Wyoming Nonpoint Source Management Plan 2013 Update

Wyoming Department of Environmental Quality
Water Quality Division
Nonpoint Source Program

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Acronyms Used

AFO	Animal Feeding Operation
AML	Abandoned Mine Lands Division
AST	Above Ground Storage Tank
BA	Brownfields Assistance Program
BIA-RMRO	Bureau of Indian Affairs—Rocky Mountain Regional Office
BLM	Bureau of Land Management
BMP	Best Management Practice
BOR	Bureau of Reclamation
CAFO	Concentrated Animal Feeding Operation
CHIA	Cumulative Hydrologic Impact Assessment
CWA	Clean Water Act
CWSRF	Clean Water State Revolving Fund
DWSRF	Drinking Water State Revolving Fund
EDAS	Ecological Data Application System
EPA	United States Environmental Protection Agency
EQC	Environmental Quality Council
FFY	Federal Fiscal Year
GRTS	Grants Reporting and Tracking System
HUC	Hydrologic Unit Code
IWI	Impaired Waters Index
LQD	Land Quality Division
MOU	Memorandum of Understanding
NEPA	National Environmental Policy Act
NRCS	Natural Resources Conservation Service
NTU	Nephelometric Turbidity Unit
OSLI	Office of State Lands and Investment
PPA	Performance Partnership Agreement
PPG	Performance Partnership Grant
QA	Quality Assurance
QAPP	Quality Assurance Project Plan
QC	Quality Control
RFP	Request For Proposals
SAP	Sampling and Analysis Plan
SHWD	Solid and Hazardous Waste Division
SLIB	State Loan and Investment Board
SMP	Management Plan for Pesticides in Groundwater
SMZ	Stream Management Zone
SOP	Standard Operating Procedure
STEPL	Spreadsheet Tool for the Estimation of Pollutant Loads
STORET	Storage and Retrieval Data Warehouse
STP	Storage Tank Program

SWIM	Surface Water Information Management
TMDL	Total Maximum Daily Load
UIC	Underground Injection Control
USACE	United States Army Corps of Engineers
USDA	United States Department of Agriculture
USFS	United States Forest Service
USGS	United States Geologic Survey
UST	Underground Storage Tank
UW	University of Wyoming
UWCES	University of Wyoming Cooperative Extension Service
VRP	Voluntary Remediation Program
WACD	Wyoming Association of Conservation Districts
WCC	Wyoming Community Colleges
WDA	Wyoming Department of Agriculture
WDEQ	Wyoming Department of Environmental Quality
WG&F	Wyoming Game and Fish Department
WOGCC	Wyoming Oil and Gas Conservation Commission
WQD	Water Quality Division
WQX	Water Quality Exchange
WSBP	Watershed-Based Plan
WSEO	Wyoming State Engineer's Office
WSFD	Wyoming State Forestry Division
WWAB	Water and Waste Advisory Board
WWDC	Wyoming Water Development Commission
WWDO	Wyoming Water Development Office
WWNRT	Wyoming Wildlife Natural Resource Trust
WWQRR	Wyoming Water Quality Rules and Regulations
WYDOT	Wyoming Department of Transportation
WYPDES	Wyoming Pollutant Discharge Elimination System

Acknowledgements

This Nonpoint Source Management Plan was written by the Nonpoint Source Program Coordinator of the Wyoming Department of Environmental Quality, Water Quality Division (WQD), with significant input from other WQD staff and the Nonpoint Source Task Force. This plan describes nonpoint source pollution control strategies that will be used by the WQD in coordination with activities conducted by other agencies or watershed groups at the federal, state, and local levels. Many of these agencies and watershed groups provided input on this management plan and their input was highly appreciated. Most importantly, the WQD would like to acknowledge the agencies, watershed groups, private landowners, and other citizens who have invested time, energy, and financial and technical resources to protect and restore Wyoming's water resources.

SECTION 1: Introduction

1.1 Purpose of this Document

The purpose of this document is to establish how the Wyoming Department of Environmental Quality (WDEQ), Water Quality Division (WQD) will implement its Nonpoint Source Program over the next five years. This document has been prepared to answer the following questions:

- What is the goal of the Wyoming Nonpoint Source Program?
- What objectives need to be met in order to achieve that goal?
- How will those objectives be achieved?
- When will those objectives be achieved?
- Who is responsible for ensuring that program objectives are achieved?
- How will the program measure and track progress towards achieving objectives?

By answering these questions, this Nonpoint Source Management Plan provides the WQD with an instrument to measure success in meeting federal and state water quality goals. In addition, the plan establishes how the program will use the efforts and input of citizens at the local level to identify and address nonpoint source pollution. The plan will also serve the WQD as a tool to evaluate effectiveness and efficiency of program activities and make adjustments as necessary to maximize program success. The plan is meant to be a dynamic document and as the Nonpoint Source Program makes progress towards its goal, this plan will be updated to reflect knowledge gained and lessons learned.

1.2 Legal Authority

This Nonpoint Source Management Plan has been prepared to meet federal regulations. Section 319(b) of the Clean Water Act (CWA) provides the legal basis for the implementation of state nonpoint source management programs and identifies the requirements states must meet to qualify for financial assistance under the Act.

Section 319(b) stresses two items which must be completed by a state prior to receiving grant funds to address nonpoint source pollution—the State Assessment Report and the State Nonpoint Source Management Program. The State Assessment Report, which the WQD has prepared on a biennial basis since 1988, provides a statewide analysis of water quality impairments caused by nonpoint source pollution. The State Nonpoint Source Management Program provides a direction for correction of these problems, as outlined within the Nonpoint Source Management Plan. The State Assessment Report, commonly referred to as the 305(b)/303(d) Integrated Report, and the Nonpoint Source Management Plan thus provide the basis for nonpoint source pollution management in Wyoming in accordance with Section 319(b) of the CWA.

