

# Water Quality Monitoring in the Yakima River Watershed

by

Washington State Department of Ecology

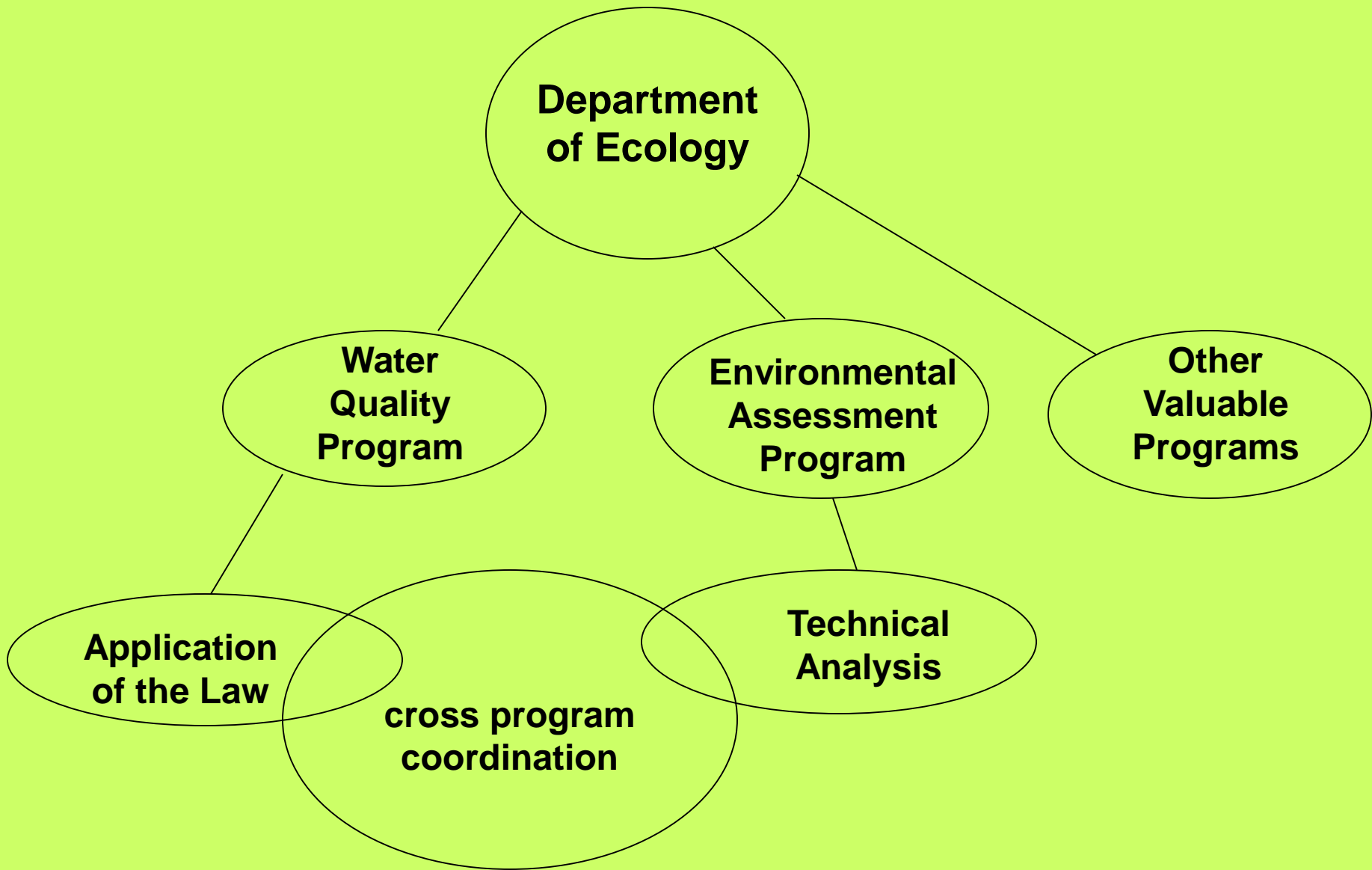
Ryan Anderson



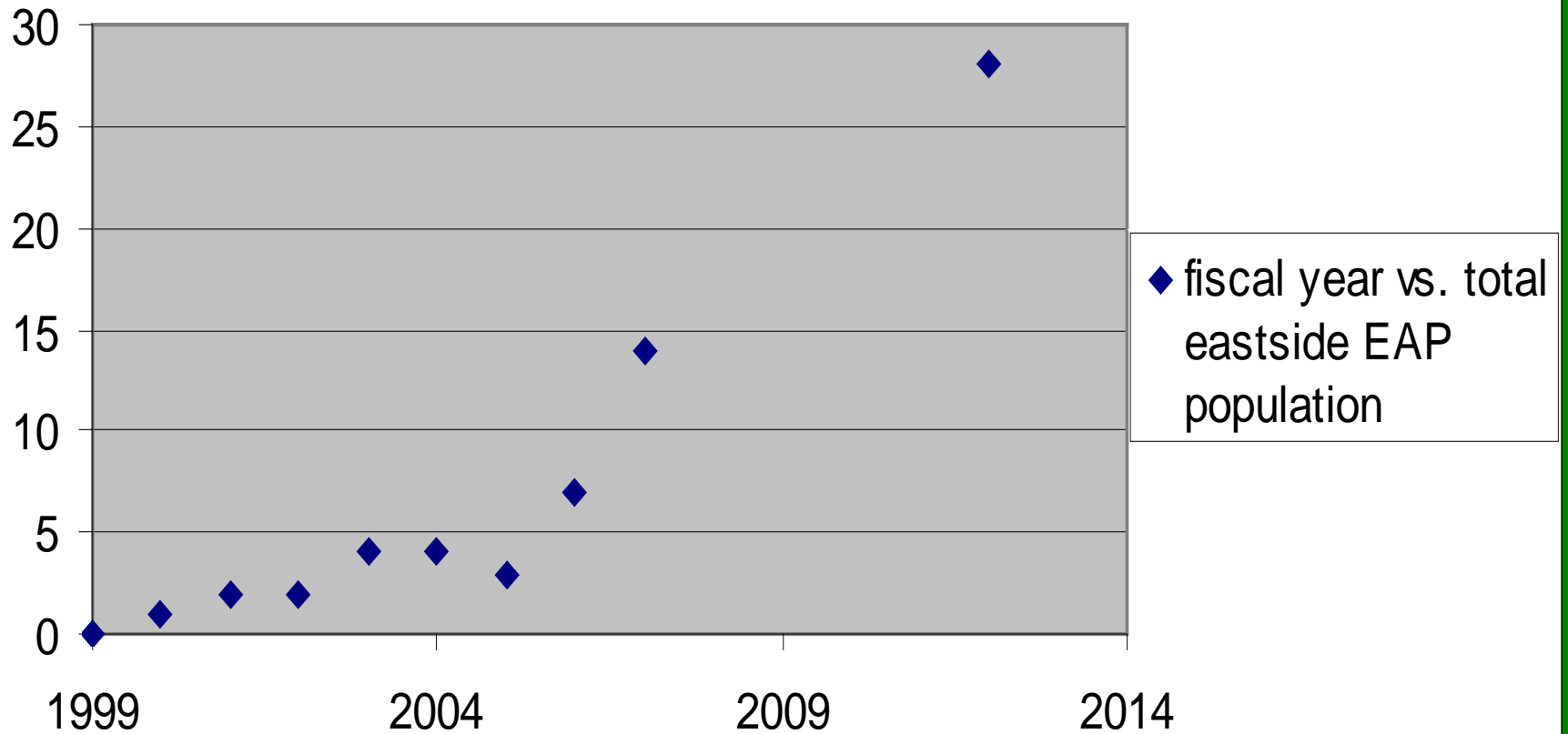
# Water Quality Monitoring in the Yakima River Watershed

- **CHANGES AT ECOLOGY**
- **Statewide Programs**
- **Yakima River Watershed Projects**
- **List of recently completed studies**

