RIPPLES IN THE GRANDE RONDE

SPRING EDITION 2018

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

PLACE-BASED PLANNING:

A Consensus-based Approach to Water Resources Management in Union County

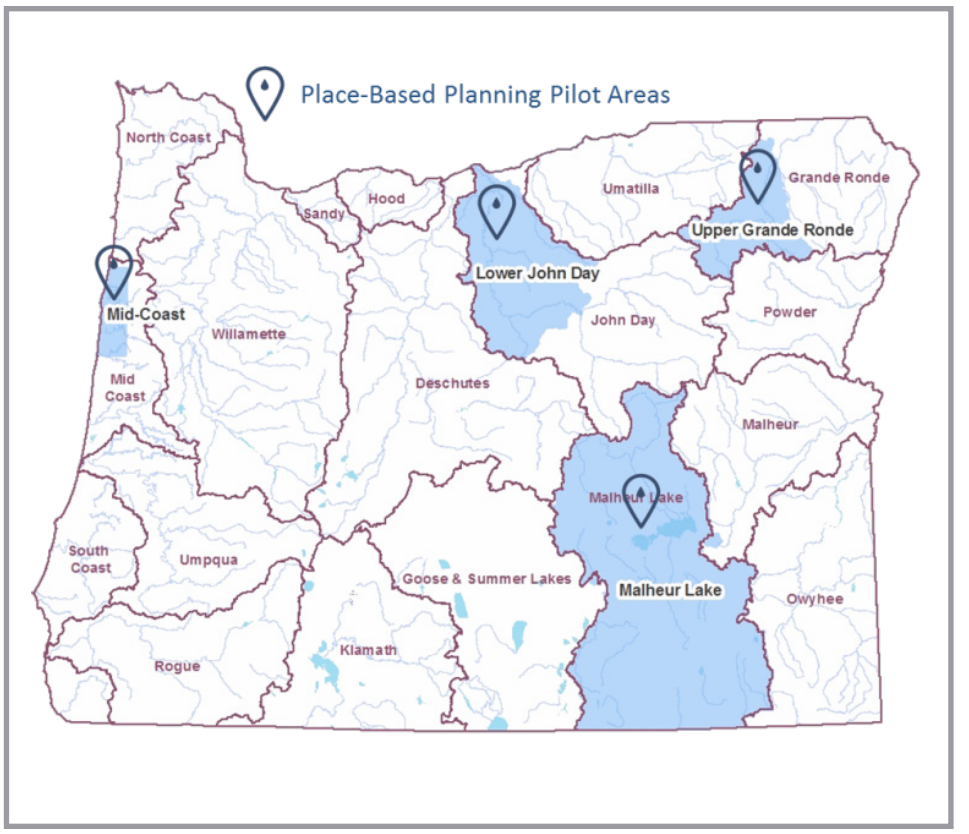
by Dana Kurtz and Kim Young, *Anderson Perry and Associates Inc.*

In 2012, the Oregon Water Resources Department (OWRD), with the assistance of multiple state agencies, developed the Integrated Water Resources Strategy (IWRS) for the state of Oregon. The IWRS is a living document that provides a framework to understand and seek solutions addressing instream and out-of-stream needs related to water quantity and quality.

This framework contains multiple recommended actions, and one action calls for funding and support of locally led, place-based efforts to help communities develop plans to meet instream needs for fish and other aquatic life as well as out-of-stream needs, including agricultural requirements, municipal water supplies, and industrial processes. The goal is for communities to work through current water issues and plan to mitigate future ones. This recommended action is emphasized in the framework because each community in Oregon has unique water challenges that are anticipated to increase in the future.

In 2015, based on the recommendations of the IWRS, the Oregon legislature appropriated resources to OWRD to implement this place-based planning recommended action. OWRD solicited letters of interest from across the state and received 16 applications to participate in a multi-year pilot planning effort. Four applicant groups received grants: the John Day Partnership in the Lower John Day River sub-basin, Union County in the Upper Grande Ronde River Watershed, the Harney County Watershed Council in the Malheur Lake Basin, and the City of Newport in the Mid-Coast Basin.

Union County was one of two groups that received full funding for the pilot phase. Union County's boundary generally aligns with the watershed boundary of the Upper Grande Ronde River Watershed (including waterbodies such as the Grande Ronde River and Catherine Creek). The Upper Grande Ronde River Watershed is a vital ecosystem that supports ranchers, farmers, residents, tribal interests, and an array of



Place-based Planning Pilot Areas (source: OWRD).

fish and wildlife species. Water supply shortages for instream and out-of-stream uses currently exist in this watershed, and these shortages may be intensified by climate change and increases in future demand.