In addition, this management plan has been prepared to meet the United States Environmental Protection Agency's (EPA) "Nine Key Elements of an Effective State Nonpoint Source Program". Beginning in fiscal year 1996, the EPA requested that states review and, as appropriate, revise nonpoint source management program plans to reflect nine key components. These nine key components were outlined in a 1999 EPA memorandum. Appendix C to this document contains a complete list of these nine key

elements and an explanation of how these nine key elements have been integrated into this management plan.

During 2011, the Section 319 Program underwent two national evaluations. The first was conducted by EPA for the Office of Management and Budget (A National Evaluation of the Clean Water Act Section 319 Program, November 2011); the second was conducted by the Government Accountability Office (Nonpoint Source Pollution: Greater Oversight and Additional Data Needed for Key EPA Water Program, May 2012). These evaluations have resulted in recommendations to improve the effectiveness and efficiency of the national Section 319 program and accelerate watershed restoration. Efforts continued into 2012 to evaluate and refine these recommendations with the overall goal of revising national Section 319 Program guidance and grant requirements. To the extent possible, this document has incorporated changing program guidance regarding state nonpoint source management plans as that information has become available. Should revised guidance necessitate further revisions to this Nonpoint Source Management Plan, the WQD will update this plan as appropriate after guidance becomes final.

This management plan has also been prepared in accordance with state regulation and policy. The WQD is the designated agency for water quality management in the State of Wyoming. The policy purpose of the Wyoming Environmental Quality Act as stated in §35-11-102 is to:

> *…enable the state to prevent, reduce and eliminate pollution; to preserve, and enhance the air, water and reclaim the land of Wyoming; to plan the development, use, reclamation, preservation and enhancement of the air, land and water resources of the state; to preserve and exercise the primary responsibilities and rights of the State of Wyoming; to retain for the state control over its air, land and water and to secure cooperation between agencies of other states, interstate agencies, and the federal government in carrying out these objectives.*

Sections 35-11-109 (a) (iii) and (viii) provide the Director of the WDEQ with adequate authority for securing intergovernmental cooperation in implementing the Nonpoint Source Management Program. Furthermore, §35-11-114 states that:

> *(a) The advisory board* [Water and Waste Advisory Board] *shall recommend to the council* [Environmental Quality Council] *through the administrator and director, comprehensive plans and programs for the prevention, control and abatement of air, water, and land pollution and the protection of public water supplies.*

This plan has been prepared by the WQD Nonpoint Source Program Coordinator with input from additional WDEQ staff, cooperating agencies and partners, and the Nonpoint Source Task Force. In accordance with state and federal regulations cited above and the WQD Continuing Planning Process, this management plan has received full public review and has been approved by the Director of the WDEQ, the Administrator of the WQD, and the Water and Waste Advisory Board (WWAB). In accordance with Section 319(b)(1) of the CWA, the WDEQ submitted the plan for certification by the Governor before submitting the plan to EPA for approval.

1.3 Statement of Program Goal

The goal of the Wyoming Nonpoint Source Program is:

> "*To identify sources of nonpoint source pollution to surface water and ground water of the State of Wyoming and to prevent and reduce nonpoint source pollution such that water quality standards are achieved and maintained.*"

1.4 Overarching Principles

The Wyoming Nonpoint Source Program will operate on several overarching principles to guide the program in achieving its goal. The overarching principles of the Wyoming Nonpoint Source Program are as follows:

- The program will work through voluntary and incentive methods to prevent and reduce nonpoint source pollution.
- The program recognizes that the most successful nonpoint source pollution control projects are those that are locally led. The program will work with local agencies, communities, watershed groups, and individuals to promote locally-led projects.
- The program recognizes that addressing nonpoint source pollution is a collaborative effort of many groups across the state. Therefore, the program will seek to build new partnerships and to maintain and improve existing partnerships with other state, local and federal agencies, watershed groups, non-profit organizations, and other parties or individuals also seeking to reduce nonpoint sources of pollution and improve water quality.
- The program will be structured and implemented such that there is a focus on realizing and documenting measurable improvements in water quality.
- The Nonpoint Source Program will administer its program as effectively and efficiently as possible.

1.5 Benefits of Improving and Maintaining Water Quality

Water quality plays an important part in maintaining Wyoming citizens' quality of life. Citizens want to be assured of clean, healthy drinking water sources for themselves and for future generations. In addition to providing safe drinking water sources, clean water supports agriculture, recreation, tourism, and other business opportunities. Clean water is also essential to support the ecological functions of healthy watersheds. Thus, protection of water resources benefits all Wyoming citizens.

Economically, water quality protection and improvement can be shown to be cost-effective. Developing new drinking water sources is almost always more costly than protecting an existing source. Healthy watersheds produce less sediment and other pollutants, thus reducing treatment costs for downstream water utilities. Property values and bank loans for property are dependent on availability of potable water sources. Contaminated irrigation supplies have the potential to devastate crops and the success of livestock operations is dependent on clean and reliable drinking water sources. Thus, the economic value of clean water resources is apparent, and it is worthwhile to note that protection of clean water resources is almost always less costly than restoration of polluted water resources.

Because it impacts every person within Wyoming, water quality has repeatedly been identified as a high priority issue by natural resource management agencies and conservation groups. While citizens

inherently recognize the value of their water resources, they may not recognize how they may personally affect water quality or how they can work to protect it. The WDEQ's voluntary programs, which include the Nonpoint Source Program, are aimed at providing information, education, technical assistance, and cost-share assistance to local sponsors for implementation of pollution prevention and restoration projects. Under CWA Section 319 grants managed by the Nonpoint Source Program, cost-share assistance can be used to conduct a wide range of nonpoint source projects, including planning and assessment studies, best management practice (BMP) implementation, information and education activities, and technical assistance projects.

