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Raising the standards for water quality objectives in Burrard Inlet: interaction between public, ecological and cultural values through Indigenous-Provincial collaboration

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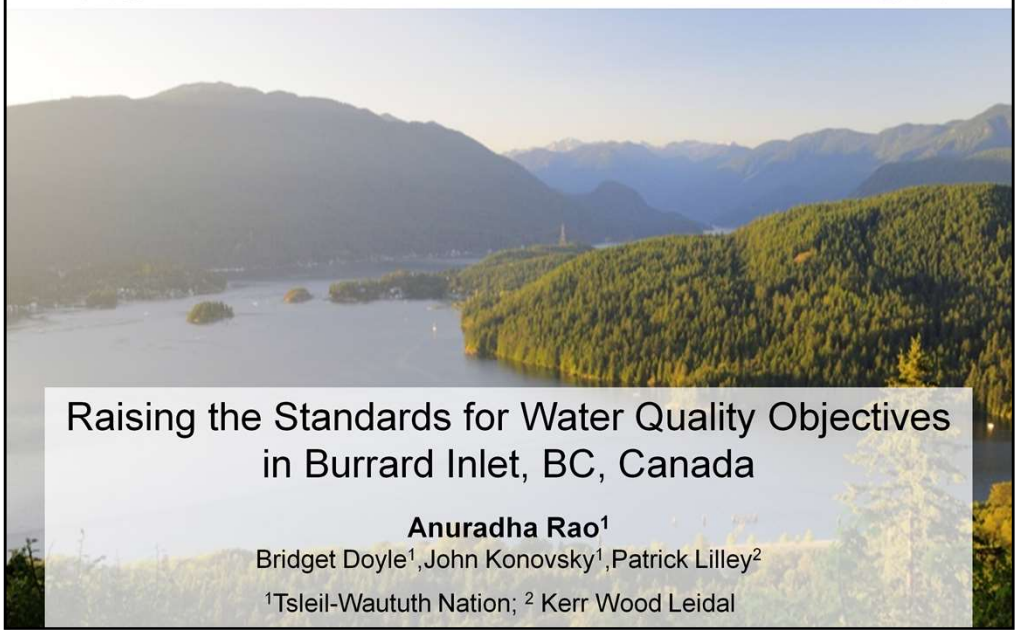
TSLEIL-WAUTUTH NATION

