

# EXAMPLES OF COLLABORATIVE ENVIRONMENTAL DATA EXCHANGE NETWORKS IN THE PACIFIC NORTHWEST

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# The 'other' Washington



# Exchange Network Discussion

- ▣ Pacific Northwest environs
- ▣ Natural history and salmon life histories
- ▣ Tribal treaty rights (1850's) predate statehood
- ▣ Generalized locations of tribes and watersheds
- ▣ “Co-management” of fisheries resources
- ▣ ESA- listings of WA salmon stocks
- ▣ Clean Water Act relevance
- ▣ Exchange Network opportunities/partnerships
- ▣ Current and future initiatives

# Exchange Network relevance specific to “co-management”

- ▣ Boldt Decisions (US v. Washington - 1974) led to co-management b/w Washington state agencies and the treaty tribes
- ▣ Unique relationship b/w tribes and state
- ▣ Salmon as cultural icon
- ▣ Endangered Species Listings of WA stocks
- ▣ Salmon ‘indicator species’ of watershed health due to life history behaviors -fresh and salt H2O
- ▣ EN opportunities with “co-managers”

# The “EN” case

- ▣ Tribal “usual and accustomed” areas
- ▣ Puget Sound, Washington Coast, Columbia basin – salmon recovery basins within
- ▣ Salmon are anadromous (hatch / rear in fresh water – migrate to sea – return to spawn)
- ▣ Juvenile salmon migration (JMX)
- ▣ National Hydrography Dataset (NHD)
  - Washington Integrated Fish Distribution



PARR - become SMOLTS in the Spring of their 2nd, 3rd or 4th year and migrate to sea.

SALMON - travel great distances in the sea and feed on sandeels, krill and herring.

PARR - remain in fresh water for one to four years feeding on insects.

FRY - start feeding on tiny water organisms and grow quickly during their first Summer.

ALEVINS - hatch in early Spring but remain buried under gravel before emerging 4 - 6 weeks later.

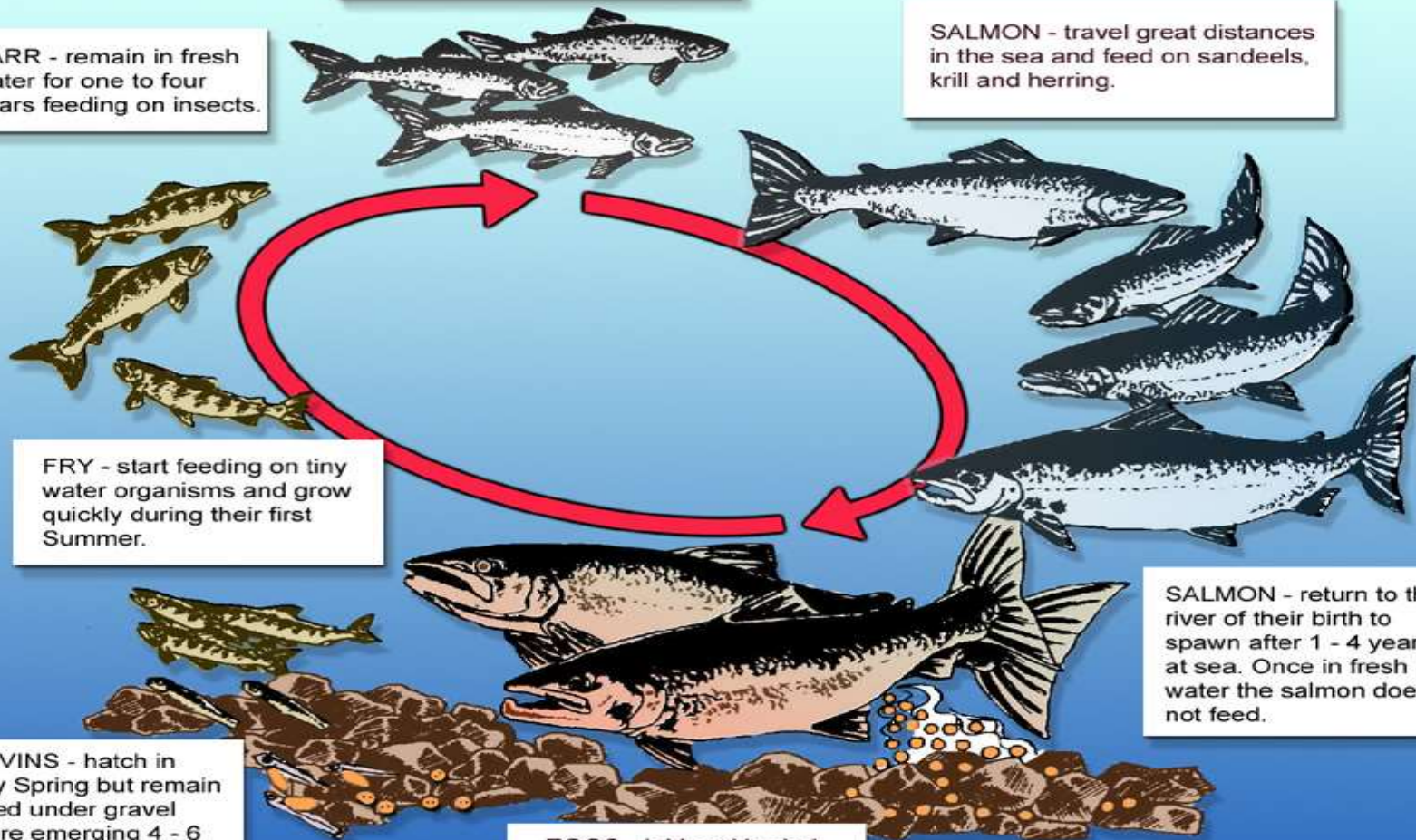
EGGS - laid and buried in gravel in late Autumn.