1.6 Benefits of Local and Voluntary Initiative

As described above, water quality benefits all citizens; thus, water quality restoration and protection should be motivated from local levels. In addition, many factors, such as precipitation, soil type, slope, geology, vegetative cover, depth to ground water, and distance to surface water, can affect whether a land use will cause nonpoint source pollution. The site-specific nature of these factors, coupled with local economic, social, and cultural considerations, are conducive to best addressing and implementing prevention and restoration activities through local initiatives. These are reasons why the Nonpoint Source Program relies largely on local voluntary implementation by individual landowners, land management agencies, and/or land-users in a cooperative effort.

The Nonpoint Source Program promotes a watershed-based approach to planning and implementing nonpoint source pollution management. In most cases, a watershed-based approach that holistically and comprehensively evaluates all pollutant sources in a watershed and considers the economic and quality of life goals within each watershed is the most efficient and effective method for realizing local water quality improvements. However, the Nonpoint Source Program also recognizes that some water quality problems may be very site-specific and may not warrant a watershed approach.

Through public information and education, cost-share assistance, technical assistance, and cooperation with management agencies and other partners, it is felt that the majority of nonpoint sources of pollution can be corrected or prevented on a voluntary basis. However, if violations of the state's water quality standards occur, and BMPs have not been implemented, the WQD has the legal authority to take enforcement action based on Chapter 1 of the Wyoming Water Quality Rules and Regulations (WWQRR). Per Chapter 1 of the WWQRR, BMPs are defined as "a practice or combination of practices that after problem assessment, examination of alternative practices, and in some cases public participation, are determined to be the most technologically and economically feasible means of managing, preventing or reducing nonpoint source pollution." It is the policy of the WQD that enforcement action may be taken only where water quality standards violations have been documented based on credible data and where BMPs have not been implemented in good faith. Formal enforcement action would not be taken unless conference and conciliation failed. Conference and conciliation would consist of attempts to obtain commitments to voluntarily implement BMPs or modify BMPs to ensure standards are met. Upon failure of such negotiations, enforcement action may be taken.

1.7 Links to Other Documents

This management plan references several associated documents or sources of information. Text shown in blue represents hyperlinks to other documents referenced in this plan. If the reader is viewing this

document electronically in .pdf (Adobe) format, by clicking on the hyperlink, the reader can directly access the referenced document. For readers not using an electronic copy of this document, complete website addresses for referenced documents are provided in Appendix D. Typing the address into a web browser application will take the reader to the referenced document. Note that many links will take the reader to sites not operated or maintained by the WDEQ; links to these sites are provided for convenience and the WDEQ is not responsible for the content or maintenance of these sites.

SECTION 2: Nonpoint Source Pollution and Wyoming

2.1 Nonpoint Source Pollution

Unlike point source pollution, which can be traced back to a single defined source, nonpoint source pollution is caused by surface water runoff that is diffuse in nature and often widespread, making it difficult to assess and control the source of the problem. Nonpoint source pollution occurs when runoff from rainfall or snowmelt travels over and/or percolates through the ground and picks up contaminants. These contaminants are deposited into streams, lakes, rivers, and ground water. Nonpoint source pollution is generally associated with human land-disturbing activities such as urban development, agriculture, recreation, timber harvesting, and mineral resource extraction. Nonpoint sources of pollution continue to be recognized as the nation's largest remaining cause of surface water quality impairments. Nonpoint source pollution contributes to most of the water quality impairments currently identified within Wyoming, as documented in the WQD 2012 305(b)/303(d) Integrated Report.

Wyoming is a unique state with a wide range of physical characteristics. These characteristics influence the presence and availability of surface and ground water, the resulting uses of that water, and how those uses have the potential to cause nonpoint source pollution. An understanding of Wyoming's water resources, factors affecting the availability of water resources, and the resulting uses of those water resources is needed to better address nonpoint source pollution within the state.

2.2 Wyoming's Water Resources

2.2.1 Climate and Topography

Wyoming is characterized by an arid to semi-arid climate, high elevation, and an abruptly variable topography. A diverse mix of landscapes and plant communities is the result, including deserts with sparse vegetation, plains dominated by grasslands, intermountain basins dominated by sagebrush, foothill areas dominated by shrublands, and mountain ranges dominated by conifer forests and alpine meadows. While precipitation varies considerably across the state due to topographical influence and other factors, the long-term statewide average rainfall is approximately 13 inches per year (Curtis and Grimes 2004).

Wyoming is a high-elevation state with a mean elevation of 6,700 feet and an elevation difference of over 10,000 feet between the highest point in the state (Gannet Peak at 13,804 feet) and the lowest point in the state (Belle Fourche River at border with South Dakota at 3,100 feet) (Economic Analysis Division 2009). Most of the state's precipitation is received as snowfall in the high elevations, which melts and runs off into major river systems or recharges ground water aquifers. During peak run-off times during melting of the snowpack and during high-intensity storm events, flooding can occur. This, in combination with highly erosive soils in some areas of the state, can result in a significant amount of natural erosion.

The high elevation of the state results in a relatively cool climate, with an average annual temperature of 45.6 degrees Fahrenheit (Curtis and Grimes 2004). Rapid temperature changes are common. The high elevation and cooler climate also result in a short growing season, about 125 days for the major agricultural areas of the state (Curtis and Grimes 2004). The high

amount of wind in Wyoming in addition to low humidity and lots of sunshine can result in high evaporation rates.

Wyoming's climate, elevation, and topography all influence the presence and distribution of water resources in the state; and, as in other western states, limited precipitation means that water resources within Wyoming are also limited and thus highly valued. In fact, of the 97,814 square miles in Wyoming, only 713 square miles, less than 1%, are surface water area (Economic Analysis Division 2009).

