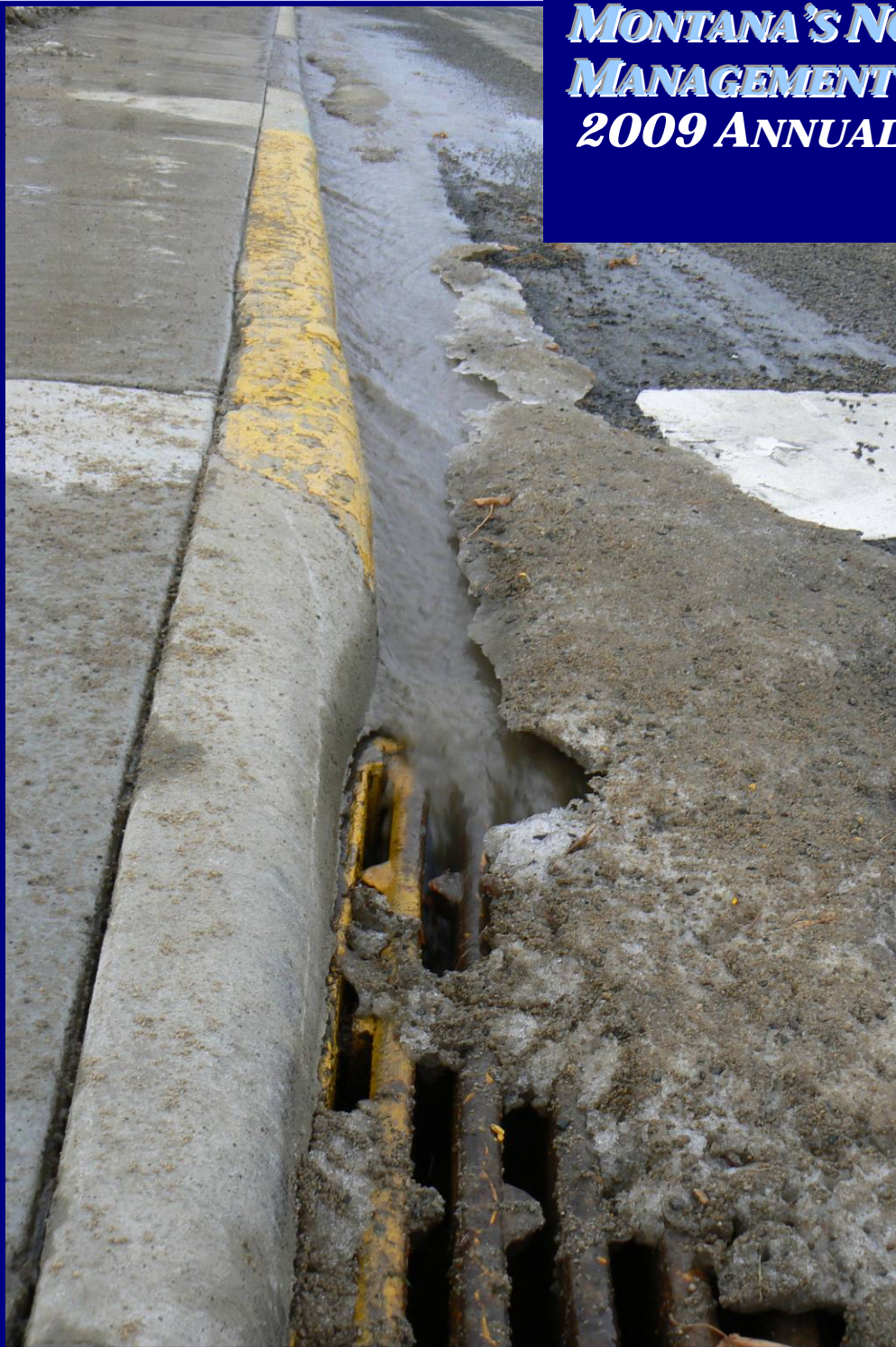


# MONTANA'S NONPOINT SOURCE MANAGEMENT PROGRAM 2009 ANNUAL REPORT



Compiled and Submitted by:  
**Montana Department of  
 Environmental Quality  
 Planning, Prevention, and  
 Assistance Division  
 Water Quality Planning Bureau**

*Montana Vision Statement:*  
**Water quality will be restored  
 and protected through the  
 implementation of voluntary  
 best management practices  
 identified in science based,  
 community supported  
 watershed plans.**



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## 2009 Nonpoint Source Management Program Annual Report

The Montana Nonpoint Source (NPS) Management program annual report intends to inform the public about the progress made annually toward fulfilling **NPS Management Plan**\* goals, while also satisfying the requirements of Section 319(m)(1) of the federal Clean Water Act of 1987. Section 319 of the Clean Water Act requires States to (1) assess water bodies for nonpoint source (NPS) impacts, (2) develop nonpoint source management programs, (3) implement those programs, and (4) report on nonpoint source program implementation to the public and to the U.S. Environmental Protection Agency (EPA).

### **2009 Nonpoint Source Management Program Highlights**

*The Nonpoint Source Management Plan has many goals. What follows are the goals that received priority in 2009.*

#### **Goal: Complete Water Quality Plans and necessary TMDLs**

The Watershed Management Section received EPA approval for TMDLs in seven TPAs in 2009.

#### **Goal: Work with watershed groups to develop watershed restoration plans**

The 319 program is currently funding fourteen groups that are in various stages of developing locally-supported watershed plans. DEQ held a Watershed Restoration Plan (WRP) workshop for these 14 groups in Bozeman in 2009.

#### **Goal: Develop riparian and wetland buffer protection campaigns**

The Watershed Protection Section is collaborating with several groups who are developing statewide riparian education campaigns including the Governor's Riparian Task Force "Room to Roam Campaign," the Flathead CD and partners' "Riparian Buffer Education Campaign" (see highlight box on page 17), and the Montana Watercourse's "NPS Riparian & Wetland Buffer Education Program.

#### **Goal: Support the certification of volunteer monitors in watershed groups**

In 2009 the Montana Watercourse, in conjunction with the DEQ, put together a Volunteer Water Quality Monitoring Plan that is promoting and supporting volunteer monitoring statewide by offering educational opportunities, professional training, data analysis and management, and comprehensive follow-up for Montana's committed volunteers and educators.

#### **Goal: Provide support and promote the development and coordination of watershed groups through MWCC activities**

The Montana Watershed Coordination Council (MWCC) had a successful year resulting in two watershed-coordinator training events with 57 participants combined, an awards ceremony that recognized outstanding watershed stewards, a new MWCC website that houses watershed resources, and a new VISTA program.

#### **Goal: Coordinate storm water management activities**

The Watershed Protection Section staff in conjunction with several other organizations held the first ever statewide storm water conference, "Clear Choices: Storm Water Solutions for Montana", April 7<sup>th</sup>-9<sup>th</sup> 2009. The purpose of the conference was to advance the knowledge and understanding of storm water management for those dealing in all aspects of planning, design, implementation, and regulatory compliance.



\*NPS Management Plan available at <http://deq.mt.gov/wqinfo/nonpoint/2007NONPOINTPLAN/Final/NPSPlan.pdf>

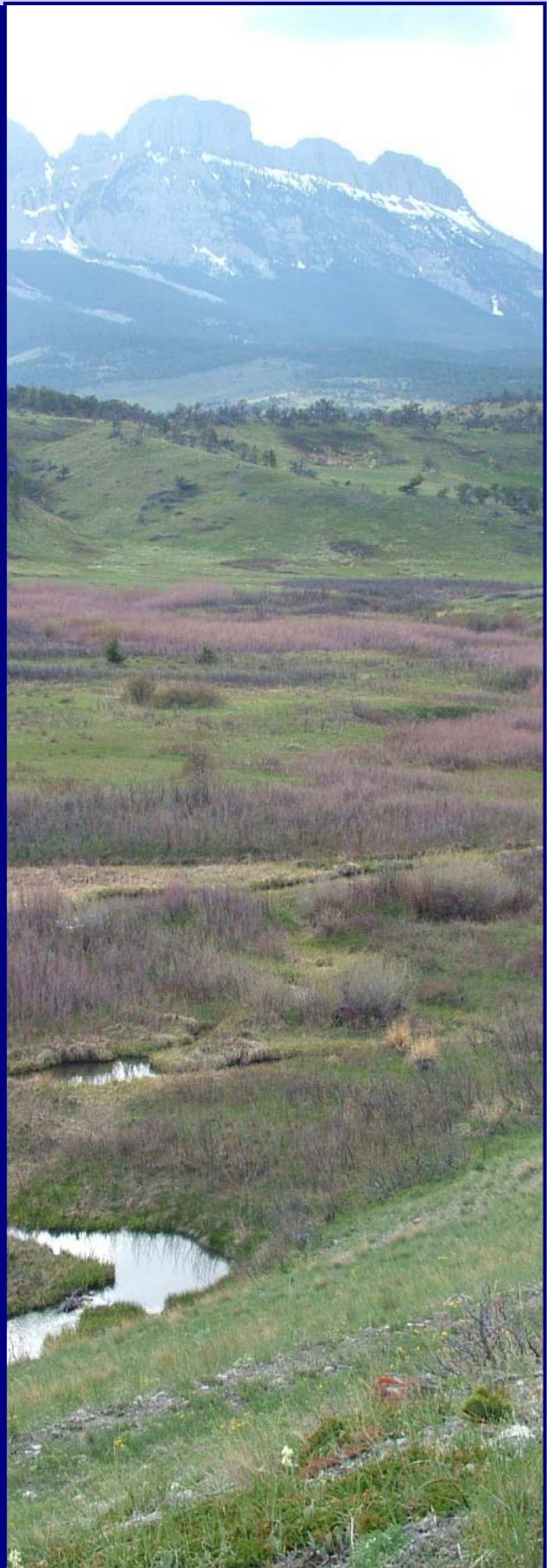
## **Implementation of the Montana NPS Management Plan**

*by the Water Quality Planning Bureau  
and Collaborating Partners*

The watershed planning approach provides a coordination tool for all stakeholders interested in conserving water resources in Montana. The involvement of the DEQ, various interagency councils, watershed groups, conservation districts, agencies, tribes, academia, and NGOs in the watershed approach allows for a broad distribution of information with the intent to increase public understanding and participation in water quality and nonpoint source issues.

The DEQ Water Quality Planning Bureau (WQPB) has the responsibility of managing the Montana Nonpoint Source (NPS) Management Program. The WQPB mission is to assure that water quality is maintained and improved so that state waters can support all their beneficial uses. This is accomplished through an integrated approach based on water quality standards development, monitoring and assessment, and development and implementation of water quality plans and TMDLs (Appendix A).

