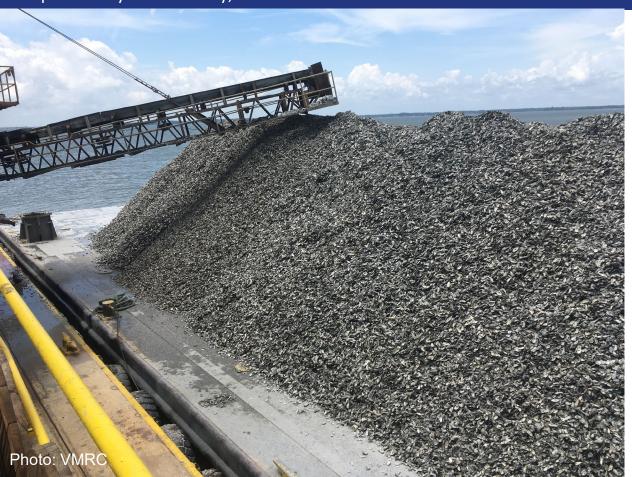
#### **Annual Update on**

## **Oyster Restoration Progress**

toward the Chesapeake Bay Watershed Agreement 'Ten Tributaries by 2025' Oyster Outcome

Presenters:
Andrew Button, VMRC
Stephanie Reynolds Westby, NOAA



#### Partners include:

Chesapeake Bay Foundation Christopher Newport University City of Norfolk City of Virginia Beach CSX Elizabeth River Project Lynnhaven River NOW Maryland Department of Natural Resources National Fish and Wildlife Foundation National Oceanic and Atmospheric Administration The Nature Conservancy **Oyster Recovery Partnership** The Pew Charitable Trusts Pleasure House Oysters/Ludford Brothers Oyster Company University of Maryland U.S. Army Corps of Engineers Virginia Commonwealth University Virginia Institute of Marine Science Virginia Marine Resources Commission

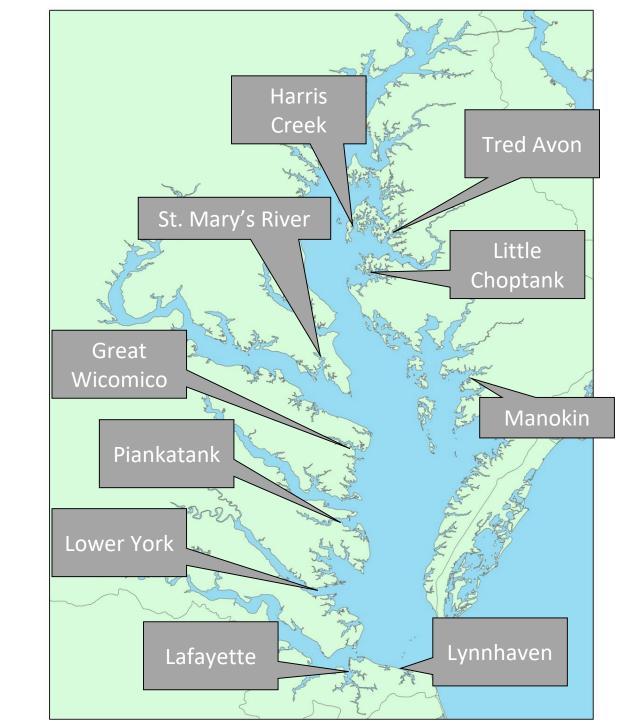
ALL NUMBERS ARE DRAFT,
and subject to change pending the publication of the
2022 Chesapeake Bay Oyster Restoration Update
(to be posted on the Chesapeake Bay Program website,
<a href="https://www.chesapeakebay.net/who/publications-archive/maryland-and-virginia-oyster-restoration-interagency-teams">https://www.chesapeakebay.net/who/publications-archive/maryland-and-virginia-oyster-restoration-interagency-teams</a>)



### **Bay-Wide Progress toward the '10 Tributaries' Outcome**

Planning: 100% complete

- Ten tributaries selected.
- Ten Blueprints (restoration plans) completed.