2.2.2 Surface Waters

Wyoming is considered a headwater state, with most surface waters originating in Wyoming and few major river systems entering Wyoming from other states. The Continental Divide runs from the northwest area of the state to south-central Wyoming at the border with Colorado. Surface run-off drains into one of four major river basins. East of the Continental Divide, run-off drains into the Missouri River Basin via the Yellowstone River, Wind River, Bighorn River, Tongue River, and Powder River in the north; the Belle Fourche River, Cheyenne River, and Niobrara River in the east-central; and the Platte River in the southeast. West of the Continental Divide, run-off drains into the Columbia River Basin via the Snake River in the northwest, the Colorado River Basin via the Green River in the southwest, and the Great Basin via the Bear River also in the southwest. The Continental Divide splits in the south-central area of the state near Rawlins to form the Great Divide Basin, which is an isolated basin with no drainage to either ocean (see Figure 1).

While drinking water for human consumption is provided to Wyoming residents primarily through ground water, some surface waters are important supplies of drinking water. The seasonal nature of Wyoming's precipitation means that several of Wyoming's rivers have been dammed to store water. The Bureau of Reclamation (BOR) manages several lakes and reservoirs within the state. Besides drinking water, uses of the stored water include irrigation supply, hydro-electric power generation, industrial purposes, and recreation.

Riparian areas along surface waters are important ecological features. Only 1% or less of Wyoming is considered riparian, but the majority of native animals depend on riparian areas at some point during the year for food, water, shelter, and migration routes (Olson and Gerhart 1982). In addition, riparian areas filter sediment and nutrients to improve water quality and help to minimize the effects of flooding by storing water.

Figure 1. Map of Wyoming with United States Geological Survey hydrologic unit code (HUC) level 6 watersheds delineated. Watersheds in yellow drain to Missouri River Basin, purple to Columbia River Basin, pink to Great Basin, and blue to Colorado River Basin. Green indicates the Great Divide Basin which is a closed basin.

2.2.3 Ground Water

Ground water is an important resource to the citizens of Wyoming and is vital to many industries that support the state's economy. Approximately 80% of all Wyoming residents rely on ground water that wholly or in part provides water to municipal and other public water systems and supplies homes, businesses, industries, schools, and parks with drinking water. In addition, nearly all rural residents depend on ground water for drinking water and/or water for livestock and irrigation uses. Ground water in Wyoming may occur near the surface in some areas to many thousands of feet below the surface in other areas. Through springs and seeps, ground water contributes fresh water to surface water bodies and helps to support the ecosystems that develop around them.

Utilizing CWA Section 319 funding, WDEQ has developed important tools to identify areas where ground water may be easily impacted (i.e. "sensitive") from releases of waste products and chemical products, and priority areas (see Figure 2) where drinking water supplies, in particular, may be susceptible to contamination from overlying land use activities.

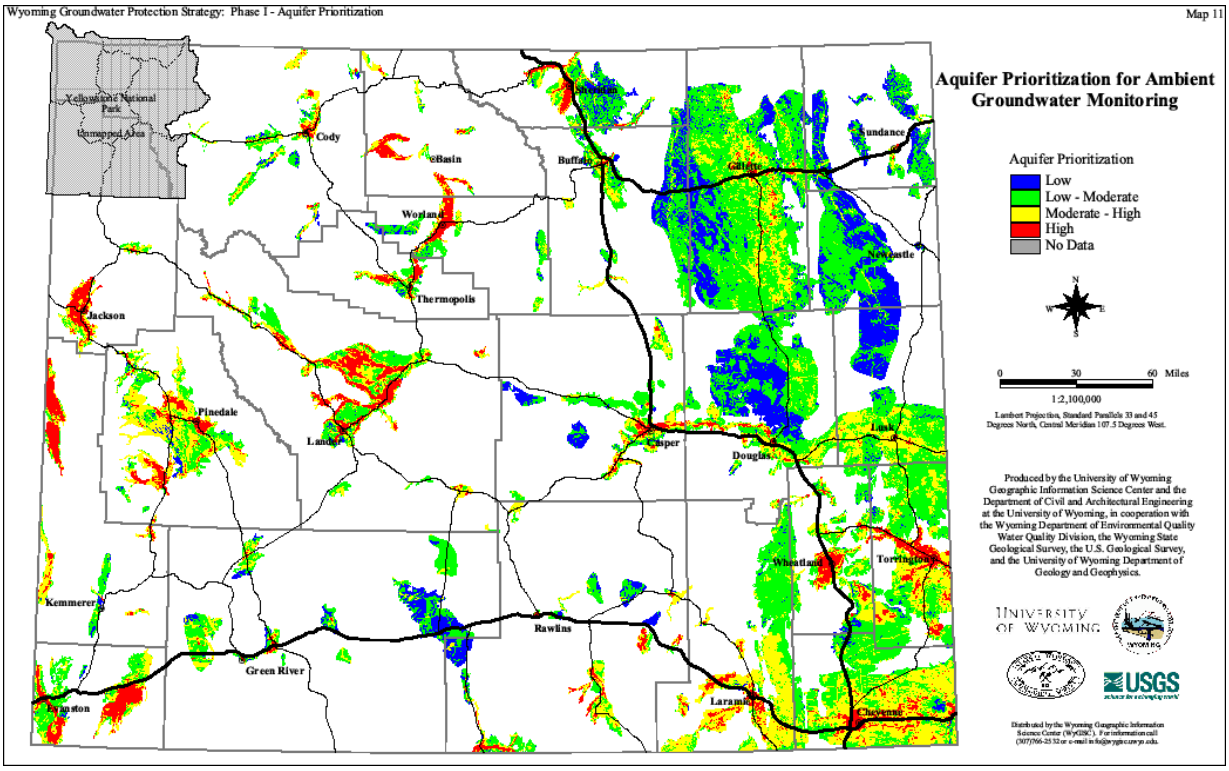

Figure 2. Map illustrating aquifer 'priority' areas where shallow groundwater (< 500' below surface) supplies are used for drinking water, are intrinsically 'sensitive' to contamination, and are overlain by land use activities that may release contaminants at the surface.