THE PEOPLE OF THE INLET



Raising the Standards for Water Quality Objectives in Burrard Inlet, BC, Canada

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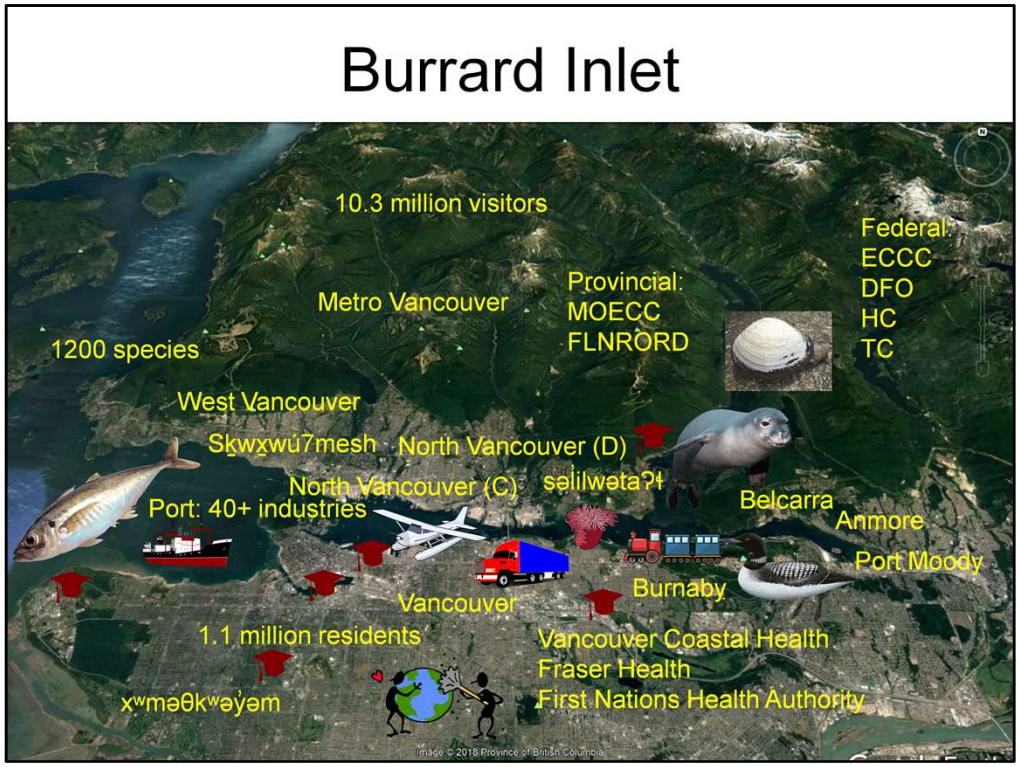
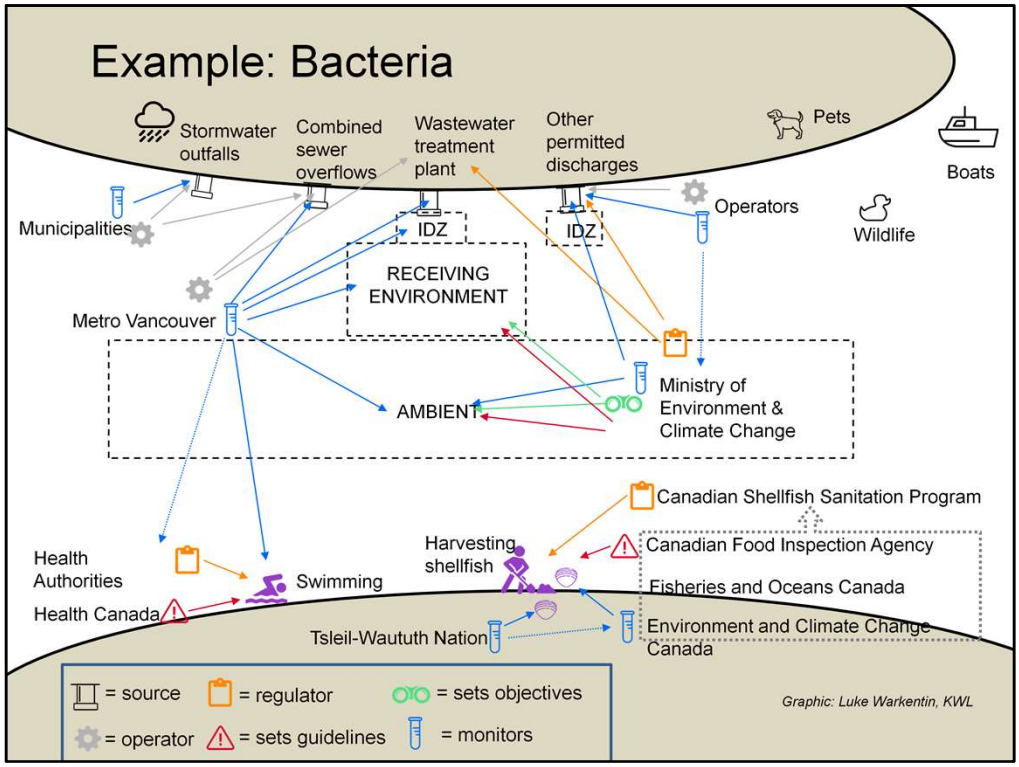


Intro to Burrard Inlet and its complexity

- 1.1 million residents
- 3 First Nations
- 9 local governments
- Federal government
- Provincial government
- Health authorities
- >40 industries: part of Canada's largest port
- major transportation hub
- several universities and colleges
- stewardship groups and other NGOs
- 10.3 million visitors to Metro Vancouver in 2017
- 1200 species of flora and fauna

