue within ninety (90) days, the Agreement will terminate, with Customer to pay Superion any amounts owed for goods and services provided prior to termination of the Agreement.

17. Effect of Termination or Expiration. On the expiration or earlier termination of this Agreement:

17.1. all rights, licenses, and authorizations granted to Customer hereunder will immediately terminate and Customer shall immediately cease all use of and other activities with respect to Superion's Confidential Information relating to the Solutions, and within thirty (30) days deliver to Superion, or at Superion's request destroy and erase Superion's Confidential Information from all systems Customer directly or indirectly controls; and

17.2. all licenses, access or subscription fees, services rendered but unpaid, and any amounts due by Customer to Superion of any kind are immediately payable and due no later than thirty (30) days after the effective date of the termination or expiration, including anything that accrues within those thirty days.

17.3. The provisions set forth in the following sections, and any other right or obligation of the parties in this Agreement that, by its nature (including but not limited to: Use Restrictions, Confidential Information, Warranty Disclaimers, Mutual Indemnifications & Limitations of Liability), should survive termination or expiration of this Agreement, will survive any expiration or termination of this Agreement.

17.4. Return of Customer Data. If Customer requests in writing at least 10 days prior to the effective date of expiration or earlier termination of this Agreement, Superion shall within 60 days following such expiration or termination, deliver to Customer in Superion's standard format the then most recent version of Customer Data maintained by Superion, provided that Customer has at that time paid all Fees then outstanding and any amounts payable after or as a result of such expiration or termination.

17.5. Deconversion. In the event of (i) expiration or earlier termination of this Agreement, or (ii) Customer no longer purchasing certain Solutions (including those indicated to be Third-Party Materials), if Customer requests assistance in the transfer of Customer Data to a different vendor's applications (**"Deconversion"**), Superion will provide reasonable assistance. Superion and Customer will negotiate in good faith to establish the relative roles and responsibilities of Superion and Customer in effecting Deconversion, as well as the appropriate date for completion. Superion shall be entitled to receive compensation for any additional consultation, software and documentation required for Deconversion on a time and materials basis at Superion's then standard rates.

18. Assignment. Customer shall not assign or otherwise transfer any of its rights, or delegate or otherwise transfer any of its obligations or performance, under this Agreement, in each case whether voluntarily, involuntarily, by operation of law, or otherwise, without Superion's prior written consent, which consent Superion may give or withhold in its sole discretion. For purposes of the preceding sentence, and without limiting its generality, any merger, consolidation, or reorganization involving Customer (regardless of whether Customer is a surviving or



disappearing entity) will be deemed to be a transfer of rights, obligations, or performance under this Agreement for which Superion's prior written consent is required. No delegation or other transfer will relieve Customer of any of its obligations or performance under this Agreement. Any purported assignment, delegation or transfer in violation of this Section is void. This Agreement is binding upon and inures to the benefit of the Parties and their respective permitted successors and assigns.

19. **No Waiver.** A Party's failure to enforce its rights with respect to any single or continuing breach of this Agreement will not act as a waiver of the right of that Party to later enforce any such rights or to enforce any other or any subsequent breach.

20. **Arbitration of Disputes.** Any dispute, controversy or claim arising out of or relating to this Agreement, including the breach, termination, or validity thereof, shall be resolved by final and binding arbitration.

    20.1. Arbitration Procedure. The claimant shall commence the arbitration by delivering a notice of arbitration to the respondent setting out the nature of the claim(s), the relief requested, and the proposed location. Within thirty (30) days of the receipt of the notice, the respondent shall deliver its answer any counterclaim(s), relief requested, and any proposed change to location. The tribunal shall consist of three (3) arbitrators, appointed as follows: The claimant shall appoint an arbitrator in the request for arbitration and the respondent shall appoint an arbitrator in the answer. The two arbitrators so appointed shall, within thirty (30) days of delivery of the answer, appoint a third arbitrator who shall act as the chair of the tribunal. The tribunal shall decide the procedures in the arbitration after consultation with the parties. The tribunal may make its decisions by a majority. The tribunal shall have the power to grant any provisional or final remedy or relief it deems appropriate, including conservatory measures and an award of attorneys' fees. The parties agree that judgment may be entered upon the award by any court having jurisdiction.

21. **Jurisdiction and Governing Law.** This Agreement and any dispute or claim arising, directly or indirectly, out of or in connection with it or its subject matter or formation (including non-contractual disputes or claims) is governed by, and shall be construed and enforced in accordance with, the laws of the State of Florida excluding choice of law. Each party irrevocably (i) agrees that a County or Circuit Court in the Eighteenth Judicial Circuit, in and for Seminole County, Florida, or the United States District for the Middle District of Florida, shall have exclusive jurisdiction to settle any dispute, controversy or claim arising, directly or indirectly, out of or in connection with this Agreement, or the breach, termination or validity thereof (including non-contractual disputes or claims) and that such court shall be the proper venue therefor; (ii) waives the right to trial by jury, (iii) consents to service of process by first class certified mail, return receipt requested, postage prepaid, to the address at which the party is to receive notice and (iv) agrees that the prevailing party shall be entitled to recover its reasonable attorney's fees, court costs and other legal expenses from the other party.

22. **Severability.** If any provision of this Agreement is illegal or unenforceable, it will be deemed stricken from the Agreement and the remaining provisions of the Agreement will remain in full force and effect.

23. **LIMITATIONS OF LIABILITY.**

    23.1. **LIMITED LIABILITY OF SUPERION. SUPERION'S LIABILITY IN CONNECTION WITH THE SERVICES, IMPROVEMENTS OR ANY OTHER MATTER RELATING TO THIS AGREEMENT WILL NOT EXCEED THE FEES THAT CUSTOMER ACTUALLY PAID TO SUPERION IN CONNECTION WITH THIS AGREEMENT FOR THE INITIAL TERM OR RENEWAL TERM WHEN THE RELEVANT ACTIONS LEADING TO SUCH LIABILITY AROSE. IN ANY EVENT, SUPERION SHALL NOT BE LIABLE FOR ANY LOSSES RESULTING FROM THE CRIMINAL ACTS OF THIRD PARTIES.**

    23.2. **EXCLUSION OF DAMAGES. REGARDLESS OF WHETHER ANY REMEDY SET FORTH HEREIN FAILS OF ITS ESSENTIAL PURPOSE OR OTHERWISE, IN NO EVENT WILL SUPERION, SUPERION PERSONNEL, SUBCONTRACTORS OR SUPPLIERS BE LIABLE UNDER OR IN CONNECTION WITH THIS AGREEMENT FOR ANY (I) LOSS OF DATA, BUSINESS, REVENUE, PROFIT, GOODWILL, OR REPUTATION, (II) BUSINESS INTERRUPTION, INCREASED COSTS, DIMINUTION IN VALUE, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, WHETHER BASED ON BREACH OF CONTRACT, TORT (INCLUDING NEGLIGENCE), STRICT LIABILITY, OR OTHERWISE; AND WHETHER OR NOT SUPERION, SUPERION PERSONNEL, SUBCONTRACTORS OR SUPPLIERS HAVE BEEN ADVISED OF THE POSSIBILITY OF SUCH LOSSES OR DAMAGES OR SUCH LOSSES OR DAMAGES WERE OTHERWISE FORESEEABLE.**

    23.3. **BASIS OF THE BARGAIN. CUSTOMER ACKNOWLEDGES THAT SUPERION HAS SET ITS FEES AND ENTERED INTO THIS AGREEMENT IN RELIANCE UPON THE LIMITATIONS OF LIABILITY AND THE DISCLAIMERS OF WARRANTIES AND DAMAGES SET FORTH IN THIS AGREEMENT, AND THAT THE SAME FORM AN ESSENTIAL BASIS OF THE BARGAIN BETWEEN THE PARTIES.**

24. **Third-Party Materials.** Customer is hereby advised that Superion provides front-line support services for third parties, but these third parties assumes all responsibility for and liability in connection with the Third-Party Materials. Superion is not authorized to make any representations or warranties that are binding upon the third party or to engage in any other acts that are binding upon the third party, excepting specifically that Superion is authorized to represent the fees for the Third-Party Materials as the same is provided for in the Agreement and to accept payment of such amounts from Customer on behalf of the third party for as long as such third party authorizes Superion to do so. As a condition precedent to installing or accessing any Third-Party Materials, Customer may be required to execute a click-through, shrink-wrap EULA or similar agreement provided by the Third-Party Materials provider.
25. **Entire Agreement; Amendment and Modification**. This Agreement contains the entire understanding of the parties with respect to its subject matter, and supersedes and extinguishes all prior oral and written communications between the parties about its subject matter. Any purchase order, agreement, or other ordering document issued by Customer at any time for any reason, will not modify or affect this Agreement nor have any other legal effect notwithstanding the inclusion of any additional or different terms or conditions in any such ordering document and shall serve only the purpose of identifying the products or services ordered. No modification of this Agreement will be effective unless it is in writing, is signed by each Party, and expressly provides that it amends this Agreement. Notwithstanding any language to the contrary herein, numbered Add-On Quotes on Superion letterhead issued by authorized Superion representatives and signed by Customer shall constitute an amendment to this Agreement.
26. **No Third-Party Beneficiaries**. This Agreement is for the sole benefit of the Parties and their respective successors and permitted assigns and nothing herein, express or implied, is intended to or shall confer on any other person any legal or equitable right, benefit, or remedy of any nature under or by reason of this Agreement.
27. **Counterparts**. This Agreement may be executed in counterparts, each of which is deemed an original, but all of which together are deemed to be one and the same agreement. A signed copy of this Agreement delivered by facsimile, e-mail, or other means of electronic transmission is deemed to have the same legal effect as delivery of an original signed copy of this Agreement.
28. **Cooperative Purchases.** This Contract may be used by other government agencies. Superion has agreed to offer similar services to other agencies under the same terms and conditions as stated herein except that the compensation may be negotiated between Superion and other agencies based on the specific revenue expectations, agency reimbursed costs, and other agency requirements. The Customer will in no way whatsoever incur any liability in relation to specifications, delivery, payment, or any other aspect of purchases by such agencies.
29. Incorporated Exhibits to this Agreement:
    - 29.1. Exhibit 1 – Project Cost Summary
    - 29.2. Exhibit 2 - Maintenance & Support Standards
    - 29.3. Exhibit 3 – Travel Expense Guidelines

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SUPERION

A CENTRALSQUARE COMPANY

EXHIBIT 1

Project Cost Summary

Annual Terms	Annual Access Fees
July 1, 2019 - June 30, 2020	$ 121,946.33
July 1, 2020 - June 30, 2021	$ 126,214.45
July 1, 2021 - June 30, 2022	$ 130,631.96
July 1, 2022 - June 30, 2023	$ 135,204.07
July 1, 2023 - June 30, 2024	$ 139,936.22

	Applications and/or Services	Annual Access Fee
Renewal Services	**141527-1, -2**	**$ 121,946.33**
Existing NaviLine Products (Currently Licensed)	NaviLine Payroll/Personnel, NaviLine GMBA w/Extended Reporting, NaviLine Purchasing/Inventory, NaviLine Land Management, NaviLine Building Permits, NaviLine Code Enforcement, NaviLine Planning & Engineering, NaviLine Cash Receipts, NaviLine Customer Information Systems, NaviLine Tax Billing, NaviLine CIS Handheld Interface, NaviLine Timekeeping Interface, Document Management Services	Included in Annual Access Fee
Existing Third Party Products (Currently Licensed)	ACOM	Included in Annual Access Fee
Terminating Third Party Products	ExecuTime Time & Attendance - Horizon (500)	N/A
Retrofit Modifications	40 Mods	Included in Annual Access Fee
Horizon Cloud Services	Hardware and software will be hosted and managed by Superion. Site to Site VPN, Setup, Implementation, Disaster Recovery Plan for Superion applications, ASP HelpCard	Included in Annual Access Fee
NaviLine Test Environment	2 refreshes per year; $600 per additional refresh.	Included in Annual Access Fee
	Total Proposed System:	**$ 121,946.33**

PAYMENT TERMS

RECURRING FEES

a. The Annual Access Fee is due: July 1, 2019 and annually thereafter.

ANCILLARY FEES

b. Reimbursement of travel and living expenses will be governed by Exhibit 3 ("**Travel Expense Guidelines**") attached hereto and will be invoiced monthly in arrears and due within thirty (30) days from date of invoice.

c. Customer is responsible for paying all taxes relating to this Agreement. Applicable tax amounts (if any) are not included in the fees set forth in this Agreement. If Customer is exempt from the payment of any such taxes, Customer must provide Superion valid proof of exemption; otherwise, Superion will invoice Customer and Customer will pay to Superion all such tax amounts.

d. If Customer fails to make any payment when due, then Superion may charge interest on the past due amount at the rate of 1.5% per month calculated daily and compounded monthly, or, if lower, the highest rate permitted under applicable law; and If such failure continues for 90 days following written notice thereof, Superion may suspend performance or access until past due amounts have been paid.

Note: Pricing for Professional Services is a good faith estimate based on the information available to Superion at the time of execution of this Agreement. The total amount that Customer may pay for these services can vary based on the actual number of hours required to complete the services. If required, additional services will be provided on a time and materials basis at hourly rates equal to Superion's then-current list price rates for the services at issue.

SUPERION

A CENTRALSQUARE COMPANY

EXHIBIT 2
Support Standards

1. Superion Cloud Security Program





1.1. Access & Continuity. Logical access restrictions include VLAN data segregation, extensive deny-by-default access control lists, and Multi-Factor authentication required for System Administration. Business continuity is prioritized via daily encrypted backup stored offsite, virtual tape backup technology to counter loss of physical media, and full replication to disaster recovery site, with redundancy an availability through multiple carriers.

1.2. Security & Monitoring. SSL and IPSEC VPN with 256 bit encryption, web application firewalls, multi-layered infrastructure model with recorded internal and external CCTV, card access control, best of breed HVAC/fire suppression/physical security, and backed by 24-7 x 365 monitoring by a staffed operations facility for: Intrusion detection & prevention, DDOS mitigation, and automated network incident creation and escalation.

1.3. Testing, Audits & Compliance. 3rd party internal, external, perimeter vulnerability and penetration testing. Centrally managed patching, OS hardening program, and endpoint protection on all servers. Industry standard compliance includes annual completion of: SSAE18/ISAE Data Center Audit, SSAE18 Operations Audit, PCI-DSS Compliance Audit, Vulnerability Testing & CVSS Audit, and Control Self-Assessment Audit.

2. Service Level Commitments

2.1. Target. In each Service Period, the target for availability of the Solutions is 99.9% ("Availability Target"). (**"Service Period"**) means 24 hours per day Monday through Sunday each calendar month that Customer receives the Solutions, excluding Sundays between 12:00 AM and 12:00 PM Eastern Time for scheduled maintenance. During this time, Customers may experience intermittent interruptions. Superion will make commercially reasonable efforts to minimize the frequency and duration of these interruptions and will notify the Customer if the entire maintenance window will be required.

2.2. Support Terms. Beginning on the Execution Date and continuing in twelve (12) month increments, each a **("Support Term"),** Superion shall provide ongoing Support Services described herein, subject to and conditioned on sustained payment of Fees and compliance with all terms and conditions of this Agreement.

2.3. Measurement. Service availability is measured as the total time that the Solutions are available during each Service Period for access by Customer (**"Service Availability"**). Service Availability measurement shall be applied to the production environment, and the points of measurement for all monitoring shall be the servers and the Internet connections at Superion's hosted environment. Superion has technology monitoring,

measuring, and recording Service Availability. The Customer, at their discretion, may also employ monitoring tools, not to override Superion's measurements for the purposes of calculating Service Availability. Additionally, the use must be:

2.3.1.1. mutually agreed upon by Superion and the Customer.

2.3.1.2. paid, installed and maintained by the Customer.

2.3.1.3. non-invasive and may not reside on Superion's systems.

2.4. Calculation. Service Availability for a given month shall be calculated using the following calculation:

2.4.1. The total number of minutes which the service was NOT available in a given month shall be subtracted from the total number of minutes available in the given month. The resulting figure is divided by the total number of minutes available in the given month.

2.4.2. Service Availability Targets are subject to change due to the variance of the number of days in a month.

2.4.3. The total number of minutes which the service was NOT available in a given month shall exclude minutes associated with scheduled or emergency maintenance.

2.5. Remedy. If the Service Period target measurement is not met then the Customer shall be entitled to a credit calculated as follows:

Service Availability in the relevant Service Period	Percentage Reduction in Monthly Fee for the Subsequent Service Period
Less than 99.9% but greater than or equal to 99.0%	5%
Less than 99.0% but greater than or equal to 95.0%	10%
Less than 95%	20%

2.6. If not directly reported by Superion, Credit entitlement must be requested by the Customer within sixty (60) days of the failed Target. Superion's failure to meet the relevant service level commitment. Customer shall not be entitled to offset any monthly Solutions fee payments, nor withhold fee payments, on account of a pending credit. Customer shall not be eligible for credits for any period where Customer is more than thirty (30) days past due on their account. Superion will provide reporting, showing performance and service levels.

3. Server Performance & Capacity.

3.1. Superion shall provide sufficient server capacity for the duration of this hosting Agreement to meet the reasonable performance requirements for the number of concurrent system users provided for in this Agreement. If the Customer requests, at some later date, to add additional Solutions, increase user licenses, increase storage or processing requirements, and/or request additional environments, these requests will be evaluated and if additional resources are required to support modifications, additional fees may apply.

3.2. "In-network" is defined as any point between which the data packet enters the Superion environment and subsequently departs the Superion environment. Any point of communications outside of the Superion protected network environment shall be deemed as "out-of-network." Superion is not responsible for Internet connectivity and/or performance out-of-network.

4. System Maintenance.

4.1. Solutions maintenance and upgrades. Superion will provide all hosted systems and network maintenance as deemed appropriate and necessary by Superion. Maintenance and upgrades will be scheduled in advance with the Customer's primary contact if they fall outside of the designated hours set aside for this function of Sundays from 12:00AM to 12:00 PM.

