



# Focus on Moses Lake Water Cleanup Plan

Water Quality Program, Eastern Regional Office

## Moses Lake Water Cleanup Plan for Phosphorus

Moses Lake does not meet Washington's surface water-quality standards for phosphorus levels. Excess phosphorus in the water can act like a fertilizer for algae and aquatic plants causing them to grow and reproduce at an abnormally fast rate. These plants become a problem when they interfere with the desired or accustomed uses of the lake.

### Background

The primary water quality problem in Moses Lake is blooms of algae, including blue-green algae, which impair recreational uses for the lake several times each summer. On warm days the algae floats, forms into unsightly mats, and can blow onto the beach where it decomposes, creating odor problems.

The excess algal growth has made several beaches undesirable for swimming. The presence of the algae can also impair the visibility in the water. Swimming through dense algae is rather unpleasant and can be dangerous. Excess phosphorus is the major cause of algae growth.

Because Moses Lake has been affected by excess phosphorus, it has been listed on the 303(d) list of impaired water bodies. Water bodies that do not meet state water quality standards are listed under section 303(d) of the federal Clean Water Act (CWA). The CWA requires the state Department of Ecology (Ecology) to develop Total Maximum Daily Loads (TMDLs) to restore water quality to the listed water bodies. A TMDL can be thought of as a water cleanup plan.

### A TMDL includes:

- A technical study or assessment of a water body, which determines the amount of a pollutant that the water body can accept and still meet water quality standards.
- An analysis of how much pollution needs to be reduced to meet these standards.
- An implementation plan or strategy to control the pollution from its various sources.
- A monitoring plan to assess its effectiveness.

### Current Status

Moses Lake has gained the attention of many limnologists (scientists who study fresh water) so a great deal of research exists on its historical and current condition. Ecology scientists have reviewed this work and summarized some of it in *Moses Lake Proposed Phosphorus Criterion and Preliminary Load Allocations Based on Historical Review* (Publication number 00-03-036 available at <http://www.ecy.wa.gov/biblio/0003036.html>).



During the spring, summer, and fall of 2001, Ecology scientists gathered additional data to supplement the past research. A report containing the results of this research and recommendations for the TMDL will be available June 2003. To view a draft version, please visit the Web page at the bottom of this sheet.

In September 2002, Ecology held a public meeting to form an advisory group to assist with strategies to reduce the amount of phosphorus entering Moses Lake. This advisory group represents interests in the watershed that could help reduce phosphorus in the lake and/or be affected by the TMDL.

This advisory committee will work with Ecology to develop a summary implementation strategy (SIS) on how to reduce the phosphorus pollution. An SIS is an outline or "idea list" of how phosphorus can and will be reduced. Once completed, the SIS, along with the study report, will be submitted to the U.S. Environmental Protection Agency (EPA) for its approval. Following EPA's approval, the advisory committee will begin developing a detailed implementation plan which is a more specific plan to reduce the pollution.

### Where does phosphorus come from?

Phosphorus and other nutrients are found in human and animal wastes, fertilizers, and organic matter (such as leaves) that can wash into streams and lakes. It also can be found in some soaps and detergents. Phosphorus also may occur naturally in the environment.

### What can you do?

People who live in a watershed – and that means all of us – may take certain actions to reduce polluted runoff from their property and therefore reduce the nutrients that reach our lakes and streams. Here are some things you can do:

- Cover and store manure, yard waste, fertilizers, and other chemicals away from the water.
- Maintain or enhance vegetation alongside water bodies to filter pollutants from the runoff. Never remove the natural riparian (stream or lake side) vegetation.
- Be careful to prevent erosion and keep sediments (dirt with contaminants) out of the water when working nearby.
- If you use a septic system, inspect it regularly according to Grant County Health District guidelines to make sure it's functioning properly.
- Use only phosphate-free soaps, detergents, and cleaners in your home or business.
- Reduce your use of fertilizers and chemicals on your lawn and garden. Rain may carry these nutrients into the nearest water body.

⇒ Please see the Moses Lake TMDL Web page for more information about the project and upcoming meetings at <http://www.ecy.wa.gov/programs/wq/tmdl/watershed/moseslake/index.html>

⇒ For more information on nutrients please see our Focus Sheet - Nutrients in Our Lakes and Streams (Publication Number 02-10-004) available on the Web at <http://www.ecy.wa.gov/biblio/0210004.html>

*If you require this publication in an alternate format, please call Elaine Snouwaert at (509) 329-3503 (Voice) or (TTY) at 711 or 1-800-833-6388.*

### Overview of the TMDL Process

