

PRICELESS RESOURCES

A Strategic Framework for Wetland and Riparian Area Conservation and Restoration in Montana 2013–2017



State of Montana
Steve Bullock, Governor

Montana Department
of Environmental Quality
Tracy Stone-Manning, Director

Montana Wetland Council
Lynda Saul, Chair

OFFICE OF THE GOVERNOR
STATE OF MONTANA

STEVE BULLOCK
GOVERNOR



JOHN WALSH
LT. GOVERNOR

May 2013

Fellow Montanans:

We all love to see the joy in young faces at the wonder of catching their first fish or discovering a hidden frog lurking in a shallow pond. Clean water, natural areas and abundant wildlife make Montana an incredible place to raise a family and enjoy the outdoors.

Clean water is also a very necessary part of our economy. Most of us know that wetlands and riparian areas provide clean water and critical habitat for the abundant fish and wildlife we enjoy; many people, however, are surprised to learn that these natural areas serve other important functions. For instance, they act as nature's sponges, soaking up high spring flows and snowmelt, and filtering out pollution that would otherwise reach our rivers and drinking water. By holding water on the land longer, these areas slow runoff, minimize erosion, reduce flood levels and recharge groundwater supplies.

Unfortunately, since the late 1800s, our state has lost more than one-third of its original wetlands to fill or draining. Countless miles of rivers and their streamside areas have been straightened, modified and deforested. If left unchecked, continued wetland and riparian loss will result in ecological and economic ramifications. On behalf of the citizens of Montana, we have a responsibility to protect and restore these natural assets to help ensure a clean and healthful environment for future generations.

The Montana Wetland Council, with input from more than 300 Montanans, has developed this statewide plan titled "Priceless Resources: A Strategic Framework for Wetland and Riparian Area Conservation and Restoration 2013 – 2107." It presents a focused approach to protecting and caring for our state's wonderful wetland resources. The result is a blueprint that builds upon the accomplishments of private landowners, conservation organizations, local, state, tribal and federal agencies, and others committed to protecting and restoring Montana's natural areas.

Major strategic directions of the 2013–2017 state plan include restoration, protection and management; mapping, monitoring and assessment; using land use planning and policy tools; focusing on vulnerable and impacted wetlands; and providing public communications and education.

As people who love all the opportunities afforded by Montana's great outdoors, we appreciate the private landowners who have completed voluntarily restoration and practice good stewardship on their lands. That these areas also provide clean water, reduce flood risk, and filter polluted runoff are services we should all value and preserve. This work will take concerted effort by all of us; we encourage you to join us in supporting this collaborative Strategic Framework to conserve, protect and restore Montana's wetlands, riparian areas and watersheds for now and for future generations.

Sincerely,

Handwritten signature of Steve Bullock in blue ink.

STEVE BULLOCK
Governor

Handwritten signature of Tracy Stone-Manning in blue ink.

TRACY STONE-MANNING
Director, Department of Environmental Quality

Handwritten signature of Jeff Hagener in blue ink.

JEFF HGENER
Director, Department of Fish, Wildlife & Parks

Handwritten signature of John Tubbs in blue ink.

JOHN TUBBS
Director, Department of Natural Resources and Conservation



Beavers, nature's dam builders, create wetlands that help hold water longer on the landscape which provides habitat for other wildlife and critical water storage in the arid west.

Photo: Tammy Crone

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Cover photos: Wetlands and riparian areas are a green oasis in an arid landscape providing water quality, water quantity, habitat, and flood control benefits.

Photo credits: John Lambing. Insets left to right: Steve Carpenedo, Catherine Wightman, Karissa Ramstead, and U.S. Fish and Wildlife Service.



Acknowledgements

Montana's wetlands and riparian areas are priceless resources that add immense value to those of us fortunate to live, work, and play in this beautiful and diverse state. These resources are critical for the water quality, water quantity, habitat, and flood reduction functions they provide to society.

I am indebted to the many Montanans in local, state, tribal, and federal governments and in the non-profit and private sectors working to advance wetland and riparian protection, restoration, and management. I am also indebted to the many landowners who have accepted the responsibility to steward their private land and aquatic resources well. I am particularly grateful to the many Montana Wetland Council participants (see Appendix A) who donated countless hours and critical thinking to assess accomplishments from the 2008–2012 Strategic Framework and help develop and refine this updated STRATEGIC FRAMEWORK FOR WETLAND AND RIPARIAN AREA CONSERVATION AND RESTORATION 2013–2017.

I also greatly value and appreciate the involvement and input from more than 300 Montanans who participated in this planning process, resulting in these updated strategic directions that are unique to Montana's strengths and address our challenges.

Finally, I am deeply appreciative of Region 8 of the U.S. Environmental Protection Agency for their longstanding grant support for the continued development of a strong comprehensive wetland program in Montana.

Sincerely,



Lynda A. Saul
DEQ Wetland Program Coordinator
Montana Wetland Council Chair

Public and private wetland stewards are recognized every other year by the Montana Wetland Council in an award ceremony at the State Capitol. The Gordon Cattle Company family accepts the 2011 Wetland Stewardship Award for their Blaine County wetlands pictured here.

Photos: Ashley Stevick and Rick Northrup



Priceless Resources

A Strategic Framework for Wetland and Riparian Area Conservation and Restoration in Montana 2013–2017



Bird watching is the number one, fastest growing outdoor recreational pursuit in the United States. Yellow-headed blackbird.
Photo: Eugene Beckes

Executive Summary

Montana’s overarching wetland goal is: **No overall net loss of the state’s remaining wetland resource base (as of 1989) and an overall increase in the quality and quantity of wetlands in Montana.** The Montana Wetland Council also supports a riparian goal: **Maintain, protect, and restore the ecological integrity of riparian areas.** The Montana Department of Environmental Quality (DEQ) provides state leadership to protect wetlands and riparian areas for their water quality, water quantity, habitat, and flood control benefits. DEQ has chosen a collaborative approach involving the Montana Wetland Council (MWC), to develop and help implement the state’s wetland and riparian plan. In 2007, the Montana Wetland Council created a five-year strategic framework to prioritize and direct collective efforts on wetland and riparian area conservation and restoration in pursuit of its goal, *PRICELESS RESOURCES: A STRATEGIC FRAMEWORK FOR WETLAND AND RIPARIAN AREA CONSERVATION AND RESTORATION IN MONTANA 2008–2012*. This five-year update reports on the accomplishments of the 2008–2012 Strategic Framework and updates the strategic directions for 2013–2017.

The Montana Wetland Council is an active network of diverse interests who work cooperatively to conserve and restore Montana’s wetland and riparian ecosystems. This updated strategic framework identifies the work priorities that the Council can best take leadership on and encourage Council participants to implement. Implementation relies heavily upon Council participants working through coordinated projects, grant funding, and in collaborative working groups. As a network, the Council helps participating organizations



and individuals build relationships, gain knowledge from each others' work, and ensures that the "right people" get timely and useful information to make sound decisions and take informed actions on shared issues. Participants include federal and state agencies, tribal governments, local governments, non-profit organizations, and the private sector. As currently structured, the Wetland Council has no authority to take action, develop policy, or speak on behalf of its participants. Those activities are the role of individual Council participants based on their unique organizational mission, authority, or statutory requirements.

Future Vision

The Montana Wetland Council sees a future where:



Lady's tresses

- Montanans value wetlands and riparian areas and understand that these areas provide important landscape ecosystem functions, including water purification, groundwater recharge, habitat for diverse plants and animals, and flood risk reduction.
- The general public and decision-makers are engaged in wetland/riparian conservation, management, and restoration because everyone understands that human health relies on the condition of our natural environment, and we all play a part in this.
- Policies and protection mechanisms back up this cultural view, with effective tools that minimize additional destruction and degradation.
- An active, committed, and effective Montana wetland community's efforts have contributed to maintaining and restoring wetlands and riparian areas.
- The Montana Wetland Council is a vibrant and engaged network that collaborates with others to develop workable resource protection solutions to difficult issues facing Montanans.

Five-Year Strategic Directions and Outcomes

The following seven strategic directions highlight where the Montana Wetland Council will focus leadership, energy, activity, and resources over the next five years in order to achieve its vision for the future. The Ideal Outcomes articulate what the Council hopes to accomplish as the end result of its efforts.



Strategic Direction #1: Restoration, Protection, and Management

The Montana Wetland Council (MWC) will support and participate in on-the-ground projects and practices that foster wetland and riparian restoration, protection, and management and net gain of wetlands.

Ideal Outcome: Montana’s land and resource managers have ample human and financial resources to cooperatively restore, conserve, protect, and increase its wetlands, riparian areas, streams, and associated uplands.

Strategic Direction #2: Mapping

The Montana Wetland Council will support the completion, maintenance, and dissemination of statewide digital wetland and riparian mapping information, and provide training and support for public and private land managers, watershed groups, and governmental entities to use this mapping information in planning, protection, and restoration decision-making.

Ideal Outcome: Maps are used as critical tools in land-use planning, land-use and watershed management, environmental permitting, restoration, and protection. Decision-makers, resource managers, and the public have up-to-date, digital, statewide wetland and riparian maps of Montana.

Strategic Direction #3: Monitoring and Assessment

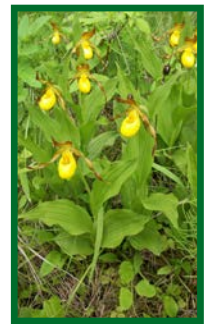
The Montana Wetland Council will continue to encourage collection, integration, and use of monitoring and assessment data to inform local planning, protection, restoration, and landscape-level decision-making.

Ideal Outcome: Decision-makers, resource managers, and the public will rely on field-based monitoring information that accurately assesses the stressors and physical, chemical, and biological condition of wetland and riparian resources to ensure sound science-based management, conservation priorities, planning decisions, and restoration efforts.

Strategic Direction #4: Planning and Policy

The Montana Wetland Council will assist local, state, tribal, and federal governments with planning, program implementation, and management information, resources, and tools needed to protect wetland and riparian areas for their water quality, water quantity, habitat, and flood control benefits.

Ideal Outcome: Local, state, tribal, and federal governments are knowledgeable, well equipped, and supported to conserve and protect wetland and riparian resources, functions, and values as they plan, develop, and implement programs and policies.



Lady's slipper

More than 2,500 plant species have been identified in Montana and more than half of these are found in the state's wetlands and riparian areas. Photos: Montana Natural Heritage Program



Strategic Direction #5: Vulnerable and Impacted Wetlands

The Montana Wetland Council will contribute to the understanding and knowledge regarding the effects of energy development, climate change, limited water resources, and invasive aquatic species on Montana’s wetlands and riparian resources, and promote approaches to minimize harmful effects.

