Nooksack Tribe collaborative teaming to address shellfish harvest closures in Drayton Harbor

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Nooksack Tribe Collaborative Teaming to Achieve Shellfish Harvest Upgrades in Drayton Harbor
Jezra Beaulieu, Water Resources Specialist

Project Team:
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The Nooksack Tribe

- Treaty of Point Elliot (1855) gave title to their land in exchange for hunting, fishing and gathering rights- “Treaty Resources”
- Became federally recognized in early 1970’s with one-acre of land near Deming, WA, now up to 2,500 acres of trust land.
- Approximately 2000 members
- Nooksack means “People of the Fern”, Whatcom was the name of a Nooksack Chief and means “noisy water”
Geographic Area

- Waters flowing on and through reservation/trust properties
- Waters used for cultural and recreational activities
- Waters supporting fishing and shellfish harvest areas
Drayton Harbor Watershed

Manila clams
Oysters

Horse Clams
Fish and Wildlife

- Chinook, coho, chum, steelhead, cutthroat
- Variety of aquatic birds
- Beaver
- Variety of shellfish:
  - Manila clams
  - Oysters
  - Horse clams
Grants

- BIA rights protection grants
- EPA Capacity Building Grant
- Performance Partnership Grant
  - CWA 106 and CWA 319
  - Indian General Assistance Grant—IGAP
- Tribe voluntarily funded routine monthly water quality sampling at over 30 locations in Drayton Harbor watershed to assist targeted monitoring efforts by the Whatcom Clean Water Program
- Program partners used our data to carry out Pollution Identification Control (PIC) Program
Overall Goals

- Establish baseline conditions
- Evaluate regulatory compliance with WA State Water Quality Standards
- Support the development of adaptive management actions to address water quality degradation
- Determine the suitability of waters for specific tribal uses
Monitoring Goals

- **Source tracking** of bacteria through bracket sampling, in collaboration with Whatcom Clean Water Program

- **Trends** of fecal coliform and E. coli bacteria in fresh and marine waters and *Enterococcus* in marine waters

- **Assess connections** with other water quality parameters: turbidity, temperature, DO, pH, specific conductance, salinity

- **Understand processes** contributing to water quality degradation
Environmental Response Tracking System (ERTS)

- Manure spreading on frozen ground
- Damaged exclusion fencing
- Livestock stream access
- High turbidity event or sediment pulse
Future Work: Ocean Acidification

- Oceans have absorbed about 25% of the CO₂ in atmosphere
- By 2100, ocean acidity is projected to increase 100-150%
- Nutrient loading in Salish Sea increasing, affecting acidification
- Acidification will likely reduce growth and survival of shellfish

Feely et al., 2012; NOAA, 2012; Barton et al., 2012
Questions?

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