Reporting on Attainability of Watershed Agreement Outcomes

2023 SRS Biennial Meeting
May 11-12, 2023

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Key topics

1. Overview of our outcome attainability reporting status.
2. Progress made since the 2021 SRS Biennial meeting.
3. Current gaps in outcome status reporting for 2025.
4. Applying our learnings.

10 Goals

- Sustainable Fisheries
- Vital Habitats
- Water Quality
- Toxic Contaminants
- Healthy Watersheds
- Land Conservation
- Public Access
- Environmental Literacy
- Stewardship
- Climate Resiliency

31 Outcomes

Sustainable Fisheries	Vital Habitats	Clean Water	Conserved Lands	Engaged Communities	Climate Change
• Blue Crab Abundance & Management • Oyster Restoration • Fish Habitat • Forage fish	• Black Duck • Brook Trout • Fish Passage • Forest Buffers • Stream Health • SAV • Tree Canopy • Wetlands	• Watershed Implementation Plans - 2017 & 2025 • Water Quality Standards Attainment & Monitoring • Toxic Contaminants Research • Toxic Contaminants Policy and Prevention • Healthy Watersheds	• Protected Lands • Land Use Options Evaluation • Land Use Methods & Metrics	• Diversity • Public Access • Stewardship • Local Leadership • Sustainable Schools • Environmental Literacy Planning • Student MWEEs	• Climate Monitoring and Assessment • Climate Adaptation

Watershed Agreement Outcomes Status in 2021

Categories Based on Ability to Measure Progress

Have Targets, Indicators, and Data Support	No Targets, But Have Indicators and Data Support	Have Targets, Indicators, but need Data Support	Progress Assessed by Qualitative Information
13	6	3	9

Watershed Agreement Outcomes Status in 2021

Categories Based on Ability to Measure Progress

Have Targets, Indicators, and Data Support	No Targets, But Have Indicators and Data Support	Have Targets, Indicators, but need Data Support	Progress Assessed by Qualitative Information
• Blue Crab Abundance • Blue Crab Management • Oyster Restoration • Fish Passage • Forest Buffers • SAV • Watershed Implementation Plans (WIPs) – 2017 and 2025 • Protected Lands • Diversity • Public Access • Student MWEEs • Stream Health	• Water Quality Standards Attainment & Monitoring • Sustainable Schools • Stewardship • Environmental Literacy and Planning • Toxic Contaminants Policy and Prevention • Climate Monitoring and Assessment	• Wetlands • Brook Trout • Black Duck	• Fish Habitat • Forage Fish • Toxic Contaminants Research • Land Use Options and Evaluation • Land Use Methods and Metrics • Local Leadership • Climate Adaptation • Healthy Watersheds • Tree Canopy
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Watershed Agreement Outcomes Status in 2023

Categories Based on Ability to Measure Progress

Have Targets, Indicators, and Data Support

- Blue Crab Abundance
- Blue Crab Management
- Oyster Restoration
- Fish Passage
- Forest Buffers
- SAV
- Watershed Implementation Plans (WIPs) – 2017 and 2025
- Protected Lands
- Diversity
- Public Access
- Student MWEEs
- Stream Health
- **Tree Canopy**

No Targets, But Have Indicators and Data Support

- Water Quality Standards Attainment & Monitoring
- Sustainable Schools
- Stewardship
- Environmental Literacy and Planning
- Toxic Contaminants Policy and Prevention
- Climate Monitoring and Assessment

Have Targets, Indicators, but NEED Data Support

- Wetlands
- Brook Trout
- Black Duck

Progress Assessed by Qualitative Information

- Fish Habitat
- Forage Fish
- Toxic Contaminants Research
- Land Use Options and Evaluation
- Climate Adaptation
- Healthy Watersheds
- Local Leadership
- Land Use Methods and Metrics

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- Sustainable Schools
- Stewardship
- Environmental Literacy and Planning
- Toxic Contaminants Policy and Prevention
- Climate Monitoring and Assessment
- **Local Leadership**

