**Chesapeake Bay Program Stream Health Workgroup meeting**

**February 2, 2020 10am-12:00pm**

**Fish Shack Conference Room, 410 Severn Ave, Annapolis, MD 21401**

Call: +1-929-205-6099, ID: 693-871-927

Zoom URL: h[ttps://zoom.us/j/693871927](https://zoom.us/j/693871927)

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| Neely Law | Matt Meyers | Julianna Greenberg | Rosemary Fanelli |
| Matt Cashman | Nancy Roth | Sandy Davis | Sadie Drescher |
| Katheryn Barnhart | Scott Phillips | Peter Tango | Claire Buchanan |
| Rikke Jepsen | Denise Clearwater | Josh Burch | Chris Spaur |
| Caroline Donovan | Emily Bialowas | Amy Williams | Aaron Porter |
| Kip Mumaw | Jennifer Greiner | Alana Hartman | Kelly Maloney |
| Renee Thompson | Mike Mallonee |  |  |

**Action Items:**

* **Final comments on the stream permitting survey to Julianna by March 2**
* **Identify points of contact in your agency or firm who can complete the stream survey and send contact information to Julianna**
* **Provide Rosemary (**[**rfanelli@usgs.gov**](mailto:rfanelli@usgs.gov)**) with papers and documents relevant to stressor literature review**
* **Provide points of contact within State /District agency for Interview/survey about stressor identification**
* **Rosemary will give an update at the next quarterly meeting (May 15, 2020)**
* **Scott Phillips will be in contact with the Toxic Contaminants Workgroup and identify members who are involved with the Integrative Assessment Report and send their contact information to Neely.**
* **Affirming previous decision that the workgroup needs to revisit the issue of a stream health indicator**
* **Claire will send out a two pager to summarize the potential stream health indicator options and problems and benefits of each option by the end of March**
* **After receiving the two pager about the stream health indicator, the workgroup will decide to form an Action Team to provide recommendations to the SHWG and Partnership to change or keep the SH indicator**
* **Julianna to send an email to remind members to send Mike Mallonee your jurisdiction’s data if relevant and if you have not previously sent to Claire**

**Introductions and announcements** – Co-chairs Neely Law (Center for Watershed Protection) and Matt Meyers (Fairfax County)

**Stream Restoration Permitting** – Josh Burch (DC DOEE)

* Draft survey prepared and revised based on comments received.
* Denise Clearwater: Flooding of adjacent property and adverse impact to other resources as additional causes for delay
  + Effect on riparian forest buffer
  + Importance of choosing the right design
* Matt Meyers: Some new projects are completely reconnected to the floodplain and flood easily. As a workgroup it will be important to support monitoring of these sites and others.
  + Historic wetland loss and reconnecting to the floodplain to regain wetlands
    - Loss of trees and how we can compensate with native plantings
  + Kip Mumaw: When looking at an endpoint for restoration, it’s important to consider what uplift is possible.
    - How do you quantify the impacts and uplift and how do you communicate them to stakeholders?
* Communication
  + Neely Law: Is there a question we can add to the survey to capture the communications issues?
* Josh: If there are issues that the survey brings up we can dive deeper in to those but we want to keep the survey as short as possible so people respond
* Sadie Drescher: How are we going to have the data analyzed and presented to the workgroup once it is collected?
  + - Neely stated that we summarized the responses into common categories – issues and successes; will provide report out to the work group and decide on next steps.
* **Final comments to Julianna by March 2**
* **Identify points of contact in your agency or firm who can complete the survey and send to Julianna**

**USGS Stressor updates** – Rosemary Fanelli (USGS), Neely Law, Matt Meyers

* Rosemary provided an update on the status of the literature review. Meeting materials posted on SHWG meetings page
* Denise: How are you searching the journals? What criteria are you using?
  + Make sure that the journals known to have relevant articles are included in the search engines
* Renee Thompson: Potentially add something about using citizen monitoring to augment existing data sets. It would be very interesting to better incorporate some of that data into the work that we’re doing.
  + Neely: Looking at data quality as you’re searching will be important. Not all publications and studies may provide data of a high enough quality to support analysis
  + Denise: Be sure to not exclude studies based solely on age
  + Rosemary: So far we have not found any studies that we excluded based on quality of data. May come more in to play when we expand in to the gray literature
    - Hoping to expand to include state studies as well as theses or dissertations that are available on Google Scholar
* Rosemary: For now, we want to start with a more narrow focus and are concentrating on benthic macroinvertebrates as an endpoint In the future,
  + - Claire Buchanan: In the future we would like to have more stream health indicators other than biological/benthics.
      * How do the stressors feed in to the stream health pyramid from Harman et al?
      * Neely: The hope is that this will be used to identify the focus for what we should continue to pursue when developing or recommending a future suite of indicators. We all recognize there are multiple stressors affecting the stream so we need to determine which we can manage and how much they are affecting the stream health.
      * Referenced the Society of Ecological Restoration – Restoration response wheel and lag time effects post restoration
  + Nancy Roth – There is a lot of literature available about fish and the effect of stressors on them. It can also be easier for managers to get their head around fish as an endpoint. Worth considering not excluding fish papers.
* Nancy: Will you look at papers that characterize stressors even if they don’t make the explicit link to biology?
  + Rosemary: Currently have tiered standards by which we’re judging papers. Top tier is multi stressor studies with a biological impact, then single stressor with a biological impact, then studies characterizing specific stressors without a direct link to biology
* Would it be fair to use EPA chronic and acute toxics thresholds?
  + Rosemary: Useful but may not represent field conditions
    - Not looking to duplicate complimentary work that’s already being done
* The Fish habitat STAC report may be an additional resource. Discuss content/analysis with Kelly Maloney.
* Scott Phillips: A lot of these stressors to stream health are important to other outcomes
  + Denise: Important to highlight “keystone stressors”, one stressor, like urbanization, can really set off a chain of other factors that will in turn have affects
* Greg Noe: All of this work is also feeding in to other prongs of USGS Chesapeake Science. We’re going to continue to work to tackle the needs of the group in the long term as well as a part of this initial effort.
  + Contact John Kennin at USGS, lots of work in New York looking at macroinvertebrate and IBI
    - New England does a lot of work on blockages that may be worth looking in to as a stressor in our area
      * Importance of connectivity
* Some of the people responsible for putting out the integrative assessment report for states are on the Toxic contaminants work groups
* **Provide Rosemary with papers and documents relevant to stressor literature review**
* **Denise will send Rosemary journals**
* **Julianna make sure Rosemary’s email is available**
* **Provide points of contact with in State /District agency for Interview/survey**
* **Rosemary will give an update at the next quarterly meeting (May 15)**
* **Scott Phillips will be in contact with the Toxic Contaminants Workgroup and identify members who are involved with the Integrative Assessment Report and send their contact information to Neely.**