Ideal Outcome: Threats that affect wetland and riparian resources, such as energy development, climate change, and other land-use changes, are understood. The broader scope of Montana’s water resources, including vulnerable wetlands and other aquatic resources, are conserved and protected across all of Montana.

Strategic Direction #6: Public Communications and Education

The Montana Wetland Council will foster the public’s awareness and understanding of the valuable ecologic, economic, and public safety functions that wetlands and riparian areas perform, and encourage and support effective public and private protective actions.

Ideal Outcome: Montanans of all ages understand the value and function of wetlands and riparian areas and the importance they provide to Montana’s water supply, clean water quality, wildlife habitat, and flood control. Montanans have access to information and education that enables them to act effectively to protect, conserve, and restore these ecosystems.

Strategic Direction #7: Montana Wetland Council Development

The Montana Wetland Council will continue to build and strengthen its communication, leadership, networking, and funding mechanisms to ensure its vitality, effectiveness, and longevity.

Ideal Outcome: The Montana Wetland Council is an effective, action-oriented network of 1,000 agencies, organizations, and individuals concerned about and working for the protection, conservation, and restoration of Montana’s wetland and riparian resources. MWC provides focus, leadership, technical information, and an action-oriented coordinated approach to accomplish this work.



Interns and staff from The Nature Conservancy’s LEAF program (Leaders in Environmental Action for the Future) monitor Hellroaring Creek in the Centennial Valley, training the next generation of water stewards.

Photo: Bebe Crouse/The Nature Conservancy





I. History and Context

National

In 1989, President George H. W. Bush established a goal of “no net loss of wetlands,” adapted from the National Wetlands Policy Forum recommendations. “No net loss” is based on quantity, as measured in acres, and quality, as measured by health. In 2004, President George W. Bush expanded that policy to include a national goal of wetland net gain.

Prior, in 1977, Executive Order 11988 on floodplain management was enacted and requires each federal agency to take action to reduce the risk of flood loss; to minimize the impact of floods to human safety, health, and welfare; and to restore and preserve the natural and beneficial values served by floodplains. Floodplains are vital components of riparian areas.

Despite laws and policies enacted to protect them, wetlands and riparian areas across the nation continue to be drained, filled, and degraded. In an undisturbed condition, these areas protect and improve drinking water quality; maintain and restore the water quality of lakes, rivers, and streams; filter polluted runoff from our water supply; absorb floodwaters; recharge groundwater; provide fish and wildlife habitat; and offer natural areas for recreation.

Wetlands such as these at Ninepipes National Wildlife Refuge provide priceless scenery, essential to Montana’s tourist economy.
Photo: John Lambing



Montana

Montana's overarching wetland goal is: No overall net loss of the state's remaining wetland resource base (as of 1989) and an overall increase in the quality and quantity of wetlands in Montana. The Montana Wetland Council also supports a goal: maintain, protect, and restore the ecological integrity of riparian areas. Sadly, Montana has lost about one-third of its original wetland base since EuroAmerican settlement, mainly as a result of draining and filling. In addition, countless wetland acres have been lost due to diminished quality, inappropriate land use, and other impacts. Development degrades riparian areas, the margins along streams, rivers, and wetlands. The Army Corps of Engineers estimates that 80 percent of all Clean Water Act permit applications in Montana involve riparian areas. Wetlands and riparian areas now comprise less than five percent of Montana's land base.

In this document, Montana presents its strategic five-year plan to prioritize and direct collective efforts on wetland and riparian area conservation, restoration, and management. The Montana Department of Environmental Quality (DEQ) has chosen a collaborative approach involving the Montana Wetland Council, to develop and help implement the state wetland plan and further our wetland and riparian goals. In the Montana context, collaboration is the most effective approach.

Competitive funding from U.S. Environmental Protection Agency (EPA) grants support the development of Montana's wetland program. EPA developed a Core Elements Framework in 2009 as a resource for states and tribes in building their wetland programs and identified four core elements critical to effective, comprehensive wetland programs: voluntary restoration and protection, monitoring and assessment, regulation, and water quality standards. In addition, EPA considers outreach and education and a watershed approach to be inherent components of all water resource programs. PRICELESS RESOURCES: A STRATEGIC FRAMEWORK FOR WETLAND AND RIPARIAN AREA CONSERVATION AND RESTORATION IN MONTANA 2013–2017 addresses the Montana Wetland Council's priorities from EPA's Core Elements Framework.

Montana Wetland Council

The Montana Wetland Council (MWC) was formed in 1994 following a "Wetland Summit" that brought together a broad cross-section of Montanans. The Montana Wetland Council is a vital and necessary player in assisting DEQ to meet its mission to implement the state's wetland program. As a result of Council capacity building and a strategic planning outreach process, the MWC has grown into an extensive networking forum (with a listserv of about 900) that promotes cooperative wetland conservation and restoration in Montana.

The DEQ Wetland Program Coordinator provides consistent leadership and staff support to the MWC, and acts as a point person for wetland issues across the state. DEQ administers EPA Wetland Program Development Grants that implement the priorities in this Strategic Framework.



II. 2013–2017 Five-Year Plan

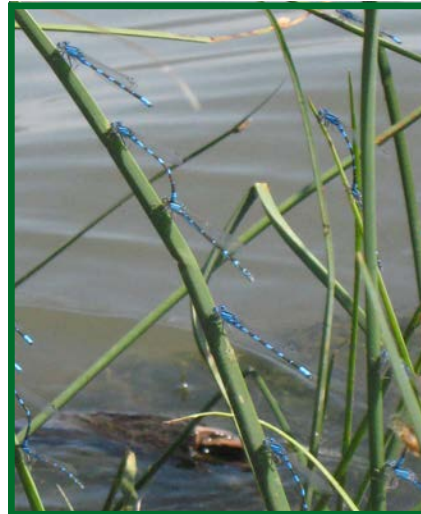
Background

The Montana Wetland Council developed the state's first wetland conservation strategy in 1997. In 2007, the State Wetland Program Coordinator recommended evaluating the progress and challenges since the 1997 Montana Conservation Strategy, and moving the Council from an informational and educational forum to a more action-oriented network. To do that, MWC embarked on strategic planning to focus and guide future efforts. The resulting five-year strategic plan was published as *PRICELESS RESOURCES: A STRATEGIC FRAMEWORK FOR WETLAND AND RIPARIAN AREA CONSERVATION AND RESTORATION IN MONTANA 2008–2012*. It identified the work priorities that the Council could best take leadership on. Implementation relied heavily upon Council participants working through coordinated projects, grant funding, and in working groups. Accomplishments from 2008–2012 are tracked and highlighted in Section VI of this 2013–2017 update. In addition to assessing five-year accomplishments, the Montana Wetland Council embarked on an update of the strategic directions. The outcome of that collective work is presented here.

State Strategy and Department of Environmental Quality's Role

The Montana Department of Environmental Quality (DEQ) is the lead state agency responsible for developing an effective, comprehensive wetland program for Montana, as well as developing the capacity of state and local governments to protect wetland resources. The DEQ Wetland Program provides state leadership to conserve wetlands for their water quality, water quantity, habitat, and flood control benefits. This Strategic Framework documents the Montana Wetland Council's priorities and is consistent with state goals and EPA's Core Element Framework.

The DEQ uses grant funding and other resources to accomplish Montana Wetland Program goals. The DEQ has chosen a cooperative network model of partnering to accomplish far more than any single individual or program could alone. Montana Wetland Council participants recognize that in the complex social and legal environment of natural resource protection and management, a network fosters discussion to better evaluate resource protection challenges from diverse perspectives, and find common solutions. Montana's model has tremendous strengths and challenges, and requires a flexible, opportunistic approach to wetland conservation and restoration.



Damselflies, such as these boreal bluets, are important indicators of water quality and the health of ponds, lakes, and streams. Their favorite prey are flies and mosquitoes. Photo: Steve Carpenedo/DEQ Wetland Program



III. Montana Wetland Council

Mission

The Montana Wetland Council is an active network of diverse interests who work cooperatively to conserve and restore Montana's wetland and riparian ecosystems.

Core Beliefs

Core beliefs provide the foundation for the Montana Wetland Council's mission, vision, and its five-year strategic plan:



- Wetlands and riparian areas are essential to maintain water quantity and clean water quality in Montana.
- Sound science must be the basis for wetland and riparian management, conservation, restoration, policy decisions, and public education.
- The state of Montana has a responsibility to safeguard its wetlands and riparian ecosystems.
- Healthy wetland and riparian communities sustain healthy human communities.
- Montana's current landowners, land managers, and the public are the stewards of wetland, riparian, and water resources for future generations.
- An informed and engaged public is essential to wetland and riparian protection and conservation.
- Open, informed communication and cooperation among all interested parties are essential ingredients for sound management of wetland and riparian ecosystems.

Structure and Role

American avocets prefer shallow wetlands with broad expanses of mud flats for feeding, resting, and nesting.

Photo: Eugene Beckes

The Montana Wetland Council welcomes participation by all entities with an interest in wetland and riparian protection, restoration, management, regulation, education, science, or other aspects of wetland resources. MWC meets three times a year, and administers the biennial Wetland Stewardship Awards ceremony to recognize outstanding wetland/riparian stewardship in Montana.

As a network, the Council helps participating organizations and individuals build relationships, gain knowledge of each others' work, and ensures that the "right people" get timely and useful information to make sound decisions and take informed action on shared issues. Participants include federal and state agencies, tribal governments, local governments, non-profit organizations, and the private sector.

Within the current structure of this Strategic Framework, the Wetland Council has no authority to take action, develop policy, or speak on behalf of participants. Those activities are the role of individual Council participants based on their unique organizational mission, authority, or statutory requirements.





Montana youth get their feet wet with hands-on science at the annual Water Summit.
Photo: Montana Watercourse

IV. Vision for the Future

The Montana Wetland Council's vision for the future sees Montana as a place where wetlands and riparian areas are restored to healthy, fully functioning ecosystems that have long-term protection. Our measures of success are a net gain of wetlands by both acreage and function, and riparian areas that are protected and restored to natural functions and processes.

We, the Montana Wetland Council, see a future where:

- Montanans value both wetlands and riparian areas and understand that these areas provide landscape ecosystem functions, including habitat for diverse plants and animals, water purification, flood control, and groundwater recharge.
- The general public and decision-makers are engaged in wetland/riparian conservation, management, and restoration because everyone understands that human health relies on the condition of our natural environment, and we all play a part in this.
- Policies and protection mechanisms back up this cultural view, with effective tools that minimize additional destruction and degradation.
- An active, committed, and effective Montana wetland community's efforts have contributed to maintaining and restoring wetlands and riparian areas.
- The Montana Wetland Council is a vibrant and engaged network that collaborates with others to develop workable resource protection solutions to difficult issues facing Montanans.





