

# Supplemental Budget Request

Status: Pending

## Public Works

## Stormwater

Suppl ID # 3060 Fund 381 Cost Center 381100 Originator: Kraig Olason

Expenditure Type: One-Time Year 1 2019 Add'l FTE  Add'l Space  Priority 1

Name of Request: SBR #2 Northshore/Edgewater SW Imp Constr Phase

**X**

Department Head Signature (Required on Hard Copy Submission)

Date

Costs:	Object	Object Description	Amount Requested
	7380	Other Improvements	\$380,000
	8301.324	Operating Transfer In	(\$380,000)
	<b>Request Total</b>		<b>\$0</b>

### 1a. Description of request:

This request is to fund the construction phase of the Northshore Drive/Edgewater stormwater improvement project. The design phase approved in 2018 has been completed.

This project will install a new water quality treatment facility along Northshore Drive in Whatcom County for the purpose of providing phosphorus and total suspended solids (TSS) removal from stormwater runoff prior to the runoff entering Lake Whatcom. In addition to the new treatment facility, a bypass pipe system will be installed to intercept runoff generated by a tributary area characterized by native forest and pasture. These areas are not pollution-generating surfaces and the runoff generated by them does not require treatment unless it mixes with polluted water. By intercepting and bypassing this runoff, the size of the treatment facility is minimized while maintaining a high level of phosphorus removal.

The project area falls within the Academy Creek basin of the Lake Whatcom watershed, located between the intersections of Northshore Drive and Egewater Lane and Northshore Road and Edgewater Lane along the northeastern shore of Lake Whatcom.

This project is included in the adopted 2020-2025 Six Year Water Resource Improvement Plan adopted by Whatcom County Council.

### 1b. Primary customers:

Primary customers include all individuals and businesses that rely on Lake Whatcom for their drinking water (100,000 people), as well as environment at large.

### 2. Problem to be solved:

Lake Whatcom is currently under a TMDL permit as a result of poor water quality and the impacts of algal blooms on public health and other beneficial uses of the lake. The TMDL mandates that Whatcom County and the City of Bellingham develop and implement programs to reduce impacts of phosphorus to the lake. The installation of this project is one of the measures included in the county's listed activities focusing on improving the lake's water quality.

### 3a. Options / Advantages:

While the project site was originally identified in the Lake Whatcom Comprehensive Plan (CH2M Hill, 2008): Stormwater Program Update as a Media Filter Drain (MFD) treatment facility, the conceptual phase of this project found that high groundwater conditions in the area precluded the use of MFDs. Additional treatment systems were considered in a Technical Memorandum prepared during the conceptual phase of this project (Tetra Tech, 2020), and Contech StormFilter Cartridges with Phosphosorb Media were ultimately selected due to their ability to function with minimal hydraulic drop, ability to enter a bypass

# Supplemental Budget Request

Status: Pending

---

## Public Works

## Stormwater

---

Suppl ID # 3060

Fund 381

Cost Center 381100

Originator: Kraig Olason

---

mode even when in a backwater condition, and existing use in other locations around Whatcom County.

### 3b. Cost savings:

Actual cost savings are difficult to quantify from this project. Efforts to improve water quality in the lake are required by the TMDL permit. Failure to implement the adopted program elements included in the TMDL response could result in fines. The costs of installing the proposed system has been optimized by installing a by-pass system to limit water entering the treatment systems from 10 developed acres. . This has greatly reduced the installation costs and annual maintenance costs over treating the entire 42 acre basin which is predominately forested.

### 4a. Outcomes:

This project is intended to reduce phosphorus leaving the developed properties within the drainage basin. Conservative estimates indicate that phosphorus should be reduced by over 50%. In many cases this reduction could be as much as +60%.

### 4b. Measures:

The designed system will be able to be monitored to determine the level of treatment being achieved. It is our goal to achieve over 50% phosphorus treatment of the runoff from the outlet pond.

### 5a. Other Departments/Agencies:

This project will require regular inspection, at least annually, and regular maintenance. Modular wetlands don't require cartridge replacements every year like cartridge vaults do, but will require modest regular maintenance and replacement of some or all of the treatment media eventually. Overall it is anticipated that modular wetlands will be less costly on an annual basis than typical cartridge vaults.

Public Works Maintenance and Operations Crew will be tasked with regular maintenance activities. The Stormwater Division will be providing frequent inspections.

### 5b. Name the person in charge of implementation and what they are responsible for:

Vernon Brown - Responsible for managing the NPDES crew which provides maintenance services of all stormwater facilities. Kraig Olason, Stormwater Program Manager, responsible to ensure all inspections are made timely.

### 6. Funding Source:

The funding source for this project is the Real Estate Excise Tax. REET has funded the majority of the Lake Whatcom Stormwater projects.