

# Lake report sinks sewer plan

Septic tank phosphorus deemed negligible in St. Mary Lake

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A new study that examines the link between phosphorus levels in St. Mary Lake and shoreline septic systems suggests a sewer system would not improve the lake's health or water quality.

Researchers have long assumed up to 28 per cent of the annual phosphorus that enters the lake originated from shoreline septic systems. Since experts

agree phosphorus is the main source of the potentially toxic algal blooms that plague St. Mary Lake, limiting inputs from septic fields by connecting lakeside properties to a community sewage system has been a recurring topic.

"For over 30 years, discussions of reducing the septic contribution by means of a sewer system of some kind have taken place based on these numbers," said Don Hodgins, author of

Update on the Assessment of Phosphorus Inputs to St. Mary Lake from Septic Systems.

The latest findings, which Hodgins presented at the Community Gospel Chapel last week, cast aside prior assumptions and offer evidence that a costly sewage system would have limited to no effect on algal blooms in the lake.

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# Previous phosphorus estimates high

## ST. MARY

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According to the report: “The evidence also shows that no phosphorus attributable to septic systems is reaching the shoreline waters of the lake, indicating that even if phosphorus plumes form in the groundwater below drain fields, all of it is adsorbed to soil particles before reaching the lake.”

Hodgins’ research was undertaken between November 2014 and May 2015. He sampled 15 stations on three properties near the lake.

Whereas previous calculations dating to the early 1980s relied on assumptions based on the number of full-time lakeside residents and

visitors, no monitoring was ever conducted around the lake.

“Assumptions were made about the number of occupants of residences and resorts, the per capita phosphorus contribution and transmission rates based on soil and setback parameters,” Hodgins said. “Importantly, however, no site-specific data were collected for St. Mary Lake.”

The 2015 report revises the estimated amount of phosphorus that enters the lake from septic fields from 300 kilograms per year to approximately five kilograms annually.

“Because a load of about five kilograms or less is negligible in terms of the phosphorus content

of the lake and other external sources, wastewater collection and treatment facilities are not necessary, and would provide no benefit for water quality in St. Mary Lake,” Hodgins writes in a synopsis of his findings.

The findings highlight the significance of phosphorus from lake-bottom sediment, the largest source of phosphorus in the lake. The knowledge will help members of the Salt Spring Island Watershed Protection Authority’s technical advisory committee focus on recommendations that will improve the lake’s long-term water quality.

More information about the Hodgins report and SSIWPA’s work is available at [ssiwatersheds.ca](http://ssiwatersheds.ca).