Stream Health Workgroup Meeting
April 19, 2024

Outcome Review Summary Questions

4TH CYCLE SRS PROCESS

Revised 9/18/23

1 COHORT NOTIFICATION
Cohorts notified 180 & 90 days prior to QPM. Cohorts notify SRS Team of QPM plans: Pass, brief update, full QPM
180 & 90 days before QPM

2 PREPARE CHECK-IN MATERIALS
Review MS, complete R/Y/G activity on LAP, & answer "Looking Back" questions.
3 months before QPM

3 MEET STAC & STAR
Logic analysis w. STAC
Science Needs w. STAR
Draft Outcome Review Summary
Abt. 8 weeks before QPM

Op SRS CHECK-IN MEETING
Optional opportunity to meet with SRS Team to discuss process
7 weeks before QPM

4 C/S DRY RUN W STAR
Practice presentation. Opportunity for cross-cohort collaboration
3 weeks before QPM

5 QPM MATERIALS DUE
2 weeks before QPM

5a Complete & send Outcome Summary Review to MB.

5b Send optional PowerPoint presentation to MB.

June 13, 2024 QUARTERLY PROGRESS MEETING
MB Meeting: Outcome attainability & problem-solving presentation/ discussion. Emphasize off-track outcomes in 2024

Op QPM FOLLOW-UP
As needed, follow-up actions and decisions are distributed for outcome lead review
3 days after QPM

7 MB FOLLOW-UP
As needed, follow-up with the MB for a discussion on actions & decisions
2-4 weeks after QPM

Op MEET SET
Optional opportunity for Outcome Lead to meet with the Strategic Engagement Team.
after QPM

Sept 2024 8 REVISE & POST MS & WORKPLAN
Revise and post Management Strategy & Workplan. No formal submission to public or MB
12 weeks after QPM

Step required every 2 years
As needed, step required
Step strongly recommended
Op Optional Step

QUESTION 1: Since your last QPM (Sept. 2021), what key successes would you like to highlight to the Management Board?

ICPRB's Chessie BIBI analysis - Stream Health Indicator status - Improving

Completed the permitting survey

Completed GIT Funding projects

Completed initial predictive models for instream stressors of physical habitat and salinity (2024)

STAC stream restoration workshop

A ~6% improvement in Chessie BIBI indicator between the baseline (2006 - 2011) and first interval (2012 – 2017) continues an earlier improving trend (ICPRB report #23-1, publication in review).

Completed initial predictive models for Chessie BIBI and for Fish habitat (2022)

QUESTION 2: Are we making progress at a rate that is necessary to achieve our outcome? Would you define our outlook as on course, off course, uncertain, or completed? Upon what basis are you forecasting this outlook?

STREAM HEALTH OUTCOME:
Continually improve stream health and function throughout the watershed. Improve health and function of ten percent of stream miles above the 2008 baseline for the watershed.

On course but need additional indicators to capture interim progress between the 5 year BIBI data sets

On course, but not certain if we can sustain a 10% improvement goal. Weather influences annual status; popn growth and climate change negatively affect trends.

Uncertain. Biological improvement in restoration projects is reported as being rare. Placing more emphasis on biological improvement may enhance progress.

Off course based on modeling results and anticipated changes with continued landscape and population pressures, plus climate change effects.

QUESTION 5: Consider and reflect on the actions you intended to take during the past cycle (2021-2023). For actions that have not begun (or which have encountered a serious barrier), what is preventing us from taking action? Are these actions still needed?

Engage with under-served, under-represented communities to increase participation in stream health concerns

Continue investigating linkages between watershed, stream abiotic conditions, and stream communities.

Improve communications and understanding of stream health

QUESTION 6: What have we learned over the past two years that we'll need to consider in the coming two years?

We need to better communicate the differences between stream health, stream restoration projects, biotic recovery, etc

there is a need to reduce tree impacts and coordinate with community members for stream restoration projects

Need for multiple indicators of stream health and condition

Integrating science/best practices into our work, e.g., Pooled Monitoring Initiative

Stream health (biology) may not improve unless it is specifically an objective of restoration and the design supports improved biology.

Results from GIT Funded Phase 1, 2, 3a

Final report from STAC Workshop

Synthesis of stressors to stream health and development of predictive tool for ID'ing important stressors for any stream reach.

