Increasing Protection for Montana's Wetlands and Riparian Areas: Challenges and Opportunities

February 2009 Final Report to Montana DEQ

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Project Summary

The purpose of this report is to evaluate Federal Clean Water Act (CWA) tools that the state of Montana could use to improve the protection of wetlands and streams in Montana and provide better integration of CWA programs at Montana Department of Environmental Quality (DEQ). These tools include Section 401 certification, regional general permits (RGP), and if necessary, wetland-specific water quality standards (WQS). The existing state program was reviewed and compared to programs from other states. Montana state water programs that complement and support Clean Water Act goals were evaluated to identify opportunities to leverage these programs in coordination with a strengthened state wetland and stream dredge and fill permitting program. The report identifies areas of Montana statutes, regulations and guidance that may require new authorities, revision or reinterpretation to ensure protection of the state's waters. A December 12th, 2008 draft discussion report was distributed to DEQ staff and management and other interviewees. A December 17th, 2008 meeting was held in Helena for discussion and comment on the accuracy, focus and utility of the ideas and recommendations in the report. The report was revised for a final round of reviews and comments within Montana DEQ and this final February 2009 report was produced for Montana DEQ.

Deciding Whether to Take Action

This report provides a number of recommendations on actions that could be taken to improve and expand Montana's wetland/riparian area permitting program and wetland/riparian protection. It provides some information about current challenges to water quality in the state. But before making a decision about which activities and recommendations to pursue, it is important to be able to answer four questions that will be asked by the administration, the legislature and the public.

What is the problem?

Montana DEQ's water program must address the issues that present the greatest risk to water quality, human health and natural resources. Montana DEQ will need to determine if a real problem exists. For example are wetlands that are unprotected by state and federal programs being destroyed or degraded? Is water quality in the state's rivers and streams threatened by development and alteration of streams and floodplains? If so, then further assessment of the problem should be pursued to determine the correct course of action.

What is at risk?

It is important to identify the resource or resources that are at risk and the land or water-based activities that are having an impact on these resources. Are these activities occurring throughout the state? In certain areas? Is it affecting all waters or only one, such as prairie potholes, wet meadows, or intermittent streams?

Why is it important?

In addition it is useful to assess and document the importance of resources at risk. Do they:

- Protect groundwater quality and quantity for public water supply?
- Absorb nutrients or other pollutants to help surfaces water meet water quality standards?
- Provide services that will assist implementation of watershed protection plans to achieve TMDLs?
- Support important game or nongame species?
- Contribute flood storage and protect against property loss?
- Store carbon to reduce the impacts of global warming?

Identifying the ecological services and values that are at risk and their importance to Montanans is an important part of the analyses of the relative importance of water resources.

What will it take to fix it?

Montana DEQ and the state have limited resources available to use to address the many challenges to maintaining and improving water quality in the state. The quantity and quality of the state's wetland and riparian areas provide important ecological services and MDEQ should identify actions that can be taken to maintain those resources and balance those needs with other water quality issues within the state. Some of the recommendations in this report will help MDEQ in answering the first three questions and identify actions that can be taken to address problems that have been or may be identified.

The answers to the first three questions should guide Montana DEQ in its decision about which recommendations in this report should be pursued to fix identified problems.

Montana's Program is Successful Given the Current Level of Funding and Program Implementation.

The purpose of this report is to identify a logical progression of actions that Montana DEQ can select from strengthening its wetland and stream permitting programs to improving its ability to protect and conserve the state's water resources. Currently Montana has a small but active 401 certification program. The state utilizes a number of authorities to protect streams and wetlands with standing water.

