

## **MLIRD Manager Curt Carpenter Reports on New Algae Bloom in Moses Lake - 2012**

Water clarity, recreation, fish and wildlife habitat conditions have steadily improved in Moses Lake since the “stinky lake” era of the 1970’s, but the battle to keep waterways free from invasive species, nutrient pollution and sediment accumulation is never over. This summer a new type of algae bloom has been identified in Moses Lake by MLIRD staff known as “Gleotrichia Algae.” This algae bloom confirms previous reports about ongoing challenges for the delicate ecosystem of inland lakes and waterways.

Gleotrichia Algae (a bacterium) over winters as cells that grow into “colonies” on accumulated bottom sediment where nutrients have settled and where light can reach. These algae colonies absorb lots of nutrients, especially phosphorous and nitrogen, then “release” from the sediment bed and float to the surface multiplying in summer light and becoming visible as a variable blue green mass on top of the water. “Eutrophication is defined as an increase in the rate of supply of organic matter in an ecosystem.” - Nixon, 1995

Similar to the growth and spread of aquatic plants, most research points to excess phosphorous (Ph) and nitrogen (N) (fertilizers) as the primary source problem. Higher concentrations of these nutrients in the water cause increased growth of algae and other “nuisance” plants. Problems like this are further compounded in Moses Lake by huge amounts of sediment flowing into the lake through Rocky Ford and Parker Horn since the basin reclamation project began. Recent increases of “flow-through” irrigation water to serve farming acreage further south appear to be another contributing factor. “Eutrophication is a natural, slow-aging process for a water body, but human activity greatly speeds up the process.” – Art, 1993

In the recent past MLIRD has been able to help balance the delicate ecosystem of our lake, although this year the ecosystem is being stressed beyond MLIRD’s current ability to assist due to the increased water flows. MLIRD is conducting tests with a product that adds oxygen to the water for habitat and that has been advertised to kill the algae.

In short, a technical state called “hyper-trophication” has evolved in Moses Lake, producing negative effects that include more plant biomass and invasive species (i.e. Milfoil), blooms, toxicity and fish kills; plus decreased oxygen, less desirable species diversity, and loss of aesthetic and property values. For more information on “Eutrophication” go to:

- <http://toxics.usgs.gov/definitions/eutrophication.html> (also click on “Related Definitions”
- [www.mlird.org](http://www.mlird.org)