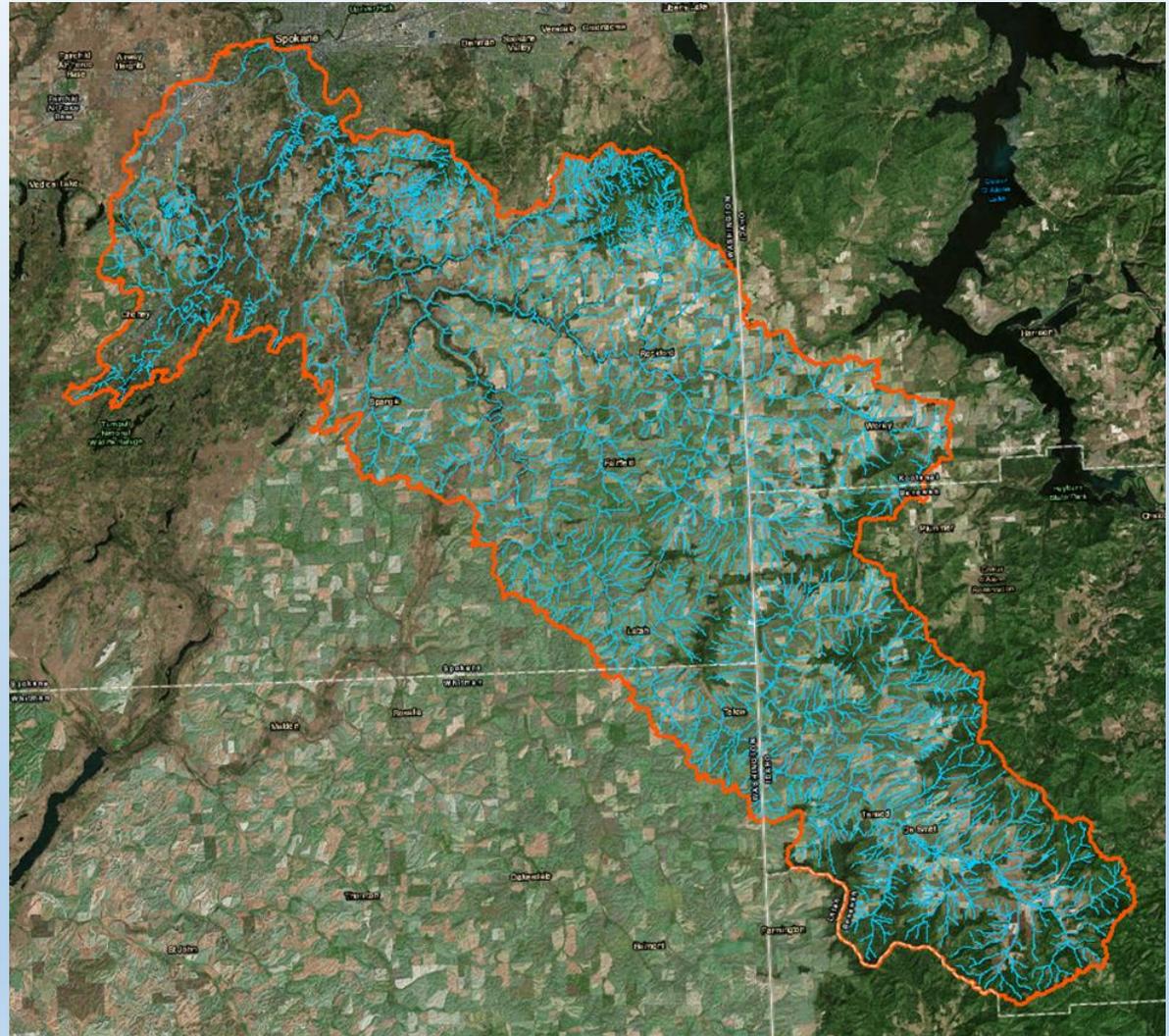
An aerial photograph of a river flowing through a snowy, forested landscape. The river is the central focus, with a mix of clear, greenish water and muddy, brown water. The surrounding area is covered in snow and dense evergreen trees. In the background, a town or village is visible on a hillside under a cloudy sky.