Cow moose. Photo: Tom Hinz

V. Five-Year Strategic Directions

Overview

The Montana Wetland Council is committed to participatory planning, and relies on participation from a broad spectrum of wetland and riparian players involved in the process (see Appendix A). The Council engaged a diverse set of wetland and riparian leaders via numerous channels, including 2008–2012 Strategic Framework Assessment conference calls involving 32 individuals, responses from more than 300 e-mail surveys, a day-long Wetland Council meeting involving about 40 participants, in-person meetings with key individuals, organizations, and agencies, and written review and comments from more than 30 leaders in wetland/riparian science and management. Our goal was to learn from our past accomplishments and challenges about the opportunities and needs for wetland and riparian conservation restoration, and management in Montana, and determine how the MWC could best contribute to this important work over the next five years.

As a result of the strategic planning outreach, 900 individuals now participate on the Council’s listserv, representing the following categories: consultants, federal agencies, local government, state agencies, tribes, university, and other. “Other” is the largest and most diverse category (170 individuals) that includes agriculture and irrigation interests, builders, biology-based and environment-based conservation groups, land trusts, mining and other industries, real estate development, recreation/sportsmen, water/wetland education organizations, and wood products. “Local government” is the other extensive category (160 individuals). It includes conservation district representatives, county commissioners, floodplain administrators, mayors, mosquito control districts, land-use planners, water quality protection districts, and others.



Focused Action

This document defines the Montana Wetland Council’s focus for the next five years. The Strategic Planning team worked hard to limit the scope to areas where the MWC could be most effective and take leadership. In order to realize our ambitious aims, MWC’s participants must actively implement the actions outlined in this Strategic Framework.

The following seven strategic directions highlight where the Montana Wetland Council will focus leadership, energy, activity, and resources over the next five years in order to achieve our vision for the future.



The life cycle of many mammals, reptiles, and birds, including moose (facing page) and this mallard, rely on a variety of healthy aquatic and upland habitats throughout the year.

Photo: Eugene Beckes



Mallard eggs in nest.
Photo: John Lambing



Strategic Direction #1: Restoration, Protection, and Management

The Montana Wetland Council (MWC) will support and participate in on-the-ground projects and practices that foster wetland and riparian restoration, protection, and management and net gain of wetlands.

Restoration, protection, and management most directly address Montana's overarching goals, which includes an overall increase in the quality and quantity of wetlands in Montana (referred to as "net gain"). The Council also supports the goal to maintain, protect, and restore the ecological integrity of riparian areas. Wetland and riparian areas occupy about 5 percent of Montana's land surface and provide water quality, water quantity, habitat, and flood control benefits to all Montanans. These aquatic resources provide essential habitat for more than 50 percent of the species identified as the greatest conservation need in the State Wildlife Action Plan (draft 2013) and are also critical for keeping common species common.

In 2000, the Montana Wetland Council was instrumental in creating the Montana Wetlands Legacy Partnership to meet the Council's 1997 conservation strategy priority to encourage voluntary conservation and restoration on private and public lands. From 2000 to 2013, the Legacy Partnership was housed and staffed by Montana Fish, Wildlife and Parks (FWP) and grew to involve more than 50 organizations and agencies to address Montana's wetland and riparian goals. Through incentive-based technical and financial assistance, extensive coordination and partnerships, Legacy Partners have restored and protected thousands of acres of wetlands, riparian areas, and associated uplands. At this time, FWP recommends that the Wetland Council or another entity take on the leadership role of the Legacy Partnership. The Montana Wetlands Council will seek additional funding and governmental support for wetland and riparian restoration, protection, and best management practices to meet the national and state goal of increased quantity and quality of wetlands.

Ideal Outcome: Montana's land and resource managers have ample human and financial resources to cooperatively restore, conserve, protect, and increase its wetlands, riparian areas, streams, and associated uplands.

To achieve this outcome, Montana Wetland Council participants will:

Objective 1A: Identify options to provide the services of the Montana Wetlands Legacy Partnership. Support and encourage the work of the Montana Wetlands Legacy partners, including government agencies, conservation organizations, land trusts, individual landowners, and others engaged in voluntary wetland and riparian restoration and conservation projects on public and private lands.

Objective 1B: Work cooperatively with agencies that manage public lands, resources, and infrastructure under their authority. For example, integrate wetland, riparian, and floodplain protection and conservation practices in hazard mitigation projects.



Objective 1C: Coordinate with wildlife-oriented agencies and conservation organizations to incorporate wetland and riparian ecological considerations into restoration, protection, and management decisions. Examples include Montana’s Crucial Area Planning System supported by the Western Governors’ Association, Montana’s State Wildlife Action Plan, Montana’s three Joint Ventures, Montana Audubon’s designated Important Bird Areas, federal Landscape Conservation Cooperatives, coordinated initiative and landscape efforts of state and local land trusts, and other landscape-scale prioritization and coordination efforts.

Objective 1D: Research, collect, and promote low-impact, passive restoration design techniques and land management practices that promote healthy wetlands and riparian areas. Partner with non-governmental organizations and public agencies to encourage public and private landowners to employ these best management approaches. Examples include fencing, beaver reintroduction and management, subdivision swales and retention ponds, thinning forest encroachment, and grazing management systems.

Objective 1E: In areas where warmer and drier climate might be anticipated and where agriculture, industry, or development might increase competition for water, and other similar water shortage situations, recognize the need to actively manage existing wetlands and support management, restoration, enhancement, and creation.

Objective 1F: Expand the pilot project that integrated wetland restoration considerations into DEQ’s larger watershed-level restoration planning processes as a way of doing business. Partner with the DEQ Watershed Protection Section, Montana Watershed Coordination Council, state and federal agencies (such as USFS Watershed Condition Framework), and watershed groups in this effort.

Objective 1G: Complete a statewide Restorable Aquatics Database to guide restoration and protection of wetland, riparian areas, and aquatic sites throughout the state to inform the public and resource professionals regarding varying levels of restoration priority in order to protect the quality of Montana’s environments.

Objective 1H: Identify and, where needed, develop and promote a reliable web-based source for Best Management Practices for agriculture, development, forestry, and other activities that can potentially affect Montana’s wetland and riparian resources.

Objective 1I: Develop a dedicated wetland, riparian, and stream restoration funding source and program for Montana that can be used to match federal and other funding sources to protect, restore, manage, and monitor ecological integrity to Montana’s aquatic resources. Examples to emulate include recently created funding sources in other western states such as Great Outdoors Colorado, Wyoming Wildlife and Natural Resource Trust, and the North Dakota Natural Resources Trust.



Wetland and riparian mapping in combination with other overlays can help prioritize areas that need protection. This example depicts Flathead River oxbow bends and sloughs. Images: Recreated from Susannah Casey/American Bird Conservancy



Strategic Direction #2: Mapping

The Montana Wetland Council will support the completion, maintenance, and dissemination of statewide digital wetland and riparian mapping information, and provide training and support for public and private land managers, watershed groups, and governmental entities to use this mapping information in planning, protection, and restoration decision-making.

The last five years have been tremendously successful in advancing digital mapping for wetland and riparian areas in Montana. Prior to 2007, 43 percent of Montana had digital wetland mapping created from 1980s-era aerial imagery. Since 2007, one-third of these areas with historical mapping now also have digital wetland and riparian mapping created from 2005 or later aerial imagery. An additional 34 percent of the state that lacked digital mapping now has wetland and riparian mapping created from recent aerial imagery. An additional 23 percent of the state is funded for mapping over the next five years, resulting in coverage of 71 percent of Montana with 2005 or later digital wetland and riparian mapping.

Wetland and riparian mapping is one of 14 Montana Spatial Data Infrastructure Framework Layers, which are the official state sources of data for their respective topics and have priority above other sources. Typically, five to eight photo-interpreters at the MTNHP Wetland and Riparian Mapping Center develop this data layer according to Federal Geographic Data Committee standards. To date, 14 funding partners have recognized the value of a statewide data layer and have contributed financially to help make the statewide digital mapping goal a reality. While completing, updating, and maintaining the data layer is a critical project, the focus must also shift from generating information to disseminating it to end users in ways that are easy to use and include documentation and data limitations.



Ideal Outcome: Maps are used as critical tools in land-use planning, land-use and watershed management, environmental permitting, restoration, and protection. Decision-makers, resource managers, and the public have up-to-date, digital, statewide wetland and riparian maps of Montana.

To achieve this outcome, Montana Wetland Council participants will:

Objective 2A: Seek funding to complete the remaining 30 percent of Montana that lacks up-to-date digital wetland and riparian maps.

Objective 2B: Develop a method for maintaining and updating the wetland and riparian areas data layer as one of the 14 official framework layers in the state's Montana Spatial Data Infrastructure. Continue to refine the data layer by including value-added information, such as landscape position, landform, water flow path, and waterbody type (LLWW descriptors), additional ground truthing, photo points, wetland assessment, and other data.

Objective 2C: Leverage the wetland and riparian mapping information with floodplain mapping projects. Partner with DNRC to assist National Floodplain Insurance Program communities and other local governments with wetland mapping and local programs to reduce flood risk by protecting natural wetlands and increase Community Rating System points.

Objective 2D: Develop training and outreach programs for using wetland, riparian, and floodplain maps and value-added information targeted to specific audiences, including federal, tribal, state, and local government agencies; consultants and other private sector users; and nonprofit and community organizations. Examples of the types of map uses to target include: land-use planning, land-use and watershed management, environmental permitting, restoration, management, and protection. Explore the approach used in CAPS to link maps and information with best management practices.

Objective 2E: Coordinate and centralize in the GIS Data List wetland and riparian mapping information, DNRC's State Floodplain Mapping Repository, and other river hazard mapping information, such as channel migration, ice jams, and flood inundation studies for Montana's rivers, streams, and aquatic resources.

Objective 2F: Focus mapping and information updates on areas undergoing rapid land-use changes, such as energy development, urbanization, and exurban development.



Montana Natural Heritage Program staff and others conduct wetland ecological integrity assessments, an important part of assessing wetland health.
Photo: Montana Natural Heritage Program



Strategic Direction #3: Monitoring and Assessment

The Montana Wetland Council will continue to encourage collection, integration, and use of monitoring and assessment data to inform local planning, protection, restoration, and landscape-level decision-making.

Montana has collected a wealth of wetland and riparian information over the last two decades. The Montana Riparian Association and the University of Montana worked collaboratively to develop the document “Classification and Management of Montana’s Riparian and Wetland Sites.” Since then, much more detailed wetland assessment and monitoring in Montana has been accomplished. For example, the BLM has assessed more than 11,000 acres of wetlands and more than 5,000 miles of riparian resources. The MTNHP has created a statewide reference network of herbaceous wetlands, and conducted hundreds of assessments to collect information on the ambient condition of wetlands across the state.

