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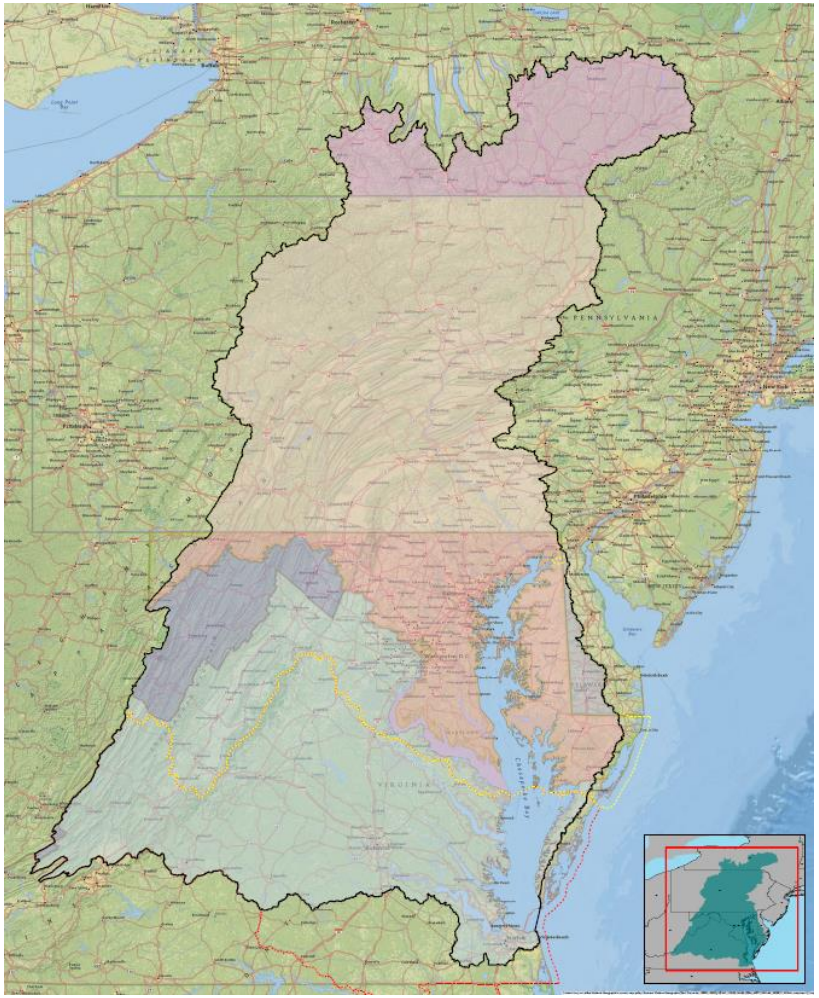
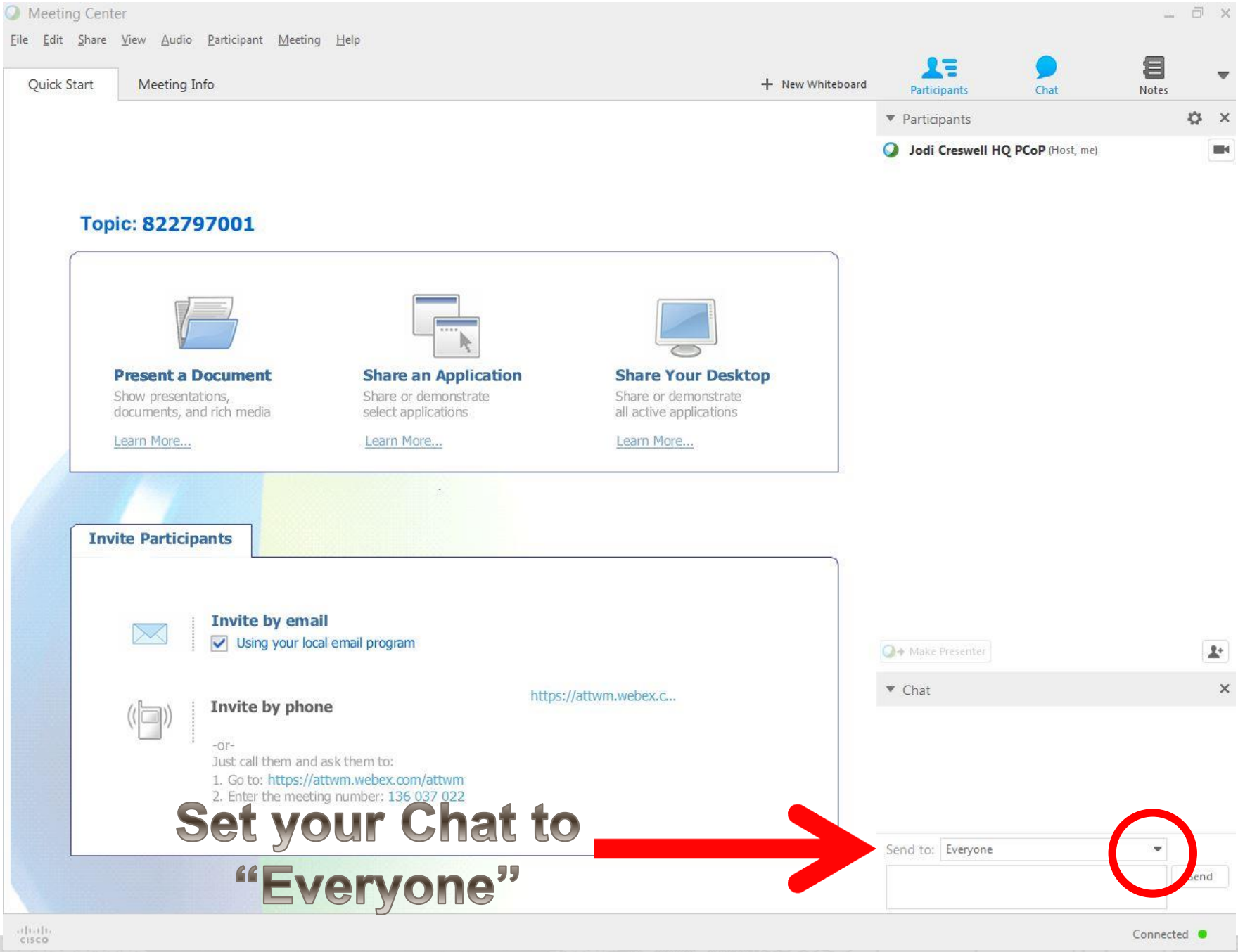


Regional, Non-government organization, Academia, etc. place your mark here: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Chat
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Jodi Creswell HQ PCoP (Host, me)
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Show presentations, documents, and rich media
Learn More...
Share an Application
Share or demonstrate select applications
Learn More...
Share Your Desktop
Share or demonstrate all active applications
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Invite by email
Using your local email program
Invite by phone
https://attwm.webex.c...
-or-
Just call them and ask them to:
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CHESAPEAKE BAY COMPREHENSIVE WATER RESOURCES AND RESTORATION PLAN

3rd Stakeholder Webinar

May 7, 2018

"The views, opinions and findings contained in this report are those of the authors(s) and should not be construed as an official Department of the Army position, policy or decision, unless so designated by other official documentation."

