From the Archives

Camp Carson, Then and Now

by Lacey Moore, GRMW

The Camp Carson mines located on the southwestern edge of Union County date back to the first placer mining actions in 1863 that occurred in and along the Grande Ronde River. In 1862, hunters making camp in Tanner Gulch found gold, which spurred mining interests in this area.

Ten years after the discovery of gold, the site that was initially referred to as the Grande Ronde River Mine was acquired by James Carson. Although the mines would come to operate under several different names and owners during the next several decades, the area has retained the place name of Camp Carson. In 1896, the holdings (then totaling 540 acres) were sold to a Parisian syndicate to be operated as the Grande Ronde Placer Mining Company. The land was sold for $51,000, and the organization employed some 200 people from the Grande Ronde Basin.

In 1903, the syndicate sold to a group of Boston capitalists, and the transaction added 460 acres to the tract. By 1940, a 60-year lease was drawn up for the Carson Channel Gold Syndicate, Inc. (based out of Spokane). It was this group that began mining using a dredge, equipment that was disassembled and transported from Granite, Oregon. The dredge operated 24 hours a day, seven days a week, for approximately five years. As the machine ate its way along the riverbed, it rearranged crucial floodplain and riparian habitat into piles of tailings that remained until the Upper Grand Ronde Mine Tailings Project.

In the early 1990s, the Bonneville Power Administration (BPA) and the United States Forest Service (USFS) added structural complexity to the area but did not alter the mine tailings, leaving the floodplain unconnected. In 2008, a stream survey of the area found salmon and steelhead habitat with a lack of fish cover, partial passage barriers for juveniles, and old wood structures that were failing. In 2009 and 2010, the Upper Grande Ronde Mine Tailings Project (phases I and II) successfully restored areas that had long been left unnaturally disposed by dredge mining. These projects were a collaborative effort among the USFS, the Confederated Tribes of the Umatilla Indian Reservation, the BPA, and the Grande Ronde Model Watershed. Restoration components included seeding and planting, adding in-stream structural complexity, relocating tailings, obliterating roads, and connecting floodplains.

The mines at Camp Carson have produced economic vitality for Union County and beyond for many years. The former mines on the Upper Grande Ronde now will serve as healthy spawning and rearing habitat for some of our region's most valued native species. ■

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Ripples in the Grande Ronde

Fall/Winter 2014 - 2015

RIVERS UNITING NEIGHBORS·QUARTERLY NEWS FROM THE GRANDE RONDE MODEL WATERSHED

Eastern Promise

Helping Eastern Oregon Kids Get a Head Start

by Leigh Collins, GRMW

ABOVE: Students preparing to sample aquatic insects at the Ladd Creek Rechannel project.

As Eastern Oregon University (EOU) wrapped up its first session of this year's Eastern Promise courses, the Grande Ronde Model Watershed (GRMW) also finished up its first and hopefully not last involvement with the Eastern Promise's summer institute. Alongside EOU professors, the GRMW had the unique opportunity to help plan, schedule, and teach students from all over the state who participated in the "Knee Deep in Science" program.

Knee Deep in Science was one of Eastern Promise's summer tracks through which high school students were able to complete nine to eleven college-level credits. These credits can count toward future studies during students' college careers, or the coursework can go toward gaining more high school credits for graduation. Eight students from Triangle Lake, Milton-Freewater, Hermiston, and La Grande participated in the Knee Deep in Science course. Each student stayed in Union County for a total of three weeks and completed nine college-level course credits in science. The schedule for these three weeks was rigorous, with classes beginning at 8:30 a.m. and continuing until 5:00-8:00 p.m. each day.

The Knee Deep in Science summer session focused on water quality in Union County. Students performed water quality analyses on the Grande Ronde River, Catherine Creek, and Ladd Creek. Students also spent an invaluable amount of time with EOU professor Jeremy Riggle in the chemistry laboratory gaining credits for part of the 100-series chemistry course by completing lab-based water analyses.

The sites where students sampled river and creek water for analysis were located on state lands or located on project sites funded by the Bonneville Power Administration (BPA). Sites that were sampled included the upper and middle Grande Ronde River, Upper Catherine Creek and the Catherine Creek Baum Restoration Project, and Upper

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Ladd Creek and the Ladd Creek Rechannel Project. The Ladd Creek Rechannel and Baum Project both were primarily funded through the BPA fish and wildlife program in previous years. With the permission of the Oregon Department of Fish and Wildlife (ODFW) and project landowners, students were able to draw water samples on private lands and state lands.