State agencies also contribute to wetland assessment and monitoring information for Montana. For example, Montana FWP collects data on wetland condition to assess the success of its Migratory Bird Stamp habitat program. The MDT continues statewide monitoring of its compensatory mitigation projects. Despite these efforts, no clearly integrated or single assessment and monitoring approach exists across these organizations. Additionally, the data collected from these efforts are often not readily accessible to wetland resource practitioners.

As a result, little of this information is used to make a collective impact to advance wetland planning, restoration, or decision-making. In addition, our ability to track no net loss and net gain remains elusive. Although there is still work to do to apply this information to on-the-ground results, Montana has succeeded in developing multiple tools to assess wetland condition and function, including MTNHP’s Montana Ecological Integrity Assessment protocol and MDT’s Montana Wetland Assessment Method.



Ideal Outcome: Decision-makers, resource managers, and the public will rely on field-based monitoring information that accurately assesses the stressors and physical, chemical, and biological condition of wetland and riparian resources to ensure sound science-based management, conservation priorities, planning decisions, and restoration efforts.

To achieve this outcome, Montana Wetland Council participants will:

Objective 3A: Work with the Montana Watershed Coordination Council Water Monitoring Work Group to expand its focus to include wetland and riparian monitoring and assessment. This expansion in scope will help inform wetland and riparian resource management, planning decisions, and restoration efforts, including systematic, consistent, and repeatable data collection and analysis protocols, and use of existing data (for example: MTNHP wetland assessments, BLM watershed assessments, and USFS Pacfish/Infish Biological Opinion). Develop or refine an implementation strategy and schedule, an information clearinghouse, and a data distribution plan.

Objective 3B: Encourage the Montana Natural Heritage Program to: (1) continue to develop a comprehensive statewide reference network of wetland/riparian sites that reflects all resource types in all eco-regions with the full range of condition from unimpaired to degraded for use in identifying and monitoring restoration goals, (2) incorporate assessment data from other organizations (such as USFS Research Natural Areas, Botanical Special Areas, and other protected areas) along with the collection of new assessment data, (3) determine common denominators for what constitutes a reference site, and (4) promote and disseminate the reference network to restoration providers as a target for restoration performance measures.

Objective 3C: Develop a reporting protocol for wetland/riparian monitoring and assessment data for Montana's Biannual Water Quality Integrated Report, and include information in 2014 and 2016 reports.

Objective 3D: Employ monitoring and assessment tools and methodology to evaluate the long-term success and ecological effectiveness of restoration, management, and compensatory mitigation in Montana. Encourage public agencies to collect data to monitor water levels, vegetation, and wildlife and human use of wetlands. Use this information to report on and improve the ecological effectiveness of aquatic restoration, management, and compensatory mitigation.

Objective 3E: Build on the USFWS status and trends and the EPA national wetland condition assessment reports, and other organizations' methods of reporting, and implement a statistically sound approach to track losses and gains of wetland resources in terms of both quantity and quality in Montana. Use this information to report on Montana's goals.



One of the most serious ecosystem threats facing Montana today is the development occurring along our waterways that fragments or reduces the functions of riparian areas. Imagine the effect streamside development would have on this landscape.

Photo: Steve Carpenedo/DEQ Wetland Program



Strategic Direction #4: Planning and Policy

The Montana Wetland Council will assist local, state, tribal, and federal governments with planning, program implementation, and growth management information, resources, and tools needed to protect wetland and riparian areas for their water quality, water quantity, habitat, and flood control benefits.

Wetland and riparian area protection, restoration, and management is increasingly complex on all fronts: legal, social, ecological, political, and economic. In addition, management and protection of these resources is challenging because the majority of Montana's wetlands and riparian areas are on private lands. Proposed policy, guidance, rules, court decisions, and programs affecting wetland and riparian resources are continuously revised, and new efforts emerge at the federal, tribal, state, and local levels. The range of potential actions on wetland and riparian areas is broad, including such diverse policy issues as Farm Bill legislation, Clean Water Act reform, the Army Corps of Engineers mitigation program, the National Flood Insurance Program, land-use development projects, conservation easement policy, land acquisition policy, water rights regulations, energy development policy, and many other issues.

MWC has a responsibility to track and assess scientific information, management recommendations, and policy analysis on national, tribal, state, and local actions that could affect wetland and riparian protection, restoration, and management, and seek solutions to these challenges by informing Council participants and decision-makers. For example, the causes and consequences of native prairie and grassland conversion to cropland in Montana are well understood and documented. Between 2008 and 2012, about 40,000 acres of native Montana prairie was plowed for the first time and converted to row crops. Many of these converted acres include wetland basins that are completely lost or severely degraded due to impacts, resulting in direct and indirect wetland losses. This information can be used to develop recommendations for government programs and landowner practices.



Ideal Outcome: Local, state, tribal, and federal governments are knowledgeable, well equipped, and supported to conserve and protect wetland and riparian resources, functions, and values as they plan, develop, and implement programs and policies.

To achieve this outcome, Montana Wetland Council participants will:

Local Government

Objective 4A: Research, compile, and distribute information that supports wetland and riparian protection in local growth policies, pre-disaster mitigation plans, subdivision review and regulations, floodplain regulations, stormwater management, design standards, future land-use maps, and other documents and local approaches to help guide land-use planning. For example, promote the recommendations for riparian and wetland protection in the Fish and Wildlife Recommendations for Subdivision and Development in Montana (April 2012) adopted by FWP (Section II. A. Water Bodies, and Appendix C-6.)

Objective 4B: Support the efforts of local government agencies and local groups to incorporate wetlands and riparian areas into their watershed restoration planning to help address identified water quality and quantity impairments.

Objective 4C: Coordinate with MWCC to develop, refine, and employ training programs such as NEMO (nonpoint education for municipal officials) to help train land-use decision-makers who address the relationship between land use and natural resource protection, with a focus on water resources.

Objective 4D: Identify and develop financial support for science-based river hazard mapping that includes identification of floodplains, channel migration, flood inundation, and ice jams. Advocate for incorporation of river hazard information in: (1) local land-use planning, (2) Conservation District 310 permit reviews, (3) wetland and floodplain restoration for distributive flood storage, and (4) other local decision-making.



Fens recharge groundwater. If climate change results in more frequent and severe droughts, then protecting and restoring wetlands that hold and slowly release water to aquifers and downstream users will be increasingly important.
Photo: Steve Carpenedo/DEQ Wetland Program



State Government

Objective 4E: Encourage Montana’s governor to reinstate the Governor’s Task Force for Riparian Protection as a coordinating entity for state agencies (such as DEQ, DNRC, FWP, MDT, Dept. of Agriculture, Commerce/Community Technical Assistance Program, and Military Affairs/State Hazard Mitigation Program) to collaborate and streamline the many programs and policies affecting streamside corridors. Encourage participation from local government associations such as the Montana Association of Conservation Districts and the Montana Association of Counties.

Objective 4F: Participate in the 2015 Montana Water Supply Initiative (State Water Plan) representing conservation, particularly environmental flow and water-dependent habitat needs, with the purpose of providing advice, recommendations, and evaluation of strategies, studies, and proposed actions for water resources from a wetland and riparian conservation and restoration perspective.

Objective 4G: Identify and incorporate wetland and riparian protection and restoration components into the Montana Nonpoint Source Water Management Plan to protect and restore water quality impacted by nonpoint sources of pollution and other pollutants.

Objective 4H: Participate in the Montana Silver Jackets program to help foster flood-resilient Montana communities and protect floodplain functions. Advocate for recommendations from Montana’s 2011 report *Floodplain Management Assessment: Strengthening Policies and Programs that Reduce Flood Risk and Protect Floodplains* that address wetland and riparian restoration and protection. For example, partner with DNRC to assist floodplain management plans for National Flood Insurance Program and Community Rating System communities, stressing the importance of maintaining healthy wetlands and riparian areas for flood storage and lowering flood risk.

Objective 4I: Participate in State Wildlife Plan updates and implementation to focus protection and restoration on wetlands and riparian areas that provide high-quality wildlife habitat. Participate in the State Comprehensive Outdoor Recreation planning process to include natural aquatic resource protection as a priority.

*Federal protection for some isolated wetlands has diminished in recent years, making land-owner management and conservation that much more important, as seen here on this private ranch west of Dupuyer.
Photo: John Lambing*





Government has a responsibility to protect and restore wetlands and watersheds to help ensure a clean and healthful environment for future generations.
Photo: John Lambing

Tribal Government

Objective 4J: Partner with MWCC to conduct a series of listening sessions with tribal planning and environmental staff regarding their aquatic resource concerns and what they need in order to address those concerns, including helping to develop technical assistance programs (i.e. monitoring and assessment and wetland/riparian plant identification).

Objective 4K: Support tribal government efforts to protect, restore, or manage ecologically and/or culturally significant wetlands, riparian areas, or aquatic dependent species. Tribal governments may require support and assistance with these efforts on reservation lands, as well as within their ancestral territories.

Federal Government

Objective 4L: Notify MWC participants of opportunities to collaborate, review, and comment on wetland and riparian components of federal agency (USFS, BLM, USFWS, USBR, and NPS) land management planning and resource operation initiatives.

Objective 4M: Support wetland and native grassland programs and provisions in Farm Bill policy that avoid and minimize wetland impacts and grassland conversion. Help reinvigorate the NRCS State Technical Committee Wetland and Wildlife Subcommittee as an avenue to comment on and provide wetland and riparian recommendations on agriculture-related policies and practices to promote wetland and riparian restoration, protection, and health.



Excess sediment can impact wetlands and riparian areas, reducing water quality and fish and wildlife habitat.

Photo: Eugene Beckes



Strategic Direction #5: Vulnerable and Impacted Wetlands

The Montana Wetland Council will contribute to the understanding and knowledge regarding the effects of energy development, climate change, limited water resources, and invasive aquatic species on Montana’s wetlands and riparian resources, and promote approaches to minimize harmful effects.

Montanans value wetlands and riparian areas, for the direct benefits they provide for wildlife habitat, flood storage, erosion reduction, groundwater recharge, and filtering anthropogenic-caused excess sediment, nutrients, and other pollutants from our water supply, yet the state has no specific wetland or riparian protection statute. Federal protection has diminished dramatically in recent years, leaving some of these aquatic resources vulnerable to impacts and outright destruction. This plan will focus on ecological vulnerability and impacts.

Rapid and historic energy development in Montana calls for science-based information to determine potential impacts and mitigation measures. Climate change may pose a long-term threat to prairie pothole wetlands and other wetland types in Montana. Water resources—both adequate water availability and healthy water quality—are crucial ingredients for ecologically functioning wetlands and riparian areas. Yet, in many places our water supply is over-appropriated or subject to increasing variability. Non-point source pollution, including hydrologic modification, traditional pollutants, and pollutants of emerging concern are affecting aquatic health. Aquatic invasive species harm our biological, agricultural, and recreational resources.