State Montana DEQ staff work closely with the U.S. Army Corps of Engineers staff and other state and federal agencies to condition federal permits for Section 404 permits and Federal Energy Regulatory Commission (FERC) hydroelectric projects. These well-established working relationships are central to program success. This report identifies some areas to explore through increased cooperation and coordination to improve program delivery and anticipates changes in national policy (i.e., stream mitigation), which will affect Montana. It provides a series of stepwise recommendations the state could undertake to play a more active role in implementing the Section 404 Program . However, any significant changes to Montana's water resource programs to provide increased protection for the state's water resources that go beyond improved coordination and cooperation are likely to require additional staff and funding. This is particularly true for the recommendations below that include substantial increases in the state's role in wetland and stream permitting under Section 404 of the Clean Water Act.

Challenges to the Protection of Water Resources in Montana

Interviews were conducted with staff from the State of Montana, U.S. Army Corps of Engineers, and U.S. Environmental Protection Agency (Appendix A) and were asked to identify existing and future threats to Montana's water resources based on their experience and best professional judgment. The following challenges were identified.

Perennial, intermittent and ephemeral streams as well as wetlands with standing water are waters of the state. Irrigation canals and groundwater are also included in the definition of state waters. The status of wetlands that lack standing water during much or all of the year is less clear under the current interpretation of the statutory definition of state waters. These were historically regulated under the Clean Water Act prior to the SWANCC and Rapanos Supreme Court decisions (2001 and 2006) and were not a priority for the state to address. There are a number of wetland types in Montana that are saturated only to the surface or wet only part of the year. These include but are not limited to wet meadows, prairie potholes and fens.

Populations are increasing in some areas of the state. People like to live next to water and individual homes and subdivisions are being proposed and built along rivers and riparian areas and in floodplains. In addition homeowners may wish to establish ponds which utilize already scarce water supplies and reduce the amount of water available in rivers and streams. Locating development next to streams and in floodplains can degrade water quality, and eliminate important riparian habitat. Development in floodplains can also create risk to human life and property. This is because floodplains are subject to flooding and the addition of houses, fill, etc. can raise flood levels both where development takes place and in nearby and downstream areas. This occurs because the flood storage capacity of floodplains is reduced or lost when development takes place.

At the same time the state is completing a series of Total Maximum Daily Loads (TMDLs) and supporting the development and implementation of watershed management plans. In many of

these watershed plans, the focus will be on reducing pollutant loads to impaired waters, particularly sediment and nutrients. However, in addition to reducing flood storage capacity, development in floodplains and along streams and rivers is likely to intensify impairment by increasing sediment and nutrient pollutant loads. This occurs because the river's historic connection to its floodplains allowed rivers to store and transport sediment to and from floodplains. When rivers are disconnected from floodplains, rivers will utilize bank and instream sediment to achieve an energy balance during high water events. This results in accelerated streambank erosion, downcutting and other undesirable changes in the river channel. Dredge and fill permits along streams can intensify transport of sediment and nutrients if they do not mitigate adequately for the changes.

In addition, TMDL watershed plans are likely to identify ways to reduce sediment and nutrient loading to impaired waters. Under current state law this could put wetlands at risk. While waters protected under state law do include ephemeral streams, the status of protection for isolated ephemeral waters, principally wetlands, is less certain. Therefore, management practices undertaken to address impairments in streams and rivers of the state may result in redirecting run-off and other types of nutrient or high sediment discharges to isolated waters. This solution may address impairment issues in the short term, but the degradation of isolated waters may contribute to ongoing water quality problems in the watershed as a whole over time.

Nutrients have also been identified as pollutants in groundwater in some areas. Currently most major municipalities in the state that are utilizing surface or groundwater for drinking water anticipate they will address this issue with higher treatment levels rather than supporting watershed management efforts to reduce nutrient loading to drinking water sources. The goal of MDEQ's groundwater protection effort is to maintain and improve groundwater quality so that the higher costs of treatment and human health issues created by nutrients and other pollutants in groundwater don't occur.

Desirable wetland mitigation sites have been difficult to identify for Montana Department of Transportation (MDT). There are no watershed programs in the state to guide mitigation for MDT or wetland mitigation overall. The lack of identified potential mitigation sites makes it challenging to replace the values and functions lost when wetlands are altered.