Have Targets, Indicators, but NEED Data Support

- Wetlands
- Brook Trout
- Black Duck

Progress Assessed by Qualitative Information

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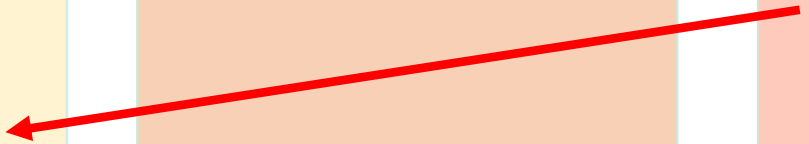
- Sustainable Schools
- Stewardship
- Environmental Literacy and Planning
- Toxic Contaminants Policy and Prevention
- Climate Monitoring and Assessment
- Local Leadership
- **Land Use Methods and Metrics**

Have Targets, Indicators, but NEED Data Support

- Wetlands
- Brook Trout
- Black Duck

Progress Assessed by Qualitative Information

- Fish Habitat
- Forage Fish
- Toxic Contaminants Research
- Land Use Options and Evaluation
- Climate Adaptation
- Healthy Watersheds



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- Land Use Methods and Metrics

Have Targets, Indicators, but NEED Data Support

- Brook Trout
- Black Duck

Progress Assessed by Qualitative Information

- Fish Habitat
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Watershed Agreement Outcomes Status in 2023

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No Targets, But Have Indicators and Data Support

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- Sustainable Schools
- Stewardship
- Environmental Literacy and Planning
- Toxic Contaminants Policy and Prevention
- Climate Monitoring and Assessment
- Local Leadership
- Land Use Methods and Metrics

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Have Targets, Indicators, but need Data Support

- Brook Trout
- Black Duck

2

Progress Assessed by Qualitative Information

- Fish Habitat
- Forage Fish
- Toxic Contaminants Research
- Land Use Options and Evaluation
- Climate Adaptation
- Healthy Watersheds

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Watershed Agreement Outcomes Status in 2023

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Have Targets, Indicators, but NEED Data Support

- Brook Trout
- Black Duck

Progress Assessed by Qualitative Information

- Fish Habitat
- Forage Fish
- Toxic Contaminants Research
- Land Use Options and Evaluation
- Climate Adaptation
- Healthy Watersheds

Large amount of work toward establishing indicators for most of these

Important Takeaway:

These Categories are Dynamic

Outcome Summary by Outlook

OUTLOOK COMPLETED

- 2017 Watershed Implementation Plans
- Blue Crab Management

OUTLOOK ON COURSE

- Blue Crab Abundance
- Fish Habitat
- Forage Fish
- Oysters
- Fish Passage
- Land Use Methods and Metrics
- Land Use Options and Evaluation
- Protected Lands
- Public Access
- Sustainable Schools
- Local Leadership
- Climate Monitoring and Assessment
- Stream Health

OUTLOOK OFF COURSE

- Brook Trout
- Forest Buffers
- SAV
- Tree Canopy
- Wetlands
- 2025 Watershed Implementation Plans
- Water Quality Standards Attainment & Monitoring
- Toxic Contaminants Policy and Prevention
- Toxic Contaminants Research

OUTLOOK UNCERTAIN

- Black Duck
- Healthy Watersheds
- Environmental Literacy and Planning
- Student MWEEs
- Stewardship
- Diversity
- Climate Adaptation

Watershed Agreement Outcomes with "Uncertain" Status

Categories Based on Ability to Measure Progress

Have Targets, Indicators, and Data Support	No Targets, But Have Indicators and Data Support	Have Targets, Indicators, but need Data Support	Progress Assessed by Qualitative Information
• Diversity • Student MWEEs	• Stewardship • Environmental Literacy and Planning	• Black Duck	• Climate Adaptation • Healthy Watersheds

Status Reporting for “Uncertain” Outcomes and those in Need of Data Support

Likely to have indicators AND off course/on course status by 2025

- Healthy Watersheds
- Environmental Literacy and Planning
- Student MWEEs
- Stewardship
- Diversity
- Forage Fish
- Toxic Contaminants Research

Indicator development may not be complete before 2025

- Black Duck
- Climate Adaptation
- Fish Habitat
- Land Use Options and Evaluation
- Brook Trout

