

WATER 4

RETROSPECT & OUTLOOK

Conserving wet meadows and water for: agriculture; wildlife and fisheries habitat; groundwater recharge; and landscape resiliency in ways that matter to people.

FEBRUARY 2020



“Water 4 brings recognition and a common language that speaks to the importance of agriculture in conservation in the West.”

-Pat O'Toole, Wyoming/Colorado Rancher



I N R E V I E W



Photo: Bruce Taylor

Water is a common thread connecting wildlife habitat, agriculture, and people in the Intermountain West. The Intermountain West is mostly publicly owned but the majority of its wetlands occur on private land. These habitats are typically associated with irrigated agriculture and occur on working ranches and farms in landscapes important to wildlife, native fish, and people. In 2019, the Intermountain West Joint Venture (IWJV) launched the Water 4 Initiative to support agricultural producers, water managers, and other partners with conservation in ways that matter to people, including improved forage production, high quality wildlife-associated recreation, enhanced groundwater recharge, and more resilient landscapes.

Water 4 operates across jurisdictional boundaries and differing perspectives to catalyze effective, lasting, and community-based conservation. In its first year, Water 4 focused on the following strategic landscapes, characterized by high value to migratory birds, wetland habitat abundance, partnership synergy, local leadership, and partner investments:

- Bear River Watershed (ID, UT, WY)
- Southern Oregon-Northeastern California (SONEC), including the Klamath Basin
- Rio Grande Corridor (CO, NM)
- Western Montana

Partner engagement and financial support has enabled Water 4 to become an established key operational program of the IWJV. The IWJV will continue to nurture relationships to support capacity, communications, partnership development, and science to inform and grow Water 4.

2019 HIGHLIGHTS

- Built or strengthened field delivery capacity in several landscapes to support community-based conservation.
- Positioned land trusts to deliver conservation easements at an increased pace to achieve land protection and bird habitat conservation.
- Unlocked new funding opportunities and spurred investments by the Natural Resources Conservation Service (NRCS) in wet meadow habitat conservation through agricultural flood-irrigation infrastructure modernization and other practices.
- Brokered emerging partnerships with the fisheries community – including the Western Native Trout Initiative – to align fish habitat and migratory bird habitat conservation, which often involves the same land, same people, and same water.
- Delivered science decision-support tools to support strategic conservation implementation.
- Created opportunities for new collaborations in and across areas of wetland importance through field tours, networking, and information sharing.

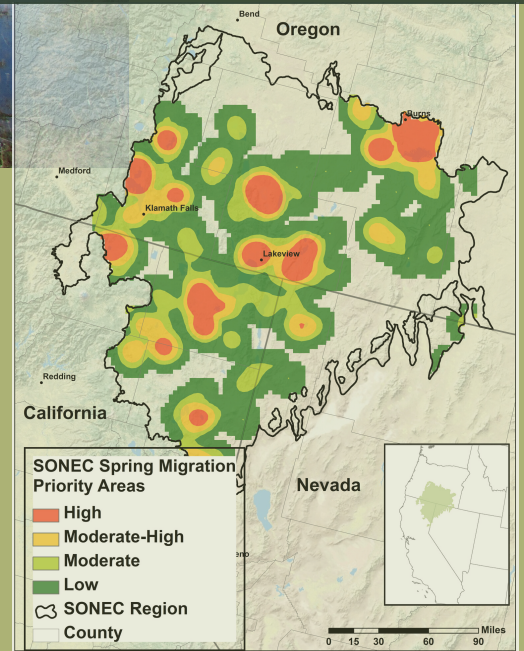
WORKING LANDS

NOTES FROM SOUTHERN OREGON-NORTHEASTERN CALIFORNIA



Photo: Josh Vest

The Southern Oregon-Northeastern California (SONEC) region is one of the most productive spring staging areas for waterfowl in North America. Flood-irrigation for hay and pasture production on large ranches provides important foraging habitat for migratory birds in the Pacific Flyway. Since 2014, the SONEC Working Wet Meadows Initiative (WWMI) has invested in science, field delivery capacity, and communications to help conservation partners and landowners conserve working lands that provide valuable habitat to water birds and other species. The SONEC WWMI was established in collaboration with Oregon NRCS to ensure the long-term availability of 64,700 acres of key wetland habitats on private lands.



