RIPPLES IN THE GRANDE RONDE

SPRING EDITION 2017

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

STATE LAND BOARD RECOGNIZES Grande Ronde Restoration

Two Grande Ronde Basin projects receive DSL Stream Award

by Jessica Humphreys, *GRMW Staff*

Collaboration among state and federal agencies, environmental non-profits and local landowners has earned recognition for two major stream restoration projects in the Grande Ronde basin. On May 9th, 2017 Governor Kate Brown, Secretary of State Dennis Richardson and State Treasurer Tobias Read (The Oregon State Land Board) presented Grande Ronde basin restoration partners with The Department of State Lands Stream Project Awards for restoration actions on Catherine Creek in Union county and the Wallowa River in Wallowa county. Coby Menton, from the Grande Ronde Model Watershed, Jake Kimbro, Armand Minthorn and Kelly George from the Confederated Tribes of the Umatilla Indian Reservation and Wallowa county rancher and landowner Liza Jane McAlister were in Salem to accept the award. It is exceptional to have two projects in the same basin receive an award that is normally reserved for one project in the entire state. Governor Kate Brown thanked the project partners for "promoting responsible, sustainable stewardship of Oregon's natural resources" and "for their extra effort, vision and dedication to Oregon." The two projects, both completed in 2016, illustrate the necessity of collaboration and coordination when it comes to restoring watershed health.

The Catherine Creek Fish Habitat Restoration Project, co-sponsored by

Pictured from left: BPA Deputy Administrator, Dan James, OWEB Deputy Director, Renee Davis, Secretary of State, Dennis Richardson, 6 Ranch owner, Liza Jane McAlister, Oregon Governer, Kate Brown, GRMW Project Coordinator, Coby Menton, State Treasurer, Tobias Read, BPA Oregon Liaison, Crystal Ball.
(Photo: Coby Menton)

Continued on page 2, **DSL Awards**

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the CTUIR and Union Soil and Water Conservation District, was implemented on a piece of property purchased by the CTUIR. Innovative restoration techniques were implemented to connect floodplains, side channels and groundwater creating exceptional habitat and hydrologic benefits. "The Catherine Creek 'Saasaxinma' (Kingfisher) Project is a unique project that addresses habitat- limiting factors using the CTUIR's River Vision as our guide to restoring watershed processes and functions," said Jake Kimbro, wildlife biologist with the CTUIR. "This vision embraces physical and hydrologic relationships, and provides a framework to restore diverse, complex and productive habitat for fish and natural resources." Project partners include the Oregon Department of Fish and Wildlife and U.S. Bureau of Reclamation; and funding from the Bonneville Power Administration, Bureau of Reclamation, Natural Resources Conservation Services, Oregon Watershed Enhancement Board, and Western Rivers Conservancy.

Wallowa River/6 Ranch Restoration Project II used historic conditions to inform restoration goals in a voluntary restoration project on private land in Wallowa county. The goal of the 6 Ranch project was to reconnect the floodplain, restore wetlands and allow for a more sinuous and functional channel. "6 Ranch has often been described as an unconventional ranching operation, though we see our goals as very similar to most ranching operations," said Liza Jane McAlister, 6 Ranch owner. "Our belief is that restoration and ranching must work side by side for long-term success. We hope to set an example of proactive, mutually beneficial relationships that result in improved landscapes in our beautiful region." One of the many unique aspects of this project is the Grazing Management Plan which will utilize short periods of intense grazing in the riparian zone to reduce the presence of invasive Reed Canary grass and promote the presence of more desirable native grasses and shrubs. This example of voluntary engagement in restoration for the mutual benefit of the environment and working lands will inspire and inform restoration projects in the coming years.

Project partners include the Grande Ronde Model Watershed, Oregon Department of Fish and Wildlife, Nez Perce Tribe, and the Natural Resources Conservation Service. Funding was provided by the Bonneville Power Administration, Oregon Watershed Enhancement Board, and U.S. Fish and Wildlife Service.

