

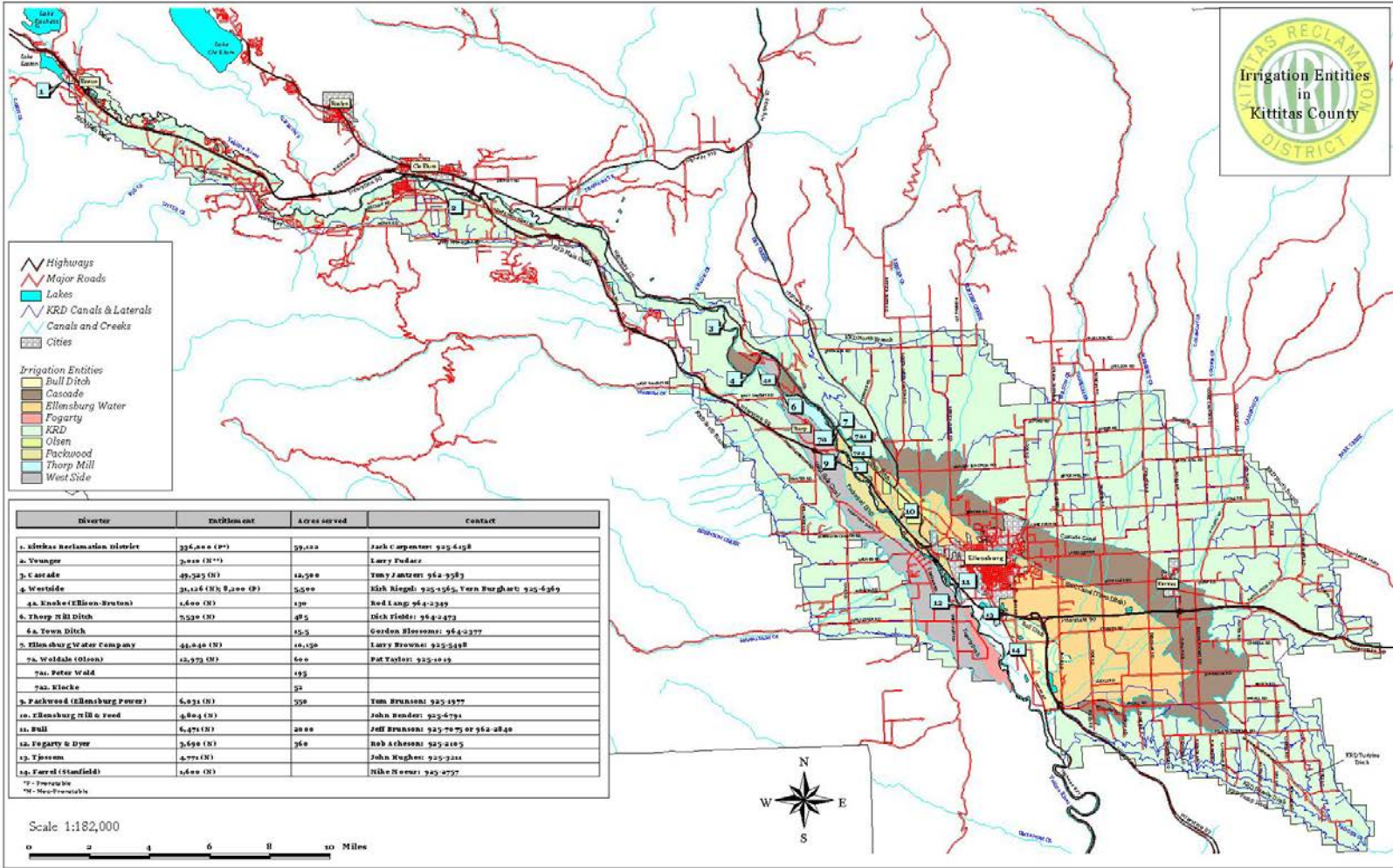
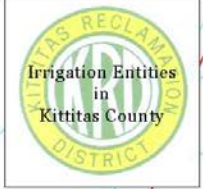
Kittitas County Water Purveyors: Water Quality Monitoring in the Upper Yakima River Basin

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Kittitas County Water Purveyors

- Local irrigators, irrigation districts, serving about 91,000 acres.
- Actively/proactively working for higher water quality to improve wildlife habitat AND to support and maintain profitable farming and ranching.
- Cooperatively work with other agencies representing local interests and collecting environmental data.

Irrigation Entities in Kittitas Valley



Total Maximum Daily Loads

- *Upper Yakima River Basin Suspended Sediment, Turbidity and Organochlorine Pesticide TMDL*
 - Published in 2003, first target in 2006, final target in 2011
- *Wilson Creek Sub-Basin Bacteria Total Maximum Daily Load (Water Cleanup Plan): Draft Submittal Report*
 - Published in March, 2005.
- **Upper Yakima River Basin Temperature TMDL**
 - Data collection for Technical Assessment has begun

Upper Yakima River Basin Suspended Sediment, Turbidity and Organochlorine Pesticide TMDL

Monitoring began in late 1990s.

