

**Public Works
Environmental Programs
York County, Virginia**

York 2040 Committee

September 4, 2019

- MS4 Permit/ TMDL Action Plan
- Stormwater CIP
- Stormwater Construction Crew
- Stormwater and E&SC
- Wetlands
- CBPA
- WMP
- Floodplain

York County's MS4 Permit

- Public Education and Outreach
- Public Participation
- Illicit Discharge Detection & Elimination
- Erosion & Sediment Control
- BMP maintenance program
- Good Housekeeping – County properties
- TMDL Action Plan

Total Maximum Daily Load (TMDL)

The TMDL is the allowable amount of:

1. Total Suspended Sediments
2. Nitrogen: Achieved through sewer projects
3. Phosphorus

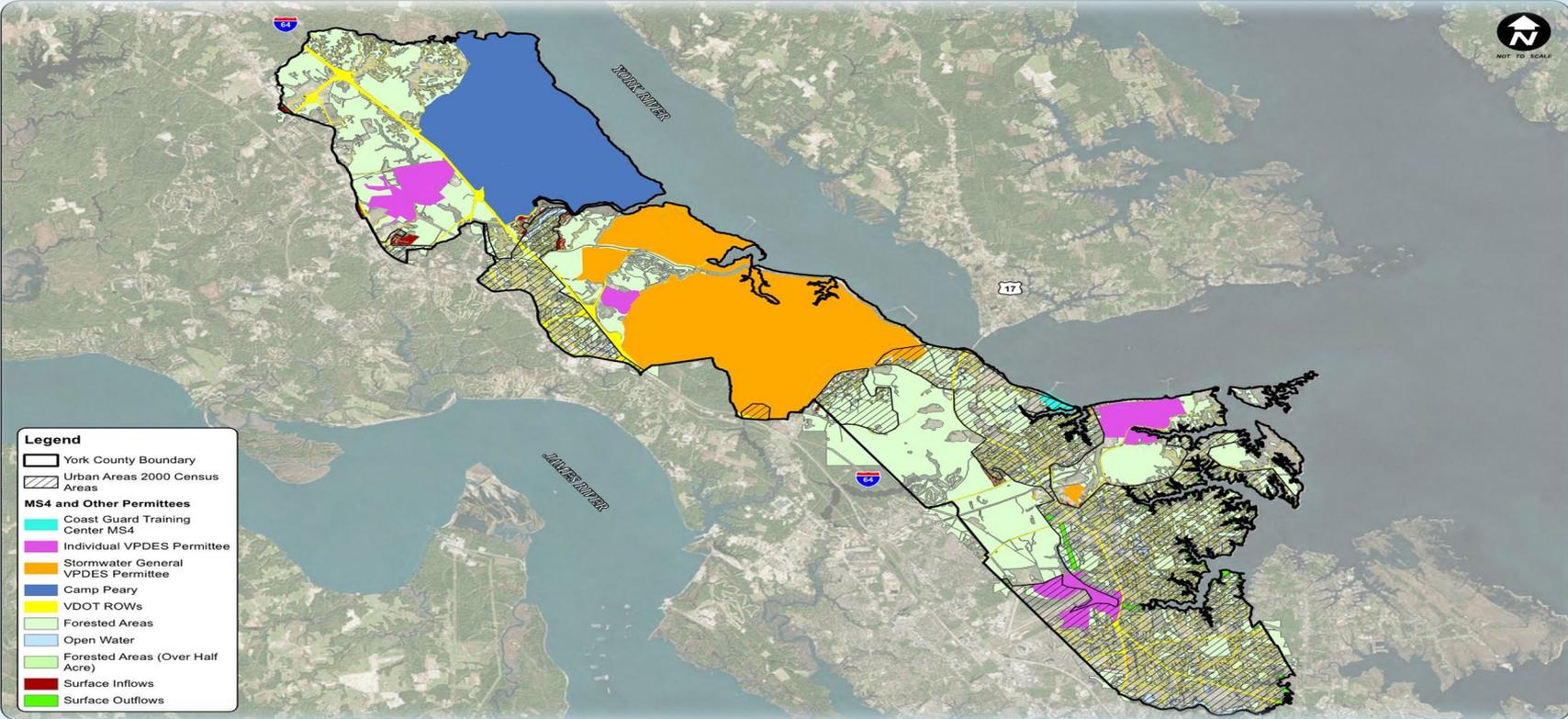
discharged into the Chesapeake Bay

TMDL Action Plan Phase I 2015 to 2018

- Developed Service Area
- Calculated Pollutant Loads and Required Reductions
- GOAL: Achieve 5% of Reductions by 2018 - **ACHIEVED**