# Hangman Watershed Work

Chad Atkins & Mitch Redfern  
WA Department of Ecology  
Water Quality Program

# Hangman Creek Watershed

- Approx. 441,000 acres
- Land use 70% agriculture
- 1/3 of area in Idaho
- Forest cover reduced by 50% - 86%



# Hangman Watershed History

- 2009 -- Fecal Coliform, Temperature, and Turbidity TMDL Approved by EPA
- 2011 – Hangman TMDL Implementation Plan completed
- 2015 – Lawsuit alleges EPA arbitrary and capricious in approval of TMDL
  - Reasonable assurance challenged
- Ecology participated in settlement discussions
- 2018 – Signed the “Agreement Between Washington Department of Ecology and Spokane Riverkeeper relating to the Hangman Creek TMDL.”



## **Hangman (Latah) Creek Watershed Fecal Coliform, Temperature, and Turbidity Total Maximum Daily Load**

### **Water Quality Improvement Report**



June 2009  
Publication no. 09-10-030

# Elements of the Agreement

## Riparian Assessment

- Forest, Agriculture, Suburban Areas, Golf Courses, etc.

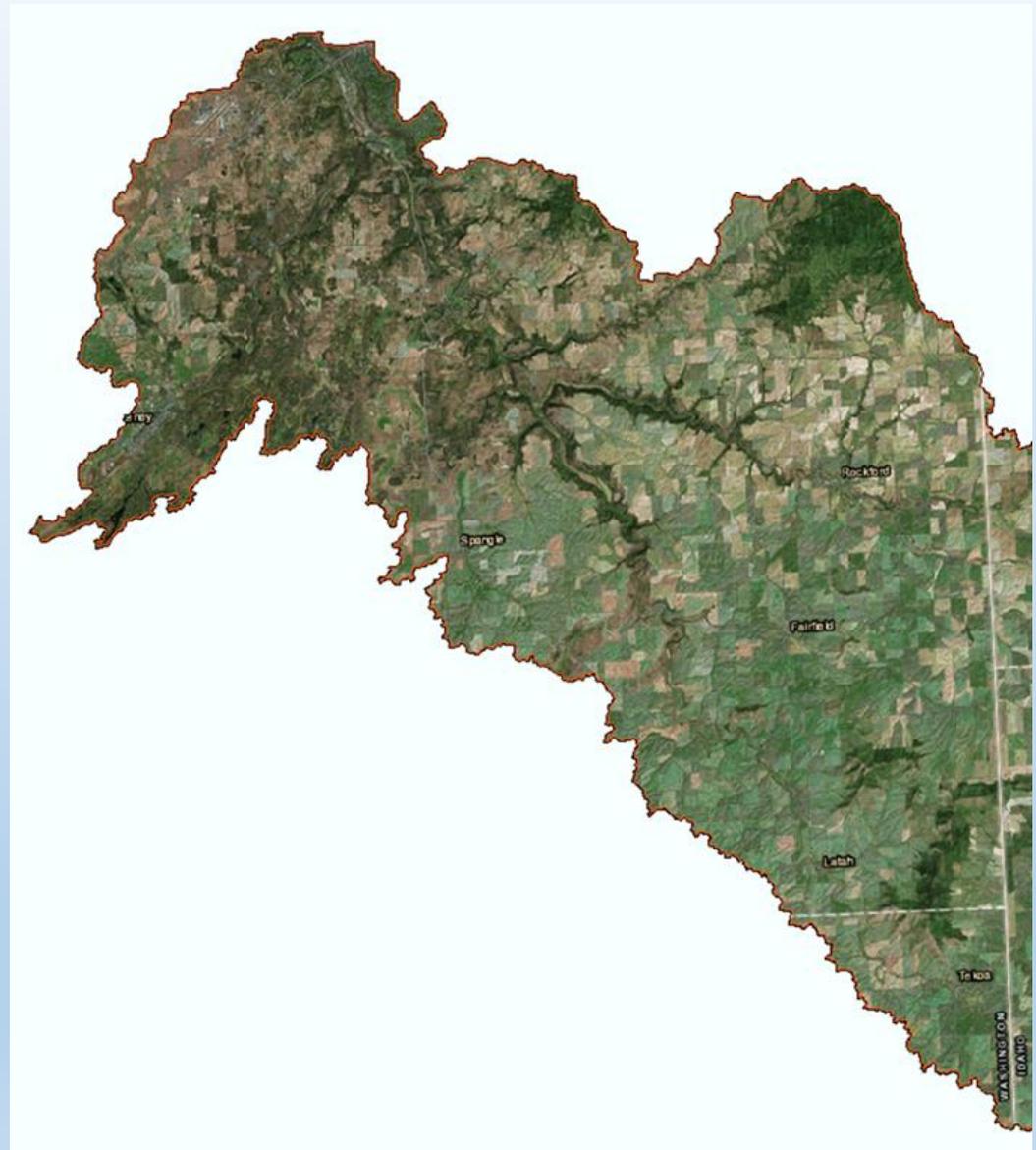
## Tillage Watershed Evaluation

- Prioritize 10 sites for contact

## Livestock Watershed Evaluation

- Prioritize 5 sites for contact