**Stream Health Indicator Discussion** – Claire Buchanan (ICPRB), Kelly Maloney (USGS)

* Claire provided an overview of the issue related to the analysis to measure progress on the stream health outcome and proposed solutions. Presentation on the Stream Health meetings page
* Other work groups have changed the metrics. Would require approval by the Partnership.
* Peter: What do we do with the catchments that we can’t classify in good confidence?
  + There are some areas that the model can rate well but there are some areas that there is a high degree of uncertainty
* Difficulty of changing the outcome
  + Jennifer Greiner: Not an insurmountable task if we can show that it’s backed by science
* Kelly: Not much of a difference in terms of resources and time for the different options of calculation
* Restoration is generally done in miles, does it make sense to report our metric in area?
  + Saying that a certain area of a watershed is healthy implies that the miles of streams there are healthy
  + Fish passage uses miles
  + Miles by stream order – stream order can change
  + Claire: Preference to work with a stream miles dataset that is ‘static’. For example, previous Bay Program data was at a scale of 1:100,000, with current work to finalized stream layer at 1:24,000); may be finer scale in future years
  + When we’re talking about “area”, we’re talking about area of the watershed not area of the stream
    - Relationship between number of miles in a stream and area of a catchment
* Indicators should be simple to understand and present
  + Is it comfortable for people to understand area as a metric for stream health?
* Renee Thompson: Catchment scale is a little more responsive to local needs
  + Make sure that the data we are using is appropriate to use at the catchment scale (not too broad)
* Need to be aware of the communications issues associated with the changing the calculation of miles or with deciding to calculate both area and miles
* Renee: Consider putting the Healthy Watersheds Workgroup on the next agenda to discuss the use of stream health metrics in the Healthy Watersheds assessment and the overlap between the two workgroups
* More stream miles means lower accuracy for historical data because we have fewer samples to represent the areas
  + Would have to recalculate the baseline with each new resolution
  + Wait until the 1:24k scale layer is final and just decide that that is what we will use for the foreseeable future?
    - Kelly is already using this scale, so it won’t be a huge lift
    - If we do this, then we have a final number of stream miles and can calculate the baseline once and be done with it
* Claire and Kelly will get together and draft a summary of issues and come up with a recommendation by the end of March
* As part of reporting out on the 2012-2017 data, we can take some time to look at the data with different options
  + Indicator v management tools
    - Stream miles are important as a management tool
* Indicators are a public friendly way to talk about progress
  + Scientifically based but doesn’t need to be a super rigorous undertaking
* **Affirming previous decision that the workgroup needs to revisit the issue of a stream health indicator**
* **Decision to form an Action Team to provide recommendations to the SHWG and Partnership to change or keep the SH indicator**
* **Claire will send out a two pager to summarize the issues by the end of March**

**Chessie BIBI status update** – Claire Buchanan

* Mike Mallonee is the data manager at the Bay program it is now his responsibility to coordinate the Chessie BIBI
* Working to develop a tool to take the templates that different groups are using and import into CEDAR in a standardized way
  + Most sites monitored will have a score for habitat parameters and measurement of YSI and water quality in addition to the invertebrate data used for BIBI
    - All of this information will soon be synched together by sampling date to be downloaded together or separately
    - Earlier datasets had a lot of misidentification, Mike is working to correct it and establish a procedure for the future
* Water quality data portal
  + Citizen monitoring will be included for water quality data now and eventually the benthic macroinvertebrate data collected by citizens will be included as well
* **Send Mike your jurisdiction’s data if relevant and if you have not previously sent to Claire**

**Wrap up and next steps** – Neely Law and Matt Meyers

* **Next meeting May 15, 2020 at the Chesapeake Bay Program Office**

**Meeting Adjourned**