Service Area Phase I and II

remained unchanged from 2013 to 2018



TMDL Calculations Phase I - Phase II

- TMDL Loads were recalculated. No significant change from Phase I.
- Required reductions in the Phase II MS4 Permit
 - 35% reduction by July 1, 2023
 - 60% reduction by July 1, 2028

CIP Projects to meet TMDL requirements

- York exceeded the 5% required reduction with five projects:
- **Construction Cost \$4 Million**
- **Total Reduction was approximately 25%.
Leaving 20% in excess which will be applied to the 2023 Phase II deadline**

H1 Regional BMP at the Sports Complex



Edgehill South Stream Restoration



Cook/ Falcon Roads Phase 1



Cook-Falcon Roads: Phase 2



Dare Elementary Stream Restoration & Wetlands



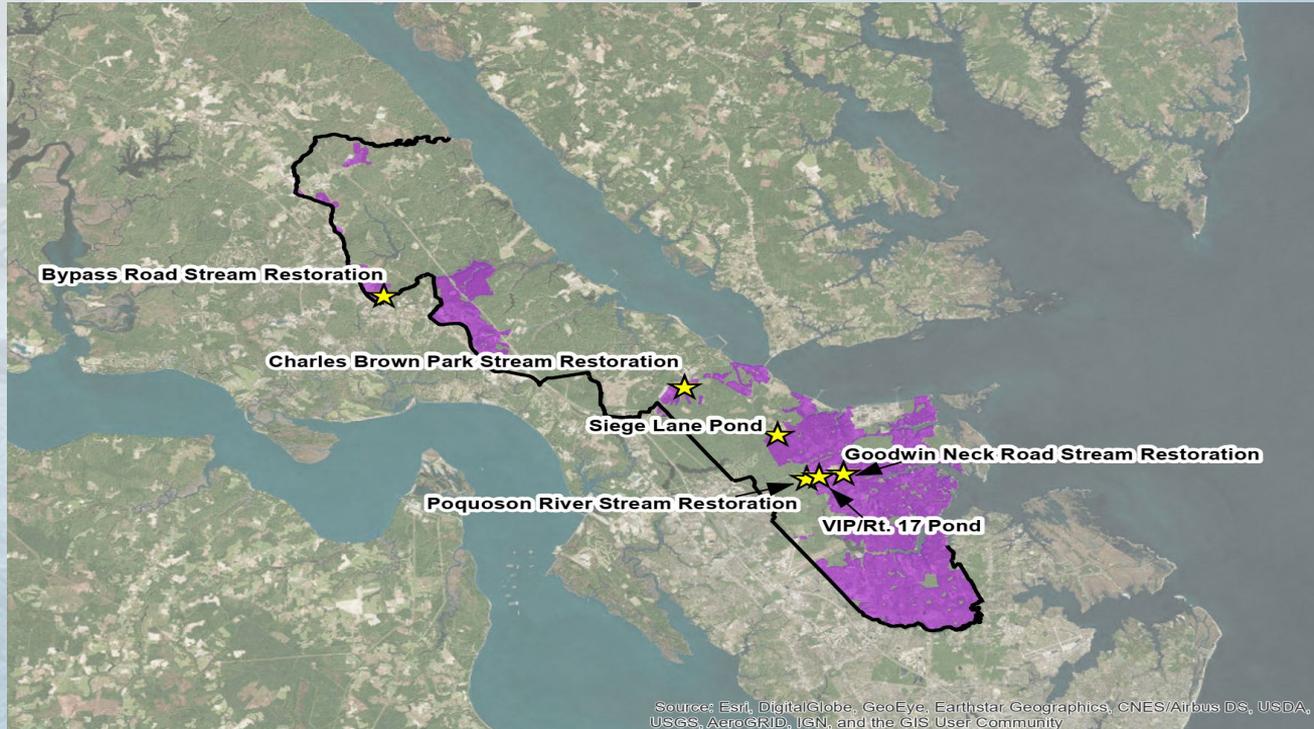
Projects to meet Phase II Goals

We will meet the required reduction of 35% by 2023 with the following projects:

- Siege Lane Pond: Under Design
- Charles Brown Park Stream Restoration: Start Nov 2020
- Poquoson Headwater Stream Restoration: Start Aug 2020
- Greensprings Stream Restoration: **Under Construction**
- Goodwin Neck Road Stream Restoration: Under Design
- Bypass Road Stream Restoration: Under Design
- VIP/Rte. 17 Pond: **Under Construction**

Construction Cost \$7 Million from Meals Tax and SLAF grants

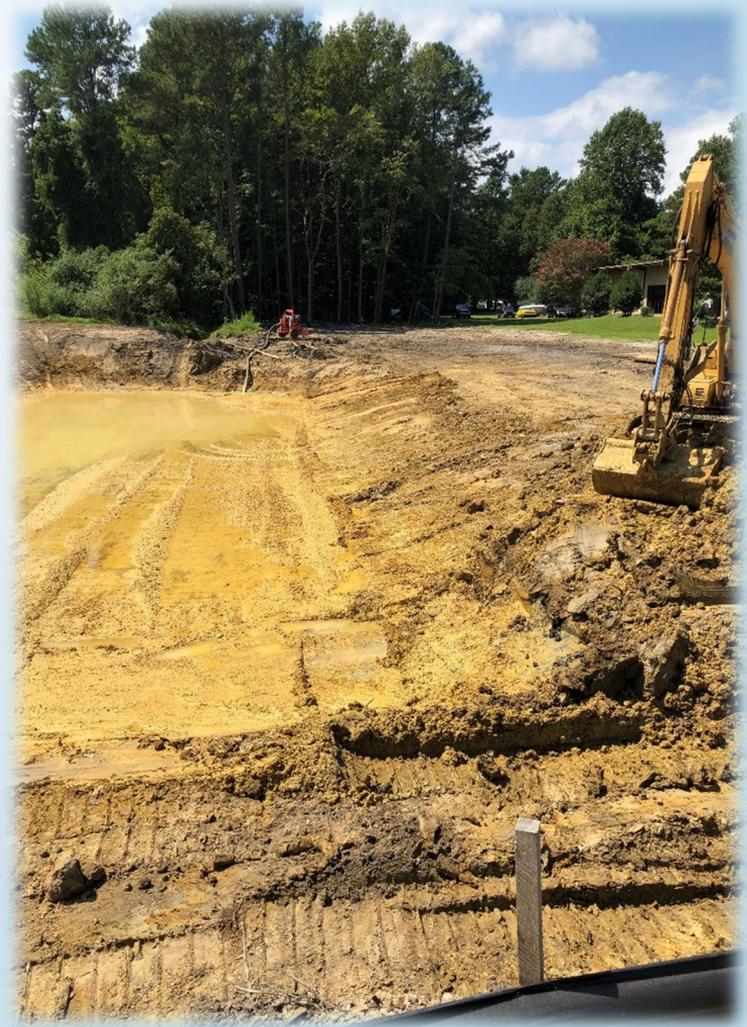
Phase II Projects Locations



Greensprings Stream Restoration



Victory Industrial Park Rte. 17 Pond



Bypass Road Stream Restoration



Permit Cycle 2023-2028

- 60% Reduction will be needed
- New Guidance and Calculations makes the required reductions a moving target

How to Meet Future Reductions

- Credit from projects in current plan should yield carry over credits
- Future projects in CIP
- HRSD Strategic Water Initiative For Tomorrow (SWIFT)

Lessons Learned

- Property owners do not want stream restoration projects or ponds in their backyards and are reluctant to accept County offers for easements. Future projects are ranked higher if easements are currently in place or if the County already owns the property.