CHESAPEAKE BAY COMPREHENSIVE WATER RESOURCES AND RESTORATION PLAN (CBCP)

SUMMARY

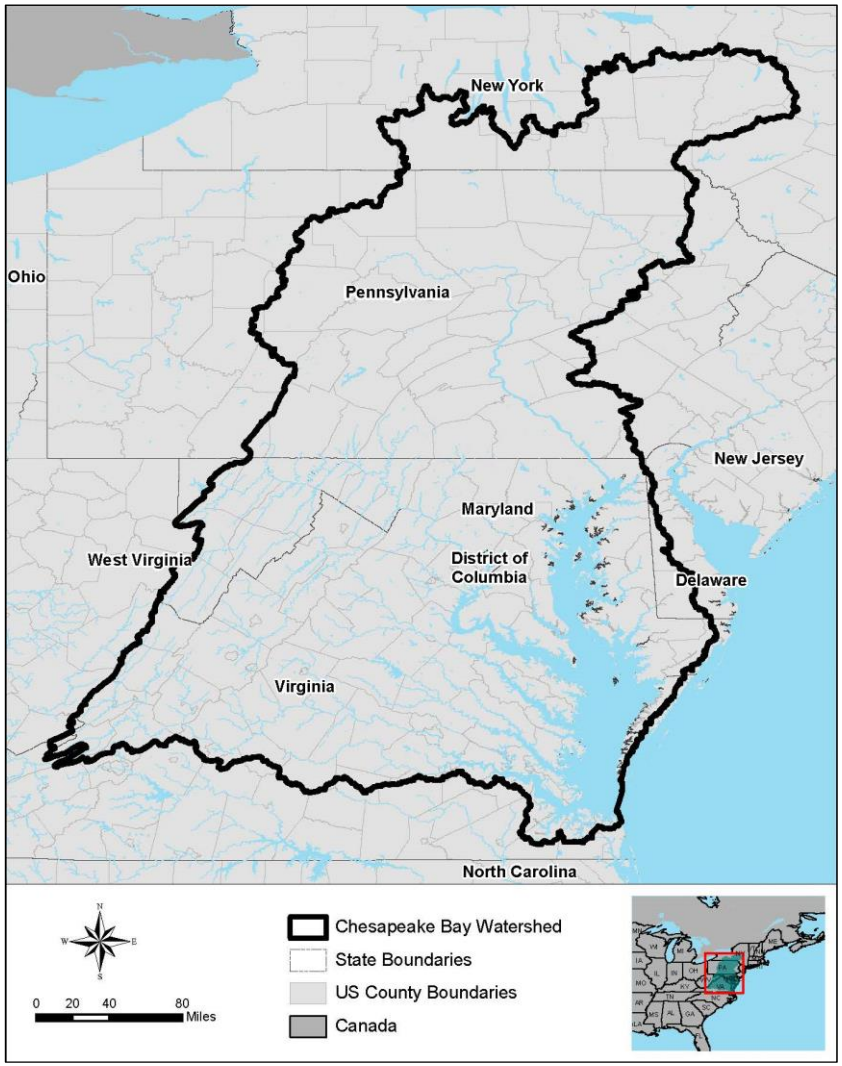
- ✓ Watershed Assessment
- ✓ Defined Problems, Needs, and Opportunities Geospatially
- ✓ USACE Actions
- ✓ Restoration Roadmap

CBCP STATUS

- ✓ Geospatial analyses complete
- ✓ 2 out of 3 stakeholder webinars complete (third webinar May 7, 2018); stakeholder collaboration ongoing
- ✓ U.S. Fish and Wildlife Service (USFWS) Planning Aid Report complete
- ✓ Development of implementation strategy complete (Restoration Roadmap)
- ✓ Inventory of Candidate Projects
- ✓ Draft Report Reviews - Underway

AGENDA

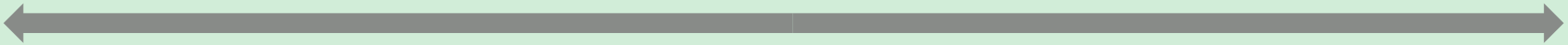
- CBCP Report Purpose and Organization
- Key Findings
- Next Steps
- Feedback
- Questions and Discussion



Annotate on the slide: How familiar are you with the Chesapeake Bay Comprehensive Water Resources and Restoration Plan?

Not familiar/ this is my first webinar

Very familiar/I have attended other meetings or webinars

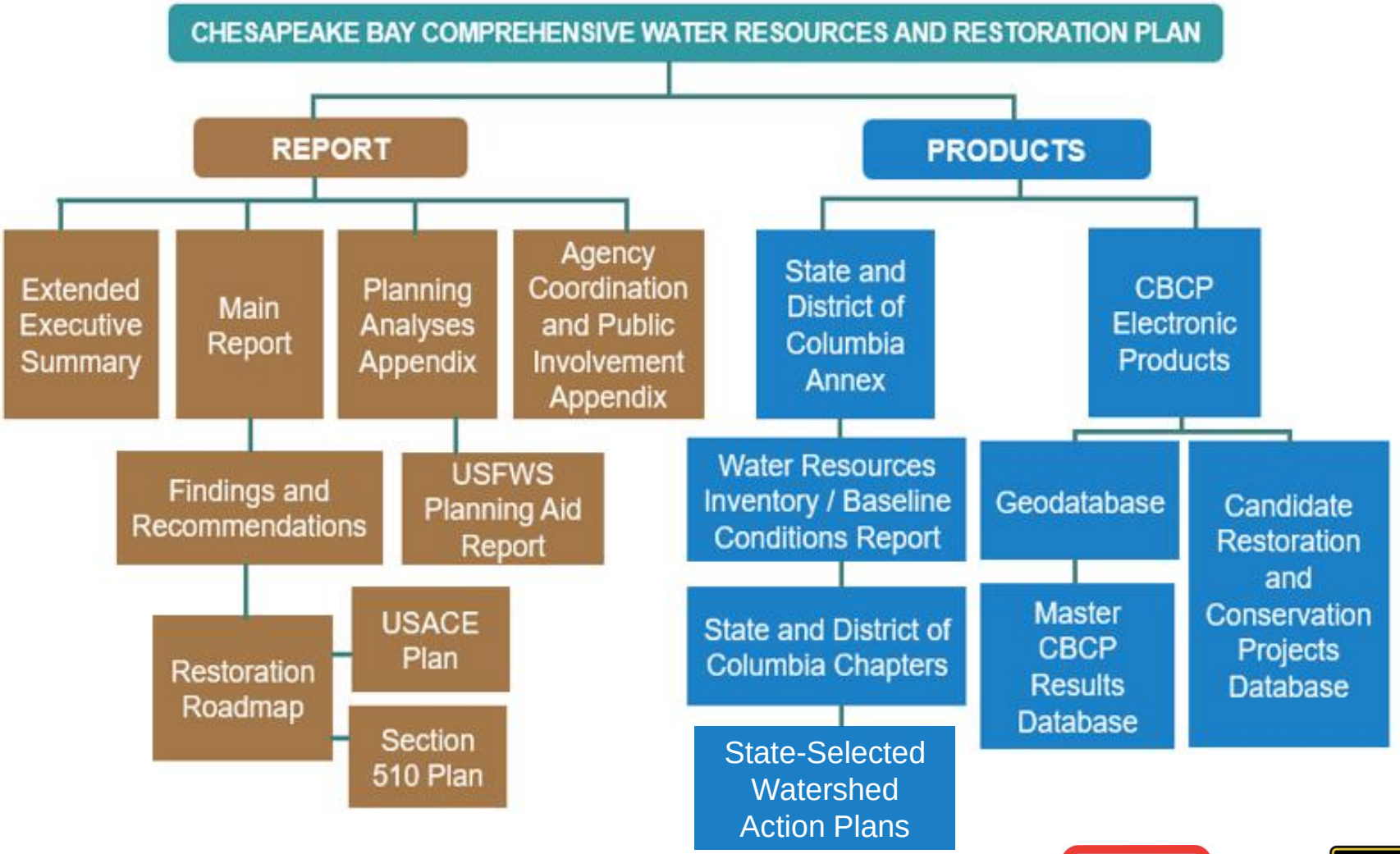


CBCP GOAL

Provide a single comprehensive and integrated restoration plan watershed assessment to assist with implementation of the 2014 Chesapeake Bay Agreement by:

- Effectively and efficiently engaging Bay stakeholders to identify problems, needs and opportunities in the watershed and avoid duplication of ongoing or planned actions by others.
- Leveraging existing geospatial data to identify locations for restoration opportunities to maximize co-benefits (the set of multiple benefits or synergies returned from an explicit action to address multiple 2014 Bay Agreement outcomes) and making the most efficient use of implementation resourcing.
- Determining where and how USACE programs could be used to support implementation.