Importance of considering opportunities to create/maintain thermal refugia

Monitoring is expensive and important, so need to ensure we've got robust experimental design that can really answer our question(s)

stream biology/uplift in stream restoration may not have been a goal and therefore could not/was not accomplished, especially in urban systems (where rest. often occurs)

Stream restoration permitting survey results

incorporate CESR report findings

updated rainfall info used in restoration

QUESTION 8: Prioritize and summarize here the factors best tackled as a Partnership (or GIT/workgroup), that have the greatest impact to achieve our outcomes.

STREAM HEALTH OUTCOME: Continually improve stream health and function throughout the watershed. Improve health and function of ten percent of stream miles above the 2008 baseline for the watershed.

Sustaining the health of currently healthy streams will be important and is tied to healthy watershed condition. In addition to restoration, promote conservation efforts.

Expanding the stream monitoring network and protocols

Land use

Adaptive Management -- communication and learning between implementers and scientists

Riparian forest restoration and minimizing riparian forest loss

Better integration of related outcomes: fish passage, riparian buffers, wetlands, water quality etc. so that any outcome is not unintentionally undermined by another

climate/ rainfall

tree impacts

providing data across the entire region, across jurisdictional boundaries to establish baseline and trends

Development as it affects runoff and stream flow.

Climate adaptation

Synthesizing new science into management practices

Forest preservation

QUESTION 9: For those high priority factors summarized previously, what is getting in the way of addressing them or what gaps continue to exist despite the current efforts to address those factors?

Mismatched and sometimes harmful local/state rules & regulations that guide development.

Organizational structure and priorities

Silo-ing of goals/ outcomes

common terms/ language (we're making progress)

Continued emphasis on water quality without incorporating biology

Capacity for doing restoration work - lots of implementation funds, limited funds for staff

High priority stressors require effort beyond streams. For example, how to best manage deicing salt inputs (parking lots, roads, etc.)? Work with infrastructure managers, etc

translating the science into our management minds/strategies

way to address gaps - Pooled Monitoring Initiative - as always, and in coordination with many of you!

Land use - current development/land use is not often part of our discussions, work, and/or control

QUESTION 10: Describe any scientific, environmental, fiscal, or policy-related developments that have already or may influence your work over the next two years. Consider the impacts of climate change in your response, as appropriate.

Beyond 2025 recommendations

Recommendations from ecological restoration permitting study in MD-to be released later this year

results from STAC Workshop

New 'hyper' resolution stream maps may double mapped stream miles in many parts of the basin

There will be a need to identify "streams" within this stream network to better target our restoration/conservation work

Pandemic stopped/slowed stream monitoring. May affect bay-wide computation of stream status indicators.

BIL/IIJA Acts have increased funding towards projects (and science?)

We have long reaches of streams in karst that seem to be lacking water virtually year-round, that had been erroneously included in sediment reduction allocations in local TMDLs.

Still ---- how to get federal funds down to the local/our level (many great projects remain unfunded due to this)

Likely some of the new MD (and maybe other states) legislation that passed... TBD

Models of predicted stream reach condition for instream stressors, including physical habitat and instream salinity, to help in targeting biological uplift and conservation plans

QUESTION 11: Based on these developments and the learning discussed in the previous sections, summarize any new actions you would like to add to the new 2-year workplan to address these gaps.

USGS is relating implementation of BMPs, and LU, to stream stressors and to stream health across the Chesapeake.

USGS is working to refine/update the predictive modeling for Chessie BIBI (beyond-BIBI), fish habitat, and select stressors of interest (e.g., instream habitat, Sp Cond)

USGS is examining the potential co-benefits of management practices to streams across the watershed

USGS has launched a multi-year effort to assess status and trends in 7 stream health indicators across the watershed (flow, geomorph, salinity, temp, biota, toxics, nutrients)

Continue to keep the Pooled Monitoring Initiative in the workplan as a way to address gaps & connect science/research to our needs.

QUESTION 12: Have you identified new needs, or have previously unmet needs, that are beyond the ability of your group to meet and, therefore, you need the assistance of the Management Board to achieve?

Riparian forests may no longer be self-sustaining in urban and perhaps suburban areas, may require increased societal effort to maintain - should have that expectation

Riparian plantings represent assisted migration opportunities. Climate is shifting; vegetation of the past not best suited for the future. We can't go back.

QUESTION 13: What steps are you continuing, or can you take, to ensure your actions and work will be equitably distributed and focused in geographic areas and communities that have been underserved in the past?

USGS has some ongoing efforts to prioritize/target stream restoration and conservation efforts in marginalized & vulnerable communities.

Explore the possibility of developing a biological reference condition for urban streams.