

## Hangman Creek TMDL Implementation

November 18, 2013

2:00 – 4:00 PM

Spokane Conservation District

210 N. Havana Street, Spokane

### Meeting Notes

---

#### In attendance:

Louis Grant – Spokane County

Ben Brattebo – Spokane County

Eric Keller – WDNR

Lynn Schmidt – City of Spokane

Scott Fields – CDA Tribe

Amanda Parrish – The Lands Council

Daniel Wells – Spokane Fly Fisheries

Steve Sprecher – NRCS

Meghan Lunney – Avista Corp

Greg Lahti – WSDOT

Matt Zarecor – Spokane County

Mike Coster – City of Spokane

Doug Greenlund – City of Spokane

Rick Noll – Spokane CD

Walt Edelen – Spokane CD

Elaine Snouwaert – Ecology

Elaine invited everyone to introduce themselves and gave a brief overview of the TMDL and the purpose of the meeting.

- TMDL development for bacteria, temperature, & turbidity/total suspended solids (TSS) began in 2004
- TSS reductions can be related to phosphorus to determine phosphorus reductions
- Eventually will develop a TMDL for DO/pH but it is likely to set more nitrogen limits than phosphorus limits due to many reaches being N-limited
- TMDL was completed and approved by EPA in 2009
- Implementation Plan completed in 2011 indicates certain issues need to be addressed
  - Sediment/nutrients from agricultural operations
  - Sediment/fecal bacteria from livestock
  - Sediment from agricultural field ditches
  - Nutrient/chemicals from residential uses
  - Improper functioning septic systems
  - Sediment from gravel and summer roads
  - Sediment from stream banks
  - Sediment from storm water
  - Forestry management
  - Sediment from roadside ditches
  - Solar heating from lack of riparian shade
- Bacteria needs to be reduced between 50-85% depending on the stream and reach
- Stream shading needs to be increased 7-43% depending on the reach to reduce temperature to natural condition levels

- Total suspended solids (sediment) needs to be reduced 8-26% with the highest reductions needed in catchments in the middle to upper portion of the watershed
- Purpose of meeting is to review implementation status 2.5 years into implementation, discuss what's working, what's not, challenges encounters, possible partnerships, and how to keep track of implementation

Elaine then invited each organization to share any implementation they were involved with.

Amanda from The Lands Council (TLC) explained that their primary focus in the Hangman Watershed is tree planting in riparian buffers and beaver management. TLC is working under two grants, one from Ecology and one from USFWS. Under the Ecology grant they have conducted education and outreach and planting riparian areas. They have had 108 landowner contacts, conducted 26 surveys, and distributed 150 brochures about water quality. TLC is working with 7 property owners (Hangman Creek, California Creek, and Garden Springs Creek) to plant riparian trees and shrubs. They have planted approximately 7000 plants. They will continue these efforts for two more years under the existing grant. Challenges they have encountered include not being able to initiate spring plantings due to agency processes, working with volunteers, and difficulty planting to appropriate depth due to cobble and rock.

TLC's USFWS grant is focused on enhancing riparian areas and beaver management. Work under this grant is just starting but will likely include work where beavers are active on California Creek, Rock Creek and on Hangman at the Bryant Property.

Cadie shared the Inland NW Land Trust's (INLT) efforts in the watershed. Previously INLT had planted 2000 plants on their easements but due to the planting techniques used the survival rate has been 0 to 12%. The highest survival was in areas where the landowners irrigated the plants. While INLT has a focus on securing easements in the Hangman watershed, especially in the best habitat areas within the canyon, they are not pursuing further restoration efforts. However, if land is enrolled in a conservation easement it is protected from development and it opens the door to other groups who may want to approach the landowner with restoration efforts. There are currently two easements in place in the watershed, they are about to close on another approximately 400 acres, and there is a letter of intent to enroll 600 acres.

Greg discussed Washington Department of Transportation's (WSDOT) stormwater permit requirements and their riparian restoration project as part of the Hwy 195/Cheney-Spokane interchange project. Due to the TMDL, WSDOT has certain requirements as part of their stormwater permit. This includes inventorying discharges to WSDOT ditches to locate pollutant sources that may be transported through their ditch to a waterway. When a source is found they work with the source or refer it to the appropriate jurisdiction. Some maintenance issues have been changed as a result of this work including relocating a catch basin near California Creek. The catch basin now discharges to a grassy area so sediment is removed before the water enters the creek. WSDOT is also partnering with Spokane CD on

a program to ensure farmers cultivating their right-of-ways are doing so in ways that do not result in sediment entering their ditches or waterways.