The SONEC WWMI team of field delivery conservation staff provides “boots on the ground” support. The team includes a SONEC Conservation Delivery Coordinator and two Conservation and Agriculture Specialists that work and live in local agricultural communities. Collectively, these positions facilitate conservation projects across the region and within local watersheds by working with partners and agricultural producers.

Cutting-edge science helps the Intermountain West Joint Venture (IWJV) and partners develop decision support tools that guide conservation investments to achieve specific habitat conservation objectives. This science is co-produced and incorporated into conservation program delivery.

The SONEC WWMI supports projects to retrofit and modernize flood-irrigation infrastructure, improve water management, and enhance wetlands. In addition, conservation easements are used to protect working agricultural lands and ensure the long term availability of important bird habitats. The IWJV and partners are also assisting land trusts in securing easement funding. These approaches are funded through Farm Bill conservation programs and contributions from partners.

SONEC SUCCESSES (2014-2019)

- Enhanced 17,707 acres for waterfowl habitat through targeted Farm Bill conservation programs.
- Secured \$2.6 million in NRCS Regional Conservation Partnership Program (RCPP) funding.
- Initiated efforts to close the first two conservation easement projects in a new working-lands conservation easement effort.
- Developed a Wetland Dynamics Technical Report and Decision Support Tool to inform and guide wet meadow conservation delivery.
- Built partnerships with 14 non-governmental organizations, land trusts, and state and federal agencies to deliver private lands habitat conservation.
- Co-produced a human dimensions research project to better understand the social, economic, and ecological factors that help or hinder the use of flood irrigation on private lands.
- Spurred the expansion of the IWJV investment in working lands to a regional scale and inspired the Water 4 Initiative.

DIGGING DEEPER INTO FLOOD IRRIGATION

A NEW STUDY EXPLORES THE DIVERSE FACTORS THAT INFLUENCE HOW RANCHERS MANAGE THEIR LAND



Photo: Christi Bode



Photo: USGS



Photo: Ed Contreras

Ranch management decisions can be complicated. It's easy to assume that ranchers are solely concerned with profit, but a recent collaborative study by partners and researchers from Virginia Tech College of Natural Resources and Environment, University of Montana, IWJV, and Partners for Conservation found that ranchers' decisions are complex. These nuances need to be taken into consideration when developing programs and policies to foster private lands conservation, especially on working wetlands.

The study involved two landowner-listening workshops, one in southern Oregon and another in southwestern Wyoming. The workshops encouraged dialogue between the various landowners and conservation professionals who attended. Conversations specifically focused on choices ranchers make about flood irrigation. When water from flood-irrigated fields flows from the ditches, saturates the field, and seeps into the groundwater, it produces forage for cattle to graze on while providing rich habitat for migrating and breeding waterbirds, like ducks and cranes, as well as sage-grouse, an iconic ground-dwelling bird in decline. The results of the study were published in *Rangeland Ecology and Management* in January 2020.