Progress is plainly evident for TSS and turbidity.

Progress is presumed for DDT and other organochlorine pesticides.

Need to get to approximately 18.6 NTU by 2006, 12.6 NTU by 2011.



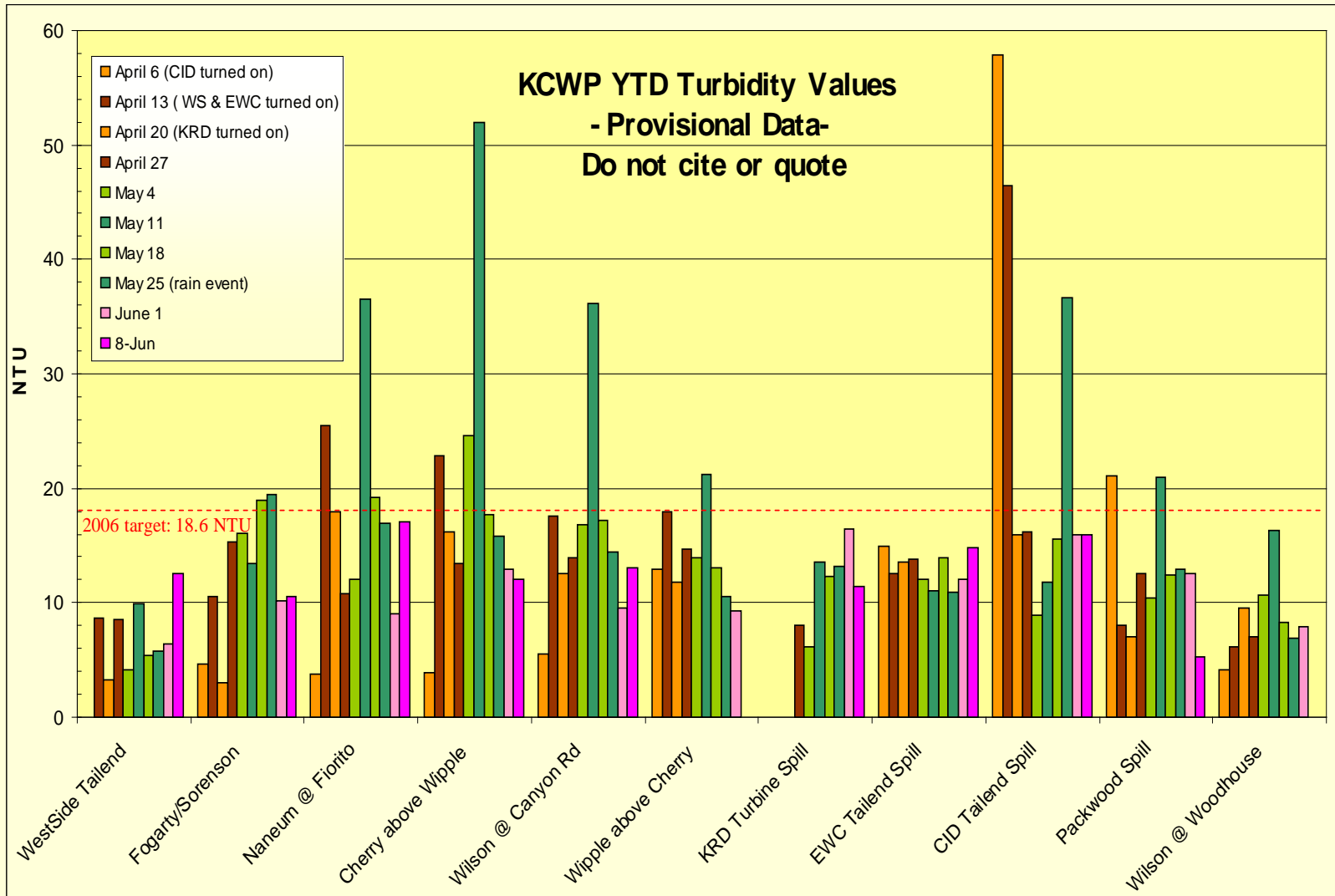
Upper Yakima River Basin Suspended Sediment, Turbidity and Organochlorine Pesticide TMDL

KCWP conducts weekly sampling for turbidity, bi-weekly for TSS.

Samples analyzed in our own lab.

Four turbidity sensors and loggers recording turbidity every fifteen minutes.



