

## **Sleuthing the sources of Shuswap Lake pollution**

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Implementation of the Shuswap Lakes Integrated Planning Process (SLIPP) Strategic Plan is getting a rough reception by many local politicians as described by recent headline news articles. Even though it appears that the key components of the Plan will receive funding, there remains an air of uncertainty about the project. Despite overwhelming public support for implementation as shown by the recent watershed survey, substantial financial support from the province and the obvious need for action due to the recent algae blooms, opposition continues due in part to misunderstandings about the project.

Much of the confusion revolves around the issue of duplication. Although water quality monitoring has been ongoing and results have shown deterioration in Salmon Arm Bay, Blind Bay, and throughout the lake; the results do not provide the comprehensive data needed to accurately identify the sources of excess nutrients causing the problems. To address the need for detailed data, SLIPP contracted experts in the field to design a monitoring program that will provide this information.

Except for Salmon Arm Bay, Shuswap Lake is primarily defined as oligotrophic, with clear water lacking in nutrients. Salmon Arm Bay became mesotrophic in the 1970s, due to an increase in nutrients that resulted in less clear water and more algae growth. Monitoring to date has shown an increase in nitrogen and phosphorus throughout the lakes, which should ring alarm bells especially given the large volume of water and rapid flushing rate in Shuswap Lake.

Impacts on water quality come from a number of possible sources, including sewage effluent, leaching septic fields, greywater from houseboats and cabin cruisers, forestry practices, storm sewers, algae toxins, and agricultural run-off. While it may seem more direct to curtail these potential impacts now, there is too much resistance to change practices and that resistance will continue until agencies have the scientific proof needed to enforce improvements.

Thanks to scientific advancements, water quality monitoring has progressed far beyond the techniques used to date in Shuswap Lake. Expensive, high tech equipment is now available that can identify chemical tracers that indicate the sources of nutrients entering the lake. The SLIPP pilot project calls for comprehensive testing that will be able to reveal whether the excess phosphorus and nitrogen comes from human sources, fertilizers or domestic animals. As well, the program calls for complete integration and cooperation between all agencies to avoid any duplication of efforts.

In addition to the monitoring, the SLIPP pilot project will include annual planning meetings and annual public reports. Everyone will benefit, as the results will lead to access to credible scientific information that will support improved decision making to

reverse the current downward trend in Shuswap Lake water quality.

It is somewhat ironic that the highest level of support for the project comes from the Thompson Nicola Regional District, which contains the smallest area of the Shuswap watershed. In the centre of our watershed, it is possible that some politicians are concerned that the results of the monitoring will show the need for more expensive upgrades to sewage treatment and/or for expensive changes to agricultural practices. Or it may be possible that these politicians would rather use their gas tax revenues for capital expenditures rather than address the causes of the algae blooms.

For the North Okanagan Regional District, there is a resistance to working with the other two regional districts as they have already allocated substantial funds for their Shuswap River Sustainability planning process. Fortunately, both their process and the SLIPP pilot project will be coordinated by the Fraser Basin Council and thus the water quality monitoring proposed for the Shuswap River will likely be done using the same chemical tracer methodology as planned for Shuswap Lake and its other tributaries.

In addition to the water quality-monitoring project, the SLIPP pilot project calls for recreation use studies, improvements to the foreshore development application process, improvements to compliance and enforcement activities, and improvements to stakeholder communication and education. The long-term vision is to create a watershed board or council similar to the Okanagan Water Basin Board that has been successfully operating for over 40 years.

The public has long insisted that action is needed to safeguard our lakes and watershed. Everyone who lives in the Shuswap is dependent in one way or another on the lake and its tributaries. Representatives from all relevant government agencies along with representatives from the public have spent years developing the SLIPP Strategic Plan. It only makes sense that governments allocate the funding needed to implement the Plan to protect the future of our watershed.