Stream mitigation currently is not required in Montana for permits issued through the Section 404 program. However on March 31, 2008, EPA and the U.S. Army Corps of Engineers issued revised regulations governing compensatory mitigation for authorized impacts to wetlands, streams, and other waters of the U.S. The Montana Corps office is in the process of developing stream mitigation guidance and stream mitigation is likely to be required in the future. This requirement may affect a number of permit applicants who have not been required to mitigate for Section 404 permitted activities in the past. The Montana Corps office has been developing an agreement for a third party to provide stream mitigation (a mitigation bank or in lieu fee program) when the new requirements are incorporated into the program to assist permit applicants in complying with stream mitigation conditions in future permits.

There are logistical barriers to successful coordination between the water programs at Montana DEQ. The Montana DEQ is not organized by media (water, air, waste). Instead, it is organized by function (all permits, all enforcement, etc.) which fragments the integration of the various water quality management programs across bureaus, divisions, and in some cases, departments. Although staff expressed a real desire to cooperate and work together, the limitations of not having a conforming communication structure, such as the EPA required Continuing Planning Process, limits individual staff or work unit knowledge about tangent functions of other water management programs.

Digital copies of National Wetland Inventory maps do not currently exist for much of the state. This is being remedied with mapping to federal geographic data standards by the Montana Natural Heritage Program (MTNHP) Wetland and Riparian Mapping Center in Helena for watersheds with partnership funding support. Wetlands have also recently become the 13th priority state data layer by the Governor's Montana Land Information Advisory Council. Readily accessible maps of wetlands and riparian areas statewide are needed to manage and conserve wetland resources.

There is no status and trends data or monitoring data available to determine what is happening to wetlands in the state over time. Status and trend research for three pilot watersheds involving the Bitterroot, Flathead and Gallatin is just being completed. Federal jurisdiction over isolated wetlands and other surface waters was reduced by the U.S. Supreme Court Rapanos and SWANCC decisions. Currently the state has not explicitly included some isolated wetlands in applying its water quality regulations. There is only anecdotal information available to assess whether these resources are threatened or not. This makes it difficult for Montana DEQ staff, the administration, the legislature or the general public to objectively assess whether there is an urgent need to revise and expand permitting programs in Montana to protect wetlands.

Montana's Existing Wetland/Riparian Dredge and Fill Permitting Program

In Montana the existing wetland/riparian dredge and fill permitting program is administered under Section 404 by the U.S. Army Corps of Engineers. These permits can be conditioned by the State through the 401 certification process under the Clean Water Act to ensure the permits will comply with the state's water quality standards and other applicable statutes and regulations. In addition the state issues a Section 318 permit to minimize and mitigate the impacts of turbidity on state waters during the construction phase.

In practice there is one state staff person who handles all state 318 permits and 401 certifications for Section 404 dredge and fill activities. The 401 certification for FERC projects is handled by different staff at MDEQ. On an annual basis there are around 250 activities that simultaneously require a Section 404 permit from the Corps and a Section 318 permit from the state. To keep the workload manageable at this staffing level, the state raises 401 certification issues informally for the majority of the activities that are covered by both programs, while at the same time issuing the state Section 318 permit. It is done this way because attaching formal

401 certification conditions to each permit would significantly increase the workload and the state and Corps staff can generally incorporate the state's comments through informal consultation. Approximately 12 activities each year require Section 404 permits but do not require a Section 318 permit. When this occurs, MDEQ attaches formal Section 401 conditions. A Section 404 permit addresses a larger universe of impacts than the State Section 318 permit. Section 318 permits primarily address impacts that occur during the construction phase of a project and must consider post-construction issues. Section 404 permits address impacts for the construction phase and the completed project.

In addition the Montana Natural Streambed and Land Preservation Act (310 permit) program is administered by the local Conservation Districts on behalf of the state. This program regulates activities by any private or nongovernmental entity that physically alters or modifies the bed or immediate banks of a perennial flowing stream. The program is staffed largely by volunteers — Conservation District supervisors. Implementation of a permitting program by Conservation Districts and implementation of a water permitting program by volunteers are both very rare nationally. Currently, the 310 permit is not a fee-based program. Some Conservation Districts are looking into developing a fee structure to support the costs associated with administering the 310 permit program in the future.

