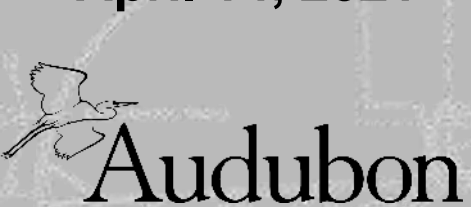


# WICOMICO RIVER MAINTENANCE DREDGING & DEAL ISLAND WETLAND RESTORATION

U.S. Army Corps of Engineers  
Baltimore District

April 14, 2021





# AGENDA



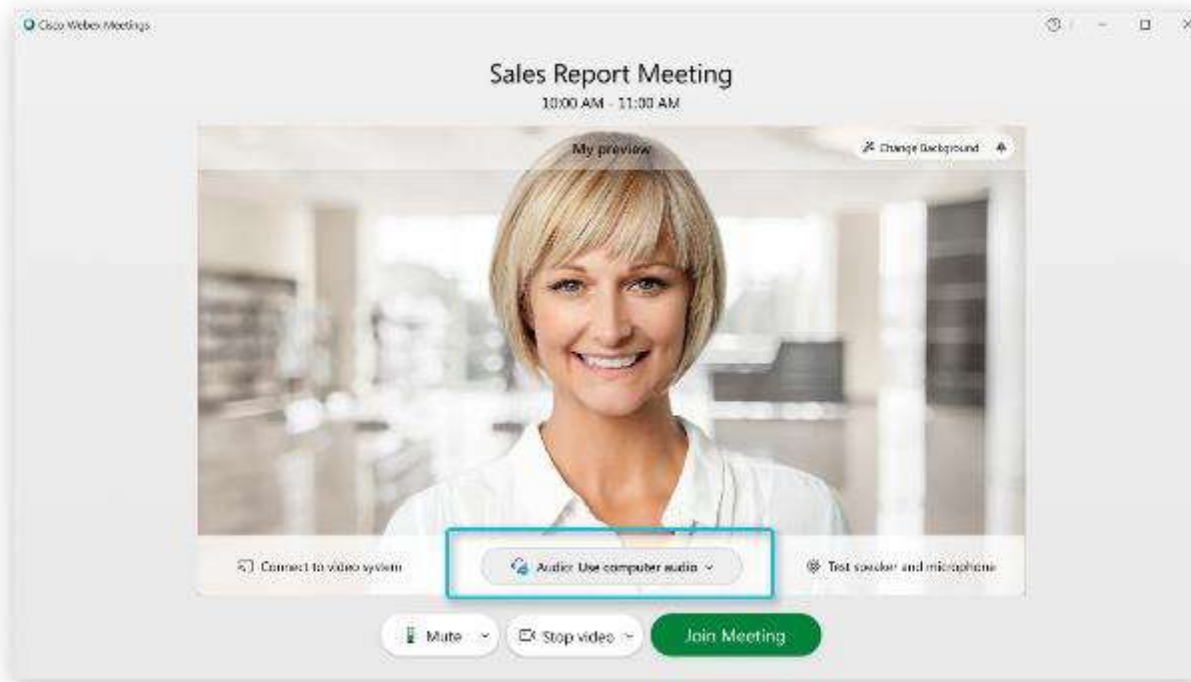
- 6:00-6:05 – Welcome & Virtual Meeting Ground Rules (USACE)
- 6:05-6:15 – Project Manager, Non-Federal Sponsor and Project Partner Introductions (All)
- 6:15-7:15 – Presentation
  - Wicomico River Project Background & Benefits (USACE)
  - Placement Site History & Selection (Wicomico County)
  - Deal Island WMA Site (USACE, USFWS, Audubon)
  - Guidance, Regulations & Considerations (USACE)
  - Dredging Plan (USACE)
  - Placement & Vegetation Plan (USACE)
  - Monitoring & Measuring Success (Audubon, USFWS, NOAA)
- 7:15-7:50 – Question & Answer Period
- 7:50-8:00 – Wrap-up (USACE)



