

## OBJECTIVES

- ❖ To build upon previous research efforts put forth by other interns.
- ❖ To identify possible habitat opportunity for Pacific Lamprey Macrophthalmia within the CRE that fall within the optimal temperature and salinity conditions specifically for this phase of the Lamprey life cycle.
- ❖ To quantify values of temperature and salinity that are of optimum benefit for Lamprey life cycle phase Macrophthalmia
- ❖ Validate the possibilities of habitat, by establishing that Lamprey Macrophthalmia has a history of inhabiting the CRE in the past.

## METHODS

- ❖ Literature review to establish optimal values of temperature and salinity specifically for the Macrophthalmia phase of the Lamprey life cycle.
- ❖ Use Columbia River circulation model SELFE to investigate possible habitat opportunities by setting the models constraints within the optimum values for temperature and salinity for this specific phase of the Lamprey life cycle, and comparing that data to observational data of the SATURN collaboratory for examination and analysis of the accuracy of the models abilities to do so.
- ❖ Conduct interviews via telephone or other personal contact with local tribal elders or tribal members to establish documentation of personal knowledge of Lamprey Macrophthalmia history within the confines of the CRE to validate the fact that they could still inhabit this region of the Columbia River.

## REASONING

I chose this particular phase of the Lamprey life cycle because there is little known about it, and it is the last phase before the fish enters salt water ocean environment. I feel this could possibly be helpful in future restoration efforts by helping to build an understanding of what enables or encourages optimum growth and or health of the species as it reaches adulthood. Furthermore I hope to shed light on how the importance of merging western science with traditional knowledge effectively assists in conducting research. This will involve cultural aspects of people directly related to the region and gives validity to the cultural importance and sensitivity that must be addressed and respected in the scientific community while conducting investigations involving the environment and its resources.