Restoration in the Grande Ronde Basin is driven by collaboration among agencies, non-profits and private landowners. By establishing a basin wide partnership and using the best available data to prioritize restoration efforts and allocate resources, ambitious and innovative projects are being implemented throughout the basin. With support and funding from Bonneville Power Administration (BPA) and Oregon Watershed Enhancement Board (OWEB), Grande Ronde basin partners plan to continue to monitor impacts of restoration actions and explore innovative and cost effective techniques to accomplish long term restoration goals in the basin.

Pictured from left: OWEB Deputy Director, Renee Davis, CTUIR Fish Biologist, Jake Kimbro, Secretary of State, Dennis Richardson, Oregon Governer, Kate Brown, State Treasurer, Tobias Read (back), BPA Oregon Liaison, Crystal Ball, CTUIR Board of Trustees Member, Armand Minthorn, CTUIR Land Acquisition Coordinator, Kelly George, BPA Deputy Administrator, Dan James.
(Photo: Coby Menton)

Working Towards a Common Cause

Promoting cooperation between neighbors to manage noxious weeds

By: Samantha Bernards, Director *Tri-County CWMA*

Anyone who knows a thing or two about noxious weeds understands that they do not respect property boundaries. Noxious weeds come in all types, from those you find in your backyard to those that only grow in some of the most remote parts of the country. Here in northeastern Oregon, noxious weeds are incredibly troublesome for local communities, and management is both costly and difficult across jurisdictional boundaries. In order to successfully manage noxious weeds, we must first create seamless communication among all affected landowners. Only after everyone is on board can we put our boots on the ground.

Since 1994, we at Tri-County Cooperative Weed Management Area (CWMA) have made it our mission to serve as responsible stewards of the land by protecting our natural resources from the degrading impacts of noxious weeds in Union, Wallowa, and Baker Counties. Tri-County CWMA was formed to manage the noxious weed problem of northeastern Oregon across multi-jurisdictional boundaries. As one of the first CWMAs in Oregon, Tri-County has served as a model for the 27 different CWMAs that now exist in Oregon, which cover nearly 85 percent of the land, according to the Oregon Department of Agriculture. Today, Tri-County CWMA covers more than 5 million acres and works with county weed programs, the Bureau of Land Management (BLM), the U. S. Forest Service (USFS) Umatilla and Wallowa-Whitman National Forests, the Oregon Department of Fish and Wildlife, the Confederated Tribes of the Umatilla Indian Reservation (CTUIR), the Natural Resources Conservation Service, Wallowa Resources, the U. S. Fish and Wildlife Service, and the Oregon Department of Agriculture to manage noxious weeds on a regional scale.

Meadow hawkweed along Lookingglass Creek showing signs of herbicide treatment.
(Photo: Samantha Bernards)

Perhaps one of the most common complaints that we as "weed people" hear is: "I put all of this time and efforts into treating my weeds, and my neighbor does nothing. What a waste!" In 2014, the Oregon Department of Agriculture estimated an annual loss of almost $83.5 million of personal income to the state's economy as a result of the top 25 species of noxious weeds alone. Nearly everyone with whom we talk are concerned about noxious weeds; however, many landowners do not have the financial capabilities to treat them or do not even know where to start. Tri-County CWMA works closely with the local county weed programs and agencies, such as the BLM and USFS, to make sure that any target weeds are treated with the best tools available. Through funding from the Oregon State Weed Board (OSWB), Oregon Watershed Enhancement Board, the Oregon Department of Environmental Quality, and many others, Tri-County CWMA helps private landowners with financial assistance to manage their noxious weeds.

