



November 9th, 2021 Meeting Minutes

Meeting took place at the New Meadows Community Center from 11:00am - 3:00pm with 17 virtual and 20 in-person participants. Captured Minutes are from group discussions and presentations. Recorded presentations are available on the [LSRWC Website](#).

Clarifying Issues and Opportunities, Reviewing Collaborative Process

The group reviewed all goals, concerns, and next steps from the October meeting and were presented with the following questions:

What additional goals should be added to our minutes from last time?

- Improve irrigation systems to improve water quality and quantity

Any additional concerns?

- Financial support for stream improvements
- Preserving water rights

Additional next steps?

- Request for additional speakers- if anyone has a suggestion for future speakers, please email Wes Keller at wesleyk@nezperce.org
- Find out who is discharging into the Little Salmon River through Idaho Pollution Discharge Elimination System
- Link for resource documents available on the website
- Evaluating meeting times

Due to a large range of stakeholders with various other engagements, the Little Salmon River Watershed Collaborate polled participants on best available meeting times to increase engagement.

Tuesdays 11:00am - 3:00pm	14 votes
Tuesdays 7:00pm - 9:00pm	6 votes
Saturdays 11:00am - 3:00pm	3 votes

After group deliberation, an alternating schedule of the above days and times was preferred by the majority. The next meeting will occur on Tuesday, December 7th from 11:00am - 3:00pm. The January meeting will occur on Tuesday, January 11th from 7:00pm - 9:00pm. Future meeting times may change with participant feedback and presenter availability.



November 9th, 2021 Meeting Minutes

For the shorter, 2-hour meetings, a participant had an idea of creating feedback through the links. During months when the group only meets for two hours, presentations could be posted beforehand, and members could email questions and comments that could be discussed during scheduled meeting times. This would optimize time during shorter meetings.

Another participant suggested making all meetings shorter.

What people or organizations are missing from the Collaborative?

- DF Development - Colin Chambers
- More land owners and ranchers - Specifically Osborn, Vance, Robinson
- County commissioners
- Watermasters, Ditch Riders - Tim Farrell
- Army Corps of Engineers
- Bureau of Reclamation
- Idaho Department of Fish and Game
- The Freshwater Trust based out of Oregon
- Idaho Department of Environmental Quality - Lance Holloway
- Natural Resources Conservation Service - Ron Brooks
- Adams County and City of New Meadows and Riggins - Planning and Zoning, Public Works
- Tamarack Mills/Evergreen Forest Products
- Meadow Creek Golf Course
- Homeowner Associations - Whitney Ranch, MeadowCreek, Circle C Ranch
- Private consultants
- Perpetua Resources

If you know someone on this list, please reach out to them and encourage them to join the Collaborative meetings.



November 9th, 2021 Meeting Minutes

Presentations

Potential restoration on the Obendorf property

Presentation from Phil Obendorf (New Meadows rancher, water user, landowner), Mike McConnell (Environmental Coordinator for Horrocks Engineering) and Tim Sickles (Rio Applied Science and Engineering).

- “The purpose of the project is to improve natural streamflow in the upper tributaries of the Little Salmon through the implementation of water conservation and aquatic resource restoration strategies.”
- Streams in the area have an influx of nutrients due to degraded riparian corridors
- Drastic deterioration of floodplain functionality prompted change in management
- Goose and Brundage Reservoirs provide a significant amount of water to the area. The property also has a diversion on Big Creek. These diversions plus others all supply water to the 1,700 acre property.
- Project is needed to:
 - Improve water quality in the Little Salmon watershed
 - Increase in-stream flow
 - Reduce stream temperatures
 - Re-establish aquatic continuity
 - Revitalize riparian and wetland functionality
 - Provide high-quality habitat for native resident aquatic species as well as future foreseeable runs of anadromous fishes
- Funding found through multiple grant allocations. This project is open to a wide range of funding options. The Nez Perce Tribe is currently seeking grant funding.
- Baseline Site Assessments are used to identify existing conditions of property and the socio-environmental climate of the region. This assessment includes but is not limited to:
 - Data Gap Analysis
 - Fatal Flaw Analysis
 - Water Budget
 - Initial Agency Coordination
 - Initial public outreach
 - Environmental Constraints