CBCP REPORT ORGANIZATION



MAIN REPORT AND APPENDICES

Main Report

- Introductory material
- Findings and recommendations
- Implementation strategy

Planning Analyses Appendix

- Presents the structure of the geospatial analyses
- Restoration Roadmap
- USFWS Planning Aid Report

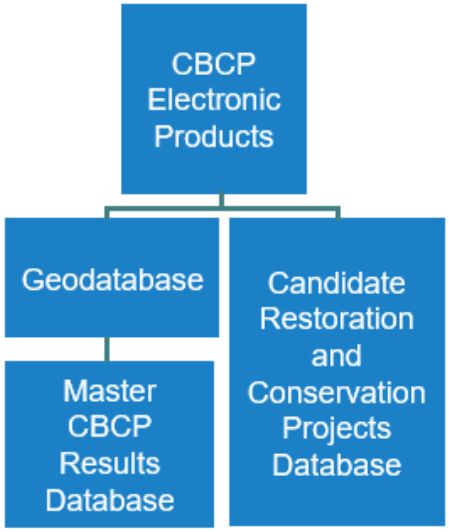
Agency Coordination and Public Involvement Appendix

- Describes the extensive collaboration effort that occurred to provide interested stakeholders and the public

State and District of Columbia Annex

- Baseline conditions of the watershed
- Results of the CBCP technical analyses are presented by jurisdiction
- State-selected watershed analyses and action plans

CBCP ELECTRONIC PRODUCTS



Geodatabase

- All maps generated
- Details of the development of each map
- GIS data used

Master CBCP Results Database

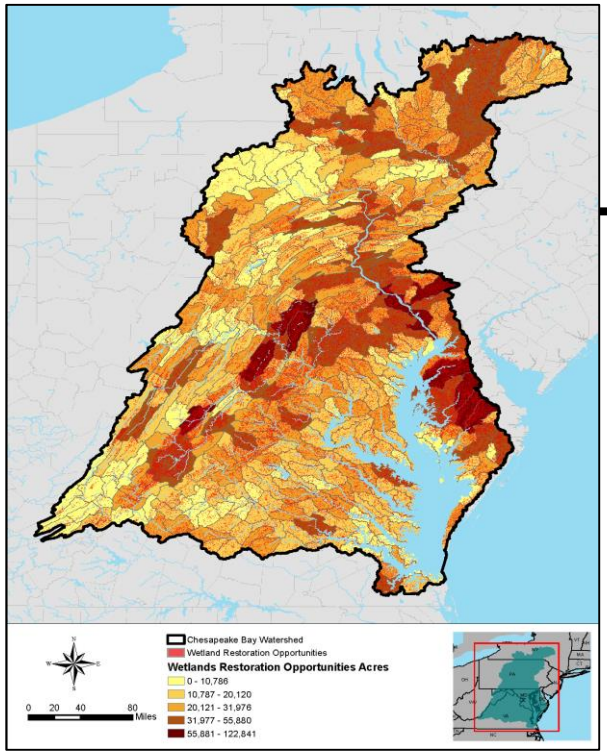
- Summarizes the results/scoring for each analysis
- Resource to understand the exact results for a specific location (subwatershed)

Candidate Restoration and Conservation Projects Database

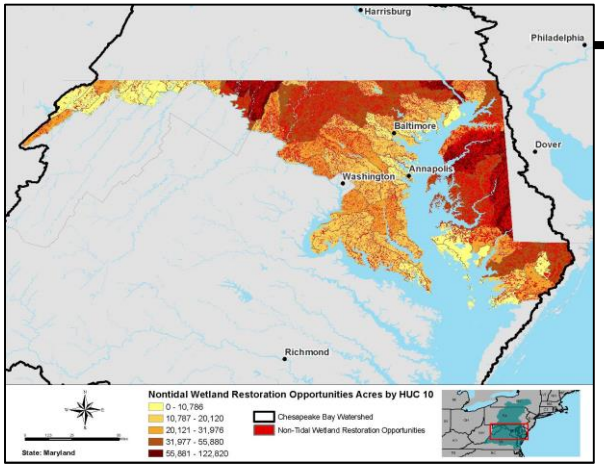
- Potential projects based on a list of opportunities submitted by stakeholders and classified using the CBCP restoration strategies
- Categorized corresponding to a USACE authority and program that could support implementation

CBCP WATERSHED-WIDE & STATE ANALYSES

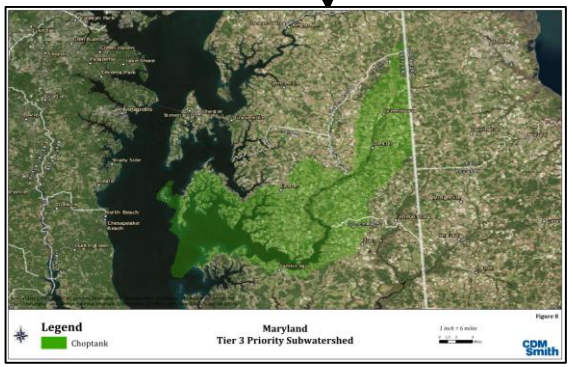
SCALE OF ANALYSES



Watershed



State



State-Selected Watershed

RESTORATION OPPORTUNITY ANALYSIS:
TARGETED GEOSPATIAL INVESTIGATIONS

1. Habitat restoration – riparian buffers, stream restoration, and fish passage for brook trout, resident, and anadromous fish plus oysters, and SAV.
2. Wetland restoration - restoration and enhancement of tidal ad non-tidal wetlands, wetland restoration to benefit avian wildlife, and beneficial use of dredged material.
3. Connectivity – connectivity of healthy habitats to restoration opportunities and connectivity to socioeconomic resources.
4. Conservation of lands to promote watershed healthy, species, and socioeconomic benefits
5. Shorelines and streambanks – at risk shorelines and proximity to restoration opportunities
6. Toxic contaminants

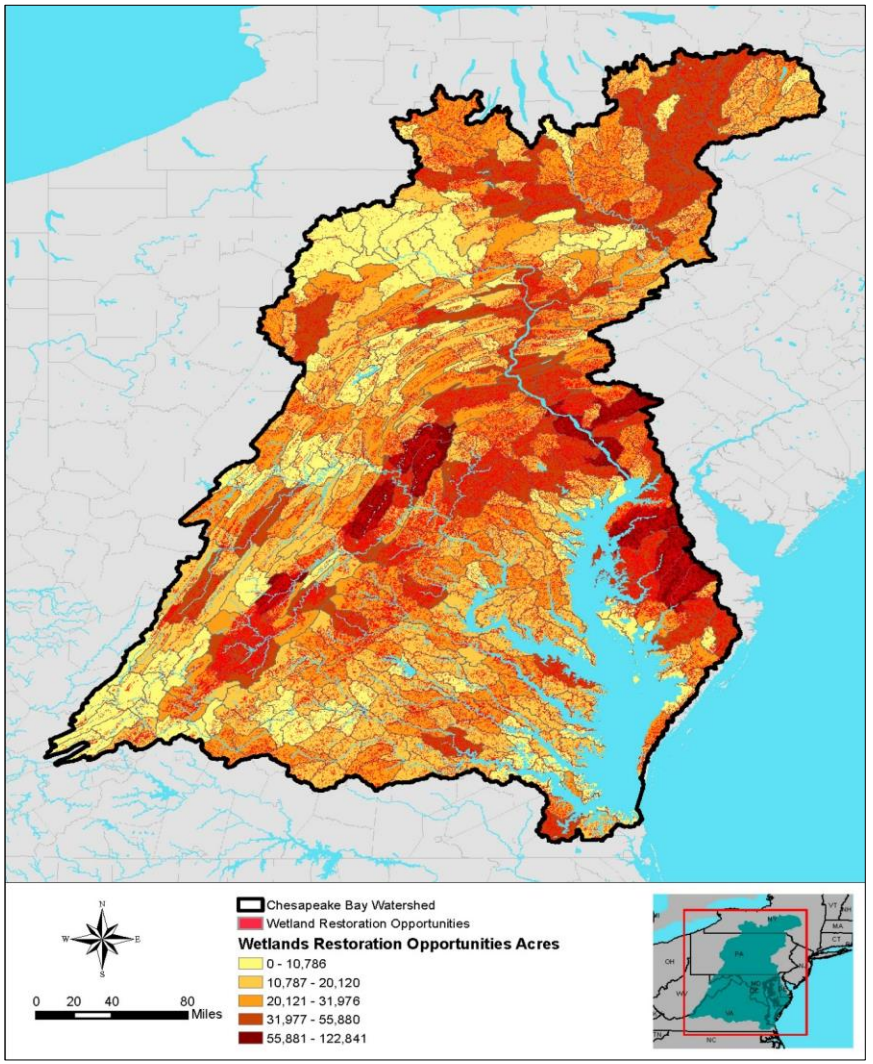



RESTORATION OPPORTUNITIES ANALYSIS:
WETLAND RESTORATION EXAMPLE

Purpose:
Identify tidal and nontidal wetland restoration and enhancement opportunities.