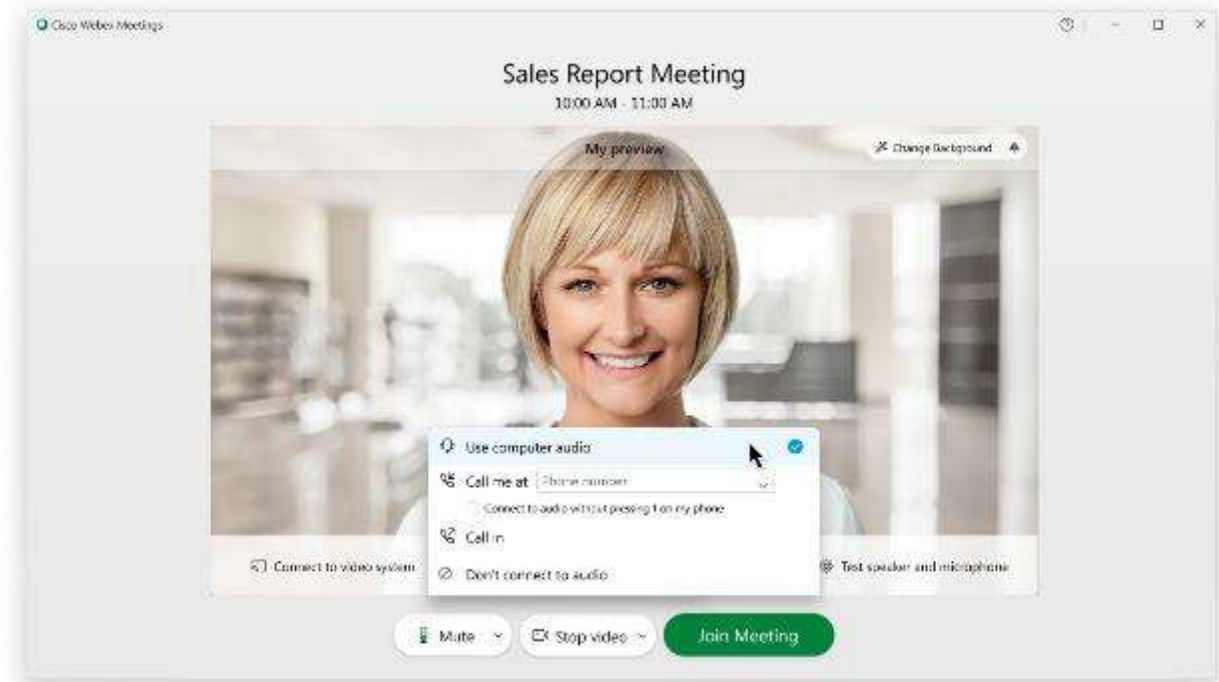
# HOW TO CONNECT TO AUDIO



## Step 1.

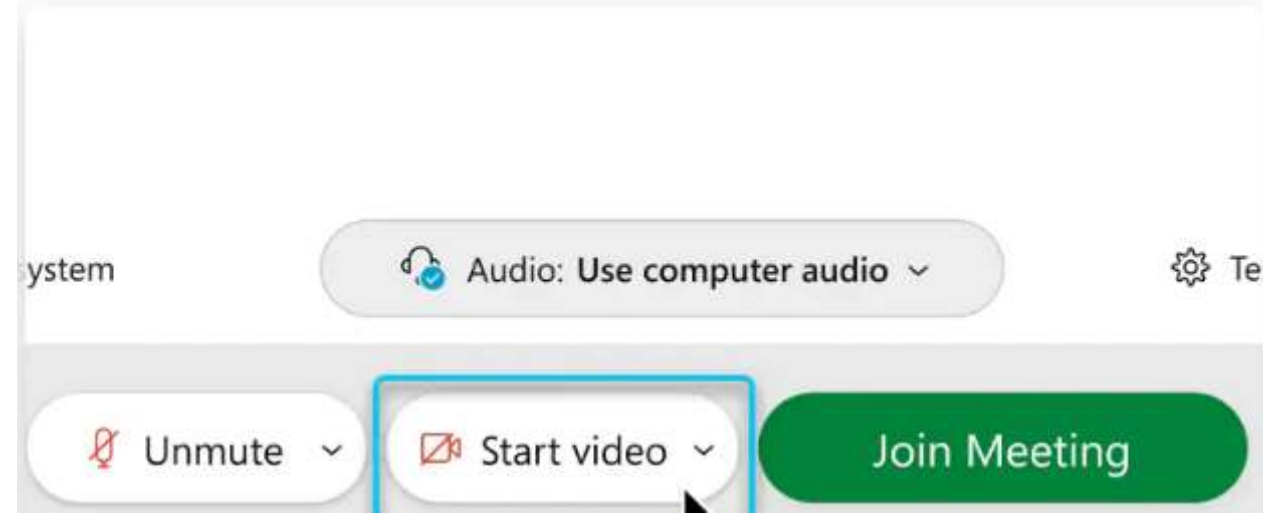
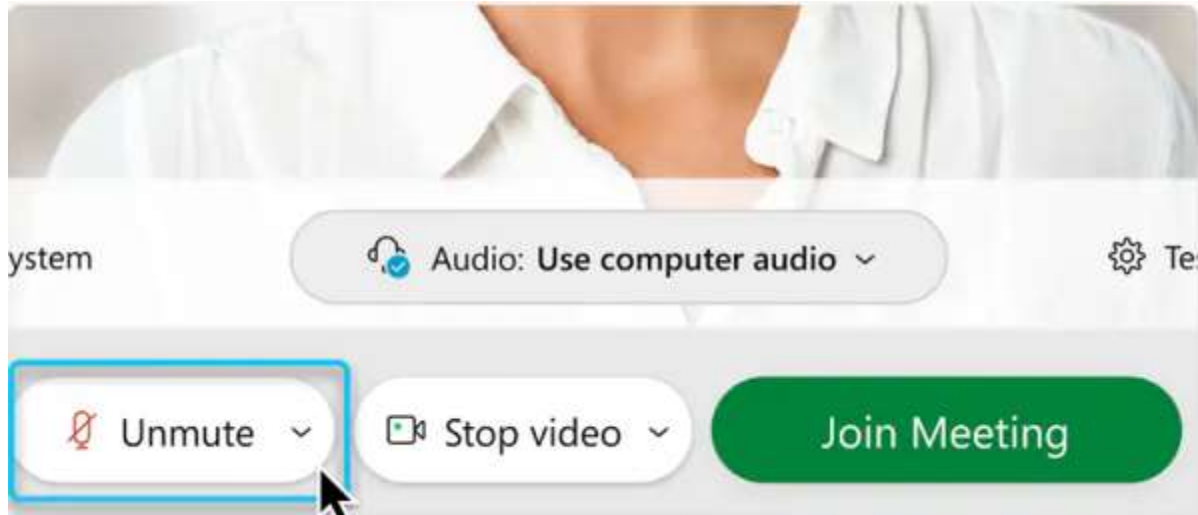


## Step 2.





# PLEASE MAKE SURE YOUR VIDEO AND AUDIO ARE OFF



- The unmute button is locked until the moderator allows you to unmute during Q&A.
- Please utilize the chat box, too. The moderator will address your question at Q&A.



# HOW TO USE WEBEX FUNCTIONS



## Getting started

Change your **Video Layout** to control where you view video participants and panels on your screen.

Choose **Floating Panel View** to position any panel where you want it - even on a second monitor.

Access the **Meeting Info** to get details about the meeting.

Meeting controls are easy to find at a glance.

## Webex reactions

**Raise hand**

Send reaction

Recognize hand gestures

**Mute** **Stop video** **Share** **Record**



# VIRTUAL MEETING GROUND RULES



- Thank you for attending!
- All general attendees will be muted
- Please hold questions until the Q&A period
- Questions sent via chat will be addressed first, then opened to those participating by phone
- Slide presentation and recorded meeting will be posted on project web page:  
<https://www.nab.usace.army.mil/Missions/Civil-Works/Wicomico-River-Maintenance-Dredging-Project/>





# INTRODUCTIONS



U.S. Army Corps of Engineers, Baltimore District



Wicomico County (Non-federal sponsor)