The Upper Grande Ronde River Watershed Partnership has been formed and is working to complete the tasks associated with the OWRD planning guidelines. The place-based planning process consists of five steps that each pilot planning group was charged with completing over a two-year period (however, all four groups have requested an extension). These important steps include forming a partnership, assessing water supply, determining water demand, seeking solutions, and finalizing an action plan. Among the potential solutions are water storage, aquifer recharge, and stream flow augmentation to improve water temperature. Place-based integrated water resources plans can provide a roadmap to gather the support and resources needed to implement local solutions.

After working together for approximately a year and a half under the

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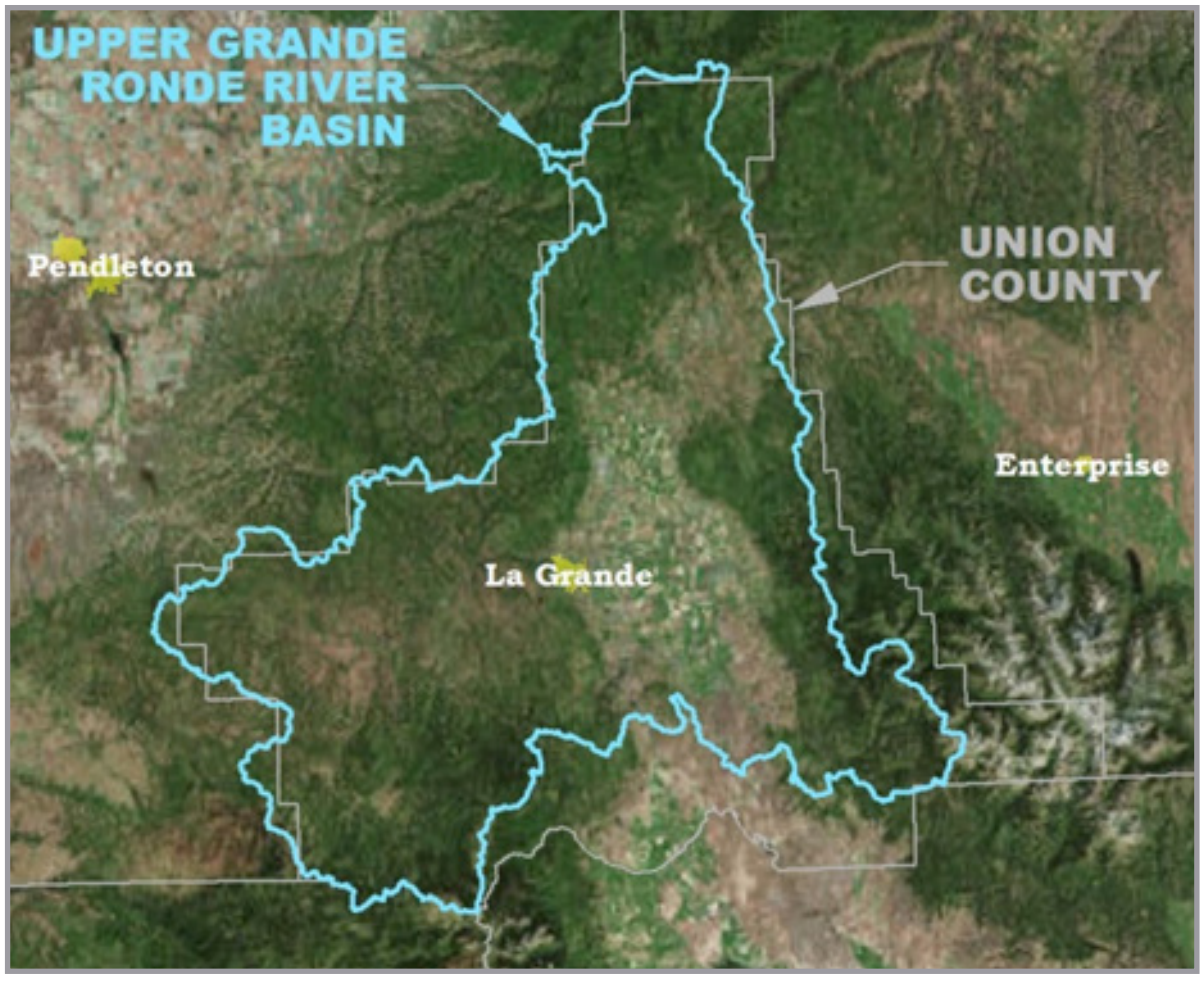
Upper Grande Ronde River Watershed Partnership Logo (source: Upper Grande Ronde River Watershed Partnership).