Related Programs

Montana DEQ implements several water programs that could be used either to leverage and improve the State's 401 certification program as well as programs that could be better coordinated to protect wetland and water resources in the state. These include, but are not limited to the State's water quality standard program, the subdivision program, the stormwater discharge program, the TMDL and associated watershed programs, the Montana Water Use Act, and the floodplain and floodway management act. "A Guide to Stream Permitting in Montana" (Appendix B) provides a concise overview of many of these programs for permit applicants.

Building a More Comprehensive Wetland/Stream Protection Program

Currently the State's 401 certification program is operated through the 401 Certification – Dredge and Fill ARM 17.30-109**.** The rule describes the process used to condition permits, but does not provide guidance, procedures or specific Best Management Practices that are followed to develop appropriate conditions. As described above the state's 401 certification program relies on successful consensus building with partners during the permit review. 401 certification decisions generally are not formally added to a permit if a 318 permit is required, but they are included in the Corps' 404 permit. However, while this approach is successful, the disadvantage in the longer term is that the institutional knowledge about how to condition permits is not documented and is based on individual staff expertise which may be lost when there is staff turnover in the future. Other states have developed guidance to direct development of appropriate conditions (Appendices C and D)

Steps to Leverage Existing Authority and Strengthen the 410 Certification Program

The state of Montana does not issue dredge and fill permits for waters of the state including wetlands. It conditions federal permits for waters that meet the definition of state waters. The recommended steps below identify incremental steps that could be taken to strengthen the existing program while positioning the state to pursue delegation of the Section 404 program some time in the future, if it chooses. These steps are incremental and not all are required. For example the state could elect not to pursue an evaluation of the existing databases and move straight to creating water quality standards for wetlands. These incremental steps are identified to allow the state to follow a logical progression that would develop state capacity and public support over a period of time. Virginia is a state that has moved from roughly Montana's present level of involvement to a program that would meet the requirements to receive assumption of the Section 404 program over a 10 year period from 1999 to 2009. They have undertaken many but not all of the steps listed below and in Appendix E in that 10-year period and have decided not to pursue assumption at this time.

In the first draft of this report a series of recommendation Levels 1-4, identified steps for the state to take to assume the Section 404 program. However, MDEQ has no plans to proceed towards implementing a state dredge and fill permitting program. Therefore the recommendations for building a comprehensive Montana dredge and fill permitting program are divided into Levels 1-2 below and Levels 3-4 in Appendix E. Montana currently has a number of high priority water quality issues it is addressing, including development of water quality standards for nutrients, developing TMDLs, and permitting stormwater plans for subdivisions. These are a higher priority for state resources than changes to the dredge and fill permitting program. However, pursuing recommendations in Level 1 and 2 can occur simultaneously with other higher priority activities to improve existing programs and generally do not require new permanent staff. Recommendations in Levels 1 and 2 may be addressed in the coming years. Levels 3 and 4 are included in Appendix E for future consideration if the state determines that it should pursue a state dredge and fill program and take over all or part of the responsibilities for administering Section 404 that currently reside with the US Army Corp of Engineers.

Program Revisions (Level 1 – Leveraging Existing Authority)

Level 1 recommendations will improve coordination and cooperation between MDEQ programs and with local and federal agencies.