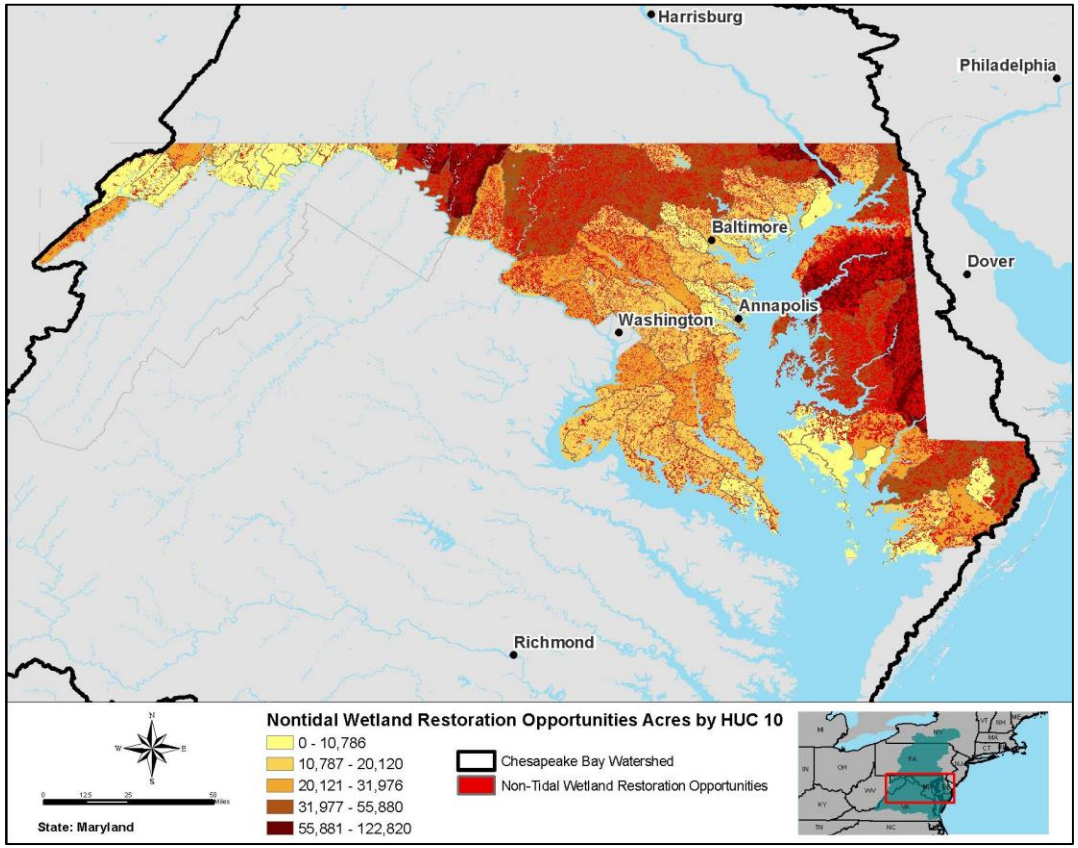
Data Layers:

- *High resolution land cover data – collected in 2016 by the Chesapeake Bay Conservancy and provided by the National Fish and Wildlife Foundation*
- *U.S. Geological Survey Digital Elevation Model*
- *Chesapeake Bay Program hydric soils layer*



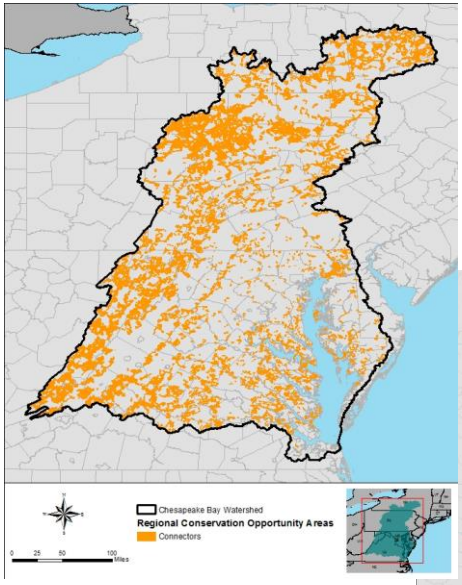
RESTORATION OPPORTUNITIES ANALYSIS:
WETLAND RESTORATION EXAMPLE (STATE SCALE)

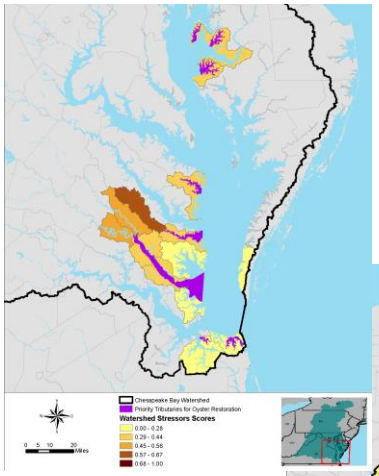
State Scale – no new geospatial analyses at state scale:

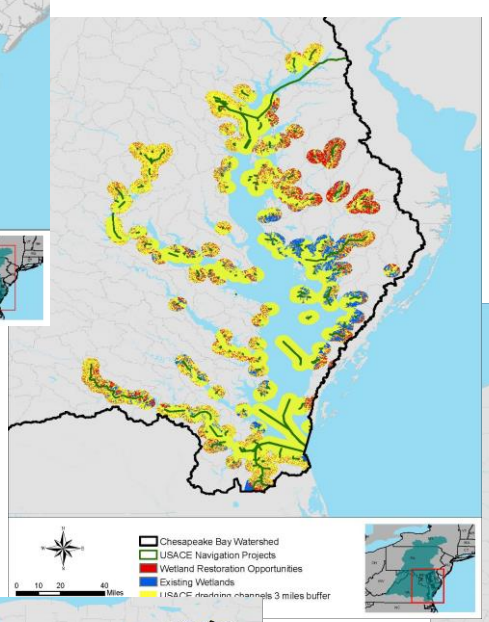


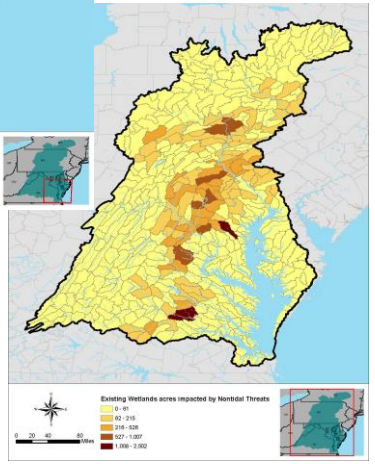
- Watershed-wide results that are “clipped” maps per state (NY, PA, WV, MD, DE, and VA) and the District of Columbia
- Discussion focused on results presented in a corresponding chapter in State and District of Columbia Chapters