As students sampled water at multiple sites, they gained a unique perspective on restoration projects as well as compared water quality at restoration sites with water quality at the types of habitat present at state parks. Students were able to choose what they would like to study on each water body and what analysis they would like to perform. Each student focused on a different topic, including but not limited to the aquatic insect population and their habitat, differences between the upper reaches and the lower reaches of each water body, and overall water quality. Students tested for a variety of chemicals in the water, including nitrites, phosphates, dissolved oxygen, and pH.

Students then interpreted the results of their analyses and presented them at a mini-symposium on EOU's campus at Badgley Hall on Friday, July 11. The students were able to discuss their results in the context of the potential influences that could be affecting the water quality of our creeks and river. This style of instruction is a new and exciting approach to learning subject material and presenting that material in order to demonstrate and master what they had learned. Students designed their own research projects and implemented the necessary sample techniques to meaningfully analyze and interpret their data. Many of the students who participated said they had never done outdoor analysis or designed their own study. One student made it clear they "were not into science" but said that this summer session was new and exciting, and they really enjoyed each day in the field or lab. It was not like sitting in class and learning from a PowerPoint or textbook.

This session would not have been possible without the help of multiple volunteers who donated their time and expertise in environmental studies to share with the students. Students were able to incorporate multiple professionals' expertise into their project designs, study implementation, and presentation of results. The volunteers included Russ McCollister, ODFW, who spent time with students dissecting salmon and talking about various methods of tracking salmonids; Michael Jagger, aquatic insect expert, who shared his knowledge about insect pollution tolerance and identification; Trent Bray, local birder and business owner, who took the students out for a morning of birding; Beth Wasley, who worked with the students on sketching; and Scott Schafer of the U.S. Forest Service, who discussed plant identification and invasive species control methods.

With all this knowledge and expertise at their fingertips, students were able to test and present their work at a higher level than most high school students would have the opportunity to experience. If you are an educator who would like to explore different options for outdoor education with your pupils, then please contact the GRMW for resources or assistance. ■

ABOVE: Students performing on-site water analysis at Catherine Creek State Park.

ABOVE: Students at upper Ladd Creek performing pH analysis.

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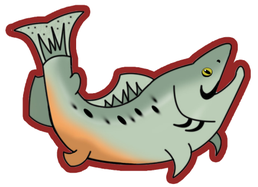
Henry Lorenzen

Henry Lorenzen, a third-generation dry land wheat farmer, has been on the NPCC since August, 2012. Prior to joining the Council, he was a partner in the law firm of Corey, Byler, Rew, Lorenzen & Hojem, LLP, and continues to serve the law firm on an "of counsel" basis. He is president of H&C Lorenzen Farm, Inc., a 4,000-acre eastern Oregon wheat farm. Mr. Lorenzen is a past member of the boards of directors for the Oregon Historical Society and Oregon Public Broadcasting. He has been an Assistant U.S. Attorney in the United States Department of Justice, a member of the Oregon Fish and Wildlife Commission, and both a member and chair of the Oregon Environmental Quality Commission. He has also served as president of the Oregon State Board of Higher Education. Mr. Lorenzen is also a licensed Professional Electrical Engineer; he received his Bachelor of Science degree in electrical engineering from Oregon State University, his MBA from Harvard University, and his law degree from Lewis and Clark Law School.

FISH FIGURES

- ODFW estimates that during the last four years, 63 percent of the fish that crossed Bonneville dam (farthest downriver) have migrated above Lower Granite (farthest upstream dam). With a 63 percent conversion on this year's run, it is expected to see just under 12,000 hatchery steelhead migrate over Lower Granite this year.
- Last year, the Fish Passage Center reported 100,019 adult Chinook passed over the Lower Granite Dam. To compare, in 1975, there were only 28,460 adult Chinook that made the same passage.
- In 2012, the median travel time for all Chinook (hatchery and wild) from Bonneville dam to Lower Granite dam was 12.8 days.



All of us here at the Grande Ronde Model Watershed (GRMW) are pleased and proud to introduce three new members of the GRMW family.