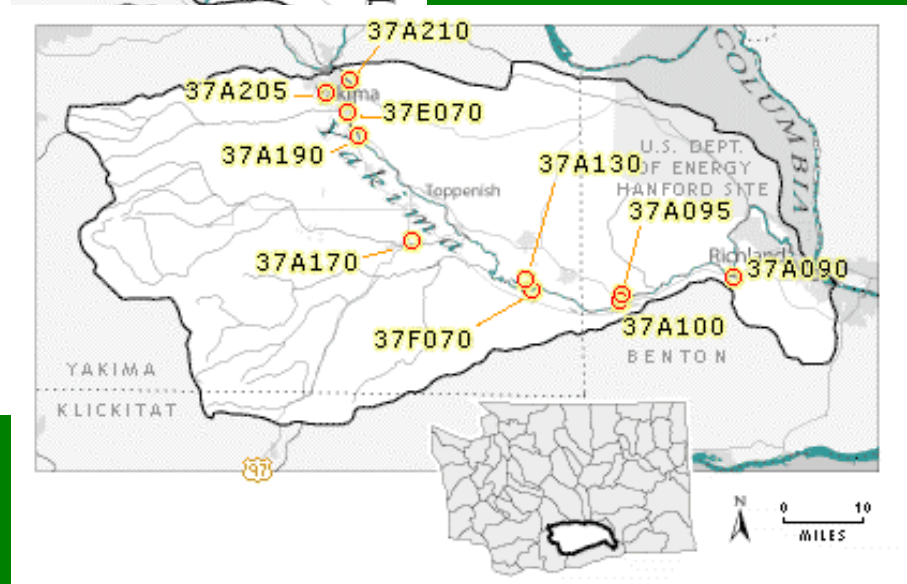
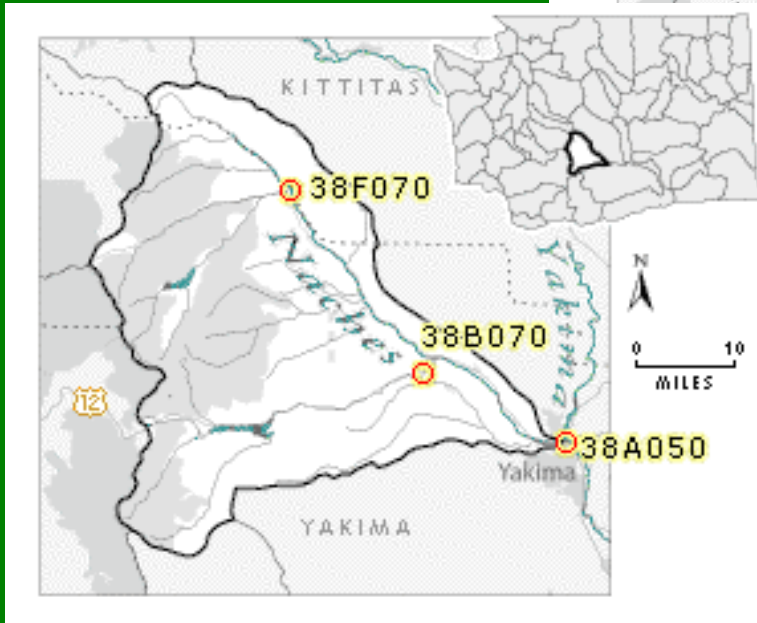
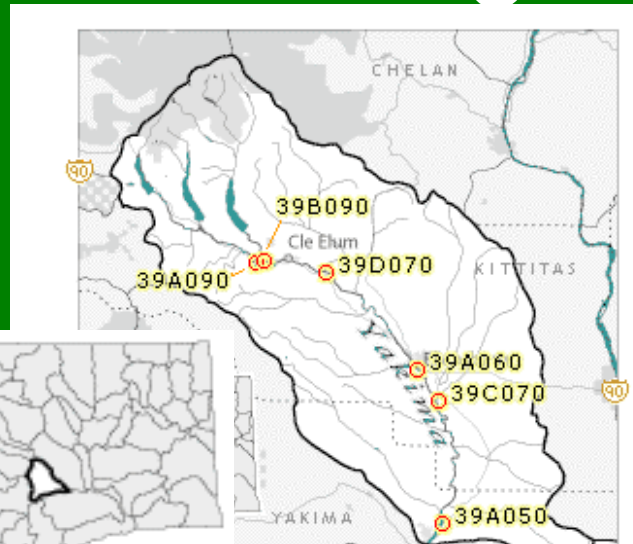




