Apr 6th, 8:30 AM - 8:45 AM

What climate change means for the Salish Sea

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What does Climate Change Mean for the Salish S[e]

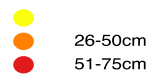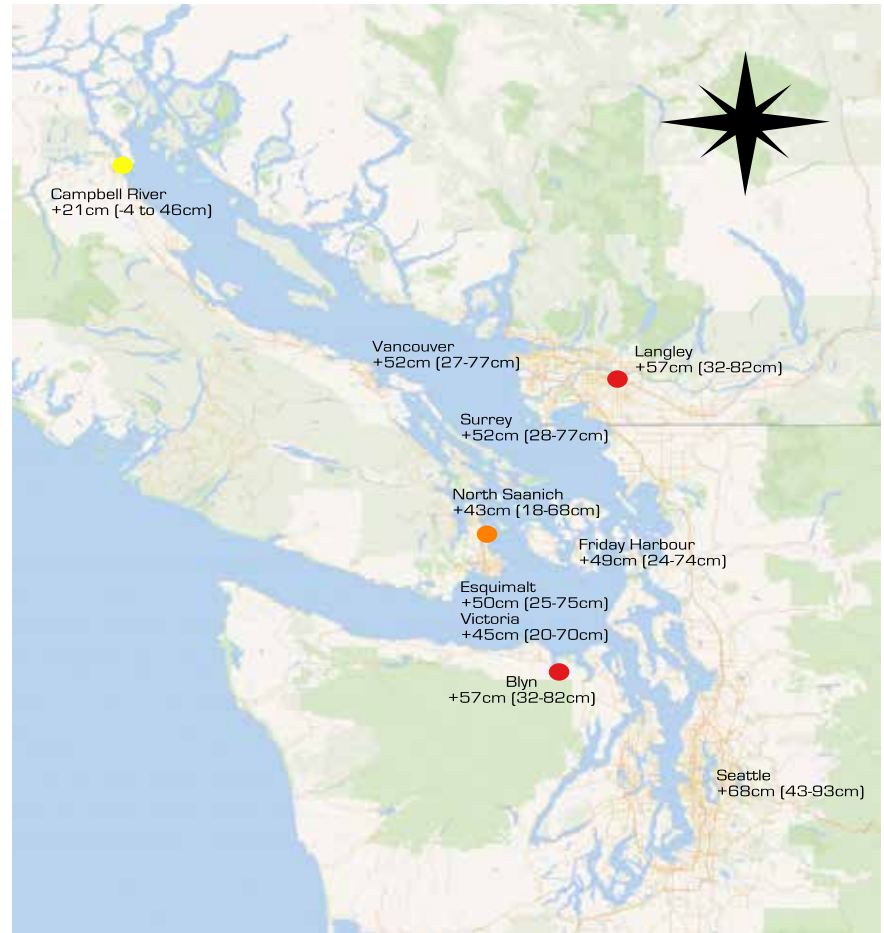Nathan Vadeboncoeur, PhD
President – Smart Shores

Climate Change: State of Knowledge and Indicato

- Assessing Climate Change
  - Key Findings
    - Climate Stressors
    - Synergistic Impacts

Sea Level Rise

- Sea level rise varies by region
- Wave impacts present the greatest risk
- Sediment transport is a key feature

Campbell River
+21cm [-4 to 46cm]

Vancouver
+52cm [27-77cm]

Langley
+57cm [32-82cm]

Surrey
+52cm [28-77cm]

North Saanich
+43cm [18-68cm]

Friday Harbour
+49cm [24-74cm]

Esquimalt
+50cm [25-75cm]
Victoria
+45cm [20-70cm]

Blyn
+57cm [32-82cm]

Seattle
+68cm [43-93cm]

26-50cm
51-75cm

map by Nathan Vadeboncoeur.