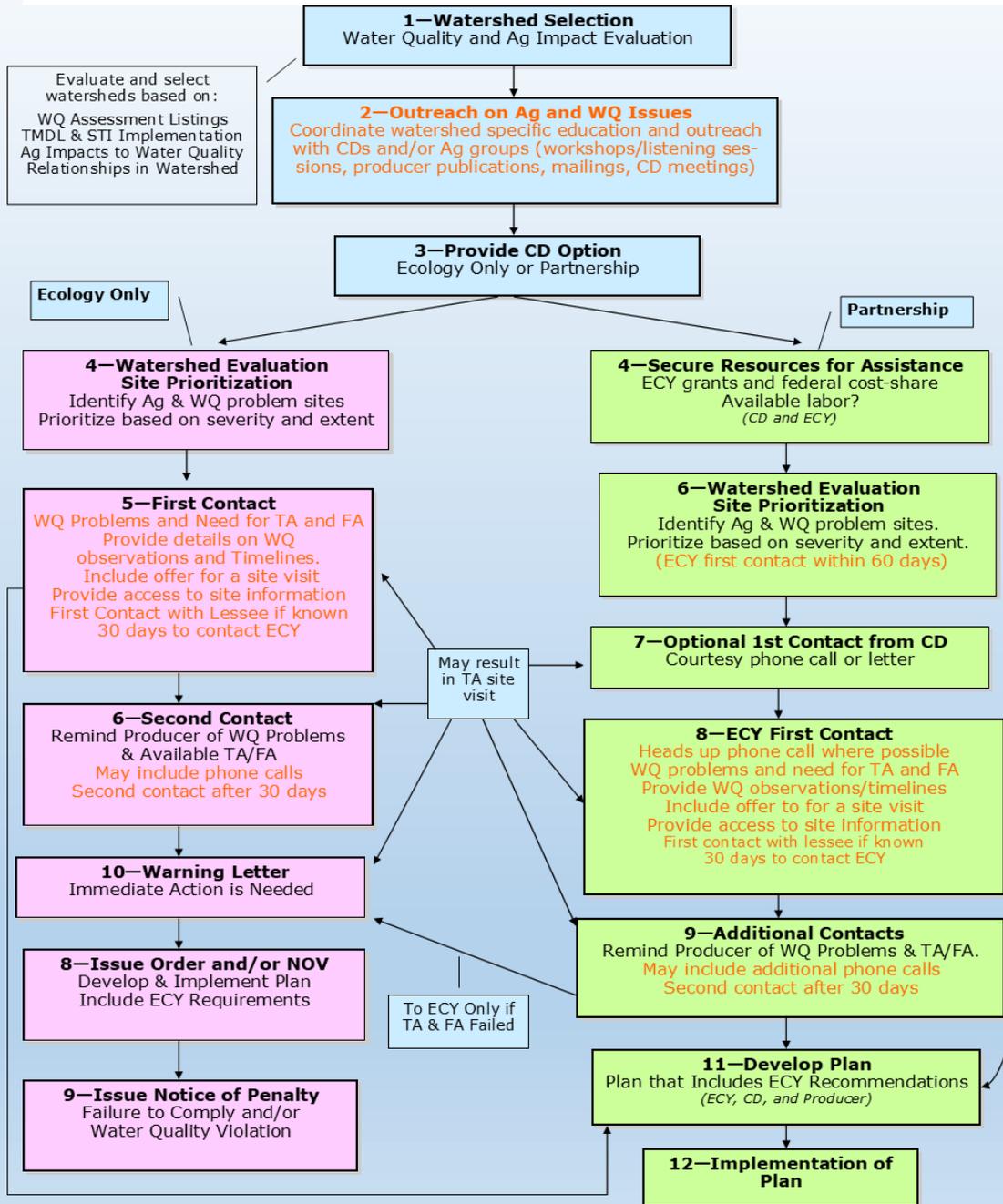
## Education and Outreach



# Partnerships & Stakeholders

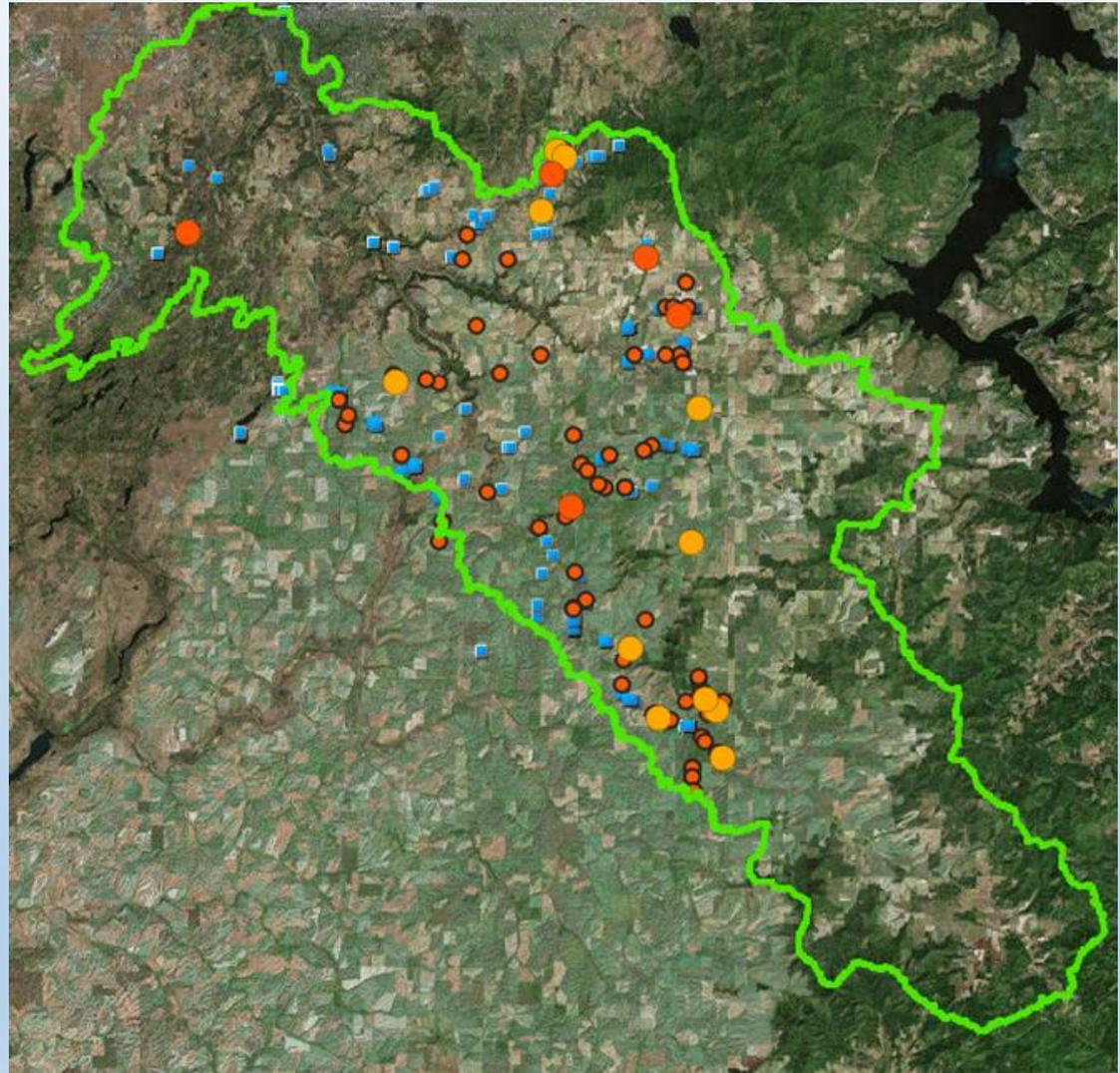
- Spokane Conservation District
- Spokane Falls Trout Unlimited
- Spokane Tribe of Indians
- Pacific Northwest Direct Seed Association
- Spokane Riverkeeper
- Washington Association of Wheat Growers
- USDA Natural Resources Conservation Service
- Spokane River Forum
- The Lands Council
- Spokane County
- Coeur d'Alene Tribe
- Inland Northwest Land Conservancy
- USDA Farm Service Agency
- WSDOT and WDFW
- City of Spokane

