

resources

The following resources for land managers are available online or by calling the agencies and organizations listed. Listing these resources does not imply Conservancy endorsement of any agency, business, non-profit organization, or management practice.

The BMP Challenge. American Farmland Trust website providing Best Management Practices (BMP) information on how to reduce fertilizer usage to reduce costs and limit contamination of local watersheds in the Midwest. Internet: www.farmland.org/resources/bmpchallenge/default.asp. Mailing address: American Farmland Trust, Agricultural Conservation Innovation Center, Brian Brandt, Director of Risk Management, 50 West Broad Street, Suite 3250, Columbus, OH 43215. Phone: (614) 221-8610.

Buffer Strips: Common Sense Conservation. Natural Resources Conservation Service website. Describes "conservation strips," including riparian buffers, filter strips, grassed waterways, shallow water areas for wildlife, and field borders that filter runoff and reduce or prevent agricultural fertilizers from entering aquatic/riparian habitats. Internet address: www.nrcs.usda.gov/FEATURE/buffers/.

Eutrophication. Definition from U.S. Geological Survey website. Describes the eutrophication process and provides links to other sites that present information about the impacts of excess nutrients on aquatic systems. Internet address: <http://toxics.usgs.gov/definitions/eutrophication.html>.

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Eutrophication. Definition from Wikipedia, a free online encyclopedia. This website provides a detailed explanation of the eutrophication process caused by excess phosphorous, nitrogen, and other chemicals that runoff or leach into aquatic systems. Internet address: <http://en.wikipedia.org/wiki/Eutrophication>

Evans, R., J.W. Gilliam, and J.P. Lilly. 1996. Wetlands and water quality. Published by the North Carolina Cooperative Extension Service. Publication Number: AG 473-7. This paper is a good general reference describing riparian wetland function and affects of agricultural chemicals and sedimentation on aquatic/riparian systems. Internet address: www.bae.ncsu.edu/programs/extension/evans/ag473-7.html.

Soil Testing Laboratory. Affiliated with the University of Wyoming Cooperative Extension Service, the Soil Testing Laboratory makes fertility recommendations for agricultural producers and homeowners based on analytical data produced in the laboratory. Internet address: http://ces.uwyo.edu/Soil_Main.asp. Mailing address: Department of Renewable Resources, Dept 3354, 1000 E. University Ave., Laramie, WY 82071. Phone: (307) 766-2135.

Testing Methods for Phosphorus and Organic Matter: Soil Biologic Methods. Natural Resources Conservation Service website. Provides information and links about soil testing, non-point nutrient pollution caused by agricultural activities, and soil sampling. Internet address: <http://soils.usda.gov/technical/methods/>.



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land stewardship news

wyoming



Wind River. © Joe Kiescher

An ongoing commitment to Wyoming's lands, waters and wildlife

The mission of The Nature Conservancy is to preserve the plants, animals and natural communities that represent the diversity of life on Earth by protecting the lands and waters they need to survive.

Dear Wyoming Land Stewards:

As I've traveled throughout our beautiful state, I've developed an appreciation for signs. Not the gaudy, flood-lit billboards that line our interstate highways. I'm talking about the well-placed, sometimes weather-worn signs that help lost backroad travelers find their way to that secret fishing hole, camp site, or hiking trail where memories are made.

Wyoming is a huge state with a cobweb of roads that can be daunting to navigate even with the best of maps. What a relief to spy that small, wooden sign that tells you the town of "Riverside" is only 15 miles ahead as you turn onto the highway after a backwoods jaunt on a sparsely marked two-track.

Other signs that draw my attention while traveling include those that express the cultural values of Wyoming's landowners. These signs reflect the state's rich ranching tradition, agriculture, and other ties to the land.

Many people in this state value their relationships to the land. Some members of our society feel so strongly about the land that they have placed conservation easements on their property to ensure the woods, streams, and meadows they love will be there for future generations. The Nature Conservancy in Wyoming now has signs available for those landowners

who wish to publicly acknowledge their dedication to conservation (see photo). If you own land with a conservation easement and would like to place one of these signs on your property, please contact me at our Lander office.

Those of us working for the Conservancy deeply appreciate the personal commitment made by our easement donors. We think you deserve a little recognition for your efforts.

Yours in Conservation,

Randy Craft, *Land Conservation Specialist*
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P.S. Please contact me if you would prefer to receive this newsletter via email.



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Web: nature.org/wyoming



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Tony Malmberg rides the range on Twin Creek Ranch. © Edward Orth

stewardship issues

Conservation Easement Donor Tony Malmberg Talks About His Unique Approach to Land Management



Tony and Andrea Malmberg.
© Twin Creek Ranch

Tony and Andrea Malmberg donated a conservation easement to The Nature Conservancy in 2005. The easement limits development and protects their Twin Creek Ranch from subdivision, a threat facing many ranches in the West. The Malmbergs practice “Holistic Resource

Management,” a land management approach that Malmberg says improves land health and profitability.

TNC: Is Holistic Resource Management (HRM) for everyone?