Atticus

Leigh Collins is no longer with the GRMW, but on August 13, 2014, only four days after her last day on the job as the Public Involvement and Education Coordinator, she and her husband, Clayton, became parents for the first time. Atticus Bosun Collins came into the world weighing 6 pounds, 15 ounces and was 19 inches long.

Dawson

The first child of Lindsey and Mason, Dawson Manton Bailie was born on July 28, 2014, at the Grande Ronde Hospital in La Grande. The future Seahawks fanatic was a robust 8 pounds, 10 ounces and 21.5 inches long.

Manu

Emmanuella Nowelia Sanyu was born November 16, 2012, in Kampala, Uganda. After spending the first year of her life in an orphanage and a few months with a foster family, both in Kampala, she became Emmanuella Sanyu Steele, daughter of Summer and Jesse Steele, on May 6, 2014. She goes by Manu, as she was called in Uganda, and joins brother Fenley, age 5.

The Pacific Northwest Restoration Programmatics Road Show

by Janine Castro, U.S. Fish and Wildlife Service and National Marine Fisheries Service[1]

The first week of September was not only the start of a new school year but also the beginning of a new and improved "restoration programmatics road show." Over a five-day period, approximately 200 restoration project funders, designers, implementers, and reviewers attended workshops in five towns across two states. Participants represented tribes, watershed councils, soil and water conservation districts, and a wide variety of local, regional, state, and federal agencies. Why did they show up? To find out how they could put the new programmatic biological opinions to good use by getting restoration projects on the ground faster, cheaper, and with greater success.

If you are new to the world of programmatics, here's why they are important. Even though restoration projects are designed to produce long-term benefits to fish and wildlife, the implementation of these projects generally has some short-term impacts on the very species we are trying to help. These impacts are often a result of the big equipment we use to move dirt, wood, and other materials, the need to move fish or other species out of a construction area, or the noise that we make while getting the work done. Without the restoration programmatics, every project area containing Threatened or Endangered species or their critical habitat would require an individual consultation with National Marine Fisheries Service (NMFS) and/or the U.S. Fish and Wildlife Service (FWS), which can be a lengthy process. Because these two agencies want to encourage restoration of fish and wildlife habitat, we have developed a streamlined approach to provide project proponents with guidance to minimize impacts to federally listed species and their habitats and take coverage under the Endangered Species Act (ESA) for actions involving unavoidable adverse effects to those species. In general, as long as the specific conditions outlined in these programmatic biological opinions (programmatics) are implemented appropriately, projects meet the consultation requirements of the ESA; additionally, project proponents know they are implementing state-of-the-science restoration practices.

The workshops were led by a cadre of folks from both the FWS and NMFS, including a few of the programmatic authors, Chris Allen and Paul Bridges; two NMFS fish passage engineers, Aaron Beavers and Jeff Brown; FWS project implementers from Oregon and Washington, CalLee Davenport and Rich Carlson; and one of the Restoration Review Team Leads, Janine Castro. In the workshops, we discussed: (1) development of the biological opinions, (2) action areas and activity categories, (3) general and species-specific conservation measures, (4) project design criteria, (5) Restoration Review Teams, (6) review and approval processes, (7) fish passage review and approval, (8) the use of variances, and (9) the implementation process. You can download the workshop presentation as well as the programmatic biological opinions and supporting documents at: http://www.fws.gov/oregonfwo/ToolsForLandowners/OtherResources.asp.

The purpose of the programmatics is to get high-quality restoration projects on the ground in an efficient manner. The activity categories cover a vast array of restoration techniques, and they reflect the current state of restoration science and practice. Understanding that no two ecosystems are alike, these new programmatics have built-in flexibility and no expiration date. As new techniques are developed and tested and as our understanding of natural systems increases, we also can improve the programmatics, provided that we are reducing our short-term negative impacts to fish and

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Currently, there are five updated restoration programmatic biological opinions (programmatics) available for use in the Pacific Northwest. They include:

HIP III – the Habitat Improvement Program
Applies to projects funded through the Bonneville Power Administration (BPA). There are two biological opinions: one with NMFS and the other with FWS. This programmatic represents the third round of consultation between NMFS and BPA but the first between BPA and FWS. Geographic coverage includes the Columbia Basin (excluding Nevada) plus the coastal area of Oregon.