U.S. Fish & Wildlife Service (USFWS)



National Oceanic & Atmospheric Administration (NOAA)



Maryland Department of Natural Resources (DNR)



Audubon Mid-Atlantic



# SPEAKERS



**Graham McAllister**  
USACE, Baltimore District  
Navigation program manager



**Danielle Szimanski**  
USACE, Baltimore District  
Wicomico River project manager



**Mark Whitelock**  
Wicomico County  
Deputy Director for Public Works



**Bart Wilson**  
U.S. Fish and Wildlife Service  
Restoration project manager



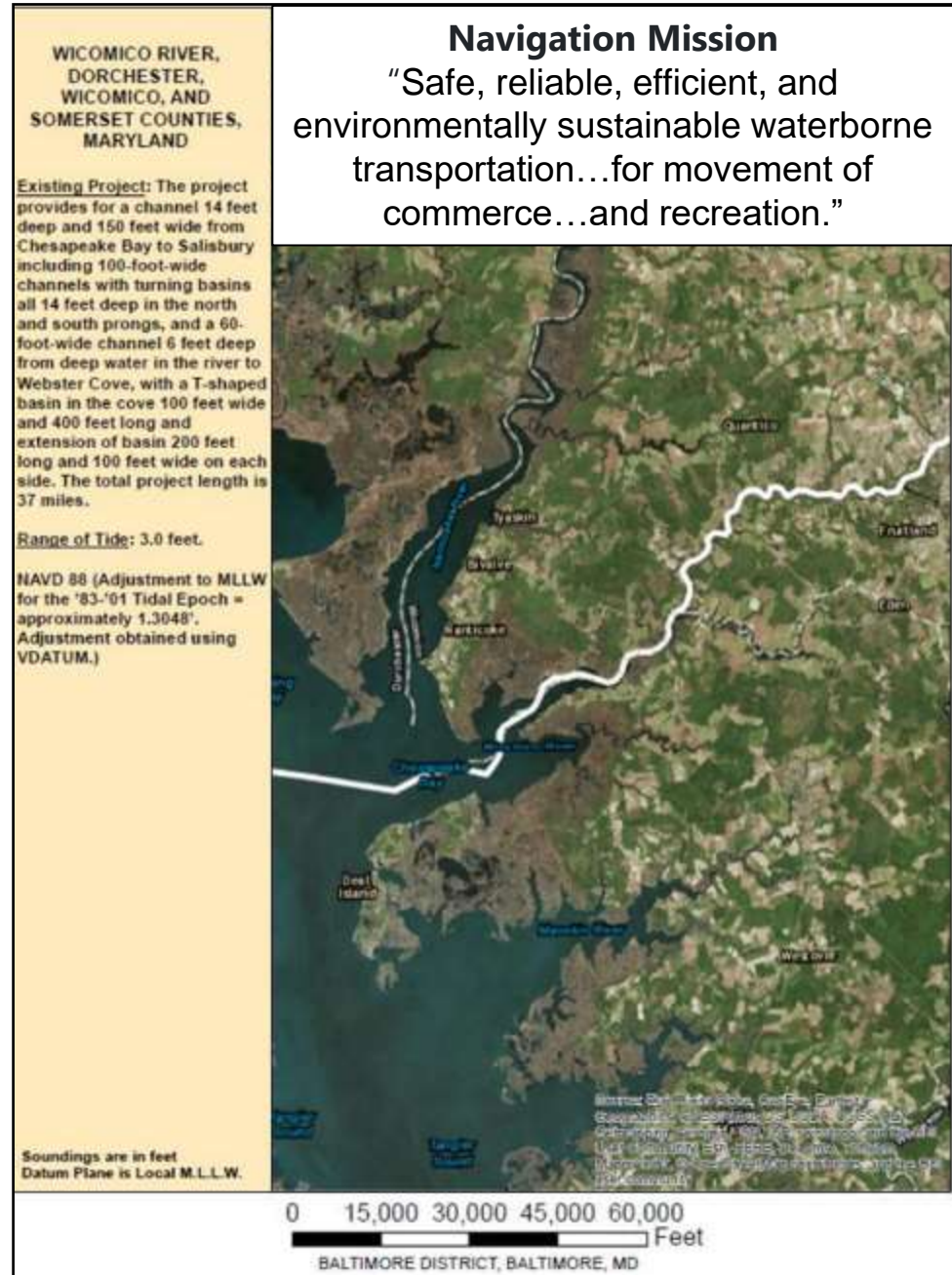
**Dave Curson**  
Audubon Mid-Atlantic  
Director of Bird Conservation





