



Hangman Settlement Agreement 2022 Annual Report

By

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Introduction

Streams in the Hangman Creek Watershed are impaired by excess fecal coliform bacteria, turbidity, elevated water temperatures, dissolved oxygen (DO), and pH. Several point source and nonpoint source issues have been identified and discussed through several water quality studies. The Washington Department of Ecology (Ecology) and the Spokane Conservation District (SCD) studied these water quality issues and developed a cleanup plan, or a [Total Maximum Daily Load](#)² report. The TMDL evaluated sources of pollutant loading and outlines the necessary pollutant reductions. The TMDL was approved by EPA in 2009. A [TMDL Implementation Plan](#)³ was produced to guide the cleanup of the creek in 2011. More information is available about Ecology’s work in the Hangman Creek Watershed on Ecology’s Hangman Creek multi-parameter TMDL [webpage](#)⁴.

On September 28, 2015, Spokane Riverkeeper (Riverkeeper) challenged the EPA’s decision to approve the Hangman Creek TMDL based on the lack of “adequate reasonable assurances that nonpoint sources of pollution will be reduced.” In early 2018, Ecology and Riverkeeper reached a settlement agreement ([The Hangman Settlement Agreement](#)⁵) that consists of the following components:

- Complete a full analysis of the creek’s health including streamside vegetation and in-stream conditions within Washington State boundaries.
- Identify, prioritize, and fix water quality problems through focused Best Management Practice (BMP) implementation.
- Monitor the creek’s health and track progress of improvements.
- Develop and implement an education and outreach plan.

This document describes the work that Ecology and its partners completed during 2022 and fulfills the Settlement Agreement obligation for Ecology’s annual reporting on watershed evaluation work, prioritized site tracking, and education and outreach efforts. It also describes Ecology funding for work in the watershed and what lies ahead for 2023 and beyond.

Watershed Evaluation Work

As a condition of the Settlement Agreement, Ecology staff performed an annual evaluation of the Hangman Creek Watershed to document nonpoint water quality concerns related to dryland agriculture and livestock land uses. 40 sites were documented in 2022.

² <https://fortress.wa.gov/ecy/publications/documents/0910030.pdf>

³ <https://fortress.wa.gov/ecy/publications/documents/1110012.pdf>

⁴ <https://ecology.wa.gov/Water-Shorelines/Water-quality/Water-improvement/Total-Maximum-Daily-Load-process/Directory-of-improvement-projects/Hangman-Creek>

⁵ https://static1.squarespace.com/static/585aee335016e1541642dc0c/t/5ab4456f8a922d7af03cb277/1521763696270/2018+02+06+Spokane+Riverkeeper_Ecology+Unsigned.pdf

The Settlement Agreement requires Ecology staff to prioritize up to ten livestock sites and ten tillage sites annually for contact to address water quality concerns. Two livestock sites and ten tillage sites were prioritized and contacted in 2022. At the end of 2022, Ecology had a total of 76 priority sites (Figure 1) that include tillage, livestock, and complaint-based sites within the watershed. 2022 was the fifth year that watershed evaluations were completed in the Hangman Creek Watershed as part of the Settlement Agreement. Figures 2 through 5 show some examples of the livestock and tillage photo documentation collected during 2022 watershed evaluations.

