

Water Quality Monitoring

The Department of Ecology (Ecology) is teaming up with the United States Geological Survey (USGS) on a study to determine if on-site septic systems in the Suncrest area contribute nutrients to Lake Spokane. Beginning in July 2014 and continuing through spring 2015, USGS will collect ground-water and aquatic plant samples from the shoreline near Suncrest. Scientists will test the samples for phosphorus and nitrogen. A final report on the study is expected in December 2015.

Why is the study needed?

Too much phosphorus and other nutrients in the Spokane River and Lake Spokane have caused a depletion of dissolved oxygen in the river. Dissolved oxygen is essential for fish and other aquatic life. In addition, excess nutrients cause toxic algae blooms that are harmful to human health. A water quality improvement plan for the Spokane River and Lake Spokane requires a reduction of nutrients such as nitrogen and phosphorus to improve the lake.

Cities and businesses along the river that discharge wastewater into the river are working to reduce nutrients from their facilities. However, all nutrient sources need to be evaluated. On-site septic systems can be a source of nutrients to groundwater that feeds the river and lake.

The USGS study will build on a broader assessment of all phosphorus sources recently completed by Spokane County.

Why study Suncrest's shorelines?

Ecology would like to systematically assess Lake Spokane's shorelines to detect possible nutrient contributions from on-site septic systems. The study is starting at Suncrest because:

- It is the most densely populated cluster of on-site septic systems along the lake, with more than 1,300 systems.

MORE INFORMATION

Information about the water quality improvement plan for the Spokane River and Lake Spokane is available at:
www.ecy.wa.gov/programs/wq/tmdl/spokaneriver/dissolved_oxygen/index.html

To read the Spokane River Watershed Nonpoint Source Phosphorus Reduction Plan visit:

www.spokanecounty.org/data/utilitieswqmp/nps_documents/Final%20NPS%20Reduction%20Plan,%20Dec%202011.pdf

To learn about all activities going on with the Spokane River and Lake Spokane, visit the Spokane River Forum website:

www.spokaneriver.net

Contact information

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Special accommodations

To request ADA accommodation or materials in a format for the visually impaired, call Ecology at 360-407-6600.

Persons with impaired hearing may call the Washington Relay Service at 711. Persons with speech disability may call 877-833-6341.

- The Spokane River Watershed Nonpoint Source Phosphorus Reduction Plan recommended studying phosphorus loading from septic tanks specifically in Suncrest and other densely populated areas.
- A detailed study will help determine how on-site septic systems from the Suncrest area may be contributing nutrients to the lake.

How can you tell if on-site septic systems are the source of nutrients?

Nitrogen from on-site septic systems has a unique chemical signature that can be detected in groundwater and plant tissue. The study will look at nitrogen content in groundwater and aquatic plants like milfoil growing along the Lake Spokane shoreline below existing residences. The nutrient content from these samples will then be compared to samples taken from an area along the lake without homes.

What happens if on-site septic systems in Suncrest are found to be contributing to the lake's nutrient problem?

If Suncrest's on-site septic systems are contributing, the next step is to assess the amount of nutrients coming into the lake from these systems. The start date for this second study, if needed, has not been determined. Once we know more details about the on-site septic system contributions to the lake, potential solutions can be investigated.

Potential solutions could be:

- Fixing or replacing failing septic systems.
- Installing new filter technologies on existing septic systems.
- Working with the Stevens County Public Utility District to construct a sewer collection system and wastewater treatment plant.

The timeline for choosing and implementing a solution may take several years depending on what needs to be done. The availability of financial assistance to help fund the solution could also factor into the timeline.

What are the next steps?

The USGS will begin collecting samples in July. If there is interest, Ecology will hold a community meeting in the fall to discuss the study and answer questions. Please contact Karin Baldwin at 509-329-3601 or karin.baldwin@ecy.wa.gov for more information.

Ecology will periodically provide updates on the study's progress through the Lake Spokane Association and other groups. A meeting to discuss the study's results will be held in early 2016.