Protecting ground water resources is critical as restoring degraded ground water can be costly and difficult. Ground water management in Wyoming focuses on protecting, restoring, and monitoring ground water, with particular attention to shallow aquifers most susceptible to degradation from anthropogenic activities. Sources of pollution include both point sources and nonpoint sources. Nonpoint sources of ground water contaminants commonly include nitrates and pesticides from cropland and residential/commercial lawns; pathogenic bacteria, nitrates and ammonia from failing septic tanks; pathogenic bacteria and nutrients from livestock operations and wildlife; and toxic substances from residential, industrial, and commercial facility waste disposal, leaks and spills, and storage tanks. Ground water monitoring is an important element of both ground water protection and ground water restoration efforts and is a vital tool in measuring changes in ground water quality over time.

2.3 Land Ownership

A significant amount of the land in Wyoming, about 57%, is public land managed by a federal, state, or local government agency, while private lands comprise approximately 43% of the state (see Figure 3) (Economic Analysis Division 2009). The Bureau of Land Management (BLM) is the largest manager of public lands within the state (28%), followed by the United States Forest Service (USFS) (15%), the State Lands Commission (6%), and the National Park Service (4%) (Economic Analysis Division 2009). Two Native American tribes, the Eastern Shoshone and Northern Arapahoe, jointly govern the Wind

River Reservation, which encompasses approximately 1.9 million acres within Wyoming.

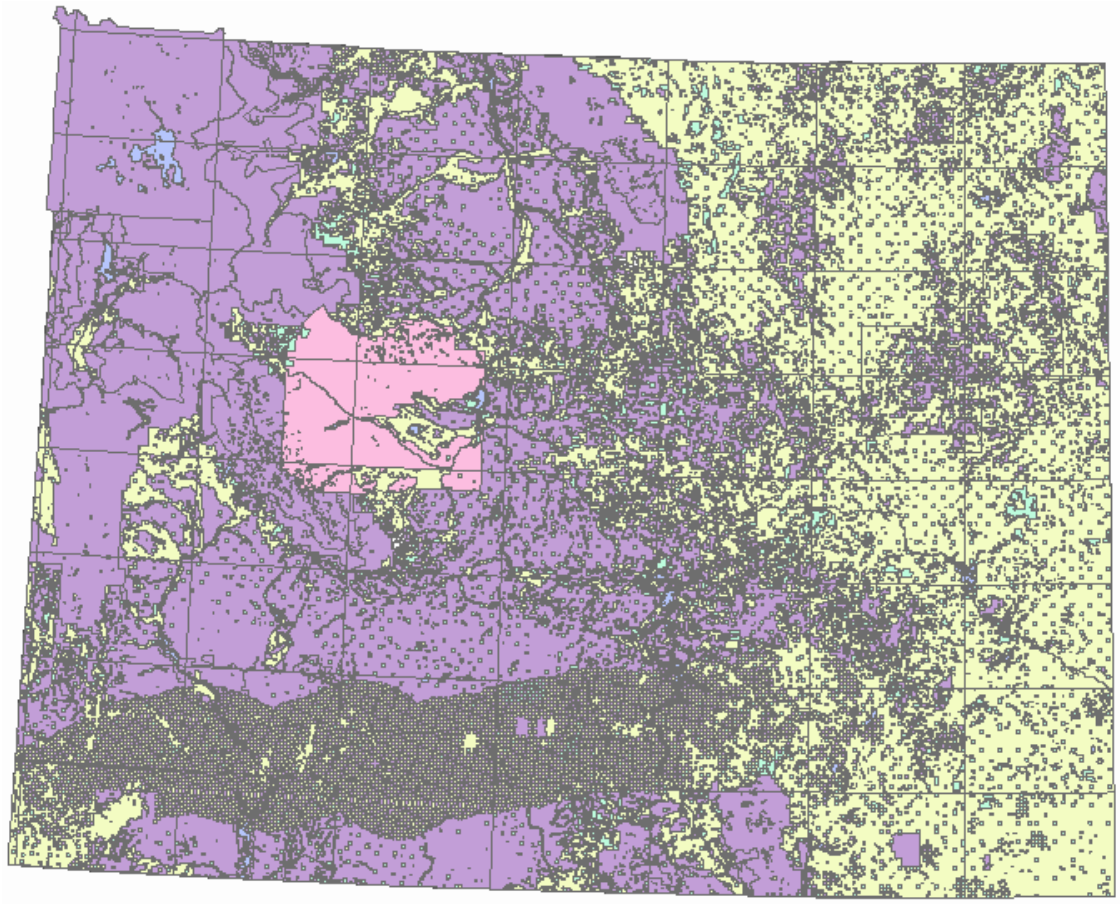

Figure 3. Map of Wyoming showing landownership. Federal lands shown in purple, state lands in green, tribal lands in pink, and private lands in yellow. Open water shown in blue.

2.4 Land Uses and Impacts to Water Quality

Wyoming's landscapes are used by humans for a multitude of purposes which have the potential to result in anthropogenic sources of nonpoint source pollution. The following sections present major land uses within Wyoming and associated sources of nonpoint source pollution that may potentially arise as a consequence of those uses. It needs to be recognized that nonpoint sources of pollution are inherently variable, and many factors, such as precipitation, soil type, slope, geology, vegetative cover, depth to ground water, and distance to surface water can affect whether or not a land use will cause nonpoint source pollution. BMPs can be implemented to prevent, mitigate, or eliminate nonpoint source pollution resulting from a particular land use.

2.4.1 Urban and Rural Residential

Nonpoint source pollution can be contributed from urban areas and urban development. In 2009, Wyoming's population was estimated to be just under 550,000 (Wyoming Department of Administration and Information n.d.). Census information shows the majority of Wyoming's population living in a city or town (Economic Analysis Division 2009). Most of Wyoming's

major urban areas are located near at least one stream or river. Protecting these streams and rivers is a major challenge and becomes more critical as urban areas experience population growth. For example, the cities of Cheyenne, Gillette, and Casper had significant population increases between 2000 and 2005 (Lieske and Taylor 2007).

