



*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

## Affirming Indigenous law at your sites

Water values—including but not limited to the health of people and aquatic life—reflect the environmental and social values of First Nations, other governments, health authorities, and others. By achieving səlilwət / Burrard Inlet Water Quality Objectives at your sites, you significantly reduce the risk your activities pose toward water values and help recognize and affirm Indigenous law.



## INDUSTRY PROFESSIONALS

### 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 already exceed acceptable levels according to Tsleil-Waututh law.
- Governments, industries, researchers, and communities share responsibility for achieving Water Quality Objectives: **benchmarks** for protecting water values.
- Water Quality Objectives are a prime opportunity to align your actions with environmental, social, and governance (ESG) pillars since they link water quality with ecological and social impacts and are founded on Indigenous values.

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# 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, contribute to protecting 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



# Frequently Asked Questions

## How are Water Quality Objectives relevant to my business?

Water is life. The Water Quality Objectives connect the dots between human actions, rights, and wellbeing.

Water Quality Objectives provide applicable standards and methodologies for use in ESG reporting, primarily related to the environmental and social pillars.

## What can I do within my existing role? Where do I fit in?

1. Identify key contaminants relevant to your operations, which may come from materials and processes directly associated with your industry, as well as indirectly from other on-site activities.
2. Prevent contaminants from entering sælilwæt / Burrard Inlet from your sites, e.g., via permitted and other discharges and from stormwater runoff.
3. Regularly compare water quality at your sites to the Burrard Inlet Water Quality Objectives. Enter your data into the public provincial database, [EnMoDS](#).

## What evidence proves we need change?

A 2022 study<sup>1</sup> of contaminants in sælilwæt / Burrard Inlet showed:

- More than 700 contaminants have been recorded in sælilwæt / 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.

## Which contaminants are addressed by the Inlet's Water Quality Objectives?

- Contaminants of emerging concern
- Metals
- Microbiological indicators
- Microplastics
- Nutrients
- Oil and grease
- Persistent organic pollutants (POPs) (e.g., flame retardants, PCBs, dioxins, furans, and hydrocarbons)
- Pesticides
- Pharmaceuticals and personal care products
- Physical parameters (e.g., pH and water temperature)

Learn more in the [water quality assessment technical reports](#).

## 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.

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<sup>1</sup> 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.

# INDUSTRY PROFESSIONALS: What is your responsibility?

Your leadership toward achieving Water Quality Objectives leaves a legacy. By aligning your choices to support these objectives, you can protect and improve Inlet conditions for future generations. Without your action, the Inlet's health will continue to degrade. Your conscientious leadership is needed to protect shared səlilwət / Burrard Inlet Water Values and for Tsleil-Waututh people to safely harvest clams and practice their ways of life.

## Step 1: Identify contaminants relevant to your company.

To implement this step, you should:

1. **Identify all potential water quality impacts from your site.** Identify every activity, material used, and substance generated at your site that involves potential contaminants or could affect other aspects of water quality (e.g., temperature or salinity). Create a complete list of those contaminants and other water quality parameters.
2. **Compare contaminant levels to Water Quality Objectives.** Test whether contaminant levels in the water or sediment at your site exceed Water Quality Objectives. Contamination is more difficult to address once it has entered the environment, so it is essential to identify and address pollution at its sources. No anthropogenic substance should enter waterways, even if there isn't a specific Water Quality Objective for it. Upload your water quality measurements to the Province of BC's public environmental monitoring database, [EnMoDS](#).

## Step 2: Reduce contaminant use and align other practices to achieve Water Quality Objectives.

To implement this step, you should:

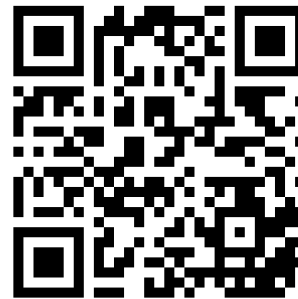
1. **Be proactive and cautionary.** Discharges, spills, and leaks continue to impair the Inlet, impacting Water Values and Indigenous ways of life. Choose to contribute to [net environmental gain](#) and be a positive leader in your industry.
2. **Reduce use of known contaminants.** Safe alternatives to known pollutants often exist. Use safer materials to reduce downstream impacts of discharges, stormwater toxicity, and overflows.
3. **Treat and manage runoff at your site.** Rainwater on paved surfaces isn't clean. Monitor and manage your site to ensure that runoff is meeting Water Quality Objectives. Learn more about industrial runoff at [twnation.ca/stormwater](http://twnation.ca/stormwater).
4. **Ensure your practices are meeting standards that protect aquatic life.** Seek third-party certification, like Salmon Safe or Green Marine, to ensure that your business uses best water quality practices.
5. **Contribute to coordinated monitoring.** To support broader efforts to understand and address pollution in səlilwət / Burrard Inlet, enter your monitoring data into the Province of BC's [Environmental Monitoring Data System](#).



Actions taken in **Step 2** may be applicable to **ESG reporting**.

## Where to Learn More

Find more resources at [twnation.ca/tlrstewardship](http://twnation.ca/tlrstewardship).



### Where can I learn more about Water Quality Objectives?

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

### Where can I learn more about taking action?

- [Salmon Safe certification](#)
- [Green Marine certification](#)
- [Coordinated monitoring report](#): suggested approach to monitoring in the Inlet

### 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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This practitioner guide was produced for the Tsleil-Waututh Nation by ESSA Technologies, Inc.  
Vector art by Vecteezy.com.