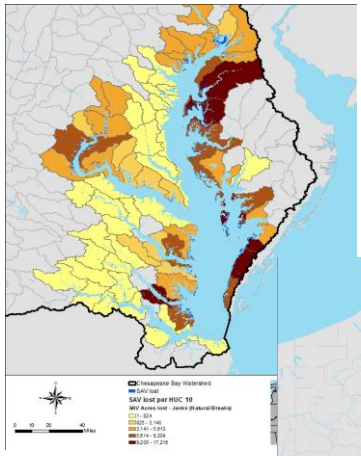
Numerous analyses were conducted…

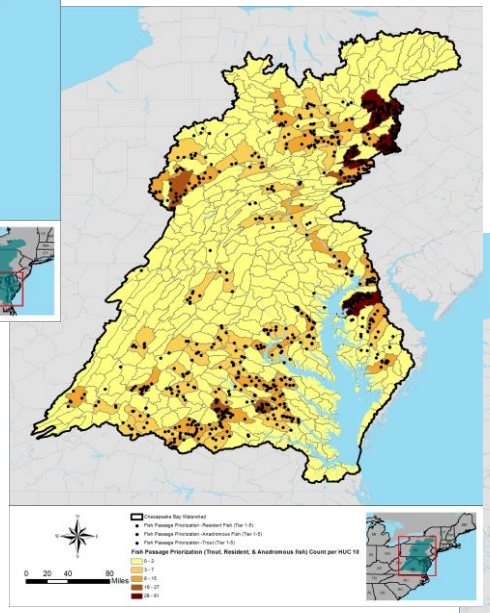


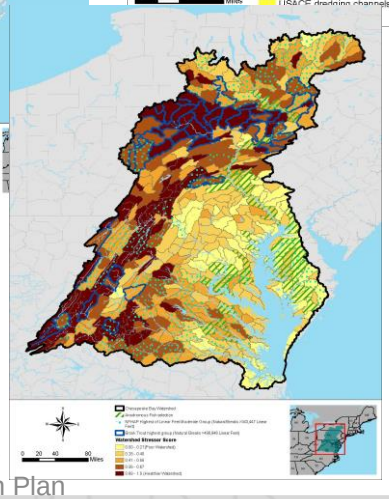


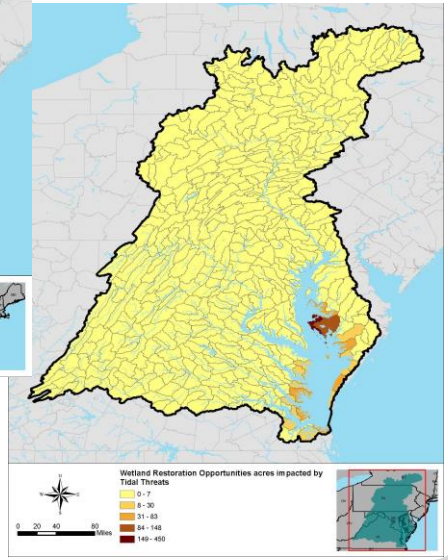






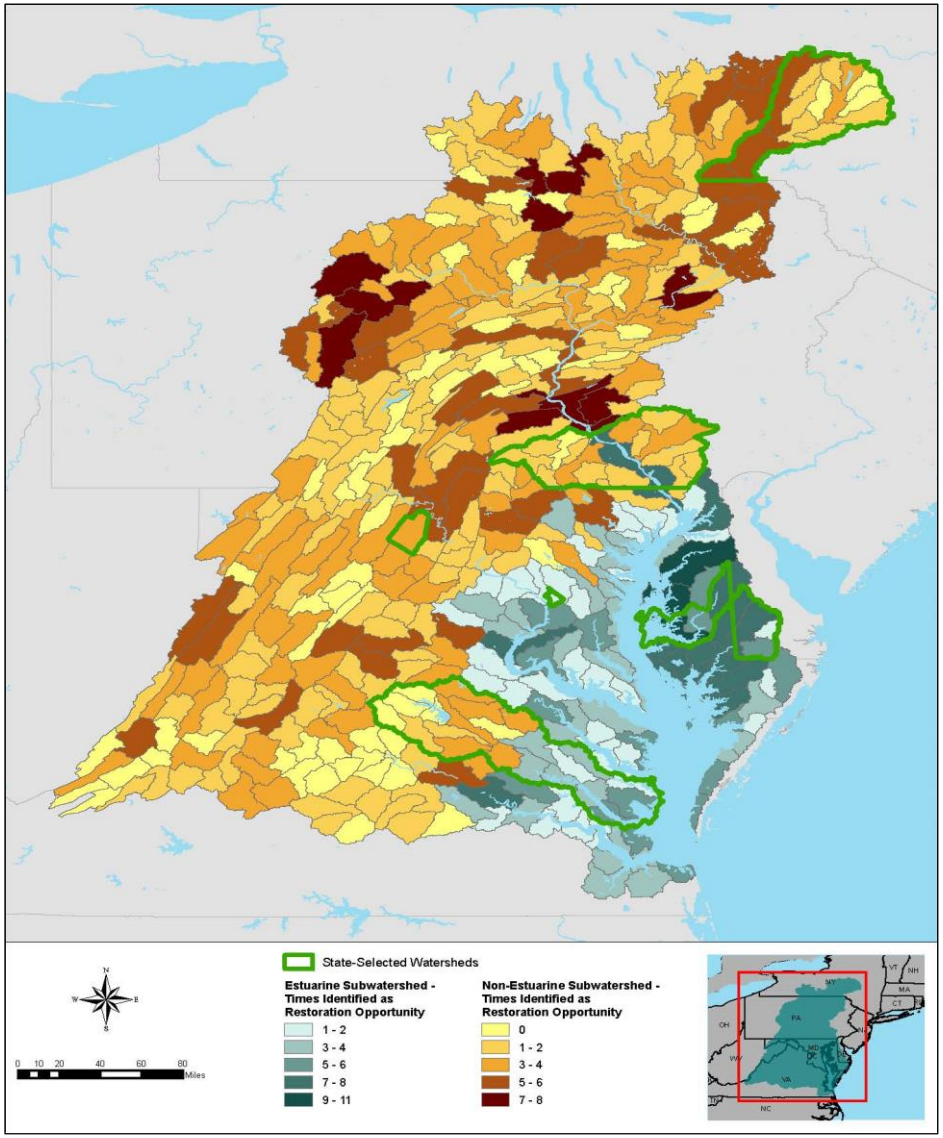






…and then overlaid

RESTORATION ROADMAP: AN INTEGRATED ANALYSIS OF OPPORTUNITIES



ANALYSES OVERLAID FOR RESTORATION ROADMAP	
Estuarine	**Non-Estuarine**
Stream Restoration	Stream Restoration
Riparian Buffers	Riparian Buffers
Tidal Wetlands	Nontidal Wetlands
Nontidal Wetlands	Future Threats – Nontidal
Future Threats – Tidal and nontidal	Wetlands Benefiting Avian Wildlife
Eroding Shorelines	Conservation
Wetlands Benefiting Avian Wildlife	Policy – Threatened Healthy/ High Value Habitats - nontidal wetlands
Wetlands Where Dredged Material May Be Used – tidal and nontidal wetlands	Water Quality Improvements
Conservation	Toxic Contaminants
Policy –Threatened Healthy/ High Value Habitats (tidal areas)	Connectivity - Regional Flow
Oyster Restoration	
SAV Restoration	
Water Quality Improvements	
Toxic Contaminants	
Marsh Migration	
Connectivity - Regional Flow	