The information described in this document highlights important or notable actions taken to achieve specific NPS five year goals in three categories: resource, policy, and education and outreach (Appendix B). The highlights include actions carried out by the Water Quality Planning Bureau and interagency councils, watershed groups, and other organizations in 2009 to meet NPS five-year goals, promote collaboration, and foster water resource awareness and protection in Montana.



## Water Quality Standards Section

The Water Quality Standards Section develops water quality criteria to identify the level of water quality necessary to protect the beneficial uses of a stream, river, lake, or groundwater resource that contribute to human welfare. Examples of beneficial uses include drinking water, fish and aquatic life, and recreation. The NPS program seeks to protect and restore these beneficial uses.

In early 2009 the Water Quality Standards Section was involved in the drafting and support of Senate Bill 95, now codified at MCA 75-5-313. This legislation allows temporary variances from numeric nutrient standards in cases where meeting the standards would result in demonstrable economic hardship to a community. The net effect of the legislation is that DEQ will be able to implement numeric nutrient criteria in a phased manner, allowing more time to address all sources of nutrient pollution (point source and nonpoint source). The passage of this bill is a key component of implementing State numeric nutrient standards, since the concentrations indicated by the science are in some cases quite stringent and may be difficult to meet.



As part of MCA 75-5-313, an advisory group was created which supersedes an earlier, informal stakeholder advisory group convened by DEQ. The Nutrient Work Group comprises a wide array of Montana interests, from agriculture to industry to environmental groups, and includes representatives from industries that contribute to nonpoint sources. This advisory group is currently working with DEQ to develop implementation procedures for numeric nutrient criteria. As part of this process, an addendum to the 2008 nutrient criteria recommendation document will be developed in 2010, and will contain updated

criteria recommendations. DEQ's work with the Nutrient Work Group will likely continue into the middle of 2010 and beyond; the anticipated outcome is draft numeric nutrient standards rules for presentation to the Board of Environmental Review.

In 2009 the Standards Section began database development for all lake data that have been collected since 2003 by DEQ, as well as all other available Montana lake data. The database will support an empirically-based lake classification system. The first steps of the analytical phase should begin in early 2010.

The section produces a document (CIRCULAR DEQ-7) containing numeric water quality standards for Montana's surface and ground waters. Provisions of state and federal law require the adoption of standards that will protect the designated beneficial uses of state waters, such as the support of aquatic life, public water supplies, recreation, and agriculture. The numeric water quality standards in this Circular have been established for pollutants that are categorized as toxic, carcinogenic, bioconcentrating, radioactive, nutrient, or harmful. In 2009/10, the planned updates to this document include revision of five existing standards, 11 new priority pollutants, 7

new non-priority pollutants and updating to reflect federal recommendations on providing frequency and duration criteria for the existing numeric criteria. In order to address the adoption of numeric standards for all pesticides, the Circular contains ground water standards for pesticides developed in compliance with the Montana Agricultural Chemical Ground Water Protection Act (80-15-201, MCA). CIRCULAR DEQ-7 is regularly updated as additional information or guidance from EPA becomes available. In 2010, we also plan to add 21 new pesticides to DEQ-7 that were detected in groundwater during 2008/2009.

The Water Quality Standards Section has also undertaken an extensive review of the water chemistry associated with sodium bicarbonate associated with coal bed natural gas deposits. This work is preparatory to evaluating the need for a bicarbonate standard.

In 2009, DEQ Water Quality Standards Section staff reviewed a study initiated in 2008 that explored how different macroinvertebrate sampling protocols affected the Montana macroinvertebrate indicators of water quality. While the staff intended to develop a way to "translate" results obtained from the different sampling methods so that historical data can be compared to current data, the differences between the methods prevented an accurate translator mechanism from being built. The staff will use the knowledge gained from this study when they develop the next iteration of biological indicators in early 2010.

## Water Quality Monitoring Section

The Water Quality Monitoring Section monitors water quality conditions and trends statewide, and assesses sources and severity of pollution problems. Bureau staff develops and conveys pertinent and reliable information on the condition of Montana's environment to resource managers and the public. This section is responsible for the following: a) operation of statewide water quality monitoring networks, b) conducting inventories of pollution sources, and c) identification of impaired streams, lakes and watersheds. The NPS program relies on data collected by the Monitoring Section.

The Water Quality Monitoring Section completely assessed 20 waters in 2009, including approximately 500 miles of stream and 3,000 acres of lakes/reservoirs.

In addition, sampling was conducted in 16 reference sites across the state as part of the reference project in place since 2000.



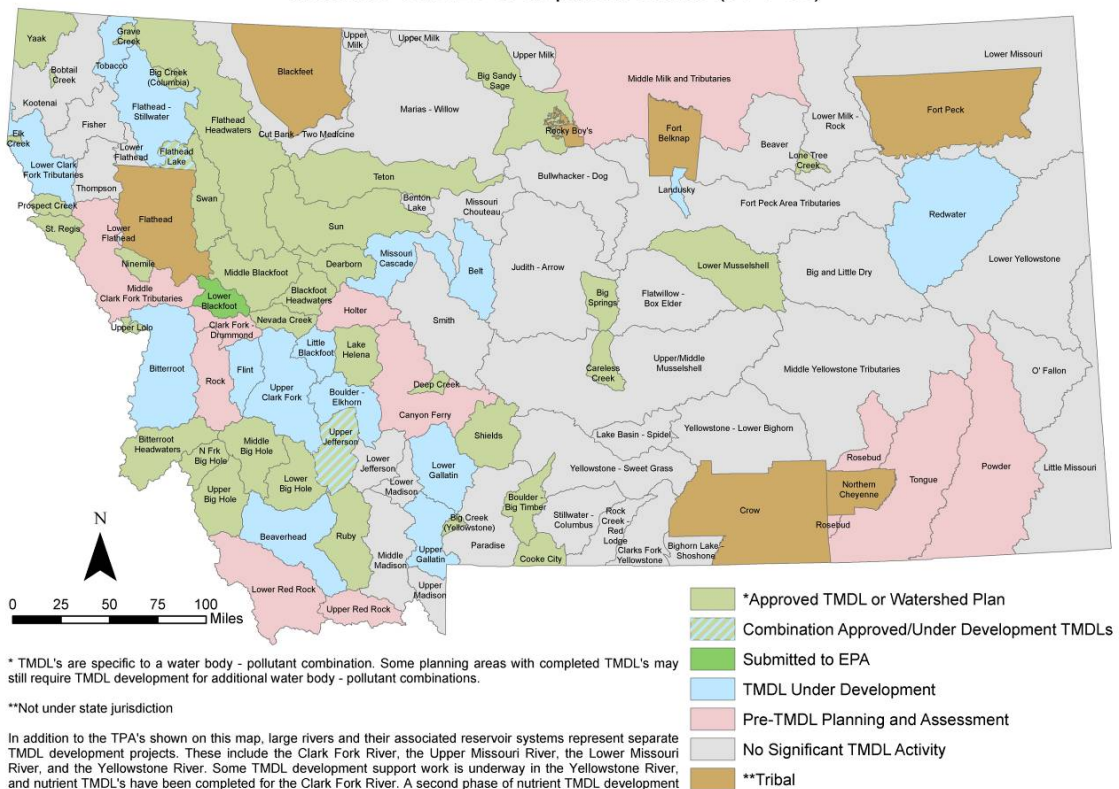
As part of the support for TMDL development, 25 streams were sampled in the Drummond-Clark Fork TMDL Planning Area. Two streams were sampled in Eastern Montana to support nutrient criteria development. All water quality monitoring data in 2009 will support TMDL development directly or indirectly. The Monitoring Section also supported TMDL development providing technical expertise on temperature data loggers, Aquarod, and Tru-tracks for various projects. Staff also provided input on monitoring design, methods, and field training. The Monitoring Section is currently working with the Standards and Modeling Sections in evaluating the data and results from 2008 - 2009 to develop a nutrient model for large rivers.

## Watershed Management Section

The Watershed Management Section (WMS) is responsible for developing scientifically defensible Total Maximum Daily Loads (TMDLs) and associated water quality planning documents that will meet EPA approval requirements and help facilitate water quality protection and water quality improvements. The section develops TMDLs for all water bodies on the 303(d) list. A TMDL is the total amount of a pollutant that a water body may receive from all sources without exceeding water quality standards and can also be defined as a reduction in pollutant loading that results in meeting water quality standards. The NPS program utilizes TMDL planning documents to determine appropriate implementation and restoration projects.

The Watershed Management Section continues to complete water quality plans and necessary TMDLS in Montana to address a court-ordered 2012 TMDL completion schedule and to provide for continuation of a TMDL program beyond 2012. TMDL documents are useful to local stakeholders as they can be used as a framework for developing more comprehensive watershed restoration plans. Montana's TMDL planning area completion schedule was updated this year to efficiently address TMDL development at a watershed scale consistent with the goals of the Settlement Agreement entered by the parties in Friends of the Wild Swan et al., v. EPA et al, CV97-35-M-DWM. The following figure (below) is the most current TMDL development status map for TMDL Planning Areas (TPAs).

Montana TMDL Development Status (11-3-09)



The Watershed Management Section received EPA approval for TMDLs in seven TPAs in 2009: Boulder Big Timber, Shields, Prospect Sediment, Middle and Lower Big Hole, Upper Jefferson Tributaries Sediment, Upper and North Fork Big Hole, and Lower Blackfoot.

The section also submitted TMDLs for the Upper Clark Fork Tributaries TPA to EPA for approval during 2009, with EPA approval anticipated early in the 2010 calendar year.

In 2009 the Watershed Management Section completed additional data collection, assessment and/or evaluation on 13 TMDL project areas including: Upper Gallatin; Bitterroot; Landusky; Lower Clark Fork Tributaries; Little Blackfoot; Missouri – Cascade – Belt; Redwater; Flint; Lower Gallatin; Flathead; Boulder – Elkhorn; Beaverhead; and Upper Jefferson.

## **Watershed Protection Section**

The Watershed Protection Section works to protect and restore water quality from the impacts of nonpoint sources of pollution in order to provide a clean and healthy environment with the Montana Nonpoint Source (NPS) Program. NPS pollution is the state's single largest source of water quality impairment. NPS pollution, unlike pollution from industrial and sewage treatment plants (point sources), comes from many widespread sources and can be generated by most land use activities. NPS pollution is created as runoff moves over and through the ground, picking up and carrying away natural and human-made pollutants, finally depositing them into lakes, rivers, wetlands, coastal waters, and even our underground sources of drinking water. Common NPS pollutants include sediment, nutrients, heavy metals, pesticides, pathogens, oil and salt.