Science-based information is needed to identify approaches to protect Montana’s vulnerable wetlands and riparian areas from the effects of a changing climate, changing land use, and invasive species. The MWC is uniquely positioned to engage its diverse participants in developing Montana solutions to protect the broader scope of the state’s vulnerable and impacted aquatic resources.



Ideal Outcome: Threats that affect wetland and riparian resources, such as energy development, climate change, and other land-use changes, are understood. The broader scope of Montana’s water resources, including vulnerable wetlands and other aquatic resources, are conserved and protected across all of Montana.

To achieve this outcome, Montana Wetland Council participants will:

Prioritize

Objective 5A: Collaborate with natural resource professionals to identify threatened wetlands that provide high-priority wildlife habitat or are high quality and highly functioning. Use new and existing resources such as Crucial Area Planning System, thunderstorm maps, conservation organizations priority areas, and other resources, to identify and guide protection, management, and restoration priorities. Identify and take advantage of opportunities to integrate these preferences and needs across different land management responsibilities and ownerships.

Energy Development

Objective 5B: Organize and support a team of experts to identify and prioritize scientific needs, data collection, risk analysis, technical studies, and GIS resources to effectively determine the direct, indirect, and cumulative impacts of energy development on wetland and riparian resources. Identify best management practices and develop a plan of action to disseminate this critical information to both public and private stakeholders and decision-makers. Implement data collection and technical studies as quickly as practicable such that current and relevant data can benefit wetlands and riparian areas affected by current and pending energy development projects in Montana.

Climate Change

Objective 5C: Compile and synthesize existing science-based information on the anticipated effects of climate change on Montana’s wetlands and riparian resources. Publish and disseminate this information widely.

Objective 5D: Identify practical options for minimizing the adverse impacts of climate change on Montana’s wetland and riparian ecosystems, including, but not limited to, the reduction of current anthropogenic stresses, best management strategies to preserve wetland hydrology and floodplain functions, and mitigation and policy options. Publish and disseminate this work widely.



Water Quantity and Quality

Objective 5E: Research the ecological limits of hydrologic alteration of prairie wetland types and impacts to fish, wildlife, and water supply in Montana, and expand this study approach to other wetland and riparian types in Montana. Attribute potential impacts to all anthropogenic stressors affecting wetland and riparian systems and make recommendations for resource protection.

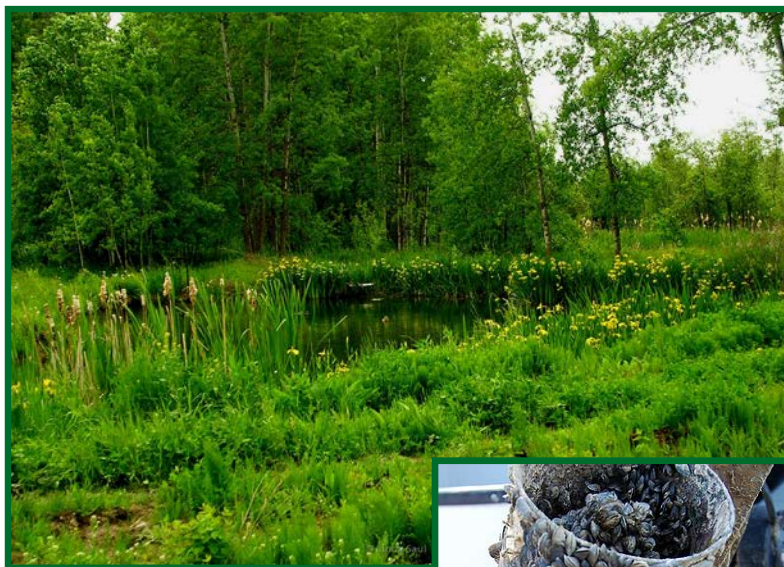
Objective 5F: Synthesize the research regarding the effects of nonpoint source pollution and traditional and emerging pollutants on wetlands and riparian areas and make recommendations on wetland and riparian protection and restoration strategies.

Aquatic Invasive Species

Objective 5G: Provide scientific information and field-based eradication experience regarding aquatic invasives' impact on wetlands and riparian areas to the Statewide Aquatic Invasive Species program and efforts to implement the 2009 Montana Aquatic Invasive Species Act. Support early detection/rapid response (EDRR) and monitoring for known and potential new invasive aquatic plant and animal species.

Several non-native, invasive perennial plants are established in Montana's wetlands and waterways such as yellow flag iris. Inspection stations are located at key sites across the state to help prevent the spread of aquatic invasive species such as these quagga mussels.

Photos: Lynda Saul/DEQ Wetland Program and NPS



Strategic Direction #6: Public Communications and Education

The Montana Wetland Council will foster the public’s awareness and understanding of the valuable ecologic, economic, and public safety functions that wetlands and riparian areas perform, and encourage and support effective public and private protective actions.

Wetland and riparian areas provide myriad valuable services to society, such as protecting surface and ground water quality and quantity, reducing flood risk, reducing erosion, providing wildlife habitat, and offering recreation and aesthetic appreciation. Thoughtful protection and stewardship by citizens, landowners, and decision-makers must be based on accurate, science-based information. The public needs an understanding of the importance of wetlands, riparian areas, floodplains, and other aquatic resources, and knowledge of the tools available to enable action. Various educational entities have produced outreach information and targeted workshops, however, an increased emphasis on wetlands and riparian areas is needed to meet the pressures and impacts to our aquatic resources. Community-based social marketing strategies focus on desired behavior changes for specific target audiences and is an emerging social science tool shown to effect positive change. A public communications strategy and additional focus on education and outreach is more important than ever.

Ideal Outcome: Montanans of all ages understand the value and function of wetlands and riparian areas and the importance they provide to Montana’s water supply, clean water quality, wildlife habitat, and flood control. Montanans have access to information and education that enables them to act effectively to protect, conserve, and restore these ecosystems.

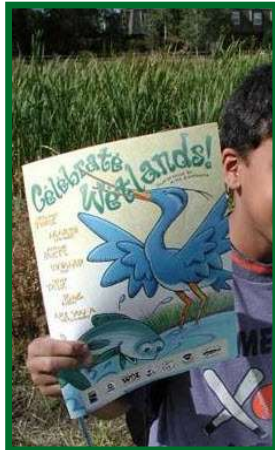
To achieve this outcome, Montana Wetland Council participants will:

Objective 6A: Work with the DEQ Watershed Protection Section’s nonpoint source program to provide support and assistance to local governments, watershed groups, and others, to develop and implement effective education and outreach strategies to protect and restore wetlands, riparian areas, and floodplains, along with the state’s other aquatic resources.

Objective 6B: Participate in MWCC’s Education and Outreach Committee and with others to reach locally based watershed groups, local governments, extension agents, other agencies, and conservation organizations. Expand the reach and audience of the MWCC E&O Committee to ensure that E&O coordinators from the appropriate agencies and organizations are included and aware of opportunities for coordination and collaboration on aquatic resource protection, restoration, and management. Examples of other education and outreach coordinators and activities include DNRC Floodplain Section and Conservation Districts Bureau, FWP’s Project Wild and the new Wildlife Center, aquatic invasive species, Montana Watercourse, other non-governmental organizations, and state and federal water- and habitat-related educational programs.



One of the Montana Wetland Council's missions is to ensure that Montanans of all ages understand and value wetlands and riparian areas.
Photos: Montana Watercourse and Rich McEldowney



Objective 6C: Research and explore new models and case studies in “community-based social marketing strategies” geared at behavior change. One pilot action should focus on eastern Montana communities and landowner options for management of wetland, riparian, and other aquatic resources. Monitor and evaluate the effectiveness of these efforts.

Objective 6D: Work with DNRC state floodplain program outreach coordinator and Disaster and Emergency Services to integrate wetland and riparian mapping and information in training venues, community assistance visits and material, website links, local ordinance, mitigation projects, technical assistance, and suggested guidance. Pilot an integrated aquatic resource outreach approach for the Missoula County Swan River floodplain mapping project with an emphasis on protecting and restoring natural floodplain storage and beneficial aquatic functions.

Objective 6E: Continue to distribute and use the excellent informational materials and tools developed by MWC and its partners over the past five years as scientific resources for target audiences interested and/or engaged in wetland and riparian area conservation planning and projects.

Objective 6F: Gather, summarize, and publicize economic data that make a compelling message about the important economic value that wetlands, riparian areas, and floodplains provide for Montana and its communities. Promote green infrastructure, particularly as we experience the effects of climate change on water resources

Objective 6G: Continue to enhance and publicize the Montana Wetland Information Clearinghouse website and networking function by updating relevant information. The Clearinghouse website is the portal for wetland and riparian area information in Montana, with links to other key sites. Refine and update the Council listserv and develop other social media approaches to promote wetland and riparian issues and coordinate with the Montana Watershed Coordination Council where appropriate.



Strategic Direction #7: Montana Wetland Council Development

The Montana Wetland Council will continue to build and strengthen its communication, leadership, networking, and funding mechanisms to ensure its vitality, effectiveness, and longevity.

Wetland and riparian area conservation and restoration challenges have increased over the last 15 years, outgrowing the Montana Wetland Council's ability to effectively respond and proactively create solutions. We need a broader structure to implement our 2013–2017 strategic directions, including investigating the responsibility to coordinate on-the-ground restoration and protection projects. A broader Council structure involving a steering committee that catalyzes, guides, and monitors implementation of this Strategic Framework will propel the MWC into a more effective action-oriented network, and enable action based on the information resources that are developed. Its value will be generated by the collective efforts of all participants in advancing wetland and riparian protection, restoration, and management through their respective agencies and organizations, as individual landowner and citizens, and collaboratively as the MWC. A closer alliance with the Montana Watershed Coordination Council, a leadership transition plan, and additional financial resources are needed to successfully implement this Strategic Framework.

Ideal Outcome: The Montana Wetland Council is an effective, action-oriented network of 1,000 agencies, organizations, and individuals concerned about and working for the protection, conservation, and restoration of Montana's wetland and riparian resources. MWC provides focus, leadership, technical information, and an action-oriented coordinated approach to accomplish this work.