In Union County, Tri-County CWMA has been treating meadow hawkweed since 2007 using funds from OSWB, Wallowa-Whitman National Forest, Umatilla National Forest, Hancock Forest, CTUIR, the Oregon Department of Agriculture, and private landowners in cooperation with Wallowa Resources. Meadow hawkweed is a "B" listed noxious weed in the State of Oregon, meaning that it is regionally abundant but may have limited distribution in some counties. In both Union and Wallowa Counties, meadow hawkweed is a high-priority species because it can rapidly spread in many habitat types. Areas of infestation include all types of landownership: federal, state, tribal, and private. Working closely with these entities, Tri-County CWMA is able to treat large areas of meadow hawkweed across property boundaries, covering

Continued on page 6, **Common Cause**

PALS in Asotin Creek: A Friendly Addition to Impaired Streams

By Reid Camp, *Eco Logical Research, Inc.*

Rivers and streams play an important role in providing fresh water, food, and recreation for humans as well as habitat for fish and wildlife. However, more than one-third of the rivers in the United States are impaired or polluted. Despite recent improvements in land management practices, the legacy effects of land use, such as logging, livestock grazing, and infrastructure development, have contributed to the degraded state of many streams in the United States. As a result, populations of salmon and steelhead throughout the Pacific Northwest have dwindled. Fortunately, stream restoration can lead to improved habitat and water quality that ultimately facilitate species recovery.

Government agencies, non-profit organizations, and private landowners have made a concerted effort over the past several decades to improve freshwater habitat for salmon through stream restoration projects. Traditional stream restoration projects have been based on engineered designs of structures and channel alteration (e.g., log jams, boulder complexes, artificial side channels). While these methods certainly have their place, especially in locations where infrastructure (e.g., houses, roads, and bridges) must be protected, the prohibitive cost of the project design and implementation is difficult to scale up to restore thousands of miles of degraded stream habitat. Therefore, as part of the Asotin Creek Intensively Monitored Watershed project, we have been developing and testing a cost-effective method to improve habitat complexity for steelhead that is easily scaled up to make stream restoration dollars go further.

The basic premise of our cost-effective method is to add large woody debris (i.e., logs and trees with branches still attached) to streams to match historic wood-loading densities. Most of the individual wood pieces form what we call Post Assisted Log Structures (PALS). The goal of PALS is to recreate a more natural, complex ecosystem. In general, the removal of woody debris, straightening of stream channels, and urban encroachment onto floodplains has transformed natural, highly complex ecosystems to static, straight thoroughfares. Woody debris, boulders, riparian vegetation, and other structural elements help make rivers appear wilder and, more importantly, they provide refuge for salmon and other fish species.

We know that woody debris in most streams was historically more prevalent than it is today. Therefore, as riparian areas slowly recover, we can kick-start the benefits of natural woody debris by constructing PALS in high densities. Eventually, trees along stream corridors will grow large enough to fall into the channel naturally, but until then, PALS allow us to mimic the same ecological process using cost-effective methods. Building PALS in high densities decreases the importance of any individual structure; they work in concert with each other to improve continuous sections of stream habitat. Furthermore, when one structure is destroyed during high-flow events, its material often gets collected on a structure downstream.

PALS are built by pounding wooden fence posts into the streambed to hold woody debris in place long enough for high-flow events to induce physical changes to the channel (Figure 1).

Figure 1. A post assisted log structure (PALS) on the South Fork of Asotin Creek immediately after construction. The goal of this structure is to deflect the majority water to one side during high flows, ultimately scouring a pool, creating bars, and providing fast water and predation refuge for steelhead.

We use a hydraulic post pounder to drive the fence posts into the streambed at least two feet deep. We transport the pieces of wood and posts to each structure location by hand. This approach greatly minimizes the impact on riparian areas, an impact that can sometimes be a drawback to traditional engineered restoration methods because they rely on heavy machinery, such as excavators and bulldozers. A single PALS can take between 10 minutes to an hour to build, allowing us to construct as many as 15 PALS in a single day. Typically, we build the structures between 30 and 50 feet apart to enhance as much habitat as possible in each project area.

PALS create beneficial physical changes to the stream channel. During high-flow events when water navigates around the PALS, it scours pools and sorts the streambed substrate, creating diverse habitat favored by juvenile and adult steelhead (Figure 2). PALS also provide resting areas for fish by slowing down fast water. In fast water, fish must constantly swim to maintain their positions, which can be energetically taxing and can inhibit survival and growth. In degraded and straightened streams, there are limited areas for juvenile and adult steelhead to rest or gain protection from high flows during the spring and ice flows during the winter. Likewise, degraded streams often lack areas for juvenile steelhead to hide from predators (e.g., garter snakes, birds, otters, other fish species). Like natural wood pieces, PALS create pools and slow down water so that fish can protect themselves from the elements and predators.