- Burrard Inlet is within the unceded lands and waters of Musqueam, Squamish and Tsleil-Waututh peoples
- Tsleil-Waututh are the People of the Inlet and have used and occupied the lands and waters of Burrard Inlet and surrounding watersheds since time out of mind.
- Tsleil-Waututh hold a sacred obligation and responsibility as the stewards of their territory..
- We know from Tsleil-Waututh oral history, knowledge, and rich archaeological records that approximately 90% of the Tsleil-Waututh diet was derived from Burrard Inlet marine resources and Fraser River salmon. Today, the inlet is unable to support Tsleil-Waututh's needs.
- Adverse cumulative effects of colonial settlement and development has eroded the ecological health, integrity and diversity of the inlet.
- By 1972 sanitation and contamination concerns were so great the federal government closed Burrard Inlet to bivalve shellfish harvesting. The closure remains in effect today.
- The Tsleil-Waututh Nation has a goal to restore the health of the Inlet, so that the community can once again harvest wild marine resources from the inlet and practice cultural and ceremonial activities in clean water, free from contamination or infection concerns.

- Tsleil-Waututh commissioned a *Burrard Inlet Action Plan* to map out how best to improve environmental conditions in Burrard Inlet.
- TWN is asserting its governance and stewardship rights and obligations by implementing the BIAP and bringing back the health of the inlet for current and future generations, as well as for ancestors.
- Water quality in Burrard Inlet affects the physical, cultural and spiritual health and wellbeing of the community. Updating provincial WQOs is 1st strategy under 1st goal of BIAP
- Provincial Water Quality Objectives in BC set limits within which various parameters should remain to enable sensitive uses of water bodies. At this time, they are policy, not regulations, and are used to make decisions about regulated activities, e.g. permitted discharges. WQ = water, sediment, tissue
- The current WQOs for Burrard Inlet are almost 30 years old and do not reflect current science, all pollutants of concern or a complete understanding of uses and values, for example uses of particular importance to First Nations (e.g. ecological and cultural uses are reflected to achieve stewardship responsibilities and obligations).
- As part of its work to implement the BIAP, Tsleil-Waututh Nation is leading an initiative with the Province of BC to update the Burrard Inlet WQOs.



- Complexity of water quality landscape (example relevant to bacteria: can apply to all parameters)

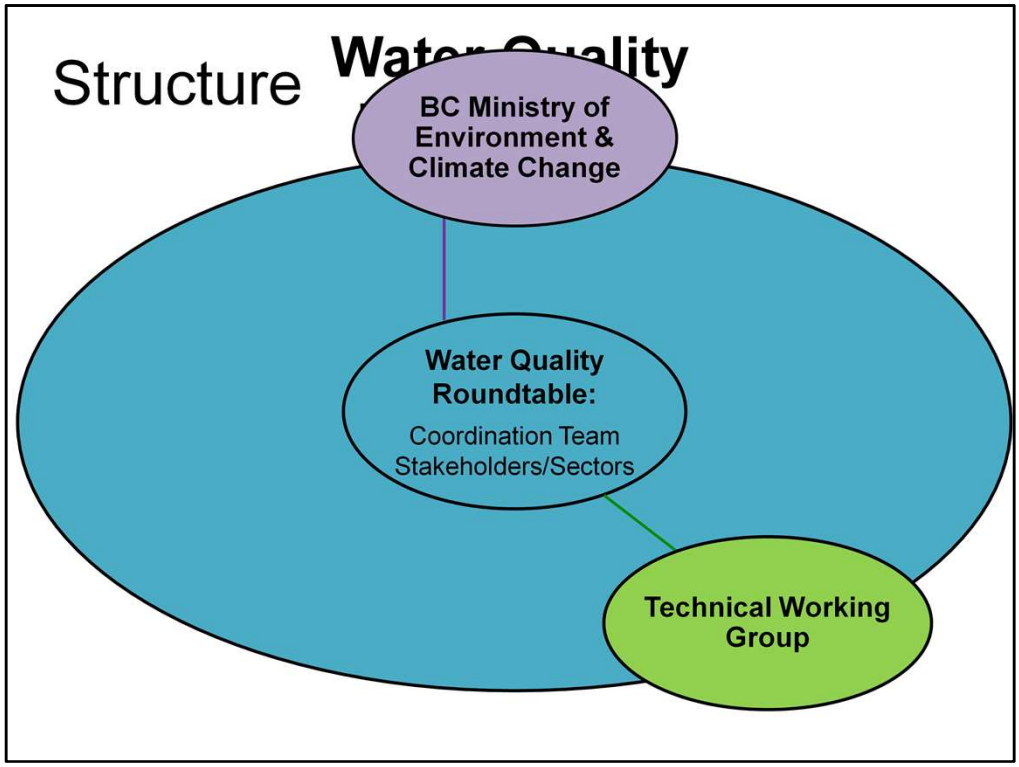
- Pipe = source
- Wheel = operator
- Clipboard = regulator
- Binoculars = sets objectives
- ! = sets guidelines
- Test tube = monitors
- Purple people = uses