The impervious surfaces (e.g. pavement, sidewalks, and buildings) that dominate urban areas increase the amount of surface runoff from these areas. Residential and industrial activities can contribute a wide variety of pollutants to the runoff which eventually enters surface water or ground water. Potential pollutants include oil and grease from automobiles, pesticides from lawn care, pathogens from pet wastes, nutrients from excessive fertilizer applications, metals washed from industrial sites, and toxic chemicals from improperly-disposed hazardous substances. Construction sites not properly managed can contribute large amounts of sediment to surface runoff from areas of exposed soils. Increased runoff from urban areas can cause increased flows or flooding within surface water channels causing increased bank erosion and sedimentation. Pollutants will accumulate in the urban setting during the interval between rainfall and snow melt events. When rain falls or snow melts there may be a sudden introduction of pollutants into lakes, rivers, streams, wetlands, and ground water because of such interval accumulation. This is known as the "first flush" effect.

Urban BMPs can help to control the quantity and quality of urban runoff. Some urban BMPs increase the permeability of urban surfaces to increase infiltration and reduce runoff volumes, others detain stormwater runoff to allow for pollutant treatment, and others work to reduce the amount of pollutants coming in contact with surface runoff. The Wyoming Nonpoint Source Urban BMP Manual is a reference for more information about urban BMPs. A copy of the current Urban BMP Manual can be found on the Wyoming Nonpoint Source Program website. Some stormwater discharges are regulated as point sources under the Wyoming Pollutant Discharge Elimination System (WYPDES) Program. More information about regulated stormwater discharges can be found on the WYPDES Storm Water Program website.

Wyoming has a significant rural population, with most Wyoming counties having an average of five people or less per square mile. The 2000 census showed approximately 35% of the population residing in unincorporated rural areas (Economic Analysis Division 2009). Between 2000 and 2005, rural areas in Wyoming showed a faster increase in growth than urban areas based on growth rates, with Fremont, Lincoln, Park, Sublette, and Sweetwater counties all showing the majority of their growth in rural areas (Lieske and Taylor 2007).

Rural residences also have the potential to contribute to nonpoint source pollution. Leaky or faulty septic systems can be a source of pathogenic bacteria or nutrients in surface or ground water. Mismanagement of rural properties near surface waters can lead to erosion and sedimentation from overgrazing or pathogenic bacteria from livestock improperly confined near surface water.

The open spaces in Wyoming are valued by its residents, and these open spaces have also been an attraction to out-of-state residents choosing to move to or purchase property in Wyoming, as well as in-state residents moving to rural areas or purchasing a second home. Teton, Sublette, Lincoln, Johnson, Crook and Carbon Counties all have greater than 10% of total housing units

being second homes (Taylor and Lieske 2002). Many newcomers and second-home owners purchase small acreage rural properties; these property owners are often first-time landowners and may not be familiar with proper land management practices to prevent and reduce nonpoint source pollution. The University of Wyoming Cooperative Extensive Service (UWCES), partially through Section 319 funding, has focused extensive outreach and education efforts to these small-acreage rural residents.

2.4.2 Agriculture

Agriculture is an important industry in Wyoming that includes cropland farming and livestock production. The agricultural sector output in Wyoming annually approaches or exceeds one billion dollars (USDA 2010). In 2009, there were 11,000 farms and ranches operating in the state, encompassing approximately 30 million acres (USDA 2010). The average farm/ranch size in 2009 was 2,745 acres, making Wyoming the first in the nation for this statistic (USDA 2010).

By far, the most common crop grown in Wyoming is hay, followed by barley, sugar beets, corn, wheat, and dry beans (USDA 2010). Limited precipitation and the seasonal nature of Wyoming's precipitation means that water for cropland irrigation can be scarce in many areas of the state and water storage and transportation structures such as dams and irrigation ditches are evident in many areas. Even so, only about 3% of the state is irrigated (Knight 1994), and dryland farming is common in some areas. Most cropland production occurs in the intermountain basins, such as the Bighorn Basin, the Green River Basin, the Wind River Basin, the Powder River Basin, and parts of the western Great Plains (Knight 1994).

Livestock grazing occurs over much of the rangelands in Wyoming. The cattle industry is the largest component of the Wyoming agricultural sector, accounting for 64% of all cash receipts in 2009 and including an inventory of 1.32 million head (USDA 2010). Sheep and lambs inventoried at 375,000 head and hogs and pigs inventoried at 87,000 head ((USDA 2010). Poultry, wool, and dairy production are more minor components of the Wyoming agriculture industry.

Like urban and rural residential activity, nonpoint source pollution can be caused by agricultural activity. Pesticide and fertilizer applications to cropland can cause contamination of surface water and/or ground water with pesticide degradates or nutrients. Soils left bare in dormant croplands can contribute sediment to surface waters via runoff or wind action. Irrigation in areas with high levels of selenium occurring naturally in the underlying bedrock can result in high selenium levels occurring in nearby surface waters due to irrigation return flow.

In an arid climate, livestock are naturally drawn to surface waters and riparian areas. Overgrazing of riparian vegetation near surface waters can contribute sediment through increased bank erosion from reduced vegetation and bank trampling. Geomorphologic changes in stream structure that can occur as a result of bank erosion can reduce a stream's ability to transport sediment and support fish and other aquatic life habitat. Pathogenic bacteria and nutrients can also be contributed from direct deposition of animal waste or surface runoff carrying animal waste from riparian or upland areas.

Nonpoint source pollution from cropland and grazing activity can be minimized by proper management. Many BMPs have been employed by Wyoming producers through the Section 319 program and other funding sources, including, to name just a few, fencing riparian areas, rotational grazing, development of upland water sources, and installation of water gaps. The Wyoming Nonpoint Source Program has a Cropland BMP Manual and a Livestock/Wildlife BMP Manual to provide agricultural producers with information about BMPs that can be used to mitigate nonpoint source pollution. Copies of these BMP manuals can be found on the Wyoming Nonpoint Source Program Website.