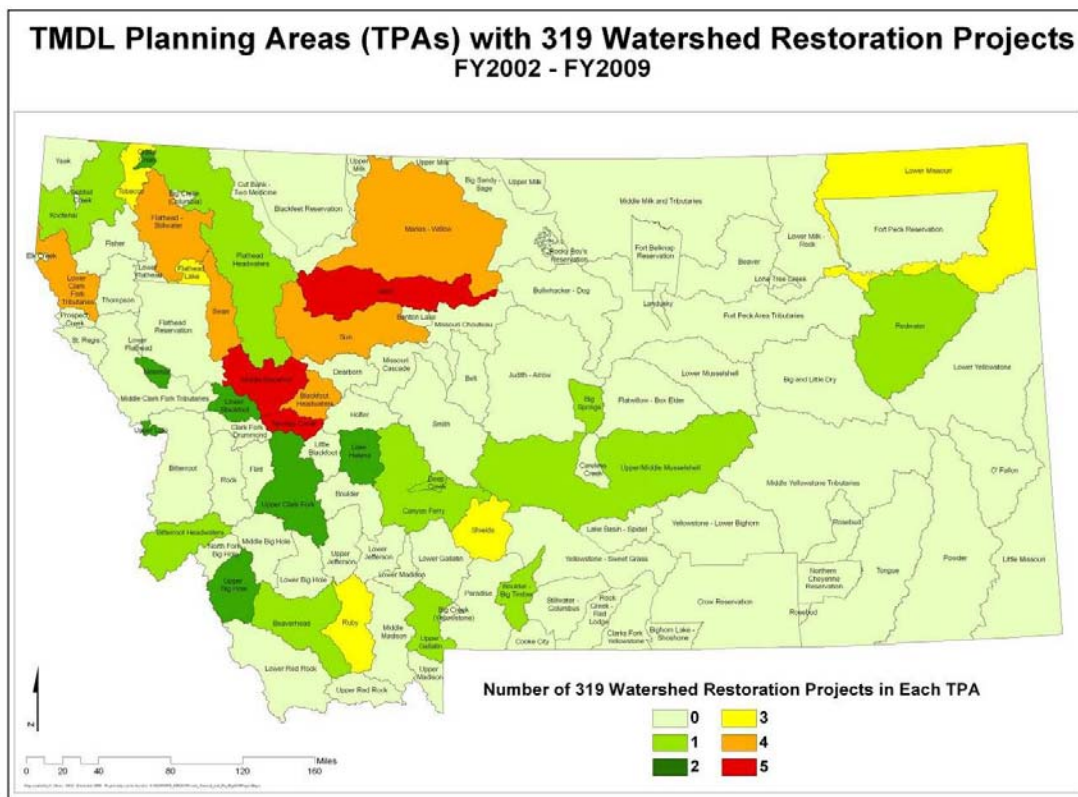
DEQ's Watershed Protection Section has a limited amount of funding under the federal CWA Section 319 to assist local groups with watershed restoration, groundwater, and education projects. The WQPB closed out the Fiscal Year 2004 319 planning and project grant and all open grants and related tasks are on schedule. Montana has a balance of ~22% remaining of unexpended 319 funds awarded, one of the lowest balances in the nation. The DEQ awarded \$900,000 in 319 nonpoint source grants, funding 9 watershed restoration, 3 groundwater, and 3 education and outreach projects in 2009 (Appendix C). Non-federal in-kind match for these projects amounted to \$881,568. The DEQ utilized \$300,000 in 319 CWA funds for TMDL planning efforts in 2009 for a total projects grant of \$1.2 million. Two project audits were conducted during 2009: Trout Unlimited which exceeded expectations and the Bitterroot Water Forum which needs improvement.

DEQ also provides a limited amount of funding under the federal CWA Section 319 to assist local groups with education projects that are focused on water quality and nonpoint source pollution through the mini-grants program. These projects are funded at \$1,500 per grant and are awarded on a twice per year cycle. In 2009 the DEQ closed out 16 mini-grant projects and awarded \$1,500 to each of 15 new projects (Appendix D) with the second call for FY10 applications beginning in January 2010.

A significant portion of the Montana's Section 319 project funding is used for implementation of practices on the ground that help to mitigate NPS pollution. The MT DEQ reports on pollutant load reductions for applicable projects and these estimated reductions often continue long after

the project has closed. Therefore, it is difficult to provide exact numbers for load reductions on completed projects. However, if we combine reported estimated load reductions between fiscal years FY2004 to FY2008 the State has achieved a reduction in of 80,033 pounds per year of nitrogen, 20,508 pounds per year of phosphorus, and 24,736 tons per year of sediment. The DEQ expects to get load reduction benefits for sediment, nitrogen, and phosphorous from five 2009 watershed restoration projects including: the Ruby Three Fork Corral Project, the Big Hole Restoration Planning & Education Project, Deep Creek -Teton River Implementation Project, the Bigfork Storm Water Project, and Swan Watershed TMDL Implementation.

The Watershed Protection section currently administers and tracks TMDL implementation projects. The section currently has more than 20 active contracts implementing various aspects of Water Quality Plans/TMDLs. In 2009, the section created a summary of all 319 projects funded from fiscal year 2002 through fiscal year 2009. The summary includes several maps that display projects by year and by project category (watershed restoration, ground water, and education & outreach). Between fiscal years 2002 to 2009, the section completed 79 watershed restoration projects in Montana (see map below). The section is now working on a comprehensive spreadsheet that will track implementation projects.



Notably, a portion of section 319 funds for implementing NPS and TMDL water quality restoration strategies have been used by local watershed groups to support implementation of NPS best management practices (BMPs). Partners within the Swan River Watershed have implemented a number of forestry BMPs leading to documented water quality improvements in the watershed (see highlight box on page 9).



## Section 319 Nonpoint Source Success Story

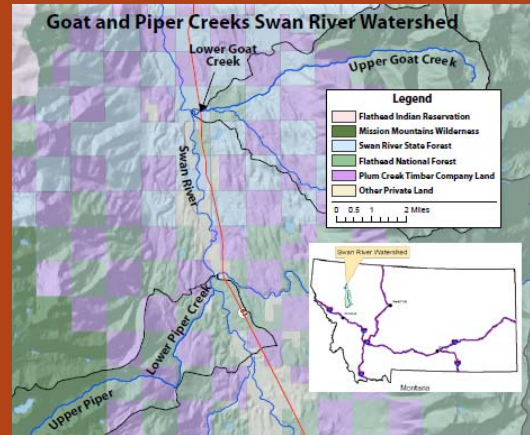
### Lower Piper and Upper & Lower Goat Creeks Forestry Best Management Practices Improve Water Quality

319 Nonpoint Source Success Stories focus on nonpoint source-impaired waterbodies where restoration efforts have led to documented water quality improvements.

Historic forestry activities impaired Lower Piper Creek and Upper and Lower Goat Creek, prompting Montana to add these three segments to its 1996 Clean Water Act section 303(d) list of impaired waters. Water quality improvement efforts have been underway for the past 20 years. In 1989 Montana adopted forestry BMPs. In 1991 the state enacted a Streamside Management Zone law, which limits the removal of riparian vegetation for commercial timber harvest and the use of potentially harmful timber harvest practices near waterbodies.

Landowners collaborated with federal and state agencies to implement forestry best management practices (BMPs) in Goat and Piper creeks, resulting in decreased concentrations of suspended solids and nutrients in these creeks over time.

Water quality improved, and in 2006 Montana removed Upper Goat Creek from the 303(d) list for nutrients and Lower Piper Creek and Lower Goat Creek for siltation.



Roadside catchments capture sediment from runoff and allow water to infiltrate and sediment to settle out.

The section staff continued to work with watershed groups to develop watershed restoration plans (WRPs) in 2009. The 319 program is currently funding fourteen groups that are in various stages of developing their watershed plans. The section hosted a Watershed Restoration Plan (WRP) workshop for these 14 groups in Bozeman on August 27, 2009. DEQ is working to provide local groups the resources and capacity to develop an approvable WRP.

In 2009, the Watershed Protection staff continued to participate in Streamside Management Zone (SMZ) reviews. SMZ reviews, through the statewide voluntary Forest Practices audits, have assessed 47 timber sales over the past 2 years. The water quality monitoring for these audits now includes road culvert monitoring protocols for evaluating their ability to provide for fish passage. The culvert evaluations produce a rating of the fish passage improvements, provided by the timber sale/SMZ restoration work, in relation to potential for achieving near-natural fish passage rates. Those culverts meeting full fish passage generally also meet the road crossing SMZs for effective flow and sediment transport.

## 2009 Montana Storm Water Conference



The Watershed Protection Section staff in conjunction with the Natural Resources Conservation Service, the Montana Chapter of the Soil and Water Conservation Society, the Sonoran Institute, the Greater Gallatin Watershed Council, the Montana Contractor's Association, and the Region 8 Environmental Protection Agency held the first ever statewide storm water conference, "Clear Choices: Storm Water Solutions for Montana", April 7<sup>th</sup>-9<sup>th</sup> 2009.

The Clear Choices Storm Water Conference raised awareness of the impacts of urban and suburban storm water pollution on state waters and beneficial uses. The conference focused on densely populated areas and areas with increasing development. The purpose of the conference was to advance the knowledge and understanding of storm water management for those dealing in all aspects of planning, design, implementation, and regulatory compliance. Civil engineers, city and county planners, local officials, developers, contractors and water resource managers throughout Montana and the region attended.

Additionally, the conference brought together permittees with DEQ and EPA agency staff and local planning, water, and conservation groups to discuss issues and explore strategies pertaining to the development, implementation, and enforcement of Storm Water Management Programs for Small Municipal Separate Storm Sewer Systems (MS4s).

The Greater Gallatin Watershed Council provided a storm water tour of Bozeman that visited commercial and residential developments in various stages of construction. Scott Olson from Altitude Training Associates held a training for Storm Water Management During Construction. Both optional events were well attended and received.



Bozeman Storm Water Tour

DEQ is currently working with the Montana State University Extension Service on a 319 grant contract, focusing on the development and implementation of education and outreach activities to address nonpoint source pollution from small livestock operations. During 2009, the 319 funds were used to plan and prepare for the 2010 Montana AFO/CAFO Roundtable, to be held January 12<sup>th</sup> and 13<sup>th</sup> in Billings, MT. Day 1 of the Roundtable will be geared to educating agency personnel (e.g. NRCS, Extension Service, DEQ, EPA, etc.), and day 2 will be geared towards educating livestock operation managers. 319 funds were also used in 2009 to update and maintain the [www.AFOstewardship.org](http://www.AFOstewardship.org) website. The site serves as a clearinghouse of information on environmental stewardship for animal feeding operations.