# PROJECT BACKGROUND

- Authorized in 1890, USACE Navigation Mission
- Commerce & Environmental impacts
  - ~1 million tons moved annually
  - 1 barge = 70 semis = 1,050 tractor-trailers
- Maintenance Phase
  - ~100,000 cubic yards dredged annually
    - Alternate between upper and lower reaches
- Sediment Characterization
- Federal/Non-Federal Sponsor Responsibilities
  - Dredging 100% federally funded
  - Non-Federal Sponsor provides placement





# EFFICIENT TRANSPORT



## Why Marine Highways

### EQUIVALENT UNITS

ONE BARGE

16 RAIL CARS

70 LARGE SEMIS/TRACTOR TRAILERS

ONE 15-BARGE TOW AND TOW BOAT

6 LOCOMOTIVES & 216 RAIL CARS

1,050 LARGE SEMIS/TRACTOR TRAILERS



# ENVIRONMENTAL BENEFITS

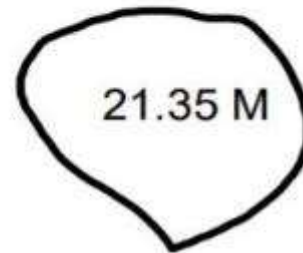


## Environmentally Friendly

Barges have the smallest carbon footprint among other transportation modes.