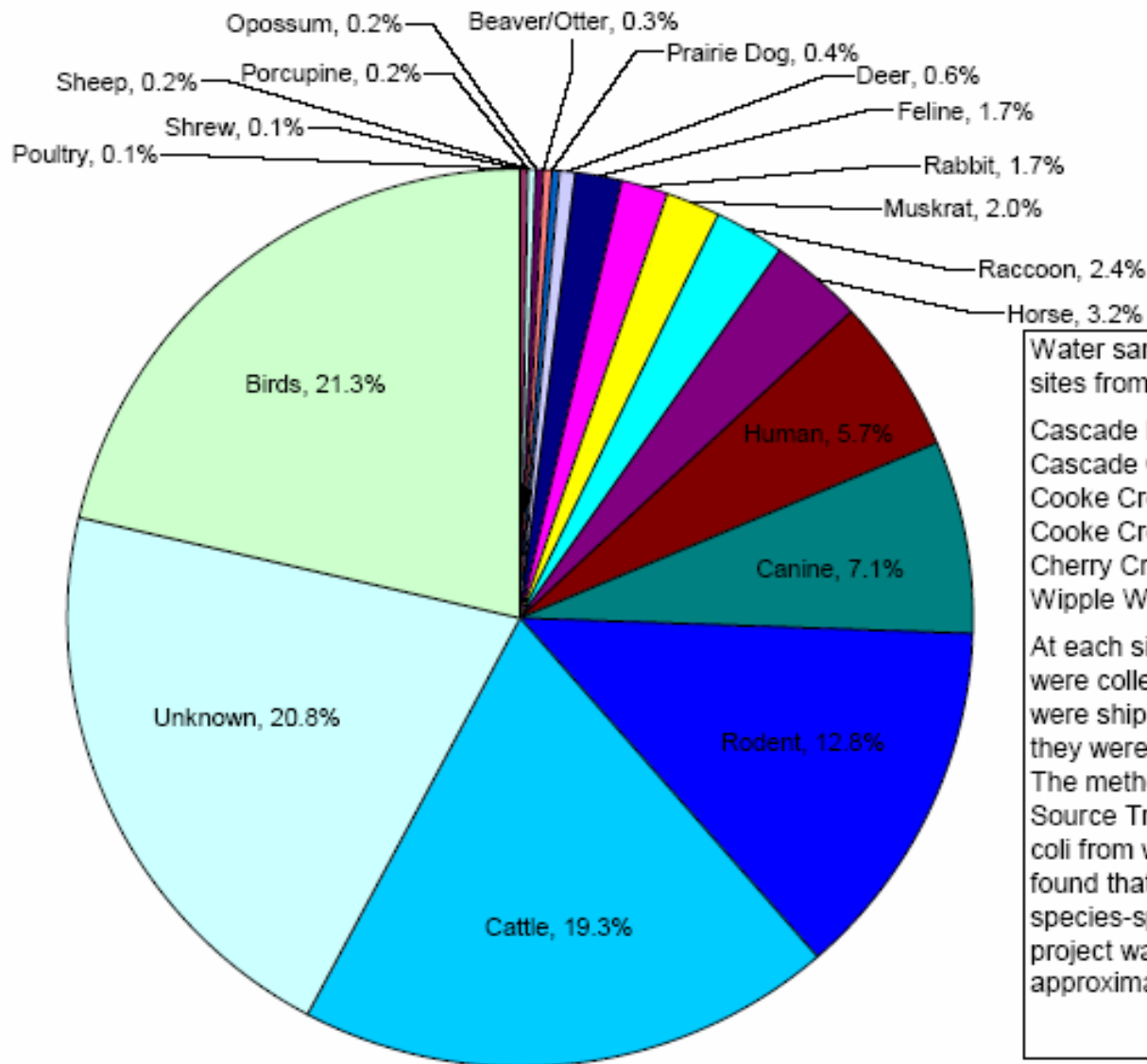


A photograph of a horse standing in a shallow creek, drinking water. The background is a lush green field with some trees and a fence line. The text is overlaid on a semi-transparent grey box.

Wilson Creek Sub-Basin Bacteria TMDL

- Fecal and E. coli measured as indicators.
- Draft Submittal Document published in March.
- DIP will be published within one year.
- Calls for reductions of up to 86% to lower concentrations to a geomean of 100cfu/100mL and a 90% value of 200 cfu/100mL of water by 2020.

Kittitas County Microbial Source Tracking Project 2001



Water samples were collected at the following six sites from April to November of 2001:

- Cascade Headworks
- Cascade Canal at Thrall Road
- Cooke Creek at 81 Road
- Cooke Creek at Fairview Road
- Cherry Creek at Moe Road
- Wipple Wasteway at Moe Road

At each site, for each sample date, 5 water samples were collected 2 minutes apart. The water samples were shipped to the BOR lab in Boise, where they were analyzed for e.coli.