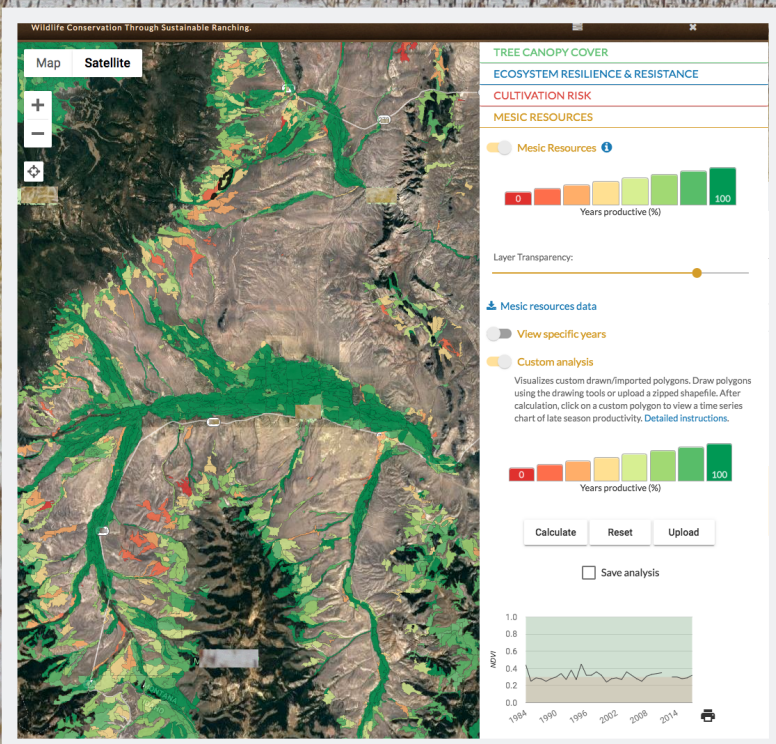
“This research is ground-breaking in that it helps conservation professionals understand the social context of agricultural irrigation decision-making in the West,” said Dave Smith, IWJV. “The findings will enable the conservation community to increasingly support agricultural irrigators in continuing to provide vital habitat for wetland-dependent birds on working lands.”

The authors noted that the IWJV has a long history of working alongside landowners and conservation practitioners and has become trusted in the region. Its connections, experiences, and on-the-ground work proved valuable in executing the research, and are now playing a key role in sharing the study's results and integrating its findings in partnership-driven conservation.

SCIENCE-BASED CONSERVATION

THE RESEARCH BEHIND WATER 4
PROJECTS AND PARTNERSHIPS

Information like this allows partners to focus conservation efforts in areas most likely to be resilient in the face of change.



Despite their relatively small footprint (less than two percent of surface area), wetland, riparian, and mesic habitats, including flood-irrigated hay meadows, are among the most important natural resources in the Intermountain West for both their ecological and socio-economic values. The region has lost half of its functional wetlands over the last century. Sixty one percent of the remaining wetlands are supported through irrigation practices on private lands.

Water 4 is leveraging partner-funded science to prioritize conservation that is maximizing biological benefits for wildlife. Idaho Fish and Game, Colorado Parks and Wildlife, Idaho and Oregon NRCS, Bureau of Land Management, and the U.S. Fish and Wildlife Service have supported wetland research that reshapes strategies to conserve water resources. Tracking long-term drought impacts to wetlands across the West is now possible thanks to the science resulting from these investments. New technology mapping the timing of wetland flooding enables partners to prioritize support for ranchers whose flood irrigation practices best align with the timing of waterbird migration. Likewise, the data can help public land managers with water management planning.

Understanding the social science – interests, perceptions, values, and motivations – of key stakeholders in specific landscapes can serve to ground the IWJV’s biological objectives and drive our partnership conservation efforts. Water 4 seeks to integrate more applied and actionable social science into its work to support the conservation of bird habitat.

WHERE WETLANDS TOGETHER

WATER 4 ACROSS THE INT

Approach:

Water 4 supports partnership-based conservation tailored to the unique opportunities and needs within landscapes, including conservation easements, agricultural flood irrigation infrastructure enhancements, fish habitat and big game habitat partnerships, and water management planning on public lands timed to habitat needs.

Model:

Water 4 addresses bottlenecks and accelerates conservation delivery through:

- Capacity to access funds and implement conservation
- Science to guide strategic conservation investments
- Communications to elevate the message of working wet meadows and cross-boundary and multi-species efforts
- Partnership development to advance sophisticated relationships for synergies in conservation

SONEC/Klamath Basin

Importance: The Southern Oregon-Northeastern California (SONEC) region is a continentally important migration hub that supports up to 70 percent of all wetland birds in the Pacific Flyway. Irrigated pastures and meadows on private working lands, in addition to publicly managed wetland complexes like Klamath Basin and Malheur Lakes National Wildlife Refuges, provide critical spring migration and early breeding habitat.

Outlook: Water 4 is continuing successful working wet meadows conservation from Lassen County (CA) to the Harney Basin (OR) by implementing strategic agricultural irrigation enhancement projects and working lands conservation easements. Water 4 is also emphasizing partner-driven conservation in the Klamath Basin.