- MS4 Permit/ TMDL Action Plan
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Stormwater CIP

- Complaint Driven
- Public Safety
- Erosion issues
- Flooding



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Flood Control Projects



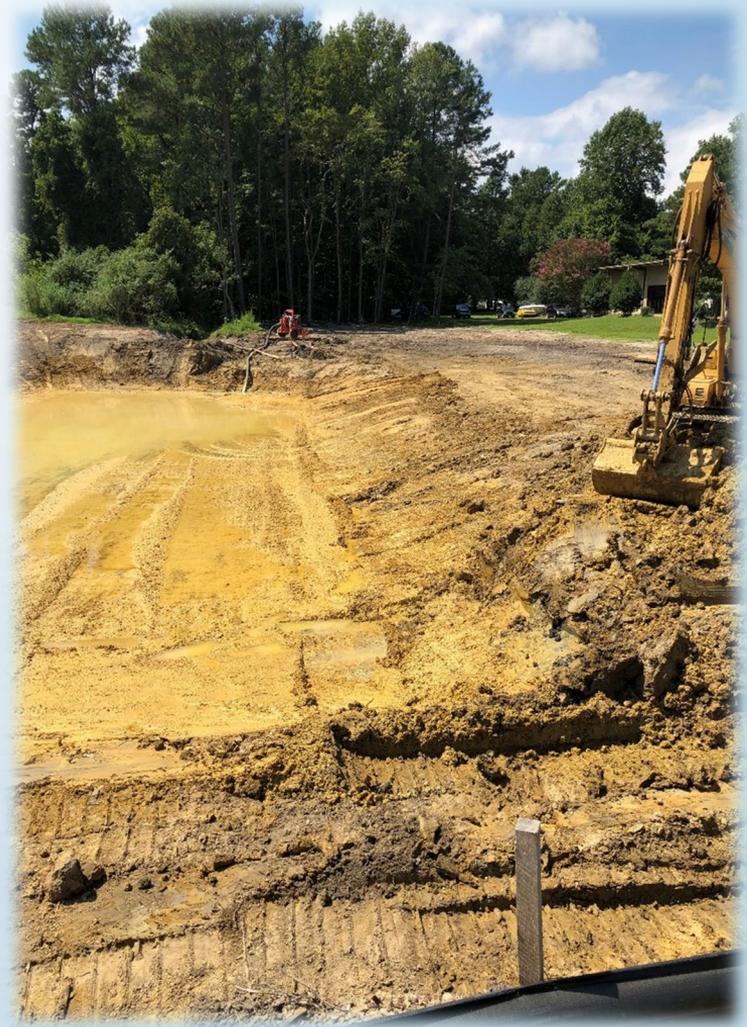
CIP Projects

- Wormley Creek Headwaters Culverts
- Edgehill Culverts: Under design
- Coventry Culverts: Completed
- Woodlake/Meadowlake: Under Construction

Funded through meals tax and VDOT revenue sharing



Victory Industrial Park Route 17 Pond



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Stormwater Crews

In-house Design

In-house Construction

Six on the crew

Three Heavy Equipment Operators

Lakeside Forest
36" storm water pipe
in County Easement



Bay Tree Beach Pump Station



Regrading and
stabilizing
drainage ditches





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Stormwater Ordinance Erosion & Sediment Control Ordinance

- The DPW is responsible for enforcing the Stormwater and E&SC Ordinances
- Every five years, DEQ reviews the County



2009: General Permit required equipment operators to obtain an E&SC plan.