It would be for anyone who wants to improve their decision-making process. The HRM framework is designed to help us make decisions that are more sustainable socially, economically and ecologically.

TNC: What are the changes you see on your land from using an HRM approach?

One of the most obvious things on our place is how much the riparian areas have improved. It has taken time and understanding to accomplish our goal—we want biodiversity on riparian areas, including beavers and a good water table. Our grazing plan is geared around factors that give an edge toward willow populations so beavers have food—then they take care of the rest. Most of our riparian areas have completely recovered. Our water table is at the flood plain so anytime we have a flood event the additional water goes out onto the flood plain rather than cutting the creek banks.

We’ve also increased ground cover on our upland ranges. The water cycle begins where the rain drop hits the earth, so

we want to do everything we can to get that rain drop into the soil mantle. The way to do that is to encourage more litter and dense plant cover so you have more permeability and absorption. This way, water gets into spring systems instead of running overland.

We’ve also had a tremendous increase in plant diversity—on all of northeast-facing slopes we have serviceberry coming in. You probably won’t see that anywhere else. We also have bluebunch wheatgrass and Indian ricegrass, where we had very little before. We have more basin wildrye, too. All of this is the result of timing and increased complexity. We also have more migratory songbirds; populations have increased by more than 70%.

TNC: How can landowners benefit from HRM on their lands?

We increased our stocking rate (the number of animal days on the land) by 85% when we started practicing Holistic Management. We’ve increased our yield through the worst drought in history because of longer recovery periods...this came from HRM. We run more cattle and have more functioning ecosystem processes. We also have more water.

TNC: What do you think the future holds for the practice of HRM?

It’s really growing across the international scene. Our community, for instance, is international. We have friends in England, Germany, Australia, South Africa, Zimbabwe,

Argentina, Brazil, Mexico... People from around the world have a common language and way of looking at the land. Though challenging, you can get the same results no matter where you are. As Allan Savory says about HRM, “It’s simple, it’s not easy.”

TNC: How is your HRM plan impacted by a conservation easement?

It isn’t at all—the only impact it had was giving us peace of mind knowing that the ranch wouldn’t be cut up and sustainability will continue on this landscape for future generations—300, 500 years from now this land will be intact and there may be a family living here running a functional ranch operation.

“The water cycle begins where the rain drop hits the earth.”

Additional nutrients—when introduced into streams—promote algae growth and cause oxygen depletion, which is detrimental to fish, invertebrates, and other life in the aquatic food web.

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wyoming

conservation easement questions

DO CONSERVATION EASEMENTS ALLOW THE USE OF FERTILIZERS?

Conservation easements often allow the use of fertilizers in the minimum amounts necessary on existing cultivated fields. Many of the Conservancy’s easements have cultivated fields, primarily in hay production. Ranchers need the flexibility to fertilize these fields to maximize crop production and provide winter feed for their livestock. But most of these fields lie on flood plains adjacent to creeks and riparian habitat that represent important “conservation values” easements seek to conserve.

Eutrophication

Research and experience show that fertilizers can have a negative impact on creeks and riparian areas by causing “eutrophication,” a process where streams, rivers, lakes, and other water bodies receive excess nutrients that cause aggressive plant growth. Algal blooms can choke out fisheries and other aquatic life. Water runoff from cultivated fields is often laden with the nitrogen-based fertilizers and phosphorus needed for crop growth. These additional nutrients—when introduced into streams—promote algae growth and cause oxygen depletion, which is detrimental to fish, invertebrates, and other life in the aquatic food web. Fertilizers leaching into water tables can contaminate potable water supplies. Sediments are also found in runoff.

Leaving 25’-50’ “conservation buffers” between agricultural field edges and riparian habitat greatly reduces the amount of nutrients and sediments that enter streams. To learn about cost-share funds available for these practices, visit the NRCS website at www.nrcs.usda.gov/FEATURE/buffers.

Soil Testing

Agricultural producers can take steps to reduce negative fertilizer impacts on natural communities. One important practice that can reduce fertilizer use and save money is to



Hay fields on The Nature Conservancy’s Winchester Ranch. © Pam Dewell/TNC

test the soil for nitrogen, phosphorous, and potassium content. Many farmers in Midwestern states test their crop field soils for phosphorous and nitrogen content prior to applying fertilizers. Based on test results, they then apply only the minimum amount of fertilizer necessary for crop uptake and growth. A soil testing program can reduce the amount of fertilizer used on crop fields, reduce production costs, and reduce the negative impacts excess fertilizers can have on sensitive aquatic systems. For more information on soil tests in Wyoming visit the University of Wyoming Soil Testing Laboratory website at http://ces.uwyo.edu/Soil_Main.asp.

Fertilizer Use On Easement Lands

Conservation easements held by the Conservancy usually allow fertilizers, provided they are used “in the amounts and frequency of application consistent with labeled instructions and in compliance with local, state, and federal regulations so long as their use is consistent with the Conservation Values of the Property.” But language varies among easements, so it is best to review your easement if you have questions about fertilizer use.