Collaboration: Why?

- MOE was reorganized and no longer has the capacity to do this work alone. Given the complexity of the Inlet and cumulative issues, it also doesn't make sense for any one entity to do it alone.
- There was a central, multi-jurisdictional body tasked with environmental management in Burrard Inlet but it was closed in 2013. This body was dysfunctional in its final years as the federal government eroded its funding and mandate. The organization of this body also precluded First Nation participation.
- MOE knew of this need + it was discussed at a multi-sector workshop in 2015 + it was prioritized in the BIAP + identified as a need by the regional government
- TWN is now providing the leadership role for this initiative e.g. in terms of coordination and funding, and is working closely with the province.

Had to develop a plan to work with multiple inputs, interests, influences and information holders

- We have established a multi-stakeholder roundtable with representatives from several sectors.



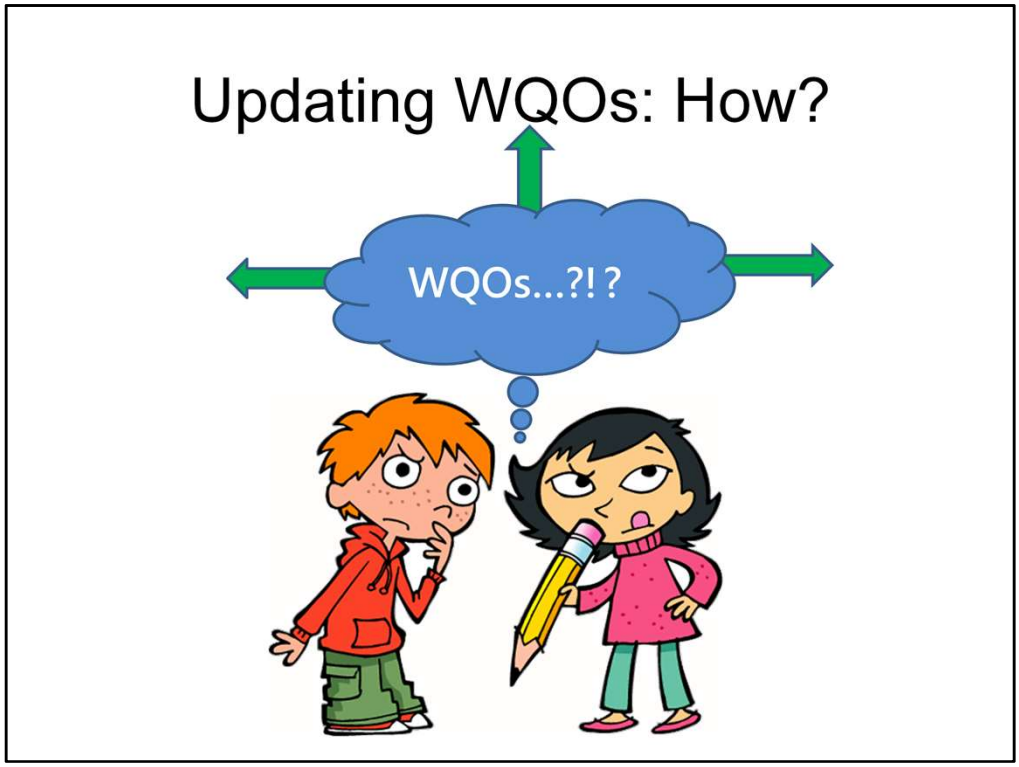
STRUCTURE

- MOE and TWN (and their contractors) have formed a Coordination team for the project
- A technical working group (TWG) has been formed as a subset of the Roundtable.
- Because this work concerns a provincial policy, the ultimate decision-maker is the BC Ministry of Environment.
- The TWG will make recommendations to the Roundtable, which will approve and forward recommendations to the BC Ministry of Environment.