*Moving an identical amount of cargo by barge:*

- Rail generates 30% more carbon dioxide
- Truck 1,000% carbon dioxide



*Tons of Co2 per Million Ton-miles*

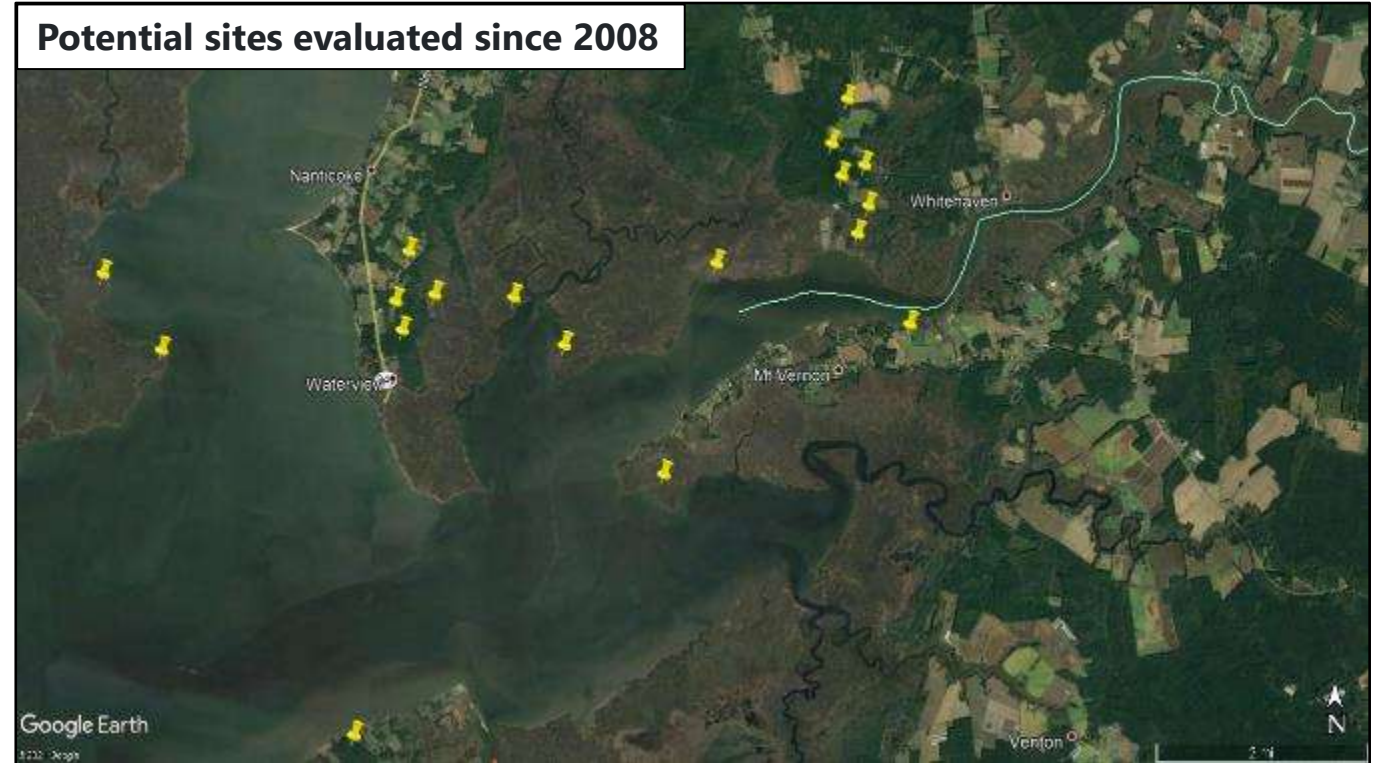




# PLACEMENT SITE HISTORY & SEARCH EFFORTS



- Challenge of placement capacity
  - Prevalence of wetlands
  - Need relatively large area
- Clara Road site last used 2013
- Future site search started 2008
- Evaluated/investigated 15+ sites
- Deal Island WMA
- Preference for beneficial use





# DEAL ISLAND SITE (AUDUBON)



- Tidal marshes threatened by sea level rise.  
Ecosystem services at stake:
  - Nursery areas for fisheries.
  - Storm surge buffer.
  - Filter for sediment, N, P pollutants.
  - Recreation and tourism.
- Goals for this project:
  - Wicomico River shipping channel.
  - Protect impoundment berm
  - Create habitat for threatened species
    - Salt Marsh Sparrow (extinct by 2050?)
    - Black Rail (90% decline since 1990).

Partnership approach has great potential



**Black Rail**



**Salt Marsh Sparrow**



# DEAL ISLAND SITE (USFWS)



- Project partners evaluated in 2019
  - Find degraded marsh in need of elevation
- Future potential
  - Building on current and past projects
    - MD, DE, RI, and NJ
- Containment
  - Straw bales, ditch plugs, sand berms
- Placement
  - Sediment sprayed in layers or lobes
  - Pipe moved as areas reach goal elevation
  - Can't be spread with equipment
- Recovery
  - Marsh Vegetation – 2 to 5 years
    - Thicker areas will be seeded and/or planted