2014: The County began issuing VSMP Permits & collecting fees
(previously done by DEQ):

Inspectors now have to be dual certified in Stormwater regulations and E&SC

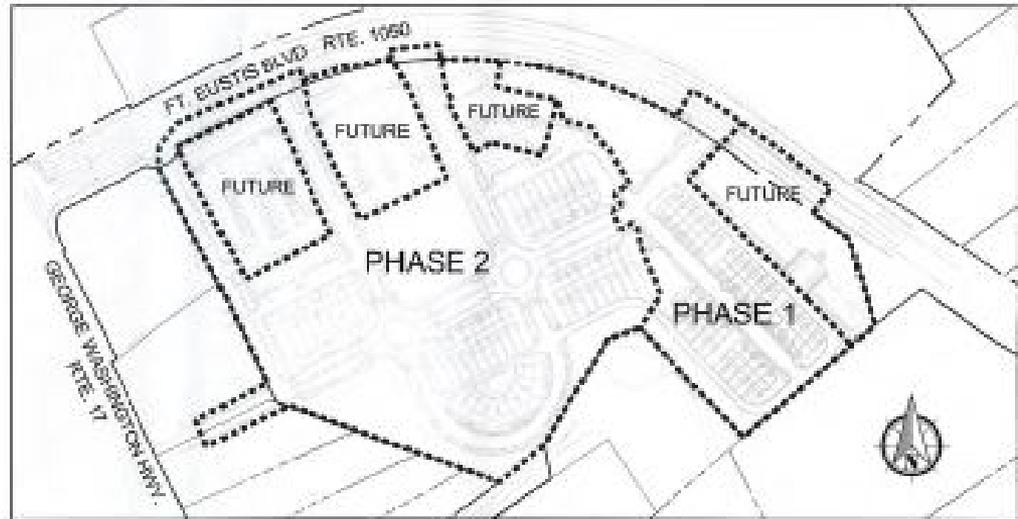
Stormwater Review engineers have to be dual certified for plan review

Collecting yearly permit maintenance fees

STORMWATER New Design Criteria: Energy Balance Equation and Runoff
Reduction Worksheets

E&SC plans added a requirement for SWPPP

2019: All phases and portions of grandfathered projects under the 2009 stormwater design criteria will have to meet 2014 criteria if not under construction by July 1, 2024.



OVERALL PHASING PLAN
(Scale: 1"=200')

Erosion & Sediment Control

- 5 certified inspectors E&SC and Stormwater
- Required inspections every 2 weeks
- Required inspections 24 hours after a significant rain event
- Monthly SWPPP book inspections





Quantity and Quality Control BMP's




Pond was stocked with *Gambusia holbrooki*,
a native mosquito eating fish.
For more information on the benefits of this
species for mosquito control, visit www.pesticides.gov
Call your local Extension Service
or visit www.pesticides.gov

01/29/2016

- MS4 Permit/ TMDL Action Plan
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- **Wetlands**
- CBPA
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Wetlands Ordinance

- The Stormwater Division of DPW is responsible for implementing the Wetlands Ordinance
- The VMRC reviews all Wetlands Board action



• Tidal Wetlands

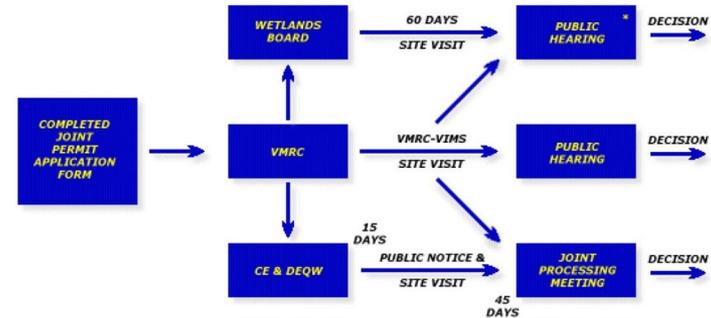
- Vegetated
- Non-vegetated

- Wetlands Board established: 7-member Board with monthly meetings
Issues permits and adjudicates violations

All Construction in wetlands requires a Joint Permit Application

- Piers, public, commercial and private
- Bulkheads
- Riprap
- Marsh toe sills/Breakwaters
- Living Shoreline
- Aquaculture

VIRGINIA'S SHORELINE PERMIT PROCESS



Governor's Executive Order: NO NET LOSS OF WETLANDS shifted permits from bulkheads to riprap to living shorelines



04/03/2019



04/03/2019

TYPICAL PROJECTS



Riprap Revetment



Living Shoreline



Bulkhead Replacement

York County Project:

- Parks, Rec and Tourism
- Public Works
- Youth Volunteer Corps

Oyster Bag Living Shoreline at Back Creek Park





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Chesapeake Bay Preservation Areas Ordinance

- The Stormwater Division of DPW is responsible for enforcing the CBPA Ordinance requirements
- Every five years, DEQ reviews the County



- **100-foot vegetated buffer** along all tidal shores, perennial streams and connected wetlands
- Chesapeake Bay Board established: 9-member Board with monthly meetings to hear exception applications and appeals

All construction/development in the RPA requires a Water Quality Impact Assessment

- Tree removal
- Home additions/decks
- Accessory Structures i.e. pool detached garage, shed, patios
- New homes
- Fill

Residential NRI

Perenniality checks by Staff



Preliminary Natural Resources Inventory

For Residential Use Only

PROPERTY ADDRESS: _____

CONTACT NAME: _____ PHONE: _____

Please answer the following questions to the best of your ability.

YES NO

- ___ ___ 1. Is there swamp, wetlands, or marshland on this property?
- ___ ___ 2. Is there a pond or lake on this property?
- ___ ___ 3. Is this property waterfront? If so, what water body? _____
- ___ ___ 4. Are there steep slopes or is there a ravine on this property?
- ___ ___ 5. Are there ditches on this property?
- ___ ___ 6. Is there water in the ditch two days after it rains?
- ___ ___ 7. Is there curb and gutter along the street?
- ___ ___ 8. Is there a stream or creek on or near this property?
- ___ ___ 9. Are there cattails, reeds or rushes on this property?
- ___ ___ 10. Is there a groundwater spring on the property?

This form was completed by: _____ on _____ Date

For Staff Use Only: Site-specific topographic NRI map

Please check for the following items:

Yes No

- Hydric soils
- Steep Slopes
- Perennial Stream
- Wetlands

Yes No

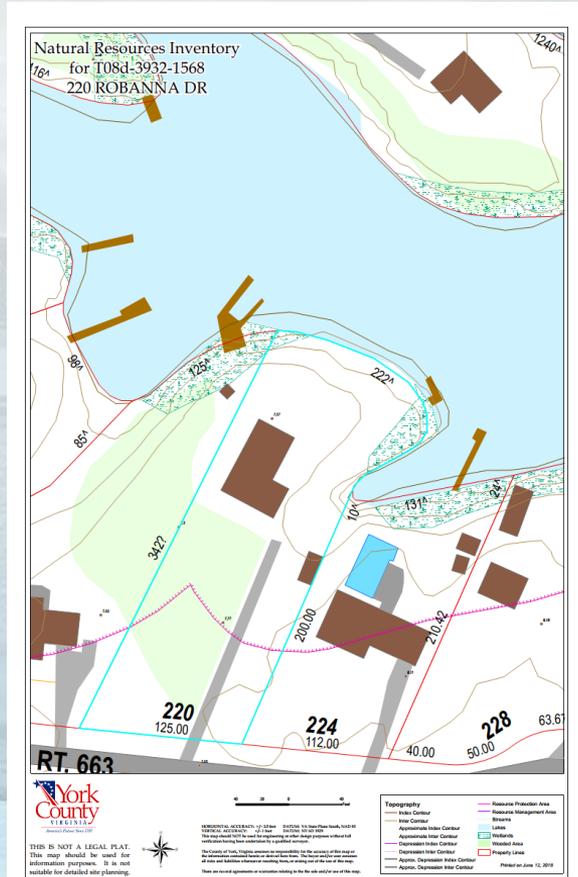
- Chesapeake Bay Preservation Areas
- Natural Heritage Areas
- Environmental Database

STAFF DETERMINATION

- No further review required
- Further environmental review required

Staff Initials: _____ Comments: _____

County Mapped RPA is a guide ONLY



Commercial Development

NRI is prepared by a professional

The feature (wetlands, perennial stream) must be flagged

Staff must check field check

Confirmation letter written

GIS layer updated

Notification letters *if necessary



Tidal Shores
AND
Ditches



Development in the RPA

ALL development in the RPA requires a WQIA

Staff Review and Approval

- Allowed Development
- Buffer Modifications
- Non Complying Use & Development Waivers
- Redevelopment
- Encroachments