The method used to identify sources was Microbial Source Tracking – analyzing the DNA of *Escherichia coli* from warm-blooded animals. Researchers have found that *E. coli* living within animals are generally species-specific. The DNA of *E. coli* identified in this project was compared against a library of approximately 65,000 isolates.

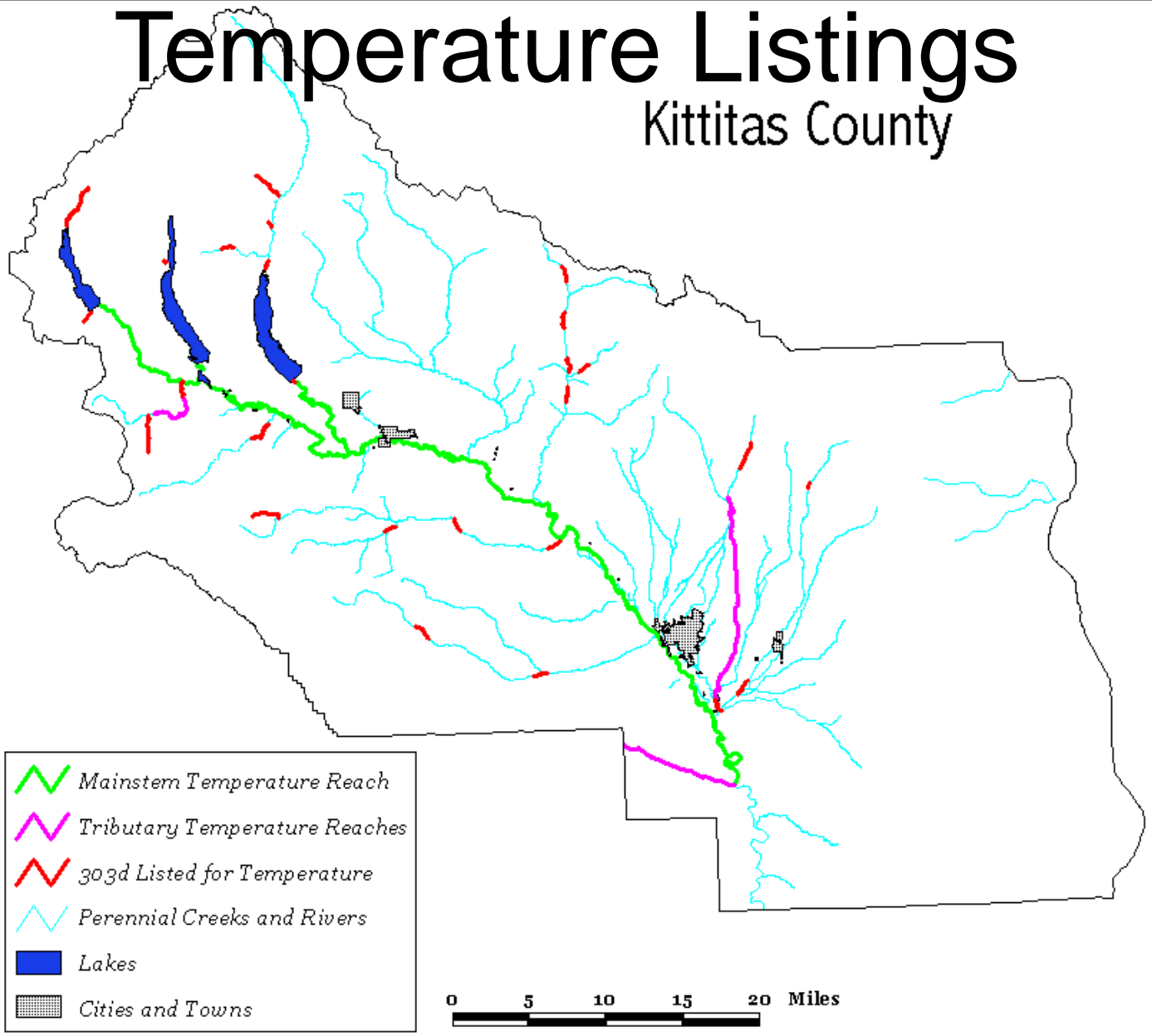
A person with long dark hair, wearing a grey jacket and blue jeans, is kneeling on a bank of a stream. They are surrounded by a large pile of dry straw or hay. The stream is visible in the foreground, and the background shows more of the stream bank and some rocks. The overall scene suggests a field study or environmental work.

Upper Yakima River Basin Temperature TMDL

- All waterways in the basin are required to meet Class A water quality standards (18°C).
- Technical Assessment (TA) to be based on data gathered as early as 1999.
- Department of Ecology modeling Taneum, Naneum, Umtanum, and possibly Swauk Creeks.

Temperature Listings

Kittitas County





Thanks ~ Questions?