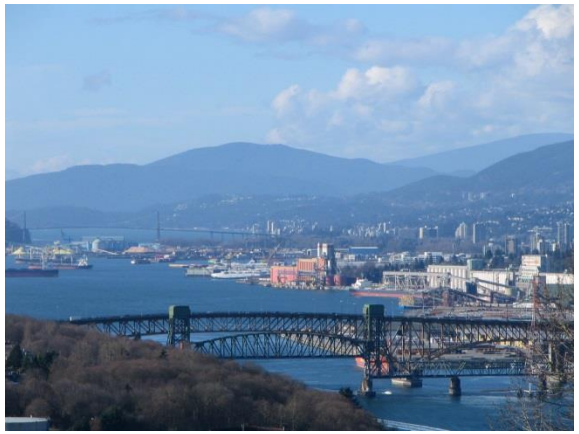
Tsleil-Waututh Nation Environmental Stewardship Initiatives in Burrard Inlet


Lindsey Ogston
Environmental Programs Manager, Tsleil-Waututh Nation

Tsleil-Waututh Vision and Goals

A productive, diverse and resilient ecosystem where:

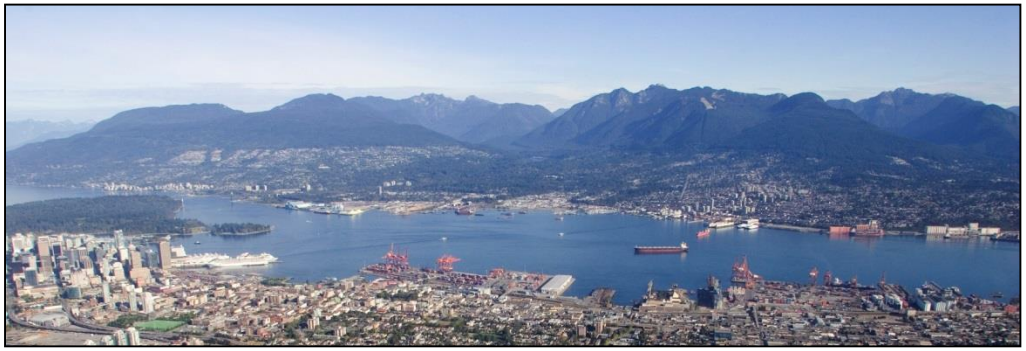
✓Healthy, wild marine foods can be harvested
✓Water and sediment is safe and clean
✓Important habitats are plentiful, productive, and connected
✓Biodiversity and key species can persist

Recovery goal: 10% of protein from marine species in Burrard Inlet

Restore the health of the inlet and put the face of the nation back on the territory

Current state of Burrard Inlet

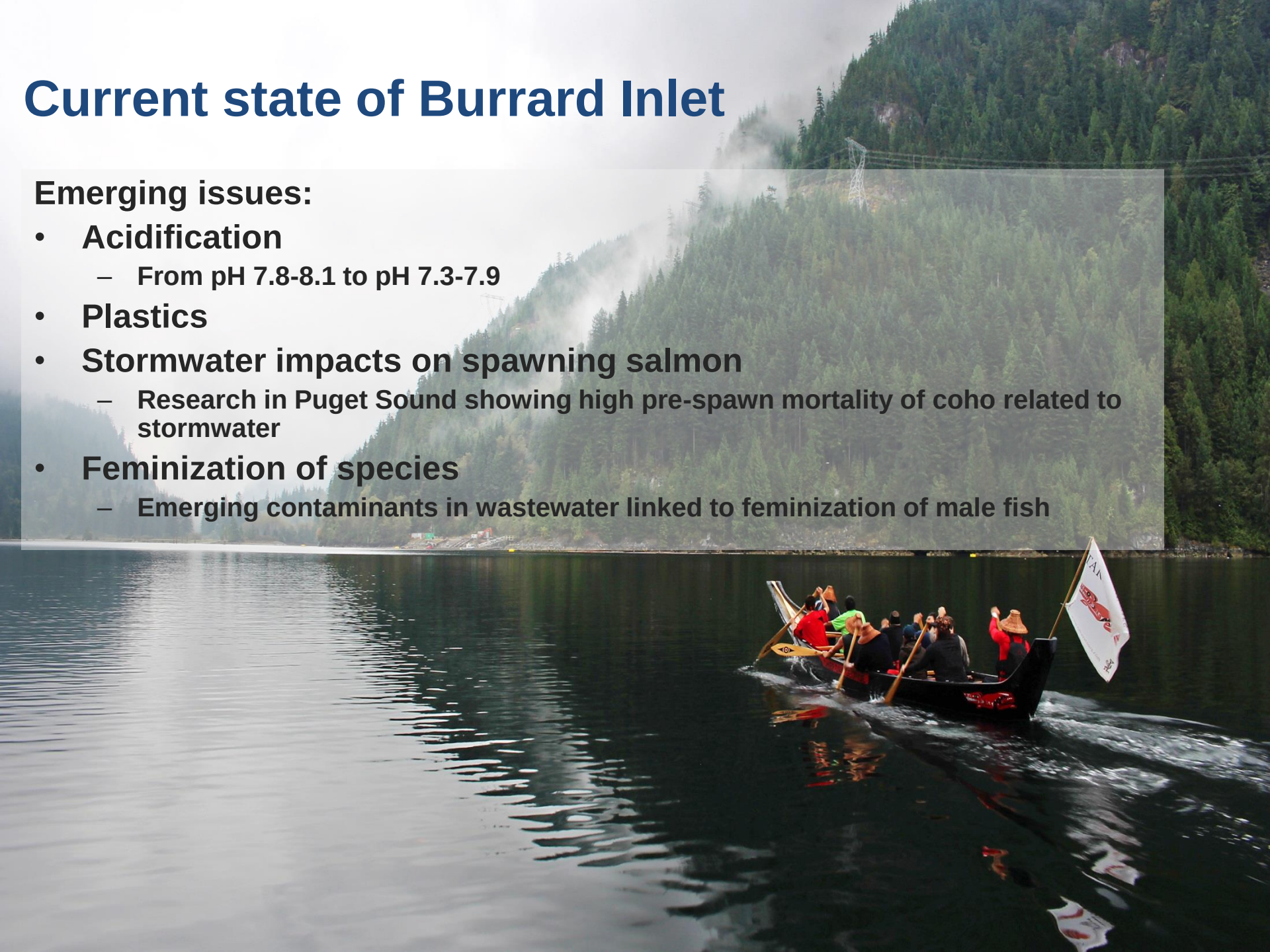
- Burrard Inlet closed to bivalve harvesting since 1972
- Herring extirpated in 1885
- General decline in habitat type, function, connectivity and species populations
- Point and non-point sources of pollution
- Lack of coordinated monitoring or environmental stewardship oversight
- General lack of information and regular data collection