leadership of Union County Commissioner Donna Beverage and Union County Planning Director Scott Hartell, the Partnership has completed several project milestones (including developing an outreach plan, work plans, and a water supply assessment) and is now in the process of completing a water supply and demand analysis. Once this water balance analysis is completed, the group will develop solutions and create an action plan to implement the ideas that are approved by the group. One of the most important documents developed by the Partnership is the governance agreement that outlines the rules of engagement for members of the group, such as the Partnership's processes for dealing with disagreements, requirements for being a voting member of the group, and guidance for participation.

The Partnership comprises city representatives, members of the agricultural and ranching communities, fish and wildlife agency representatives, other government agency representatives, and members of non-governmental organizations and tribal organizations. A unique component of the planning process is that all decisions are made through consensus. The Partnership received training in December 2017 from Oregon Consensus related to consensus-based decision-making, which involved learning about the importance of listening to all points of view and ensuring everyone truly is in agreement with the decisions being made. The planning process has progressed relatively smoothly; however, concerns about specific water issues have arisen during meetings, indicating that these difficult resource issues will require broadly supported solutions.

With between 20 and 40 people attending each Partnership meeting and more than 20 organizations operating as signatories to the governance agreement's memorandum of understanding, the need for inclusive participation is great. Commissioner Beverage stated, "I am excited that this project is being done by and for the local community." To encourage participation from a broad range of stakeholders, Commissioner Beverage convenes meetings to accomplish different tasks. Currently, in addition to stakeholder meetings (that include all Partnership members), there is a technical committee that reviews scientific components of the planning process, a steering committee that reviews overall planning direction and strategy, and four water demand working groups (agriculture, municipal, ecological, and natural hazards) that are completing the demand analysis task. These working groups meet regularly to analyze information and have opportunities to educate all Partnership participants about different facets of water demand projections. Mike Burton of the Natural Resources Conservation Service (NRCS), who is a member of the agriculture working group, stated, "NRCS has been happy to provide technical resources and information on the existing irrigation systems and efficiency for this community-based effort. It has been great to work as a team in



Upper Grande Ronde River Watershed Planning Area (source: Upper Grande Ronde River Watershed Partnership).

Upper Grande Ronde River Watershed Partnership Field Trip (source: Upper Grande Ronde River Watershed Partnership).

this effort with other state, federal, and tribal representatives under the direction of local community members and representatives. We are hopeful that efforts such as this community planning process will lead to even more landowners improving the efficient use of our water and energy resources for all beneficial uses in the Grande Ronde Valley."

The public is invited to attend all meetings, and members of the Partnership volunteer their time to complete project tasks. Member participation is tracked, and their volunteered time accounts for a portion of the required funding match of 25 percent of the grant value. Meetings typically involve presentations, time to discuss feedback and guidance on the next steps in the process, and small group work sessions. In addition to convening stakeholder meetings, the Partnership uses outreach events, such as radio interviews, newspaper articles, and a field trip to learn about agricultural, ecological, and municipal water demand, to encourage participation from different local people and groups.

So far, one of the outcomes of the technical side of the planning process has been increasing awareness of how much we do not know about the resources and systems in our watershed. These "data gaps" have been identified in many critical information sources used for planning and include a lack of information about the volume of groundwater in the basin, the sustainability of groundwater pumping, water quality parameters, surface water flows/calculated consumption of surface water, and actual water use of various water consumers.

When asked about their ideal outcomes for the planning process, stakeholders were unsurprisingly diverse in their answers. But, surprisingly, there is a widespread atmosphere of compromise in the Partnership—even among conflicting interests. According to Jeff Oveson of the Grande Ronde Model Watershed, "I initially was of the impression that the process was designed with a pre-determined outcome in mind, the outcome being that we need to build a reservoir in Union County." Over time, Oveson reports that he saw cooperation among Partnership members with conflicting interests and values and the emergence of "the understanding that we cannot successfully address any of those interests or values without addressing all of them."