The Watershed Protection Section staff created a [Nonpoint Source Wiki page\\*](#), a collaborative website designed to allow the public to participate in web-based "discussions", leaving comments or asking questions about nonpoint source issues. The wiki also allows 319 grantees to review and add documents, creating a space for sharing and collaboratively working on 319 grants as they progress. Additionally, the section staff is frequently working with the WQPB administration staff to modify and update the DEQ WQPB Website as needed. The [nonpoint source program page\\*\\*](#) has undergone a major transformation in 2009 with a new main page, side-bar and several new informative pages and links.

\* <http://montananps319grants.pbworks.com/FrontPage>

\*\* <http://deq.mt.gov/wqinfo/nonpoint/NonpointSourceProgram.asp>

## Data Management Section

The Data Management Section provides technical support services for the Nonpoint Source Program and for the entire Water Quality Planning Bureau of the Planning, Prevention, and Assistance Division in the areas of data systems development and management for water quality metric data, water quality assessments, contract management and administration, and reference library.

The Section's Data Management staff administered Montana's STORET water quality database system, including assistance to outside users with the web-based STORET Interface Module (WebSIM). The last STORET upload of DEQ monitoring data occurred June 2009. A new database system is replacing Montana's STORET database. The new EQuIS-based WQX database (MT-eWQX) was put into production in December 2009 with staff completing the migration of 988,000 result records to the National WQX database via the network node (CDX). The staff developed user guides for preparing Electronic Data Deliverables (EDDs), provided external user training for data providers, and analytical laboratories on how to prepare EDDs for the new MT-eWQX data system.

In 2009, the Section administered the Clean Water Act Information Center which provides public access to Montana's Water Quality Integrated Report (305(b) and 303(d) Lists. A 60-day public comment period was conducted by staff on the 2008 Integrated Report (IR). The State's Final IR and accompanying 303(d) list was provided to EPA Region 8 on October 5, 2009 and approved by EPA Region 8 in December.

Data Management staff began development of Phase 2 of the program's "WARD" data system, for managing water quality assessments. Phase 2 of the project will provide the program with tracking tools for waterbody-pollutant listing (i.e., TMDL tracking) from initial listing through TMDL development and subsequent state-mandated 5-year reviews.

Web 2.0 wiki sites for the Watershed Management Section's TMDL Program and Watershed Protection Section's 319 Grant Program are developed and administered by the Data Management staff.

The Section's modeling staff provided TMDL modeling support for the following TPAs: Bitterroot River (nutrients and temperature), Upper Clark Fork River (nutrient and sediment), Big Hole River (temperature and nutrients), and Flathead Lake watershed (nutrients). Modeling staff also provided modeling support for the development of numeric nutrient criteria using the Yellowstone River as a pilot study area. Modeling staff continued to work with USDA Agricultural Research Station in Temple, TX and Texas A&M University on the development of a Biozone Algorithm to be incorporated into the Soil & Water Assessment Tool (SWAT) model for explicit modeling of on-site wastewater treatment system impacts to surface waters. Additionally, modeling staff is working with a contractor to develop a revised and update Statewide Precipitation Map.

## **Quality Assurance and Quality Control Section (QAQC)**

The QAQC Section supports the Nonpoint Source Program, the Bureau, and its assisting contractors by describing the management and technical procedures that will assure the quality of environmental information used to support decisions. This is referred to as a "quality system." It provides the Bureau with a practical framework for managing the quality of activities resulting in environmental determinations and controls.

QAQC staff continues to work on a water quality monitoring strategy for the Bureau that will include monitoring of intermittent streams and development of processes. The State's Monitoring Strategy was delivered to the EPA in 2009.

QAQC implemented collaborative monitoring processes with the Bureau of Land Management, US Forest Service, Tri-State Water Council, US Geological Survey, University of Montana, and a number of conservation districts, watershed groups, and non-profit organizations. The section also collaborated with the Greater Gallatin Watershed Council Volunteer Stream Monitoring Program in volunteer training.

The QAQC Section collaborated in the development of five SAPs, and also worked on an addendum to a SAP, all focusing on monitoring 319 restoration activities for effectiveness and pollutant load reductions including: Little McCormick Creek SAP; Bigfork Stormwater Project SAP; Teton Spring Creek Enhancement Project SAP; Big Spring Creek Stream and Riparian Assessment SAP; Poorman Creek Culvert Replacement SAP; Blackfoot Challenge SAP (note, SAP has not been finalized yet; still waiting on the Challenge); Pondera County Conservation District (AN-wasteway)/addendum to existing SAP for contract.

QAQC worked with the Watershed Protection Section in Approving the Montana Watercourse/Montana State University Extension Water Quality Volunteer Monitoring General Quality Assurance Project Plan. All volunteer groups that receive funding through the 319 program will be required to submit a Sampling Analysis Plan under the general volunteer monitoring QAPP.



## DEQ Collaborating Partners

The Water Quality Planning Bureau has carried out NPS goals and successfully maintained the viability of watershed groups across the state through supporting and coordinating with organizations such as the Montana Watershed Coordination Council, Montana Watercourse, Montana State University Extension, Montana Association of Conservation Districts, and various Montana agencies.

### Montana Watershed Coordination Council (MWCC)

The Montana Watershed Coordination Council is a statewide information and support network created to advance local watershed work. The coordination council links together local watershed groups, natural resource agencies, and private organizations with the goal of enhancing, conserving, and protecting natural resources and sustaining the high quality of life in Montana for present and future generations. The network allows organizations to share resources, identify and capitalize on opportunities for collaboration, and avoid duplication of efforts and projects.

Two MWCC Committees, Water and Education & Outreach, are chaired by DEQ staff. Five MWCC work groups are co-chaired by DEQ staff including the Water Activities Work Group, Training Group, Outreach Materials, the Water Quality Monitoring Work Group, and the Groundwater Work Group. These and the other MWCC work groups offer forums to agencies, academia, conservation district, watershed groups, and non-profit group personnel to discuss issues and offer solutions to water resource needs in Montana. Please visit the new MWCC website for a comprehensive list of participating agencies at [www.mtwatersheds.org](http://www.mtwatersheds.org).

MWCC work groups had a successful year resulting in several significant outcomes including two watershed-coordinator training events with 57 participants combined, an awards ceremony that recognized outstanding watershed stewards, a new MWCC website that houses watershed resources, and a new VISTA program.

#### MWCC Training

##### *Trees Water and People*

MWCC in conjunction with the Montana Watercourse closed out a grant with Trees Water and People (TWP) as part of the Protecting the *Water of the Arid West* project. The generous funding from TWP allowed MWCC to deliver professional training to 260 watershed professionals representing 67 watershed groups or conservation districts. In 2009, the grant funded the spring watershed-coordinator training and several BSPPA trainings:



*Spring Training*

On April 21-22, 2009, MWCC held a Spring Watershed Coordinator Training, “Implementing a Watershed Management Plan.” This training had two major components, writing locally driven program neutral watershed plans and utilizing watershed assessments and tools. Other activities included a session on Institutional Frameworks for Watershed Management, an Information Fair related to the assessments section, and concluded with a session on identifying future training needs. Twenty-eight people attended the training.

*BSPPA*

The Big Sky Public Procurement Association in conjunction with MWCC as part of the TWP grant provided cost effective training for local organizations and governments in the areas of procurement and contract management. In 2009, BSPPA held five Certified Procurement Professional trainings, two Certified Contract Specialist trainings, and two Certified Contracts Officer trainings.

Trees Water and People held a “Western Headwaters Roundtable,” as part of the *Protecting the Water of the Arid West* project led by TWP and funded by an EPA Targeted Watersheds Capacity Building Grant. Thirty-seven people attended the TWP Conference in Colorado for a two and a half day discussion about the future of watershed protection efforts, focusing on local watershed groups and their statewide councils. One MT DEQ staff attended and five of the eight attendees from Montana are members of the MWCC and were able to provide significant input regarding Montana watersheds and nonpoint source issues into the discussions.



TWP Roundtable - Keynote Speaker Mary Kelly -Photo credit Lacey Gaechter



MWCC Fall Training: B-Bar Ranch, MT

*Fall Training*

The MWCC received a grant from PPL Montana to hold the 10<sup>th</sup> Annual Watershed Coordinator Fall Training on September 8-10, 2009, “Building Better Projects, Project Development, Project Management, and Communication.” The training had 29 participants ranging from watershed coordinators to agency staff. This training incorporated formal instruction sessions, and small group and individual assignments that culminated in a draft project, project management plan and an elevator speech, including key talking points. Participants

worked on a specific project they could take away and further develop, following a general framework that will be useful in developing and managing other projects. Additionally, a session on success stories allowed for celebration and the opportunity to hear about projects and activities that other watershed groups could emulate.

### 2009 Wetland and Watershed Stewardship Joint Award Ceremony

Every two years, the Montana Watershed Coordination Council and the Montana Wetland Council jointly honor their stewardship award recipients. This year the Montana Watershed Stewardship Award recognized the Yellowstone River Conservation District Council for outstanding contributions toward promoting the health and viability of the Yellowstone River through broad community collaboration. The Council's purpose is to provide local leadership and assistance, and guidance for the wise use and



Yellowstone River Conservation District Council Members presenting at Award Ceremony

conservation of the Yellowstone River's natural resources. The YRDC is developing planning and management tools that will promote voluntary best management practices that minimize impacts to the river corridor. The YRDC is embarking on a restoration initiative that will result in substantial ecosystem and recreation benefits along the entire river in Montana and North Dakota. The MWCC also recognized Robert Ray, DEQ Watershed Protection Section and NPS program manager, for the Agency Support Award. MWCC acknowledged his high level of participation in the organization, broad impact across the state, positive interactions at the local watershed level, and his longevity in participating with and actively managing watershed issues.

### New MWCC Website

The MWCC has secured a new website server and domain, [www.mtwatersheds.org](http://www.mtwatersheds.org). The website also has a new design intended to provide easy access to watershed resources and MWCC activities. The website links to the MWCC Facebook page, which houses photos from MWCC events and links to a Google Calendar to keep members up-to-date on MWCC activities. There are two new features “Be a member” and “Donate today”, allowing MWCC to increase participation and acquire the funds needed to continue producing quality products for the watershed community.