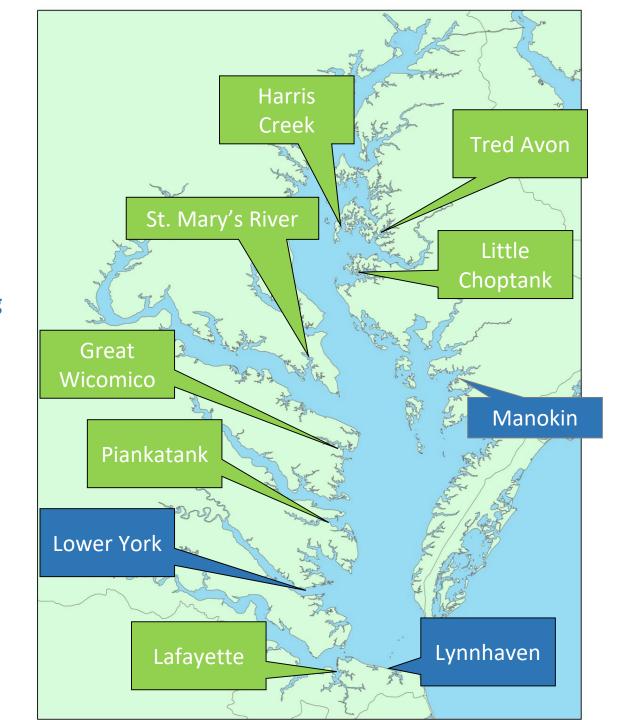
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#### **Progress by Tributary:**

- Initial restoration complete in seven tributaries (70%)
- In-water restoration work is ongoing in the remaining three tributaries



# A Word on Acres...

Unit of measure toward each tributary goal ('blueprint goal'):

Acres of reefs, functioning at a certain level (per Oyster Metrics success criteria)

Unit of Measure:

# of tributaries completed Goal:

Restore oysters in 10 tributaries

# Purpose:

- Improve a broad suite of ecosystem services provided by oysters;
- Improve the health of the Chesapeake Bay,
- Etc.

### **Bay-Wide Progress**

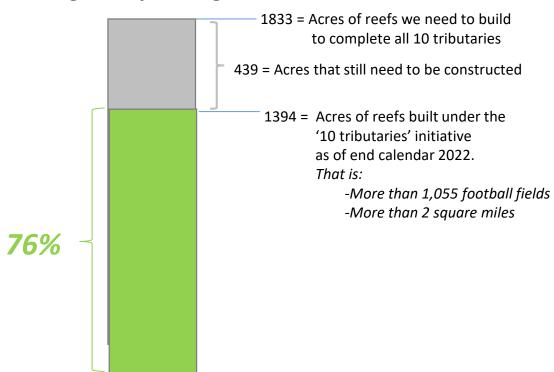
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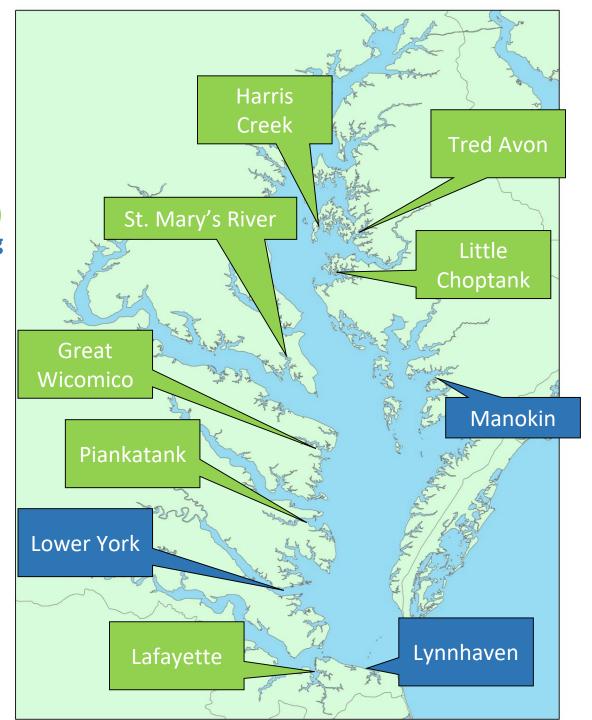
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### **Progress by Acreage in Need of Restoration:**