07/2015



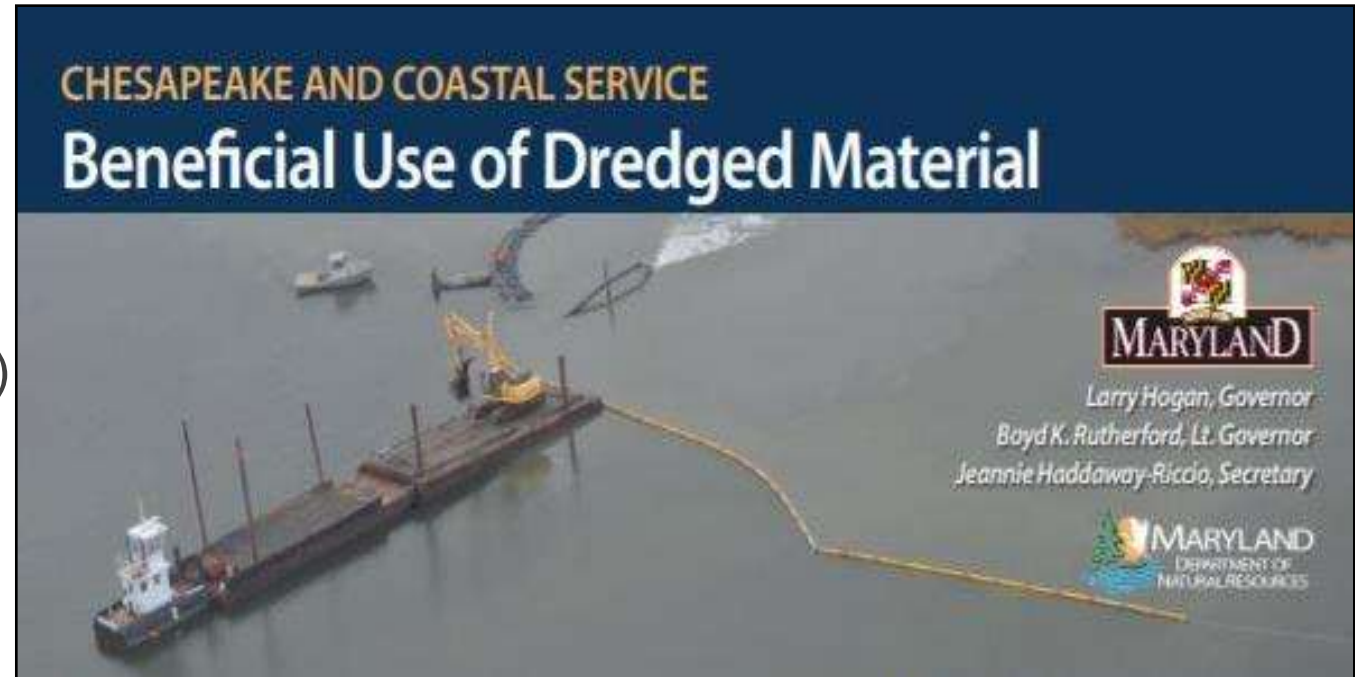
06/2017



# GUIDANCE, REGULATIONS & CONSIDERATIONS



- Federal Standard
- Beneficial Use of Dredged Material
  - Enhancing coastal resilience
- Governor's Executive Order (01.01.2017.13)
- Coordination
- Time-of-Year restrictions
  - Anadromous fish
  - Oysters
  - Waterfowl
  - Submerged Aquatic Vegetation
  - **Dredging mid-Oct through mid-Feb**
- Team effort from start to finish!





# DREDGING PLAN



- Authorized to 14 ft. deep MLLW and 150 ft. wide
- Lower half of Wicomico River dredged ~2 years
  - Operations and Maintenance (O&M) funding
  - Last dredged in 2017, placement at Ellis Bay
- Dredge from Shark Fin Shoal to Whitehaven
- ~130,000 cubic yards (cy) dredged this cycle
- Hydraulic (cutter-suction) method
- Safety
  - Dredging announced via USCG LNM
  - Pipeline routed to minimize impacts
  - Pipeline marked per USACE/USCG guidance





# PLACEMENT & VEGETATION PLAN



- ~72 acres of wetland to be used this cycle
- Containment
  - Impoundment & straw bales
  - Tidal ditch plugs at heavy erosion areas
  - 100-750 ft from marsh edge on Manokin River
- Placement
  - Target elevation 1.5 ft above existing
  - Estimate 2-4 in of compaction
  - Pipeline discharge from existing berm
  - Diffuser/spreader to reduce velocity
  - Contractor, USACE, Habitat Expert Observer
- Planting to occur over 2 growing seasons
  - Aerial seeding & planting by hand



# MONITORING & MEASURING SUCCESS



- Long-term effort and partnership
- Pre- and Post-Placement monitoring
  - Elevation – USACE/USFWS
  - Invasive control – Wicomico County
  - Vegetation type/coverage – USFWS/NOAA
  - Vegetation Biomass – NOAA
  - Bird populations – Audubon
  - Submerged Aquatic Veg – DNR/NOAA
  - Hydrodynamics – U.S. Naval Academy