Margaret Matter, a water resource specialist and water resources program lead for the Oregon Department of Agriculture, stated, "My first impression was uncertainty, although I chose to be optimistic. Today, I am very optimistic and confident that the community will be successful, and although there is still some uncertainty, it is not as significant. It is good to periodically take account of the process. One thing it does is that I realized how far we've come in the process." She also is impressed that "the community is interested, actively involved, and is a major driving force in the process."

Moving forward, the Partnership intends to continue its dedication to understanding water needs in our community. When this planning project is completed and the local integrated water resources plan is developed, the Partnership is hopeful that additional funding from OWRD and other sources will provide for these improvement projects to be implemented.

Interested in learning more? Then join us!

Place-based planning meetings are generally held monthly and are a great way to help shape the Upper Grande Ronde River Watershed's water future. For more information about the Upper Grande Ronde River Watershed planning effort, please contact Scott Hartell, Union County Planning Director, (541) 963-1014, shartell@union-county.org or visit http://union-county.org/planning/place-based-integrated-water-resources-planning/ to read project documents, meeting minutes, and reports.■

Helping Freshwater Mussels Help River Ecosystems

Introducing *Conserving the Gems of Our Waters: Best Management Practices for Protecting Native Western Mussels During Aquatic and Riparian Restoration, Construction, and Land Management Projects and Activites* by Emilie Belvins, Laura McMullen, Sarina Jepsen, Michele Blackburn, Aimée Code and Scott Hoffman Black

by Beth Glidewell, *Confederated Tribes of the Umatilla Indian Reservation,* and Emilie Blevins, *Xerces Society*

Several species of freshwater mussels call the Grand Ronde River and its tributaries home. The western pearlshell mussel is the most prominent, inhabiting upper portions of the watershed while often burrowed into stream bottoms in large groups called mussel beds. These native animals are a critical part of their aquatic ecosystems, helping to improve habitat conditions for fish and other aquatic species through "ecosystem services." Mussels filter the water, removing bacteria, algae, and fine sediment; they increase substrate stability by anchoring themselves in place with a muscular foot; and they help retain and recycle nutrients, increasing food available for aquatic insects, which then become food for juvenile fish. Pacific lamprey juveniles grow more rapidly when they are raised in conjunction with freshwater mussels, and mussels provide food resources to a variety of birds and animals in riparian ecosystems.

Recognized as a vital aspect of healthy aquatic ecosystems, freshwater mussels also are among the First Foods that are of cultural importance to the Confederated Tribes of the Umatilla Indian Reservation (CTUIR). A First Foods-focused approach to river restoration incorporates systems' physical and ecological processes—referred to as the "key touchstones" of hydrology, geomorphology, connectivity, riparian vegetation, and aquatic biota—that characterize functional and sustainable aquatic systems into a framework to help guide holistic restoration activities (Jones et al. 2008). Freshwater mussels, in addition to themselves being aquatic biota in need of conservation actions, can play a critical role in helping to rebuild functionality in restored aquatic ecosystems.

The focus of habitat restoration in many areas, including the Grande Ronde River Watershed, is to improve spawning and rearing habitats of Endangered Species Act (ESA)-listed salmon and steelhead. Freshwater mussels, through the many ecosystem services they provide, have the potential to further improve these same habitats. To utilize these benefits, freshwater mussels should be incorporated into restoration project planning and identified among the existing values of a restoration site.

Surveying for mussels before conducting restoration is important for protection and conservation of healthy aquatic ecosystems (source: Xerces Society).

Incorporating freshwater mussels into project planning also helps to protect mussels from restoration actions. Although restoration projects benefit ecosystems and improve habitat conditions, these actions have the potential to negatively impact aquatic species that are less mobile and/or are sensitive to disturbance. Even when habitat

Western pearlshell can be found in the Grande Ronde River Basin in beds like these (source: Roger Tabor).

The best management practices guide is available at: https://xerces.org/conserving-the-gems-of-our-waters/

alterations are temporary, mussels cannot swim out of the way to avoid instream work, then return. As a long-lived and sedentary species, many generations of a mussel population are present in an area at all times, and even temporary habitat alterations can damage or kill much of the population and reduce their ability to repopulate an area.

Worldwide, freshwater mussels are among the most imperiled groups of aquatic animals, and the species present in Eastern Oregon are no exception. A recent collaboration between the Xerces Society, the CTUIR Freshwater Mussel Project, and others led to a range-wide evaluation of species distribution and extinction risk. The study found that western U.S. mussels had been lost from nearly one in five watersheds in their native ranges; two of the four species evaluated are considered "vulnerable" to extinction; and a third species, the western pearlshell, is considered "near threatened" because it has disappeared from more than 15 percent of its range and suffered large declines in abundance elsewhere. Freshwater mussels, especially the western pearlshell, have very slow natural recruitment, meaning that it often requires decades to repopulate a disturbed habitat. This slow natural recruitment rate makes conservation of existing mussel populations a priority.