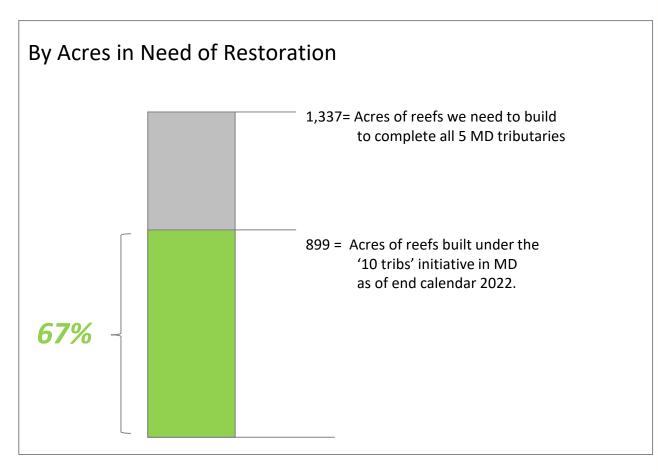


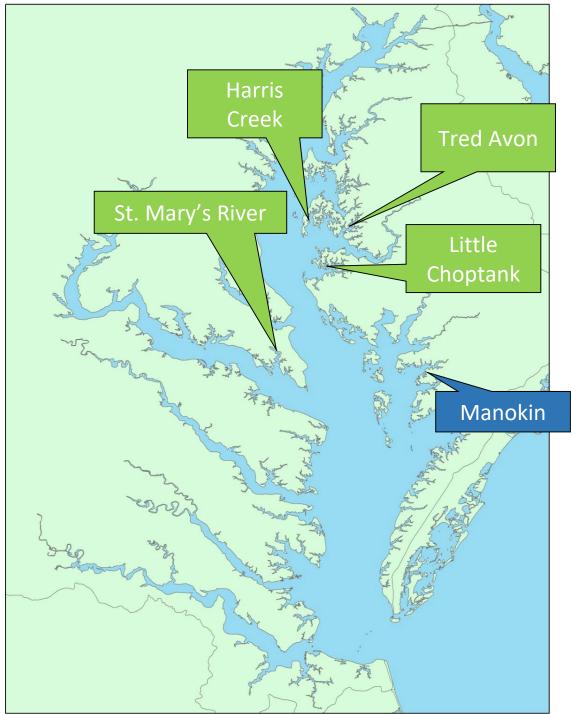


### **MD Summary**

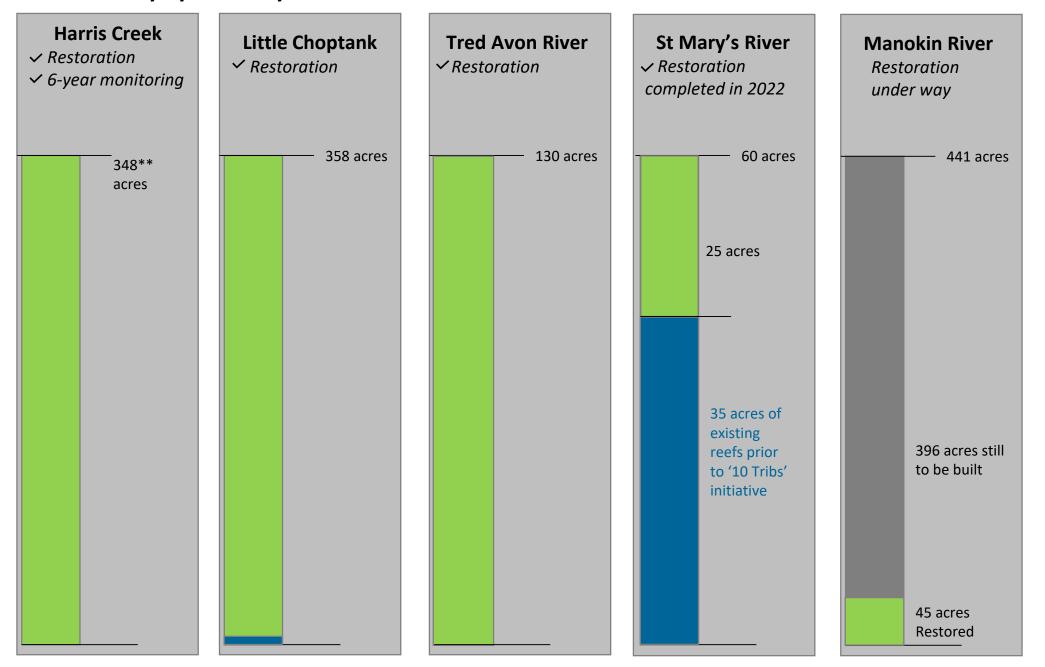
### By Number of Tributaries:

- 4 of 5 complete (80%)
- St Mary's: completed in 2022
- Manokin: slated for 2025 completion





### **MD Summary by Tributary:**



### **MD Highlights and Challenges**

### **Highlights**

- Good natural spat sets in 2020, 2021, and 2022- including in Tred Avon, which is a lower natural recruitment area.
- Completed initial restoration in St. Mary's River; celebration event at St Mary's College
- Stone reef construction started in Manokin River in 2022.
- U of MD Horn Point Hatchery produced more than 511 million spat-on-shell for the five MD restoration sanctuaries.



