



# Livestock & Water Quality

## Non-point Livestock Program

Chad Atkins

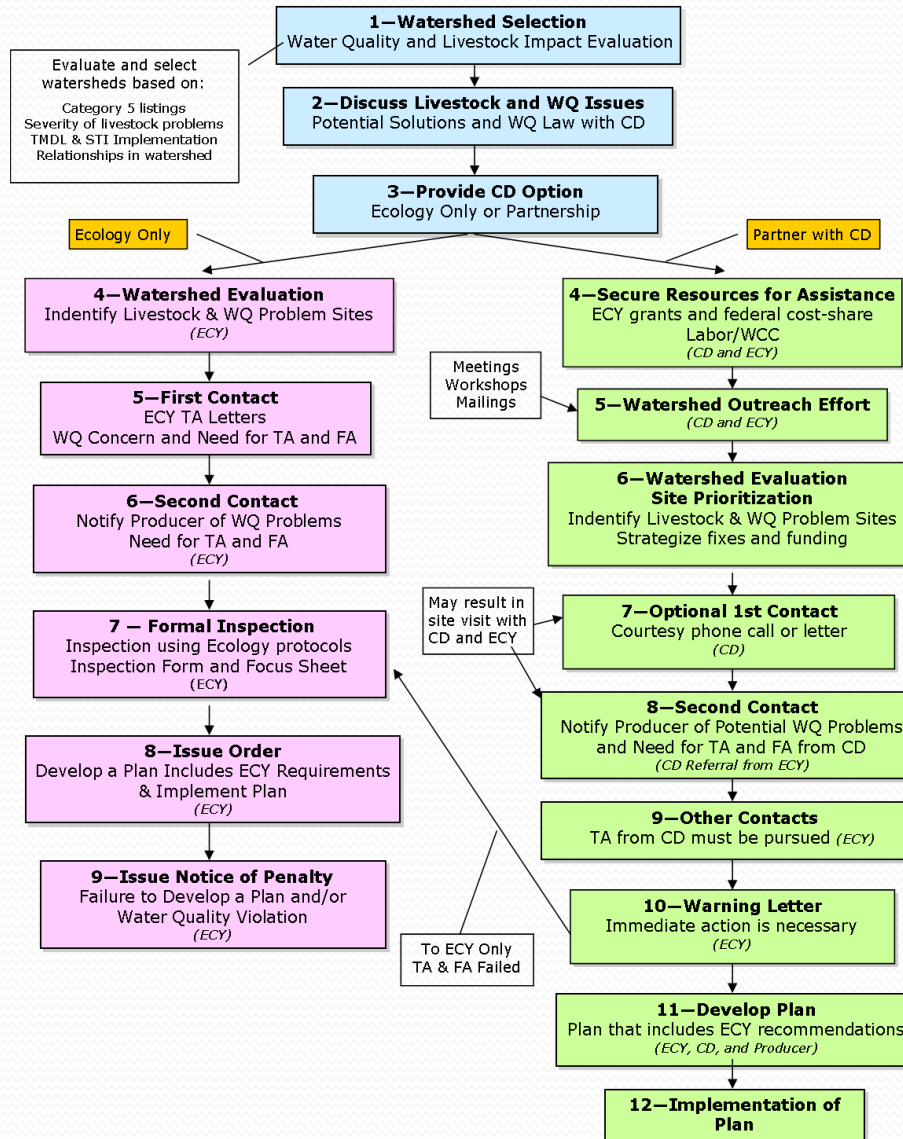
Department of Ecology

Water Quality Program

# Livestock & WQ Effort in ERO

- Worked with over 100 livestock producers to implement more than 300 miles of riparian protection
- To date, work focused in Asotin, Garfield, Columbia, Whitman, Adams, Lincoln Counties

## Flow Chart for Addressing Agricultural WQ Problems in ERO



# Visible livestock impacts near the stream indicate WQ problems

- Bare ground and exposed soil
- Contaminated run-off (active or potential)
- Slumping streambanks and erosion
- Moderate to heavy grazing
- Discharges from confinement areas
- Absence of woody vegetation due to livestock action
- Manure accumulations
- Access to surface water
- Livestock paths and trails