SALMON - return to the river of their birth to spawn after 1 - 4 years at sea. Once in fresh water the salmon does not feed.

GRILSE - are mature salmon which return to their native river after only one winter at sea.

Female salmon or 'hen' fish can survive spawning and return to sea as KELTS.

Male salmon or 'cock' fish usually die when spawning is over.



# National Hydrography Dataset and Washington Fish Distribution

- ▣ National Hydrography Dataset (NHD)
- ▣ Washington Integrated Fish Distribution (WIFD)
  - Summary and narrative and products
  - Stream events layered with Distributions
  - (this EPA – EN project completed December 31, 2013)
- ▣ SalmonScape (WDFW) web link

[http://wdfw.wa.gov/mapping/salmonscape/salmonscape\\_info.html](http://wdfw.wa.gov/mapping/salmonscape/salmonscape_info.html)



### Legend



# Specific Partnerships in EN

- ▣ NW Indian Fisheries Commission & Washington Department of Fish and Wildlife partners in Juvenile Migrant Exchange (JMX)
- ▣ same partners in (NHD)
- ▣ same partners in Near Shore Exchange (NSX)
- ▣ Columbia InterTribal Fish Commission
  - WDFW, USGS -Coordinated Assessments (CAX)
- ▣ Federal nexus - CWA, ESA, fiduciary relationship

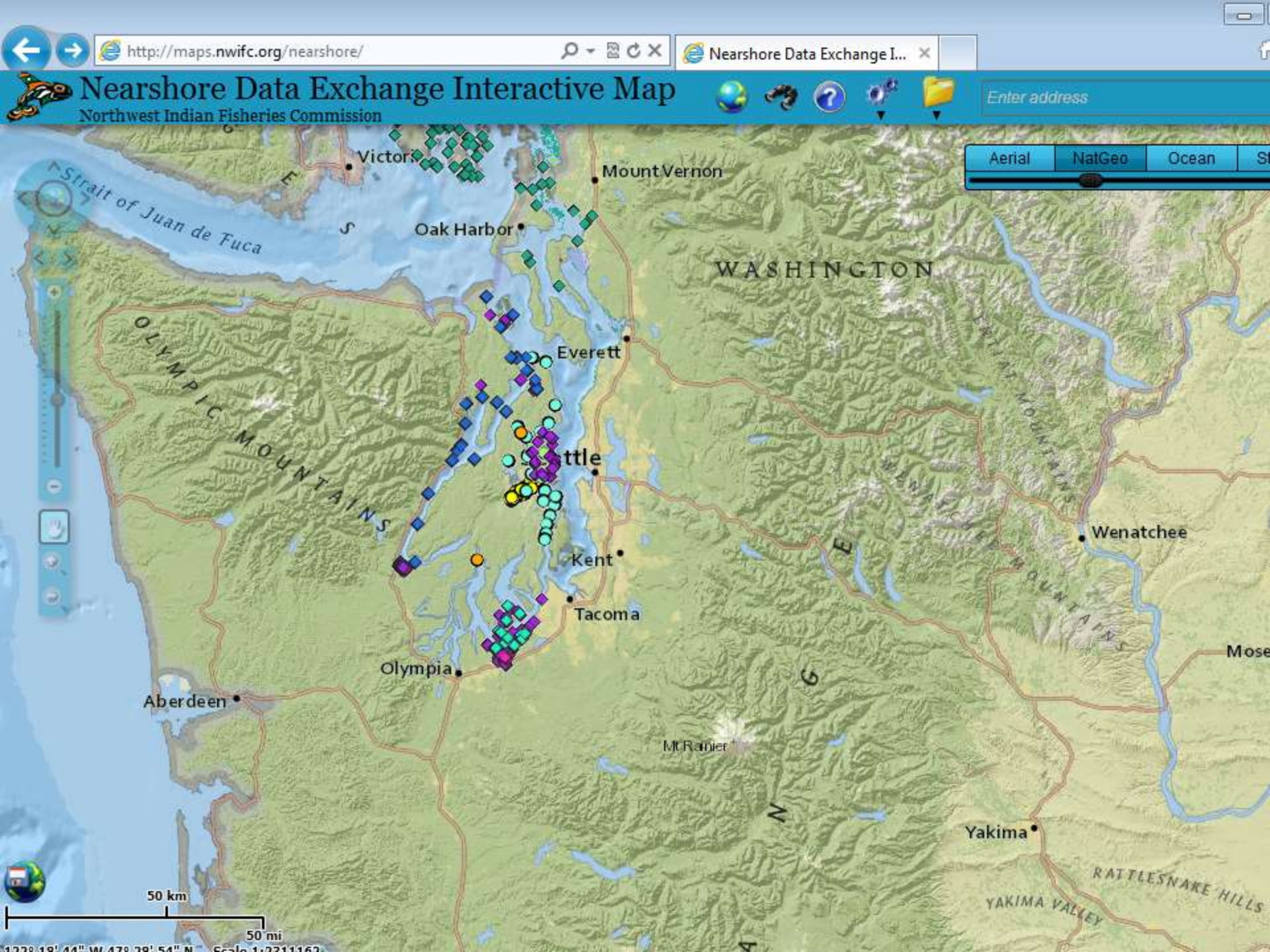
# EN supports coalition building and collaboration