2.4.2.1 Concentrated Animal Feeding Operations

In animal feeding operations (AFOs), animals are confined in a small land area where feed is brought to them rather than the animals grazing or seeking feed in an open area such as rangeland or an open pasture. Potential sources of water quality pollution from AFOs include urine, manure, feed, and dead animals. An operation is considered an AFO if the animals are confined for at least 45 days in a 12-month period and there is an absence of grass or other vegetation in the confinement area during the normal growing season.

EPA has set criteria to further designate certain AFOs as Concentrated Animal Feeding Operations (CAFOs), for which a point source discharge permit is required under the WYPDES Program. These criteria were established as a federal rule in the February 12, 2003 Federal Register and are primarily based on the number of animal units contained in the AFO. Depending on the number of animal units, the facility is designated as a large, medium, or small CAFO. Facilities designated as Large CAFOs require a WYPDES permit. For example, AFOs that confine at least 1,000 cattle or cow/calf pairs are designated as Large CAFOs. Facilities that, based on animal units, qualify as a Medium CAFO must also have either a manmade ditch or pipe that carries manure or wastewater to surface water or must have the animals come into contact with surface water that passes through the confinement area in order to require WYPDES permit coverage. Facilities that are designated as Small CAFOs based on animal units can be designated as CAFOs and required to obtain a permit on a case-by-case basis by the permitting authority.

As of the date of this document, the WYPDES Program had permitted 49 CAFO operations in Wyoming. Based on a federal rule established in the November 20, 2008 Federal Register, CAFOs seeking permit coverage are required to submit nutrient management plans with their permit applications. WYPDES Program staff review these nutrient management plans and are required to provide an opportunity for public comment. Terms of the nutrient management plans are required to be included in the WYPDES permit conditions.

Addressing potential pollution sources from AFOs remains voluntary and incentive-based. Producers with AFOs can voluntarily address potential water quality problems through adoption of appropriate BMPs and development of comprehensive nutrient management plans. WYPDES Program staff members have provided education and

assistance to producers in determining which facilities qualify as CAFOs and require permit coverage. Past Section 319 projects have also sought to disseminate educational information about AFOs and CAFOs and have included implementing demonstration sites throughout the state to encourage tours and open discussion on effective AFO solutions. AFOs with potential water quality concerns are also addressed through locally-led watershed planning groups, citizen complaints, and producer requests for assistance. The Wyoming Nonpoint Source Program has helped provide financial assistance to producers for AFO remediation through cost-share projects.

2.4.3 Timber Harvesting

Approximately 18% (11.4 million acres) of the total land area in Wyoming is forest land. The USFS manages over 50% of this forest land, with smaller percentages managed by private individuals or businesses (17%), the BLM (11%), the National Parks (15%), and other public land management agencies (4%) (Thompson, DeBlander and Blackard 2005). Of the ten national forests in Wyoming, the Bridger-Teton and Shoshone National Forests comprise over 50% of the total acreage (Economic Analysis Division 2009). Lodgepole pine and spruce-fir are the most common forest types in Wyoming, comprising about 40% of forest lands (Thompson, DeBlander and Blackard 2005).

While a smaller component than agriculture or mineral development, timber harvesting from public and private forested lands has contributed to Wyoming's economy. Wyoming's timber industry has fluctuated over time in response to demand and constraints placed on timber harvesting from public lands. Beginning in the 1990s, timber harvesting from public lands in the western United States decreased dramatically due to litigation over timber sales, threatened and endangered species protection, and other environmental regulations (Morgan, et al. 2005). This downward trend has continued to the present date in Wyoming. The number of sawmills in operation dropped from 34 in 1983 to 21 in 2005 (Brandt, Morgan and Thompson 2009) to only one major operation and a handful of small operations in 2011.

A mountain pine bark beetle epidemic that began in the late 1990s has affected over 100 million acres of forested land in Wyoming and other western mountain states, primarily lodgepole pine forests. Because land management agencies may increase logging efforts to remove beetle infested trees, the Wyoming timber industry may see increased activity due to the increased need to remove dead or dying trees from the large acreages affected by beetle kill; however, demand for timber may ultimately determine the extent to which the timber industry is revived.

Like urban and agricultural activities, timber harvesting has the potential to contribute to nonpoint sources of pollution. Sediment is the greatest pollutant of concern which is primarily caused by the construction and use of roads, water crossings, and poor timber harvest design and layout. Excessive erosion following mismanaged prescribed burns or extreme fire events can also occur. Pesticides and nutrients can also be of concern if pesticide and fertilizers applications are not managed properly. Improvements to timber harvesting techniques have been made throughout the past century and modern harvesting techniques done correctly contribute very little in the way of sediment pollution. In addition, riparian vegetation is

typically protected through stream management zones (SMZs) and any operations that occur in and around the SMZs are carefully monitored.

The state and federal land management agencies responsible for timber harvesting, to a large extent, either have the appropriate technical staff necessary for the proper selection and implementation of BMPs, or have access to them. Timber harvesting on private lands is minimal, but these producers also need to be aware of BMPs. A private individual who wishes to manage the timber on his land may be at a loss to understand and use proper management practices. The Wyoming Nonpoint Source Program has a Silviculture BMP Manual to assist with education and outreach for timber harvesting. A copy of this BMP manual can be found on the Wyoming Nonpoint Source Program Website. In addition, the Wyoming State Forestry Division (WSFD) works extensively to assist private landowners with BMPs and overall forest health education. WSFD has also published the Wyoming Forestry Best Management Practices booklet which is another resource for silviculture BMPs.

Through past Section 319 projects, the Wyoming Nonpoint Source Program has partnered with the Wyoming Timber Industry Association and the WSFD to develop and evaluate effective forestry BMPs and provide educational and training opportunities to promote the use of those BMPs. These agencies have provided BMP training sessions in the classroom and in the field to private, state, and federal timber representatives through such projects and have also developed an extensive auditing process to evaluate the implementation and effectiveness of BMPs and recommend changes as appropriate. The Wyoming Nonpoint Source Program has also partnered with WSFD to implement BMPs to control nonpoint source pollution following severe wildfires.