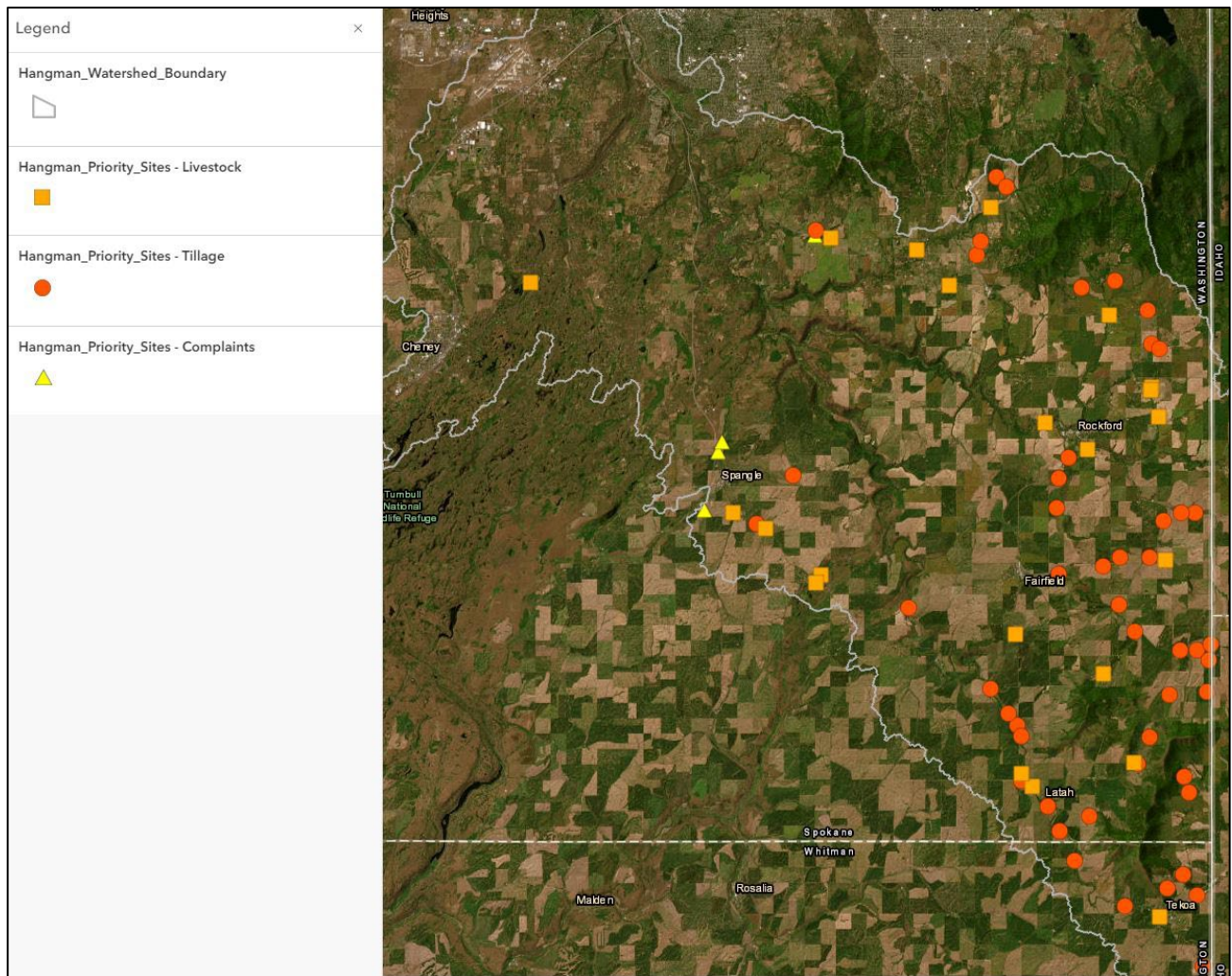


Figure 1: Hangman Prioritized Site Map



Figure 2: Tillage through ephemeral stream.



Figure 3: Tillage adjacent to seasonal stream.



Figure 4: Livestock site winter feeding area with concentrated manure near surface water that leads to perennial stream.



Figure 5: Livestock with unrestricted access to riparian area and surface water along mainstem Hangman creek.

Priority Site Tracking

The Settlement Agreement requires Ecology to track the progress of each priority site, and report annually the following information located below in Table 1.

| Project Tracking Elements | Amount | Notes |
|---|--------|--|
| Sites evaluated | 426 | Total sites evaluated during watershed evaluations 2018-2022. |
| Sites prioritized | 76 | All livestock, tillage, and complaint-based sites are considered priority sites for tracking purposes. |
| Ecology site visits | 101 | Ecology staff have conducted 101 site visits of the prioritized sites. Some sites have been visited several times by Ecology staff for various reasons from plan negotiations to project construction oversight. |
| Priority sites being addressed by Ecology alone | 35 | Sites which the producer or landowner has worked or is working only with Ecology on a plan, to the best of Ecology's knowledge. |
| Priority sites being addressed by Ecology and a CD or other stakeholder organization in partnership | 26 | Sites which the producer or landowner has worked, or is working, with Ecology and third party on a plan. Third parties include: Spokane Conservation District, Spokane Tribe of Indians, Spokane Riverkeeper, Natural Resources Conservation Services, Farm Service Agency, Pine Creek Conservation District, Spokane County, and Spokane Falls Trout Unlimited. |
| Sites certified in Farmed Smart Program | 0 | No current priority sites are part of this program. |
| Site visits where previously implemented BMPs are not operated and maintained adequately | 0 | Ecology will continue to monitor previous BMP sites during annual watershed evaluations for proper operation and maintenance. |
| Sites brought into compliance without use of enforcement tools | 11 | Sites where BMPs have been implemented to be fully protective of water quality, without the use of enforcement tools. These projects have been completed. |
| Recommendations for enforcement | 4 | Sites where Ecology staff submitted a request for enforcement. |
| Enforcement actions taken by Ecology | 4 | Sites where an administrative order was issued. |
| Sites brought into compliance after enforcement | 2 | The two enforcement actions issued thus far have resulted in compliance with completed projects. The other two enforcement action sites were in negotiations at the end of 2022. |
| Sites contacted but not brought into compliance | 6 | Sites that are unwilling to work with Ecology or have yet to respond to contact efforts. Ecology will continue to escalate regulatory pressure on these sites as needed. |
| Valid complaints in watershed | 6 | Six complaints have become priority sites. |
| Complaints resolved through technical assistance | 5 | Five complaint sites are in various stages of active communication with Ecology on plans. |
| Complaints resolved through enforcement | 0 | No complaints have yet been resolved through enforcement. |

