

# Selenium Uptake and Assimilation

## North San Francisco Bay

To support the anticipated North San Francisco Bay selenium TMDL and provide data to more fully understand the food web pathways and uptake / assimilation of selenium (Se) into sturgeon, the following studies are proposed:

- During the 2014 sportfish collection, in addition to planned collection of white sturgeon and analysis of Se in muscle tissue, include an evaluation of stomach contents for dietary composition. Stomach contents can also be analyzed for Se content.
- Include as part of the 2014 muscle tissue work, collection and analysis of *C. amurensis* in the North Bay for Se.

These studies can potentially be combined with currently planned efforts so the costs should be relatively low. *Note that if stomach contents are needed, the fish committee would not be able to only analyze plugs of white sturgeon in 2014. Whole fish would be required.*

### These studies will address the following management questions:

What are the sources, pathways and processes leading to contaminant-related impacts in the Estuary, if any?

- Where is selenium entering the food web?
- What additional data may be useful to improve understanding of sources and food web pathways and processes?

Are there harmful effects from Se occurring in food web species?

- What are the best opportunities for management intervention for the most important contaminant sources, pathways, and processes?
- What effects can be expected from management actions?

Although the data will not be available until after the Draft TMDL is issued, the data can be used to guide management actions during TMDL implementation.

### Path Forward

- Steering Committee (SC) okays to move forward and develop a study proposal
- Sportfish and Exposure/Effects Workgroups to develop a study proposal to be evaluated by the TRC in December (coordinated with Meg Sedlak)
- Review of study proposal by SC in January