



*an informational series for
governments • industries • researchers, educators, and eNGOs*

Water Quality Objectives

are water quality characteristics, including contaminant limits, set to protect **water values** including seafood consumption. These **benchmarks** are set and monitored for in water, sediment, and animal tissue.

For səlilwət / Burrard Inlet, these objectives were developed collaboratively by Tsleil-Waututh Nation and British Columbia, guided by a Roundtable of First Nations, other levels of government, health authorities, researchers, non-profit organizations, and industries. Together, we agreed on six səlilwət marine priorities, or **water values**, that will be protected by achieving Water Quality Objectives. These values include:

- Shellfish consumption
- Finfish consumption
- Wildlife
- Marine aquatic life
- Cultural practices and recreational uses
- Institutional water uses

Make decisions to protect Water Values

Governments must take meaningful steps to reduce contamination in Burrard Inlet by prioritizing **key actions**.

Your tools to help attain Water Quality Objectives include:

- Legislation and regulation
- Economic incentives
- Wastewater and rainwater management
- Source control
- Land use planning
- Education
- Coordinated monitoring tied to action



GOVERNMENTS

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Key takeaways:

- Tsleil-Waututh people have carefully stewarded the lands and waters of səlilwət / Burrard Inlet since time out of mind.
- Pollution has impacted marine life; a shellfish harvesting closure has been in effect since 1972.
- Current levels of contamination in səlilwət exceed acceptable levels according to TWN law.
- Water Quality Objectives are the reference levels against which you should compare water quality measurements in and around səlilwət / Burrard Inlet, including at sources.
- Governments, industries, researchers, and communities share responsibility for achieving Water Quality Objectives.
- These objectives address many contaminants, summarized under the **frequently asked questions** (page 5).

A brief overview

Hundreds of regulated and unregulated contaminant sources contribute to water quality problems in səliłwət / Burrard Inlet, and more than 700 contaminants have been recorded in the Inlet.

How are Water Quality Objectives set and achieved?

1. Identify water values

To set objectives for a specific contaminant, experts identify which **water value** is most sensitive to that contaminant in water, sediment, and tissue.

2. Set objectives

Objectives for each value are target concentrations that, once attained, present low risk to sensitive values.

3. Measure to manage

Coordinated monitoring helps identify *where, when, why, and how much* concentrations exceed water objectives. Understanding səliłwət / Burrard Inlet water quality patterns empowers effective **management** of pollution sources.

Contaminant example:

Copper concentrations in sediment exceeded the Water Quality Objective in 86% of Inner Harbour samples collected in October 2015 and April 2016 by Ocean Wise.

When copper concentrations in sediment exceed the Water Quality Objective, they pose a potential risk to human or environmental health.

Copper (µg/g)

Water Quality Objective:
single sample concentration of **18.7 µg/g**.

Inner Harbour

A Legacy of Stewardship

Since time out of mind, Tsleil-Waututh people have carefully stewarded the lands and waters of səliłwət / Burrard Inlet, maintaining conditions that supported many villages and thousands of people. Our well-being is integrated with that of səliłwət, which has provided healthy, abundant food and is central to spiritual, cultural, ceremonial, and recreational practices.

Decreased Quality of Water—and Life

Since European contact, colonial development has severely degraded the territory. Contamination in səliłwət / Burrard Inlet has led to long-term shellfish harvesting and swimming closures, and it has diminished our ability to practice important cultural activities that require healthy, clean waters. These changes in water quality have fundamental consequences for our people, community health and ways of life. Current



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contaminant levels exceed what is allowable under our law and infringe upon inherent and constitutionally protected

Aboriginal rights under Canadian law.

Restoration: A Sacred Obligation

Tsleil-Waututh people have a sacred obligation to protect, defend, and steward the territory. Successful restoration of səliłwət's health requires all people—governments, industries, experts, and individuals—to make decisions to protect the well-being, rights, and culture of all who depend on it.

"We have to weave all our knowledge together so that our grandchildren will be able to grow up on the mudflats like we did as kids."

~Tsleil-Waututh Elder



GOVERNMENT ACTION AREAS:

Orienting decisions toward net environmental gain

Governments hold a crucial responsibility: allocating limited resources to maximize water quality improvements. The systemic change required to protect shared water values takes time and requires deliberate prioritization of actions that will **improve water quality at the source**, before contaminants flow toward səlilwət / Burrard Inlet. Prioritizing actions that improve water quality demonstrates accountability for legacy and current impacts and improves conditions for present and future generations.

Here are some examples of actions you can prioritize to help attain Water Quality Objectives:

Action Area #1: Legislation and regulation

- Prohibit industrial wastewater and stormwater discharges that exceed Water Quality Objectives.
- Directly enforce Water Quality Objectives through existing legislation, regulation, and [bylaws](#), including Official Community Plans.
- Ensure water discharges meet Water Quality Objectives, applying meaningful penalties for exceedances.
- Ensure that development standards protect water values and are consistent with Water Quality Objectives.
- Assess project impacts in the context of cumulative effects: changes to social, cultural, environmental and economic conditions caused by multiple interactions among human activities and natural processes that accumulate across space and time.
- Implement Integrated Stormwater / Watershed Management Plans for all developed watersheds that flow into səlilwət / Burrard Inlet.
- Ban or restrict use of harmful substances.
- Ensure that regulations and best practices designed to prevent pollution are consistently applied and followed.