- ▣ “Co-Management” b/w state and tribes
- ▣ Salmon life histories
- ▣ Varied jurisdictions
  - State
  - Federal
  - U and A
  - International
- ▣ Salmon recovery regions
- ▣ Lead Entities (Washington Salmon Coalition)

# EN brings data sets together

- ▣ JMX pulls tribal and state juvenile data
- ▣ NSX pulls tribal and state near shore data
- ▣ NHD pulls hydrography and fish distribution
- ▣ CAX pulls coordinated information and data
- ▣ WQX pulls state water quality data







# EN draws attention of policy makers to issues

- ▣ Salmon Recovery Funding Board
  - JMX, NSX, NHD
  - AMX, NHD2 (pending)
- ▣ Northwest Power and Conservation Council
  - Coordinated Assessments in the Columbia Basin
- ▣ Salmon Recovery Regions of Washington
- ▣ Puget Sound Partnership
- ▣ NOAA -NMFS
  - 5 year review of salmon recovery regional plans
- ▣ Informs Congressional delegation

# Selected EPA Exchange Network Initiatives in place

- ▣ Juvenile Migrant Exchange (JMX)
- ▣ Nearshore Data Exchange (NSX)  
Presented earlier by Windsor Solutions / NWIFC
- ▣ National Hydrography Dataset (NHD)
- ▣ Coordinated Assessments (CMX)
  - ▣ Just commenced

# Coordinated Assessments Exchange (CAX)

## Coordinated Assessments Exchange (CAX)

Corporate Databases  
(Automated Data Exchange)



Exchange Configuration Team

Interface  
Specification

CAX Data  
Repository

Virtual  
Node



Developing Systems



Inter-Tribal Monitoring Data Project

- Slower timeline
- Same interface
- Build infrastructure

# Pending Exchange Network Initiatives

Submitted by RCO / WDFW / NWIFC last November 2013 - awaiting review & ranking

- Adult Salmon Exchange (AMX)  
Summarize submission
- Next iteration of NHD w/ USGS (NHD2)  
Summarize submission
- ▣ Other?
  - Monitoring Metrics Exchange ? (MMX) ?
  - Estuarine Data Exchange ? (EDX) ?

■ USGS – BPA – CRTIFC – NWIFC – EPA-WDFW- RCO -PSP      FY 2015



# InterAgency Commission > Recreation & Conservation Office

- ▣ Celebrating 50 YEARS of conservation
- ▣ ESA listing of salmon stocks in 1990a
- ▣ Salmon Recovery Funding Board (SFRB)
- ▣ The Governor's Salmon Recovery Office ☺
- ▣ "The Washington Way"
  - Salmon Recovery Regions
  - Lead Entities – Washington Salmon Coalition

# Thank you

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