Table 1: Hangman Settlement Agreement prioritized site tracking metrics 2018-2022.

Riparian and In-Stream Analysis

As part of the Settlement Agreement, Ecology needed to undertake and complete an assessment of the riparian and in-stream conditions of the Hangman Creek Watershed within Washington State. Ecology, with input from the Riverkeeper, broke this task into three components: riparian land use categorization, riparian canopy height and cover, and in-stream conditions.

In 2019, Ecology initiated the riparian land use categorization component. Ecology categorized and quantified land use types within the stream buffer at the parcel and HUC 12 scales – this component has been completed and results can be found in the 2019 Annual Report.

In 2020, Ecology initiated the riparian canopy height and cover component using two LiDAR datasets to analyze canopy height and cover within the riparian buffer area for the 40% of the watershed where LiDAR data was available – the results from this component can be found in the 2020 Annual Report. The remaining 60% of the watershed will be analyzed using the same methodology when LiDAR becomes available in 2023.

The in-stream field component was completed in May of 2022 by Ecology and Spokane Conservation District. The in-stream report was drafted at the end of 2022 and will be shared with the Riverkeeper in 2023.

Outreach Strategy

The purpose of the Hangman Outreach Strategy is to identify priorities and actions that will inform and engage the community around the value of the Hangman Creek Watershed. The Strategy is intended to be used as a guide for partners and stakeholders to plan and implement individual and joint outreach and education efforts.

2022 Action Item Implementation

The Outreach Strategy prioritizes action items for the first three years. Below is an update on outreach activities that occurred in 2022.

Direct Mailings to Watershed Residents

Ecology drafted the first in a series of brochures to mail to over 2,300 watershed addresses. The purpose of the brochures is for Ecology to communicate directly with residents about current efforts in the watershed, sources of pollution and BMPs, funding sources, etc. Ecology anticipates mailing the first brochure in 2023.

Conduct a Public Survey

The release of the public survey was delayed in 2022. Ecology will rekindle discussions with Riverkeeper about the survey in 2023.

Centennial Trail Interpretive Sign

We identified a typo in the interpretive sign that was installed along the Centennial Trail in November 2021. Ecology ordered a corrected sign in 2022, which will be installed in 2023.

Stakeholder Meetings

We've determined that one-on-one, or small group meetings are more effective methods of sharing information and engaging our partners. While there is value in convening the large stakeholder group, moving forward, Ecology staff will focus on increasing the number and diversity of stakeholders engaged in the Hangman Creek Watershed, as well as continue building and maintaining positive relationships with existing stakeholders.

Enforcement Actions

Ecology offers technical and financial assistance for prioritized sites that have water quality issues. Sites that are unwilling to work on water quality protection measures, will result in additional regulatory escalation. Ecology took enforcement actions in August of 2022, which ultimately resulted in an administrated order.

2022 Funding Highlights

Below is a summary of projects funded by Ecology's [Water Quality Combined \(WQC\) Funding Program⁶](#) in fiscal year (FY) 2022.

- **Implemented the Spokane Tribe of Indians, DIF Project Maintenance, Riparian Restoration, and Livestock BMPs Project (\$257,868):** This project includes project maintenance on previously installed riparian restoration sites of high priority identified by Ecology within the Hangman Creek Watershed. This three-year project had just gotten underway near the end of 2022 providing funding for ensuring successful riparian establishment along these sites.
- **Implemented the Spokane Riverkeeper, Rock and Hangman Creeks Riparian Restoration and Water Quality Improvement Project (\$256,892):** This project will continue to improve nonpoint pollution issues throughout the watershed by installing 50 acres of riparian plantings, establishing three water quality monitoring locations, 10 water temperature loggers, and provide education and outreach programs to maximize restoration efforts within the watershed. This three-year project had just gotten underway near the end of 2022.
- **Implemented the Spokane Conservation District, Spokane Riparian Establishment Project (\$283,500):** This project will implement three projects, two of which are in the

⁶ https://ecology.wa.gov/About-us/Payments-contracts-grants/Grants-loans/Find-a-grant-or-loan/Water-Quality-Combined-Funding-Program/WQC-funding-cycle?utm_medium=email&utm_source=govdelivery

Hangman Creek Watershed. These projects will implement livestock BMPs and riparian restoration. This three-year project got underway near the end of 2022.