# Environmental Assessment Program Staff Population Growth East of Cascades



# Ambient Monitoring Program



# Ambient Monitoring Parameters

- Flow (at most stations)
- Dissolve Oxygen
- pH
- Temperature
- Turbidity
- Total Suspended Solids
- Fecal Coliform Bacteria
- Nitrate/Nitrite
- Total Nitrogen
- Ammonia
- Soluble Reactive Phosphorous
- Total Phosphorous

Contact: Chris Coffin, Environmental Assessment Program (509) 454-4257

[http://www.ecy.wa.gov/programs/eap/fw\\_riv/rv\\_main.html](http://www.ecy.wa.gov/programs/eap/fw_riv/rv_main.html)

# Permanent Ambient Monitoring Stations in the Yakima River Watershed

- Yakima River near Cle Elum
- Yakima River at Nob Hill (HWY 24)
- Yakima River at Kiona



# “Basin Stations”

at least one water year of data at following sites

- Naches River @ Yakima
- Naches River @ Naches
- Tieton River @ Oak Creek
- Yakima River @ VanGiesen
- Yakima River nr Richland
- Yakima River below Prosser
- Yakima River @ Mabton
- Yakima River @ Granger
- Yakima River near Toppenish
- Yakima River @ Parker
- Yakima River above Ahtanum
- Yakima River near Terrace Heights
- Yakima River @ Harrison Bridge
- Yakima River @ Ellensburg
- Yakima River near Thorp
- Cle Elum River
- Satus Creek @ Satus
- Toppenish Creek near Satus
- Marion Drain near Granger
- Wide Hollow Creek @ main street
- Wide Hollow Creek @ Union Gap
- Wide Hollow Creek @ Goodman
- Wide Hollow Creek @ Randall Park
- Sulphur Creek @ McGee Road
- Ahtanum Creek @ 62<sup>nd</sup>
- Moxee Drain @ Birchfield
- Rattlesnake Creek near Nile
- Bumping River @ American River
- Little Naches near Cliffdell
- Cowiche Creek @ Powerhouse Road
- Cowiche Creek @ Zimmerman Road
- Wilson Creek @ Highway 971
- Teanaway River near Cle Elum

[http://www.ecy.wa.gov/programs/eap/fw\\_riv/rv\\_main.html](http://www.ecy.wa.gov/programs/eap/fw_riv/rv_main.html)