To achieve this outcome, Montana Wetland Council participants will:

Objective 7A: Create a broader organizational structure for the Council to more effectively galvanize, coordinate, and sustain the energy, knowledge, and resources of its participants, and for MWC's work as an action-oriented network. This will be accomplished in two steps:

1. A broad-based steering committee will guide MWC. The committee will include leadership or participation from each collaborative working group or ad hoc committee and other "at large" members who represent the Council's geographical, organizational affiliation, and scientific/technical diversity. The first steering committee will define its roles and responsibilities and job description. The Montana Wetland Council chair will lead the steering committee.
2. Collaborative working groups or ad hoc committees will coalesce around strategic directions or objectives and use a structure that efficiently responds to the issue and needs. Examples include utilizing existing groups, committees, or other ongoing structures, or forming ad hoc working groups. Meetings will be issue-based and held when and where the issue is most relevant or via remote access. Each group will receive staff support from DEQ or another MWC partner organization.



Objective 7B: Identify diverse funding sources and encourage Council participants to incorporate MWC’s ideal outcomes into their agencies’ or organizations’ scope of work. DEQ and Council participants will continue to pursue EPA Wetland Program Development Grants and other funding sources as an important avenue to fund and implement projects and programs described in this Strategic Framework. DEQ will search for funding to establish a “resource fund” that can reimburse working groups and steering committee members for their direct costs of participating in this broader MWC structure.

Objective 7C: Continue efforts to expand and diversify organizational, agency, business, and individual participation in MWC. Specific strategies include: (1) locating Council meetings around the state, (2) providing remote participation options for Council meetings and other events, (3) engaging with and presenting wetland and riparian Strategic Framework issues at meetings of diverse audiences, and (4) broadening the topic areas explored at MWC meetings.

Objective 7D: Develop a stronger working partnership and joint programs with the Montana Watershed Coordination Council, particularly in the areas of communication, education, monitoring, and restoration. Whenever possible and appropriate, collaborate on projects that benefit both organizations and the resources.

Objective 7E: Continue to develop a cadre of wetland and riparian expertise throughout Montana by providing and sponsoring professional development opportunities for MWC leaders and participants through (1) Montana Wetland Council meetings, (2) MSU Extended University courses developed by the Council, and (3) field-based trainings. Provide financial support for participants to attend educational conferences, symposia, and meetings offered by other agencies, institutions, and organizations. Develop an expert speakers’ bureau.

Objective 7F: Cultivate new leaders and implement transition planning as seasoned leaders retire. Recruit, nurture, and place upcoming leaders in positions of responsibility in MWC.

Objective 7G: Implement, monitor, and update the Montana Wetland Council’s Strategic Framework so that it continues to focus and articulate the Council’s priorities and areas of leadership.



VI. 2008-2012 Strategic Framework Assessment of Accomplishments

The Montana Wetland Council relied on participants and four ad hoc Working Groups to assess the Ideal Outcomes for each Strategic Direction identified in the 2008–2012 Strategic Framework. Some task-based ideal outcomes were completed in the five-year time frame. Many are ongoing and accomplishments and needs have been reviewed and revised for the 2013–2017 update. Several were either not started due to lack of funding or no identified champion, or priorities have shifted and they are no longer considered vital. Overall, most Strategic Framework assessors observed that the 2008–2012 planning process and document development was effective in providing large-scale guidance to set priorities for the Council network of wetland and riparian professionals.

Strategic Direction #1: Public Education 2008–2012 Accomplishments

Ideal Outcome	Completed	Ongoing	Not started/ No resources
1A – Information Campaign		X	
1B – Clearinghouse	X		
1C – Education Specialist		X	
1D – Science Advisory			X

1A – Integrated into other strategic directions, not developed as a separate campaign.

1B – Clearinghouse website was enhanced in 2009 and is updated as needed.

1C – DEQ hired a wetland environmental specialist in 2009. Duties include SD#2 and SD#4.

1D – DEQ reviews all education and outreach material for scientific accuracy and consistency.

Shining Example: Public Education

As a network, numerous Montana Wetland Council partners have created public education resources and embarked on outreach and marketing efforts. These target several specific audiences regarding knowledge of, appreciation for, and encouragement to take action to restore and protect the valuable functions performed by wetlands and riparian resources. For example, two publications highlight landowner outreach: *A Landowners' Guide to Montana's Wetlands and Landowners' Guide to Eastern Montana Wetlands and Grasslands*. Both included case studies and were distributed to more than 1,000 interested parties. Landowner outreach also included property owners. For example, the Flathead Lakers reported that site visits to 21 properties resulted in 100 percent of the landowners changing some type of land-use practice on their property to protect water quality. Another example highlights collaboration with Montana Audubon, which produced outreach material for local governments: *A Planning Guide for Protecting Montana's Wetland and Riparian Areas*.



Shining Example: Stewardship Awards

Montana Wetland Council's biennial Wetland Stewardship Award 2009 and 2011 recognize individuals and teams who exemplify excellence and commitment in wetland conservation, protection, restoration, and stewardship. The award ceremony is held in conjunction with the Montana Watershed Coordination Council, which recognizes individuals and groups providing innovative, locally led approaches to conserving, protecting, restoring, and enhancing watersheds in Montana. Wetland stewardship awards recipients include: Jim and Cindy Kittredge of the Bird Creek Ranch near Cascade, and NRCS Bozeman-area biologist Tim Griffiths, in 2009; and Henry and Trisha Gordon from the Gordon Cattle Company in Blaine County, and the Flathead River to Lake Initiative, in 2011. In 2013, the Montana Wetland Council will honor the Valley Garden Ranch in Madison County, and the Blackfoot Trumpeter Swan Restoration Program. Montana landowner stewardship was also recognized at the national level when the National Wetland Award for Landowner Stewardship was awarded to the Laszlo Family Granger Ranches near Ennis, in 2010. The National Wetland Award for Conservation and Stewardship was awarded to Tim Swanson from The Nature Conservancy–Montana for his work with the ranching community in southwestern Montana in 2012. These awards not only acknowledge the recipients' positive stewardship and restoration work, but also encourage and inspire landowners and others interested in similar endeavors.

Strategic Direction #2: Professional Training 2008–2012 Accomplishments

Ideal Outcome	Completed	Ongoing	Not started/ No resources
2A – Workshops	X		
2B – Professional Development	X		
2C – Technical Assistance to Professionals		X	
2D – National/Regional Conference	X		

- 2A – Specific trainings and workshops were held in conjunction with other meetings: floodplains, sanitarians, planners, and more.
- 2B – Scholarships included those to EPA Region 8 Wetland Workshop, Clean Water Act Section 404 training, Association of Montana Floodplain Managers, GIS training, and others.
- 2C – The 2008–2012 emphasis on data and generating information allows this outcome to be a future focus.
- 2D – Montana hosted the three-day Region 8 Wetland Program Capacity Building Workshop in 2010 and a Wetland Training Institute field practicum in 2011.



Shining Example: Professional Development

Montana Wetland Council participants created a new professional development training series in 2010 that offered continuing education credits eligible for Professional Wetland Scientist Certification. The annual training is now institutionalized at Montana State University and provides field and classroom courses in wetland regulation, restoration, monitoring and assessment, and other topics. Council participants initiated a Montana chapter of the Society of Wetland Scientists that offers a professional speaker series. Field-based wetland plant identification trainings were developed and offered at 11 locations across Montana and attended by about 250 people; they will continue to be offered at three locations per year into the future. Council participants developed, published, and distributed 3,000 copies of a booklet, *Common Native and Invasive Wetland Plants in Montana*.

The result of these trainings means sanitarians, floodplain managers, land-use planners, range managers, local decision-makers, and public and private resource professionals can better identify potential wetland areas, are better able to avoid impacts to these areas, have the tools and resources to integrate wetland and riparian protection into their work, know when permits are needed, and are acquainted with wetland and riparian resource professionals they can call upon.

Strategic Direction #3: Mapping, Monitoring & Assessment 2008–2012 Accomplishments

Ideal Outcome	Completed	Ongoing	Not started/ No resources
3A – Mapping Center		X	
3B – Track Wetland Loss/Gain		X	
3C – Floodplain Mapping		X	
3D – Reference Network Palustrine emergent wetlands	X	X	
3E – Assessment & Monitoring Program			X
3F – Climate Change Impacts		X	

- 3A – See digital wetland and riparian mapping “Shining Example” below. Outreach on map availability and use is needed.
- 3B – Tracking was attempted unsatisfactorily in three watersheds. Map scale and photo detail were the overriding factors. We need to determine a more robust method to estimate wetland loss and gain.
- 3C – Floodplain mapping has advanced, including several channel migration studies. Clearinghouse is needed.
- 3D – See reference network “Shining Example” below. Additional wetland/riparian types are needed.
- 3E – MTNHP has developed information for one wetland type. MTNHP needs to expand and work with other wetland and riparian partners to make these findings available to others.
- 3F – Research on groundwater-dependent ecosystems and prairie wetlands has been initiated.



Shining Example: Digital Wetland and Riparian Mapping

Montana Wetland Council participants were successful in adding a new data layer—wetlands and riparian areas—as one of the 14 official Montana Spatial Data Layers. That paved the way for the Montana Natural Heritage Program (MTNHP) to create the Wetland and Riparian Mapping Center and a partnership approach to funding the development of digital mapping information. Prior to 2007, 43 percent of Montana had digital wetland mapping created from 1980s-era aerial imagery. Since 2007, one-third of these areas with historical mapping now also have digital wetland and riparian mapping created from 2005 or later aerial imagery. An additional 34 percent of the state that lacked digital mapping now has wetland and riparian mapping created from recent aerial imagery. An additional 23 percent of the state has funding for mapping over the next five years, resulting in coverage of 71 percent of Montana with new digital wetland and riparian mapping. These accomplishments are possible due to the funding support from 14 Council partners (including major funding from BLM, Great Northern Land Conservation Cooperative, Montana Land Information Act, and EPA Region 8) and the expertise of the Montana Wetland and Riparian Mapping Center at MTNHP.

Maps provide information on the location and type of wetlands and riparian areas. Additionally, MTNHP provides value-added information to these maps by adding descriptors that describe potential wetland functions (water storage, nutrient cycling, sediment retention), making them useful to a broad range of users for planning and prioritizing for management, restoration, and conservation. BLM is using the digital information to apply protective land-use stipulations during energy development. MDT uses the maps in highway planning efforts for new alignments and to avoid or minimize aquatic impacts. DEQ and watershed groups are using the maps to identify suitable restoration sites that will have a positive effect on water quality and quantity. Maps can also be used to address drought management, water quality impairment, and a host of other resource management needs. CSKT mapping experts have teamed up with the MTNHP Wetland and Riparian Mapping Center to cross-check map accuracy on state and tribal lands.