ARBO II – the Aquatic Restoration Biological Opinion
Applies to projects funded and/or designed by the USFS, the Bureau of Land Management, and the Coquille Tribe through the Bureau of Indian Affairs. There are two biological opinions: one with NMFS and the other with FWS. This programmatic represents the second round of consultation for both agencies. Geographic coverage includes Oregon and Washington and the portions of national forest land that is primarily in Oregon and Washington but also includes parts of Idaho and Nevada.

PROJECTS – the Programmatic Restoration Opinion for Joint Ecosystem Conservation by The Services
Applies to projects either funded by or supported through substantial technical assistance from the FWS and the National Oceanic and Atmospheric Administration (NOAA) Restoration Center. There is currently only a NMFS biological opinion, and the FWS biological opinion is forthcoming. PROJECTS is a new programmatic for both agencies. Geographic coverage includes Washington, Idaho, and Oregon (excluding the upper Klamath Basin).

[1] The U.S. Fish & Wildlife Service donates approximately 50 percent of Janine's time to the National Marine Fisheries Service to further cross-agency coordination and consistency of restoration approaches.

ABOVE: Paul Bridges, FWS, Roseburg; Jeff Brown, NMFS, Portland; Rich Carlson, FWS, Lacey; Janine Castro, FWS/NMFS, Portland; CalLee Davenport, FWS, Portland.

wildlife species and promoting long-term recovery.

The programmatics are organized so that the General Conservation Measures come first. These measures essentially are the "price of entry"– the things that must be done by anyone undertaking a restoration project. Typical measures include erosion control, spill prevention, site layout and flagging, and the like. Most of us know these measures as Best Management Practices. Depending on the likelihood of federally listed species being present in the area, Species-Specific Conservation Measures also must be followed. Common measures include work timing windows to minimize disturbance or specific herbicides that cannot be used within occupied habitat. Additional Project Design Criteria may be applicable depending on the type of project. For instance, if you are replacing a culvert with a new structure to improve fish passage, then there is specific guidance on how to size the replacement structure. To provide the kind of flexibility needed to respond to specific ecosystems' needs, we also have included the ability to make minor exceptions (or variances) to conservation measures and design criteria when those variances would be better for species and/or their habitat. One of the most common minor variance requests is for an in-water work extension so that work can occur in-stream during a time when there is the lowest likelihood of fish presence. Needless to say, a thorough reading of the appropriate programmatic is in order before undertaking any project.

Beyond the measures and criteria provided in the programmatics, some projects need a bit of extra review to ensure that we are minimizing impacts and maximizing restoration potential. For the most complex projects (dam removal and channel reconstruction), each programmatic has its own Restoration Review Team. This group provides guidance and review throughout the project development process to make sure that the project can be covered by the programmatic or needs to be handled through an individual consultation. For many projects, a full Restoration Review Team review is not required, but we still need to make sure that technical criteria are being met. That's where the NMFS fish passage engineers come in. They ensure that the proposed designs meet the most current NMFS fish passage criteria. Although this review process may sound like a lot of extra work, the intention is to design and implement the best projects possible while maintaining the integrity of our programmatics. This additional level of review has allowed us to include many more restoration actions than in previous programmatics, which saves everyone time.

The workshop road show continually emphasized the need for communication throughout the project development and implementation process. Specifically, there should be no surprises. Regulators and project reviewers should not surprise project proponents with last-minute changes, and project proponents should keep the reviewers in the loop from the beginning so that we have a good understanding of the entire project. Fish and wildlife are depending on our ability to work together and collaborate to ensure the best possible outcome for our recovery efforts. We are in this together! ■

Fish Online!

WWW.GRMW.ORG

- Snake River Basin stream flows
- Snow and precipitation reports
- Habitat enhancement projects
- Meetings, activities, and events
- Past issues of *Ripples* and more!

Grande Ronde Model Watershed

Upcoming Board Meetings

The public is welcome to attend.

- Tuesday, February 24th
  5:00 p.m.
  Wallowa Community Center
  204 East 2nd St
  Wallowa, OR 97885

- Tuesday, April 28th
  5:00pm
  Elgin Community Center
  260 North 10th St
  Elgin, OR 97827

Meeting dates are subject to change, please call 541-663-0570 to confirm. Thank you!