Identified challenges in determining outcome attainability for these outcomes (based on SRS documentation)

Undefined targets and timelines

Lack of agreement on "Success"

Disconnect between outcome and monitoring

Lack of capacity to fill research gaps

Where we have had success in increasing our understanding of outcome attainability

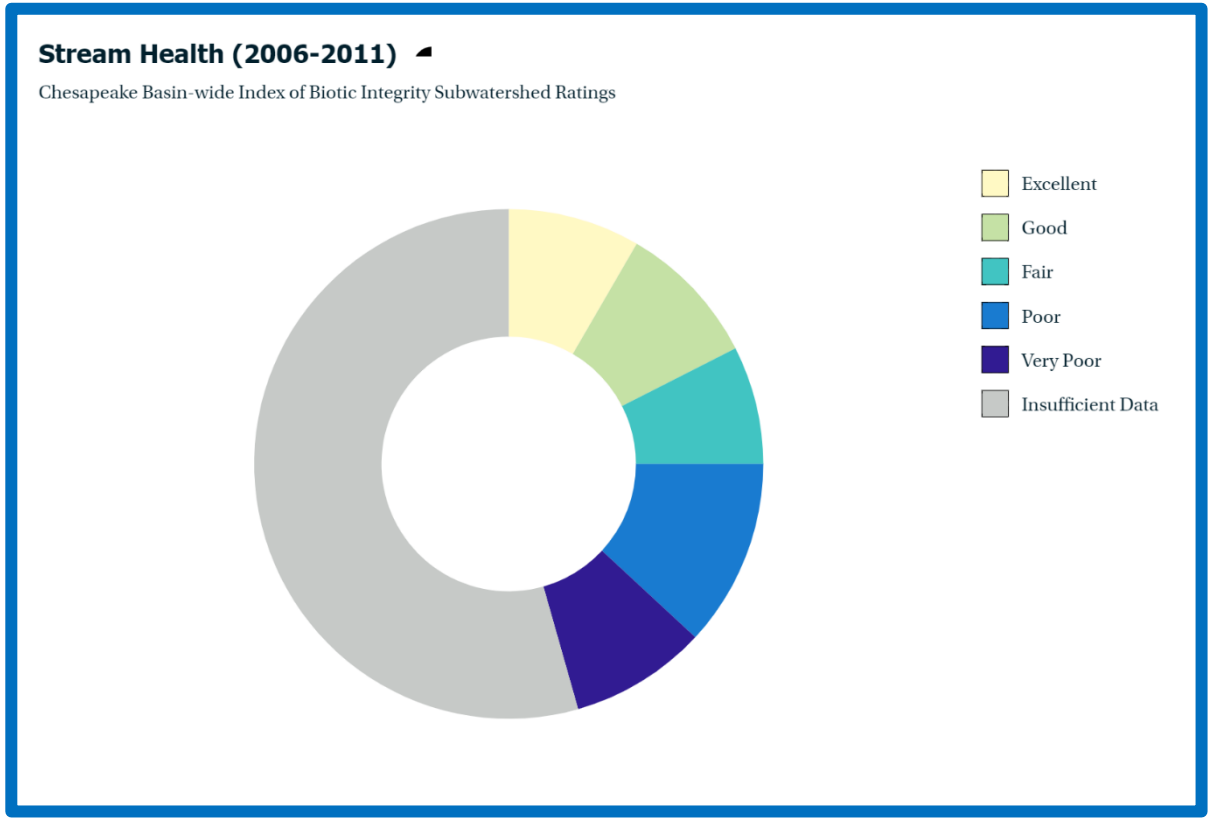
Stream Health

Continually improve stream health and function throughout the watershed. Improve health and function of 10% of stream miles above the 2008 baseline for the watershed.

RECENT PROGRESS
NO CHANGE (2018)

OUTLOOK
UNCERTAIN

In 2018, researchers and resource managers established the six years between 2006 and 2011 as the baseline period for our indicator of stream health. Known as the Chesapeake Basin-wide Index of Biotic Integrity, or Chessie BIBI, this indicator describes the quality of assessed streams in relation to all of the streams in the watershed. During this baseline period, the Chessie BIBI ranked 25 percent of the Bay watershed with fair, good or excellent stream conditions and 21 percent with poor or very poor conditions.