4.2. Hardware maintenance and upgrades. Hardware maintenance and upgrades will be performed outside of the Customer's standard business hours of operation and the Customer will be notified prior to the upgrade.

4.3. Emergency maintenance. Emergency situations will be handled on a case-by-case basis in such a manner as to cause the least possible disruption to overall system operations and availability without negatively affecting system stability and integrity. Superion will attempt to notify the Customer promptly, however if no contact can be made, Superion management may deem it necessary to move forward with the emergency maintenance.



5. **Incident Response.** Incidents are defined as interruptions to existing service and can range in priority from urgent to low depending on the impact to the Customer. Superion will make commercially reasonable efforts to respond to Solutions incidents for live production systems using the following guidelines:

Priority Level	Impact	Description	Performance Target	Minimum Performance Goal %
1	Urgent	An Incident that results in loss of Customer connectivity to all of the Solutions or results in loss, corruption or damage to Customer's Data.	Superion will respond within 1 hour of the issue being reported.	95%
2	Critical	An Incident that has an adverse material impact on the performance of the Solutions or materially restricts Customer's day-to-day operations.	Superion will respond within 2 hours of the issue being reported.	95%
3	Non-Critical	An Incident that does not result in a failure of the Solutions but a fault exists that restricts the Customer's use of the Solutions.	Superion will respond within 4 hours of the issue being reported.	95%
4	Minor	An Incident that does not affect or which has minimal adverse impact on the use of the Solutions.	Superion will respond within 24 hours of the issue being reported.	95%

5.1. Measurement. Superion shall track and report on response and resolution time for application and hosting support issues identified by the Customer.

6. **Disaster Recovery.** Superion provides disaster recovery services for Solutions. The costs for these disaster recovery services are included in the monthly fees. In the event that a disaster renders the Customer's data center is inaccessible or rendered non-functional, Superion will provide the ability to connect to the appropriate data center using software provided by Superion. This will allow the Customer to connect to their systems from a remote site to the previously identified critical functions, however functionality may be diminished due to lack of access to hardware and/or software located in the Customer's facilities.

7. **Exceptions.** Superion shall not be responsible for failure to carry out its service and maintenance obligations under this Agreement if the failure is caused by adverse impact due to:

7.1. defectiveness of the Customer's environment, Customer's systems, or due to Customer corrupt, incomplete, or inaccurate data reported to the Solutions, or documented Defect.

7.2. denial of reasonable access to Customer's system or premises preventing Superion from addressing the issue.

7.3. material changes made to the usage of the Solutions by Customer where Superion has not agreed to such changes in advance and in writing or the modification or alteration, in any way, by Customer or its subcontractors, of communications links necessary to the proper performance of the Solutions.

7.4. a force majeure event, or the negligence, intentional acts, or omissions of Customer or its agents.

8. **Incident Resolution.** Actual response times and resolutions may vary due to issue complexity and priority. For critical impact level and above, Superion provides a continuous resolution effort until the issue is resolved.

9. **Service Requests.** Service requests are new requests that will take less than 8 hours to accomplish. For new requests that require additional time, Superion will prioritize these requests, and determine if extra time is needed to order equipment or software.

10. **Non-Production Environments.** Superion will make commercially reasonable efforts to provide non-production environment(s) during Customer business hours. Non-production environments are not included under the metrics or service credit schedules discussed in this Exhibit.

10.1. Maintenance. All forms of maintenance to be performed on non-production environments will follow the exact structure and schedules outlined above in Section 3 for regular System Maintenance.

10.2. Incidents and service requests. Non-production environment incidents are considered priority 3 or 4, dictated by circumstances and will be prioritized and scheduled similar to production service requests.



11. **Responsibility Summary Matrix.**

Responsibility Summary Matrix		
Description	Superion Responsibility	Customer Responsibility
ASP Server Hardware management	X	
ASP Server File system management	X	
ASP Server OS upgrades and maintenance	X	
ASP Database product upgrades and maintenance	X	
ASP 3rd Party product upgrades and maintenance	X	
Application Update Installation		
Request to install application updates		X
Installation of application updates	X	
ASP Backup Management	X	
Data and or File restoration		
Request to restore data and or files		X
Restoration of data and or files	X	
Network		
ASP Network up to and including the router at Superion's location	X	
ASP Router at Customer's location	X	
Customer's network up to the router at Customer's location		X
Customer Workstations		X
System Performance	X	X
Add/Change users		
User add/change requests		X
User add/change implementation for System Access	X	
User add/change implementation for Solutions		X
Add/Change Printers		
Printer add/change requests		X
Printer add/change implementation on ASP network	X	
Printer add/change implementation for Solutions		X
Disaster Recovery	X	
Password Management	X	X
Application Management		
Application Configuration		X
Application Security Management		X
Accuracy and Control of Data		X
Security		
Intrusion and Penetration Testing	X	

12. **Virtual Private Network (VPN) Concentrator.** If Customer's desired system configuration requires the use of a VPN concentrator, including router, this will be provided by Superion. It will reside at Customer's location but is, and shall remain the property of Superion.

13. **Customer Cooperation.** Customer may be asked to perform problem determination activities as suggested by Superion. Problem determination activities may include capturing error messages, documenting steps taken and collecting configuration information. Customer may also be requested to perform resolution activities including, for example, modification of processes. Customer agrees to cooperate with such requests, if reasonable.

14. **Training.** Outside the scope of training services purchased, if any, Customer is responsible for the training and organization of its staff in the operation of the Solutions.

15. **Development Work.** The Support Standards do not include development work either (i) on software not licensed from Superion or (ii) development work for enhancements or features that are outside the documented functionality of the Solutions, except such work as may be specifically purchased and outlined in Exhibit 1. Superion retains all Intellectual Property Rights in development work performed and Customer may request consulting and development work from Superion as a separate billable service.

16. Telephone Support & Support Portal

16.1. Hours. Superion shall provide to Customer, Monday through Friday, 8:00 A.M. to 5:00 P.M. Customer's Local Time within the continental United States, excluding holidays ("5x9"). Superion shall provide to Customer, during the Support Hours, commercially reasonable efforts in solving errors reported by the Customer as well as making available an online support portal. Customer shall provide to Superion reasonably detailed documentation and explanation, together with underlying data, to substantiate errors and to assist Superion in its efforts to diagnose, reproduce and correct the error. This support shall be provided by Superion at Customer location(s) if and when Superion and Customer agree that on-site services are necessary to diagnose or resolve the problem. If a reported error did not, in fact, exist or was not attributable to a defect in the Solutions or an act or omission of Superion, then Customer shall pay for Superion's investigation and related services at Superion's standard professional services rates. Customer must provide Superion with such facilities, equipment and support as are reasonably necessary for Superion to perform its obligations under this Agreement, including remote access to the Specified Configuration

16.2. Releases. Customer shall promptly install and/or use any Release provided by Superion to avoid or mitigate a performance problem or infringement claim. All modifications, revisions and updates to the Solutions shall be furnished by means of new Releases of the Solutions and shall be accompanied by updates to the Documentation whenever Superion determines, in its sole discretion, that such updates are necessary.

16.3. Case Number. Measured from the moment a Case number is created. As used herein a "Case number" is created when a) a Superion support representative has been directly contacted by Customer either by phone, in person, or through Superion's online support portal, and b) when Superion's support representative assigns a case number and conveys that case number to the Customer.

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SUPERION

A CENTRALSQUARE COMPANY

EXHIBIT 3

Travel Expense Guidelines

Superion will adhere to the following guidelines when incurring travel expenses:

All arrangements for travel are to be made through the Superion Corporate Travel Agent unless other arrangements have been made with the Customer and are documented in writing.

AIR TRAVEL – Superion will use the least expensive class of service available with a minimum of seven (7) day, maximum of thirty (30) day, advance purchase. Upon request, Superion shall provide the travel itinerary as the receipt for reimbursement of the airfare and any fees. Fees not listed on the itinerary will require a receipt for reimbursement.

Trips fewer than 250 miles round are considered local. Unless a flight has been otherwise approved by the Customer, Customer will reimburse the current IRS approved mileage rate for all local trips.

LODGING –Superion will use the most reasonable accommodations possible, dependent on the city. All food items, movies, and phone/internet charges are not reimbursable.

RENTAL CAR – Compact or Intermediate cars will be required unless there are three or more Superion employees sharing the car in which case the use of a full size car is authorized. Gas is reimbursable however, pre-paid gas purchases will not be authorized and all rental cars are to be returned with a full tank of gas. Upon request, receipts for car rental and gas purchases will be submitted to Customer. Superion shall decline all rental car insurance offered by the car rental agency as staff members will be covered under the Superion auto insurance policy. Fines for traffic violations are not reimbursable expenses.

OTHER TRANSPORTATION – Superion staff members are expected to use the most economical means for traveling to and from the airport (Airport bus, hotel shuttle service). Airport taxi or mileage for the employee's personal vehicle (per IRS mileage guidelines) are reimbursable if necessary. Upon request, receipt(s) for the taxi will be submitted to Customer. Proof of mileage may be required and may be documented by a readily available electronic mapping service. The mileage rate will be the then-current IRS mileage guideline rate (subject to change with any change in IRS guidelines).

OTHER BUSINESS EXPENSES – Parking at the airport is reimbursable. Tolls to and from the airport and while traveling at the Customer site are reimbursable. Tipping on cab fare exceeding 15% is not reimbursable. Porter tips are reimbursable, not exceeding $1.00 per bag. Laundry is reimbursable when travel includes a weekend day or Company Holiday and the hotel stay is four nights or more. Laundry charges must be incurred during the trip and the limit is one shirt and one pair of pants/skirt per day. With the exception of tips, receipts shall be provided to Customer upon request for all of the aforementioned items.

MEALS – Standard per Diem. Subject to change due to cost of living.

Carla Gerber, Deputy Director, Planning, Housing, and Zoning
6/22/2021
County Commissioners Meeting

Item Summary:
The Maryland Agricultural Land Preservation Foundation (MALPF) is accepting easement applications for the FY 2022 acquisition cycle. Regulations require that the County Commissioners review and approve the applications submitted to MALPF for appraisal and consideration for easement acquisition.

ATTACHMENTS:

Description

Confidentiality Law

Coded EPF Scoring Table

CHAPTER 17

(Senate Bill 73)

AN ACT concerning

Maryland Agricultural Land Preservation Foundation – Sale of Land Preservation Easements – Confidentiality of Records

FOR the purpose of requiring that certain records relating to the sale of an agricultural land preservation easement to the Maryland Agricultural Land Preservation Foundation remain confidential until after a certain time; and generally relating to the sale of Maryland Agricultural Land Preservation Foundation easements.

BY adding to
Article – Agriculture
Section 2–510(m)
Annotated Code of Maryland
(2007 Replacement Volume and 2008 Supplement)

SECTION 1. BE IT ENACTED BY THE GENERAL ASSEMBLY OF MARYLAND, That the Laws of Maryland read as follows:

Article – Agriculture

2–510.

(M) NOTWITHSTANDING ANY OTHER PROVISION OF LAW, FOR EACH OFFER CYCLE AS PROVIDED IN THIS SECTION, RECORDS RELATING TO A LANDOWNER'S RANKING, ASKING PRICE, OR FOUNDATION OFFER SHALL BE CONFIDENTIAL AND NOT SUBJECT TO PUBLIC INSPECTION UNTIL AFTER THE END OF THE CYCLE, AS DETERMINED BY THE FOUNDATION.

SECTION 2. AND BE IT FURTHER ENACTED, That this Act shall take effect July 1, 2009.

Approved by the Governor, April 14, 2009.

FY 2022 Easement Prioritization Formula Scores/Rankings

Code	Rank		LE	20%	F1	F2	F3	F4	F5	F6	40%	P1	P2	P3	P4	P5	P6	30%	TOTAL
		Maximum Score	*100*	*20.00*	*25*	*25*	*15*	*20*	*10*	*5*	*40.00*	*25*	*25*	*20*	*15*	*5*	*10*	*40.00*	100.00
A	1		53.87	10.77	13	23	15	20	0	3	29.6	25	25		7	5	10	28.8	69.17
B	2		57.03	11.41	15	15	15	20	0	3	27.2	25	25		5	5	10	28.0	66.61
C	3		68.80	13.76	24	17	15	20	0	0	30.4	25	10		10	5	2	20.8	64.96
D	4		68.48	13.70	18	25	15	20	0	1	31.6	2	20	7.40	2	5	10	18.6	63.85
E	5		50.62	10.12	21	9	15	20	0	3	27.2	25	25		5	5	4	25.6	62.92
F	6		67.97	13.59	16	28	15	20	0	0	31.6	2	20	7.07	0	5	10	17.6	62.82
G	7		66.11	13.22	24	15	15	10	0	0	25.6	25	5		10	5	10	22.0	60.82
H	8		51.22	10.24	19	9	15	20	0	3	26.4	25	15		5	5	10	24.0	60.64
I	9		58.16	11.63	18	23	15	20	0	3	31.6	18.2	10		7	5	2	16.9	60.11
J	10		50.13	10.03	24	11	15	5	0	0	22.0	25	25		10	5	4	27.6	59.63
K	11		57.81	11.56	9	23	15	20	0	1	27.2	25	20		0	5	2	20.8	59.56
L	12		76.92	15.38	6	23	15	20	0	0	25.6	17.9	10		5	5	4	16.8	57.74
M	13		51.00	10.20	11	5	15	20	0	0	20.4	3.5	25	13.29	10	5	8	25.9	56.52
N	14		37.13	7.43	10	3	15	20	0	1	19.6	25	25		7	5	10	28.8	55.83
O	15		50.33	10.07	6	17	15	20	0	3	24.4	25	5		10	5	8	21.2	55.67
P	16		67.60	13.52	21	5	15	20	0	0	24.4	5.4	20		7	5	6	17.4	55.28
Q	17		75.14	15.03	5	23	15	20	0	0	25.2	17.9	10		0	5	2	14.0	54.19
R	18		52.94	10.59	14	13	15	20	0	3	26.0	5.3	20		5	5	6	16.5	53.11
S	19		60.63	12.13	7	15	15	15	0	3	22.0	0.6	25	2.23	10	5	4	18.7	52.86
T	20		51.76	10.35	5	9	15	15	0	1	18.0	19.6	25		5	5	6	24.2	52.59
U	21		57.74	11.55	5	17	15	20	0	3	24.0	5.1	20		5	5	6	16.4	51.99
V	22		52.73	10.55	2	19	15	20	0	0	22.4	5	25		5	5	6	18.4	51.35

Parks and Recreation
6/22/2021
County Commissioners Meeting

Item Summary:
Recreation Program Coordinator Vacancy

ATTACHMENTS:
Description

Public Works - Roads Division
6/22/2021
County Commissioners Meeting

Item Summary:
Motor Equipment Operator I Vacancies

ATTACHMENTS:
Description

Environmental Operations Division
6/22/2021
County Commissioners Meeting

Item Summary:
FY2022 Landfill Monitoring Contracts

ATTACHMENTS:

Description

06.22.21 Contract, Earth Data Incorporated, Landfill Monitoring, Nicholson Landfill

06.22.21 Contract, Earth Data Incorporated, Landfill Monitoring, Dulin Rubble Landfill

CONTRACT

THIS CONTRACT, made this 22nd day of June 2021, by and between the County Commissioners of Kent County, a body corporate and politic of the State of Maryland, hereinafter referred to as the OWNER, and Earth Data Incorporated, hereinafter referred to as the CONTRACTOR;

WITNESSETH, That for and in consideration of the mutual covenants and promises between the parties hereto, it is fully agreed that:

1. The CONTRACTOR will furnish all the labor, materials, equipment, and transportation necessary to conduct the following monitoring work:
    - Quarterly landfill gas monitoring on eighteen (18) gas well points; five (5) gas vapor points; twenty (20) gas vents.
    - Conduct semi-annual sampling of twenty-three (23) groundwater monitoring wells and five (5) domestic wells for laboratory analysis to include sending groundwater samples to lab for the MDE required EPA Method 8011 analysis.
    - Prepare quarterly and semi-annual reports.

at the Nicholson Landfill 23750 Larney Nick Rd., Chestertown, Kent County, MD, in accordance with the Earth Data Inc. Proposal 4696-G, prepared by Earth Data Incorporated, dated 2/16/21, and attached hereto, as part of the Contract Documents.

2. LIABILITY INSURANCE. CONTRACTOR shall furnish to Owner, before beginning any work hereunder, a Certificate of Insurance certifying that the Contractor carries comprehensive, general liability insurance coverage through a policy which protects the County , and names the County as an Additional Insured in aggregate liability coverage of not less than Two Million ($2,000,000.00) Dollars.

3. WORKER'S COMPENSATION INSURANCE. CONTRACTOR shall furnish to the County Commissioners, before beginning construction, a Certificate of Workmen's Compensation Insurance covering all employees of said Contract in amounts statutorily required.

4. COMPLETION OF WORK. The CONTRACTOR shall commence the work covered by this contract after July 1, 2021 and shall complete prior to June 30, 2022 unless the period for completion is extended as provided for in the general conditions. This contract shall have a renewal option for three (3) years in one (1) year increments upon mutual agreement of the CONTRACTOR and OWNER and subject to available funding.

5. CONTRACT SUM. The OWNER shall pay the CONTRACTOR for the performance of said work, subject to additions or deletions provided herein a sum, not to exceed, One Hundred Six Thousand, Three Hundred Dollars ($106,300.00) in conformity with the bid schedule.

6. The contract documents include the following attachments:
    a. Standard County Terms and Conditions.
    b. Proposal 4696-G, prepared by Earth Data Incorporated, dated 2/16/21.

7. The OWNER will pay to the CONTRACTOR in the manner and at such times as set forth in the general conditions and in such amounts as required by the Contract Documents.

8. This Contract shall be governed by the Laws of the State of Maryland, without regard to its conflicts of law principles. Jurisdiction and venue shall lies in State or federal located within the State of Maryland.

9. This Contract shall be binding upon all parties hereto and their respective heirs, executors, administrators, successors, and assigns.

IN WITNESS WHEREOF, the parties hereto have executed, or caused to be executed by their duly authorized officials, this Contract in duplicate, on the date first above written.