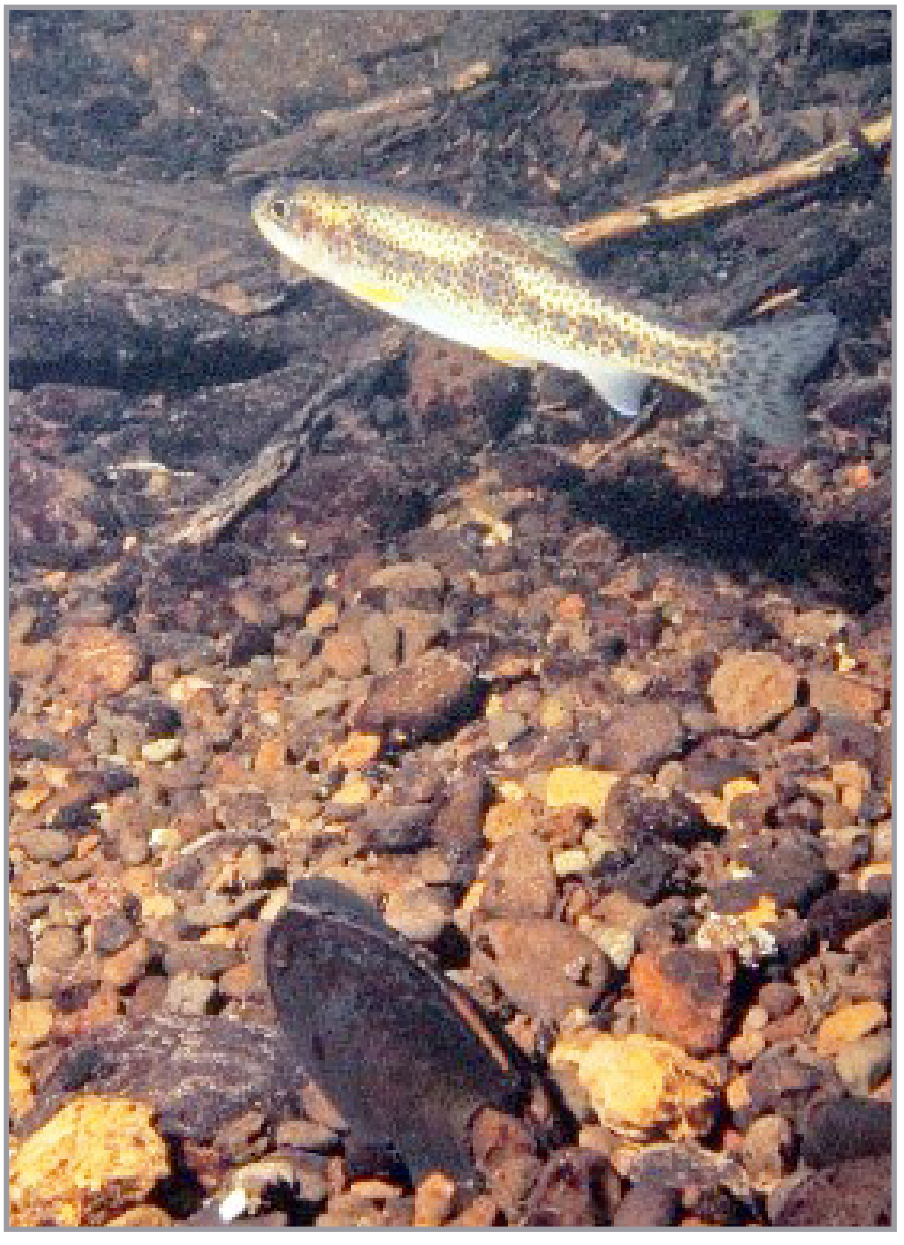
Deliberate efforts are required both to prevent further losses to native mussel populations and to retain their ecosystem services in river restoration projects. In this newly published *Conserving the Gems of our Waters* document, Best Management Practices are described for many types of restoration work, including construction, vegetation management, flow management, and sediment remediation, that maximize benefits of aquatic restoration projects where mussels are present. These Best Management Practices assist restoration practitioners by providing:

- Methods to determine mussel presence, including a review of mussel survey techniques;
- Methods to include mussels in project planning activities;
- Methods to reduce impacts to mussels; and
- Methods to salvage and relocate mussels.