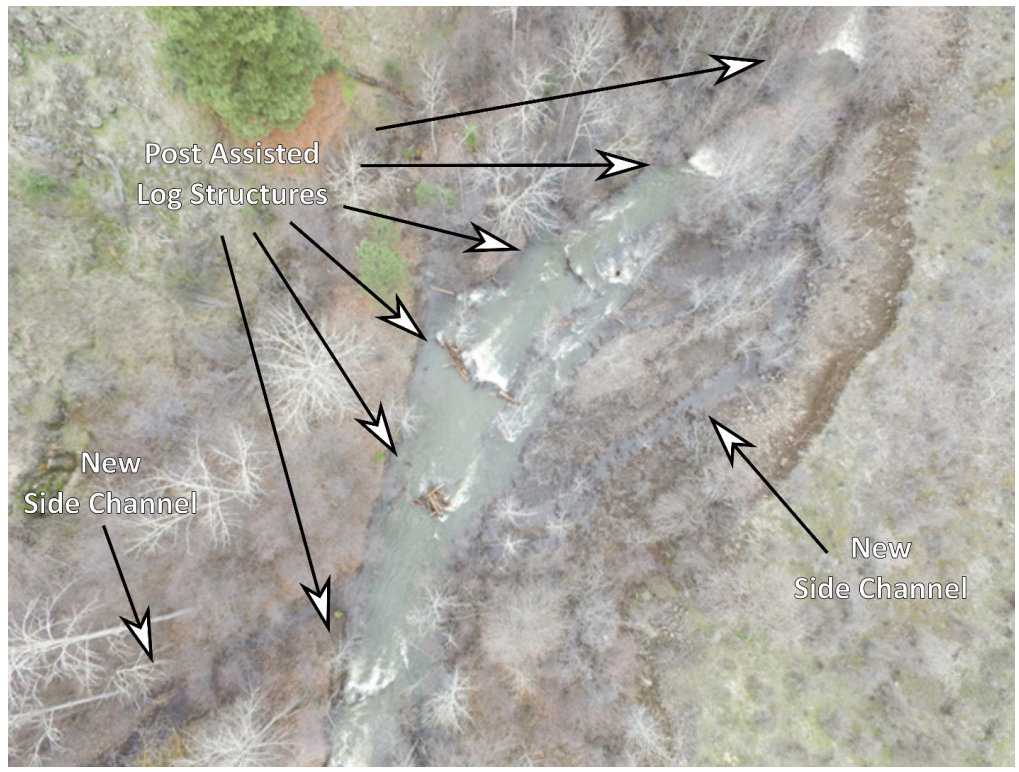


Figure 3. Drone imagery during a high flow event on the South Fork of Asotin Creek in March 2017 showing a series of post assisted log structures (PALS) and their influence on the stream channel.

We have installed 630 PALS consisting of more than 3,000 individual large pieces of wood across nine miles of stream in three of Asotin Creek's main tributaries (Charley Creek, North Fork Asotin Creek, and South Fork Asotin Creek). Since we installed the PALS in 2012, the number of pools has doubled, new side channels have developed, spawning habitat has improved, and the survival and abundance of juvenile steelhead has increased. In March 2017, Asotin Creek experienced a substantial large flow event, giving us an opportunity to see how well the structures withstand floods (Figure 3). Some structures got blown out, but the posts and wood pieces from the failed structures collected on downstream structures and in side channels, creating new, complex wood jams much larger than we could have built by hand. Every year, we conduct effectiveness monitoring to determine exactly how and where the habitat has changed as a result of the PALS.

Since we started building PALS in Asotin Creek, multiple local agencies, working groups, and private landowners have adopted similar approaches.