Chesapeake Bay Board Review & Approval

- Exceptions
- Appeals



Chesapeake Bay Board

7-Member Board
Monthly public meetings

New or expanded accessory
structures

Encroachments to less than 50-
feet

Violations/Appeals



Buffer Requirements

- 10-foot Structure offset NEW LOTS
- Signage
- Construction Fence
- Recorded BMP agreements
- Limited Construction Area
- Tree Replacement
- BMP's





100-foot spacing

Signs free to
homeowners

\$10/each for new
subdivisions

Permanent Signage Required

Recorded BMP

Maintenance

Agreements



COUNTY OF YORK
STORMWATER MANAGEMENT/BMP MAINTENANCE AGREEMENT
CHESAPEAKE BAY PRESERVATION AREAS ORDINANCE

THIS AGREEMENT, made this ____ day of _____, 20____, by and between _____, hereinafter referred to as the "Landowner", and the COUNTY OF YORK, Virginia, a political subdivision of the Commonwealth of Virginia, hereinafter referred to as the "County".

WITNESSETH:

WHEREAS, the Landowner is the owner of certain parcel of land located in the County bearing GPIN Number _____ hereinafter referred to as the "Property", the Property being located in the Chesapeake Bay Preservation Area as defined and regulated in Chapter 23.2 of the York County Code; and

WHEREAS, the Property is being developed by the Landowner as shown on plans entitled "_____" and dated _____, 20____, hereinafter called the "Plan", which has been approved by the County, and is on file in the York County Department of Public Works, and is incorporated herein by reference; and

WHEREAS, the County requires that on-site stormwater management/BMP facilities be constructed and adequately maintained by the Landowner, its successors and assigns;

NOW, THEREFORE, for and in consideration of the foregoing premises, the mutual covenants contained herein, and the following terms and conditions, the parties hereto agree as follows:

1. The on-site stormwater management/BMP facilities shall be constructed by the Landowner, its successors and assigns, in accordance with the plans and specifications identified in the Plan.
2. The Landowner, its successors and assigns, shall maintain the stormwater management/BMP facilities in good working condition in perpetuity, acceptable to the County, so that they are performing their design functions.
3. The Landowner, its successors and assigns, at its sole expense hereby agrees to inspect or cause the stormwater management/BMP facilities to be inspected at such regular intervals as deemed necessary by the County but not less than once per year. Such inspections

Annual Inspections



BMP's required for all impervious area in the RPA buffer AND all impervious cover over 16%