### VISTA Program

Kevin McNellis began his VISTA service shared between the Montana Youth Restoration Partnership [MYRP] and MWCC, in September. Kevin will develop the framework for what the VISTA program will look like across the state. He will help to identify what is needed, how the MWCC can best serve watershed groups through this program, and how the MWCC can link with other partnership programs. He may help with capacity building and grant writing to get the program operational, and will help to establish a framework and network for the launching of the statewide program in 2010. Kevin will also work closely with the Swan Ecosystem Center Volunteer that is serving as the MWCC on-the-ground pilot program. He will also be working with the Montana Conservation Corps [MCC] to continue developing a partnership with MWCC, provide a well-educated volunteer labor force on the ground, and perhaps eventually run the local administration for the VISTA program.

### 2010 MWCC Watershed Symposium

Planning participants selected the Colonial Inn in Helena as the facility for the 2010 Symposium. The three-day event, titled *Connecting Communities*, is scheduled for September 7-9, 2010. Sessions will include full conference sessions and concurrent break out sessions. Specific topics and speakers are in development. The symposium will offer a poster session and networking opportunities on the first evening.

## Riparian Campaign Collaboration

The DEQ Watershed Protection Section is collaborating with several groups who are developing statewide riparian education campaigns including the Governor's Riparian Task Force "Room to Roam Campaign," the Flathead CD and partners' "Riparian Buffer Education Campaign" (see highlight box on page 17), the Montana Watercourse's "NPS Riparian & Wetland Buffer Education Program, and other various organizations. The Governor's Riparian Task Force is currently working with MACD to hold streamside best management practice (BMP) listening sessions around the state to gather information on existing streamside BMPs, record new ideas,

### Construction

#### The Challenge:

Erosion logs are in place, but not properly installed or maintained, allowing sediment to enter into the waterway.



### Streamside BMP: Erosion Control During Construction

Erosion control blankets and erosion logs are properly installed to help stabilize the soil on stream banks and prevent sediment from entering into the waterway.



and allow Montanans to share the successes they have achieved in protecting natural resources. DEQ's Watershed Protection Section aided in the creation of a poster for the listening sessions that features several examples of challenges to streamside management and appropriate BMPs. Construction challenges and BMPs (left) are one of the many issues the listening sessions intend to address. Others include: urban, suburban, transportation, agriculture, recreation, landowner, and recreation issues.



## Riparian Buffer Education Media Campaign

**Partners:**

Flathead Conservation District (FCD), Missoula Valley Water Quality District (MVWQD), Gallatin Local Water Quality District (GLWQD), Lewis and Clark County Water Quality Protection District (LCCWQPD), Ravalli County Environmental Health (RCEH) and Lake County Environmental Health (LCEH)

**Goal of the Riparian Buffer Education Media Campaign:**

Increase public awareness of the important functions of native riparian vegetation, and foster development of a social norm that encourages establishing, improving and maintaining healthy riparian areas.

**Objective:**

Develop Montana regional media campaign highlighting the importance of healthy native riparian vegetation in protecting water quality, fish and wildlife habitat, and in preventing bank erosion and flooding.

**Project update:**

The original campaign plan was to modify the Missoula Valley WQD radio and newsprint ads that referenced the Linnaeus classification system. However, the partners decided that the campaign could be more effective if all new ads were developed, and sought input from other partners including the Governor's Riparian Task Force. Below is the new ad concept that will run for five weeks in the spring of 2010 on TV, radio, and in web banners.



Leave Plants Along Rivers and Lakes | [WaterSmartMT.org](http://WaterSmartMT.org).

**Campaign Content:**

When you remove native trees and shrubs like cottonwoods and willows from along a river or lake .... it does more than just clear out vegetation....it causes erosion, makes it easier for pollution to get into the water, and destroys wildlife habitat. It clears out everything you enjoy about living near the water. Leave native plants along rivers, streams and lakes. Visit [WaterSmartMT dot com](http://WaterSmartMT.com) to learn more.

## Volunteer Monitoring Partnership

In 2009 the Montana Watercourse, in conjunction with the DEQ, put together a Volunteer Water Quality Monitoring Plan that intends to promote and support volunteer monitoring statewide by offering educational opportunities, professional training, data analysis and management, and comprehensive follow-up for Montana's committed volunteers and educators. During the past two years, MTWC and MSUEWQ successfully completed a pilot volunteer monitoring certification program funded by DEQ that was designed to increase the quality of data collected by volunteers. Their joint effort produced a solid foundation for future certified volunteers. Building on this success, the two entities propose to continue growing the volunteer water monitoring network.

Several partners will share in the responsibility of carrying out the plan. The Department of Environmental Quality currently maintains the Wiki Volunteer Monitoring website, provides NPS Water Quality Specialists (within existing resources constraints) for technical assistance, and provides funding for laboratory analysis support. The Montana Watercourse intends to conduct the volunteer monitoring program coordination, provide database support, maintain the Volunteer Monitoring Handbook, and provide Level 1, 2 and database trainings. Montana State University Water Quality Program plans to assist with data analysis, conduct volunteer field checks, assist in SAP development, and provide certification training. The MWCC Water Quality Monitoring Work Group has agreed to review Sampling Analysis Plans.

## Montana Wetlands Council



### MONTANA WETLAND COUNCIL

1520 E Sixth Ave • P.O. Box 200901 • Helena, MT 59620-0901 • Phone (406) 444-6652

The Montana Wetlands Council is an active network of diverse interests that works cooperatively with the DEQ and other organizations to conserve and restore

Montana's wetland and riparian ecosystems. 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." In 2008, the Council published a strategic wetland plan titled "Priceless Resources: A Strategic Framework for Wetland and Riparian Area Conservation and Restoration in Montana 2008-2012." The Strategic Framework addresses the two inherent aspects of EPA's water resource programs (outreach and education and watershed approach) and all six core elements critical to effective comprehensive wetland programs (regulation, monitoring and assessment, restoration, water quality standards, public-private partnerships, and coordination).

In 2009, DEQ assisted the Wetland Council towards fulfilling its objectives by highlighting various wetland and riparian area conservation and management needs.

Areas of assistance include:

- DEQ held three Council meetings focusing on different topics. Meeting topics and actions from meetings include:
  - **January 15** - Integrating wetlands into watershed restoration planning and restoration activities. **Follow up** - DEQ Wetland Program wrote and received an EPA wetland

program development grant to work with two watershed groups to demonstrate integrating wetlands into DEQ 319 watershed restoration plans and planning process.

- **May 7** – MWC and MWCC Award Ceremony and Riparian Area Protection Panel. **Follow up** – DEQ Wetland Program contracted with the Montana Association of Conservation Districts to conduct streamside best management practices listening session 14 communities across Montana.
- **September 23** - Tools and resources available for local governments, Conservation Districts, watershed groups, Tribes, and others to help identify, protect, and manage wetlands and riparian resources. **Follow up** - the Bitter Root Water Forum discussed their workshop (partially funded w/ Wetland Program Development Grant funds) titled "Smart Building Near Streams in the Bitterroot: A course for Ravalli County Realtors," that helped educate 44 realtors about wetland and riparian issues in the Bitterroot Valley." As a result, three other watersheds/communities are working to replicate this project and the power point presentation given to Realtors in the Bitterroot has been downloaded 261 times in the last month.
- Montana Audubon completed a DEQ Wetlands Program contract involving numerous resources for local government to help them protect streams and riparian areas. These resources are all available on the web: <http://mtaudubon.org/issues/wetlands/planning.html>
- The DEQ updated the Wetlands Clearinghouse: <http://deq.mt.gov/wqinfo/Wetlands/Index.asp>. The updated version includes specific information on the activities of Strategic Framework Working Groups and the Montana Wetland Council, current grant and funding opportunities, policy and legislation related to wetlands and other pertinent information.

## Nonpoint Source Program Areas of Concern and Future Recommendations

Although the Water Quality Planning Bureau staff and collaborating organizations were able to address many of the NPS goals, there are still several goals that did not receive support in 2009. These areas of concern include assisting in the review of subdivision storm water rules; forming and sustaining a MS4 task force to promote and coordinate storm water management activities; SMZ review for protection of water quality through collaborative research projects; and the development of a statewide educational campaign for small farm and ranch conservation. The NPS program is grossly underfunded and understaffed given the scope and needs of the program.

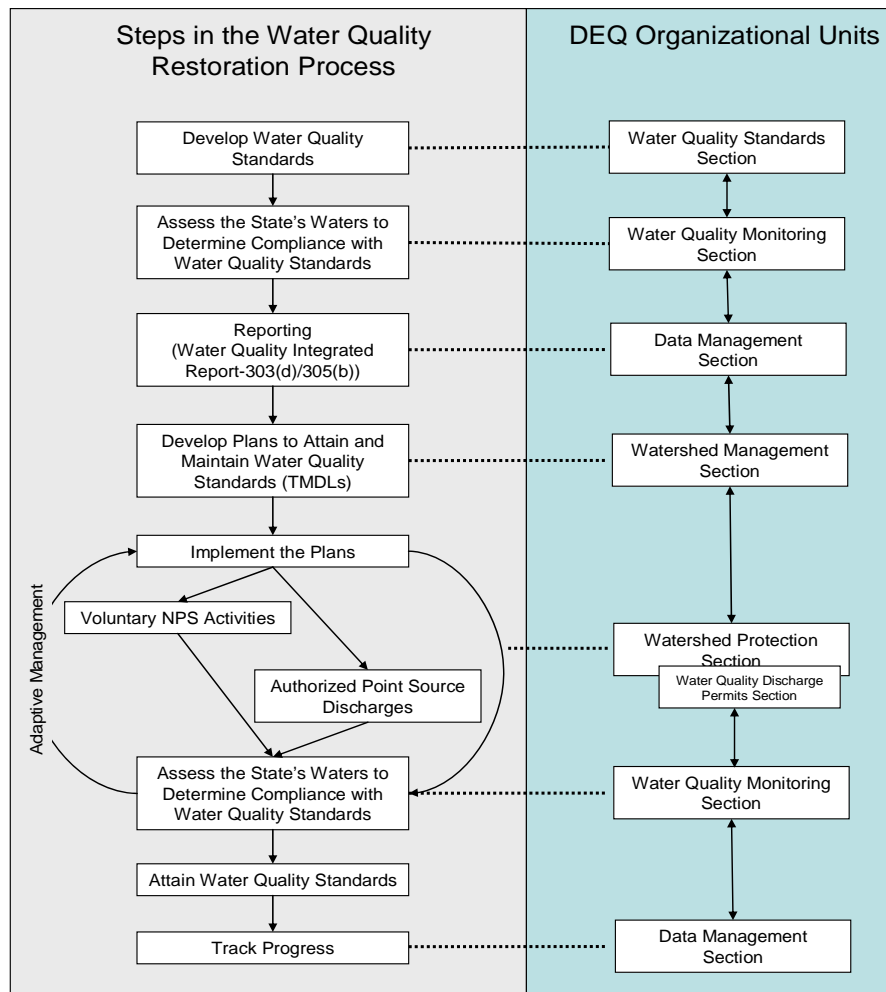
Montana NPS program priorities for 2010 include concentrating on animal feeding operations throughout Montana. Success within the NPS program demonstrate that collaborating with organizations such as MWCC and MACD is an effective way to support watershed groups and conservation districts (CDs) throughout Montana. DEQ staff will continue to contribute to these organizations by providing funding and staff time for events such as the 2010 Symposium and GIS training, and in the creation of resources for watershed groups and CDs through enhancing resources like the MWCC website.