Current state of Burrard Inlet

Emerging issues:

- **Acidification**
  - **From pH 7.8-8.1 to pH 7.3-7.9**
- **Plastics**
- **Stormwater impacts on spawning salmon**
  - **Research in Puget Sound showing high pre-spawn mortality of coho related to stormwater**
- **Feminization of species**
  - **Emerging contaminants in wastewater linked to feminization of male fish**



Burrard Inlet Action Plan Overview

A science-based, First Nation-led initiative to improve the health of the Burrard Inlet ecosystem

Purpose of the Plan:

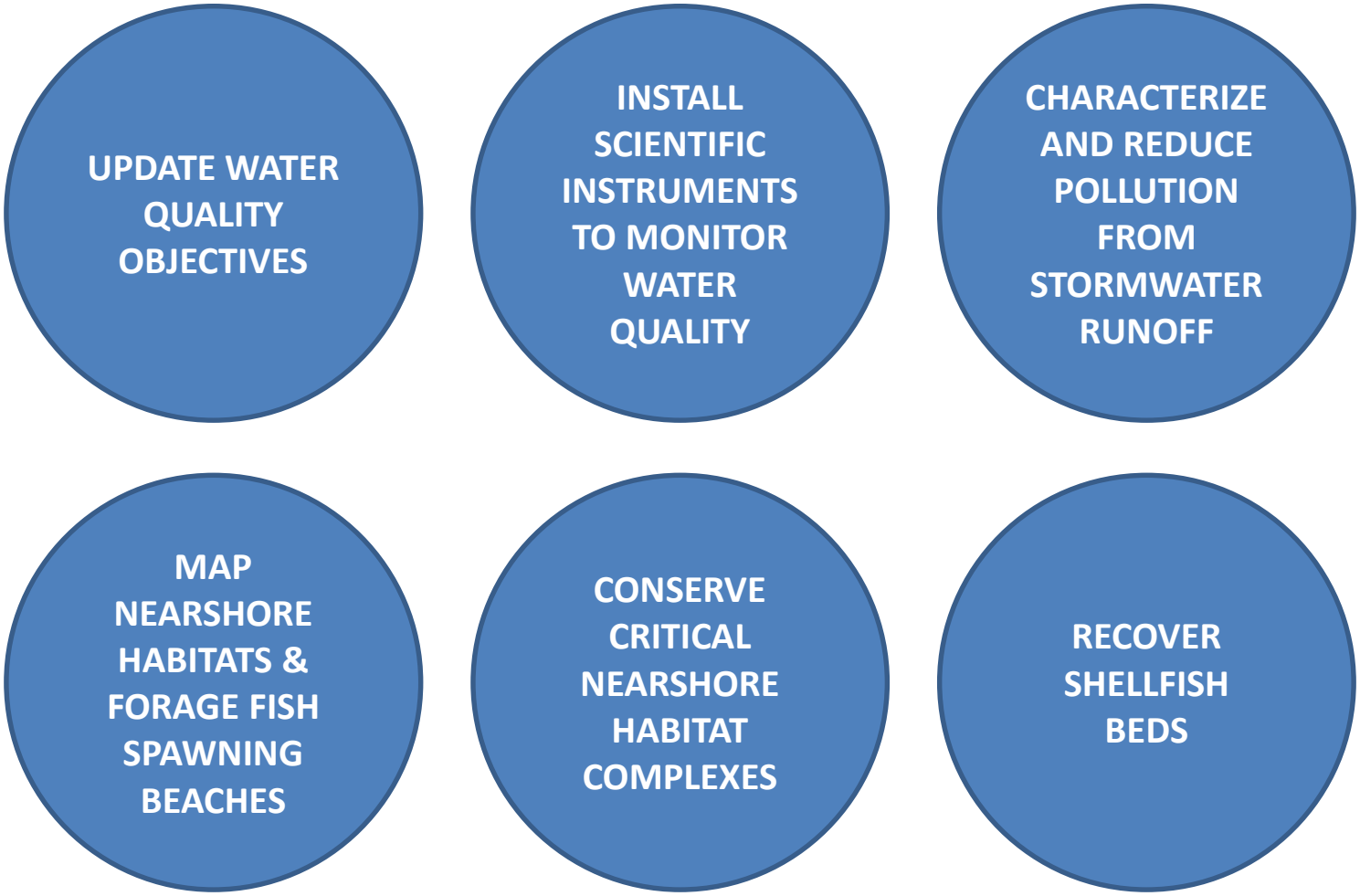
- To summarize scientific knowledge
- Identify priority issues
- Identify knowledge gaps & research needs
- Develop shared stewardship vision
- Prioritize near-term actions