Recommendation 1: Develop guidance for developing 401 certification conditions. Currently the state does not have formal guidance or Standard Operating Procedures developed for 401 certification. A number of other states have developed guidance, Standard Operating Procedures (SOPs), Best Management Practices (BMPs) and master letters that are used to

conduct 401 certification. Other states use these materials in conjunction with assigning new staff to shadow experienced staff to ensure consistent application of the state's applicable standards and guidance. (Appendix C and D)

Recommendation 2: Based on guidance, provide more comprehensive conditions for Nationwide Permits. The U.S. Army Corps of Engineers revises and re-issues nationwide general permits every five years. The state has an opportunity to certify, condition or deny each of the nationwide permits at this time for the five year period they are in place. Montana's current 401 certification of the nationwide general permits is available at: https://www.nwo.usace.army.mil/html/od-rmt/deq401c.pdf . (Appendix F)

Currently Montana is making a number of changes to its water quality standards, completing TMDLs, developing watershed restoration plans, and working toward ensuring development and compliance with stormwater management plans for new subdivisions. In the next 5-year review of Corps permits, MDEQ has the opportunity to take a comprehensive look at its current water quality standards and related water programs to add any addition conditions, denials, etc. to ensure the Section 404 program general permits support the state's goals for it water resources. As an example EPA Region 8 has issued the following changes to the nationwides for Indian Country in Montana: https://www.nwo.usace.army.mil/html/od-rmt/r8cl.pdf. (Appendix G) Development of documentation to support the state's 401 certification program could be pursued through an EPA Wetlands Development grant.

Recommendation 3: Support implementation of stream mitigation program in Montana. In the spring of 2008, the U.S. Army Corps of Engineers finalized a new mitigation rule that included the requirement for mitigation of streams for Section 404 permits nationwide. It is anticipated that the Montana Corps office will begin requiring stream mitigation sometime in 2009. Draft stream mitigation guidance is posted on the Montana Corps website at https://www.nwo.usace.army.mil/html/od-rmt/pn/200490212pn.pdf. (Appendix H) The Montana DEQ, Montana Conservation Districts and other organizations should work together to inform the public and potential permit applicants about the program, provide information about how to comply with the new stream mitigation requirements and help the public understand how stream mitigation will benefit protection and restoration of state waters. An active effort to provide information prior to implementation of the new permitting requirements will allow the public to understand why the changes are occurring and support their efforts to comply. Before the guidance is finalized it may be worthwhile to look at similar guidance from other areas of the country. (Appendices I and J)

Recommendation 4: Review current Department interpretation and policy regarding Water Quality Standards within the context of wetlands. Like many states, Montana's water quality standards have been designed more specifically for protection of streams and rivers, and do not expressly take into account the unique characteristics of wetlands. Montana's court-mandated TMDL completion schedule is forcing staff to prioritize finishing modifications of standards to facilitate more efficient wrap-up of TMDLs. However there may be opportunities to make minor adjustments in existing standards as part of the normal continual improvement process.

For example some states have inserted language into their existing standards to allow for different background levels where the difference is consistent with normal levels in a specific kind of water body. This would fit right in with how Montana water quality standards now reference consideration of natural conditions. In addition the state could evaluate the use of water quality standards for wetlands in other states and identify language and approaches that would be consistent with the state's current water quality standards. In the future if it is determined that specific wetland water quality standards rule-making or additional authorities are needed to effectively protect the state's wetland resources and their corresponding beneficial uses, a cohesive plan for adopting new standards may need to be developed. This project could be pursued through a future wetland development grant from U.S. EPA. Additional information on wetland water quality standards can be found in Appendices K and L.

Recommendation 5: Evaluate federal and state databases that could be used or expanded to track 401, 310, 318 and other water and floodplain permitting to assess cumulative impacts on water resources. Montana DEQ, the U.S. Environmental Protection Agency and the Montana Corps all have databases with water quality and permitting information. However, the state has not evaluated the usefulness of integrating and/or sharing the information in the databases. Better coordination could provide the state and citizens of Montana with greater access to information about Montana's water quality, the status of permits and other information. It is logical to pursue ways to link or incorporate Section 401 certification information with the Corps' ORM2 database for Section 404 permits. This project could be funded through an EPA Wetlands Development Grant.