## Appendices

### Appendix A – WQPB Integrated Approach

**To WQPB's integrated approach:**

1. The Standards Section defines the goals for a waterbody by designating its uses, setting criteria to protect those uses, and establish provisions to protect waterbodies from pollutants
2. The Monitoring Section monitors water quality conditions and trends statewide, and assesses sources and severity of pollution problems
3. The Data Management Section reports the assessment findings
4. The Watershed Management Section develops TMDL plans for waters not meeting standards
5. The Watershed Protection Section supports implementation of the plans
6. Additionally, the water quality standards developed by the Standards Section are used throughout the Agency, such as in the Montana Pollutant Discharge Elimination System (MPDES) program, to ensure clean water protection by all permitted point-source dischargers.



**Appendix B - Montana Nonpoint Source Management Program Five Year Goals and Action Plan**

The Montana Nonpoint Source (NPS) Management Program's goal is to protect and restore water quality from the impacts of nonpoint sources of pollution in order to provide a clean and healthy environment. The short-term (five-year) goal of Montana's NPS Management Program is to demonstrate significant progress in protecting and restoring the water quality of Montana from nonpoint sources of pollution as measured by achieving the actions outlined in the NPS management plan. These actions focus on three specific areas: resource specific goals, policy specific goals, and education and outreach specific goals.

<b>Resource Specific Five-Year Goals for the State's Nonpoint Source Plan</b>	
<b>Five-Year Goal</b>	<b>Measurable Outcome</b>
Complete Water Quality Plans and necessary TMDLs	<p>The Watershed Management Section received EPA approval for TMDLs in six TPAs in 2009: Boulder Big Timber, Shields, Prospect Sediment, Middle and Lower Big Hole, Upper Jefferson Tributaries Sediment, and Upper and North Fork Big Hole.</p> <p>The section submitted TMDLs for three additional TPAs to EPA for approval in 2009: Lower Blackfoot, Tobacco Sediment, and Upper Clark Fork Sediment/Metals/Temperature</p> <p>In 2009 the Watershed Management Section completed additional data collection, assessment and reporting on 15 TMDL project areas including: Upper Gallatin Sediment; Upper Gallatin Nutrients and Pathogens; Bitterroot Sediment and Temperature; Landusky Metals; Lower Clark Fork Tributaries Sediment; Little Blackfoot Nutrient, Sediment, and Metals; Missouri – Cascade – Belt Metals; Bitterroot Nutrients; Redwater Nutrient and Salinity; Flint Nutrient, Sediment, and Metals; Lower Gallatin; Flathead; Boulder – Elkhorn; Beaverhead Sediment, Temperature, Metals, and Nutrient; and Upper Jefferson Metals, Nutrient, and Temperature.</p>
Conduct water quality assessments state-wide	The Water Quality Monitoring Section (WQMS) completely assessed 20 waters in 2009, which will be reflected on the 2010 Water Quality Integrated Report.
Review/update Integrated Water Quality Report (305(b)/303(d))	A 60-day public comment period was conducted by staff on the 2008 Integrated Report. The State's Final IR and accompanying 303(d) list was provided to EPA Region 8 on November 5, 2009. EPA Region 8 approval occurred in December 2009.
Reference site monitoring and assessment	The WQMS staff sampled 16 sites in 2009 as part of the Reference Site Project.
Increase DEQ internal monitoring support for TMDL program	WQMS - All water quality monitoring data from 27 streams, 16 reference sites, and 24 lakes collected in 2009 will support TMDL development directly or indirectly.
Work with watershed groups to develop watershed restoration plans	The Watershed Protection section staff continued to work with watershed groups to develop watershed restoration plans (WRPs) in 2009. The 319 program is currently funding fourteen groups that are in various stages of developing their watershed plans. The section hosted a Watershed Restoration Plan (WRP) workshop for these 14 groups in Bozeman on August 27, 2009. DEQ is working to provide local groups the resources and capacity to develop an approvable WRP.

Resource Specific Five-Year Goals for the State's Nonpoint Source Plan	
Five-Year Goal	Measurable Outcome
Implement restoration projects identified in Water Quality Plans/TMDLs	The Watershed Protection section currently administers and tracks TMDL implementation projects. The section currently has 20 active contracts implementing various aspects of Water Quality Plans/TMDLs. In 2009, the section created a summary of all 319 projects funded from fiscal year 2002 through fiscal year 2009. The summary includes several maps that display projects by year and by project category (watershed restoration, ground water, and education & outreach). Between fiscal years 2002 to 2009 the section completed 79 watershed restoration projects in Montana. The map below displays the location of these watershed restoration specific projects in each TMDL planning area. The section is now working on a comprehensive spreadsheet that will track implementation projects.
Monitor 319 restoration activities for effectiveness and pollutant load reductions	The QAQC Section collaborated in the development of five SAPs, and also added an addendum to a SAP, all focusing on monitoring 319 restoration activities for effectiveness and pollutant load reductions including: Little McCormick Creek SAP; Bigfork Stormwater Project SAP; Teton Spring Creek Enhancement Project SAP; Big Spring Creek Stream and Riparian Assessment SAP; Poorman Creek Culvert Replacement SAP; Blackfoot Challenge SAP (note, SAP has not been finalized yet; still waiting on the Challenge); Pondera County Conservation District (AN-wasteway)/addendum to existing SAP for contract.
Establish a statewide monitoring strategy for monitoring of 319 and other watershed restoration activities for practice effectiveness, load reductions, and in-stream water quality achievements.	QAQC staff continues to work on a water quality monitoring strategy for the Bureau that will include monitoring of intermittent streams and development of processes. The strategy was delivered to the EPA in 2009.
Conduct 5-year reviews of completed and implemented TMDLs	The Watershed Protection Section has a draft template for five year reviews of completed and implemented TMDLs. Three watersheds are currently in the evaluation process: Big Creek (N Fork Flathead), Big Spring, and Upper Lolo.
Collaborate with federal, state, and local agencies to promote conservation tillage (no-till, direct seed), vegetated filter strips, and riparian buffers	DEQ is currently working with the Blackfoot Challenge, the Montana Department of Fish, Wildlife and Parks, the Army Corps of Engineers, and local landowners in the Nevada Creek watershed on a 319 grant contract. The contract involves stream restoration and the installation of riparian buffers.
SMZ review for protection of water quality, 2 facets: 1)restored watershed monitoring 2)collaborative research projects (i.e. DNRC & Plum Creek)	1) The Watershed Protection Section staff participated in SMZ reviews. The reviews, through the statewide voluntary Forest Practices audits, have assessed 47 timber sales over the past 2 years. The water quality monitoring for these audits include road culvert monitoring protocols on their relative degree of fish passage. This monitoring assesses the degree of fish passage blockage from existing culverts. The audits produce a rating of the fish passage improvements provided by the timber sale/SMZ restoration work in relation to potential for achieving near-natural fish passage rates. Those culverts meeting full fish passage generally also meet the road crossing SMZs for effective flow and sediment transport.  2) No current results to report
Overlap priority areas with USFS/DNRC using GIS for coordinating watershed planning process (needs assessment versus existing budgets)	The Watershed Protection Section is participating in Multi-Agency Integrated Restoration Strategy (MA-IRS) being coordinated by Department Natural Resources and Conservation.

<b>Resource Specific Five-Year Goals for the State's Nonpoint Source Plan</b>	
<b>Five-Year Goal</b>	<b>Measurable Outcome</b>
Work with MSU Extension, DNRC, USFS R8, NRCS, and BLM to develop a targeted list of BMPs for grazing (those that achieve water quality standards)	The Watershed Protection staff is participating in the Animal Feeding Operations/Confined Animal Feeding Operation Partnership, and also providing 319 support to MSU Extension for grazing BMPs.
Provide reviews and comment on outside agency proposed projects	The staff of the Watershed Protection Section continued to provide review and comment on outside agency proposed projects as requested.
Develop, maintain and enhance Clean Water Act Information Center public access to data system	In 2009, the staff administered the Clean Water Act Information Center which provides public access to Montana's Water Quality Integrated Report (305(b) and 303(d) Lists.
Administer STORET water quality database system	The Section's Data Management staff administered Montana's STORET water quality database system, including assistance to outside users with the web-based STORET Interface Module (WebSIM). Last STORET upload of DEQ monitoring data occurred June 2009. The new database system implemented is replacing Montana's STORET database. The new EQUIS-based WQX database (MT-eWQX) was put into production in December 2009 with staff completing the migration of 988,000 result records to the National WQX database via the network node (CDX).
Administer web-based STORET Interface Module for non-DEQ STORET data submittals	The staff developed user guides for preparing Electronic Data Deliverables (EDDs), provided external user training for data providers, and analytical laboratories on how to prepare EDDs for the new MT-eWQX data system.
Initiate monitoring project for "large rivers" (e.g. Missouri, Yellowstone)	The Monitoring Section continues working with the Standards and Modeling Sections in evaluating the data and results from 2007 to develop a nutrient model for large rivers.

