Se Technical Sub Committee
June 5th Meeting

June 5, 2019
2:30 p.m. – 4:00 p.m. PST / 3:30 p.m. -- 5:00 p.m. MST

In attendance: Jody Fisher (co-chair), Lauren Sullivan (co-chair), Joe Beaman (USEPA), David DeForest (Windward Env.), Genny Hoyle (KTOI), Karen Jenni (USGS), Myla Kelly (MDEQ), Heather McMahon (KNC), Dave Naftz (USGS), Theresa Presser (USGS), Sheldon Reddekopp (BC ENV); Michel Ryan-Aylward (BC ENV), Carla Fraser (Teck), Kevin Rieberger (BC ENV), Jason Gildea (USEPA), Lars Sander-Green (Wildsight) , Ayn Schmit (USEPA), Trevor Selch (MTFWP), Jesse Sinclair (KNC)

Meeting Summary

Co-chairs began the meeting by informing the group of a co-chair change. Shelden Reddekopp will be replacing Jody Fisher as the SeTSC co-chair beginning July 1.
Co- chairs gave an update to May SeTSC action items.

Co-chair stated the objective here today is to continue discussions on the levels of protection.

Karen Jenni (USGS) walked the group through a PowerPoint presentation to clarify what the levels of protection are and how they are used for implementation. The presentation was distributed to the group prior to the meeting.

Sheldon Reddekopp (BC ENV) reviewed the six proposed levels of protection which had been circulated prior to the meeting. The proposed levels of protection are still in development.

David DeForest gave a PowerPoint presentation on species-specific thresholds and identified some reasons why they may be useful for inclusion in the SeTSC's modeling efforts. The presentation was distributed to the group prior to the meeting.

- USGS commented that there may not be sufficient information on how all species of interest within the Reservoir bioaccumulate, but agreed that the best approach is to pick the most conservative estimate based on available information.
- There was agreement that key decisions would need to be made during development/running of the model with respect to species-specific data and analyses.
- David DeForest suggested, if there was agreement, to incorporate species specific thresholds into the proposed alternatives when available.
- US EPA was not certain if that would be possible, to have one water column value and multiple egg ovary values.
- US EPA suggested another potential way of using species-specific thresholds would be to include species specific BAF's. The BAF is less complex and may be able to incorporate species specific thresholds.
- US EPA expressed a preference for egg ovary data as it is the closest surrogate to the egg tissue that the reproductive effects are seen at.
- BC ENV asked whether the first 4 proposed alternatives could be expected to be protective of human health/consumption.

- USGS stated that would not be a fair assumption to make. USGS expanded on an earlier comment from US EPA that 85% of data used in EPA's national numbers were based on diet to whole body. Clarified that there are few studies done on diet to egg-ovary. Indicating it is an unavoidable constraint and requires subsequent conversion factors to be applied.
- Jessie Sinclair (KNC) asked for clarification on species specific food webs. He asked the modelers, how does the ecosystem-scale model accounts for differences in species food webs to get to the trophic transfer for fish or invertebrates particulates? Is that parameterized or represented as an average bioaccumulation given the selenium data on multiple species?
- USGS responded to clarify in the ecosystem-scale model, two types of factors are included, one from particulate to invertebrate then invertebrates to fish. In the first case, they are as specific as possible, realistically to taxa and specific to the food and the material of the food that the invertebrates eat. The ecosystem-scale model allows for specificity around this factor.
- Jesse Sinclair responded to further clarify that the model accounts for a fish diet of invertebrates but not for periphyton?

Co-chair moved to the next agenda item to discuss means, maximums, or other metrics to consider. Co-chair asked the group if there are any other metrics to be considered?

- No additional metrics were brought to the table by the members

Myla Kelly (MDEQ) gave a brief description of how means and maximums are used in implementation by MDEQ.

- This description spurred discussion among the group on the wording of the levels of protection and how that wording impacts what the modelers are doing.

Co-chair discussed next steps, including:

  - Timeline - MDEQ & BC ENV are updating the timeline for the duration of the development of a selenium site-specific criterion.
  - Updates from Lotic to the data tables and State of the Lake to include 2017-2018 coming soon
  - BAF species selection – Joe Beaman is currently working on the selection criteria
  - MRC conference call June 17

Opened the final minutes of the meeting up to observers for comments and questions. Limited time was available for questions at the end of the call. Observers were encouraged to call or e-mail co-chairs with any follow-up items.

DRAFT