In addition to detailing suggested best practices for various habitat restoration projects, the document includes links to regional resources as well as comprehensive information about freshwater mussel life history and species present in the western U.S.

There is still a lot to learn about the role of freshwater mussels in aquatic habitat restoration. In the coming years, the Xerces Society and CTUIR Freshwater Mussel Project will work together to apply and evaluate these best practices in an effort to improve freshwater mussel conservation and to help aquatic system restoration efforts enhance ecosystem health, function, and resiliency. You can join us in these efforts by downloading *Conserving the Gems of Our Waters* from the Xerces Society website: https://xerces.org/conserving-the-gems-of-our-waters/ or by contacting:
Emilie Blevins, Conservation Biologist, Xerces Society (Emilie.Blevins@Xerces.org) or
Beth Glidewell, CTUIR Freshwater Mussel Project Lead (ElizabethGlidewell@CTUIR.org).

Citation: Jones, K., Poole, G., Quaempts, E. J., O'Daniel, S., & Beechie, T. (2008). Umatilla River Vision. Revised 2011. ■



Mussels and fish are an intertwined part of our natural heritage (source: Roger Tabor).

Meet the Staff:

KAYLA MORINAGA

by Alex Borgerding, *GRMW Staff*

Kayla Morinaga, our new Monitoring Network Coordinator here at the Grande Ronde Model Watershed (GRMW), is an Oregonian through and through. Growing up in Ontario, Kayla comes from a family of loggers and farmers who instilled in her at a young age the importance of a healthy environment and productive resources. Kayla's love of nature and the outdoors was heightened when she was in the second grade by her all-time favorite teacher. In a lesson about the Amazon, she was fascinated learning about the diversity of plants and animals, extinction, and the destruction of natural landscapes. She recalls learning a lot about the ocean in the fourth grade, which made her young self sure she wanted to be a marine biologist. She realized this dream would never come to fruition when she found out that she suffers from motion sickness while on the water. That left terrestrial wildlife, water, and freshwater aquatic species, and Kayla says "the fish and water won me over." This interest was a perfect fit for her, considering that her father, grandparents, and much of her extended family are avid recreational fishers, and she grew up joining them for long days of steelhead, trout, bass, and crappie fishing. As an adult, Kayla does not have the chance to fish as much as she would like, but she is committed to the importance of clean, cool water for our fish.

After graduating from Ontario High School, Kayla obtained her associate degree from Treasure Valley Community College. She then transferred to Eastern Oregon University (EOU), where she earned her bachelor's degree in biology with a minor in chemistry. She says, "I knew that I wanted to work in a field that would keep me in touch with nature and in which I could feel I am making a positive contribution toward preserving and enhancing our watersheds." During her time at EOU, she got a job with the U.S. Forest Service (USFS) as a stream surveyor during the summer months. Although this job sometimes could be tough because it required several days of backpacking to remote streams covered in downed wood and dense riparian vegetation, Kayla found it to be a terrific opportunity for a young person. She enjoyed being able to explore the Malheur, Umatilla, and Wallowa-Whitman National Forests.

After finishing her degree at EOU, Kayla received a permanent position at the USFS as a Hydrologic Technician. In this job, she was still involved in stream surveying but had the luxury of supervising the survey crew instead of venturing out into hard-to-survey streams. Kayla had done her fair share of time in the field! During her years as a Hydrologic Technician, Kayla also managed multiple watershed-related databases for the Wallowa-Whitman National Forest as well as the water quality monitoring program for the La Grande Ranger District.

When Kayla isn't hard at work in the GRMW office, you may find her, her husband of 10 years, Matthew Orosco, and their three young daughters outside picking morels or huckleberries. The family also loves to travel, play sports, garden, camp, and fish. When Kayla and Matthew are occasionally able to escape together from the busyness of family life, they enjoy running, backpacking, and hunting.

When I asked Kayla why she wanted to work for the GRMW and what she most looks forward to in her new position, she said, "I have had a connection with some of the staff at the GRMW starting many years ago because we all helped out with the free fishing day event that used to be held at Morgan Lake in early June. The GRMW has a reputable mission, and I've always had much respect for it, so coming to work

Continued on page 8, **MEET KAYLA**

Kayla with her husband, Matthew, and their three daughters, Cora, Paige, and Ashlyn (source: Shelley K Photography).