How we're managing/hopefully avoiding challenges in collaboration:

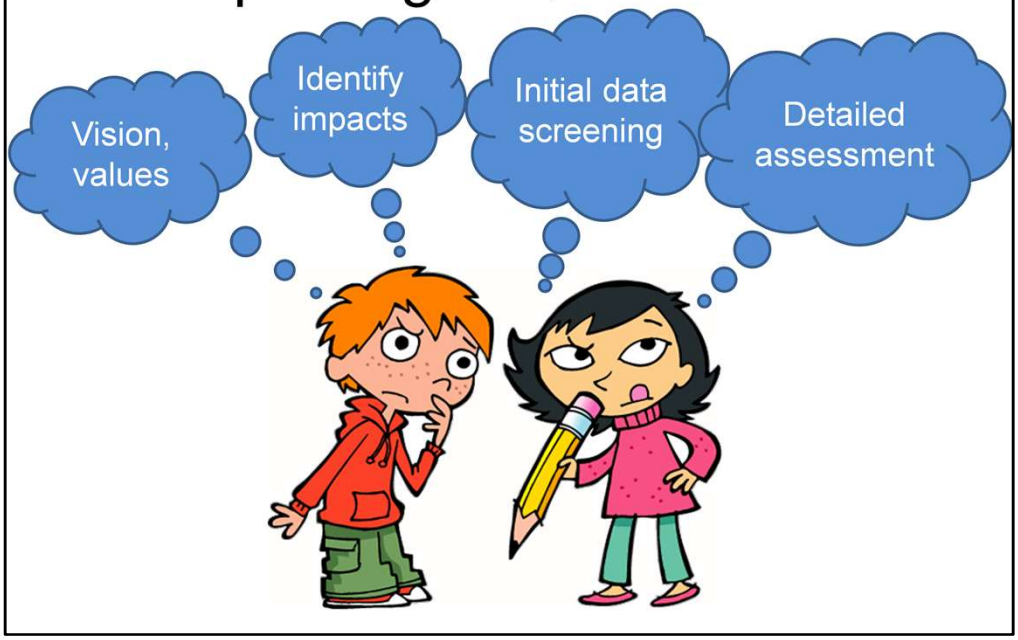
- funding for project manager to juggle the balls and technical support to compile and analyze data
- take the time needed to develop and agree on organizational structure, respective roles, working relationship
- flexibility in timeline to make sure everyone is comfortable
- balance process and results
- provide opportunities for group and inter-sector dialogue and engagement
- positive attitude, openness to ideas and participation (coordination team and participants)
- regular but not onerous communication
- gather and respond to feedback
- stone soup: time, conference call lines, meeting rooms, expertise, data