WITNESS/ATTEST

Lacey I. Cox

THE COUNTY COMMISSIONERS
OF KENT COUNTY, MARYLAND

By: P. Thomas Mason
P. Thomas Mason, President

Christine Kunkowski, Office Manager

EARTH DATA INCORPORATED

By:

Mark A. Williams, President
Title

46-4244988
Employer Identification Number

GENERAL TERMS & CONDITIONS OF CONTRACT BETWEEN COUNTY & CONTRACTOR

("General Conditions")

1. ACCOUNTING SYSTEM AND AUDIT, ACCURATE INFORMATION

The Contractor certifies that all information the Contractor has provided or will provide to the County is true and correct and can be relied upon by the County in awarding, modifying, making payments, or taking any other action with respect to this contract including resolving claims and disputes. False or misleading information constitutes grounds for the County to terminate this contract for cause and to pursue any other appropriate remedy. The Contractor certifies that the Contractor's accounting system conforms to generally accepted accounting principles, is sufficient to comply with the contract's budgetary and financial obligations, and is sufficient to produce reliable financial information.

The County may examine the Contractor's and any first tier subcontractor's records to determine and verify compliance with the contract and to resolve or decide any claim or dispute arising under this contract. The Contractor and any first tier subcontractor must grant the County access to these records at all reasonable times during the contract term and for three (3) years after final payment (or for such longer period as may be required pursuant to any federal, state, or other loan or grant condition). If the contract is supported to any extent with federal or state funds, the appropriate federal or state authorities may also examine these records. The Contractor must include the preceding language of this paragraph in all first tier subcontracts.

2. AMERICANS WITH DISABILITIES ACT

The Contractor agrees to comply with the nondiscrimination requirements of Titles II and III, and other provisions, of the Americans with Disabilities Act of 1990, Pub. Law 101-336, as amended, currently found at 42 U.S.C., § 12101, et seq.

3. APPLICABLE LAWS

This contract must be construed in accordance with the applicable laws, rules, and regulations of the State of Maryland (without regard to its conflicts of laws principles) and of Kent County. All Kent County laws, rules, and regulations are incorporated by reference into, and made a part of, this contract. In the case of any inconsistency between this contract and such laws, rules, and regulations, the laws, rules and regulations shall govern. The Contractor must, without additional cost to the County, pay any necessary fees and charges, obtain any necessary licenses and permits, and comply with applicable federal, state and local laws, codes and regulations. For purposes of litigation involving this contract, except for contract Disputes discussed in paragraph 8 below, exclusive venue and jurisdiction must be in the Maryland State courts located in Kent County, Maryland.

4. ASSIGNMENTS AND SUBCONTRACTS

The Contractor may not assign or transfer this contract, any interest herein or any claim hereunder, except as expressly authorized in writing by County's County Administrator, or as otherwise specifically provided for in the contract. Unless performance is separately and expressly waived in writing by the County Administrator, an assignment does not release the Contractor from responsibility for performance of this contract. Unless otherwise provided in the contract, the Contractor may not contract with any other party for furnishing any of the materials or services herein contracted for without the written approval of the County Administrator.

5. CHANGES

The County Administrator may unilaterally change the work, materials and services to be performed, in accordance with County law, rule, or regulation. The change must be in writing and within the general scope of the contract. The contract will be modified to reflect any time or money adjustment the Contractor is entitled to receive. Any claim concerning an adjustment in time or money due to a change must be given in writing to the County Administrator or the designated contract administrator, within thirty (30) days from the date that the change was ordered, or the claim is waived. Any failure to agree upon a time or money adjustment must be resolved under the "Disputes" clause of this contract. The Contractor must proceed with the prosecution of the work as changed, even if there is an unresolved claim. No charge for any extra work, time or material will be allowed, except as provided in this section.

6. CONTRACT ADMINISTRATION

A. The contract administrator, subject to paragraph B below, is the Department representative designated by the County Administrator. The contract administrator is authorized to:

(1) serve as liaison between the County and Contractor;

(2) give direction to the Contractor to ensure satisfactory and complete performance;

(3) monitor and inspect the Contractor's performance to ensure acceptable timeliness and quality;

(4) serve as records custodian for this contract;

(5) accept or reject the Contractor's performance;

(6) furnish timely written notice of the Contractor's performance failures to the County Administrator;

(7) prepare required reports;

(8) approve or reject invoices for payment;

(9) recommend contract modifications or terminations to the County Administrator; and

(10) issue notices to proceed.

B. The contract administrator is NOT authorized to make determinations (as opposed to recommendations) that alter, modify, terminate or cancel the contract, effect a procurement, interpret ambiguities in contract language, or waive the County's contractual rights.

7. COST & PRICING DATA

The Contractor guarantees that any cost and/or pricing data provided to the County will be accurate and complete. The Contractor grants the County access to all books, records, documents, and other supporting data in order to permit adequate evaluation of the Contractor's proposed price(s). The Contractor also agrees that the price to the County, including profit or fee, may, at the option of the County, be reduced to the extent that the price was based on inaccurate, incomplete, or non-current data supplied by the Contractor.

8. DISPUTES DURING CONTRACT PERFORMANCE

Any dispute by Contractor arising during the performance of the contract, which dispute is not disposed of by mutual agreement, must be decided as provided hereunder. Pending final resolution of a dispute, the Contractor must proceed diligently with contract performance. Subject to the discretion of the County Administrator, the head of the County department, office, or agency ("Department Head") of the contract administrator is the designee of the County Administrator, for the purpose of dispute resolution. If the contract administrator is the Department Head, then the dispute shall be managed by the County Administrator. The Department Head may, with the Contractor's consent, delegate this responsibility to another person (other than the contract administrator). The Contractor waives any dispute or claim not made in writing and received by the Department Head within thirty (30) days of the occurrence giving rise to the dispute or claim. A dispute must be in writing, for specific relief, and any requested relief must be fully supported by affidavit and all relevant calculations, including cost and pricing information, records, and other information. The Contractor may, at the County's option, be made a party to any related dispute involving another Contractor.

9. DOCUMENTS, MATERIALS AND DATA

All documents, materials or data developed as a result of this contract are the County's property, unless specifically provided for in the contract. The County has the right to use and reproduce any documents, materials, and data, including confidential information, used in the performance of, or developed as a result of, this contract. The County may use this information for its own purposes, including reporting to state and federal agencies. The Contractor warrants that it has title to or right of use of all documents, materials or data used or developed in connection with this contract. The Contractor must keep confidential all documents, materials, and data prepared or developed by the Contractor or supplied by the County.

10. DURATION OF OBLIGATION

The Contractor agrees that all of Contractor's obligations and warranties which, directly or indirectly, are intended by their nature or by implication to survive performance of the contract shall so survive the completion of performance, termination for cause, or the termination for convenience of the contract.

11. ENTIRE AGREEMENT

There are no promises, terms, conditions, or obligations other than those contained in the contract, including any terms, conditions, documents or exhibits thereto, and these General Conditions. This contract supersedes all communications, representations, or agreements, either verbal or written, between the parties hereto, with the exception of express warranties given to induce the County to enter into the contract.

12. ETHICS REQUIREMENTS/ POLITICAL CONTRIBUTIONS

The Contractor must comply with the ethics provisions contained in Chapter 29 – Ethics of the Code of Public local Laws of Kent County.

13. GUARANTEE

A. Contractor guarantees for one year from acceptance, or for such other period of time as may have been expressly stated in the contract or the County's written solicitation, all goods, services, and construction offered, including those used in the course of providing the goods, services, and/or construction. This includes a guarantee that all products offered (or used in the installation of those products) carry a guarantee against any and all defects for such period. The Contractor must correct any and all defects in material and/or workmanship which may appear during the guarantee period, or any defects that occur within one (1) year of acceptance even if discovered more than one (1) year after acceptance, by repairing (or replacing with new items or new materials, if necessary) any such defect at no cost to the County and to the County's satisfaction.

B. Should a manufacturer's or service provider's warranty or guarantee exceed the requirements stated above, that guarantee or warranty will be the primary one used in the case of defect. Copies of manufacturer's or service provider's warranties must be provided upon request.

C. All warranties and guarantees must be in effect from the date of acceptance by the County of the goods or services.

D. The Contractor guarantees that all work shall be accomplished in a workmanlike manner, and the Contractor must observe and comply with all federal, State, County and local laws, ordinances and regulations in providing the goods and performing the services listed.

E. Goods and materials provided under this contract must be of first quality, latest model, and of current manufacture, and must not be of such age or so deteriorated as to impair their usefulness or safety. Items that are used, rebuilt, or demonstrator models are unacceptable, unless specifically requested by the County in the in the contract documents.

F. ***All goods shall be merchantable and fit for the particular purpose ordered or purchased, and the Contractor so represents and warrants.***

14. HAZARDOUS AND TOXIC SUBSTANCES

Manufacturers and distributors are required by federal "Hazard Communication" provisions of 29 CFR 1910.1200, and the Maryland "Access to Information About Hazardous and Toxic Substances" Law, to label each hazardous material or chemical container, and to provide Material Safety Data Sheets to the purchaser. The Contractor must comply with these laws and must provide the County with copies of all relevant documents, including Material Safety Data Sheets, prior to performance of services or contemporaneous with delivery of goods.

15. IMMIGRATION REFORM AND CONTROL ACT

The Contractor warrants that both the Contractor and any subcontractor do not and shall not hire, recruit or refer for a fee, for employment under this contract or any subcontract, an alien while knowing the alien is an unauthorized alien, or any individual without complying with the requirements of the federal Immigration and Nationality laws, including but not limited to any verification and record keeping requirements. The Contractor further assures the County that, in accordance with those laws, it does not and will not discriminate against an individual with respect to hiring, or recruitment or referral for a fee, of the individual for employment or the discharging of the individual from employment because of such individual's national origin or, in the case of a citizen or intending citizen, because of such individual's citizenship status.

16. INCONSISTENT PROVISIONS

Notwithstanding any provisions to the contrary in any contract terms or conditions supplied by the Contractor, the County's General Conditions supersede the Contractor's terms and conditions in the event of any inconsistency, unless specifically waived or amended by the County.

In the case of any conflicts or ambiguities among the contract documents, such matters shall be resolved in favor of the following priorities:

a. Any term or condition specifically provided for in a contract or exhibit to a contract, other than terms and conditions provided by the Contractor.

b. Terms and conditions specified by the County in any request for proposal, request for interest of qualifications, invitation to bid, or other document specifying with particularity the County's terms and conditions.

c. These General Conditions.

The lack of a specific provision in any of the documents referred to in items 16.a and 16.b above shall not operate to create an ambiguity with these General Conditions.

17. INDEMNIFICATION

The Contractor is responsible for any loss, personal injury, death and any other damage (including incidental and consequential) that may be done or suffered by reason of the Contractor's negligence or failure to perform any contractual obligations. The Contractor must indemnify and save the County harmless from any loss, cost, damage and other expenses, including attorney's fees and litigation expenses, suffered or incurred due to the Contractor's negligence or failure to perform any of its contractual obligations. If requested by the County, the Contractor must defend the County in any action or suit brought against the County arising out of the Contractor's negligence, errors, acts or omissions under this contract. The negligence of any agent, subcontractor or employee of the Contractor is deemed to be the negligence of the Contractor. For the purposes of this paragraph, County includes its elected officials, officials, employees, agents, boards, and agencies. Any incidental and consequential damages shall be limited to the amount of insurance required by the contractor hereunder.

18. INDEPENDENT CONTRACTOR

The Contractor is an independent contractor. The Contractor and the Contractor's employees or agents are not agents or employees of the County. Neither these General Conditions nor the contract are intended to create, nor do they create any partnership, joint venture, agency or other relationship between the County and the Contractor.

19. INFRINGEMENT

Contractor represents and warrants that there is no copyright or patent infringement with respect to any goods or materials furnished pursuant to the contract. The Contractor shall indemnify and hold harmless the County with respect to costs, expense, damages, and liability arising from or on account of any claim for infringement.

20. INSPECTIONS

The County has the right to monitor, inspect and evaluate or test all supplies, goods, or services called for by the contract at all reasonable places (including the Contractor's place of business) and times (including the period of preparation or manufacture).

21. INSURANCE

Prior to execution of the contract, the Contractor must obtain at its own cost and expense, and keep in force and effect during the term of this contract, including all extensions, the insurance specified in the contract, including any applicable table or attachment, with an insurance company licensed or qualified to do business in the State of Maryland and with an A. M. Best rating of not less than A-. The Contractor must submit a certificate of insurance prior to award of this contract and prior to any contract modification extending the term of the contract, as evidence of compliance with this provision. The County must be named as an additional insured on all liability policies. Forty-five (45) days written notice to the County of cancellation or material change in any of the policies is required. In no event may the insurance coverage be less than that shown on the applicable table, attachment, or contract provision for required insurance. Subject to applicable law, the County Administrator may waive or modify the requirements of this section 21 in whole or in part.

22. NON-CONVICTION OF BRIBERY

The Contractor hereby declares and affirms that, to its best knowledge, none of its officers, directors, members, partners, or employees directly involved in obtaining contracts has been convicted of bribery, attempted bribery, or conspiracy to bribe under the laws of any state or the federal government.

23. NONDISCRIMINATION IN EMPLOYMENT

The Contractor shall not discriminate in employment, or in the treatment of employees, or discriminate in any manner on the basis of race, color, gender, age, religion, creed, national origin, ancestry, marital status, disability, political affiliation, or lawful sexual orientation and shall follow and obey all applicable State, federal, and County laws and regulations regarding employment discrimination. The Contractor must bind its subcontractors to the provisions of this section.

24. PAYMENTS

This contract is subject to a non-appropriations clause as provided herein. No payment may be made or is due under this contract unless funds for the payment have been appropriated and encumbered by the County. Under no circumstances will the County pay the Contractor for legal fees. The Contractor must not proceed to perform any work (provide goods, services, or construction) prior to receiving written confirmation that the County has appropriated and encumbered funds for the work. If the Contractor fails to obtain this verification from the County prior to performing work, the County has no obligation to pay the Contractor for the work.

If this contract provides for an additional contract term, or for work in any period beyond the end of the County's fiscal year in which the contract is executed, continuation of this contract beyond the end of that fiscal year is contingent upon the subsequent appropriation of funds and encumbrance of those appropriated funds for payments under this contract. If funds are not appropriated and encumbered to support continued performance in a subsequent fiscal period, this contract terminates without further notice from, or cost to, the County. The Contractor acknowledges that the County Commissioners have no obligation to appropriate funds for this contract in subsequent fiscal years. Furthermore, the County has no obligation to encumber funds to this contract in subsequent fiscal years. Accordingly, for each subsequent contract term, the Contractor must take appropriate action to verify that such funds have been appropriated and encumbered. See Annotated Code of Maryland, Article 31, section 3.

25. PERSONAL PROPERTY

All furniture, office equipment, equipment, vehicles and other similar types of personal property specified in the contract and purchased with funds provided under the contract become the property of the County upon the termination or expiration of this contract, unless expressly stated otherwise.

26. TERMINATION FOR CAUSE

The County may terminate the contract in whole or in part, and from time to time, whenever the County determines that the Contractor is:

a. defaulting in performance or is not complying with any provision of this contract;

b. failing to make satisfactory progress in the prosecution of the contract; or

c. endangering the performance of this contract.

Prior to a termination for cause, the County will send the Contractor written notice specifying the cause. The notice will give the Contractor ten (10) days from the date the notice is issued to cure the default or make progress satisfactory to the County in

curing the default, unless a different time is given in the notice. If the County determines that default contributes to the curtailment of an essential service or poses an immediate threat to life, health, or property, the County may terminate the contract immediately upon issuing oral or written notice to the Contractor without any prior notice or opportunity to cure. In addition to any other remedies provided by law or the contract, the Contractor must compensate the County for additional costs incurred by the County to obtain substitute performance. A termination for cause shall be considered a termination for convenience as of the date the Contractor was advised of the termination for cause, if there was, in fact, no cause.

27. TERMINATION FOR CONVENIENCE

This contract may be terminated by the County, in whole or in part, upon written notice to the Contractor, when the County determines termination to be in the County's best interest. The termination is effective ten (10) days after the notice is issued, unless a different time is given in the notice. The County is liable only for payment for acceptable performance prior to the effective date of the termination, and for costs reasonably incurred as of the date of termination, which costs or items acquired by such costs cannot be economically retained by the Contractor for other or future use of the Contractor.

28. TIME

Time is of the essence in the performance by Contractor of the contract and of all ancillary matters arising therefrom.

29. TITLE

All goods delivered or provided to the County or otherwise pursuant to the contract, and the title thereto, shall be free any security interest, lien, contract restriction, or other form of encumbrance. Title shall pass to the County at the place of delivery to the County, subject to the County's right to inspect and accept or reject the goods.

30. WORK UNDER THE CONTRACT

Work may not commence under this contract until all conditions for commencement are met, including execution of the contract by both parties, compliance with insurance requirements, and issuance of any required notice to proceed.

Earth Data
INCORPORATED
• Water Resources • Geospatial Services •
Solutions for Tomorrow. Today.

COST ESTIMATE

FY 2021-22 Landfill Monitoring, Nicholson Landfill, Kent County, MD

Conduct quarterly landfill gas monitoring on 18 gas well points; 5 vapor points; 20 gas vents. Conduct semi-annual sampling of 23 monitoring wells & 5 domestic wells for laboratory analysis. Send groundwater samples to lab for MDE required analysis. Prepare quarterly and semi-annual reports.