# Flow Chart for Addressing Agricultural WQ Problems in ERO



# Watershed Evaluations

- Document from right-of-way
- Prioritize 15 sites annually
- Technical assistance phone calls
- Technical assistance letters
- Site visits
  - Follow up letters
- Landowner assistance from Spokane CD, Ecology, or other third party



















# Best Management Practices (BMPs)

- Tillage Suite
  - Land use setback
  - Conservation tillage
  - Riparian buffer
  - Bank stabilization
- Livestock Suite
  - Land use setback
  - Exclusion fencing
  - Off-stream watering
  - Riparian buffer
  - Bank stabilization
  - Manure storage plan/facilities



# Hydrology Considerations

## Issues

- Ditched/straightened waterways
- Tiling drainage
- Lack of riparian and wetlands
- Lack of woody debris
- Highly erodible soils



## Impacts

- Flashy system <math><1\text{cfs}</math> – 20k
- Turbulent velocities
- Exacerbated natural erosion
- Disturbed riparian corridor



# Effectiveness Tracking

- BMP's implemented on priority sites:
  - 3 years – 25%
  - 5 years – 50%
  - 8 years – 75%
- Priority Sites Results to Date
  - Fixed – 2
  - Currently being implemented – 4
  - In queue for implementation – 2
  - Currently working with Ecology & CD on plans/funding – 4
  - Sites in communication but plans still being negotiated – 9
  - Unresponsive/Unwilling – 9
- **14 New TA Contacts for 2020**



# Sources of BMP Funding

- Ecology Centennial/319 Grants and Loans
- Regional Conservation Partnership Program (RCPP)
- NRCS Environmental Quality Incentives Program (EQIP)
- Continuous Conservation Reserve Program (Continuous CRP)
- Commodity Buffer Program
- Terry Husseman Coastal Protection Account
- Washington Conservation Commission Grants
- Direct Implementation Fund (DIF)
- Conservation Reserve Enhancement Program (CREP)?