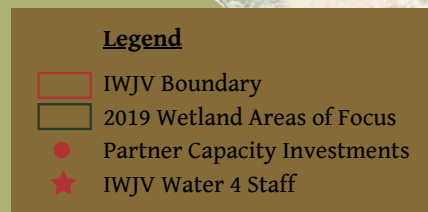
Investments: Oregon NRCS, USFWS Region 8 Partners for Fish & Wildlife Program, Science Applications, and External Affairs, Region 1 Ecological Services and Refuges

Bear River Watershed

Importance: The Bear River Watershed spans three states, multiple jurisdictions, and is the life-blood of the Great Salt Lake ecosystem, supplying over 60 percent of all flowing water to the system. Furthermore, the Bear River Watershed contains some of the highest priority wetland complexes for birds in Idaho, Utah, and Wyoming.

Outlook: Water 4 seeks to develop the capacity to accelerate implementation of working lands conservation easements by garnering funding and support from a variety of nonprofits and state and federal agencies.

Investments: Utah Division of Wildlife Resources, Mule Deer Foundation, USFWS Region 6 Regional Director and Refuges



Landowner interest for conservation and funding currently outpaces capacity to implement projects and places is the most fundamental need

AND PEOPLE COME TOGETHER

INTERMOUNTAIN WEST



Western Montana

Importance: Western Montana is characterized by working landscapes of multi-generational ranches interspersed with public land. These landscapes provide vital habitat for both breeding and migrating waterfowl, as well as other wildlife like mule deer, elk, grizzly bears, bull trout, and Arctic grayling.

Outlook: Water 4 is strengthening migratory bird habitat and sustaining agricultural lands through conservation programs implemented by an array of partners. Water 4 is focused on expanded field delivery capacity, science, and communications in key areas such as the Blackfoot Watershed, Mission Valley, and Southwest Montana.

Investments: Montana NRCS, USFWS Region 6 Regional Director

Farm Bill

The 2018 Agriculture Improvement Act, commonly known as the Farm Bill, is America's largest source of funding for habitat conservation on private lands. It provides financial support to farmers and ranchers for conservation practices that improve water quality and quantity, soil health, and fish and wildlife habitat. The 2018 Farm Bill reauthorized a suite of powerful conservation programs with expanded flexibility. The NRCS plays a pivotal role in Water 4 through implementation of Farm Bill conservation programs.

NAWCA

The North American Wetlands Conservation Act (NAWCA) has become the nation's premier wetlands conservation program over the last 30 years. NAWCA has played a critically important role in the Intermountain West as a catalyst for conservation partnerships that protect, restore, and enhance habitats. NAWCA is an important tool for leveraging non-federal funding and spurring partnerships.

Rio Grande Corridor

Importance: The Rio Grande Corridor is a connecting thread for migratory birds along the vast Central Flyway from the prairies of Canada to the highlands of Mexico. The corridor is particularly important to Greater Sandhill Cranes, Northern Pintails, White-faced Ibis, and many other species.

Outlook: Water 4 is initially focused in the San Luis Valley (CO) and Middle Rio Grande (NM). Water 4 established a cost-shared engineering technician position in the San Luis Valley to help private landowners enhance flood-irrigated wet meadows. Water 4 is also supporting wetlands planning in the SLV and opportunities for agricultural infrastructure enhancements through additional partners. Looking ahead, Water 4 seeks to expand field delivery and partnership capacity in the Middle Rio Grande valley.

Investments: Colorado and New Mexico NRCS, USFWS Region 6 Regional Director

through NRCS and other programs currently
funds. Adding capacity in the right places is
many Water 4 partners.

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**IWJV Water 4 Committee Members*

Water 4 Vision

Water 4 emerged from amazing conservation work currently underway throughout the Intermountain West. To support and expand these efforts, Water 4: builds the field delivery capacity to implement conservation; communicates the stories of success, challenges, and opportunities on a flyway scale; transfers science to partners in ways that can inform conservation investments on the ground; grows funding and catalyzes innovation; and strengthens partnerships. Water 4 implementation is accelerating water and wetlands conservation and developing transferable models across the West.

IWJV Water 4 Coordinator

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