- **Implemented the *Hangman Riparian Restoration and Conservation Program (\$2,500,000)***: This program will provide rental rates with long-term contracts for agricultural riparian land taken out of production and planted with native trees and shrubs. Ecology partnered with Spokane Conservation District on this project. This program will implement approx. 180 acres of riparian tree and shrub plantings along perennial streams in the Hangman Creek Watershed. All acres planted are located on sites prioritized by Ecology as part of the Hangman Settlement Agreement. This program is the first of its kind in the Hangman Creek Watershed, and planting riparian trees and shrubs on dryland agricultural riparian ground is unprecedented. Ecology and Spokane Conservation District have been working very hard on this project with high optimism for its continued success in years to come.
- **Implemented the Spokane CD, *Making Conservation Pay Project (\$3,000,000)***: This loan from State Revolving Funds allowed Spokane County Conservation District to expand their Direct Seed Equipment Loan program to 13 counties in Eastern Washington. This program allows producers to purchase the necessary direct seed equipment to practice low disturbance, direct seed conservation tillage. This loan helps to convert acres in the Hangman Creek farmed with conventional tillage techniques to direct seed. This three-year program is well underway and currently providing equipment loans to multiple producers in Eastern Washington including the Hangman Creek Watershed.
- **Implemented the Spokane CD, *Hangman Creek Streambank Stabilization RM-17 Phase II Project (\$333,333)***: This project builds upon and continues work along Hangman Creek at river mile 17 to stabilize banks, plant riparian buffers and install irrigation systems to improve plant survival. The second phase of the project will prevent an estimated 16,000 tons of sediment from reaching the Spokane River. Designs, materials, and permits were obtained in 2021, and the project was constructed in 2022. Riparian planting maintenance and general monitoring is planned for 2023.
- **Implemented the Spokane CD, *Hangman Creek Agricultural BMP Assistance Project (\$1,500,000)***: This project increases community awareness, addresses agricultural sediment pathways, inventories bank erosion contributions, implements 3,000 feet of stream restoration and reduces sediment delivery through producer incentives, cost-share programs, and loans. The funding allows the Spokane CD to support producers by focusing implementation at high priority sites identified during Ecology watershed evaluations. This three-year project is well underway providing financial assistance to implement multiple projects throughout the watershed.

- **Implemented the Lands Council, *Hangman Creek Watershed Riparian and Wetland Restoration Project (\$294,600)*:** This FY22 grant project continues The Land Council’s work in the Hangman Creek Watershed by installing Beaver Dam Analogs, planting riparian buffers, and educating agricultural producers and local youth in the watershed.

Partner Coordination

- **Coordination with Watershed Partners**

Ecology met regularly with watershed partners to plan, fund, and coordinate on implementing BMPs that improve and protect water quality. Watershed partners included, but are not limited to:

- | | |
|--------------------------------------|---|
| ○ Spokane Conservation District | ○ Inland Northwest Land Conservancy |
| ○ Pine Creek Conservation District | ○ Natural Resources Conservation Services |
| ○ WA Department of Fish and Wildlife | ○ Spokane Falls Trout Unlimited |
| ○ Spokane Riverkeeper | ○ The Lands Council |
| ○ Spokane Tribe of Indians | ○ Farm Service Agency |
| ○ Coeur d’Alene Tribe | |

- **Hangman Stakeholder Meetings**

No formal stakeholder meetings were convened in 2022. However, Ecology met separately with several stakeholders throughout the year to partner and collaborate on work in the watershed.

- **Funding for New Riparian Restoration Program**

Ecology regional staff submitted a proposal for \$1 million to establish the Hangman Riparian Restoration and Conservation Program – This program provides rental rates with long-term contracts for agricultural riparian land taken out of production and planted with trees and shrubs. Ecology partnered with Spokane Conservation District on the program. The proposal was funded in 2021 and outreach for enrollment was completed in 2022, identifying the need for more funds. A second proposal was awarded for an additional \$2.2 million to meet the demand. Implementation of approx. 180 acres of riparian areas located across 11 of the prioritized Hangman Settlement Agreement sites will begin in 2023.

