

Wyoming Reclamation and Restoration Center

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The Wyoming Reclamation and Restoration Center (WRRC) provides a focal point at the University of Wyoming bridging the academic needs of the institution to those of the State of Wyoming in studies of distressed lands. The Center is primarily funded externally and with foundation dollars with no direct funding from the University block grant.

The WRRC was originally formed to address the significant gaps in science needed to effectively restore ecological functions of distressed and disturbed lands. Center-affiliated faculty and students have made large contributions to this discipline and take pride by facilitating recovery of Wyoming rangelands but it remains clear that much work remains to be done on how to best reclaim and restore drastically disturbed landscapes whether from human activity or environmental degradation. It is also evident that significant opportunities for restoration-related research should be added to the Center's portfolio, and by refocusing on emerging issues the Center will be well positioned for success in competitive grants and securing foundation funding from regional patrons. Specifically, we aim to broaden the Center to come into alignment with the College and University's emerging research initiatives by highlighting ecological restoration and the assessment, management and restoration of healthy soils and plant communities in Wyoming's managed ecosystems.

In the meantime, vital work through the Institute for Managing Annual Grasses Invading Natural Ecosystems (IMAGINE) housed at the UW Sheridan R&E Center under Dr. Brian Mealor's direction, is being accomplished.

IMAGINE plays a crucial role in coordinating efforts across Wyoming and neighboring states to combat invasive annual grasses. They lead initiatives like NEWIGWG and the Sublette County Cheatgrass Task Force, collaborating extensively in counties such as Lincoln and Laramie, and extending their influence to states like South Dakota, Montana, Colorado, and Oregon. With substantial support from a \$1 million federal grant under the Invasive Annual Grasses Tech Transfer Partnership, IMAGINE spearheads educational networks for western US land managers. Their efforts include an economic impact assessment revealing Wyoming's \$33 million annual production losses from invasive annual grasses, and estimating \$4 million in annual restored grazing capacity through NEWIGWG's Sheridan County program. IMAGINE also cultivates statewide partnerships to advance proactive management strategies, establishing themselves as leaders in invasive species management. From 2022 to 2024, the IMAGINE Monitoring Network interns, comprising undergraduate students from locations like Laramie, Buffalo, Sheridan, and beyond, have collected data at nearly 20,000 locations in Wyoming over three summers. This effort has been pivotal in supporting state initiatives, local partnerships, and advancing ongoing research. IMAGINE's current research initiatives encompass diverse aspects of invasive annual grass management and ecological impact assessment in Wyoming. Projects include assessing mule deer habitat post-control using GPS collars in Sheridan County, developing 'Smart' Data Systems to optimize plant management, evaluating grazing strategies post-treatment, enhancing seeding practices with Indaziflam, operating the Invasive Annual Grass Treatment Monitoring Network, and conducting pilot studies on economic impacts and native plant selection for restoration projects. These efforts aim to refine management approaches and enhance ecological understanding on a broad scale.

Discussion is ongoing about the direction of the Center, but with vital work being accomplished in surface level restoration, we will continue to fund these projects through completion and with the hire of the joint SER/CALSNR position reevaluate the scope of projects in which the Center is engaged.