Continued on page 8, **PALS**

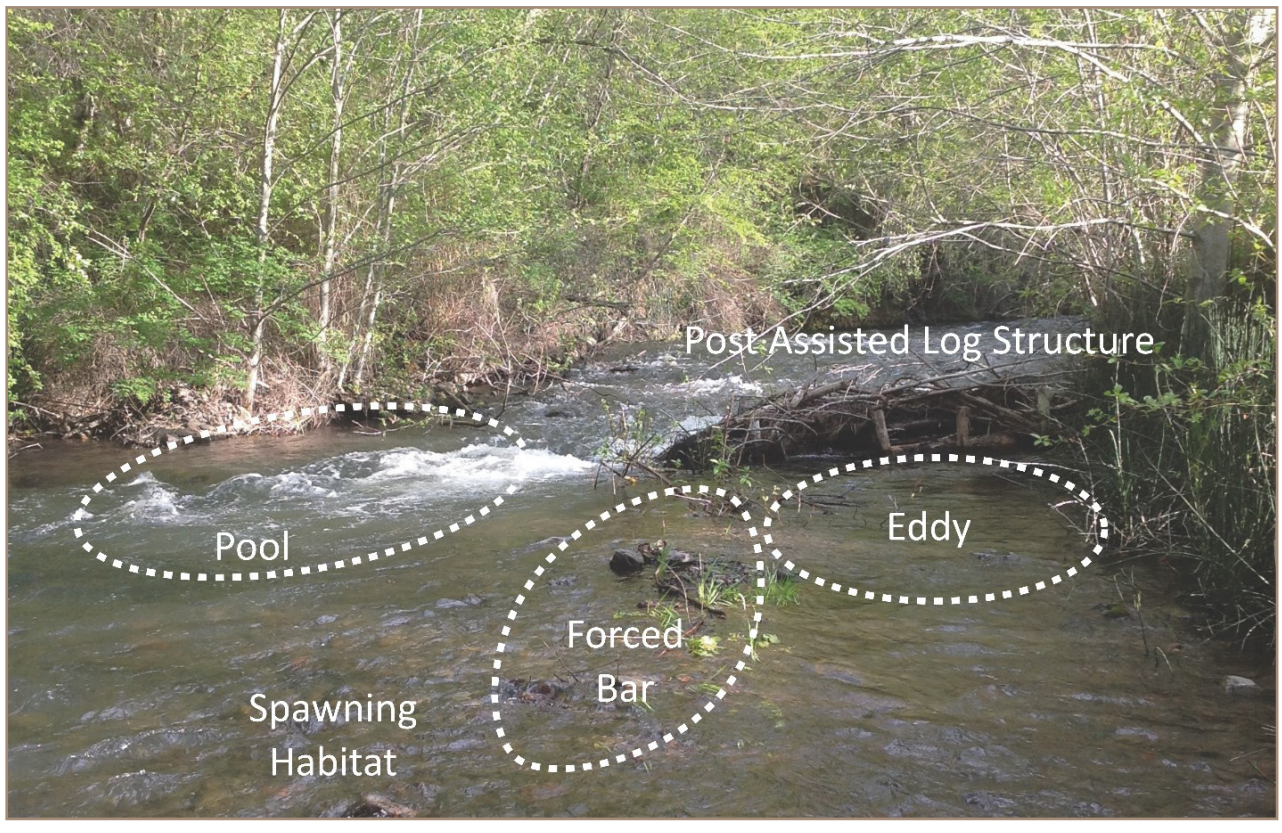


Figure 2. A post assisted log structure (PALS) on the North Fork of Asotin Creek built in 2011. Following a high flow event in 2012, a large pool and bar formed. Juvenile steelhead may use the eddy and fresh gravels around the structure for cover, and adult steelhead may rest in the eddy, and potentially spawn in the new gravel bar.

Ripples in the Grande Ronde is funded by the Bonneville Power Administration and the Oregon Watershed Enhancement

... *continued from page 2,* **Common Cause**

nearly 48,000 acres. In Union County alone, we plan to spend nearly $58,000 "on-the-ground" for meadow hawkweed control. Tri-County CWMA is unique in its ability to pool together funds from nearly a half-dozen sources, not including landowner contributions, to treat meadow hawkweed seamlessly during the narrow summer treatment window.