New Plan for $250 Million per Year in Habitat Improvement Investments

by Jeff Oveson, GRMW

Breaking News

During a recent Northwest Power and Conservation Council (NPCC) meeting held at Wildhorse Resort on the Confederated Tribes of the Umatilla Indian Reservation, the Council adopted its newest Columbia River Basin Fish and Wildlife Program. Following the October 8 meeting, a news release announced that the Council's new Columbia River Basin Fish and Wildlife Program comes on the heels of a truly historic year for salmon. This year, more salmon were counted at Bonneville Dam as they returned from the ocean than any year since 1938 when counting began. 2014 saw a record return of sockeye, a near-record fall Chinook run, and an impressive and increasing Coho run.

"The great salmon returns of 2014, which continue a trend going back more than a decade, suggest that the extraordinary is becoming the ordinary," Council Chair Bill Bradbury said. "Our fish and wildlife program supports the restoration of ecosystems and wild fish by addressing a broad spectrum of the fish and wildlife life cycle including habitat, hatcheries, river flows, dam passage, invasive species, and climate change impacts."

Through the program, the Council works to restore healthy ecosystems and healthy populations of wild fish — including those that go to the ocean, like salmon, and those that do not, like bull trout — throughout the entire Columbia River Basin. This work involves connecting areas of good habitat, removing fish-passage barriers, and improving water quality by reducing toxic substances. Much of the work designed to boost wild fish also helps wildlife in the same ecosystems.

The program also supports using hatchery programs as tools to help rebuild fish populations that spawn in the wild. The program integrates hatcheries with habitat improvements and works with fish and wildlife agencies and Indian tribes to define the scope and purposes of fish propagation as well as appropriate management techniques consistent with current and evolving scientific principles.

By law, the Council revises the fish and wildlife program at least every five years. The process began more than a year ago and involved more than 400 recommendations, extensive public comments, and public hearings in all four Northwest states. Funded by the Bonneville Power Administration (BPA), the Council's program is the biggest of its kind in the nation, directing more than $250 million a year to mitigate the impacts of hydropower dams in the Columbia River Basin on fish and wildlife.

The History of the Northwest Power and Conservation Council

After four years of deliberation from 1976 to 1980, the U.S. Congress devised methods for protecting the preference that existing federal law gives to publicly owned utilities, while at the same time providing the benefits of federal hydropower to residential and small farm customers of private utilities. The resulting Northwest Power Act also addressed the impacts of hydropower dams in the Columbia River Basin on fish and wildlife and their habitat. Just a century earlier, between 10 million and 16 million salmon and steelhead returned from the Pacific Ocean to spawn in the Columbia River Basin each year. However, by the late 1970s, the annual returns had dwindled to about 2.5 million fish, and most of those fish returned to hatcheries. Environmental groups and other advocates for fish and wildlife considered filing petitions to protect dwindling fish populations under the federal Endangered Species Act, but held out for 10 years to see what protections might be devised under the Act.

The Act directs the BPA to continue its traditional role of transmitting and marketing power but also carry out additional responsibilities. Under the Act, the BPA must acquire all necessary energy resources to serve public utilities that choose to apply to the BPA for wholesale power supplies. The Act contains checks and balances to ensure that all customers of the BPA are treated equitably. The BPA remains accountable to the people of the Pacific Northwest for the actions it takes to meet the needs of residents and industry.

To guarantee this accountability, the Northwest Power and Conservation Council was created with the mission to ensure, with public participation, an affordable and reliable energy system while enhancing fish and wildlife in the Columbia River Basin. By forming a regional planning council consisting of two members from each of the four Northwest states that is charged with developing a regional plan, Congress provided a regional decision-making system. It emphasizes local control of resource development and power planning.

Council members are appointed by the Governors of the four states. Currently, Oregon is represented by Bill Bradbury and Henry Lorenzen, Idaho by Bill Booth and Jim Yost, Montana by Jennifer Anders and Pat Smith, and Washington by Phil Rockefeller and Tom Karier. A Council Central Staff is located in Portland, Oregon, with state staffs located around the Columbia Basin. The Executive Director of the Council is Steve Crow, who was raised in Lostine before attending Oregon State University and the University of Oregon School of Law.