# Visible impacts effect these water quality parameters

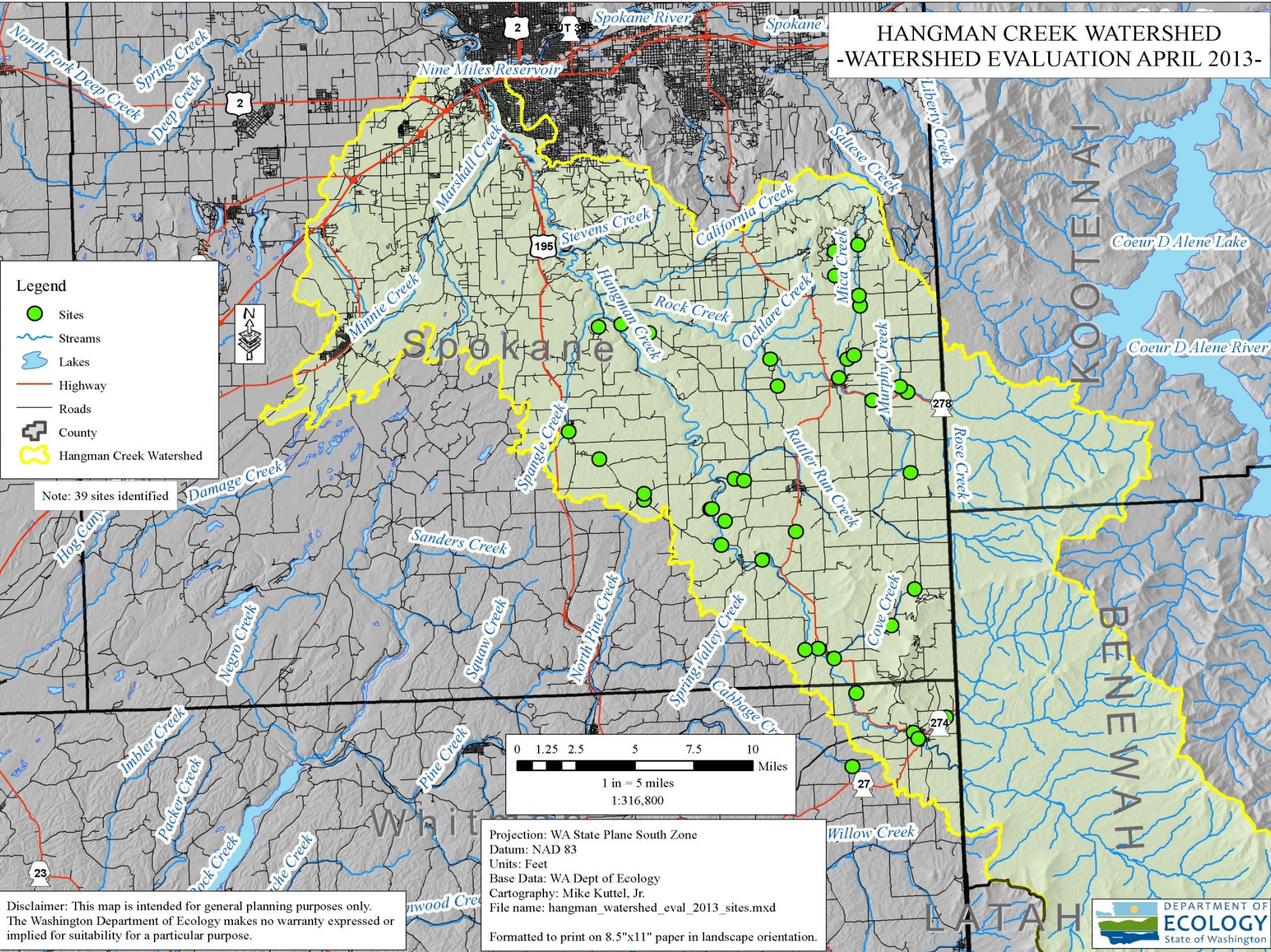
- Fecal Coliform Bacteria
- Nutrients (nitrogen, phosphorus)
- Temperature
- Dissolved Oxygen
- Turbidity
- pH
- Narrative Criteria -- Habitat

# Are Livestock a Significant Source?

- Cattle deposit up to 11% of manure and 9% of urine directly in the water
- 40 head can deposit 240 lbs each day in the stream
- Access for 6 months equals 43,800 lbs of manure directly in the stream
- Does not include manure deposited in the stream corridor
- Does not include riparian impacts (sediment and temperature)



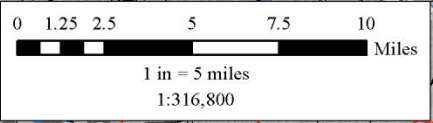
# HANGMAN CREEK WATERSHED -WATERSHED EVALUATION APRIL 2013-



**Legend**

- Sites
- Streams
- Lakes
- Highway
- Roads
- County
- Hangman Creek Watershed

Note: 39 sites identified



Projection: WA State Plane South Zone  
Datum: NAD 83  
Units: Feet  
Base Data: WA Dept of Ecology  
Cartography: Mike Kuttel, Jr.  
File name: hangman\_watershed\_eval\_2013\_sites.mxd  
Formatted to print on 8.5"x11" paper in landscape orientation.

Disclaimer: This map is intended for general planning purposes only. The Washington Department of Ecology makes no warranty expressed or implied for suitability for a particular purpose.





# Sources of Funding for BMPs

- Continuous Conservation Reserve Program (Continuous CRP)
- Ecology Centennial / 319 grants
- Conservation Commission grants
- Environmental Quality Incentive Program (EQIP)
- Ecology Terry Husseman grants
- Direct Implementation (DIF) grants