## Montana's NPS Management Program 2009 Annual Report

Policy Directed Five-Year Goals for the State's Nonpoint Source Plan	
Five-Year Goal	Measurable Outcome
<p>Provide 319 funding to projects that implement NPS and TMDL water quality restoration strategies</p>	<p>The WQPB closed out the Fiscal Year 2004 319 planning and project grant. All open grants and related tasks are on schedule. Montana has a balance of ~22% remaining of unexpended 319 funds awarded, one of the lowest balances in the nation. The DEQ awarded \$900,000 in 319 nonpoint source grants, funding 9 watershed restoration, 3 groundwater, and 3 education and outreach projects in 2009 (Appendix C). Non-federal in-kind match for these projects amounted to \$881,568. The DEQ utilized \$300,000 in 319 CWA funds for TMDL planning efforts in 2009 for a total projects grant of \$1.2 million.</p> <p>DEQ's Watershed Protection Section has a limited amount of funding under the federal CWA Section 319 to assist local groups with education projects that are focused on water quality and nonpoint source pollution through the mini-grants program. These projects are funded at \$1,500 per grant and are awarded on a twice per year cycle. In 2009 the DEQ closed out 16 mini-grant projects and awarded \$1,500 to 15 new projects (Appendix D) with the second call for FY10 applications beginning in January 2010.</p>
<p>Develop and implement DEQ water quality improvement MOUs with agencies including USFS, BLM, DNRC, MDT, and MFWP</p>	<p>The Watershed Protection staff developed an MOU between the DEQ and the Bureau of Land Management (BLM) that identifies the commitments for communicating and acting on nonpoint source water quality issues. The goal of the MOU is "To maintain or restore water quality on lands managed or influenced by the Bureau of Land Management."</p>
<p>Assist in efforts to develop a cumulative impact assessment strategy for ground-water impacts in high density septic/development areas</p>	<p>The WPS is working with Lewis and Clark County on a groundwater 319 grant that may be useful as model for other areas. The 319 grant provides Lewis and Clark County with funding to assist in developing a program to ensure proper maintenance of septic systems by homeowners. Inadequate or lack of septic system maintenance has been demonstrated to impact drinking water and the environment.</p>
<p>Assist in the review of subdivision storm water rules.</p>	<p>No activity</p>
<p>Implement collaborative monitoring processes with federal, state, and local agencies on federal and state land projects, focusing on riparian zone management in achieving water quality standards</p>	<p>QAQC implemented collaborative monitoring processes with the Bureau of Land Management, US Forest Service, Tri-State Water Council, US Geological Survey, University of Montana, and a number of Conservation Districts, Watershed Groups, and Non-Profit Organizations. The section also collaborated with the Greater Gallatin Watershed Council Volunteer Stream Monitoring Program in volunteer training.</p>
<p>Continue water quality participation in the ITEEM process by collaborating with the IRTWG group</p>	<p>This effort, led by Montana Department of Transportation to better coordinate and plan for environmental impacts on large-scale transportation corridors, has been put on hold due to economic concerns.</p>



<p>Develop numeric nutrient water quality standards and implementation procedures for surface waters</p>	<p>In early 2009 the Water Quality Standards Section was involved with the drafting and support of Senate Bill 95, now codified at MCA 75-5-313. This legislation allows for the granting of temporary variances from numeric nutrient standards in cases where meeting the standards would result in demonstrable economic hardship to a community. The net affect of the legislation is that DEQ will be able to implement numeric nutrient criteria in a more phased manner, allowing more time to address all sources of nutrient pollution (point source and nonpoint source). The Standards Section felt that passage of this bill was a key component of implementing numeric nutrient standards, since the concentrations indicated by the science are in some cases quite stringent and may be difficult to meet.</p> <p>As part of MCA 75-5-313, a "Nutrient Work Group" advisory group was created which supersedes the earlier, informal stakeholder advisory group convened by DEQ. The Nutrient Work Group comprises a wide array of Montana stakeholders, from agriculture to industry to environmental groups, and includes representatives from industries which mainly contribute to nonpoint sources. This legislatively-mandated advisory group is currently working with DEQ to develop implementation procedures for numeric nutrient criteria. As part of this process, an addendum to the 2008 nutrient criteria recommendation document will be developed in 2010, and will contain updated criteria recommendations. DEQ's work with the Nutrient Work Group will likely continue into the middle of 2010 and beyond; the anticipated outcome is draft numeric nutrient standards rules for presentation to the Board of Environmental Review.</p>
<p>Develop technical basis for a lake classification system based on nutrient status</p>	<p>The Standards Section began collating into a database all lake data that have been collected since 2003 by DEQ, as well as all other available Montana lake data. This is a first step towards the analytical phase, wherein DEQ will begin to work on an empirically-based lake classification system. The first steps of the analytical phase should begin in early 2010.</p>

<p>Promulgate numeric standards for all pesticides identified in Montana ground and surface waters.</p>	<p>The Standards section produces a document (CIRCULAR DEQ-7) containing numeric water quality standards for Montana's surface and ground waters. Provisions of state and federal law require the adoption of standards that will protect the designated beneficial uses of state waters, such as the support of aquatic life, public water supplies, recreation, or agriculture. The numeric water quality standards in this Circular have been established for parameters (i.e., "pollutants") that are categorized as toxic, carcinogenic, bioconcentrating, radioactive, nutrient, or harmful. In 2009/10, the planned updates to this document include five revisions of existing standards, 11 new priority pollutants, 7 new non priority pollutants and updating to reflect federal recommendations on providing frequency and duration criteria for the existing numeric criteria. In order to address the adoption of numeric standards for all pesticides, the Circular contains ground water standards for pesticides developed in compliance with the Montana Agricultural Chemical Ground Water Protection Act (80-15-201, MCA). CIRCULAR DEQ-7 is regularly updated as additional information or guidance from EPA becomes available. This year, we also plan to add 21 new pesticides to DEQ-7 that were detected in groundwater during 2008/2009.</p> <p>The Water Quality Standards Section has also undertaken an extensive review of the water chemistry associated with sodium bicarbonate introduction from coal bed natural gas deposits. This work is preparatory to evaluating the need for a bicarbonate standard.</p>
<p>Develop biocriteria for wadeable streams</p>	<p>In 2009, DEQ Water Quality Standards Section staff reviewed a study initiated in 2008 that explored how different macroinvertebrate sampling protocols affected the Montana macroinvertebrate indicators of water quality. While the staff intended to develop a way to "translate" results obtained from the different sampling methods so that historical data can be compared to current data, the differences between the methods prevented an accurate translator mechanism from being built. The staff will use the knowledge gained from this study when they develop the next iteration of biological indicators in early 2010.</p>
<p>Develop Standard Operation Procedures (SOP) for monitoring intermittent streams</p>	<p>QAQC staff continues to work on a water quality monitoring strategy for the Bureau that will include monitoring of intermittent streams and development of processes. The strategy was delivered to the EPA in 2009.</p>
<p>Review and recommend revisions or updates to Montana's Ground-Water Plan</p>	<p>Ground-water Plan update by Department of Natural Resources and Conservation currently on hold while pursuing development of State Water Plan.</p>
<p>Form a MS4 task force to promote and coordinate storm water management activities</p>	<p>The 2009 Clear Choices Storm Water Conference brought together permittees with DEQ and EPA agency staff and local planning, water, and conservation groups to discuss issues and explore strategies pertaining to the development, implementation, and enforcement of Storm Water Management Programs for Small Municipal Separate Storm Sewer Systems (MS4s). Additionally, staff created a general storm water communication forum (wiki site). Additional activities are on hold while the Section is not fully staffed.</p>

Education and Outreach Five-Year Goals for the State's Nonpoint Source Plan	
Five-Year Goal	Measurable Outcome
<p>Provide support and promote the development and coordination of watershed groups through MWCC activities, training workshops, advertising campaigns, etc.</p>	<p>Two MWCC Committees, Water and Education &amp; Outreach, are chaired by DEQ staff. Five MWCC work groups are co-chaired by DEQ staff including the Water Activities Work Group, Training Group, Outreach Materials, the Water Quality Monitoring Work Group, and the Groundwater Work Group. These and the other MWCC work groups offer forums to agencies, academia, conservation district, watershed groups, and non-profit group personnel to discuss issues and offer solutions to water resource needs in Montana. Please visit the new MWCC website for a comprehensive list of participating agencies at <a href="http://www.mtwatersheds.org">www.mtwatersheds.org</a>.</p> <p>MWCC work groups had a successful year in 2009, resulting in several significant outcomes including two watershed-coordinator training events with 57 participants combined, an awards ceremony that recognized outstanding watershed stewards, a new MWCC website that houses watershed resources, and a new VISTA program.</p>
<p>Support the certification of volunteer monitors in watershed groups</p>	<p>In 2009 the Montana Watercourse, in conjunction with the DEQ, put together a Volunteer Water Quality Monitoring Plan that intends to promote and support volunteer monitoring statewide by offering educational opportunities, professional training, data analysis and management, and comprehensive follow-up for Montana's committed volunteers and educators. During the past two years, MTWC and MSUEWQ successfully completed a pilot volunteer monitoring certification program funded by DEQ that was designed to increase the quality of data collected by volunteers. Their joint effort produced a solid foundation for future certified volunteers. Building on this success, the two entities propose to continue growing the volunteer water-monitoring network.</p> <p>Several partners will share in the responsibility of carrying out the plan. The Department of Environmental Quality currently maintains the Wiki Volunteer Monitoring website, provides NPS Water Quality Specialists (within existing resources constraints) for technical assistance, and provides funding for laboratory analysis support. The Montana Watercourse intends to conduct the volunteer monitoring program coordination, provide database support, maintain the Volunteer Monitoring Handbook, and provide Level 1, 2 and database trainings. Montana State University Water Quality Program plans to assist with data analysis, conduct volunteer field checks, assist in SAP development, and provide certification training. The MWCC Water Quality Monitoring Work group has agreed to review Sampling Analysis Plans.</p> <p>QAQC worked with the Watershed Protection Section in Approving the Montana Watercourse/Montana State University Extension Water Quality Volunteer Monitoring General Quality Assurance Project Plan. All volunteer groups that receive funding through the 319 program will be required to submit a Sampling Analysis Plan under the general volunteer monitoring QAPP.</p>