Action Area #2: Economic incentives and disincentives

- Create a cost for plastic polluters. Make plastic products more valuable, encouraging reuse, repair, and recycling.
- Enforce repercussions for entities whose discharges exceed Water Quality Objectives.

Action Area #3: Source control

- Implement land use and development standards to minimize introduction of pollutants.
- Prevent sewer overflows.
- Reduce impermeable areas, increase vegetated and natural areas, and install green infrastructure.
- Restore habitat in riparian zones.
- Intercept and treat stormwater before it enters waterways.
- Ensure best practices at current and future sanitary sewage and stormwater treatment facilities, including year-round disinfection of effluent and removal of contaminants prior to discharge.

Action Area #4: Coordinated monitoring tied to action

- Support initiation, development and implementation of a coordinated monitoring program.
- Investigate sources of microbiological contaminants.
- Characterize pollutant loadings (e.g., using flow and pollutant concentrations) from tributaries and piped stormwater to identify and address sources.

Action Area #5: Outreach campaigns

- Raise awareness of water values, pollution sources, and everyday solutions by conducting an outreach campaign. Learn more at: https://twnation.ca/wp-content/uploads/2026/04/WQO_Outreach.pdf.

Frequently asked questions

What evidence proves we need change?

A 2022 study¹ of contaminants in səlilwət / Burrard Inlet showed:

- More than 700 contaminants have been recorded in səlilwət / Burrard Inlet since 1971.
- At least 56 contaminants exceeded levels that were low-risk for practicing water values.
- At least 24 contaminants exceeded levels safe for subsistence seafood harvest and consumption, part of the coastal Indigenous ways of life.
- BC wastewater discharge permits legalized the release of 27 contaminants that exceeded low-risk levels.

What have we accomplished so far?

We have created new policy that is holistic, founded on Indigenous values, and more protective of human health and the environment.

We co-created this policy with multiple levels of government and other agencies and industries with influence on water.

We have worked with BC and other First Nations, governments, authorities, industries and non-profit organizations to understand how clean or dirty the Inlet's water is, what is causing pollution, and what needs to be done to clean it up.

We have set high expectations for everyone to improve water quality so Tsleil-Waututh people can once again harvest food from the Inlet, we can all feel safe entering the Inlet's waters, and a diversity of aquatic life can return to these waters.

Why are these objectives important to all?

Water is life. The Water Quality Objectives connect the dots between human actions, rights, and wellbeing. This education is an early step toward improving relationships with First Nations.

Which contaminants are addressed by səlilwət / Burrard Inlet Water Quality Objectives?

Water Quality Objectives have been established for metals, microbiological indicators, microplastics, nutrients, oil and grease, persistent organic pollutants (e.g., PBDEs, PCBs, PCDDs, PCDFs, and PAHs), pesticides, pharmaceuticals and personal care products, contaminants of emerging concern (CECs), and physical parameters (e.g., pH and water temperature). Learn more in the [water quality assessment technical reports](#).

Who else is taking action?

Researchers, eNGOs, and educators are asked to support səlilwət / Burrard Inlet Water Quality Objectives by aligning their research and monitoring work to address data and knowledge gaps and by spreading information about how to help achieve these objectives.

Industry professionals are expected to take action to address their effects on səlilwət / Burrard Inlet water quality by reducing production, use, and release of hazardous materials.

How can bylaws help achieve Water Quality Objectives?

Several types of bylaws can be created and updated to help achieve Water Quality Objectives. Examples include bylaws for watercourse protection, stormwater management, medication disposal, source control, runoff controls, land use planning, zoning, Official Community Plan, use of beaches and water areas, and others.

Water Quality Objectives could be incorporated into such bylaws to ensure that monitoring is adequately conducted during development and that these objectives are met at the source.

¹ Rao, A.S. (2022). [A review of Burrard Inlet water quality data to understand the impacts of contamination on Tsleil-Waututh Nation's safe harvesting practices](#). Tsleil-Waututh Nation Research Report.

Where to Learn More

Find more resources at
twnation.ca/tlrstewardship.



Where can I learn more about Water Quality Objectives?

- [BC's Burrard Inlet Water Quality Objective policy website](#)
- [Policy report](#): includes table of all Water Quality Objectives
- [Contaminant-specific technical reports](#)
- [Outreach campaign guide](#)

Where can I learn more about water quality monitoring?

- [Coordinated monitoring report](#): suggested approach to monitoring in the Inlet
- [Assessment and attainment monitoring reports](#)

How has water quality affected Tsleil-Waututh food harvest?

Rao, A.S. (2022). [A review of Burrard Inlet water quality data to understand the impacts of contamination on Tsleil-Waututh Nation's safe harvesting practices](#). Tsleil-Waututh Nation Research Report.

Where and how is the Inlet impacted by development?

[Map](#): Impacts of Colonial Development in Burrard Inlet

How does stormwater affect the Inlet, and what can we do to reduce impacts?

[StoryMap](#): Restoring a Healthy Inlet - Tsleil-Waututh Nation

Glossary

benchmark *noun*

a standard or point of reference against which water quality parameters, including contaminant levels, may be compared. These may include minimum concentrations at which research or other knowledge suggests there is a significant risk associated with a water value.

net environmental gain *noun*

This Tsleil-Waututh principle considers that current conditions throughout the territory are already at a net loss, compared to pre-contact conditions, and increased habitat performance is needed via enhanced measures. Achieving environmental gains beyond regulatory requirements is an example of an opportunity to achieve net environmental gain.



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