As part of the Hwy 195/Cheney-Spokane interchange project, WSDOT is working on a bank restoration project. Previously vertical banks have been graded to a 3:1 slope with soil lifts and riparian plantings. The project treats about 1000 feet of bank. Whips were installed in the fabric lifts and container plants were planted between the lifts. They will irrigate the project for 3 years to ensure the plants get established. The upstream and downstream ends of the project will need to be evaluated after high flow events.

Walt discussed several projects and programs completed or underway at the Spokane Conservation District (SCD). The 3-year Agricultural Watershed Enhancement Program (AWEP) which was a partnership between SCD, NRCS, and Ecology was very successful in getting more acreage into direct seed or mulch till (see NRCS activities for more details). SCD would like to pursue a similar project if the opportunity comes up. They still pursue direct seed implementation through their direct seed program which includes loans for equipment and cost share.

This year SCD continued their Willow Warriors Weekend where volunteers plant willow whips along the banks of Hangman Creek. This year they planted approximately 6000 whips within the high water area. Additional riparian projects include a stream bank restoration project along Hangman Creek off Valley Chapel Road between the confluences with Rock and Spangle creeks. This project laid back approximately 1600 feet of vertical bank and planted it with riparian plants. SCD also completed a 350 to 400 ft stream bank project along Rock Creek at the edge of Rockford several years back. SCD has bioengineering designs for river mile 17 but they need substantial funding to implement the projects.

SCD has a proposal into USFWS to fund a fish passage project on California Creek at Chapman Road. They are also in the process of finalizing grant agreements with Ecology to fund their Livestock and Land Program and a Septic System Repair and Replacement Program. Currently SCD is working with 6 landowners on livestock projects. They've also had a couple calls showing interest in the septic loan program.

The Watershed Implementation Team (WIT) associated with Watershed Planning has primarily focused on water quantity and floodplain projects. They do not have TMDL implementation/water quality projects to report.

Steve reported on agricultural practices implemented through the Natural Resources Conservation Service's (NRCS) programs. The AWEP program resulted in approximately 8000 acres transitioned from conventional tillage to direct seed or mulch till. Mulch till is direct seed with the addition of a harrow or roller pass. The Environmental Quality Incentives Program (EQIP) paid to convert approximately 3700 acres to direct seed. Research indicates that the erosion from these conservation practices is about 1 ton per acre annually compared to 7 tons per acre annually from conventional tillage.

NRCS programs have also funded grassed waterways to reduce erosion. There are several sediment basins designed for implementation but they may not be installed due to the backlog on cultural resources assessments.

NRCS also has programs for nutrient and pesticide management. The nutrient management program includes soil testing, development of a nutrient budget, and precision application. Overall there have not been reductions in fertilizer use but there is more strategic use of fertilizer affecting where it is applied. About 4000 acres in the pesticide management program use low to moderate risk pesticides and strive to reduce any offsite movement.

Enrolling riparian acres into continuous conservation reserve program (CCRP) has been challenging because the acreage isn't eligible if the stream banks are not stable. Only about 5% of NRCS funding is available for stream bank stabilization projects so will need to leverage funding from other sources to restore the banks to increase CCRP enrollment.

Scott gave an update on activities on the Coeur d'Alene Tribal Reservation. Due to a lack of funding at EPA the TMDL for the Reservation portion of the watershed will not be written in the near future. The Tribe has been working with Avista Corporation to purchase approximately 650 acres along Hangman Creek to restore relic channels and create wetlands. The Tribe also began a one-mile channel realignment on Sheep Creek (tributary) about 2 years ago but the discovery of an endangered plant has delayed the project. The Tribe's fisheries department has also been working on beaver enhancement projects on Sheep Creek that include structures to encourage beavers but even if beavers do not inhabit them it will help with flow control.

The Tribe has been working with the Idaho Department of Transportation as they widen Highway 95. The Tribe has a goal of reconnecting the Creek to its floodplain but culverts and bridges, if not designed with this in mind, could be a barrier. The Tribe was able to get them to change their designs to include bigger culverts to help with grade control which will facilitate restoring the stream elevation to connect it with the floodplain.