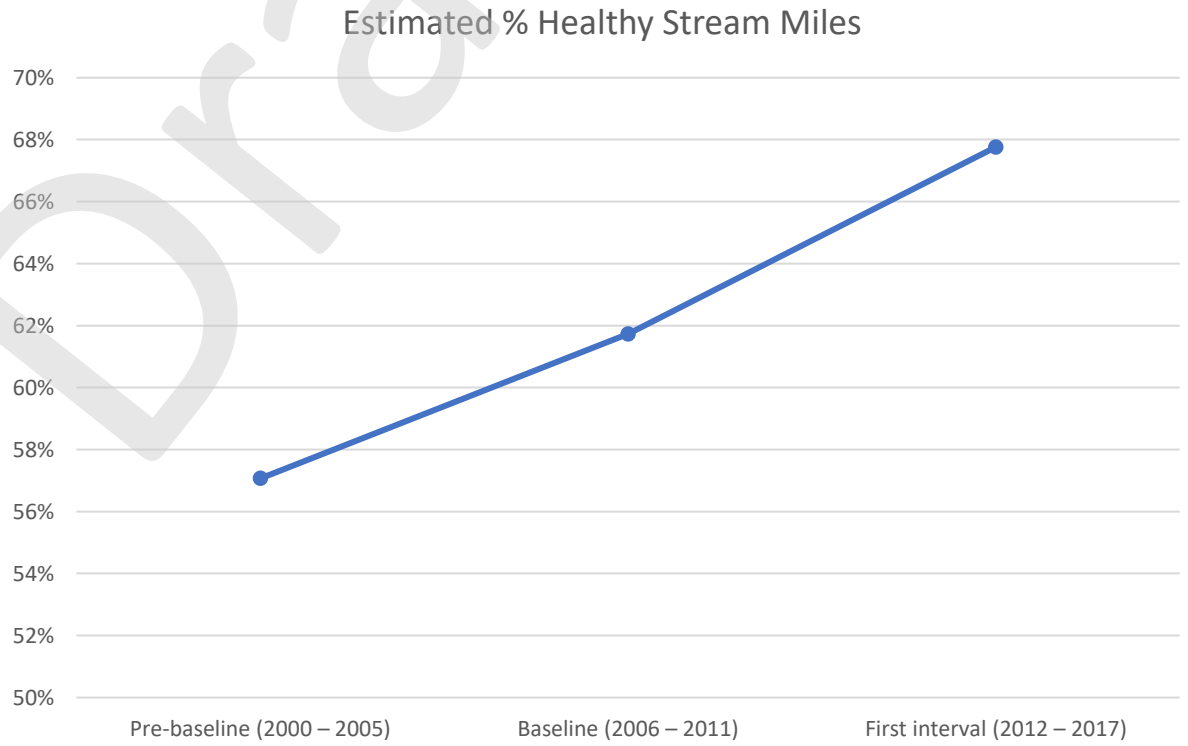
Stream Health

Continually improve stream health and function throughout the watershed. Improve health and function of 10% of stream miles above the 2008 baseline for the watershed.

RECENT PROGRESS
INCREASE (2018)

OUTLOOK
ON COURSE

In 2018, researchers and resource managers established the six years between 2006 and 2011 as the baseline period for our indicator of stream health. Known as the Chesapeake Basin-wide Index of Biotic Integrity, or Chessie BIBI, this indicator describes the quality of assessed streams in relation to all of the streams in the watershed. During this baseline period, the Chessie BIBI ranked 25 percent of the Bay watershed with fair, good or excellent stream conditions and 21 percent with poor or very poor conditions.



What has contributed to success in outcome attainability reporting?

Defined targets and timelines

Definition of "success"

Monitoring is well-aligned with outcome target(s)

Increasing capacity to fill research gaps through GIT funding and other sources

Next Steps

Apply our learning from these outcomes to:

- target and sustain support for outcomes in need of progress reporting through 2025 and beyond
- refine outcome language where needed

Questions?

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