Recommendation 6: Explore opportunities to integrate Montana Conservation District activities including Section 310 permits with Montana DEQ. Montana Association of Conservation Districts currently implements the Section 310 permitting program providing an important local level perspective on permitting for a portion of the state's waters. This program provides a basis for local involvement in water resources permitting, which could be further explored. Conservation Districts at the local level have access to information that is lacking at the state or federal level. They are also potentially subject to peer pressure from neighbors who may support or object to permitting activities. Developing a balanced, mutually supportive approach to Section 310 permitting and perhaps other water resource permitting programs in the future merits additional discussion and exploration.

Program Revisions (Level 2 – Strengthen the 401 Certification Program)

Level 2 recommendations provide an incremental series of actions the state could take to leverage its existing 401 certification program to take a larger role in implementing Section 404 without adopting new permitting authority. It provides the MDEQ with additional expertise and a larger role in ensuring the Section 404 program is efficient, repeatable and consistent with the state's other programs directed to maintaining and improving the state's water resources.

Recommendation 1: Revise interpretation/definition of waters of the state to include all wetlands. Historically the state of Montana has not explicitly interpreted its definition of waters to extend to all wetlands in the state in part because protection of other waters in the state had a higher priority. However, a review of the definition of state waters is needed to determine the extent of waters currently regulated. A more comprehensive interpretation of the current definition of waters would not necessarily lead to immediate additional regulation because new permitting authority might be required and applicability of current water quality standards to wetlands is limited in some cases. However, the benefit of confirming that all wetlands are waters of the state provides the state with the authority to take action in the future if threats occur. (Appendix M)

Recommendation 2: Attach formal 401 certification conditions to permits to comply with state statutes and regulations when appropriate. Currently most 401 certifications are handled informally. However, if the state chooses to take a stepwise approach to increasing its formal role in implementing the Section 404 program, then using the formal 401 certification process will provide the public and permit applicants with information about the conditions applied by the state that are necessary to ensure compliance with state standards. Acting on this recommendation will increase the current workload and is likely to require additional staffing.

Recommendation 3: Revise the State's Water Quality Standards to retain existing inclusive standards and incorporate any additional standards needed to appropriately protect wetlands. Currently wetlands that are waters of the state are protected by some of the state's inclusive standards that can be applied to wetlands as well as other waters of the state. However, these standards are general and may not provide protection to some of the unique characteristics of wetlands. The adoption of water quality standards specifically designed for wetlands could help protect wetlands and downstream waters from loss and degradation. It would provide an improved basis for 401 certification of Section 404 permits and integrate wetlands with standards for other waters in the state. Adoption of water quality standards for wetlands would include identifying designated uses, developing narrative or numeric criteria and establishing an antidegradation policy. In some cases existing standards can be partially utilized. For example standards for toxics apply to wetlands as well as other waters. But specific additional designated uses as well as narrative and numeric criteria are likely to be needed. In addition Montana may want to consider a watershed approach to antidegradation similar to the state of Maine, where antidegradation policy for water bodies includes "significant wetlands, within a water body supporting existing populations of wildlife or aquatic, estuarine or marine life, or plant life that is maintained by the water body." (Appendices N and O)

***Recommendation 4: Develop a Regional General Permit*.** Develop a Regional General Permit with the Corps for activities authorized under the Nationwide permit program that require individual 401 certification to comply with state regulations. In addition, the State could take over implementation of part or the entire nationwide permit program in the state by revoking the majority of the nationwide general permits and implementing a regional general permit.

Other states have pursued this approach and essentially used the 401 certification program to take a leadership role in carrying out the Corps' nationwide permit program. This approach greatly simplifies the nationwide permitting program in a state and provides the state with the authority to issue general permits for minor activities in waters of the state. (Appendix P)

***Recommendation 5: Enforce 401 certification when violations occur*.** Formal adoption of 401 certification conditions would allow the state to require compliance and pursue enforcement when violations occur. A compliance and inspection protocol could be developed and local government entities such as the Montana Association of Conservation Districts could conduct inspections sharing responsibilities with the state MDEQ. These inspections could be integrated with the state's stormwater and subdivision programs. A local, consistent compliance program would increase local understanding of permit requirements, prevent violations and reduce the costs incurred by private landowners and the state over time by reducing the number of violations that occur.