Over the mountains in Baker County, we are currently working on another similar project focused on rush skeletonweed. First recorded in Baker County in the early 1990s, rush skeletonweed is a "B" listed noxious weed that is known to impact areas ranging from the Snake River to the Keating Valley. Most of the rush skeletonweed in Baker County is limited to the east side; however, each year we find scattered sites near Keating and Huntington. With funds provided by the OSWB, we can provide a 50-50 cost-match with landowners in the Halfway area to assist them with their rush skeletonweed treatment. Scattered throughout private lands are properties owned by the BLM and USFS. Tri-County CWMA works with both federal agencies to manage the fir rush skeletonweed treatments in Baker County and coordinates projects across jurisdictional boundaries. In 2017, we plan to treat rush skeletonweed across nearly 100,000 acres, totaling just under $100,000. During the fall, we hire local contractors who treat rush skeletonweed for several weeks by horse, ATV, and foot, reaching some of the most extreme topographical areas of Baker County.

A hired contractor, Work Horse Inc., treating rush skeletonweed near Halfway in Spring.
(Photo: Samantha Bernards)

Rush skeletonweed near Brownlee Reservoir.
(Photo: Samantha Bernards)

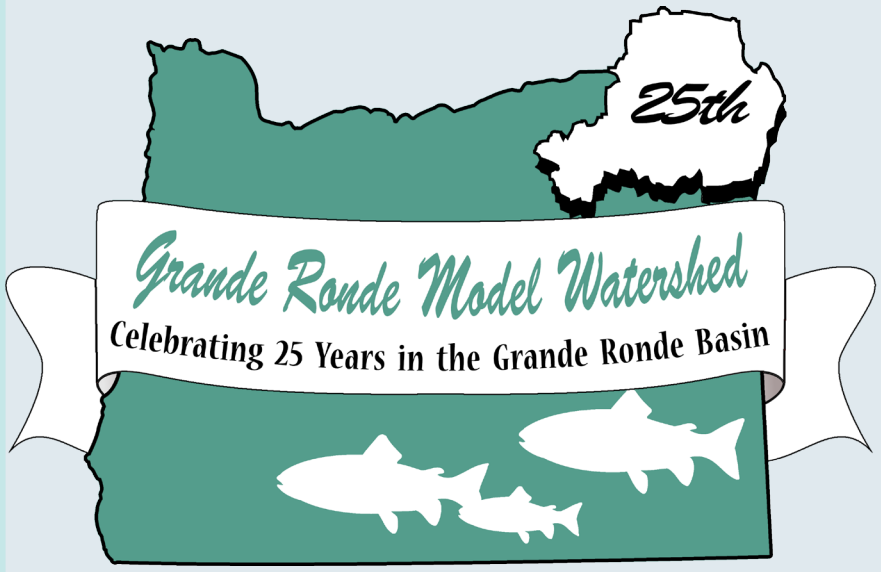
For more than two decades, Tri-County CWMA has built lasting relationships with both government agencies and private landowners. It is these relationships that allow us to work across political boundaries to get work done where it is most needed. Throughout the year, we provide noxious weed booklets to as many people as we can reach because early detection of a species is critical. Tri-County CMWA also helps with local programming, such as outdoor schools, Union County crop tours, county fairs, spray days with local counties, and many other outreach events. Our goal is to assist as many landowners as possible in controlling noxious weeds and reducing the financial burden of managing noxious weeds on local communities in northeastern Oregon.

Tri-County CWMA is located at:

10507 N. McAlister Rd. Rm. 5 in La Grande, Oregon

We are always happy to help anyone who has questions regarding their noxious weeds or needs help with plant identification.