You can learn more about the Northwest Power and Conservation Council and its Fish and Wildlife Program by visiting: http://www.nwcouncil.org. ■

Bill Bradbury

Bill Bradbury is one of Oregon's two representatives to the Council. He has long been involved in Oregon politics and environmental issues affecting the state. He has served as an elected official, both as Oregon's Secretary of State and as a member of the Oregon Senate, where he was Senate President. He directed For the Salmon, a non-profit organization, and during his tenure, he worked with Northwest American Indian tribes; federal, state, and local governments; and timber, agriculture, and fishing interests.

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MEET THE INTERN

Katie Fisher

I was born and raised in the small town of Burns, Oregon, where my dad owned the custom meat shop and my mom works as a pre-school teacher. I grew up on a small ranch and became involved in 4-H and FFA showing cattle. In high school, I also participated in FFA leadership activities, Harney Partners for Kids and Families, Harney County Youth Action Committee, Key Club, and the National Honor Society. I also played basketball for the Lady Highlanders all four years of high school.

After graduating high school in 2010, I moved to La Grande to attend Eastern Oregon University (EOU) and major in pre-nursing. I am currently a junior nursing student at Oregon Health and Science University School of Nursing La Grande campus and will be graduating with my Bachelor's of Science in Nursing RN in the spring of 2016. Throughout my four years in La Grande, I have worked as a student assistant at Pierce Library at EOU and as an assistant manager at Maurice's clothing store. I am currently employed with the Bureau of Reclamation and will begin tutoring nursing students at the beginning of the coming year.

ABOVE: Katie electro-shocking as part of fish salvage in Catherine Creek.

I began working as a student intern for the Bureau of Reclamation in June of 2014 along with two other student employees for the Grande Ronde Basin. Our large project for the summer was to work on a river restoration fish habitat project on Catherine Creek and assist in fish salvage, which involves containing fish in isolated sites of construction and relocating them in the main stream. We also took water flow measurements at various sites throughout the valley and worked closely with the Confederated Tribes of the Umatilla Indian Reservation and Oregon Department of Fish and Wildlife on other river restoration or preservation projects, yearly data collection, and other various field work.

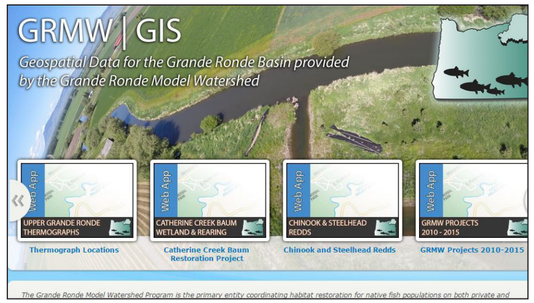
I am currently working in the Bureau of Reclamation office in La Grande as a student intern alongside Darrell Dyke. I have been enjoying my work and partnering with the many other agencies in the valley to ensure the safety of fish in the Grande Ronde Basin. ■

Wish Granted

ESRI Grants Non-Profit Status to GRMW for Expanded Software Use and Data Hosting

by Mason Bailie, GRMW

Environmental Systems Research Institute (ESRI) has accepted GRMW (GRMW) into their Non Profit Program and granted multiple user licenses. This non-profit program assists organizations involved in conservation and humanitarian efforts. With these licenses, GRMW receives ArcGIS software at significantly reduced costs as well as "credits" that enable us to access ArcGIS Online. GRMW would like to invite all of its *Ripples* readers to check out our newly created ArcGIS Online webpage at http://grmw.maps.arcgis.com.



A preview of the GRMW ArcGIS Online homepage.

What is ArcGIS Online?

ArcGIS online is a tool that gives us the ability to create interactive web maps that can be easily shared with our partners and the public. Using our existing data, we can easily design map icons, edit informational pop-ups, and customize functionality to suit our needs. Links to these personalized maps then can be distributed to whomever needs the data, and they can access the data from a web browser.

What Data Are There Now?

Although we are working on adding more data that the public can view, there are some exciting maps that you can see right now! Here are a few project maps that you can check out today:

- Last 5 years of GRMW Projects
- Catherine Creek Baum Project with Aerial Imagery
- Steelhead and Chinook Redds
- Temperature monitoring in Union County

If you have questions about our data, feel free to contact our Database Manager, Mason Bailie, at 541-663-0570. ■