Earth Data Proj. Mgr. : J.P. Stokes
EDI File No.: 4696-G
Date: 2/16/2021
Prepared By: JPS

Client: Kent County DPW
Contact: Marty Holden
Phone #: 410-778-7448
Email: mholden@kentgov.org

Item	Description	Est. Quantity	Unit	Unit Price	Annual Amount
1	Landfill Gas Monitoring - Quarterly (28 gas points)	4	EA	$575.00	$2,300.00
2	Monitoring & Domestic Well Sampling- Semi Annual (28 wells)	2	EA	$8,733.00	$17,466.00
3	Semi-Annual Laboratory Analysis (VOC; Metals; General Chem.; Dissolved Gas)	2	EA	$18,253.10	$36,506.20
4	Semi-Annual Data Analysis	2	EA	$4,418.50	$8,837.00
5	Semi-Annual Report Preparation	2	EA	$4,816.00	$9,632.00
6	Project Administration (semi-annual sampling and gas monitoring)	2	LS	$2,160.00	$4,320.00
7	Monitoring Well Sampling (12 wells for 2 additional quarters)	2	EA	$3,876.00	$7,752.00
8	Quarterly-Annual Laboratory Analysis (12 wells for 2 additional quarters)	2	EA	$4,864.45	$9,728.90
9	Quarterly Data Analysis (4 quarters)	4	EA	$648.00	$2,592.00
10	Quarterly Report Preparation (4 quarters)	4	EA	$1,056.00	$4,224.00
11	Project Administration (quarterly sampling and reporting)	4	LS	$720.00	$2,880.00

TOTAL ESTIMATED PROJECT COST **$106,238.10**

Quote good until May 1, 2021
Standard terms and conditions apply.

EARTH DATA INCORPORATED

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 05/27/2021

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Whitten Group LLC 317 Crusader Road Cambridge MD	CONTACT NAME: Jeffrey Gombos PHONE (A/C, No, Ext): (800) 931-7484 FAX (A/C, No): E-MAIL ADDRESS: Jeff@whittengroupllc.com
INSURED Earth Data Inc 131Comet Drive Centreville MD 21617	**INSURER(S) AFFORDING COVERAGE** — **NAIC #** INSURER A : FCCI INSURER B : Markel Services, Inc. INSURER C : INSURER D : INSURER E : INSURER F :

COVERAGES **CERTIFICATE NUMBER:** updated Master 21-22 **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	[X] COMMERCIAL GENERAL LIABILITY [ ] CLAIMS-MADE [X] OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: [X] POLICY [ ] PRO-JECT [ ] LOC OTHER:	Y		CPP10005222500	09/30/2020	09/30/2021	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG Employee Benefits	$ 1,000,000 $ 100,000 $ 5,000 $ 1,000,000 $ 2,000,000 $ 2,000,000 $
A	AUTOMOBILE LIABILITY [ ] ANY AUTO [ ] OWNED AUTOS ONLY [X] SCHEDULED AUTOS [X] HIRED AUTOS ONLY [X] NON-OWNED AUTOS ONLY [X]	Y		CA10005222600	09/30/2020	09/30/2021	COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident) 	$ 1,000,000 $ $ $ $
A	[X] UMBRELLA LIAB [X] OCCUR [ ] EXCESS LIAB [ ] CLAIMS-MADE [ ] DED [X] RETENTION $ 0	Y		UMB10005222700	09/30/2020	09/30/2021	EACH OCCURRENCE AGGREGATE 	$ 5,000,000 $ 5,000,000 $
A	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY Y/N ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? [ ] (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	N/A		001-WC19A-78825	09/30/2020	09/30/2021	[X] PER STATUTE [ ] OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	 $ 1,000,000 $ 1,000,000 $ 1,000,000
B	Professional Liability Pollution Liability			MKLV7ENV101790	05/25/2021	05/25/2022	Each Claim Aggregate	$1,000,000 $2,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

The County Commissioners of Kent County MD is listed as additional insured

CERTIFICATE HOLDER

The County Commissioners of Kent County MD
400 High Street
Chestertown MD 21620

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

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CONTRACT

THIS CONTRACT, made this 22nd day of June 2021, by and between the County Commissioners of Kent County, a body corporate and politic of the State of Maryland, hereinafter referred to as the OWNER, and Earth Data Incorporated, hereinafter referred to as the CONTRACTOR;

WITNESSETH, That for and in consideration of the mutual covenants and promises between the parties hereto, it is fully agreed that:

1. The CONTRACTOR will furnish all the labor, materials, equipment and transportation necessary to conduct the following monitoring work:
    - Quarterly landfill gas monitoring of four (4) gas well points; eight (8) gas vapor points; three (3) gas vents.
    - Conduct semi-annual sampling of five (5) groundwater monitoring wells for laboratory analysis to include sending groundwater samples to lab for the MDE required EPA Method 8011 analysis.
    - Prepare quarterly and semi-annual reports.

at the Dulin Rubble Landfill, 23310 Ricauds Branch Rd., Chestertown, Kent County, MD, in accordance with the Earth Data Inc. Proposal 4697-G, prepared by Earth Data Incorporated, dated 2/16/21, and attached hereto, as part of the Contract Documents.

2. LIABILITY INSURANCE. CONTRACTOR shall furnish to Owner, before beginning any work hereunder, a Certificate of Insurance certifying that the Contractor carries comprehensive, general liability insurance coverage through a policy which protects the County , and names the County as an Additional Insured in aggregate liability coverage of not less than Two Million ($2,000,000.00) Dollars.

3. WORKER'S COMPENSATION INSURANCE. CONTRACTOR shall furnish to the County Commissioners, before beginning construction, a Certificate of Workmen's Compensation Insurance covering all employees of said Contract in amounts statutorily required.

4. COMPLETION OF WORK. The CONTRACTOR shall commence the work covered by this contract after July 1, 2021 and shall complete prior to June 30, 2022 unless the period for completion is extended as provided for in the general conditions. This contract shall have a renewal option for three (3) years in one (1) year increments upon mutual agreement of the CONTRACTOR and OWNER and subject to available funding.

5. CONTRACT SUM. The OWNER shall pay the CONTRACTOR for the performance of said work, subject to additions or deletions provided herein a sum, not to exceed, Twenty-two Thousand Dollars ($22,000.00) in conformity with the bid schedule.

6. The contract documents include the following attachments:
   a. Standard County Terms and Conditions.
   b. Proposal 4697-G, prepared by Earth Data Incorporated, dated 2/16/21.

7. The OWNER will pay to the CONTRACTOR in the manner and at such times as set forth in the general conditions and in such amounts as required by the Contract Documents.

8. This Contract shall be governed by the Laws of the State of Maryland, without regard to its conflicts of law principles. Jurisdiction and venue shall lies in State or federal located within the State of Maryland.

9. This Contract shall be binding upon all parties hereto and their respective heirs, executors, administrators, successors, and assigns.

IN WITNESS WHEREOF, the parties hereto have executed, or caused to be executed by their duly authorized officials, this Contract in duplicate, on the date first above written.

WITNESS/ATTEST

Lacey J. Cox

THE COUNTY COMMISSIONERS
OF KENT COUNTY, MARYLAND

By: P. Thomas Mason
P. Thomas Mason, President

Christine Kunkowski, Office Manager

EARTH DATA INCORPORATED

By:

Mark A. Williams, President
Title

46-4244988
Employer Identification Number

GENERAL TERMS & CONDITIONS OF CONTRACT
BETWEEN COUNTY & CONTRACTOR

("General Conditions")

1. ACCOUNTING SYSTEM AND AUDIT, ACCURATE INFORMATION

The Contractor certifies that all information the Contractor has provided or will provide to the County is true and correct and can be relied upon by the County in awarding, modifying, making payments, or taking any other action with respect to this contract including resolving claims and disputes. False or misleading information constitutes grounds for the County to terminate this contract for cause and to pursue any other appropriate remedy. The Contractor certifies that the Contractor's accounting system conforms to generally accepted accounting principles, is sufficient to comply with the contract's budgetary and financial obligations, and is sufficient to produce reliable financial information.

The County may examine the Contractor's and any first tier subcontractor's records to determine and verify compliance with the contract and to resolve or decide any claim or dispute arising under this contract. The Contractor and any first tier subcontractor must grant the County access to these records at all reasonable times during the contract term and for three (3) years after final payment (or for such longer period as may be required pursuant to any federal, state, or other loan or grant condition). If the contract is supported to any extent with federal or state funds, the appropriate federal or state authorities may also examine these records. The Contractor must include the preceding language of this paragraph in all first tier subcontracts.

2. AMERICANS WITH DISABILITIES ACT

The Contractor agrees to comply with the nondiscrimination requirements of Titles II and III, and other provisions, of the Americans with Disabilities Act of 1990, Pub. Law 101-336, as amended, currently found at 42 U.S.C., § 12101, et seq.

3. APPLICABLE LAWS

This contract must be construed in accordance with the applicable laws, rules, and regulations of the State of Maryland (without regard to its conflicts of laws principles) and of Kent County. All Kent County laws, rules, and regulations are incorporated by reference into, and made a part of, this contract. In the case of any inconsistency between this contract and such laws, rules, and regulations, the laws, rules and regulations shall govern. The Contractor must, without additional cost to the County, pay any necessary fees and charges, obtain any necessary licenses and permits, and comply with applicable federal, state and local laws, codes and regulations. For purposes of litigation involving this contract, except for contract Disputes discussed in paragraph 8 below, exclusive venue and jurisdiction must be in the Maryland State courts located in Kent County, Maryland.

4. ASSIGNMENTS AND SUBCONTRACTS

The Contractor may not assign or transfer this contract, any interest herein or any claim hereunder, except as expressly authorized in writing by County's County Administrator, or as otherwise specifically provided for in the contract. Unless performance is separately and expressly waived in writing by the County Administrator, an assignment does not release the Contractor from responsibility for performance of this contract. Unless otherwise provided in the contract, the Contractor may not contract with any other party for furnishing any of the materials or services herein contracted for without the written approval of the County Administrator.

5. CHANGES

The County Administrator may unilaterally change the work, materials and services to be performed, in accordance with County law, rule, or regulation. The change must be in writing and within the general scope of the contract. The contract will be modified to reflect any time or money adjustment the Contractor is entitled to receive. Any claim concerning an adjustment in time or money due to a change must be given in writing to the County Administrator or the designated contract administrator, within thirty (30) days from the date that the change was ordered, or the claim is waived. Any failure to agree upon a time or money adjustment must be resolved under the "Disputes" clause of this contract. The Contractor must proceed with the prosecution of the work as changed, even if there is an unresolved claim. No charge for any extra work, time or material will be allowed, except as provided in this section.

6. CONTRACT ADMINISTRATION

A. The contract administrator, subject to paragraph B below, is the Department representative designated by the County Administrator. The contract administrator is authorized to:

(1) serve as liaison between the County and Contractor;

(2) give direction to the Contractor to ensure satisfactory and complete performance;

(3) monitor and inspect the Contractor's performance to ensure acceptable timeliness and quality;

(4) serve as records custodian for this contract;

(5) accept or reject the Contractor's performance;

(6) furnish timely written notice of the Contractor's performance failures to the County Administrator;

(7) prepare required reports;

(8) approve or reject invoices for payment;

(9) recommend contract modifications or terminations to the County Administrator; and

(10) issue notices to proceed.

B. The contract administrator is NOT authorized to make determinations (as opposed to recommendations) that alter, modify, terminate or cancel the contract, effect a procurement, interpret ambiguities in contract language, or waive the County's contractual rights.

7. COST & PRICING DATA

The Contractor guarantees that any cost and/or pricing data provided to the County will be accurate and complete. The Contractor grants the County access to all books, records, documents, and other supporting data in order to permit adequate evaluation of the Contractor's proposed price(s). The Contractor also agrees that the price to the County, including profit or fee, may, at the option of the County, be reduced to the extent that the price was based on inaccurate, incomplete, or non-current data supplied by the Contractor.

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Any dispute by Contractor arising during the performance of the contract, which dispute is not disposed of by mutual agreement, must be decided as provided hereunder. Pending final resolution of a dispute, the Contractor must proceed diligently with contract performance. Subject to the discretion of the County Administrator, the head of the County department, office, or agency ("Department Head") of the contract administrator is the designee of the County Administrator, for the purpose of dispute resolution. If the contract administrator is the Department Head, then the dispute shall be managed by the County Administrator. The Department Head may, with the Contractor's consent, delegate this responsibility to another person (other than the contract administrator). The Contractor waives any dispute or claim not made in writing and received by the Department Head within thirty (30) days of the occurrence giving rise to the dispute or claim. A dispute must be in writing, for specific relief, and any requested relief must be fully supported by affidavit and all relevant calculations, including cost and pricing information, records, and other information. The Contractor may, at the County's option, be made a party to any related dispute involving another Contractor.

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All documents, materials or data developed as a result of this contract are the County's property, unless specifically provided for in the contract. The County has the right to use and reproduce any documents, materials, and data, including confidential information, used in the performance of, or developed as a result of, this contract. The County may use this information for its own purposes, including reporting to state and federal agencies. The Contractor warrants that it has title to or right of use of all documents, materials or data used or developed in connection with this contract. The Contractor must keep confidential all documents, materials, and data prepared or developed by the Contractor or supplied by the County.

10. DURATION OF OBLIGATION

The Contractor agrees that all of Contractor's obligations and warranties which, directly or indirectly, are intended by their nature or by implication to survive performance of the contract shall so survive the completion of performance, termination for cause, or the termination for convenience of the contract.

11. ENTIRE AGREEMENT

There are no promises, terms, conditions, or obligations other than those contained in the contract, including any terms, conditions, documents or exhibits thereto, and these General Conditions. This contract supersedes all communications, representations, or agreements, either verbal or written, between the parties hereto, with the exception of express warranties given to induce the County to enter into the contract.

12. ETHICS REQUIREMENTS/ POLITICAL CONTRIBUTIONS

The Contractor must comply with the ethics provisions contained in Chapter 29 – Ethics of the Code of Public local Laws of Kent County.

13. GUARANTEE

A. Contractor guarantees for one year from acceptance, or for such other period of time as may have been expressly stated in the contract or the County's written solicitation, all goods, services, and construction offered, including those used in the course of providing the goods, services, and/or construction. This includes a guarantee that all products offered (or used in the installation of those products) carry a guarantee against any and all defects for such period. The Contractor must correct any and all defects in material and/or workmanship which may appear during the guarantee period, or any defects that occur within one (1) year of acceptance even if discovered more than one (1) year after acceptance, by repairing (or replacing with new items or new materials, if necessary) any such defect at no cost to the County and to the County's satisfaction.

B. Should a manufacturer's or service provider's warranty or guarantee exceed the requirements stated above, that guarantee or warranty will be the primary one used in the case of defect. Copies of manufacturer's or service provider's warranties must be provided upon request.

C. All warranties and guarantees must be in effect from the date of acceptance by the County of the goods or services.

D. The Contractor guarantees that all work shall be accomplished in a workmanlike manner, and the Contractor must observe and comply with all federal, State, County and local laws, ordinances and regulations in providing the goods and performing the services listed.

E. Goods and materials provided under this contract must be of first quality, latest model, and of current manufacture, and must not be of such age or so deteriorated as to impair their usefulness or safety. Items that are used, rebuilt, or demonstrator models are unacceptable, unless specifically requested by the County in the in the contract documents.

F. ***All goods shall be merchantable and fit for the particular purpose ordered or purchased, and the Contractor so represents and warrants.***

14. HAZARDOUS AND TOXIC SUBSTANCES

Manufacturers and distributors are required by federal "Hazard Communication" provisions of 29 CFR 1910.1200, and the Maryland "Access to Information About Hazardous and Toxic Substances" Law, to label each hazardous material or chemical container, and to provide Material Safety Data Sheets to the purchaser. The Contractor must comply with these laws and must provide the County with copies of all relevant documents, including Material Safety Data Sheets, prior to performance of services or contemporaneous with delivery of goods.

15. IMMIGRATION REFORM AND CONTROL ACT

The Contractor warrants that both the Contractor and any subcontractor do not and shall not hire, recruit or refer for a fee, for employment under this contract or any subcontract, an alien while knowing the alien is an unauthorized alien, or any individual without complying with the requirements of the federal Immigration and Nationality laws, including but not limited to any verification and record keeping requirements. The Contractor further assures the County that, in accordance with those laws, it does not and will not discriminate against an individual with respect to hiring, or recruitment or referral for a fee, of the individual for employment or the discharging of the individual from employment because of such individual's national origin or, in the case of a citizen or intending citizen, because of such individual's citizenship status.

16. INCONSISTENT PROVISIONS

Notwithstanding any provisions to the contrary in any contract terms or conditions supplied by the Contractor, the County's General Conditions supersede the Contractor's terms and conditions in the event of any inconsistency, unless specifically waived or amended by the County.

In the case of any conflicts or ambiguities among the contract documents, such matters shall be resolved in favor of the following priorities:

a. Any term or condition specifically provided for in a contract or exhibit to a contract, other than terms and conditions provided by the Contractor.

b. Terms and conditions specified by the County in any request for proposal, request for interest of qualifications, invitation to bid, or other document specifying with particularity the County's terms and conditions.

c. These General Conditions.

The lack of a specific provision in any of the documents referred to in items 16.a and 16.b above shall not operate to create an ambiguity with these General Conditions.

17. INDEMNIFICATION

The Contractor is responsible for any loss, personal injury, death and any other damage (including incidental and consequential) that may be done or suffered by reason of the Contractor's negligence or failure to perform any contractual obligations. The Contractor must indemnify and save the County harmless from any loss, cost, damage and other expenses, including attorney's fees and litigation expenses, suffered or incurred due to the Contractor's negligence or failure to perform any of its contractual obligations. If requested by the County, the Contractor must defend the County in any action or suit brought against the County arising out of the Contractor's negligence, errors, acts or omissions under this contract. The negligence of any agent, subcontractor or employee of the Contractor is deemed to be the negligence of the Contractor. For the purposes of this paragraph, County includes its elected officials, officials, employees, agents, boards, and agencies. Any incidental and consequential damages shall be limited to the amount of insurance required by the contractor hereunder.

18. INDEPENDENT CONTRACTOR

The Contractor is an independent contractor. The Contractor and the Contractor's employees or agents are not agents or employees of the County. Neither these General Conditions nor the contract are intended to create, nor do they create any partnership, joint venture, agency or other relationship between the County and the Contractor.

19. INFRINGEMENT

Contractor represents and warrants that there is no copyright or patent infringement with respect to any goods or materials furnished pursuant to the contract. The Contractor shall indemnify and hold harmless the County with respect to costs, expense, damages, and liability arising from or on account of any claim for infringement.