Montana's NPS Management Program 2009 Annual Report

<p>Improve DEQ website for public access to information on NPS Program</p>	<p>The Watershed Protection Section staff created a <a href="#">Nonpoint Source Wiki page*</a> , a collaborative website designed to allow the public to contribute by starting discussions, leaving comments or asking questions about nonpoint source issues. The wiki also allows 319 grantees to review and add documents, creating a space for sharing and collaboratively working on 319 grants as they progress. Additionally, the section staff is frequently working with the WQPB administration staff to modify and update the DEQ WQPB Website as needed. The <a href="#">nonpoint source program page**</a> has undergone a major transformation in 2009 with a new main page, side-bar and several new informative pages and links.</p>
<p>Develop educational campaign: Urban growth and development issues (i.e. storm water runoff, septic system maintenance, transportation infrastructure, low impact development)</p>	<p>The Watershed Protection section staff in conjunction with several sponsors held the first statewide storm water conference. The Clear Choices Storm Water Conference raised awareness of the impacts of urban and suburban storm water pollution on state waters and beneficial uses. The conference focused on densely populated areas and areas with increasing development. The purpose of the conference was to advance the knowledge and understanding of storm water management for those dealing in all aspects of planning, design, implementation, and regulatory compliance. Civil engineers, city and county planners, local officials, developers, contractors and water resource managers throughout Montana and the region attended.</p>
<p>Develop educational campaign: Riparian and wetland buffer protection</p>	<p>The Watershed Protection Section is collaborating with several groups who are developing statewide riparian education campaigns including MSU's Watercourse, the Governor's Task Force for Riparian Protection and a consortium of local water quality protection districts, conservation districts and counties.</p>
<p>Develop educational campaign: Small farm and ranch conservation. Work with NRCS, DNRC, MSU Extension, and Farm Bureau</p>	<p>DEQ is currently working with the Montana State University Extension Service on a 319 grant contract, focusing on the development and implementation of education and outreach activities to address nonpoint source pollution from small livestock operations. During 2009, the 319 funds were used to plan and prepare for the 2010 Montana AFO/CAFO Roundtable, to be held January 12th and 13th in Billings, MT. Day 1 of the Roundtable will be geared to educating agency personnel (e.g. NRCS, Extension Service, DEQ, EPA, etc.), and day 2 will be geared towards educating livestock operation managers. 319 funds were also used in 2009 to update and maintain the <a href="#">www.AFOstewardship.org</a> website. The site serves as a clearinghouse of information on environmental stewardship for animal feeding operations.</p>
<p>Work with Statewide organizations (i.e. MEEA, Project WET) to establish and expand water curriculum in schools</p>	<p>The Watershed Protection Section manages the 319 funded NPS Education for Diverse Audiences grant administered by the MSU Montana Watercourse. In 2009, MT Watercourse worked with the Office of Public Instruction, Project WET, Project Webfoot, Project Learning Tree, Watershed Education Network and others to hold workshops and develop curriculum for the K-12 audience.</p>
<p>Develop and promote BMP training for road maintenance personnel using Local Technical Assistance Program (LTAP) and other venues</p>	<p>No Activity</p>

## Appendix C – 319 FY09 Project Summaries

Project Name	Project Sponsor	DEQ Project Officer	Project Type	319 Awarded Funds	Non-Federal Match Funds (required)	Total Project Cost
<b>Watershed Restoration Projects</b>						
Ruby Three Fork Corral	Ruby Valley Conservation District	Mark Kelley	Restoration	\$65,000.00	\$45,000.00	\$110,000.00
Big Hole Restoration Planning & Education	Big Hole Watershed Committee	Mark Kelley	Restoration	\$135,000.00	\$330,600.00	\$465,600.00
Deep Creek - Teton River Implementation Project	Teton River Watershed Group	Mark Ockey	Restoration	\$115,000.00	\$113,650.00	\$228,650.00
Shields River Watershed Restoration Plan	Park Conservation District	Mark Ockey	Restoration	\$25,000.00	\$15,000.00	\$40,000.00
Bigfork Storm Water Project II	Flathead County	Robert Ray	Restoration	\$125,000.00	\$83,333.00	\$208,333.00
Sun River Flow Temperature Project	Sun River Watershed Group	Mark Ockey	Restoration	\$95,000.00	\$70,000.00	\$165,000.00
Middle Blackfoot TMDL Clearwater Implementation	Clearwater Resource Council	Mark Ockey	Restoration	\$20,000.00	\$15,000.00	\$35,000.00
Elk Creek Restoration Project	Lower Clark Fork Watershed Group	Robert Ray	Restoration	\$20,000.00	\$19,000.00	\$39,000.00
Swan Watershed TMDL Implementation	Swan EcoSystem Center	Robert Ray	Restoration	\$40,000.00	\$26,783.00	\$66,783.00
DEQ Watershed Protection Section Support	Montana DEQ	Robert Ray	Restoration	\$47,000.00	\$0.00	\$47,000.00
<b>SUB-TOTALS</b>				<b>\$687,000.00</b>	<b>\$718,366.00</b>	<b>\$1,405,366.00</b>
<b>Groundwater Projects</b>						
Clark Fork Watershed Septic Project	Tri-State Water Quality Council	Kristy Zhinin	Groundwater	\$38,000.00	\$25,371.00	\$63,371.00
Bitterroot Hazardous Waste Disposal	Ravalli County	Mark Kelley	Groundwater	\$30,000.00	\$35,675.00	\$65,675.00
Helena Area Groundwater Project	Lewis & Clark County WQPD	Robert Ray	Groundwater	\$30,000.00	\$21,489.00	\$51,489.00
<b>SUB-TOTALS</b>				<b>\$98,000.00</b>	<b>\$82,535.00</b>	<b>\$180,535.00</b>

		<i>Information &amp; Education Projects</i>				
NPS Riparian Wetland Buffer Education Campaign	Montana State University - Watercourse	Kristy Zhinin	E & O	\$52,000.00	\$34,667.00	\$86,667.00
Delivering Well Educated	Montana State University Extension Service	Kristy Zhinin	E & O	\$39,000.00	\$26,000.00	\$65,000.00
Mini-Grants	Montana DEQ	Kristy Zhinin	E & O	\$24,000.00	\$20,000.00	\$44,000.00
<b><i>SUB-TOTALS</i></b>				<b>\$115,000.00</b>	<b>\$80,667.00</b>	<b>\$195,667.00</b>
		<i>TMDL Planning Projects</i>				
Flint Creek TMDL Coordination	Granite County Conservation District	Darrin Kron	TMDL Planning	\$20,000.00	\$5,000.00	\$25,000.00
Lolo TMDL Coordination	Lolo Watershed Group	Banning Starr	TMDL Planning	\$10,000.00	\$10,000.00	\$20,000.00
Flathead TMDL Coordination	Montana DNRC - FBC	Rob Rung	TMDL Planning	\$15,000.00	\$3,000.00	\$18,000.00
Flathead TMDL Education & Outreach	Flathead County	Rob Rung	TMDL Planning	\$20,000.00	\$3,000.00	\$23,000.00
Upper Gallatin	Blue Water Task Force	Mark Kelley	TMDL Planning Restoration	\$10,000.00	\$5,000.00	\$15,000.00
Lower Gallatin	Greater Gallatin Watershed Council	Pete Schade	TMDL Planning	\$90,000.00	\$60,000.00	\$150,000.00
Montana TMDL At-Large	Montana DEQ TMDL	Dean Yashan	TMDL Planning	\$135,000.00	\$0.00	\$135,000.00
<b><i>SUB-TOTALS</i></b>				<b>\$300,000.00</b>	<b>\$86,000.00</b>	<b>\$386,000.00</b>
<b><i>GRAND TOTALS</i></b>				<b>\$1,200,000.00</b>	<b>\$967,568.00</b>	<b>\$2,167,568.00</b>

## Appendix D – 319 Projects Closed in 2009

Project Name	Description	Funding	Start Date	End Date
Flathead County Bigfork Stormwater PER	208009-Preliminary Engineering Report- w/expected follow-up	\$25,000	10/30/2007	6/30/2009
Kootenai River Network	207049-Grave Creek III	\$30,000	6/21/2007	6/30/2009
Lewis and Clark Water Quality Protection District	207043 - Coordination, E&O, Septic System maintenance	\$64,296	2006	6/30/2009
Montana Water Trust	208031-Prickly Pear Creek Re-watering Project	\$17,000	7/1/2008	6/30/2009
MWCC Program Assistance	209050-S&WCDofMT - MWCC Staff Support	\$20,000	1/1/2009	12/31/2009
Flathead CD	207039-Haskill Ck Maintenance & monitoring	\$25,000	2/7/2007	6/30/2009
MSU Watercourse	206051-NPS information & Education	\$75,290	6/30/2006	5/31/2009
MSU Watercourse	207052-Volunteer Monitoring Certification	\$19,890	6/21/2007	6/30/2009
MSU Water Center	208024-MWCC Website Upkeep	\$6,000	6/18/2008	6/30/2009
Blackfoot Challenge	206046-Restoration monitoring&stewardship	\$37,800	6/23/2006	6/30/2009

<b>319 Mini-Grants Awarded in 2009 (Fiscal Years 08 and 09)</b>					
<b>Contract</b>	<b>Project Sponsor</b>	<b>Project Title</b>	<b>Start Date</b>	<b>End Date</b>	<b>Funding</b>
WQPB-MG09-07	Beaverhead CD	Dillon Elementary 5th Grade Outdoor School Demonstrations	2/20/2009	2/28/2010	\$1,500
WQPB-MG09-08	Big Hole River Foundation	Technical Guidance Series	2/20/2009	2/28/2010	\$1,500
WQPB-MG09-09	Big Hole Watershed Weed Committee	Noxious Weed Awareness Project for Anglers	2/20/2009	2/28/2010	\$1,500
WQPB-MG09-10	Bureau of Land Management - Missouri Breaks Interp Center	Educator Water Quality Workshop	2/20/2009	2/28/2010	\$1,500
WQPB-MG09-11	Kalispell Public Works	Construction Site Erosion and Pollution Control Training	2/20/2009	2/28/2010	\$1,500
WQPB-MG09-12	Livingston Public School Dist 1 & 4	Fleshman Creek Stewardship Project	2/20/2009	2/28/2010	\$1,500
WQPB-MG09-13	Whitefish Lake Institute	Montana Lake Book (2nd Edition)	2/20/2009	2/28/2010	\$1,500
WQPB-MG10-01	JFK Elementary	Stormwater Management and Revegetation	8/14/2009	6/30/2010	\$1,500
WQPB-MG10-02	Bitter Root Water Forum	Our Valley, Our Water - Educational Forum	8/14/2009	6/30/2010	\$1,500
WQPB-MG10-03	Citizens Better Flathead	Flathead County Pharmaceutical Waste Stewardship Project	8/14/2009	6/30/2010	\$1,500
WQPB-MG10-04	Flathead Basin Commission	Basinwide Aquatic Invasive Species Conference - Flathead Basin	8/14/2009	6/30/2010	\$1,500
WQPB-MG10-05	Green Mountain CD	Sanders County Water Festival	8/14/2009	6/30/2010	\$1,500
WQPB-MG10-06	Lewis and Clark Water Quality Protection District	Second Annual Lake Helena Watershed Festival	8/14/2009	6/30/2010	\$1,500
WQPB-MG10-07	Miles City	Miles City River Awareness Summit	8/14/2009	6/30/2010	\$1,500
WQPB-MG10-08	Sleeping Giant Middle School	Non-Point-Source Pollution Storm Sewer Awareness Project	8/14/2009	6/30/2010	\$1,500
				<b>2009 Total</b>	<b>\$22,500</b>