After Isabel

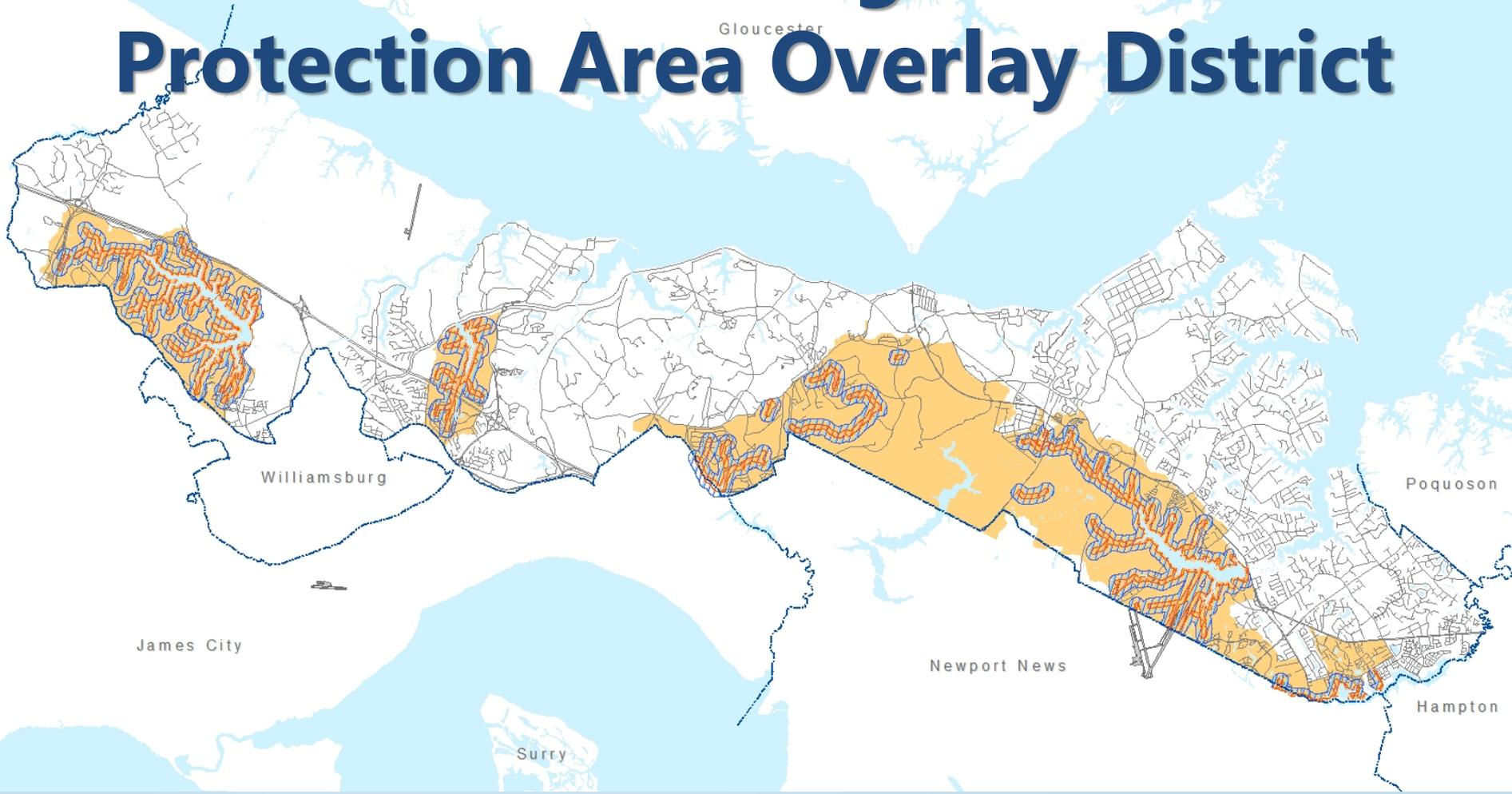
The Allure of the Water



After redevelopment

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Watershed Management and Protection Area Overlay District



WMP Overlay District

- Purpose: To ensure protection of watershed surrounding current and potential public water supply reservoirs
- Development requires an impact study detailing proposed runoff control and reservoir protection measures for the project
- 200' buffer to be maintained in its natural state or planted with an erosion-resistant vegetative cover

WMP Overlay District

- Uses prohibited in or within 500' of the 200' buffer
 - Septic tanks and drainfields
 - Feed lots or other livestock impoundments
 - Uncovered trash containers and dumpsters
 - Fuel storage in excess of 50 gallons
 - Manufacture, bulk storage, distribution of petroleum, chemical, or asphalt products

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Floodplain Ordinance

- York County Stormwater and Building Regulation is responsible for enforcing the Floodplain Ordinance
- Joe Brogan, Stormwater Division Chief, is the Floodplain Administrator
- FEMA reviews the County every five years



Spring 2021 FEMA review for the compliance

- Floodplain Ordinance revise & update (last updated 2015)
- Inspections
- Entire Program



York County's CRS Program

- Community Rating System
- A voluntary system developed by FEMA to incentivize localities to enact programs to decrease flood risks
- CRS provides flood insurance rate reductions to policyholders in communities that implement activities that exceed the minimum requirements

Review of York County's CRS Program

- Every 5 years, FEMA/ISO reviews the CRS member communities.
- York County's program was reviewed on July 29, 2015.



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Results of the 2015 CRS Review

- York County went from a 8 to a 7 securing an additional 5% discount for our citizens over the 10% we were already receiving as an 8.
- There is a Plan of Action that will be submitted 2019 to bring York County to a Class 6 community.

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Questions?