November 9th, 2021 Meeting Minutes

- Water Rights Assessment
- Land and Aerial Survey
- Permitting and Compliance
- Easement and Encumbrances
- Develop a Global Information System (GIS)
- Aquatic Resource Delineation
- Cultural and Historic Resource Survey
- Water Quality Assessment
- Geotechnical Survey
- The next step is Project Conceptualization and Design which includes:
 - Development of the Project Schedule
 - Project Cost and Budget
 - Accounting
 - Irrigation Infrastructure Design and Construction Strategy
 - Stream Channel Restoration and Enhancement Plan
 - Monitoring and Adaptive Management Plan
 - Development of the Public Involvement Plan
- Obendorf's pivot irrigation system: Goal is to bring water in from Goose Creek to provide 70% coverage with pivot and 30% from end guns, all using gravity pressure system. Ideally they would like to put a large enough pipe in for others to plug into and use the pressurized water system.
- Potential restoration work relies on the information inventory at the beginning of the project such as water quality, land use, aquatic species, habitat changing, stream sinuosity, riffle/pool frequency, groundwater exchange and more.
- Creating sustainable irrigation infrastructure and riparian restoration are two important aspects of this plan.
- Horrock Engineering firm is a friend of landowners and wants to maintain livestock use of the land.
- Aquatic Resource Restoration and Enhancement includes plans to:
 - Remove existing flood-irrigation infrastructure, install riparian habitat components, install livestock watering facilities, and overall broaden the riparian corridor



November 9th, 2021 Meeting Minutes

- Pollinators will also benefit from a diverse watershed habitat which increases farm land productivity.
- Long term monitoring depends on a range of circumstances such as funding sources and administrative requirements.
- This whole process will take about nine years to implement all of the plans.

Questions and discussion

- **Q:** One of the struggles when going to more efficient irrigation systems is that because the drainage is so over allocated with water rights, it is difficult to keep the saved water in the stream channel downstream. Has there been discussions with the state on how to do this?
 - **A:** No, there has not been as of yet. Conducting a water budget and understanding water rights will illuminate these issues. With shorter watersheds that have less complex irrigation systems, it is not as big of an issue. With this project, a major concern to Phil is to protect water rights and not negatively impact other water users.
- **Q:** At what point do you conduct a geotechnical investigation?
 - **A:** At the beginning of the project to understand the groundwater interaction with surface water.
 - We want to ensure our projects benefit the system which is why we monitor so heavily before, during and after implementation.
 - We expect the groundwater recharge will increase with habitat restoration.
- **Q:** What is the potential hydro electric power gain for the 150 ft fall in the pipe?
 - **A:** Unsure but potential to investigate installing a power system within the pipe to support electricity demands.

Lessons from the Lemhi: Discussion on restoration efforts and lessons learned in the Lemhi.

Presentation from Daniel Bertram (Office of Species Conservation) and Bob Minton (Lemhi Soil and Water Conservation District)

From historic records, we see a significant reduction in the how much water is retained in the Lemhi Basin

- Lemhi River Restructuring Project



November 9th, 2021 Meeting Minutes

- Road development and infrastructure drastically narrowed the historic wetland range of the Lemhi.
- Human infrastructure in general is drastically interfering with healthy habitats.
- Agriculturists are an easy target to blame for all the problems with river systems but they are true partners to the land because they assist in preserving the riparian zone.
- Humans desire to continue to build and do things bigger and better is the real issue
- Through channelization and installation of rip rap to help prevent flooding and protect private property, there is now less biodiversity and increased flow time of water out of the basin.
- Over 700 diversions out of the Lemhi River which was mostly for flood irrigation equating to significant water withdrawals.
 - Prior to this project, only 2 of 31 tributaries maintained functional connectivity throughout the year while the remaining 29 would dry up.
 - Now, up to 7 tributaries are connected year round through easements, sprinkler conversion projects, and new irrigation infrastructure
- Lower Lemhi River Dewatering - asked residents to go gather fish from low stream
- Little Sawmill - Habitat Improvement Project
 - Input from other agriculture producers through the Lemhi Soil and Water Conservation District who funds this project. Funding also comes from Trout Unlimited.
 - The Lemhi SWCD would assist with irrigation efficiencies and Trout Unlimited would implement instream habitat improvements.
 - Pre-project conditions: turbid nutrient rich water and diverted stream flow
 - Landowners main goal was to install a pivot irrigation system
 - The landowner was willing to move their cabin North on their property to allow for river restoration and to install a pivot on productive land
 - A kiosk was constructed to explain the scope of the project.
 - 2 years past project and pleased with current success. Song birds have returned, abundant wildlife and the willow complex has come in quickly.