20. INSPECTIONS

The County has the right to monitor, inspect and evaluate or test all supplies, goods, or services called for by the contract at all reasonable places (including the Contractor's place of business) and times (including the period of preparation or manufacture).

21. INSURANCE

Prior to execution of the contract, the Contractor must obtain at its own cost and expense, and keep in force and effect during the term of this contract, including all extensions, the insurance specified in the contract, including any applicable table or attachment, with an insurance company licensed or qualified to do business in the State of Maryland and with an A. M. Best rating of not less than A-. The Contractor must submit a certificate of insurance prior to award of this contract and prior to any contract modification extending the term of the contract, as evidence of compliance with this provision. The County must be named as an additional insured on all liability policies. Forty-five (45) days written notice to the County of cancellation or material change in any of the policies is required. In no event may the insurance coverage be less than that shown on the applicable table, attachment, or contract provision for required insurance. Subject to applicable law, the County Administrator may waive or modify the requirements of this section 21 in whole or in part.

22. NON-CONVICTION OF BRIBERY

The Contractor hereby declares and affirms that, to its best knowledge, none of its officers, directors, members, partners, or employees directly involved in obtaining contracts has been convicted of bribery, attempted bribery, or conspiracy to bribe under the laws of any state or the federal government.

23. NONDISCRIMINATION IN EMPLOYMENT

The Contractor shall not discriminate in employment, or in the treatment of employees, or discriminate in any manner on the basis of race, color, gender, age, religion, creed, national origin, ancestry, marital status, disability, political affiliation, or lawful sexual orientation and shall follow and obey all applicable State, federal, and County laws and regulations regarding employment discrimination. The Contractor must bind its subcontractors to the provisions of this section.

24. PAYMENTS

This contract is subject to a non-appropriations clause as provided herein. No payment may be made or is due under this contract unless funds for the payment have been appropriated and encumbered by the County. Under no circumstances will the County pay the Contractor for legal fees. The Contractor must not proceed to perform any work (provide goods, services, or construction) prior to receiving written confirmation that the County has appropriated and encumbered funds for the work. If the Contractor fails to obtain this verification from the County prior to performing work, the County has no obligation to pay the Contractor for the work.

If this contract provides for an additional contract term, or for work in any period beyond the end of the County's fiscal year in which the contract is executed, continuation of this contract beyond the end of that fiscal year is contingent upon the subsequent appropriation of funds and encumbrance of those appropriated funds for payments under this contract. If funds are not appropriated and encumbered to support continued performance in a subsequent fiscal period, this contract terminates without further notice from, or cost to, the County. The Contractor acknowledges that the County Commissioners have no obligation to appropriate funds for this contract in subsequent fiscal years. Furthermore, the County has no obligation to encumber funds to this contract in subsequent fiscal years. Accordingly, for each subsequent contract term, the Contractor must take appropriate action to verify that such funds have been appropriated and encumbered. See Annotated Code of Maryland, Article 31, section 3.

25. PERSONAL PROPERTY

All furniture, office equipment, equipment, vehicles and other similar types of personal property specified in the contract and purchased with funds provided under the contract become the property of the County upon the termination or expiration of this contract, unless expressly stated otherwise.

26. TERMINATION FOR CAUSE

The County may terminate the contract in whole or in part, and from time to time, whenever the County determines that the Contractor is:

a. defaulting in performance or is not complying with any provision of this contract;

b. failing to make satisfactory progress in the prosecution of the contract; or

c. endangering the performance of this contract.

Prior to a termination for cause, the County will send the Contractor written notice specifying the cause. The notice will give the Contractor ten (10) days from the date the notice is issued to cure the default or make progress satisfactory to the County in

curing the default, unless a different time is given in the notice. If the County determines that default contributes to the curtailment of an essential service or poses an immediate threat to life, health, or property, the County may terminate the contract immediately upon issuing oral or written notice to the Contractor without any prior notice or opportunity to cure. In addition to any other remedies provided by law or the contract, the Contractor must compensate the County for additional costs incurred by the County to obtain substitute performance. A termination for cause shall be considered a termination for convenience as of the date the Contractor was advised of the termination for cause, if there was, in fact, no cause.

27. TERMINATION FOR CONVENIENCE

This contract may be terminated by the County, in whole or in part, upon written notice to the Contractor, when the County determines termination to be in the County's best interest. The termination is effective ten (10) days after the notice is issued, unless a different time is given in the notice. The County is liable only for payment for acceptable performance prior to the effective date of the termination, and for costs reasonably incurred as of the date of termination, which costs or items acquired by such costs cannot be economically retained by the Contractor for other or future use of the Contractor.

28. TIME

Time is of the essence in the performance by Contractor of the contract and of all ancillary matters arising therefrom.

29. TITLE

All goods delivered or provided to the County or otherwise pursuant to the contract, and the title thereto, shall be free any security interest, lien, contract restriction, or other form of encumbrance. Title shall pass to the County at the place of delivery to the County, subject to the County's right to inspect and accept or reject the goods.

30. WORK UNDER THE CONTRACT

Work may not commence under this contract until all conditions for commencement are met, including execution of the contract by both parties, compliance with insurance requirements, and issuance of any required notice to proceed.

Earth Data
INCORPORATED
• Water Resources • Geospatial Services •
Solutions for Tomorrow. Today.

COST ESTIMATE

FY 2021-22 Landfill Monitoring, Dulin Rubble Landfill, Kent County, MD

Conduct quarterly landfill gas monitoring on 4 gas wells, 8 soil vapor points & 3 vents. Conduct semi-annual sampling of 5 monitoring wells for laboratory analysis. Send groundwater samples to lab for MDE required analysis. Prepare annual report.

Earth Data Proj. Mgr. : J.P. Stokes
EDI File No.: 4697-G
Date: 2/16/2021
Prepared By: JPS

Client: Kent County DPW
Contact: Marty Holden
Phone #: 410-778-7448
Email: mholden@kentgov.org

Item	Description	Est. Quantity	Unit	Unit Price	Annual Amount
1	Landfill Gas Monitoring Well Sampling- Quarterly	4	EA	$503.00	$2,012.00
2	Monitoring Well Sampling- Semi Annual	2	EA	$2,112.50	$4,225.00
3	Semi-Annual Laboratory Analysis	2	EA	$3,900.95	$7,801.90
4	Semi-Annual Data Analysis	2	EA	$2,088.00	$4,176.00
5	Annual Report Preparation	1	EA	$2,144.00	$2,144.00
6	Project Administration (semi-annual sampling and gas monitoring)	1	LS	$1,600.00	$1,600.00
	TOTAL ESTIMATED PROJECT COST				**$21,958.90**

Quote good until May 1, 2021
Standard terms and conditions apply.

EARTH DATA INCORPORATED

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 05/27/2021

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER	CONTACT NAME: Jeffrey Gombos	
Whitten Group LLC 317 Crusader Road Cambridge MD	PHONE (A/C, No, Ext): (800) 931-7484 FAX (A/C, No): E-MAIL ADDRESS: Jeff@whittengroupllc.com	
	INSURER(S) AFFORDING COVERAGE	NAIC #
	INSURER A : FCCI	
INSURED Earth Data Inc 131Comet Drive Centreville MD 21617	INSURER B : Markel Services, Inc.	
	INSURER C :	
	INSURER D :	
	INSURER E :	
	INSURER F :	

COVERAGES **CERTIFICATE NUMBER:** updated Master 21-22 **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	[X] COMMERCIAL GENERAL LIABILITY [ ] CLAIMS-MADE [X] OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: [X] POLICY [ ] PRO-JECT [ ] LOC [ ] OTHER:	Y		CPP10005222500	09/30/2020	09/30/2021	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG Employee Benefits	$ 1,000,000 $ 100,000 $ 5,000 $ 1,000,000 $ 2,000,000 $ 2,000,000 $
A	AUTOMOBILE LIABILITY [ ] ANY AUTO [ ] OWNED AUTOS ONLY [X] SCHEDULED AUTOS [X] HIRED AUTOS ONLY [X] NON-OWNED AUTOS ONLY [X]	Y		CA10005222600	09/30/2020	09/30/2021	COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident) 	$ 1,000,000 $ $ $ $
A	[X] UMBRELLA LIAB [X] OCCUR EXCESS LIAB [ ] CLAIMS-MADE [ ] DED [X] RETENTION $ 0	Y		UMB10005222700	09/30/2020	09/30/2021	EACH OCCURRENCE AGGREGATE 	$ 5,000,000 $ 5,000,000 $
A	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY Y / N ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? [ ] (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	N / A		001-WC19A-78825	09/30/2020	09/30/2021	[X] PER STATUTE [ ] OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	 $ 1,000,000 $ 1,000,000 $ 1,000,000
B	Professional Liability Pollution Liability			MKLV7ENV101790	05/25/2021	05/25/2022	Each Claim Aggregate	$1,000,000 $2,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

The County Commissioners of Kent County MD is listed as additional insured

CERTIFICATE HOLDER

The County Commissioners of Kent County MD
400 High Street
Chestertown MD 21620

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

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Environmental Operations Division
6/22/2021
County Commissioners Meeting

Item Summary:
Procurement/Purchase Order Number Request

Environmental Operations Division
6/22/2021
County Commissioners Meeting

Item Summary:
Per Chapter 68 (Boats and Boating) of the Public Laws of Kent County, the Public Landings and Facilities Board consists of five members appointed by the Kent County Commissioners for a term of five years or until their successors are appointed and have their position. A member of the Board of County Commissioners of Kent County shall be an ex officio member of the board.

ATTACHMENTS:

Description

Environmental Operations Division
6/22/2021
County Commissioners Meeting

Item Summary:
Per Chapter 68 (Boats and Boating) of the Public Laws of Kent County, the Public Landings and Facilities Board consists of five members appointed by the Kent County Commissioners for a term of five years or until their successors are appointed and have their position. A member of the Board of County Commissioners of Kent County shall be an ex officio member of the board.

ATTACHMENTS:

Description

County Engineer
6/22/2021
County Commissioners Meeting

Item Summary:
Kent Ag Center Buildings Demolition Change Order

ATTACHMENTS:

Description

06.22.21 Change Order, Zeb's Lawn and Land Services, LLC, Kent Ag Center Demolition

Zeb's Lawn and Land Service LLC
10700 Worton RD
Worton, MD 21678 US
410-708-1836
zebblyman@yahoo.com

Estimate

ADDRESS
Kent County Maryland

SHIP TO
709 Morgnec rd chestertown md 21620

ESTIMATE #	DATE
1014	06/09/2021

SERVICE	DESCRIPTION	QTY	RATE	AMOUNT
Labor	This is a change order for the demo at the ag center. The change for this job is to demo and dispose of the walls of the building that where originally going to stay.	1	5,000.00	5,000.00

TOTAL **$5,000.00**

Accepted By P. Thomas Mason

P. Thomas Mason, President
County Commissioners of Kent County

Accepted Date: June 22, 2021

Thomas N. Yeager, County Attorney
6/22/2021
County Commissioners Meeting

Item Summary:

- Mutual Aid Agreement between County Governments and Sheriffs on the Eastern Shore
- County Commissioners of Kent County and the Sheriff of Kent County

ATTACHMENTS:

Description

Ordinance No. 6-2021 Execution of A Law Enforcement Mutual Aid Agreement ADOPTED Legislation

THE COUNTY COMMISSIONERS OF KENT COUNTY, MARYLAND

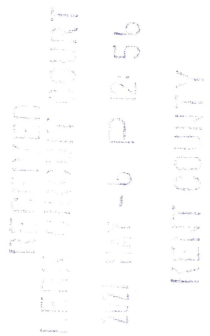
April 6, 2021
Legislative Session Day

Legislative Session Day
April 6, 2021

ORDINANCE NO. 6-2021

INTRODUCED BY: P. Thomas Mason, President of the Board of County Commissioners for Kent County, Maryland.

An Ordinance to the approve the execution of a Law Enforcement Mutual Aid Agreement by and between Kent County, Maryland; Wicomico County, Maryland; Somerset County, Maryland; Worcester County, Maryland; Dorchester County, Maryland; Talbot County, Maryland; Caroline County, Maryland; Queen Anne's County, Maryland; and Cecil County, Maryland; and each of the Sheriffs for the foregoing jurisdictions, pursuant to Section 2-105 of the Criminal Procedure Article, Maryland Annotated Code.



THE COUNTY COMMISSIONERS
OF KENT COUNTY, MARYLAND

P. Thomas Mason

P. Thomas Mason, President

INTRODUCED, read first time, April 6, 2021, ordered posted and public hearing scheduled on April 20, 2021, at 6:00 p.m. in the County Commissioners Hearing Room, R. Clayton Mitchell, Jr., Kent County Government Center, 400 High Street, Chestertown, Maryland.

By order of:

Sondra M. Blackiston

Sondra M. Blackiston, Clerk

PUBLIC HEARING

HAVING been posted and notice of time and place of hearing and copies having been made available to the public and the press, a public hearing was held on April 20, 2021. Reported favorably ~~[with~~ XXXXX [without] amendments; read second time and ordered to be considered on May 4, 2021, a legislative session day.

CAPITALS & BOLD INDICATES MATTER ADDED TO EXISTING LAW.
~~Strike through~~ indicates matter deleted from existing law.

ORDINANCE 6-2021
THE EXECUTION OF A LAW ENFORCEMENT MUTUAL AID AGREEMENT

AN ORDINANCE concerning:

THE AUTHORIZATION OF THE COUNTY COMMISSIONERS OF KENT COUNTY, MARYLAND TO APPROVE THE EXECUTION OF A LAW ENFORCEMENT MUTUAL AID AGREEMENT BY AND BETWEEN KENT COUNTY, MARYLAND; WICOMICO COUNTY, MARYLAND; SOMERSET COUNTY, MARYLAND; WORCESTER COUNTY, MARYLAND; DORCHESTER COUNTY, MARYLAND; TALBOT COUNTY, MARYLAND; CAROLINE COUNTY, MARYLAND; QUEEN ANNE'S COUNTY, MARYLAND; AND CECIL COUNTY, MARYLAND; AND EACH OF THE SHERIFFS FOR THE FOREGOING JURISDICTIONS, PURSUANT TO SECTION 2-105 OF THE CRIMINAL PROCEDURE ARTICLE, MARYLAND ANNOTATED CODE.

RECITALS

WHEREAS, SECTION 2-105 OF THE CRIMINAL PROCEDURE ARTICLE AUTHORIZES THE GOVERNING BODY OF A COUNTY TO DETERMINE THE CIRCUMSTANCES UNDER WHICH THE POLICE OFFICERS AND OTHER OFFICERS, AGENTS, AND EMPLOYEES OF THE COUNTY, TOGETHER WITH ALL NECESSARY EQUIPMENT, MAY LAWFULLY GO OR BE SENT BEYOND THE BOUNDARIES OF THE COUNTY OR MUNICIPAL CORPORATION TO ANY PLACE WITHIN OR OUTSIDE THE STATE; AND,

WHEREAS, SECTION 2-105 OF THE CRIMINAL PROCEDURE ARTICLE FURTHER PROVIDES THAT A COUNTY MAY ENTER INTO MUTUAL AID AGREEMENTS WITH OTHER COUNTIES TO ESTABLISH AND CARRY OUT A PLAN TO PROVIDE MUTUAL AID BY PROVIDING ITS POLICE OFFICERS AND OTHER OFFICERS, EMPLOYEES, AND AGENTS, TOGETHER WITH ALL NECESSARY EQUIPMENT, TO ASSIST OTHER COUNTIES AND TO RECEIVE ASSISTANCE; AND,

WHEREAS, THE COUNTY COMMISSIONERS OF KENT COUNTY HAVE DETERMINED THAT ENTERING INTO A MUTUAL AID AGREEMENT WITH THE KENT COUNTY SHERIFF AND THE GOVERNING BODIES OF THE OTHER COUNTIES ON MARYLAND'S EASTERN SHORE AND THEIR RESPECTIVE SHERIFFS PURSUANT TO SECTION 2-105 OF THE CRIMINAL PROCEDURE ARTICLE WILL PROMOTE THE HEALTH, SAFETY, AND WELFARE OF THE CITIZENS OF KENT COUNTY.

NOW, THEREFORE, BE IT ORDAINED BY THE COMMISSIONERS OF KENT COUNTY, MARYLAND THAT:

SECTION ONE: THE ABOVE RECITALS ARE HEREBY INCORPORATED AS IF FULLY SET FORTH HEREIN.

SECTION TWO: THE TERMS OF THE MUTUAL AID AGREEMENT, ATTACHED HERETO AS EXHIBIT "A" AND INCORPORATED BY REFERENCE HEREIN, SHALL BE AND ARE HEREBY APPROVED.

SECTION THREE: THE PRESIDENT OF THE KENT COUNTY COMMISSIONERS IS HEREBY AUTHORIZED AND DIRECTED TO EXECUTE THE MUTUAL AID AGREEMENT ON BEHALF OF KENT COUNTY, MARYLAND.

SECTION FOUR: BE IT FURTHER ENACTED, THAT ANY CHANGES TO THE MUTUAL AID AGREEMENT SHALL BE ADOPTED BY KENT COUNTY BY AN ORDINANCE IN ACCORDANCE WITH THE REQUIREMENTS OF CRIMINAL PROCEDURE ARTICLE § 2-105, MD. CODE ANN., AS AMENDED, MODIFIED, OR RECODIFIED FROM TIME TO TIME.

SECTION FIVE: BE IT FURTHER ENACTED, THAT THIS ORDINANCE AND THE MUTUAL AID AGREEMENT HEREBY SHALL SUPERSEDE AND REPLACE ANY PREVIOUS ORDINANCES OR AGREEMENTS DEALING WITH THE SAME SUBJECT MATTER, INCLUDING, THE MUTUAL AID AGREEMENT CONTEMPLATED THEREIN.

SECTION SIX: BE IT FURTHER ENACTED, THAT THE TITLE AND A FAIR SUMMARY OF THIS ORDINANCE SHALL BE PUBLISHED AFTER ENACTMENT OF THE ORDINANCE IN ACCORDANCE WITH MARYLAND ANNOTATED CODE OF MARYLAND, LOCAL GOVERNMENT, SECTION 9-311. THE TITLE IS NOT A SUBSTANTIVE PART OF THIS ORDINANCE. IF THE ORDINANCE IS AMENDED, THE TITLE MAY BE ADMINISTRATIVELY REVISED IF REQUIRED TO CONFORM THE TITLE TO THE CONTENT OF THE ORDINANCE AS FINALLY ENACTED.