WHAT LIES AHEAD:

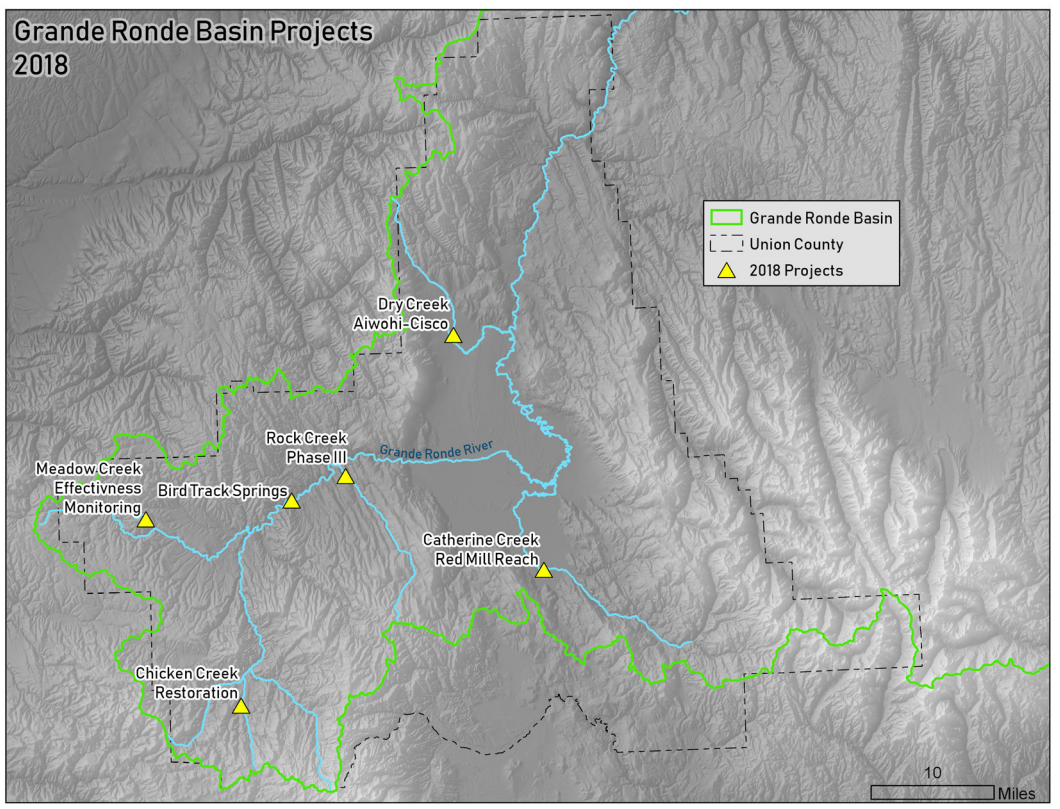
Projects Hitting the Ground in 2018

by Connar Stone, *GRMW Staff*

Below is a list of the Grande Ronde Model Watershed (GRMW) projects that likely will be breaking ground in 2018 (barring any major hiccups in funding come May 22).

Catherine Creek Red Mill Reach Restoration (Pending Funding): This project is the first of a three-stage approach to improving habitat and flow conditions for Endangered Species Act (ESA)-listed aquatic species in Catherine Creek. The first stage will improve instream flow quantity by converting flood irrigation to a high-efficiency pressurized system servicing 65.1 acres of property. Flood irrigation has proven to be an inefficient use of water, resulting in water quality degradation due to sediment- and chemical-laden water returning to the main channel. Natural Resources Conservation Service (NRCS) staff suggest that irrigation upgrades will result in more efficient water distribution and reduce water use by 40 to 60 percent. The landowner has agreed to sign a Cooperative Conservation Agreement that will allow the Union County Soil and Water Conservation District (USWCD) to complete the second and third stages of this floodplain restoration effort.

Sponsored by: USWCD
Partners: GRMW, Oregon Watershed Enhancement Board (OWEB), NRCS
Estimated Construction Start Date: August 2018



Map displaying general location of projects to break ground this summer (source: GRMW).

Bird Track Springs ($3,870,162): The U.S. Forest Service (USFS) portion of the Bird Track Wood Haul and Planting Project will involve the creation, hauling, and staging of trees with rootwads and the purchase of deciduous and coniferous seedlings on USFS lands. Approximately 500 trees greater than 20 inches in Diameter at Breast Height (DBH) will be removed, hauled, and staged for placement within the Grande Ronde River on USFS lands. Approximately 34,000 seedlings will be planted by machine and hand within the project area.