	Monitoring*					
	Baseline (Year)	Post-placement (Year)				
	1	1	2	3	4	5
Elevation	X	x	X	x		
Invasive Species Control	X	x	X	x	x	x
Vegetation Type & Coverage	X	x	X	x	x	x
Vegetation Biomass	X	x	x			
Bird populations	X	x	X	x	x	x
Submerged Aquatic Vegetation	X	x	X			
Hydrodynamics	x	x	X			
Sediment Chemistry/Characterization	x	x	x	x		

\* Monitoring Plan has not been finalized



# GUIDANCE FOR QUESTION & ANSWER PERIOD



# TO ASK A QUESTION, RAISE HAND OR ENTER IN CHAT

## Chat in lower right

## Webex reactions – Raise hand

Change your Video Layout to control where you view video participants and panels on your screen.

Choose Floating Panel View to position any panel where you want it - even on a second monitor.

Access the Meeting Info to get details about the meeting.

Meeting controls are easy to find at a glance.

Raise hand

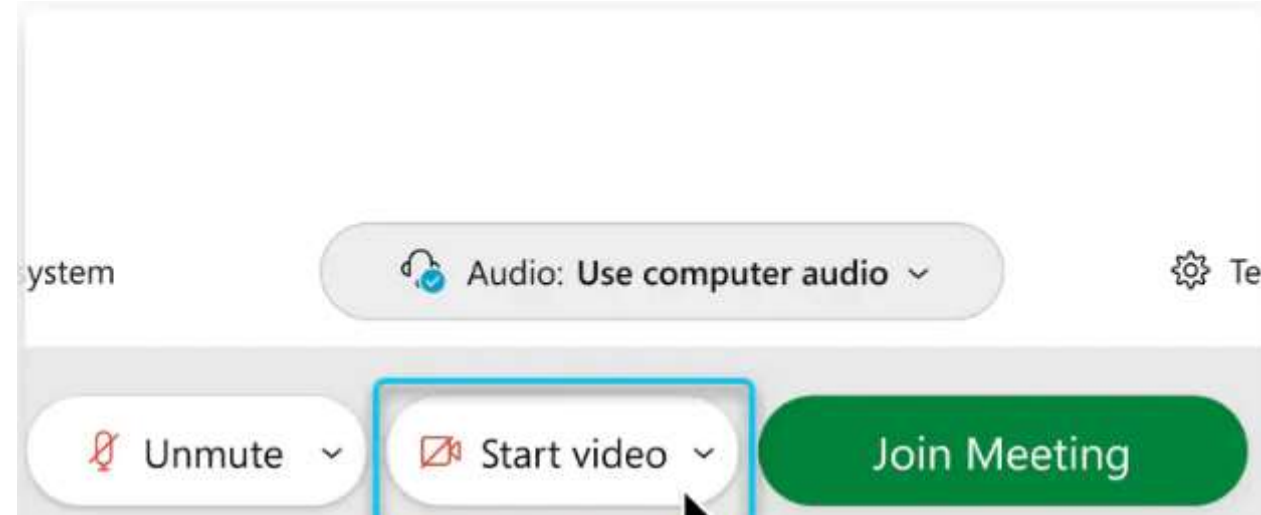
Send reaction

Recognize hand gestures

Mute Stop video Share Record



# PLEASE MAKE SURE YOUR VIDEO AND AUDIO ARE OFF



- The unmute button is locked until the moderator allows you to unmute during Q&A.



# QUESTION & ANSWER PERIOD



# PROJECT POINTS OF CONTACT



## USACE

Danielle Szimanski

Project Manager

Navigation Section

[Danielle.m.szimanski@usace.army.mil](mailto:Danielle.m.szimanski@usace.army.mil)

## Wicomico County

Chris Clasing

Chief Civil Engineer

Department of Public Works

[cclasing@wicomicocounty.org](mailto:cclasing@wicomicocounty.org)

**Project web page:** <https://www.nab.usace.army.mil/Missions/Civil-Works/Wicomico-River-Maintenance-Dredging-Project/>

A wide, shallow body of water, possibly a bay or estuary, with a grassy shoreline. The water is calm with gentle ripples. The sky is a clear, bright blue. The text "THANK YOU!" is overlaid in the center of the image.

**THANK YOU!**