November 9th, 2021 Meeting Minutes

- Through a Load Reduction Estimate, the result is reduced sediment and nutrient loads
- A partnership with the Bureau of Reclamation allowed for extended water quality monitoring.
 - The data may be skewed because it was not taken at the same time every year, but overall there has been a reduction in E. coli.
- Environmental Quality Incentives Program (EQIP) through NRCS was also helpful for designing irrigation infrastructure free of charge for them and the landowner through the Farm Bill. Bonneville Power Association also provided funding.
- Point of Diversion Relocation Project: Eighteen Mile intercept project
 - Eighteen Mile Creek was put into a ditch, pushed out of the valley bottom and used for flood irrigation. This diversion was created by installing a structure that stopped all the flow in Eighteen Mile Creek at the confluence with Holly Creek.
 - This structure created a pond and increased the water level, allowing water to flow down the irrigation ditch and irrigate the desired area of the field.
 - Analysis found that switching from flood to pivot irrigation would provide a large increase in productivity.
 - Not a water savings project, but a diversion relocation project—moving the point of diversion downstream. Flood irrigation relies on gravity to get the water to the field but switching to irrigation infrastructure, we were able to pump water back uphill, keeping the water in the system longer. By moving the point of diversion downstream from the confluence with Holly Creek, the area was wet for much longer in the year.
- Funding
 - NRCS- EQIP
 - NRCS- Technical Services through design
 - DEQ- 319 Grant
 - BPA
 - PCSRF
 - USFWS- National Fish Passage
- Partner
 - Lemhi Soil and Water Conservation District



November 9th, 2021 Meeting Minutes

- NRCS
 - IDWR
 - BOR
 - OSC
 - IDFG
 - Landowners
- Lessons Learned
 - Relationships and Trust are pivotal- start with landowners at a small scale and work your way up- make sure landowners are happy, don't overpromise
 - Idaho water law is complicated and requires experts to make sure each project is left in compliance with all state and federal laws. It is important to get landowners to understand that they won't lose water rights if they save water
 - Knowledge gap between different irrigation systems- Encourage collaborations between neighbors to identify best practices for the area
 - Bidding Requirements- lowest bidder wins project, utilize funds in the best manner possible. Important that the landowner understands that up front.
 - Construction Implementation- discuss the work window from the very beginning to not affect operations. Many projects go longer than expected- what are the impacts to the landowner?
 - Identifying the sponsor for each project- in order to get more projects completed

Questions and discussion

- **Q:** Did you use any gravity feed systems?
 - **A:** Yes, if we're able to gravity feed we use those. Biggest problem is too much pressure so they require pressure reducing stations. We would like to incorporate some type of hydro into the system instead of needing to depressurize.
- **Q:** What type of temperature reduction did you see?
 - **A:** Spring channel was consistently 5 degrees colder than the main channel during the summer. In the winter, the same location was 3 degrees warmer than the main channel. Only putting 5 cfs into an 80 cfs



November 9th, 2021 Meeting Minutes

system so it's not seeing an impact in main Lemhi but they are in the springs.

- **Q:** Did you see a market increase in fish population?
 - **A:** We don't have the best data to answer that question. It's necessary to consider many factors that are difficult to quantify. We expect the survival rates to be higher but due to other factors we cannot anticipate true impact. Fish that stick around for at least a year have a higher survival rate so we are doing a study to see if the improvement actions we made will make them stay longer.
- **Q:** How much savings are they seeing with pivot vs flood irrigation system percentage wise?
 - **A:** Not really a savings, more of a reallocation for different purposes. March - October flood irrigating up to two inches of water covering the field whereas a pivot system only uses 7 gallons per acre.
- **Q:** What happened to the water table after converting to pivots?
 - **A:** Have not noticed much difference in their 20 year well study. There are areas where pivot irrigation is not available where downhill landowners rely on the runoff from upstream flood irrigators, so they would potentially be harmed by a pivot system.
- **Q:** What were some lessons learned through this process?
 - **A:** Pivot's provide better, more efficient irrigation every time. With higher technology, landowners can almost eliminate wind drift and evaporation resulting in reduced waste.
 - **A:** The most important part of this process is understanding the impacts that the project will have not only on landowners, but the ecosystem prior to implementation.
- **Q:** In our reservoir systems, how would our water rights be affected if we switched to a pressurized irrigation system?
 - **A:** Only a water rights expert can really answer that question. It is dependent on your particular allocation.
- **Q:** When people have switched to the pivot systems, have they changed which crops they grow?
 - **A:** A negative effect is when a pivot is installed, the land loses habitat for wildlife by converting unproductive land. When we design an irrigation system, it's focused only on the water they need for production. If we put



November 9th, 2021 Meeting Minutes

in larger pipes than they needed, the funders would not see the water efficiency impact.

- Private landowners have installed the largest percentage of pivots on their

NEXT Meeting December 7th, 2021, 11:00am-3:00pm MST in person at the New Meadows Community Center and virtually via Zoom. Agenda to follow.

<https://littlesalmonriverwatershedcollaborative.com>

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