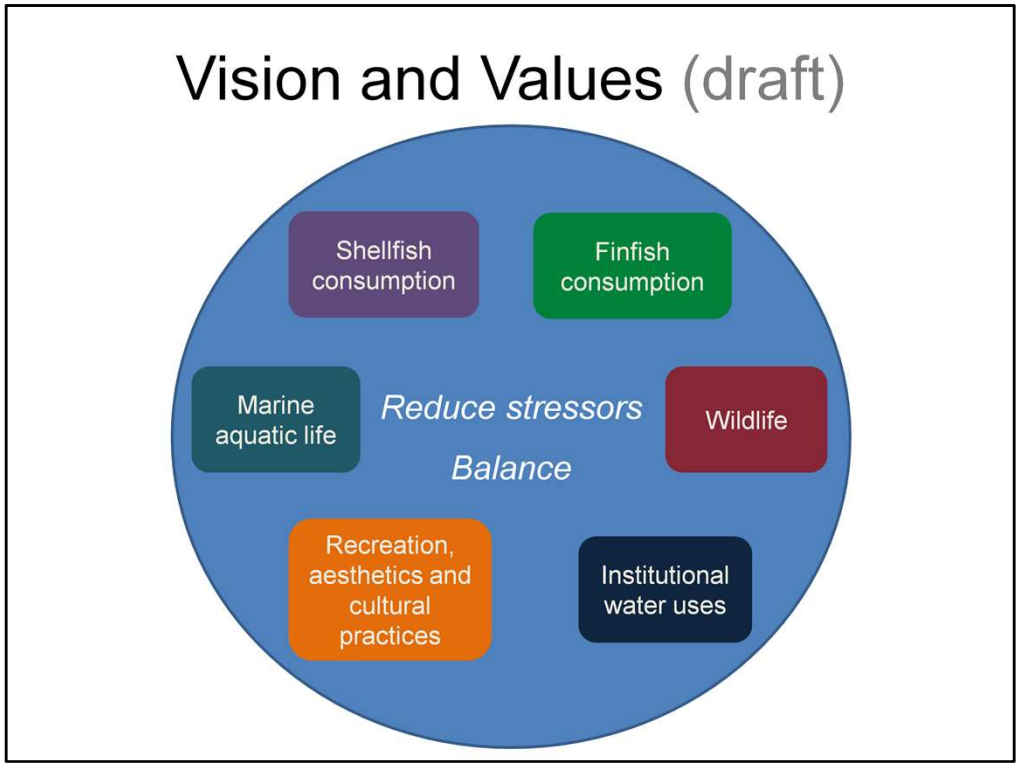
Although there have been challenges with respect to limited resources available to our provincial colleagues, the momentum and attention we've been generating may be starting to turn this situation around.



So many different directions we could go: Where to start? How to focus? How to be efficient and effective, and meet everyone's needs?

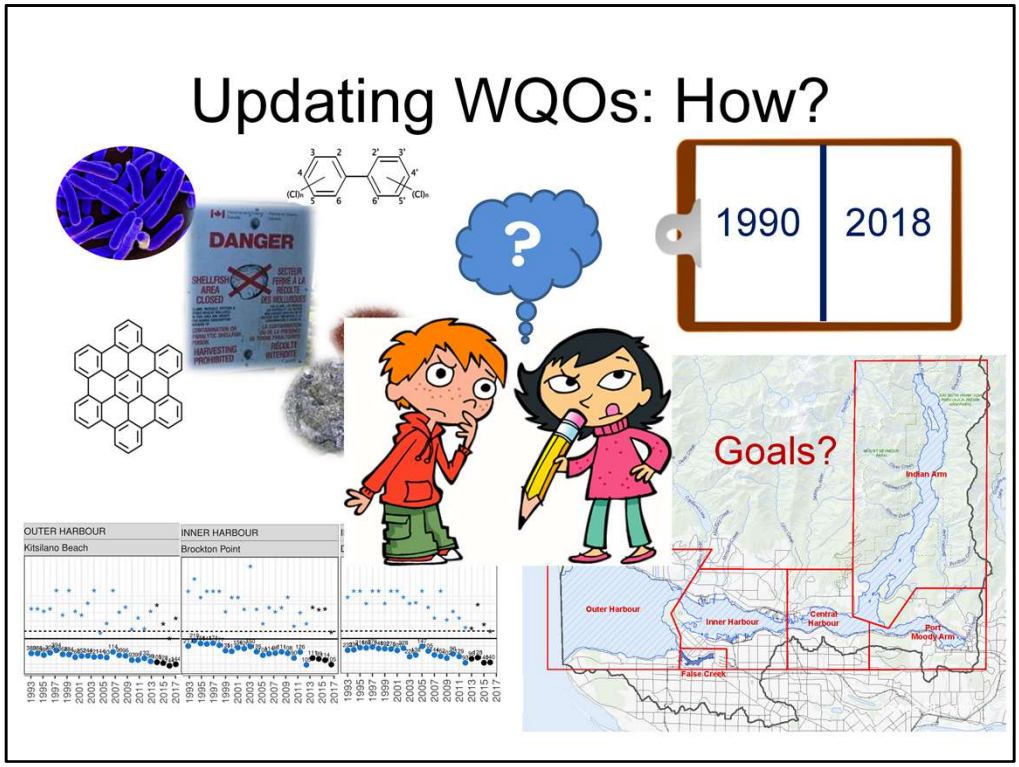
Updating WQOs: How?