Overall goal: Improve the health of the Burrard Inlet ecosystem by 2025

5 Goals of the Action Plan

1. Improve water quality and reduce contamination
2. Protect and enhance fish and wildlife habitat
3. Protect and recover key species populations and food webs
4. Protect and restore supporting biophysical processes/ ecological integrity
5. Identify and track emerging issues

Six Priority Near-term Actions



Where are we now: Water Quality

- **Creation of the Burrard Inlet Water Quality Roundtable and Technical Working Group**
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- **Identify priority issues**
- **Update the MOE's 1990 Ambient Water Quality Objectives for Burrard Inlet**
- **Develop recommendations for monitoring and management of water quality in Burrard Inlet**

Where are we now: Shellfish

- **First DFO shellfish opening in Burrard Inlet since the 1970's**
- **Four harvests to date**
- **11 years of water quality monitoring of marine sites for fecal contamination**
- **5 years of biotoxin testing**

MST* Cumulative Effects Monitoring Framework

*MST = Musqueam, Squamish, and Tsleil-Waututh Nation

TWN Cumulative Effects Management Goals

- Sufficient ecological representation & integrity for meaningful exercise of TWN rights in our territory, including resource harvest and cultural practices
- Sustain community well-being and resilience
- Provide for economic livelihood sufficiency and opportunity over the short and long-term
- Provide for intra- and inter-generational equity (inc/past & future generations)
- Meet local, regional, national, and international climate commitments

Baseline vs Current Conditions

Key Valued Components for TWN

Environment	Culture
Shellfish	Governance/stewardship rights
Finfish	Places
Other plant/animal species	Environmental quality
Habitat types/connection	Access
Water/sediment/tissue/air quality	Social economy —*both subsistence & contemporary*
Ecological processes	Community health

Monitoring and Data Amalgamation

TWN Programs
Burrard Inlet Water Column Profiles (new) w/ONC
Canadian Shellfish Sanitation Program w/ECCC
First Narrows Seafloor Observatory w/ONC
Forage Fish Spawning Beach Surveys w/Ramona DeGraff
Harmful Algal Blooms w/CFIA
Indian River Salmon Surveys w/DFO
Forage Fish Spawning Surveys w/VFPA
Kelp & Eelgrass Surveys w/SeaChange
Nearshore Survey w/ECCC & CORI (John Harper)
On-Reserve Stream Water Quality Surveys
PollutionTracker w/Ocean Wise
Shellfish/Sediment Contamination Surveys
Water Quality Objectives Update w/MOE
Central Harbour Shoreline Erosion Study

TWN Climate Change Projects

- Community based Climate Change Resiliency Plan
- Review and comment on all Federal climate change-related legislative and regulatory processes
- International Alliance to Combat Ocean Acidification

Ecosystem Restoration and Monitoring

- Indian River Watershed elk
- Indian River fish habitat restoration program
- Burrard Inlet estuaries
- Salmon stock assessments and forage fish
- Kelp and eelgrass bed mapping and transplants


Thank you! Questions?