Future Outlook

Watershed Evaluations and Site Prioritization

As a condition of the Settlement Agreement, Ecology staff will perform an annual evaluation of the Hangman Creek Watershed to document nonpoint water quality concerns related to dryland agriculture and livestock land uses in 2023. An estimated 15 sites will be prioritized for technical assistance outreach.

Tracking and Reporting on Existing Sites

Ecology staff will continue to offer technical and financial assistance for existing prioritized sites. This may include additional regulatory escalation on sites with water quality issues that are unwilling to work on water quality protection measures. Ecology will perform a routine check on previously implemented BMPs in the Fall of 2023 to ensure existing BMPs are maintained adequately.

Hangman Riparian and Instream Assessment

The Settlement Agreement requires Ecology to complete an assessment of the riparian and in-stream conditions of the watershed within Washington State boundaries. The in-stream assessment was completed in May 2022. A report on the in-stream assessment was drafted at the end of 2022 and will be shared with Riverkeeper in 2023.

Outreach Strategy

Ecology will work with Riverkeeper to identify outreach priorities for 2023. Some of the priorities identified for 2023 are listed below.

- **Update the Outreach Strategy**
In the Outreach Strategy, originally drafted in 2019, we recommended that it be reviewed and updated every three to five years to reflect the outreach projects conducted, evaluation of their success, document lessons learned and recommendations. In addition to reflecting on actions completed, the Action Plan should be updated with tasks to complete in the upcoming three- to -five years.
- **Finalize and Distribute the Public Survey**
Ecology has a draft of the public survey in Survey Monkey and a draft rollout plan. Ecology and Riverkeeper need to decide how best to use the survey as an outreach tool and that will inform how it is distributed and whether funding should be identified to help with that.
- **Identify Additional Outreach Needs and Efforts**
Ecology and Riverkeeper, with the help of partners, will identify new or continued outreach needs and opportunities.

2023 Funding

Below is a summary of the grant through Ecology's WQC Funding Program for FY23.

- **Spokane CD, *Direct Seed Loan Program (\$5,196,914)*:** The Direct Seed Loan Program will be a continuation of the existing Spokane Conservation District equipment loan program for the purchase of direct seed and no-till equipment. The program helps farmers in 19 Eastern Washington counties and 1 western Washington county, purchase direct seed and no-till equipment eliminating a financial barrier to adoption and mitigating thousands of tons of sedimentation and soil erosion from reaching regional water systems.
- **Spokane CD, *Hangman Creek Agricultural Sediment Abatement Project (\$424,000)*:** The Spokane Conservation District will continue its successful stream bank stabilization work within the Hangman Creek Watershed. The objective of this project is to reduce sediment contributions and re-establish a naturally resilient drainageway that supports the functions of flow and sediment conveyance without excessive vertical or lateral erosion. A two-stage channel will provide conveyance for regular flows in a base channel and low frequency floods in the channel and floodplain area. This large-scale project is located on a Hangman Settlement Agreement prioritized site.
- **Spokane CD, *Hangman Riparian Restoration and Conservation Program (\$3,200,000)***
This program will provide annual rental rates with long-term contracts for agricultural riparian land taken out of production and planted with trees and shrubs. Ecology partnered with Spokane Conservation District on the program. Enrollment for the program took place in towards the end of 2022.

Partner Coordination

- **Stakeholder Engagement**

We've determined that one-on-one, or small group meetings are more effective methods of sharing information and engaging our partners. Ecology will continue to facilitate stakeholder meetings in 2023 and beyond. Ecology staff will continue to work on increasing the number and diversity of stakeholders engaged in the Hangman Creek Watershed, as well as continue building and maintaining positive relationships with existing stakeholders. Engaged watershed stakeholders and positive partnerships are vital to cultivating a synergistic environment for achieving significant water quality improvements. Additionally, Ecology is committed to engage with the Spokane and Coeur d'Alene Tribes and local municipalities on water quality protection measures.

- **Meetings with the Spokane Riverkeeper**

Ecology staff will continue to meet with the Spokane Riverkeeper every other month to provide updates on work in the Hangman Creek Watershed, talk through issues, and plan for future work.

- **Meet with Watershed Partners**

Ecology staff will continue to meet regularly with watershed partners to plan and coordinate on implementing best management practices that improve and protect water quality. Ecology will continue to work on maintaining existing funding opportunities as well as support and encourage new funding opportunities for water quality improvement work. Ecology and the Spokane Riverkeeper will look for opportunities to complete a watershed tour together along with any other interested stakeholders.

- **Hangman Stakeholder Meetings**

Ecology staff will continue to work with the Spokane Conservation District to convene watershed stakeholders as needed.