SECTION SEVEN: BE IT FURTHER ENACTED, THAT IF ANY PROVISION OF THIS ORDINANCE OR THE APPLICATION THEREOF TO ANY PERSON OR CIRCUMSTANCE IS HELD INVALID FOR ANY REASON IN A COURT OF COMPETENT JURISDICTION, THE INVALIDITY DOES NOT AFFECT OTHER PROVISIONS OR ANY OTHER APPLICATION OF THIS ORDINANCE WHICH CAN BE GIVEN EFFECT WITHOUT THE INVALID PROVISION OR APPLICATION, AND FOR THIS PURPOSE THE PROVISIONS OF THIS ORDINANCE ARE DECLARED SEVERABLE.

SECTION EIGHT: BE IT FURTHER ENACTED, THAT THE PUBLISHERS OF THE CODE OF PUBLIC LAWS KENT COUNTY, IN CONSULTATION WITH AND SUBJECT TO THE APPROVAL OF THE COUNTY ATTORNEY, SHALL MAKE NON-SUBSTANTIVE CORRECTIONS TO CODIFICATION, STYLE, CAPITALIZATION, PUNCTUATION, GRAMMAR, SPELLING, AND ANY INTERNAL OR EXTERNAL REFERENCE OR CITATIONS TO THE CODE THAT ARE INCORRECT OR OBSOLETE, WITH NO FURTHER ACTION REQUIRED BY THE COUNTY COMMISSIONERS. ALL SUCH CORRECTIONS SHALL BE ADEQUATELY REFERENCED AND DESCRIBED IN THE EDITOR'S NOTE FOLLOWING THE SECTION AFFECTED.

SECTION NINE: THE MUTUAL AID AGREEMENT SHALL BECOME EFFECTIVE AFTER HAVING BEEN DULY ADOPTED BY THE RESPECTIVE COUNTIES IN THEIR REGULAR ROUTINE FOR LEGISLATION ENACTMENT AND UPON EXECUTION BY THE RESPECTIVE COUNTIES AND SHERIFFS.

SECTION TEN: AND BE IT FURTHER ENACTED, THAT THIS ORDINANCE SHALL TAKE EFFECT FORTY-FIVE (45) DAYS FROM THE DATE OF ITS PASSAGE BY THE COUNTY COMMISSIONERS OF KENT COUNTY, MARYLAND

Ordinance shall take effect on the 18th day of June, 2021.

Read Third Time May 4, 2021

PASSED this 4th day of May, 2021.

Failed of Passage _____

By order of:

Sondra M. Blackiston

Sondra M. Blackiston, Clerk

THE COUNTY COMMISSIONERS
OF KENT COUNTY, MARYLAND

(SEAL)

COUNTY COMMISSIONERS OF KENT CO. SEAL ADOPTED MAY 18, 1880 MARYLAND

P. Thomas Mason

P. Thomas Mason, President

Ronnie Fithian

Ronald H. Fithian, Member

Robert N. Jacob, Jr., Member

ORDERED a fair summary thereof or the entire Ordinance shall be published in at least one newspaper of general circulation in the County, not less than three times at weekly intervals within a four-week period.

CAPITALS & BOLD INDICATES MATTER ADDED TO EXISTING LAW.
~~Strike through~~ indicates matter deleted from existing law.

MUTUAL AID AGREEMENT
BETWEEN

WICOMICO COUNTY, MARYLAND,
THE SHERIFF OF WICOMICO COUNTY, MARYLAND

AND

SOMERSET COUNTY, MARYLAND
THE SHERIFF OF SOMERSET COUNTY, MARYLAND

AND

WORCESTER COUNTY, MARYLAND,
THE SHERIFF OF WORCESTER COUNTY, MARYLAND

DORCHESTER COUNTY, MARYLAND,
THE SHERIFF OF DORCHESTER COUNTY, MARYLAND

AND

TALBOT COUNTY, MARYLAND,
THE SHERIFF OF TALBOT COUNTY, MARYLAND

AND

CAROLINE, MARYLAND,
THE SHERIFF OF CAROLINE COUNTY, MARYLAND

AND

QUEEN ANNE'S COUNTY, MARYLAND,
THE SHERIFF OF QUEEN ANNE'S COUNTY, MARYLAND

AND

KENT COUNTY, MARYLAND,
THE SHERIFF OF KENT COUNTY, MARYLAND

AND

CECIL COUNTY, MARYLAND,
THE SHERIFF OF CECIL COUNTY, MARYLAND

THIS MUTUAL AID AGREEMENT, made this the _____ day of _____, 2020, by and between **WICOMICO COUNTY, MARYLAND,** a body corporate and politic of the State of Maryland, by and through the **COUNTY EXECUTIVE OF WICOMICO COUNTY, MARYLAND** and the **COUNTY COUNCIL OF WICOMICO COUNTY, MARYLAND**, (collectively, " **Wicomico County**"), the **SHERIFF OF WICOMICO COUNTY,** a State Constitutional Officer, (**"Wicomico Sheriff"**), and;

WORCESTER COUNTY, MARYLAND, a body corporate and politic of the State of Maryland, by and through the **COUNTY COMMISSIONERS OF WORCESTER COUNTY, MARYLAND**, (collectively, **"Worcester County"**), the **SHERIFF OF WORCESTER COUNTY,** a State Constitutional Officer, (**"Worcester Sheriff"**), and;

SOMERSET COUNTY, MARYLAND, a body corporate and politic of the State of Maryland, by and through the **COUNTY COMMISSIONERS OF SOMERSET COUNTY, MARYLAND**, (collectively, **"Somerset County"**), the **SHERIFF OF Somerset COUNTY,** a State Constitutional Officer, (**"Somerset Sheriff"**), and

DORCHESTER COUNTY, MARYLAND, a body corporate and politic of the State of Maryland, by and through the **COUNCIL MEMBERS OF DORCHESTER COUNTY, MARYLAND**, (collectively, **"Dorchester County"**), the **SHERIFF OF DORCHESTER COUNTY,** a State Constitutional Officer, (**"Dorchester Sheriff"**), and;

TALBOT COUNTY, MARYLAND, a body corporate and politic of the State of Maryland, by and through the **COUNCIL MEMBERS OF TALBOT COUNTY, MARYLAND**, (collectively, **"Talbot County"**), the **SHERIFF OF TALBOT COUNTY,** a State Constitutional Officer, (**"Talbot Sheriff"**), and;

CAROLINE COUNTY, MARYLAND, a body corporate and politic of the State of Maryland, by and through the **COUNTY COMMISSIONERS OF CAROLINE COUNTY, MARYLAND**, (collectively, **"Caroline County"**), the **SHERIFF OF CAROLINE COUNTY,** a State Constitutional Officer, (**"Caroline Sheriff"**), and;

QUEEN ANNE'S COUNTY, MARYLAND, a body corporate and politic of the State of Maryland, by and through the **COUNTY COMMISSIONERS OF QUEEN'S ANNE COUNTY, MARYLAND**, (collectively, **"Queen Anne's County"**), the **SHERIFF OF QUEEN ANNE'S COUNTY,** a State Constitutional Officer, (**"Caroline Sheriff"**), and;

KENT COUNTY, MARYLAND, a body corporate and politic of the State of Maryland, by and through the **COUNTY COMMISSIONERS OF KENT COUNTY, MARYLAND**, (collectively, **"Kent County"**), the **SHERIFF OF KENT COUNTY,** a State Constitutional Officer, (**"Kent Sheriff"**), and;

CECIL COUNTY, MARYLAND, a body corporate and politic of the State of Maryland, by and through the **COUNTY EXECUTIVE OF CECIL COUNTY, MARYLAND** and the **COUNTY COUNCIL OF CECIL COUNTY, MARYLAND**, (collectively, **" Cecil County"**), the **SHERIFF OF Cecil COUNTY,** a State Constitutional Officer, (**"Cecil Sheriff"**),

(Collectively each aforementioned corporate and politic of the State and Sheriff herein referred to as "**The Parties**")

WHEREAS, it is in the public interest that law enforcement agencies throughout the State of Maryland cooperate to the greatest extent possible to provide prompt, effective, and professional police services; and

WHEREAS, these agencies experience similar law enforcement problems; and

WHEREAS, all law enforcement officers, (hereinafter sometimes called "police" or "officers"), are trained in current law enforcement techniques and have completed a course of training prescribed by the Maryland Police Training Commission and are certified pursuant to Md. Code Ann., §3-209, *et seq.*, Public Safety Article; and

WHEREAS, police officials of both jurisdictions are aware from time to time situations have developed at locations and times in either jurisdiction when sufficient police resources were not immediately available to enable police to render prompt, effective, and professional service to the public; and

WHEREAS, Wicomico County and Wicomico County Sheriff, and Worcester County and Worcester Sheriff, and Dorchester County and Dorchester Sheriff, and Talbot County and Talbot Sheriff, and Caroline County and Caroline Sheriff, and Queen Anne's County and Queen Anne's Sheriff, and Kent County and Kent Sheriff, and Cecil County and Cecil Sheriff are desirous of extending prompt, effective, and professional police service to the public to the extent that police resources are available; and

WHEREAS, pursuant to the authority conferred in Md. Code Ann., § 2-105, Criminal Procedure Article, the Parties enter into this Mutual Aid Agreement.

NOW, THEREFORE, in consideration of the mutual covenants and agreements hereinafter contained, **THE PARTIES** do hereby agree as follows:

1. Whenever, in the judgment of the **Wicomico Sheriff**, **Somerset Sheriff, Worcester Sheriff**, **Dorchester Sheriff, Talbot Sheriff**, **Caroline Sheriff, Queen Anne's Sheriff, Kent Sheriff, Cecil Sheriff** or, in the event of their absence or unavailability, an officer designated by one of the aforementioned Sheriffs, a situation occurs and the police in the County where the situation occurs determines that assistance from another Party or Parties is necessary, an aforementioned Sheriff, or designated officer, may request assistance in the form of police personnel or equipment from the other jurisdiction. The request shall be directed to one of the aforementioned Sheriffs, or, in the event of their absence or unavailability, an officer that has been previously designated. If, in the judgment of one of the aforementioned Sheriff's or their designees, whom the request has been made, a situation does exist, and the police or equipment requested are available, such resources may be dispatched as requested. A participating agency will provide operational assistance only to the extent that the police and equipment are not required for the adequate protection of that jurisdiction. Additionally, an aforementioned Sheriff shall have the authority to terminate their

participation in the situation at any time when circumstances are such that continued participation is deemed not in the best interest of the providing or assisting Agency. One of the aforementioned Sheriffs, or his or her designee, shall have the sole authority to determine the personnel and equipment, if any, available for operational assistance. Notwithstanding anything to the contrary herein, this Agreement shall not be construed to authorize any Sheriff to "deputize" the law enforcement officers of participating Parties to this Agreement as deputies within their respective jurisdictions.

2. When this Agreement is triggered and while any County police officer traverses, while on official duty, any highway, road, street, or alley in the other jurisdiction and observes any crime in progress, the police officer is authorized to act as a police officer pursuant to this Agreement.

3. The term "situation," as used in this Agreement, may include, but is not limited to, an emergency as defined under Md. Code Ann., §2-101, Criminal Procedure Article, including but not limited to, an unruly person or group which demonstrates the potential for violence, a hostage situation, a fire, a national disaster, an accident or other circumstance where prompt police action requiring more than one officer or specialized equipment is required.

4. The manner of providing assistance, as set forth in this Agreement, shall not limit the authority granted police officers in matters involving fresh pursuit as provided in Md. Code Ann., § 2-301, *et seq.*, Criminal Procedure Article, or the powers granted by §§5-802, 5-807, 5-808, and 5-901 of the Criminal Law Article.

5. Pursuant to Md. Code Ann., § 2-105(c), *et seq.*, Criminal Procedure Article, the Parties acknowledge that the acts performed in furtherance of this Agreement by law enforcement officers, or other officers, agents, or employees and the expenditures made by the Parties shall be deemed conclusively to be for a public and governmental purpose.

6. The Parties acknowledge that all of the immunities from liability enjoyed by a Party's jurisdiction when acting through its officers, agents, or employees for a public or governmental purpose within its boundaries shall be enjoyed by the jurisdictions to the same extent when acting pursuant to other lawful authority and/or agreement beyond the boundaries of the Parties in which they are commissioned or employed.

7. Pursuant to Md. Code Ann., § 2-105(c)(3), Criminal Procedure Article, the Parties acknowledge that when their police officers or other officers, agents, or employees are acting under this Agreement or other lawful authority beyond the boundaries of the jurisdiction within the State in which they are commissioned or employed, those persons have the same immunity from liability described in Md. Code Ann., §5-612, Courts and Judicial Proceedings Article and exemptions from laws, ordinances, and regulations, and the same pension, relief, disability, workers' compensation, and other benefits, in addition to any other immunities and exemptions to which they are otherwise entitled while performing their respective duties within the boundaries of the jurisdiction in which they are commissioned or employed.

8. The Parties to this Agreement shall be responsible for the workers' compensation and death claims of its own employees that may arise out of its employees' activities outside their respective jurisdictions under the Agreement.

9. A police officer who acts under the authority granted by this Agreement remains at all times and for all purposes an employee of the employing unit.

10. Pursuant to Md. Code Ann., § 2-105, *et seq.*, Criminal Procedure Article, each of the Parties to this Agreement agree:

(a) To waive any and all claims that are against the other Parties to the Agreement and that may arise out of their activities outside their respective jurisdictions under the Agreement; and

(b) To indemnify and hold harmless the Parties to the Agreement from all claims by third parties that are for property damage or personal injury and that may arise out of the activities of the other Parties to the Agreement outside their respective jurisdictions under the Agreement.

11. The Agreement to indemnify shall in no way be construed to constitute a waiver of any immunity or limited liability, which may be claimed as set forth in Md. Code Ann., § 5-639, Courts and Judicial Proceedings Article, and Md. Code Ann., § 12-101, *et seq.*, State Government Article. Nothing contained in this Agreement shall be construed to waive, in part or in whole, any immunity (statutory, common law or other) enjoyed by any Party hereto or by any officer, agent or employee of any such Party. This Agreement does not purport to create any "special relationship" between any law enforcement officer and any other person, when a law enforcement

officer is conducting law enforcement activities pursuant to this Agreement.

12. The Parties agree to cooperate fully with each other in the defense of claims, pursuant to the indemnifications of Paragraph 10(b). This cooperation will include the following:

(a) Prompt notification to the other Party of any accident, incident or enforcement action resulting in personal injury, property damage, or having the potential for liability;

(b) Permit a Party to this Agreement to conduct a parallel independent investigation of any accident or incident;

(c) Make reports, records, and equipment available for purposes of the defense of any claim or suit.

13. Pursuant to Md. Code Ann., § 2-105, *et seq.*, Criminal Procedure Article, all personnel provided by the other jurisdiction shall report to the senior ranking commissioned police officer of the jurisdiction requesting aid.

14. Radio communication between the jurisdictions shall be coordinated through the Communications Section of each Party. In addition, requests for aid in mass processing of arrestees, transportation of prisoners or operation of a temporary detention facility shall be coordinated through the Sheriff for the

jurisdiction requesting the aid, or, in their absence, the senior ranking commissioned police officer.

15. This Agreement shall commence upon execution by all of the Parties and shall remain in effect for each Party until a Party hereto cancels its participation in this Agreement by sending a written notice thirty (30) calendar days prior to the cancellation from the Sheriff of the jurisdiction that wishes to withdraw from this Agreement.

16. Notice by a Party to withdraw from this Agreement does not act to void the Agreement between the remaining Parties to this Agreement, and only acts to sever the Party that withdraws. As such, following the written withdrawal of a Party to this Agreement, an addendum to this agreement will be executed by the Parties within forty-five (45) days following the withdrawing Party's withdrawal, indicating that said Party has withdrawn from this Agreement and that the Parties are amended to only include those remaining Parties to this Agreement. Notice would be affected to each county attorney listed in this Agreement.

17. Copies of this Agreement will be provided to the Parties and The Office of the State's Attorney for each jurisdiction in which a Party to this Agreement is located, and upon request of the Office for The State's Attorney for any Party's jurisdiction at any time that they may make such a request that is necessary for the prosecution of any case that requires this Agreement.

18. This Agreement shall supersede any prior agreements, verbal or written, that may have been previously executed, controlling the matters set forth herein.

19. This Agreement shall be governed by the laws of the State of Maryland.

AS WITNESS the hands and seals of the Parties the day, month and year first above written.

[SIGNATURES TO FOLLOW ON NEXT PAGE]

WICOMICO COUNTY, MARYLAND

WITNESS/ATTEST

_____

WICOMICO COUNTY, MARYLAND

By:_____
(NAME)
Wicomico County Executive

SHERIFF OF WICOMICO COUNTY

_____

By:_____
Mike Lewis
Sheriff of Wicomico County

Reviewed for form and legal sufficiency and approved for

APPROVED:
execution this the ___ day of _____, 2021.

Wicomico County Council

_____
(NAME)
Council Attorney

_____
By: (NAME), Council President

CECIL COUNTY, MARYLAND

WITNESS/ATTEST

_____

CECIL COUNTY, MARYLAND

By:_____

(NAME)
County Executive

SHERIFF OF CECIL COUNTY

_____

By:_____

Scott Adams
Sheriff of Cecil County

Reviewed for form and legal sufficiency and approved for

APPROVED:
execution this the ___ day of _____, 2021.

CECIL COUNTY COUNCIL

_____

(NAME)
County Attorney

_____

By: (NAME), Council President

KENT COUNTY, MARYLAND

WITNESS/ATTEST

_____

KENT COUNTY, MARYLAND

By:_____

P. Thomas Mason
County Commissioners of Kent
County, Maryland
President

SHERIFF OF KENT COUNTY

_____

By:_____

John Price
Sheriff of Kent County

Reviewed for form and legal
sufficiency and approved for

APPROVED:
execution this the ___ day of
_____, 2021.