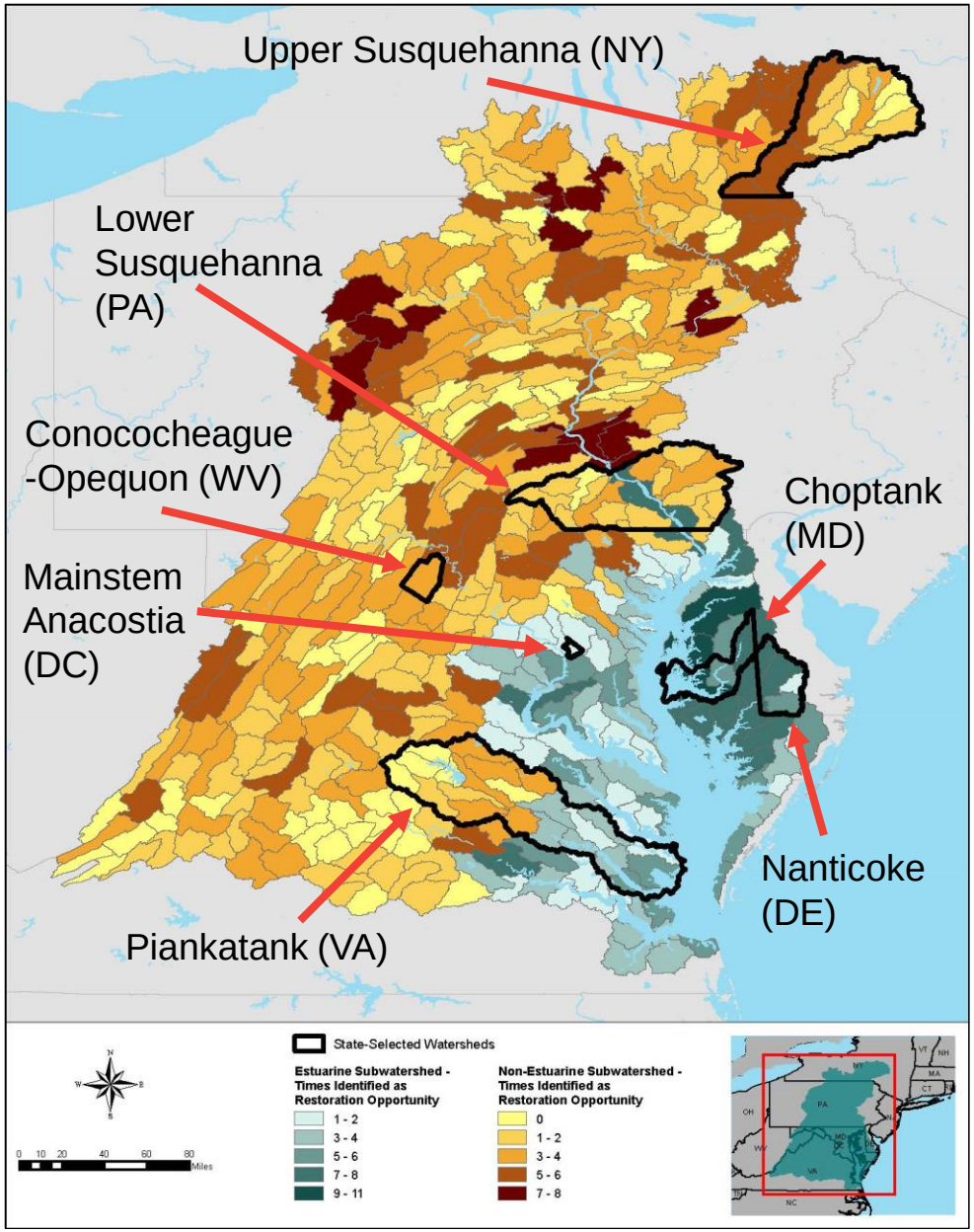
RESTORATION ROADMAP

Location			Measure, Costs, Benefits							
Subwatershed Name	Subwatershed Number	Jurisdiction	Management Measure	Unit of Measure	Area of Opportunity - Low	Area of Opportunity-High	Min Cost	Max Cost	Environmental Benefits	Ecosystem Good and Services
Lower Choptank River	0206000505	MD	Living shorelines	acres	1	4,795	$1,120	$1,220	Natural eroding shorelines provide sediment that creates and maintains shallow water habitat and beaches. Shoreline armoring causes the loss of natural shoreline habitat in the Bay. Natural eroding shorelines provide sediment that creates and maintains shoreline shallow water habitat and beaches.	Hazard mitigation (reduced risks to property, infrastructure, human safety); soil retention

Implementation					Significance		
Implementation Barriers	Potential for Future Threats	Threat Considerations	Number of Opportunties in Subwatershed	Sequencing	2014 Bay Agreement Goal/ Outcome	Presence of Federally Listed Species	Identified Opportunities
funding; user conflicts; land ownership; climate change/sea level rise; understanding of benefits	yes	tidal threats-coastal storm flooding; eroding shorelines (threaten wetlands); more frequent flooding; SLR	9	At high risk for erosion and a detailed analysis should be completed to determine how best to stabilize locations in this HUC depending on landscape. Living Shoreline could include stone toe + wetlands, wetland enhancement, dune plantings or riparian buffer.	Climate Resiliency	yes	1. oysters, 2. SAV, 3. eroding shorelines, 4. tidal wetlands, 5. non-tidal wetlands, 6.dredged material, 7. avian wildlife, 8. marsh migration, 9. streams

- Roadmap is a compilation of all opportunities identified
- Identifies the potential of a given subwatershed to address multiple 2014 Bay Agreement goals and outcomes; thereby providing co-benefits

CBCP STATE-SELECTED WATERSHED ANALYSES



STATE-SELECTED WATERSHED ANALYSES

- Coordinated Watersheds with State POCs
- Corroborated with CBCP geospatial analyses
- Presentation of a smaller scale implementation plan
  - Review of existing projects, ongoing efforts, Planned projects, reports, & studies

STATE-SELECTED WATERSHED ANALYSIS EXAMPLE – CHOPTANK RIVER, MD

PROBLEMS:

- Choptank is a heavily stressed watershed
- High priority for conservation and restoration based on work by federal agencies.
- Poor habitat connectivity
- High vulnerability to tidal threats such as:
  - Sea level change
  - Frequent flooding
  - Coastal storm risk
  - Erosion
  - Future development
- Loss of SAV Habitat

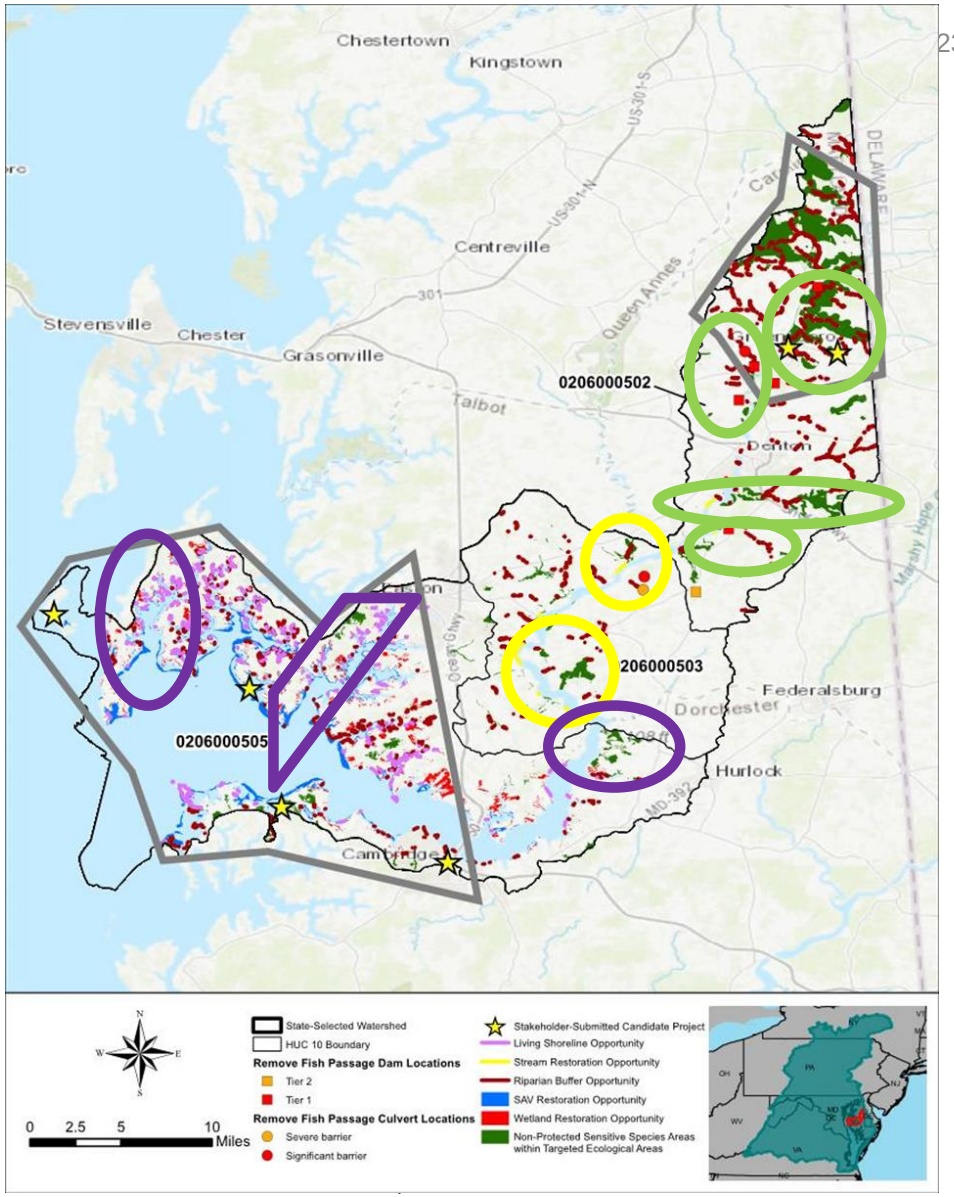
OPPORTUNITIES:

- Stream restoration to benefit anadromous fish & removal of fish passage blockages
- Oyster restoration
- Wetland/marsh restoration
  - Shoreline stabilization
  - Marsh migration
  - Restoration through substrate deposition

STATE-SELECTED WATERSHED ANALYSIS

CHOPTANK RIVER, MD

- Potential opportunities to address 2014 Chesapeake Bay Agreement Goals/Outcomes
  - Agricultural Best Management Practices (BMPs)
  - Living Shorelines (in Oyster sanctuaries)
  - Fish Passage
  - Wetland Restoration
  - Riparian Buffers



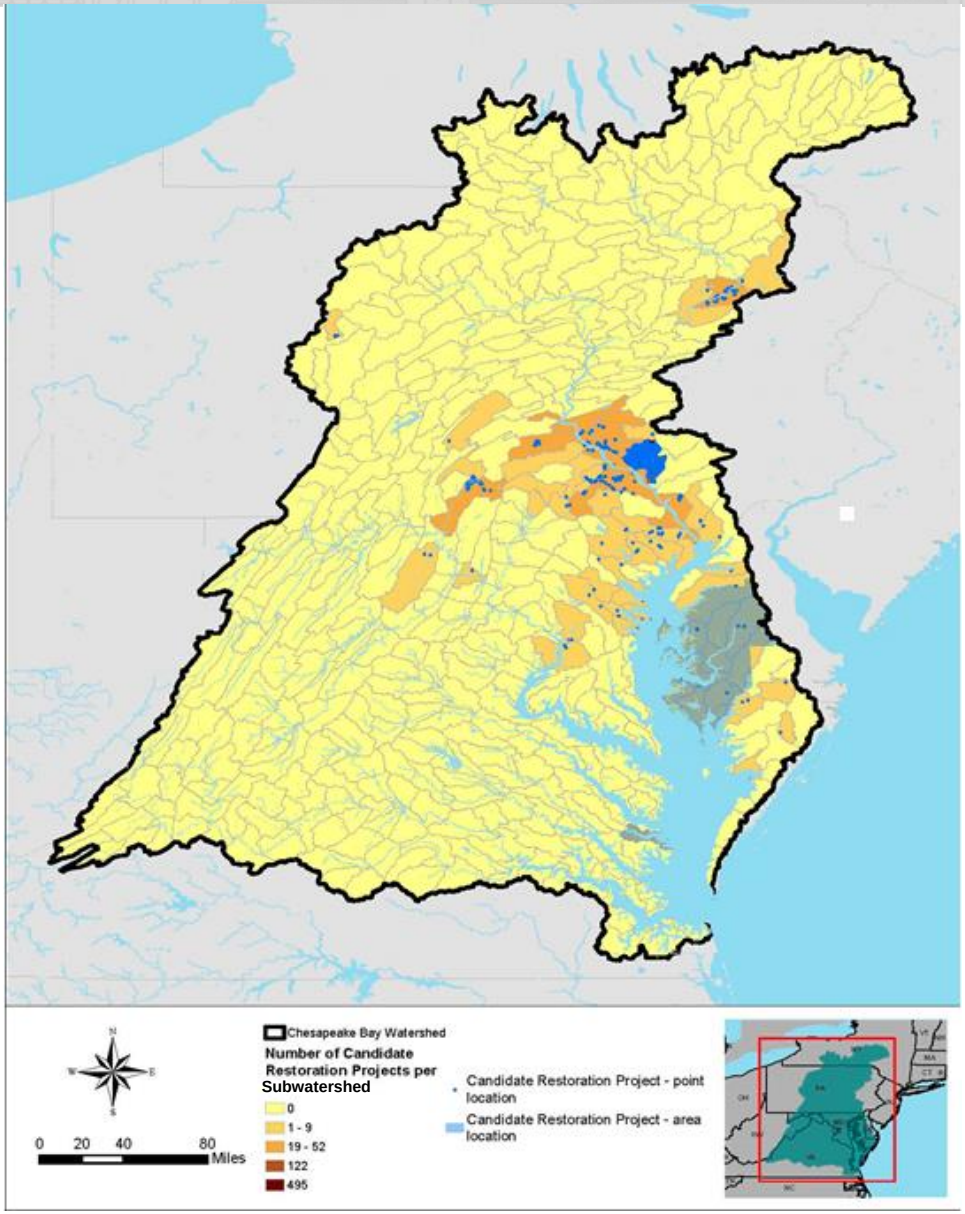
SUMMARY OF CHOPTANK WATERSHED RESTORATION AND CONSERVATION ACTIVITIES

Suggested Prioritization	Activity	Quantity	Details
1	Agricultural BMPs	Not computed	Implementation of agricultural BMPs will help realize improvements in ecosystem health throughout the Choptank watershed, which will aid in restoration of vegetation and habitat throughout the watershed. Agricultural nutrients contribute to stressors in the watershed; addressing these stressors will be critical prior to initiating other restoration opportunities.
2	Oyster Restoration Monitoring	504 acres	Oysters provide multiple benefits to the ecosystems in which they exist. They filter water, improving water quality; can provide shoreline stabilization, wave attenuation, and flood risk management benefits; and provide habitat and food for other plants and animals such as crabs, fish, and birds. Many oyster restoration efforts are currently underway in Broad Creek, Harris Creek, Island Creek, La Trappe Creek, and Tred Avon River. Monitoring and support of these efforts should continue to help improve other ecosystems within the watershed and promote clean water.
3	Conservation	61,520 acres	Several areas have been identified within the Choptank watershed as being priority areas for conservation because of their high ecological value. Programs like the Maryland DNR CREP exist to support the conservation of these areas.
4	Riparian Buffer Restoration	1,033 acres	Riparian buffers provide multiple benefits in the subwatershed, including shoreline stabilization and habitat creation, and provide water quality benefits to adjacent streams by preventing pollution from entering the waterways. Several riparian buffer opportunities were identified within the Choptank watershed, on the mainstem, and along tributaries.
5	Fish Passage	10 priority blockages	The dams and culverts within the Choptank watershed have been prioritized for removal based on their impact to ecosystems and habitat. Removal or replacement of the five high priority dams and six high priority stream crossings will improve ecosystem connectivity, expand available aquatic habitat, and may improve stream functionality and stream health.
6	Stream Restoration	2.6 miles	Areas of high erosion along the mainstem of the Choptank River were targeted for streambank stabilization and restoration. Restoration efforts would help retain soil and restore functionality of the stream for habitat and wildlife.
7	Living Shorelines	29.2 miles	Armored and natural areas of high erosion along the mainstem of the lower portions of the Choptank River were identified as priority sites for living shorelines, which provide natural habitat and additional flood risk mitigation benefits.
8	Wetland Restoration and Migration	26,486 acres	Several areas were identified for wetland restoration or migration. Those areas with the lowest cost-distance for implementation, such as Crosiadore Creek, Holmes Creek, and Reeds Creek, were targeted areas for wetland migration. Wetlands trap polluted rainfall runoff, improve receiving water quality, and provide fish habitat.
9	SAV Restoration	6,824 acres	Once water quality is improved within the Choptank watershed, SAV habitat can be restored. Areas of historic SAV habitat are prioritized for this restoration.