Physical Coastal Processes

- Sediment Transport
- Shoreline Armouring
- Habitat Impacts

High Water 2100
High Water 2018
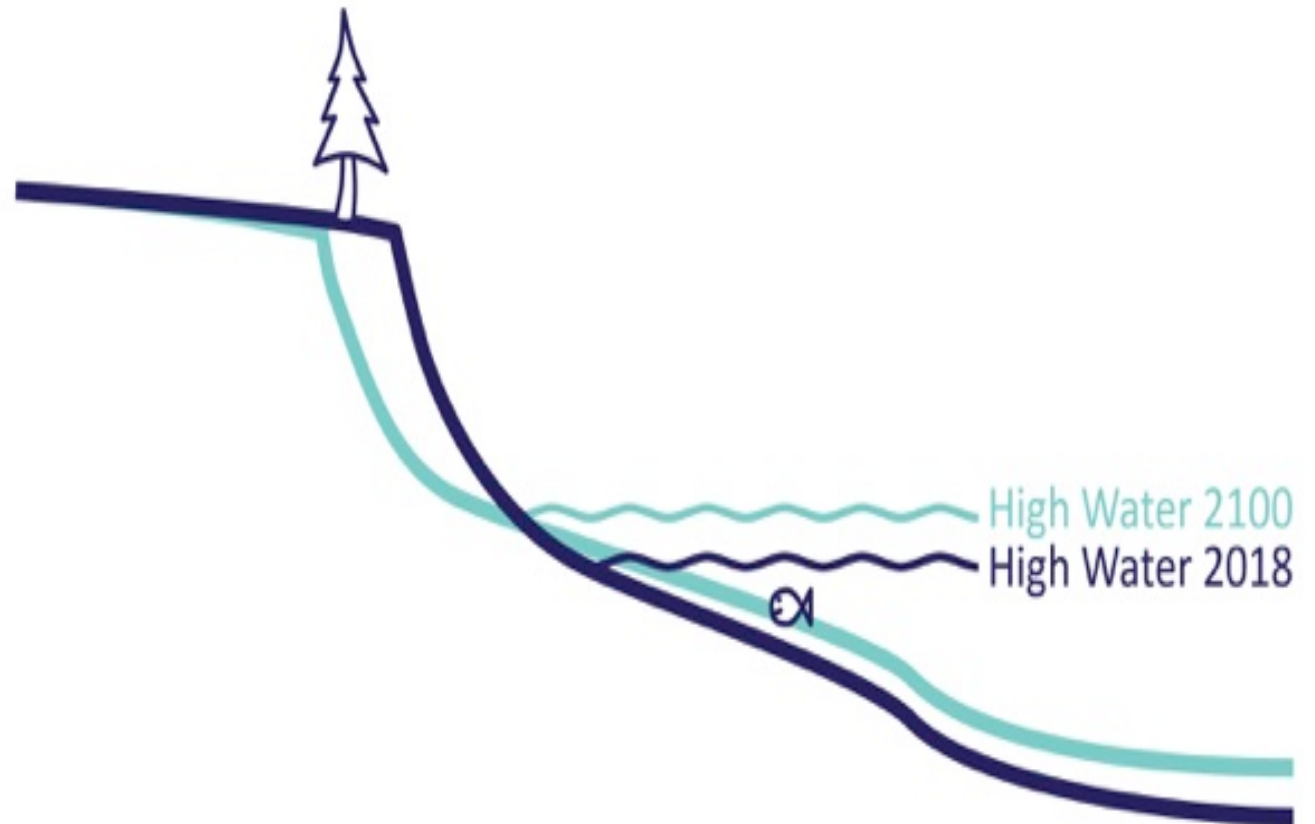
Fisheries

- Forage fish and juvenile salmon habitat
- Phenological Mismatch
- Water temperature
- Riparian Zones
- Predation

High Water 2100

High Water 2018
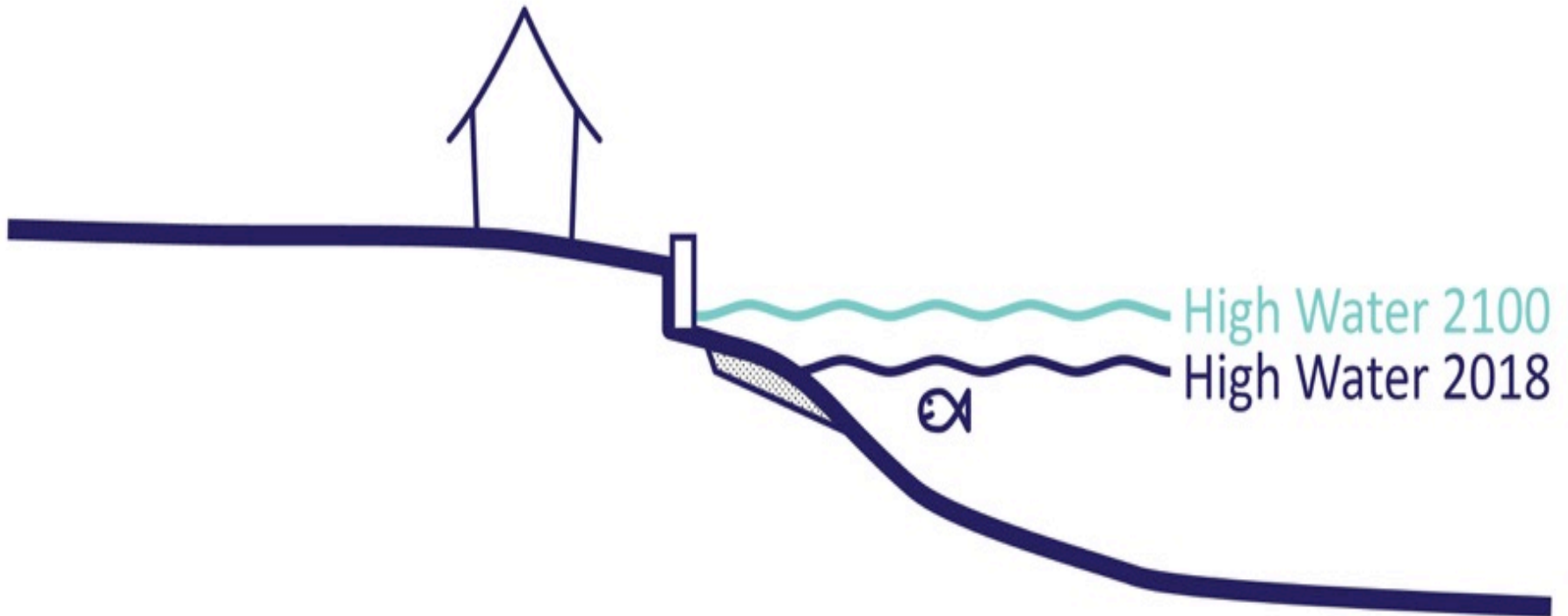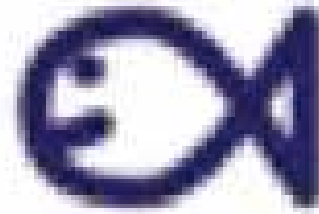
Birds

- Pacific Flyway
- Potential intertidal impacts mediated by Agriculture
- Phenological Mismatch

Key Messages

- Municipalities play a key role in determining climate impacts
- Changes to atmospheric and water temperatures can affect the marine food web
- Climate impacts are the result of synergistic effects and have cascading consequence