_____
Thomas N. Yeager
County Attorney

QUEEN ANNE COUNTY, MARYLAND

WITNESS/ATTEST

_____

QUEEN ANNE COUNTY, MARYLAND

By:_____

(NAME)
County Executive

SHERIFF OF QUEEN ANNE COUNTY

_____

By:_____

Gary Hofman
Sheriff of Queen County

Reviewed for form and legal sufficiency and approved for

APPROVED:
execution this the ___ day of _____, 2021.

QUEEN ANNE COUNTY COUNCIL

_____

(NAME)
County Attorney

_____

By: (NAME), Council President

CAROLINE COUNTY, MARYLAND

WITNESS/ATTEST

_____

CAROLINE COUNTY, MARYLAND

By:_____

(NAME)
County Executive

SHERIFF OF CAROLINE COUNTY

_____

By:_____

Randy Bounds
Sheriff of Caroline County

Reviewed for form and legal sufficiency and approved for

APPROVED:
execution this the ___ day of _____, 2021.

CAROLINE COUNTY COUNCIL

_____
(NAME)
County Attorney

_____
By: (NAME), Council President

TALBOT COUNTY, MARYLAND

WITNESS/ATTEST

_____

TALBOT COUNTY, MARYLAND

By:_____

(NAME)
County Executive

SHERIFF OF CECIL COUNTY

_____

By:_____

Joseph Gamble
Sheriff of Talbot County

Reviewed for form and legal sufficiency and approved for

APPROVED:
execution this the ___ day of _____, 2021.

TALBOT COUNTY COUNCIL

_____

(NAME)
County Attorney

_____

By: (NAME), Council President

DORCHESTER COUNTY, MARYLAND

WITNESS/ATTEST

_____

DORCHESTER COUNTY, MARYLAND

By:_____

(NAME)
County Executive

SHERIFF OF DORCHESTER COUNTY

_____

By:_____

James Phillips Jr.
Sheriff of Dorchester County

Reviewed for form and legal sufficiency and approved for

APPROVED:
execution this the ___ day of _____, 2021.

DORCHESTER COUNTY COUNCIL

_____
(NAME)
County Attorney

_____
By: (NAME), Council President

WORCESTER COUNTY, MARYLAND

WITNESS/ATTEST

_____

WORCESTER COUNTY, MARYLAND

By:_____

(NAME)
County Executive

SHERIFF OF WORCESTER COUNTY

_____

By:_____

Matthew Crisafulli
Sheriff of Worcester County

Reviewed for form and legal sufficiency and approved for

APPROVED:
execution this the ___ day of _____, 2021.

WORCESTER COUNTY COUNCIL

_____
(NAME)
County Attorney

_____
By: (NAME), Council President

SOMERSET COUNTY, MARYLAND

WITNESS/ATTEST

_____

SOMERSET COUNTY, MARYLAND

By:_____

(NAME)
County Executive

SHERIFF OF SOMERSET COUNTY

_____

By:_____

Ronnie Howard
Sheriff of Somerset County

Reviewed for form and legal sufficiency and approved for

APPROVED:
execution this the ___ day of _____, 2021.

SOMERSET COUNTY COUNCIL

_____

(NAME)
County Attorney

_____

By: (NAME), Council President

Arnessa Dowell, Director, Kent County Public Library
6/22/2021
County Commissioners Meeting

Item Summary:
Third Amendment to Lease, Kent County Public Library Galena Branch

ATTACHMENTS:

Description

06.22.21 Third Amendment to Lease, By and Between George Haggerty and Kent County Commissioners, KCPL Galena Branch 111 D. North Main Street

12.08.20 Second Amendment to Lease, By and Between George Haggerty and Kent County Commissioners, KCPL Galena Branch 111 D. North Main Street

07.07.20 First Amendment to Lease By and Between George Haggerty and Kent County Commissioners, KCPL Galena Branch 111 D. North Main Street

THIRD AMENDMENT TO LEASE

This Third Amendment to Lease, dated as of this 22nd day of June 2021 By and between George O. Haggerty, Jr. (Landlord) and Kent County Commissioners (Tenant).

Whereas, Landlord and Tenant have heretofore entered into a Five (5) Year Lease dated July 1, 2015, for certain premises located at 111D N. Main St., Galena, Maryland 21635, which was Amended on July 7, 2020 for an additional Six (6) Months until December 31, 2020 and further Amended on September, 2020 for an additional Six (6) Months until June 30, 2021.

Whereas, Landlord and Tenant desire to amend the term and rate of the lease as follows:

Lease Amendment Term: June 30,2021 to September 30, 2021

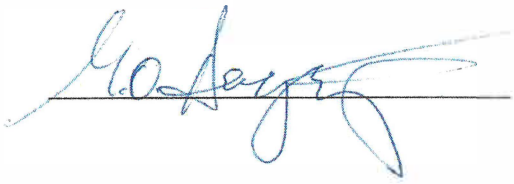
Three (3) Month Lease Rate $900/month

Except as herein specifically modified all terms and provisions of the Lease are and shall remain in full force and effect, and the Lease, as amended hereby, if ratified by both parties.

IN WITNESS WHEREOF, Landlord and Tenant have duly executed this Third Amendment to Lease the day and year first written above.

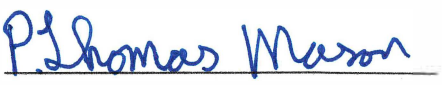
LANDLORD

George O. Haggerty, Jr.



TENANT

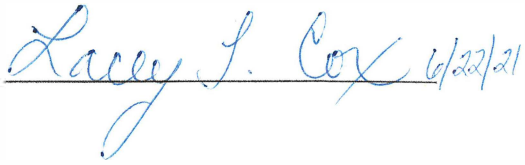
Kent County Commissioners



P. Thomas Mason, President

Print Name and Title

ATTEST/WITNESS



SECOND AMENDMENT TO LEASE

This Second Amendment to Lease, dated as of this 8th day of December, 2020 By and between George O. Haggerty, Jr. (Landlord) and Kent County Commissioners (Tenant).

Whereas, Landlord and Tenant have heretofore entered into a Five (5) Year Lease dated July 1, 2015, for certain premises located at 111D N. Main St., Galena, Maryland 21635, which was Amended on July 7, 2020 for an additional Six (6) Months until December 31, 2020.

Whereas, Landlord and Tenant desire to amend the term and rate of the lease as follows:

Lease Amendment Term: January 1, 2021 to June 30, 2021

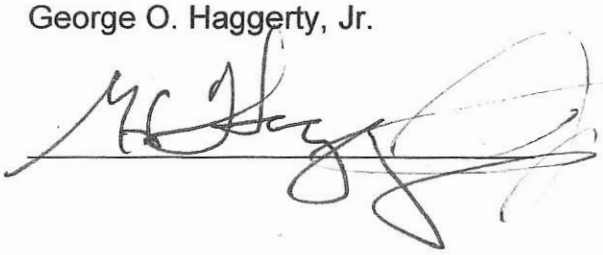
6-Month Lease Rate $900/month

Except as herein specifically modified all terms and provisions of the Lease are and shall remain in full force and effect, and the Lease, as amended hereby, if ratified by both parties.

IN WITNESS WHEREOF, Landlord and Tenant have duly executed this Second Amendment to Lease the day and year first written above.

LANDLORD

George O. Haggerty, Jr.



TENANT

Kent County Commissioners

P. Thomas Mason

P. Thomas Mason, President

Print Name and Title

ATTEST/WITNESS

Susan Haggerty

Sandra M. Blackston

12/08/20

FIRST AMENDMENT TO LEASE

This First Amendment to Lease, dated as of this 7th day of July, 2020
By and between George O. Haggerty, Jr (Landlord) and Kent County Commissioners (Tenant)

Whereas, Landlord and Tenant have heretofore entered into a Five (5) Year Lease dated July 1, 2015, for certain premises located at 111D N Main St., Galena, Maryland 21635.

Whereas, Landlord and Tenant desire to extend the term of the lease for six months through December, 31, 2020.

Now, Therefore, Landlord and Tenant hereby agree that the lease is hereby amended as follows:

6-Month Lease Rate $1,750.00/ month

Except as herein above specifically modified all terms and provisions of the Lease are and shall remain in full force and effect, and the Lease, as amended hereby, if ratified by both parties.

IN WITNESS WHEREOF, Landlord and Tenant have duly executed this First Amendment to Lease the day and year first written above.

LANDLORD
George O. haggerty, Jr.

TENANT
KENT COUNTY COMMISSIONERS

P. Thomas Mason

P. thomas Mason, President
Print Name and Title

ATTEST/WITNESS

Maryland Association for Environmental and Outdoor Education
6/22/2021
County Commissioners Meeting

Item Summary:
Maryland Green School 2021

ATTACHMENTS:

Description

06.15.21 Maryland Association for Environmental and Outdoor Education (MAEOE), Maryland Green School 2021, Kent School Certificate of Recognition

Certificate of Recognition

This is to certify that

Kent School

is hereby recognized

for being named a Maryland Green School in 2021, for their outstanding environmental education programs and significant contributions from students and staff in this endeavor. As a recognized Maryland Green School, Kent School is a highly visible model for other Kent County schools and the community as a whole. Students and staff have demonstrated how the environment can be integrated into the instructional program, how environmental best management practices can be employed in the building and on the school grounds and how local environmental issues can be explored through partnerships in the community. We, the County Commissioners of Kent County are pleased to congratulate Kent School for this notable achievement of being recognized as one of the outstanding Maryland Green Schools in our county and state.

THE COUNTY COMMISSIONERS
OF KENT COUNTY, MARYLAND

P. Thomas Mason

P. Thomas Mason, President

Ronnie Fithian

Ronald H. Fithian, Member

Robert N. Jacob, Jr., Member

June 15, 2021

Sondra M. Blackiston, Clerk/Kate Manager
6/22/2021
County Commissioners Meeting

Item Summary:
Senate Bill 205/House Bill 12, Alcoholic Beverages - Sale or Delivery for Off-Premises Consumption

ATTACHMENTS:

Description

06.15.21 Memo Board of License Commissioners Request to Opt-In Senate Bill 205

Senate Bill 205

6.15.21-COVID-19 Transition Plan

06.03.21 Melvin Thompson, Senior Vice President, Restaurant Assoication of Maryland, and J. Steven Wise, Lobbyist, Maryland State Licensed Beverage Association, Senate Bill 205

Commissioners' Office

Memo

To: Commissioners Mason, Fithian, and Jacob

From Sondra M. Blackiston, Clerk/KATE Manager
Brandon L. McFayden, Inspector, Kent Alcohol and Tobacco Enforcement

cc: Shelley L. Heller, County Administrator
Thomas N. Yeager, County Attorney

Date: June 22, 2021

Re: Senate Bill 205/HB12 Alcoholic Beverages – Sale or Delivery for Off-Premises Consumption

---

During the pandemic, the Governor's Executive Orders (EO's) allowed restaurants and bars to sell mixed drinks and cocktails in sealed containers for off-premises consumption. The COVID-19 State of Emergency has ended, and emergency mandates and restrictions end on July 1st followed by a 45-day administrative grace period.

During the 2021 General Assembly Senate Bill 205/HB 12 was passed. It authorizes local liquor boards to adopt regulations to allow restaurants, bars, and taverns to temporarily continue selling alcoholic beverages for off-premises consumption (carryout and delivery) as prescribed from July 1, 2021, until June 30, 2023. The legislation provides a framework for local oversight.

Some of the requirements in this legislation go beyond the related Executive Order and provide for appropriate local oversight, partly:

- alcoholic beverages sold for off-premises consumption must be purchased along with prepared food other than prepackaged snacks
- license holders must register and receive written authorization from the Board to take advantage of this privilege
- sales for delivery are subject to any documentation the Board requires
- specifies that containers must be closed with a cap, cork, seal, or lid with no holes for straws or sipping
- prohibits delivery sales after 11 p.m.

- delivery person must be license holder or license holder's employee who is at least 21 years old and certified in an alcohol awareness program
- prohibits delivery to another licensed premises or to an address located outside of the licensed jurisdiction
- a local licensing board may opt to limit the quantity of alcoholic beverages that may be sold or delivered under this section to an individual in a single transaction

Other jurisdictions have adopted 2 to 1 ratio meaning for each meal, two drinks can be sold, container size restrictions, and a limit on ounces based on industry standards namely 16 ounces for beer and 8 ounces for wine, etc. Staff does not find value in adding restrictions.

Staff recommends the Board of License Commissioners opt-in to allow Class B (restaurant) and Class D (bar) license holders to temporarily continue selling alcoholic beverages for off-premises consumption for carryout and delivery as prescribed by the law, effective immediately upon the lifting of certain Executive Orders. If approved, this will grant staff time to educate licensed establishments and seamlessly transition from EO to law.

SENATE BILL 205

A1 (1lr1462)

ENROLLED BILL

— Education, Health, and Environmental Affairs/Economic Matters —

Introduced by **Senator Hettleman**

Read and Examined by Proofreaders:

_____

Proofreader.

_____

Proofreader.

Sealed with the Great Seal and presented to the Governor, for his approval this _____ day of _____ at _____ o'clock, _____M.

_____

President.

CHAPTER _____

AN ACT concerning

Alcoholic Beverages – Sale or Delivery for Off–Premises Consumption

FOR the purpose of altering the scope of a certain provision prohibiting the retail delivery to a purchaser of alcoholic beverages under certain circumstances; *providing that certain authorization for the holders of certain licenses to sell alcoholic beverages for off–premises consumption in a certain manner applies only in a jurisdiction in which the local licensing board has adopted certain regulations;* authorizing ~~a county to adopt a local law or ordinance to allow~~ the holders of certain licenses that authorize the sale of alcoholic beverages at a restaurant, bar, or tavern to sell certain alcoholic beverages for off–premises consumption or delivery under certain circumstances; prohibiting a local licensing board from charging a certain license holder an additional fee under certain circumstances; authorizing a local licensing board to limit the quantity of alcoholic beverages sold or delivered to an individual in a single transaction; requiring *the Alcohol and Tobacco Commission and* the Maryland Department of Health *jointly* to conduct a certain study and submit a certain report

EXPLANATION: **CAPITALS INDICATE MATTER ADDED TO EXISTING LAW.**
[Brackets**]** indicate matter deleted from existing law.
Underlining indicates amendments to bill.
~~Strike out~~ indicates matter stricken from the bill by amendment or deleted from the law by amendment.
Italics indicate opposite chamber/conference committee amendments.

to the General Assembly; providing for the termination of this Act; and generally relating to the sale of alcoholic beverages at restaurants, bars, and taverns.

BY repealing and reenacting, with amendments,
Article – Alcoholic Beverages
Section 4–507
Annotated Code of Maryland
(2016 Volume and 2020 Supplement)

BY adding to
Article – Alcoholic Beverages
Section 4–1107
Annotated Code of Maryland
(2016 Volume and 2020 Supplement)

SECTION 1. BE IT ENACTED BY THE GENERAL ASSEMBLY OF MARYLAND, That the Laws of Maryland read as follows:

Article – Alcoholic Beverages

4–507.

(a) This section does not apply to:

(1) the delivery of wine from a direct wine shipper to a consumer using a common carrier in accordance with Title 2, Subtitle 1, Part V of this article; **[**or**]**

(2) the holder of a common carrier permit in the course of delivering directly shipped wine in accordance with Title 2, Subtitle 1, Part V of this article**; OR**

(3) THE DELIVERY OF ALCOHOLIC BEVERAGES IN ACCORDANCE WITH ~~A LOCAL LAW OR AN ORDINANCE ADOPTED UNDER~~ § 4–1107 OF THIS TITLE.

(b) Retail delivery to a purchaser of alcoholic beverages is prohibited unless:

(1) a retail license holder obtains a letter of authorization from the local licensing board to make deliveries; and

(2) the delivery is made from the licensed premises by the retail license holder or an employee of the retail license holder.

4–1107.

~~(A) (1) A COUNTY MAY ADOPT A LOCAL LAW OR AN ORDINANCE THAT ALLOWS RESTAURANTS, BARS, OR TAVERNS TO SELL ALCOHOLIC BEVERAGES FOR OFF–PREMISES CONSUMPTION ONLY IN ACCORDANCE WITH THIS SECTION.~~

(A) (1) THIS SECTION APPLIES ONLY IN A JURISDICTION IN WHICH THE LOCAL LICENSING BOARD HAS ADOPTED REGULATIONS TO AUTHORIZE THE SALE OR DELIVERY OF ALCOHOLIC BEVERAGES FOR OFF–PREMISES CONSUMPTION IN ACCORDANCE WITH THIS SECTION.

(2) IN CONSIDERING WHETHER TO ADOPT ~~A LOCAL LAW OR AN ORDINANCE~~ *REGULATIONS* UNDER THIS SECTION, A ~~COUNTY~~ *LOCAL LICENSING BOARD* SHALL WEIGH THE NEED TO PROMOTE THE ECONOMIC RECOVERY OF DIFFERENT CATEGORIES OF SMALL BUSINESSES IN THE WAKE OF THE COVID–19 PANDEMIC AND THE NEED TO PROTECT PUBLIC HEALTH AND WELFARE.

~~(A)~~ (B) (1) THIS SUBSECTION APPLIES ONLY TO A LICENSE THAT AUTHORIZES THE SALE OF ALCOHOLIC BEVERAGES FOR ON–PREMISES CONSUMPTION ONLY AT A RESTAURANT, BAR, OR TAVERN.