The Tribe has also been partnering with the SCD to host direct seed breakfasts to educate farmers about the practice. They have had good reception but need better timing for future meetings. They intend to continue this effort. The Tribal Farm (approximately 5000 acres) has a new manager who is more open to direct seed farming. Scott expects that 80% of the farm could convert to direct seed. The farm is primarily in Hangman and the Little Hangman sub-watershed but could expand to the Rock Creek sub-watershed. As the Tribal Farm converts to direct seed it could influence private farmers to also consider changing.

Doug and Lynn discussed the City's projects that relate to Hangman Creek. Doug explained that the City is creating a pervious pavement parking lot and restoring a section of Garden Springs Creek within the Arboretum through funding from Ecology. Lynn indicated that as part of the High Drive project on the South Hill discharges from CSO-20 (across from Cheney-Spokane Rd interchange with Hwy 195) will be

completely eliminated. They are separating drywells from the CSO to reduce flows and installing a tank large enough to contain flows during storms so it can be metered out to the treatment plant. This work will be completed in 2015. CSO-19 (near 7<sup>th</sup> Avenue on the South Hill) had a larger tank installed and will result in one or fewer dischargers per year as required. Additionally, the City has inventoried all outfalls from their MS4 system, is complying with the stormwater manual, incorporating stormwater practices into all new projects, and carrying out education and outreach as required by the permit.

Eric with the Department of Natural Resources (DNR) explained that all forestry practices in the watershed must be completed under a Forest Practice Permit and in compliance with the Forest and Fish law. Under this law streams need a buffer 50 ft - 100 ft wide between the stream and the harvest. There are currently 25 to 30 active permits in the watershed.

Ben discussed the County's efforts to reduce possible pollutant loading from the Latah Treatment Plant. The plant discharges to ground very close to Hangman Creek. It is improving conservation to reduce flows into the plant and improving treatment technology.

Matt explained that the County is operating under the Stormwater Permit and Manual. Additionally, to keep runoff from reaching water bodies from gravel and paved roads, maintenance staff are putting in check dams where there is a ditch. On roads through cuts a ditch is necessary, but when the road is higher than the surrounding ground the County is trying to just let the runoff sheet flow off into the adjacent property (natural dispersion). In this way the flows do not get concentrated and erosion and sediment transport is prevented. All new projects in the County must comply with the Manual and for the most part are keeping water on site and infiltrating it. They are also fulfilling education and outreach requirements.

Daniel informed the group that the Fly Fishers club was available to help with fundraising for projects and volunteers for projects.

Meghan from Avista reiterated their partnership with the CDA Tribe to restore wetlands along Hangman Creek on 650 acres. Previously Avista had explored fulfilling their FERC License requirement to restore or enhance 42 acres of wetlands in the Hangman watershed but that requirement is now being explored in the Little Spokane watershed. As part of their requirement for the Spokane River Dissolved Oxygen TMDL they are looking for bank stabilization projects they could help fund.

Elaine mentioned that she heard from Andy Dunau at the Spokane River Forum that they had not completed any work in the watershed due to a lack of funding.

Elaine summarized Ecology's implementation. The primary parameter affected by the TMDL for the wastewater dischargers was temperature but three of the facilities have had exceedances of their bacteria and turbidity limits. Tekoa and Fairfield are working on reducing infiltration and inflow to help with permit limit compliance. Rockford and Freeman School are not discharging during the critical months of June, July, and August. Spangle and Cheney are conducting studies to determine if their

discharge is having an impact on in-stream temperatures since the TMDL did not have site specific data on which to base the temperature limits. Tekoa, Spangle, and Fairfield will be working under a compliance schedule to meet the permit limit or to stop discharging during the critical period.

In the two years since the Implementation Plan was completed Ecology has reviewed and advised on 10 funding applications for treatment plants or activity projects in the watershed. Eight of the projects were offered funding.

Ecology has also referred approximately 9 nonpoint source agricultural operations to the Spokane or Pine Creek CD for assistance.

Ecology's biggest challenge has been how to best track implementation efforts. Elaine has a spreadsheet to keep track of activities but it's only as good as the information about projects and updates she receives. Ecology is also looking at using GIS to track projects, changes in riparian buffers, and number of acres in direct seed.