Stop by or give us a call at (541) 624-5353.



by Jeff Oveson, *GRMW Executive Director*

Even though the beginnings of GRMW are recorded in several official documents and at least one case study, the people who were indirectly involved in the early years of GRMW each seem to have a slightly different perspective on the why's and how's, but the one common theme is that County Commissioners, leaders from the Nez Perce Tribe and the Confederated Tribes of the Umatilla Indian Reservation, commodity groups and conservation organizations all agreed that managing local watersheds should be led locally. With the pending Endangered Species Act listing of Spring Chinook salmon, summer steelhead, and Bull Trout on the horizon in the late 1980's, these disparate groups pledged to work together to address the needs and desires of the people and interests they represented, hoping to convince federal officials that local interests were entitled.

With support from Oregon Governor Barbara Roberts, the Northwest Power Planning Council (now called the Northwest Power and Conservation Council) the Counties and the Tribes, not to mention numerous private landowners and conservation groups, the GRMW was formed in April of 1992. Over the years, GRMW has partnered in restoration projects with the Soil and Water Conservation Districts, both Tribes, Oregon Department of Fish and Wildlife, Oregon Department of Forestry, Oregon Department of Transportation, the US Forest Service, Natural Resource Conservation District and Farm Services Agency, various non-profit organizations and weed management organizations, as well as others. We could not have accomplished anything without them.

We have enjoyed consistent financial support from Bonneville Power Administration and the Oregon Watershed Enhancement Board, as well as critical project funding support of the Bureau of Reclamation, Oregon Department of Environmental Quality, US Fish and Wildlife, and a variety of smaller non-profit organizations.

We have cooperated in permitting and consultation with NOAA Fisheries, Army Corps of Engineers, Oregon Department of State Lands, US Fish and Wildlife, and the Oregon State Historic Preservation Office.

GRMW has relied heavily on the people willing to volunteer their time, effort, and leadership. This year, we celebrate our 25th Anniversary, and want to acknowledge all those people who have given so much by serving on the GRMW Board of Directors.

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Montana Pagano
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Continued on page 8, **Anniversary**

... *continued from page 5,* **PALS**

PALS have been built in Alpowa Creek, Pataha Creek, Little Tucannon River, and the Palouse River in Washington State. Projects also are occurring in Oregon, Idaho, Utah, Montana, and Wyoming. As more groups use and adapt this method, we are working with then to refine our methods in order to increase efficiency and effectiveness. Because an explicit expectation of PALS is that some will fail, this method may not be suitable in areas with infrastructure such as houses, roads, and bridges. Likewise, they are not designed to hold up to extreme flood events; rather, they are designed to mimic natural woody debris, which moves dynamically through a stream.

PALS are not the only cost-effective solution to stream restoration, but they allow government dollars to go further than traditional methods. Traditional, engineered wood structures can cost several thousand dollars per structure, whereas PALS cost as little as $100 per structure. PALS are a promising restoration method that allows watershed managers to rehabilitate miles instead of feet. Freshwater habitat has been degraded on a global scale, contributing to the decline of fish populations. Therefore, a cost-effective stream restoration method like PALS that can be implemented across large areas is necessary to return ecosystems to a stable, healthy condition.

... *continued from page 7,* **Anniversary**

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Barbara Walker
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Karyn Wood
Pat Wortman
Jeff Yanke
Jack Yearout
Dave Yost
Jeff Zakel

All current and past board members are welcome to attend our 25th Anniversary meeting and BBQ, August 22nd, 2017. For more information and to RSVP, call GRMW at: 541-663-0570.

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Melissa Cochran
Leigh Collins
Mary Estes
Heather Hall
Bob Horton
Jessica Humphreys
Michelle Johnson
Kristin Knight
Lyle Kuchenbecker
Tom Macy
Coby Menton
Lacey Moore
Cecilia Noyes
Jeff Oveson
Patty Perry
Jesse Steele
Connar Stone

Grande Ronde Model Watershed
Upcoming Board Meetings

Tuesday, June 27th, 2017
5:00 p.m.
Wallowa Community Center
204 E 2nd St.
Wallowa OR 97885

The public is welcome to attend.

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

Grande Ronde Model Watershed

1114 J Avenue | La Grande OR 97850
Ph. 541-663-0570 | Fax 541-962-1585

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