(2) A ~~LOCAL LAW OR AN ORDINANCE ADOPTED UNDER THIS SECTION SHALL AUTHORIZE A~~ LICENSE HOLDER UNDER THIS SUBSECTION ~~MAY TO~~ *MAY* SELL ANY ALCOHOLIC BEVERAGES AUTHORIZED UNDER ITS LICENSE, INCLUDING, IF AUTHORIZED, ~~A MIXED DRINK OR COCKTAIL, IN A SEALED OR CLOSED CONTAINER~~ MIXED DRINKS OR COCKTAILS IN SEALED OR CLOSED CONTAINERS FOR OFF–PREMISES CONSUMPTION OR DELIVERY IF:

(I) THE ALCOHOLIC BEVERAGE IS PURCHASED ALONG WITH PREPARED FOOD OTHER THAN PREPACKAGED SNACKS;

(II) THE INDIVIDUAL PURCHASING THE ALCOHOLIC BEVERAGE:

1. IS AT LEAST 21 YEARS OF AGE;

2. PROVIDES VALID IDENTIFICATION AS PROOF OF AGE; AND

3. IF THE SALE IS FOR DELIVERY, PROVIDES ANY DOCUMENTATION THAT THE LOCAL LICENSING BOARD REQUIRES;

(III) THE LICENSE HOLDER HAS REGISTERED AND RECEIVED WRITTEN AUTHORIZATION FROM THE LOCAL LIQUOR LICENSING BOARD TO SELL ALCOHOLIC BEVERAGES AUTHORIZED UNDER ITS LICENSE FOR OFF–PREMISES CONSUMPTION OR DELIVERY;

(IV) EACH ALCOHOLIC BEVERAGE SOLD FOR OFF–PREMISES CONSUMPTION OR DELIVERY IS:

1. PROVIDED IN THE MANUFACTURER'S ORIGINAL SEALED CONTAINER OR IN A CONTAINER CLOSED WITH A CAP, CORK, SEAL, OR LID WITH NO HOLES FOR STRAWS OR SIPPING; AND

2. SOLD OR DELIVERED NOT LATER THAN 11 P.M.;

~~**(V) THE DELIVERY OF AN ALCOHOLIC BEVERAGE IS MADE FROM THE LICENSED PREMISES BY THE LICENSE HOLDER OR THE HOLDER'S EMPLOYEE TO THE INDIVIDUAL PURCHASING THE ALCOHOLIC BEVERAGE; AND**~~

(V) THE DELIVERY OF AN ALCOHOLIC BEVERAGE IS MADE FROM THE LICENSED PREMISES TO THE INDIVIDUAL PURCHASING THE ALCOHOLIC BEVERAGE BY THE LICENSE HOLDER OR THE LICENSE HOLDER'S EMPLOYEE, WHO IS AT LEAST 21 YEARS OLD AND CERTIFIED IN AN ALCOHOL AWARENESS PROGRAM; AND

(VI) THE ALCOHOLIC BEVERAGE IS NOT DELIVERED TO:

1. ANOTHER PREMISES LICENSED TO SELL ALCOHOLIC BEVERAGES; OR

2. AN ADDRESS LOCATED OUTSIDE OF THE LICENSED JURISDICTION.

~~**(B)**~~ **(C) (1) THIS SUBSECTION APPLIES ONLY TO A LICENSE THAT AUTHORIZES THE SALE OF ALCOHOLIC BEVERAGES FOR ON–PREMISES AND OFF–PREMISES CONSUMPTION AT A RESTAURANT, BAR, OR TAVERN.**

(2) A ~~LOCAL LAW OR AN ORDINANCE ADOPTED UNDER THIS SECTION SHALL AUTHORIZE A~~ LICENSE HOLDER UNDER THIS SUBSECTION ~~MAY~~ ~~TO~~ *MAY* OBTAIN A PERMIT FROM THE LOCAL LICENSING BOARD THAT AUTHORIZES THE HOLDER TO SELL ~~A MIXED DRINK OR COCKTAIL IN A SEALED OR CLOSED CONTAINER~~, IF AUTHORIZED UNDER THE HOLDER'S LICENSE, MIXED DRINKS OR COCKTAILS IN SEALED OR CLOSED CONTAINERS FOR OFF–PREMISES CONSUMPTION OR DELIVERY IF:

(I) THE MIXED DRINK OR COCKTAIL IS PURCHASED ALONG WITH PREPARED FOOD OTHER THAN PREPACKAGED SNACKS;

(II) THE INDIVIDUAL PURCHASING THE MIXED DRINK OR COCKTAIL:

1. IS AT LEAST 21 YEARS OF AGE;

2. PROVIDES VALID IDENTIFICATION AS PROOF OF AGE; AND

3. IF THE SALE IS FOR DELIVERY, PROVIDES ANY DOCUMENTATION THAT THE LOCAL LICENSING BOARD REQUIRES;

(III) EACH MIXED DRINK OR COCKTAIL SOLD FOR OFF–PREMISES CONSUMPTION OR DELIVERY IS:

1. PROVIDED IN THE MANUFACTURER'S ORIGINAL SEALED CONTAINER OR IN A CONTAINER CLOSED WITH A CAP, CORK, SEAL, OR LID WITH NO HOLES FOR STRAWS OR SIPPING; AND

2. SOLD OR DELIVERED NOT LATER THAN 11 P.M.;

~~**(IV) THE DELIVERY OF THE MIXED DRINK OR COCKTAIL IS MADE FROM THE LICENSED PREMISES BY THE LICENSE HOLDER OR THE HOLDER'S EMPLOYEE TO THE INDIVIDUAL PURCHASING THE MIXED DRINK OR COCKTAIL; AND**~~

(IV) THE DELIVERY OF AN ALCOHOLIC BEVERAGE IS MADE FROM THE LICENSED PREMISES TO THE INDIVIDUAL PURCHASING THE ALCOHOLIC BEVERAGE BY THE LICENSE HOLDER OR THE LICENSE HOLDER'S EMPLOYEE, WHO IS AT LEAST 21 YEARS OLD AND CERTIFIED IN AN ALCOHOL AWARENESS PROGRAM; AND

(V) THE MIXED DRINK OR COCKTAIL IS NOT DELIVERED TO:

1. ANOTHER PREMISES LICENSED TO SELL ALCOHOLIC BEVERAGES; OR

2. AN ADDRESS LOCATED OUTSIDE OF THE LICENSED JURISDICTION.

(D) ~~**A LOCAL LAW OR AN ORDINANCE ADOPTED UNDER THIS SECTION MAY NOT IMPOSE ADDITIONAL RESTRICTIONS OR LIMITATIONS ON THE SALE OF ALCOHOLIC BEVERAGES UNDER SUBSECTION (B) OR (C) OF THIS SECTION.**~~

~~**(C)**~~ **(E)** ~~**(1)**~~ **A LOCAL LICENSING BOARD*:***

(1) **MAY NOT CHARGE A LICENSE HOLDER AN ADDITIONAL FEE FOR SELLING OR DELIVERING ALCOHOLIC BEVERAGES IN ACCORDANCE WITH** ~~**A LOCAL LAW OR AN ORDINANCE ADOPTED UNDER**~~ **THIS SECTION**~~**.**~~***; AND***

(2) ~~A LOCAL LICENSING BOARD~~ MAY LIMIT THE QUANTITY OF ALCOHOLIC BEVERAGES THAT MAY BE SOLD OR DELIVERED ~~UNDER A LOCAL LAW OR AN ORDINANCE ADOPTED~~ UNDER THIS SECTION TO AN INDIVIDUAL IN A SINGLE TRANSACTION.

SECTION 2. AND BE IT FURTHER ENACTED, That *the Alcohol and Tobacco Commission and* the Maryland Department of Health shall *jointly*:

(1) conduct a study on the impact of the expansion of alcohol access under the Governor's proclamation of March 5, 2020 "Declaration of State of Emergency and Existence of Catastrophic Health Emergency – COVID–19" and § 4–1107 of the Alcoholic Beverages Article, as enacted by Section 1 of this Act, for the years 2020, 2021, and 2022, including the impact on public health; and

(2) on or before December 31, 2022, report to the General Assembly, in accordance with § 2–1257 of the State Government Article on the findings of the study.

SECTION ~~2.~~ 3. AND BE IT FURTHER ENACTED, That this Act shall take effect July 1, 2021. It shall remain effective for a period of 2 years and, at the end of June 30, 2023, ~~this Act and any local law or ordinance adopted under~~ this Act, with no further action required by the General Assembly, shall be abrogated and of no further force and effect.

Approved:

_____

Governor.

_____

President of the Senate.

_____

Speaker of the House of Delegates.

Emergency Orders Terminated on July 1

Order	Note	Order #
Masking / Delegation to Secretary of Health		21-05-14-01
State Employees – Elevated Level II		--
Quarantine and Testing of Travelers		20-12-17-01
Alcoholic Beverage Delivery, etc.	Addressed by legislation effective 7/1/21	20-05-12-02
Liquor License Fee Flexibility	Addressed by legislation effective 7/1/21	20-06-11-01
Telehealth Services	Addressed by legislation effective 7/1/21	20-04-01-01
Restricting Supply of Hydroxychloroquine etc.		20-04-14-01
Inmates – Early Release		20-11-17-03
No Garnishment of CARES Act Rebates		20-04-29-03
No Garnishment of ARPA Rebates		20-03-15-01
Fast-Track FDA Lab Approval	No longer applicable	20-03-23-02
Deadlines for Taxes and Oaths of Office	No longer applicable	20-03-31-01
Designation of Disability Services Personnel	No longer applicable	20-03-31-02
Alternative Marriage Procedures		20-05-13-02
Child Care – Essential Personnel		20-03-25-01
Shareholder Meeting Flexibility		21-01-28-02
Municipal Elections – Postponement	No longer applicable	20-03-30-03
Santa Claus – Exemption from Quarantine		20-12-17-03

Orders in Effect During 45-Day Administrative Grace Period

Order	Note	Order #
MVA – Driver's License Extension		21-05-13-01
National Guard Activation		--
Nursing Home Oversight		20-04-29-01
COVID Testing by Pharmacists		20-05-19-01
Alternate Care Sites		20-11-17-02
Vaccine Administration Reporting		21-01-05-01
Health Care Workforce Flexibility		21-03-09-02
Children's Health Program Contributions		20-03-30-02
EMS Workforce Augmentation		20-03-19-03
Video Hearings for MIA		20-09-29-02
Evictions and Foreclosures		20-12-17-02
Remote Notarization of Documents	Statute is sufficient	20-09-29-01
Remote Witnessing of Documents	Addressed by legislation effective 10/1/21	20-04-10-01
Licenses and Timeframes[1]		21-03-09-03
Comptroller Timeframe Extension		21-06-15-02
Healthcare License Extension		21-06-15-03

[1] This order will remain in effect only to allow virtual hearings.

RESTAURANT ASSOCIATION MARYLAND

Maryland State Licensed Beverage Association

June 3, 2021

P. Thomas Mason
Kent County Board of License Commissioners
400 High St.
Chestertown, MD 21620

Dear Chairman Mason and Board:

On May 18th, Governor Hogan signed into law House Bill 12 (Chapter 140) and Senate Bill 205 (Chapter 141) authorizing local liquor boards to adopt regulations to allow restaurants, bars and taverns to temporarily continue selling alcoholic beverages for off-premises consumption (carryout and delivery) as prescribed in the language of the law. This takes effect on July 1, 2021 and remains in effect until June 30, 2023.

We respectfully request that the Board adopt regulations to effectuate the law as is required, so that the economic benefits to small business intended by lawmakers can be continued. We hope the registration/authorization process is easy and efficient for licensees who wish to take advantage of this extended privilege. As the lead advocates for this legislation on behalf of our organizations, we can help with disseminating information about your regulations and registration process to our members.

As you may know, the restaurant/bar industry has been devastated by the COVID pandemic, and it will likely take several years for our industry to fully recover from losses and rebuild business to pre-pandemic levels. Our industry continues to rely on assistance and programs from every level of government on our long road to recovery.

The Governor's Executive Order allowing restaurants/bars/taverns to sell alcoholic beverages for off-premise consumption has become a welcomed privilege and economic benefit for licensees who were not previously permitted to do so. The Executive Order also allows licensees who already had authorization to sell alcoholic beverages for off-premise consumption (in the manufacturer's sealed container) to sell mixed drinks/cocktails in sealed containers for off-premise consumption as well. Customers enjoy the convenience of purchasing alcoholic beverages with their carryout or delivery food orders, and restaurants/bars have benefited from the additional sales revenue.

Even though capacity and operating restrictions have been lifted, our industry remains in recovery mode. On-premise food/beverage sales have not yet returned to pre-pandemic levels, and the convenience of carryout/delivery remains popular. Our industry very much needs the extended

privileges authorized by this legislation, and it has been demonstrated for over a year now that it can be done safely and responsibly.

Although Governor Hogan's related Executive Order remains in effect for now (originally issued on 3-19-2020 and subsequently amended and restated on 5-29-2020 and 5-12-2021), we hope that your Board will soon adopt regulations and establish the necessary registration process for interested licensees so that there is no lapse of such privileges once the Executive Order is terminated.

Some of the requirements in this legislation go beyond the related Executive Order and provide for appropriate local oversight, including:

- alcoholic beverages sold for off-premise consumption in accordance with this section of law must be purchased along with prepared food other than prepackaged snacks
- license holders must register and receive written authorization from the local liquor licensing board to take advantage of this privilege
- sales for delivery are subject to any documentation the local liquor licensing board requires
- specifies that containers must be closed with a cap, cork, seal, or lid with no holes for straws or sipping
- prohibits delivery sales after 11 p.m.
- delivery person must be license holder or license holder's employee who is at least 21 years old and certified in an alcohol awareness program
- prohibits delivery to another licensed premises or to an address located outside of the licensed jurisdiction
- a local licensing board may opt to limit the quantity of alcoholic beverages that may be sold or delivered under this section to an individual in a single transaction

Do not hesitate to contact us if we can provide more information, or if you would like a representative from our organizations to participate in any related Board discussions or meetings.

Thank you for your time and consideration.

Melvin R. Thompson
Senior Vice President
Restaurant Association of Maryland
443-539-2455 (office direct dial)
mthompson@marylandrestaurants.com

J. Steven Wise
Lobbyist
Maryland State Licensed Beverage Association
Schwartz, Metz & Wise, P.A.
410-244-7000 (office)
swise@smwpa.com

Procedures for Public Comment
6/22/2021
County Commissioners Meeting

ATTACHMENTS:

Description

Procedures for Public Comment

06.22.21 Public Comments Sign In Sheet

BOARD OF COUNTY COMMISSIONERS OF KENT COUNTY
PROCEDURES FOR PUBLIC COMMENT

In addition to public appearance, the meeting is also being held virtually, via teleconference and viewable on the County website at www.kentcounty.com/government.

It is our desire that everyone who wishes to comment be given a fair and uninterrupted opportunity to express their views to the County Commissioners during this public comment period.

- Comments will be limited to three (3) minutes in length.
- Comments longer than three (3) minutes will be required to be submitted in writing.
- The Board President will open the meeting to Public Comments, citizens are asked to state their name, address, and the topic of interest. Citizens are to ask that all views be expressed in a respectful and civil manner. The Board respects your desire and right to convey your message freely. We ask as a courtesy to the Board and our citizens that you respect the Commissioners' request to refrain from naming citizens and name calling when offering any critique.

The County staff will acknowledge each caller, in the order they called in, announce the last 4 digits of the phone number that was used to call in, and will ask the caller to unmute their phone allowing them to comment.

PUBLIC COMMENTS
SIGN IN SHEET
June 22, 2021

NAME (please print)	ADDRESS	Topic

Contingency and Use of Fund Balance Report
6/22/2021
County Commissioners Meeting

ATTACHMENTS:

Description

6-8-2021 Commissioner Report Contingency

FY21 CONTINGENCY & USE OF FUND BALANCE
AS OF COMMISSIONERS MEETING MINUTES DATED
June 8, 2021

CONTINGENCY

DATE APPROVED	DEPARTMENT	AMOUNT APPROVED	DESCRIPTION
9/29/20	Capital Projects	$ 17,750	Quaker Neck Public Landing Pier and Mooring
10/6/20	Planning and Zoning	15,000	Task Force Support - Comprehensive Rezoning Update
10/20/20	Commissioners Office	30,000	Workstations and items to complete security configuration
10/27/20	Environmental Operations	16,600	Accrued penalties for effluent violations at Nicholson Landfill
11/17/20	Detention Center	4,000	Control Panel System
12/8/20	Capital Projects	65,900	Tuner's Creek Bulkhead & Boat Ramp Replacement
1/26/21	Water/Wastewater Services	85,000	Repairs & Maintenance Services Worton Lagoon
3/2/21	Information Technology	29,294	Replace Uninterrupted Power Supply (UPS)
4/13/21	Information Technology	8,100	Network security testing software
4/13/21	Capital Projects	21,183	Turners Creek Bulkhead-Change Order No. 2
4/13/21	State's Attorney Office	13,000	Part-time aid
4/20/21	Capital Projects	3,910	Turners Creek Bulkhead-Additional Engineering Services-unforeseen site conditions
5/4/21	WWS	13,125	Worton Portalogic System
5/4/21	WWS	7,000	Worton Tower Security Fencing
5/4/21	WWS	2,000	Plan Cabinets
5/4/21	Environmental Operations	15,031	Compact Utility Tractor
5/11/21	Buildings/Grounds-Court House	60,200	HVAC split system-Court House
TOTAL		**$ 407,093**	
BEGINNING CONTINGENCY BUDGET		**$ 800,000**	
ENDING CONTINGENCY BALANCE		**$ 392,907**	

USE OF FUND BALANCE

DATE APPROVED	DEPARTMENT	AMOUNT APPROVED	DESCRIPTION
09/08/2020	Alcoholic Beverage Inspector	$ 11,732	Full-time equivalent hours increased from .50 to .70
09/29/2020	The Health Department	$ 59,611	COLA Increase from prior years
12/08/2020	Commissioner's Office	$ 1,380	Maintenance on Hearing Room audio/visual equip
TOTAL		**$ 72,723**	

USE OF FUND BALANCE

Note: If expenses are not reduced or offset by the same amount of fund balance used, this will result in a decrease in fund balance below our 7.5% target.

Thomas N. Yeager, County Attorney
6/22/2021
County Commissioners Meeting

Item Summary:
Legal
This meeting will be closed under the Annotated Code of Maryland General Provisions Article § 3-305 (b) (7) To consult with counsel to obtain legal advice; and (8) To consult with staff, consultants, or other individuals about pending or potential litigation

ATTACHMENTS:

Description