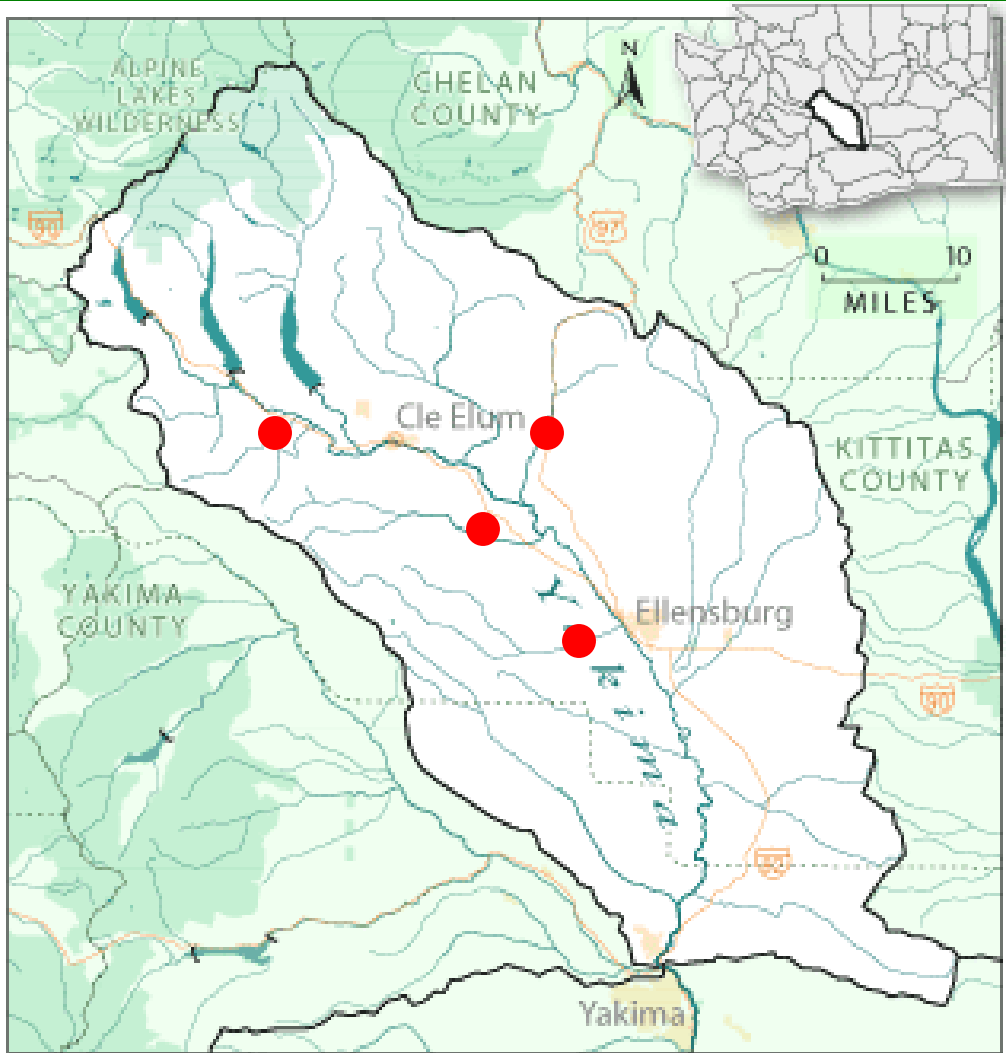


# Surface Water Monitoring Program for Pesticides in Salmonid-Bearing Streams

- Statewide study
  - Sites through lower Yakima watershed
  - Intensive study on Marion Drain
- 
- Dan Dugger  
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# Stream Q Monitoring



- Big Creek near Mouth
- Swuak Creek near Lauderdale jct.
- Taneum Creek at Brain Ranch
- Manastash Creek at Manastash Road

# Yakima Watershed Specific Studies

- Upper Yakima River Watershed Temperature TMDL
  - Data collected in 2005 and 2006 from tributaries of the Upper Yakima River.
    - Stream temperature
    - Q
    - Riparian vegetation characteristics
    - Other physical parameters

# Yakima Watershed Specific Studies

- Naches River Watershed Temperature TMDL
  - Data collected in 2004 from streams in the Naches River Watershed
    - Stream temperature
    - Q
    - Riparian vegetation characteristics
    - Other physical parameters

# Yakima Watershed Specific Studies

## Yakima Area Creeks Fecal Coliform Bacteria TMDL-

Fecal coliform bacteria samples collected from Wide Hollow Creek, Cowiche Creek, and Moxee Drain during 2005 and 2006.

Stormwater data, conventional parameters and some physical parameters collected.

# Yakima Watershed Specific Studies

- Yakima Toxics Project
  - Fish tissue study
  - Effectiveness monitoring for the Upper and Lower Yakima River toxics TMDLs
  - New TMDL for several pesticides on 2004 303(d) list.
  - PBDE's in wastewater treatment effluent

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# Recent Studies by Ecology

- Lower Yakima River DDT and TSS TMDL (1997)
  - Effectiveness Monitoring Report after first five years of implementation (2006).
- Upper Yakima River TSS, Turbidity and OCP TMDL
- Teanaway River Basin Temperature TMDL (1999)
- Granger Drain Fecal Coliform Bacteria TMDL
- Selah Ditch Multi Parameter TMDL
- Wilson Creek Fecal Coliform Bacteria TMDL
- Yakima Area Creeks Fecal Coliform Bacteria TMDL

# Biological Monitoring

- EMAP
- Project Specific Studies
  - Yakima Floodplain mining study
  - REMAP Yakima
- Reference Streams (3 of 10 statewide are in Yakima River Watershed)
  - Oak Creek
  - Umtanum Creek
  - W. Fork Teanaway River



# Biological Monitoring Aquatic Macroinvertebrates

- [http://www.ecy.wa.gov/programs/eap/fw\\_benth/index.htm](http://www.ecy.wa.gov/programs/eap/fw_benth/index.htm)
- Glen Merrit (360)407-6777



# Biological Monitoring Aquatic Plants and Lakes

- <http://www.ecy.wa.gov/programs/eap/lakes/aquaticplants/index.html>



# End of show



Eighties Dancing!! Tonight at 9-ish, Pete's