SECTION 510 PROGRAM AUTHORITY

- Section 510, WRDA 1996: “Pilot” design and construction technical assistance program for Chesapeake Bay watershed restoration and protection
- Section 5020, WRDA 2007: program increased from $10M to $40M
- Section 1040(a), WRRDA 2014: Identify projects in Chesapeake Bay Comprehensive Plan. Types of projects eligible for assistance:
  - Sediment and Erosion Control;
  - Protection of Eroding Shorelines;
  - Ecosystem Restoration, including Submerged Aquatic Vegetation;
  - Protection of Essential Public Works;
  - Beneficial Uses of Dredged Material;
  - Other related projects to enhance living resources of the estuary
- Carried out in coordination/cooperation with federal, state and local government agencies—avoid duplication of efforts
- Allows implementation on federal lands at agency expense and can include non-Federal contributions to agency

STAKEHOLDER SUBMITTED CANDIDATE RESTORATION PROJECTS



	Roadmap Summary		Candidate Projects	
Jurisdiction	Number of Opportunities in Jurisdiction	Opportunities Identified in Jurisdiction	Identified by Stakeholders	Identified Strategies in Action Plan for Project Identification
DC	1	toxics	17	4
NY	23 - solely in NY; 8 with PA	wetlands, streams, riparian buffers, toxics, conservation	0	5
PA	147 - solely in PA: 8 with NY; 15 with MD	wetlands, streams, riparian buffers, toxics, conservation, brook trout, fish passage, policy/conservation	875	5
MD	74- solely MD; 19 joint with PA, DE; 14 with PA; 16 with VA; 4 with WV	streams, wetlands, use of dredged material, marsh migration, oysters, policy/conservation, toxics, WQ/SAV, fish passage, living shorelines, riparian buffers	62	9
VA	93 - solely in VA, 9 with WV, 16 with MD	sreams, riparian buffers, wetlands, benifical use, WQ/SAV, brook trout, oysters, toxics, policy/conservation, marsh migration, living shorlines, fish passage, conservation	1	9
DE	3 solely in DE; 18 joint with MD, PA	wetlands, marsh migration, riparian buffers, shoreline stabilization, policy/conservation, toxics, WQ/SAV	0	6
WV	8 solely in WV; 9 with VA; 4 with MD	streams, wetlands, riparian buffers, fish passage, conservation	2	7

Chat to everyone: Do you have any additional candidate restoration projects or concerns about submitting an idea? Please make a comment in the chat and we will follow up with you.

Example Restoration Projects: Stream Restoration, Riparian Buffer Restoration, Nontidal/Tidal Wetland Restoration, Fish Passage Blockage Removal, Shoreline Stabilization, Oysters and Submerged Aquatic Vegetation Rest

FINDINGS

- There are broad Bay-wide opportunities to contribute to meeting 2014 Bay Agreement Goals and Outcomes. The CBCP has identified *Opportunities* for specific restoration and conservation.
- Limitations to where USACE can implement, so opportunities identified for stakeholders as well:
  - riparian buffers
  - acid mine drainage
  - water quality
  - land conservation
  - remediate and control toxic contaminants
- The CBCP also presents findings to address future threats, strategies for improving habitat connectivity and building resiliency throughout the watershed, and considerations for incorporating species of concern into future implementation.

FINDINGS

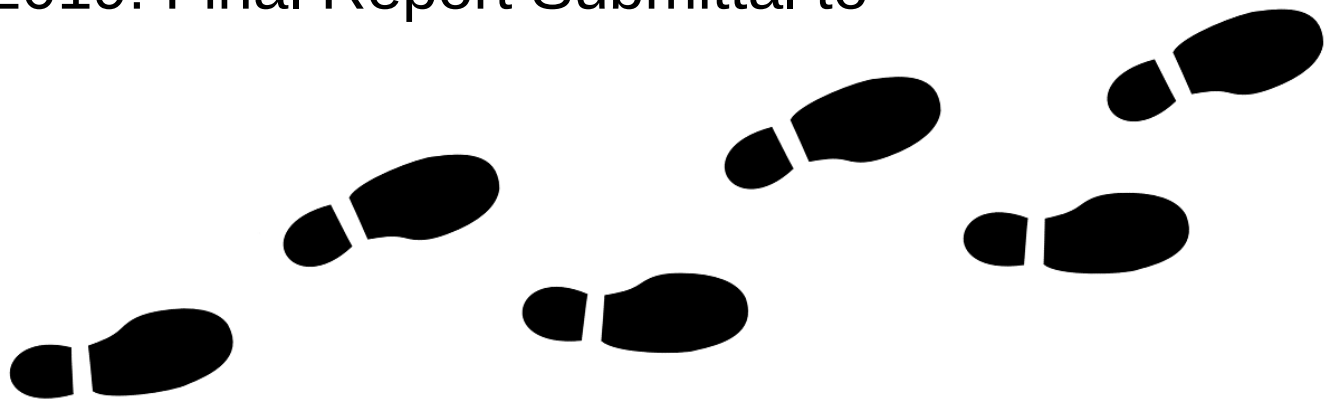
- 2014 Bay Agreement identifies ‘who’ and ‘what’ - CBCP identified where (by subwatershed and in state-selected watershed action plans)
- There are opportunities to focus planning and zoning policy on preserving high ranked healthy habitats and important socioeconomic areas that are at risk.
- Work continues to generate a portfolio of potential projects in subwatersheds throughout the Chesapeake Bay Watershed.
- Cost efficiencies, innovative financing, and expanding partners and markets will be key to getting projects in the ground.

RECOMMENDATIONS

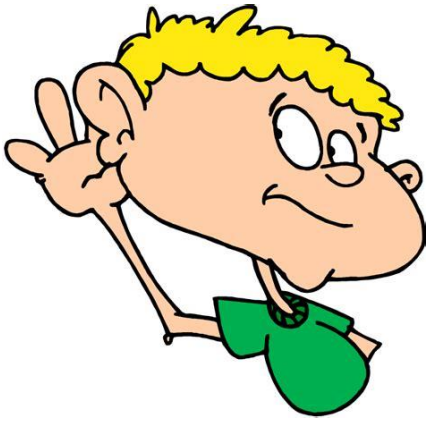
- Optimize actions geographically to maximize benefits and contributions toward the 2014 Bay Agreement goals and outcomes
- Promote conservation/enhancement opportunities adjacent to existing healthy/high value habitats
- Address watershed stressors in degraded habitats
- Promote integrated water resources management and plan for future threats
- Encourage, develop, and support relationships that lead to restoration success
- Employ tracking actions to manage implementation of restoration actions

NEXT STEPS…

- May 2018: Complete Internal Reviews
  - Release Draft Report for Agency and Public Review – May 31, 2018
- June 2018: Public Review
- Summer – Winter 2018: Revisions and Final Draft Report Submission to USACE Headquarters
- Summer 2019: Final Report Submittal to Congress



STAKEHOLDER FEEDBACK



- We are interested in hearing from you -
  - Project recommendations
  - Specifically, we want to know what you think of 'concentrated areas' in the state-selected watersheds. We have found that these areas have the highest concentration of potential multi-benefit projects.
- The CBCP Report and Products will be available on the project website: http://www.nab.usace.army.mil/Missions/Civil-Works/Chesapeake-Bay-Comprehensive-Plan/
- There will be 30 days to review the Report after its release on May 31, 2018
- Comments and feedback can be emailed to: ChesBayCompPlan@usace.army.mil

Chat to everyone: How can we disseminate the draft report to the broadest audience possible? How can we help you share the report to the most local level for feedback?

Example ideas: Participate in any discussion you have about the report, webinars, attend meetings, etc.

QUESTIONS?

Annotate on the slide: How useful and informative was this webinar series (3 webinars 2017-2018)? If you have any suggestions or feedback, please use the chat.

Not useful
or informative

Very useful and
informative