Benefits of Adopting Program Revisions (Levels 1-2) to Ensure Clean Water for Montana.

The goal of the Clean Water Act is "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters." Water quality standards and point source permits address the chemical and biological integrity; in addition dredge and fill permits under Section 404 provide an important and even essential tool for protecting the physical and biological integrity. Acting on the recommendations in this report is likely to lead to the following benefits:

- Many of Montana's streams and rivers are degraded by nutrients and sediment. Permits for dredge and fill activities can be a tool for meeting TMDL goals.

- Integration of dredge and fill permitting into watershed plans for addressing TMDLs could also provide opportunities to identify wetland and stream mitigation sites and/or areas that will also support TMDL priorities.

- Montana could pursue bundling stormwater, dredge and fill permitting and/or onsite sewage treatment into a single or joint permitting process.

- Development of water quality standards for wetlands that can support integration of 404, 401 and 402 programs.

The recommendations in the report will also support Montana DEQ's activities directed toward taking a more comprehensive watershed approach to protecting and conserving the state's waters. For example, the State is in the process of developing a statewide monitoring and assessment plan. This is a chance for the state to plan a monitoring strategy for all waters in the state including wetlands, streams, rivers, lakes and groundwater.

In addition, Montana is currently developing more than 100 TMDLs within about 6 to 7 different watersheds per year. More than 50% of Montana's TMDLs address sediment, nutrients, or temperature. Reasonable land, soil and water conservation practices to protect wetland, riparian and floodplain areas and efforts to avoid and minimize wetland and riparian losses will be necessary throughout most watersheds in Montana to properly protect and restore water quality. These goals can be supported by applying appropriate dredge and fill permitting conditions and mitigation requirements that support water quality improvement in impaired waters.

Also, during the interviews with Montana DEQ staff, some areas appeared to lack communication between the different parts of Montana DEQ's water quality management programs. The greatest obstacle to effective communication may be the organizational fragmentation of these programs. A comprehensive plan such as the CPP (CWA 303e) describing each program's goals, objectives and functions, including dredge and fill permitting activities, would go a long way toward establishing the communication infrastructure necessary to effectively coordinate these interrelated water quality management activities.

In conclusion, there are a number of activities Montana DEQ can undertake at a modest level of effort to conserve and protect wetlands and riparian areas that are likely to yield significant benefits.

Appendices

Appendices to this report are located at http://aswm.org/swp/montana/index.htm The appendices provide supporting information and documentation to serve as a resource for evaluating and pursuing the recommendations in the report.

A. List of Interviewees for Report
B. A Guide to Stream Permitting in Montana
C. Standard Operating Procedures and Master Letters Indiana 401 Certification Program
D. Links to Other State 401 Certification web pages for 50 States
E. Program Revisions Level 3 and Level 4
F. Sample Condition Letters for Nationwide Permits for Tribal Lands in Montana
G. Section 401 Water Quality Certification for Nationwide Permits in Montana
H. Corps draft Stream Mitigation Guidance for Montana
I. Kansas Stream Mitigation Guidance (SMG)
J. Stream Mitigation Resources
K. Water Quality Standards Module
L. Wetland Water Quality Standards and Their Applications By States and Tribes (Version 4/10/03)
M. Wetland Water Quality Standards and their application by States and Tribes
N. Links to Waters of the State Definitions for 50 States
O. Revised Maine Statutes: Article 4-A Water Classification Program
P. River Network Antidegradation Online Report Database

Q. ASWM Article on State Programmatic General Permits
R. Kansas Water Plan
S. Model Regulatory Program (ASWM)
T. ELI Summary of State Wetland Programs
U. ASWM Summary of State Wetland Programs
V. ASWM Issue paper on Assumption/SPGPs/401 certification
W. Description of Montana's Wetland Resources