# Other Activities

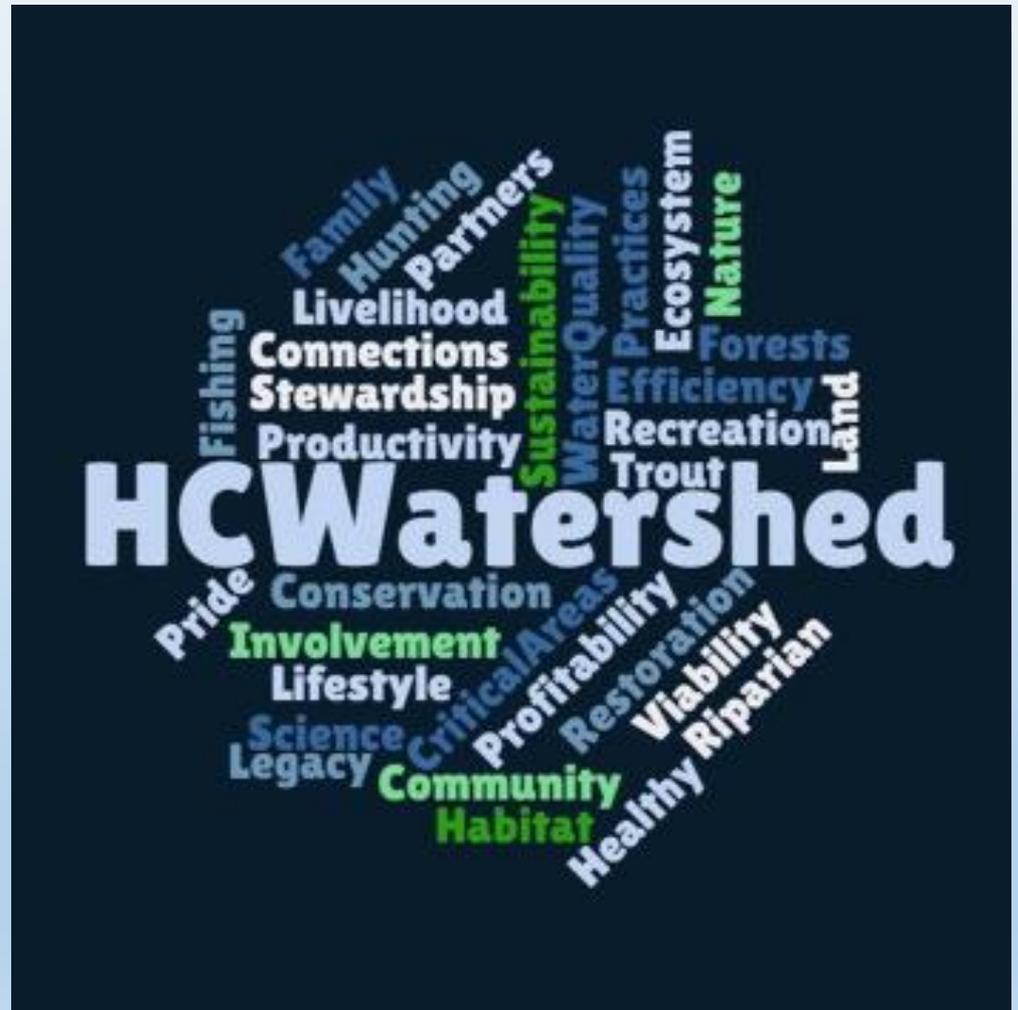
- Stakeholder engagement
  - Grant funding awards
  - Energize and diversify stakeholders
  - Annual stakeholder meeting
- Outreach
  - Supporting SPS Spokane River Rally
  - Public survey on conservation
  - Educational videos
  - Interpretive sign at Hangman Valley Golf Course
  - Highway signs identifying Hangman Watershed streams
  - BMP/Watershed Tours



Hangman Valley Golf Course Riparian Planting

# Challenges to Success

- COVID delays
- Tiling and hydrology
- Idaho portion of the watershed
- Funding for BMPs
- Unwilling/Unresponsive landowners



Questions?