One of the things we've been starting with is a group understanding of the reasons why we're doing this in the first place: what we want to achieve

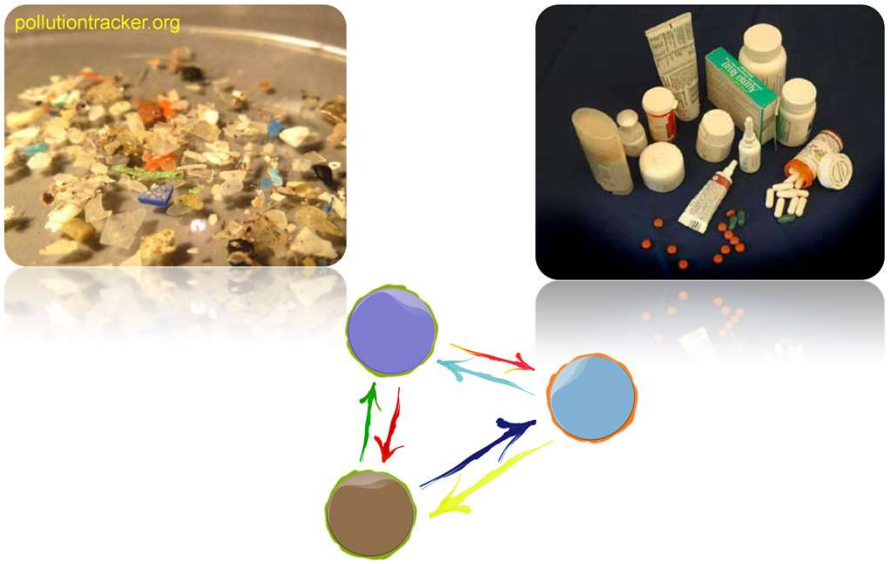
- TWN consumption needs
- Survival of biota
- Primary contact activities
- Recognize water uses by municipalities, industries etc.
- All within an overall vision of reducing stressors on the system and achieving balance



combination of:

- determining which parameters are of (key) importance to most sensitive uses, especially added uses such as shellfish harvesting – prioritizing
- comparing existing WQOs with revised/new guidelines from BC and other jurisdictions
- compile and analyze existing data to look for trends and parameters of concern (and locations)
- considering spatial and temporal goals to balance aspirations with realism (sub-regions, short- and long-term)
- still figuring it out – what we thought would be simple parameters to update are turning out to be complex

Evolving threats



- e.g. microplastics, PPCPs, interactions, e.g. physical/chemical
- don’t have answers yet
- engaging experts, e.g. staff from OW’s Pollution Tracker program are involved, and we are discussing contracting expertise as needed
- identifying/filling data gaps is part of the work plan

Advantages of TWN leadership:

- not going away or changing their priorities
- Have done a lot of groundwork in relationship building, which made pulling the Roundtable easier than starting from scratch
- TWN have mobilized the resources to make this happen
- Involved in multiple, interconnected facets of Burrard Inlet; holistic understanding

- Re. transboundary influences: Although focused on Burrard Inlet, water knows no boundaries, and this work contributes to the health of the Salish Sea and Coast Salish relatives

    - The work on WQOs relates to other TWN stewardship initiatives, such as a cumulative effects monitoring framework and climate change resiliency planning – all of which may have trans-boundary influences. For example, TWN recently joined PNW States and Indian Tribes on the International Alliance to Combat Ocean Acidification, and is working with Ocean Networks Canada to install a seafloor observatory to monitor and study acidification in Burrard Inlet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Thanking all of you