Shining Example: Reference Network and Ecological Assessment Protocol

The Montana Natural Heritage Program completed a reference network for herbaceous wetland types that represents a gradient of wetland conditions from poor condition to highest quality, a goal identified in Montana Wetland Council's 2008-2012 Strategic Framework. In addition, MTNHP created a spatial and tabular database to house and manage assessment data. A Montana Ecological Integrity Assessment Method and protocols were also created to consistently assess wetlands and establish a baseline condition for many wetlands and wetland types. A rotating basin monitoring and assessment program was initiated and basin-wide assessments were completed for the Milk–Marias watersheds, southwestern Montana, and southeastern Montana, representing nearly 300 assessments. This science-based assessment and monitoring approach provides an ecological understanding of wetland systems in Montana, as well as information on their condition, typical stressors that occur near wetlands, and how these affect wetland health. The reference network can be used to set restoration targets for both regulatory mitigation and voluntary or incentive-based restoration. These protocols and data also provide an opportunity to integrate wetland assessments into other watershed assessments for a comprehensive picture of watershed health.



**Strategic Direction #4: Restoration
2008–2012 Accomplishments**

Ideal Outcome	Completed	Ongoing	Not started/ No resources
4A – Wetland Legacy Partnership Aquatic Resource Crediting Program	X	X	
4B – Restoration Support		X	
4C – Document Protection			X
4D – Evaluate Success			X
4E – Restoration Handbook		X	

- 4A – The Legacy Partnership has accomplished several Ideal Outcomes. Sustainable funding has been a challenge, however, resulting in several priorities (state-owned land restoration and tracking database) not yet initiated or completed.
- 4B – Support for restoration has occurred through trainings, award program, and site tours as resources permit. Additional public outreach regarding restoration benefits and opportunities is needed.
- 4C – Aligning the stewardship database with conservation easements has not occurred. Due to compatibility challenges it is no longer a priority.
- 4D – This work remains an unfunded priority and has shifted to monitoring and assessment for update.
- 4E – *Restoration Guidelines for Wetlands of the Western Prairie Pothole Region* has been completed. Additional wetland and riparian types will need funding.

Shining Example: Aquatic Mitigation Crediting Program

Montana Wetland Council participants created an In Lieu Fee (ILF) program to offset impacts to aquatic resources throughout Montana under the Corps 404 and Section 10 regulatory program. Montana Aquatic Resources Services (MARS) was developed as a 501(c)3 non-profit entity and represents a third option for compensatory mitigation. This option adds increased flexibility for permittees and additional restoration for Montana’s aquatic resources. In addition, MARS was established to go beyond compensatory mitigation and offer other aquatic restoration. For example, the Exxon Pipeline Mobil Company is using MARS’s services to establish channel migration easements along portions of the Yellowstone River for their supplementary environmental program requirements resulting from the Yellowstone River Silvertip Pipeline oil spill. An additional unanticipated outcome is that the U.S. Army Corps of Engineers Stream Mitigation Protocol has been formalized since 2008. It provides a process to mitigate for stream impacts from permitted actions. The new statewide ILF program will be able to provide stream restoration and protection based on the Stream Mitigation Protocol.



Shining Example: CSKT Restoration Successes Shared with Council Participants

The Confederated Salish and Kootenai Tribes resource professionals have shared with Wetland Council participants their experience gained from two decades of work to protect and actively manage more than 17,000 acres with significant wetland/riparian acreage, including more than 25 miles of perennial, fish-bearing streams on the Flathead Indian Reservation. The far-ranging expertise the tribe has developed and shared includes restoring several thousand acres of wetland and riparian habitat using active and passive techniques, including a Tribal Forestry greenhouse that houses native plants grown from local seed sources. CSKT has also successfully reintroduced native species, including trumpeter swans and leopard frogs.

The tribe's experience in the Flathead and Mission valleys has aided swan reintroduction programs in the Blackfoot and Madison valleys. Watershed assessments in each of the seven watersheds on the Flathead Reservation and restoration focusing on water quality improvement has resulted in successfully reducing turbidity, water temperature, and nutrient loads, and has led to improved water quality and land and water management in agricultural settings. Experience gained in non-native species reduction (e.g. reed canary grass control), including mapping, monitoring, and actively managing non-native species in wetland/riparian areas, has informed management. They have also focused on promoting and demonstrating improved connectivity of fish and wildlife habitats over large geographic areas. For example, CSKT and MDT successfully collaborated on Highway 93 North reconstruction involving wildlife underpasses/crossings that have received national recognition and paved the way for similar improvements to Highway 93 South reconstruction. Finally, CSKT has worked cooperatively with federal agencies (EPA, USFWS, NRCS), state agencies (FWP), numerous local, non-profit, and university organizations, and private landowners to achieve wetland and riparian conservation and restoration goals.

*Successful wetland/riparian restoration projects require technical expertise, adequate hydrology, reestablishment of native species such as this *Juncus torreyi*, and landowner commitment.*
Photo: Karissa Ramstead



**Strategic Direction #5: Local Government
2008–2012 Accomplishments**

Ideal Outcome	Completed	Ongoing	Not started/ No resources
5A – Model Regulations/Other	X		
5B – Incentives		X	
5C – Assess Effectiveness		X	
5D – Training/Technical Assistance		X	
5E – Coordination		X	
5F – Financial Support		X	

- 5A – Completed projects include wetland and riparian considerations included in DNRC Model Floodplain Ordinance and development guidance such as Montana FWP *Fish and Wildlife Recommendations for Subdivision Development in Montana*.
- 5B – See “Shining Example” below, more focused work needs to be completed.
- 5C – Completed *A Planning Guide for Protecting Montana’s Wetland and Riparian Areas* in 2008 and updated the riparian setback and land-use planning table in July 2009. Another update would be useful.
- 5D – Limited training has occurred, need an outreach focus in the future.
- 5E – Coordinated on trainings, presentations, and award ceremonies. Increasing coordination with Montana Watershed Coordination Council, Montana Association of Conservation Districts, Montana Association of Counties, and Montana Association of Planners is a priority.
- 5F – EPA Wetland Protection Development Grants have supported local government projects such as an evaluation of riparian and wetland area management in Missoula County subdivisions, and approximate floodplain mapping for four counties in the Big Hole River Watershed.



Healthy riparian areas absorb high flows, reduce erosion, provide habitat, and reduce downstream erosion as seen in these paired images of the Missouri River on June 10, 2011, and September 29, 2007.

Photo: Lisa J. Dunn



Shining Example: Linking Wetland Protection with Floodplain Management

Montana Wetland Council participants completed and are helping to implement recommendations from a report titled, *Montana Floodplain Management Assessment: Strengthening Policies and Programs that Reduce Flood Risk and Protect Floodplains*.

This year-long assessment revealed that Montana’s flood risk reduction and protecting flood storage functions of natural wetland and riparian areas share similar goals. The assessment recommendations spawned rapid floodplain mapping, an updated statewide model floodplain ordinance for local governments, a grant proposal to map river hazards, and development of other tools and resources for local governments. Other resources include developing and distributing science-based publications such as recommendations on the size of stream vegetative buffers needed to protect water quality, fisheries, and wildlife. A pilot floodplain mapping project in the Big Hole watershed created a protocol for rapid approximate map development. That, coupled with the updated model floodplain ordinances, provides a template for other local governments to better protect their floodplain wetlands while reducing flood risk. Additional river hazard mapping in southwestern Montana (channel migration corridors, ice jam locations, and flood inundation) will provide a visual planning tool and has the potential to encourage more interest in floodplain management, reduce wetland and riparian impacts, protect floodplain wetlands, and encourage communities to adopt ordinances that equal or exceed the new DNRC Model Floodplain Ordinance. As a result of this work, the constituency for wetland protection has increased and become more broad-based, and partnerships between wetland and floodplain programs have strengthened.

Strategic Direction #6: Vulnerable Wetlands 2008–2012 Accomplishments

Ideal Outcome	Completed	Ongoing	Not started/ No resources
6A – Vulnerable Wetlands White Paper			X
6B – State Solutions		X	
6C – Clean Water Act		X	
6D – Collaborate on Outreach		X	
6E – Water Quality Role		X	

- 6A – The term “vulnerable wetlands” was not clearly defined. This outcome lacked a champion.
- 6B/6C – DEQ investigated Clean Water Act 401 certification, wetland water quality standards, and nationwide permit review. No state solutions have been forwarded at this time.
- 6D – Held outreach session across Montana, see “Shining Example” below.
- 6E – Included in Non-point Source Management Plan and conducted community outreach after the 2011 flooding across much of Montana.



Shining Example: Promoting Natural River Processes and Best Management Practices

The Governor’s Task Force for Riparian Protection developed a *Room to Roam* brochure and presentation. They conducted 19 public meetings discussing the public safety and ecological importance of giving rivers sufficient “room to roam” beyond their existing channel to accommodate natural channel erosion, flooding, and other natural river processes that can put streamside development at risk. The Task Force also teamed up with 10 conservation districts and the Montana Association of Conservation Districts to hold 12 listening sessions or focus groups about riparian management, involving more than 250 Montanans. Sixty personal interviews with stakeholders were also conducted. This outreach resulted in a document titled, *Taking the Pulse of Riparian Protection in Montana*. It provides Montana land management professionals a snapshot about the status of riparian protection from a landowner’s perspective, and recommendations for future outreach. Funding from EPA Wetland Program Development Grants and technical support from Council participants enabled this outreach work.

**Strategic Direction #7: Public Policy
2008–2012 Accomplishments**

Ideal Outcome	Completed	Ongoing	Not started/ No resources
7A – Evaluate Policies/Programs Wetland and Floodplain Assessment	X	X	
7B – Inform Congressional Delegation		X	
7C – Water Quality Standards		X	
7D – Participate on Boards/Councils		X	
7E – Integrate with Watershed Plans	X		
7F – Energy Development Model			X

- 7A – Completed two comprehensive assessments: *Increasing Protection for Montana’s Wetlands and Riparian Areas: Challenges and Opportunities*, and *Montana Floodplain Management Assessment: Strengthening Policies and Programs that Reduce Flood Risk and Protect Floodplains*.
- 7B – Provided information as requested.
- 7C – Initiated research and discussions and will investigate further when issue is prioritized.
- 7D – Coordinated with other entities based on Council participant interest and overlap with organization or agency mission.
- 7E – Completed in two watersheds and developed model and approach for others, see “Shining Example” below.
- 7F – Not started due to lack of funding and champion. Held Council meeting in central Montana that focused on energy development and wetland and riparian resources.

Shining Example: Integrating Wetlands into Watershed Restoration Planning

Montana Wetland Council participants piloted projects with two watershed groups in the Big Hole and Gallatin watersheds that hold promise for larger replication and significant restoration success. Water-quality-limited watersheds underwent a rigorous scientific



assessment, screening potential wetland restoration sites for water quality improvement. These watershed groups tested and refined office- and field-based protocols to identify potential wetland restoration sites that would yield maximum water quality benefits. This approach resolves watershed challenges in a more integrated and holistic fashion, demonstrating that wetland restoration contributes to water quality restoration, documenting that wetlands are a critical part of watershed health, and developing a replicable process for other water-quality-limited watersheds. The Big Hole and Gallatin watershed groups have shared their experiences with the Montana Watershed Coordination Council, the Montana Wetland Council, and at other statewide meetings to encourage others to integrate wetlands into watershed restoration planning.