### **Challenges:**

- Opposition from wild harvest industry resulted in construction delays in Manokin
- Manokin is the largest tributary yet in terms of acreage (but it is also a high-natural-recruitment area, so it may need less hatchery seed).
- Shell is in short supply; could impact spat-on-shell production for seeding remaining reefs.
- Low spat-on-shell production in 2019 (fresh water year), and 2020 (covid).

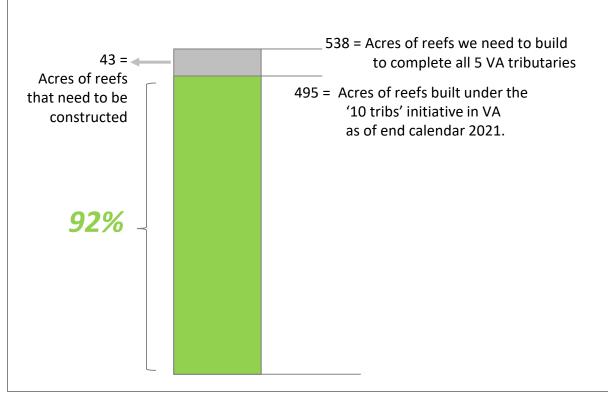
Photo: Oyster Recovery Partnership

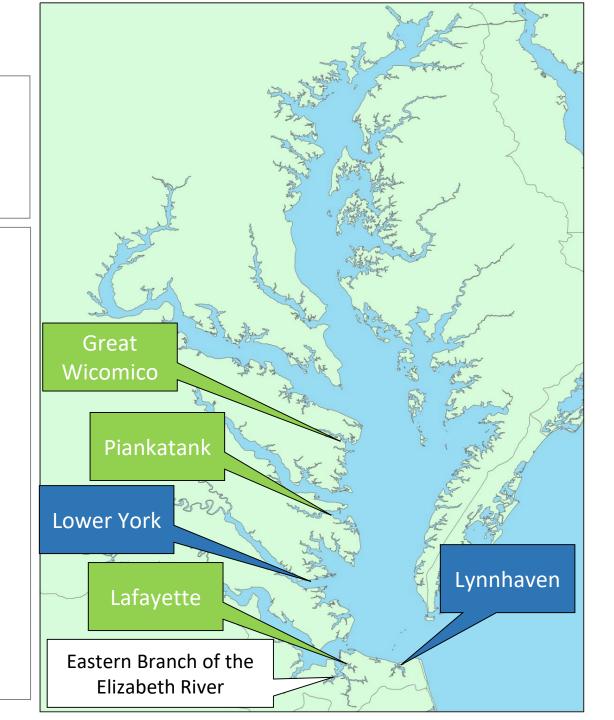
### **VA Summary**

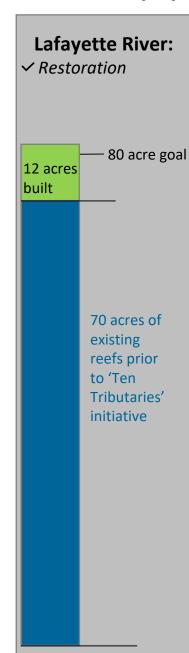
### Progress by Number of Tributaries:

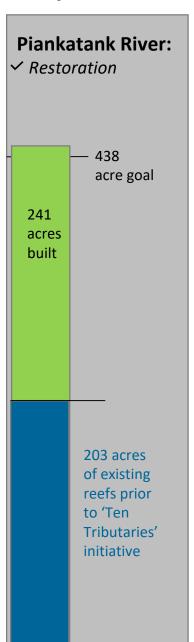
- 3 of 5 complete (60%... Plus a 'bonus trib')
- Lower York: slated for early 2023 completion
- Lynnhaven: slated for completion by 2025

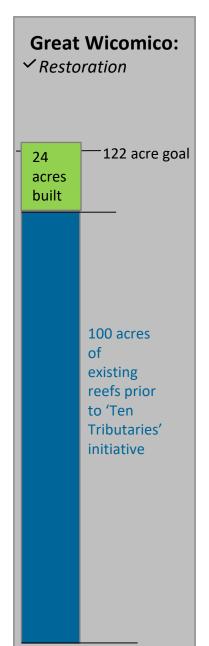
## Progress by Acres in Need of Restoration:

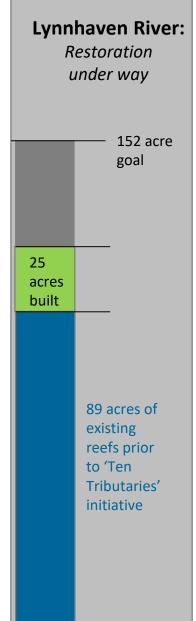


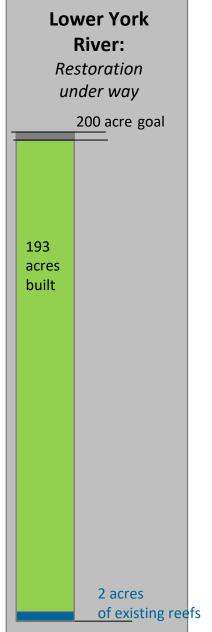


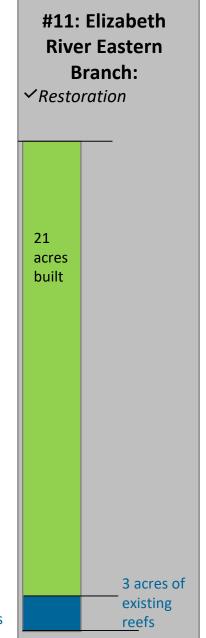








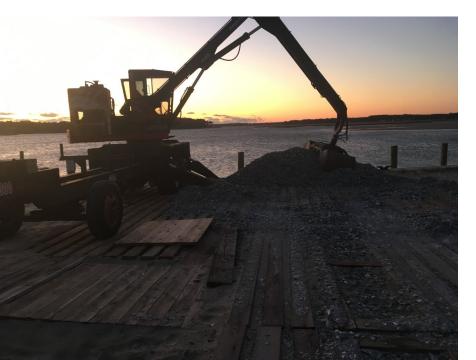




### **VA Highlights and Challenges:**

### **Highlights**

- Nearly 30% of the reefs built under the '10 tribs' initiative was built in 2022.
- 2021 was similar— we're on a roll.
- Lower York River is nearly complete (148 acres of reefs built this year; 5 more to go).
- VA has experienced a consistently high natural spat set since 2019.
- VA oyster harvest is projected to be the highest since the 1997-88 season.



### **Challenges**

- Opposition to some proposed projects, by other user groups (exboating public, adjacent private lease holders, waterfront property owners, watermen).
- Due to construction material and placement issues, 13 acres of Lynnhaven River reefs are under consideration for mitigationwhich may include removal. (These are excluded from the 2022 accounting).
- "Final Mile Delivery"- as targets are almost reached, the last remaining acreage may become more difficult and/or expensive per acre of restoration on some tributaries.



### **Bay-Wide Highlights and Challenges**

### **Highlights**

- Partnerships remain strong and are a key element
- Monitoring shows success across the vast majority of three-year-old and six-year-old reefs.
- This effort remains a national and international example of large-scale restoration success.
- More than 3/4 of the way to the 2025 Bay agreement goal.
- We just might make it... <u>IF</u> we maintain momentum.
- Harvests from non-sanctuary areas are also increasing in some areas.

### Challenges

- People don't seem to know about this
- This is expensive. \$82+ million spent Bay wide under the '10 tribs' initiative (in-water restoration cost).
- Monitoring- likely could be streamlined
- The fickle nature of Mother Nature.
- Although most reefs are meeting Oyster Metrics targets, a few reefs may not.
- Identify how to create better inclusivity and better serve
   EJ communities
- What's next in oyster restoration?



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### **Chesapeake Oyster Restoration Sea Chanty**

Credit, and blame, goes to Chat GPT
Presenters stand by neither the accuracy of this slide
nor their singing voices

### (Verse)

Come gather 'round mates and lend me your ears For a tale of oyster restoration, we'll cheer From the York River to Lynnhaven Bay We're bringing oysters back, day by day

### (Chorus)

Yo-ho-ho, let's raise a glass To the work of those restoring oysters, en masse Building reefs to give them a home Making the Chesapeake Bay healthy to roam

### (Verse)

The Choptank River saw a boat run aground On a reef made of rock, no oysters to be found. But with our help, the reef came back to life Now watermen rejoice, with fewer moments of strife

### (Verse)

Not all watermen are happy, some are upset Changes in fishing practices, they must accept But for the good of the Bay, they'll come around For with our work, oysters will abound

### (Outro)

So here's to the work of those restoring oysters, we say

For the health of the Bay, we couldn't ask for more today

Let's raise a toast to the work they do For the Chesapeake Bay and me and you.