Sponsored by: Confederated Tribes of the Umatilla Indian Reservation (CTUIR)
Partners: Bureau of Reclamation (BOR), USFS, GRMW
Estimated Construction Start Date: June 2018

Meadow Creek Effectiveness Monitoring (Pending Funding): Meadow Creek has recently undergone extensive instream restoration of large wood, and 60,000 shrubs and conifers were recently planted to accelerate riparian recovery. A new grazing system for cattle began in 2017 that is designed to support riparian recovery by directing cattle to spend more time in uplands and less in riparian areas. OWEB funds will be used to help conduct effectiveness monitoring of salmonid habitat and population responses and other resource responses to restoration as well as to evaluate the compatibility of new cattle grazing practices and wild ungulate grazing to support riparian restoration for salmonids.

Sponsored by: USFS Pacific Northwest Research Station
Partners: OWEB, GRMW, Oregon State University, Utah State University, Oregon Department of Fish and Wildlife (ODFW)
Estimated Construction Start Date: Ongoing

Dry Creek Aiwohi-Cisco Stream Restoration (Pending Funding): Dry Creek has been identified as a high-priority stream for restoration and one of the largest steelhead-producing streams in the Grande Ronde River Basin. The stream goes dry through the summer months upstream of the project area. The stream has surface flow during the entire summer in the project area. The bottom mile of Dry Creek provides thermal refugia for steelhead during the summer months. The Aiwohi project will add habitat uplift to four miles of habitat restoration in the Willow Creek Drainage in a continuous block. Previous restoration work on Dry Creek was conducted on 0.58 miles of the stream from the mouth to the Aiwohi property boundary. This project will add 0.21 stream miles to that reach.

Sponsored by: USWCD
Partners: OWEB, GRMW
Estimated Construction Start Date: August 2018

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... *continued from page 6,* **MEET KAYLA**

here was a great opportunity. My position is the monitoring network coordinator for the basin, and I have a long background in monitoring and databases as well as good working relationships with many of the partner organizations established during my previous work. I also am very familiar with northeastern Oregon from work as well as time spent out recreating, so I think all of that has set me up for success in this position. I am excited to gain the feeling that I am making a positive contribution to preserving and enhancing the watersheds within the Grande Ronde River Basin and to foster relationships with all of the partner organizations as well as private landowners. Lastly, being a parent of young children, I better appreciate the importance of education and exposure to the natural world around us for everyone, but primarily for young people. It is easier than many people assume to help instill a lasting impression and respect for nature on them, especially the importance of clean water."

We here at the GRMW are so pleased to have Kayla on our staff, and we are excited to see the work she will complete for the entire Grande Ronde River Basin as our much-needed monitoring network coordinator.■

... *continued from page 7,* **2018 PROJECTS**

Rock Creek Restoration Phase III ($233,515): Originally initiated in 2014, the Rock Creek Project scope of work includes a combination of techniques to address habitat-limiting factors and facilitate processes and functions that support ecological and life history requirements. The project involves new channel construction, reactivation of historic meanders and channel segments, reclamation of channelized reaches into functioning floodplains, road and dike removal to reconnect floodplains, side channel development, large wood additions to enhance pool complexity, and riparian floodplain planting.

Sponsored by: CTUIR
Partners: GRMW, Oregon Department of Forestry, NRCS
Estimated Construction Start Date: July 2018

Chicken Creek Restoration ($368,003): The project will prioritize large woody debris placement to add roughness, increase floodplain interaction and habitat complexity, and promote out-of-channel flooding. It is expected that the project will promote longer periods of hydrologic production, decreased stream temperatures, and increased riparian deciduous vegetation. The project will place wood within two miles of Chicken and West Chicken Creeks, limit access to the stream at one dispersed recreation site, and plant 5,000 deciduous seedlings and 10,000 cuttings.

Sponsored by: USFS
Partners: GRMW
Estimated Construction Start Date: July 2018 ■

Grande Ronde Model Watershed
Upcoming Board Meetings

Tuesday, May 22nd, 2018
5:00 p.m.
Elgin Community Center
260 N 10th St.
Elgin OR 97827

Tuesday, July 24th, 2018
5:00 p.m.
Annual BBQ
Historic Union City Park
Union, OR 97883

The public is welcome to attend.

Meeting dates are subject to change.
Please call (541) 663 - 0570 to confirm.
Thank you!

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