***Strategic Direction #8: Council Effectiveness
2008–2012 Accomplishments***

Ideal Outcome	Completed	Ongoing	Not started/ No resources
8A – Monitor/Update	X		
8B – Committee & Working Groups		X	
8C – Grant Administration/Resource Fund		X	
8D – State Funding		X	

- 8A – Working Groups reported on Strategic Framework implementation at Council meetings. This assessment captures 2008–2012 accomplishment highlights.
- 8B – Steering Committee structure was not formed. Four ad hoc Working Groups addressed strategic directions and Ideal Outcomes as funding and participant resources allowed.
- 8C – Success occurred when strategic directions aligned with participant priorities, missions, or EPA grant funding priorities. EPA Region 8 Wetland Program Development Grants were critical.
- 8D – Approximately 1.5 FTE has been secured within DEQ funding for the Wetland Program staff. Other program funding is provided by competitive grants.

Shining Example: Growing the Wetland Council into a Network

The Montana Wetland Council has grown as an effective network, with a listserv distribution of more than 900 individuals, and Council meetings that consistently attract about 60 participants. The Council network is seen as a forum for learning and is working to increase the overall awareness of the importance of healthy wetland and riparian areas and our collective responsibility to protect these resources. The Council network is also a place for dialogue and solving problems. Council publications, meeting summaries, and newsletters reach a wide audience and the constituency for wetland protection has increased and become more broad-based. As a result, partnerships have strengthened, and participants report collaboration on more projects with other Council participants. In the last six years, Montanans have received three national wetland awards, showcasing the effectiveness of coordinated work and a network of committed professionals. This expanded network provides an opportunity for a more coordinated effort and approach to increase the collective impact and effectiveness of limited resources. Council leadership has been institutionalized within state government with dedicated funding to continue its effectiveness.





Montana has lost more than one-third of its original wetlands since the late 1800s. Achieving no net loss and net gain will take perseverance.
Photo: Tom Hinz

VII. No Net Loss and Net Gain Accomplishments

More than half of the United States' original wetlands have been lost due to human causes. In 1989, the president established a goal of "no net loss of wetlands." In 2004, the president expanded that goal to include a national goal of "wetland net gain." Montana, which has lost more than one-third of its original wetlands, accepts these national goals while acknowledging that incremental gains are difficult to measure, and losses are ongoing and typically undocumented. In addition to human impacts, wetlands are naturally transient on the landscape, influenced by weather, precipitation, changes in groundwater flow, and other variables.

The U.S. Fish and Wildlife Service "Status and Trends of Wetlands" reports to Congress consistently document that wetland losses exceed gains. The EPA initiated the first-ever national survey of the ecological condition of the nation's wetlands. Field sampling was conducted in 2011; the final report should be published by the end of 2013. However, the scale of both projects will not meet the need for individual state reporting. Although some states conduct regular wetland inventories, the expense has not allowed this to become a reality in Montana. In this document, Strategic Direction #2, Mapping, provides the status of the initial mapping information layer for Montana.



Despite the challenges in measuring no net loss and net gain, these goals are so significant that we must continue to strive to reach them. National no-net-loss policy is addressed through regulatory actions based in the Clean Water Act, Section 404 program jointly administered by the U.S. Army Corps of Engineers and the U.S. Environmental Protection Agency. Net gain, on the other hand, is typically voluntary and incentive-based, supported by government agency programs, willing landowners, and non-governmental organizations. Monitoring and assessment occurs sporadically, however, so actual wetland net gain from such projects is often not fully documented and projects are not consistently reported in a central clearinghouse.

The Montana Wetlands Legacy Partnership assembled information on net gain projects in a statewide database from 2000 to 2006. During this period, the database documented over 800,000 acres of land protection projects in Montana. These purchases in fee, conservation easements, and cooperative agreements with landowners included at least 27,000 acres of wetlands and riparian areas. However some projects may have been double-counted due to the partnership approach of multiple entities involved in a single project, while other restoration and protection projects may have been missed due to the nature of voluntary reporting. Since 2006, partner organizations have maintained their own records of program and project accomplishments.

We have chosen to report on no net loss and net gain for the 2008-2012 Strategic Framework time period by inviting organizations, agencies, and other entities to self-report their accomplishments toward these goals. The Montana Wetland Information Clearinghouse website provides links to these reports.



The Blackfoot watershed includes abundant wetlands providing outdoor recreation, scenic beauty, and diverse wildlife. Many partners are working together to conserve this large and intact landscape.
Photo: John Lambing



Appendix A: Strategic Framework Participants

The following individuals actively participated in the strategic planning process to assess the 2008–2012 Strategic Framework and update the 2013–2017 Strategic Framework.

- Laura Andersen, Montana Watershed Protection Program, Department of Environmental Quality, Helena
- Lynn Bacon, TerraQuatic, LLC, Bozeman
- Janet Bender-Keigley, Montana Watercourse, Bozeman
- Jim Berkley, Environmental Protection Agency Region 8, Denver
- Gael Bissell, Wildlife Biologist, Montana Fish, Wildlife & Parks, Kalispell
- Jeannette Blank, ERM Group, Inc., Livingston
- Mark Bostrom, Bureau Chief Department of Environmental Quality and Chair MWCC, Helena
- Jen Boyer, Land-Use Planner, Future West, Bozeman
- Christi Buffington, Education & Outreach Coordinator, Flathead Lakers, Polson
- Steve Carpenedo, Wetland Environmental Scientist, Department of Environmental Quality, Helena
- Janet Ellis, Program Director, Montana Audubon, Helena
- Vanessa Fields, United States Fish and Wildlife Service, Benton Lake NWR, Great Falls
- Doris Fischer, Land Use Planner, Montana Wildlife & Parks, Sheridan
- Randy Gazda, Partners for Fish and Wildlife, United States Fish and Wildlife Service, Benton Lake NWR, Great Falls
- Jim Hansen, Montana Fish, Wildlife & Parks, Billings
- Tom Hinz, Montana Wetlands Legacy Partnership Coordinator, Montana Fish, Wildlife & Parks, Bozeman
- Beverly Magley, Edit-Write LLC, Helena
- Katie Makarowski, Water Quality Planning Bureau Monitoring & Assessment Section Department of Environmental Quality and Montana Watershed Coordination Council Monitoring Work Group Leader, Helena
- Mary Manning, Regional Vegetation Ecologist, USDA Forest Service, Missoula
- Pam Mavrolas, Strategic Planning Consultant, Helena
- Rich McEldowney, Professional Wetland Scientist, Group Manager, Wetland/Riparian Ecologist, Atkins, Bozeman
- Cat McIntyre, Wetland Scientist, Geum Consulting (previously Montana Natural Heritage Program), Hamilton
- Joe Meek, Source Water Section Supervisor, Department of Environmental Quality, Helena
- Scott Mincemoyer, Program Manager Botanist, Montana Natural Heritage Program, Helena
- Karen Newlon, Ecologist/Project Manager, Montana Natural Heritage Program, Helena
- Toney Ott, Environmental Protection Agency Region 8, Denver
- Duncan Patten, Research Professor, Land Resources and Environmental Sciences at Montana State University, and Montana Water Center Interim Director, Bozeman
- Mike Philbin, Supervisory Physical Scientist, Bureau of Land Management, Billings
- Abby Rokosch, Ducks Unlimited Inc./USDA Natural Resources Conservation Service Partnership Position, Bozeman
- Bob Sanders, Montana Conservation Program Manager, Ducks Unlimited, Inc., Elliston
- Lynda Saul, Wetland Program Coordinator, Department of Environmental Quality and Wetland Council Chair, Helena
- Ann Schwend, Water Resource Management Bureau, Department of Natural Resources and Conservation, Helena
- Steve Shelly, Regional Botanist/Research Natural Areas Coordinator, USDA Forest Service, Missoula
- Laurence Siroky, Bureau Chief, Department of Natural Resources and Conservation, Helena
- Rick Sojda, Supervisory Biologist, Northern Rocky Mountain Science Center/USGS, Bozeman
- Shanny Spang-Gion, Non Point Source/Wetlands Program Coordinator, Environmental Protection Department, Northern Cheyenne Tribe, Lame Deer
- Rusty Sydnor, Restoration Specialist, Confederated Salish and Kootenai Tribes' Fisheries Program, Pablo
- Cameron Thomas, Aquatic Ecologist, USDA Forest Service, Missoula
- Jeff Tiberi, Executive Director, Montana Association of Conservation Districts, Helena
- Larry Urban, Wetland Mitigation Specialist, Montana Department of Transportation, Helena
- Constanza von der Pahlen, Critical Lands Program Director, Flathead Lakers, Polson
- Catherine Wightman, Sagebrush, Wetland and Farm Bill Coordinator, Montana Fish, Wildlife & Parks, Helena



Appendix B: Strategic Framework Glossary

BLM	United States Bureau of Land Management
CAPS	Crucial Areas Planning System
CSKT	Confederated Salish and Kootenai Tribes
DEQ	Montana Department of Environmental Quality
DNRC	Montana Department of Natural Resources and Conservation
EDRR	early detection/rapid response
EPA	U.S. Environmental Protection Agency
FWP	Montana Fish Wildlife & Parks
GIS	geographic information system
ILF	In Lieu Fee
LEAF	Leaders in Environmental Action for the Future
LLWW	landscape position, landform, water flow path, water body type
MARS	Montana Aquatic Resources Services
MDT	Montana Department of Transportation
MTNHP	Montana Natural Heritage Program
MWC	Montana Wetland Council
MWCC	Montana Watershed Coordination Council
E&O Committee	MWCC Education and Outreach Committee
NEMO	nonpoint education for municipal officials
NPS	National Park Service
NRCS	U.S. Natural Resources and Conservation Service
NWR	National Wildlife Refuge
USBR	U.S. Bureau of Reclamation
USFS	U.S. Forest Service
USFWS	U.S. Fish and Wildlife Service

Appendix C: Resources/Website

Please go online at <http://deq.mt.gov/wqinfo/wetlands/wetlandscouncil.mcp> to view an electronic version of this document and link to resources and websites.

Montana Wetland Information Clearinghouse website:
<http://deq.mt.gov/wqinfo/wetlands/default.mcp>





Photo: Lynda Saul

Governor Steve Bullock and his son releasing a Trumpeter Swan in May 2013, as part of the Blackfoot Trumpeter Swan Restoration Program – a collaborative effort of landowners, local schools, non-profit organizations, and state and federal agencies that are returning this iconic species to the Blackfoot watershed.

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Photo: Eugene Beckes

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