2.4.4 Hydrologic Modification

Hydrologic modifications can be described as those activities which alter the physical structure, form, or flow patterns of surface water and ground water. Hydrologic modifications can be simple, such as a road crossing, or complex, such as construction of a dam for hydroelectric power generation. As in other western states, water supply and water rights are contentious and complicated issues in Wyoming, and streams are often modified in response to meeting allocated water rights. Surface water diversions to provide water supplies are considered hydrologic modifications. Land development around surface waters can reduce bank stability, destroy riparian areas, or straighten channels.

All construction in rivers and streams will have impacts—these impacts can be insignificant or even beneficial in some cases, but can be devastating in other cases. Hydrologic modifications often reduce the natural ability of a stream channel to absorb energy, which increases water velocity, thereby increasing erosion, bank undercutting, and habitat loss. Hydrologic modifications can also cause a drop in the water table, resulting in streams going dry.

The U.S. Army Corps of Engineers (USACE) administers the CWA Act Section 404 permitting program, which regulates the discharge of dredged or fill material into waters of the United States. This is the primary regulation governing most hydrologic modifications. WQD is notified by the USACE of all 404 permit actions for hydrologic modification, and ensures that

proper BMPs are incorporated as conditions within each permit (Section 401 certifications, see Section 3.8.1).

The Nonpoint Source Program has developed the Stream and Lake Restoration BMP Manual to assist in averting adverse water quality effects during or following modification activities. A copy of this BMP manual can be found on the Wyoming Nonpoint Source Program Website. The Nonpoint Source Program has seen an increasing number of projects apply for Section 319 funds to assist with stream restoration projects that use natural channel design to restore a stream's stable geomorphological characteristics, which may have been altered due to urban development, overgrazing, or other land use activities. In addition to funding restoration projects, Section 319 funding has been used to train WQD staff in applied stream geomorphology and natural channel design methods to assist with the evaluation and implementation of such projects.

2.4.5 Mineral Production and Resource Extraction

Mineral production is an important industry in Wyoming whose major commodities include coal, natural gas, coal bed methane, crude oil, and trona production. Wyoming ranks first in the nation for mining employment, employing over 30,000 people in 2007; in 2007, over $145 million was collected by the state in sales tax for mining activity (Economic Analysis Division 2009). Wyoming has seen several "boom and bust" cycles related to mineral production; mineral booms have often presented a challenge to balance production and economic benefit with environmental protection.

Wyoming's numerous coal mines make it the number one producer of coal in the nation. Most of the mines are surface open pit mines with a few underground mines. Wastewater generated at surface pit mines includes ground water, pit water, and surface runoff water. The wastewater is routed to settling ponds before being discharged to surface water.

The production of oil, natural gas, and coal bed methane generally involves drilling a well to reach the resource and pump it to the surface; after being brought to the surface, the gas or oil is separated from formation waters which may be discharged as a byproduct. Water is disposed of by multiple methods, including underground injection, surface discharge, or storage in off-channel reservoirs. Produced water discharges are typically regulated by WDEQ or the Wyoming Oil and Gas Conservation Commission (WOGCC). Several areas of Wyoming have seen recent booms in oil and gas development, including the coal bed methane development in the Powder River Basin of Wyoming and the oil and gas exploration and development in the Pinedale Anticline area.

Besides produced water which must be disposed of, mineral production can potentially cause water quality pollution by increased land disturbance; the extensive roads and wellpads that are often constructed in conjunction with mineral development can lead to increased erosion and sedimentation. Spills at extraction sites may contribute pollutants to nearby surface water or ground water. Produced water stored in reservoirs can potentially affect shallow ground water aquifers. In addition, resource extraction may require the use of water to extract the resource. For example, hydraulic fracturing ("fracking"), where fluid is pumped under pressure into a coal

seam to fracture it in order to increase the amount of recoverable oil or gas, may have the potential to contaminate ground water.

The WYPDES Program regulates discharges from mineral production activity into surface waters of the state. This includes regulating discharges from coal mines, non-coal mining activities, coal bed methane outfalls, and oil and gas outfalls. WYPDES storm water discharge permits are required for some land-disturbing activities relating to mineral production. Underground injection for the disposal of produced water is regulated under the Underground Injection Program of the WDEQ Ground Water Program or the WOGCC. The WDEQ Ground Water Program is also responsible for oversight of impacts of stored produced water in reservoirs.

Other divisions with the WDEQ are also involved in regulation of mineral production. The WDEQ Land Quality Division (LQD) administers and enforces all statutes and regulations on land disturbances dealing with mining and reclamation within the State of Wyoming. The LQD has the authority to require permitting and licensing of all operator actions of surface and underground mine facilities. Each mining operation must be covered by a reclamation bond in the event the operator is unable to fulfill the reclamation requirements. The Abandoned Mine Land Division (AML) of the WDEQ works to eliminate safety hazards and repair environmental damage from past mining activities. The AML traditional reclamation program has reclaimed thousands of acres of abandoned coal, bentonite, and uranium open pit mines. Under the Solid and Hazardous Waste Division, the Storage Tank Program (STP) seeks to prevent soil and ground water contamination from tanks that may be leaking fuel. Other state agencies, such as the State Engineers Office (SEO) and WOGCC, and federal agencies such as the BLM, also play a part in regulating mineral development in Wyoming.

Thus, water quality impacts from resource extraction activities are largely mitigated through regulatory mechanisms within the WDEQ and other management agencies. However, nonpoint source pollution can be mitigated in general by limiting the amount of ground disturbance as much as possible, implementing erosion control measures to reduce the amount of sediment in runoff, maintaining vegetated buffers along waterways, and taking precautions to reduce the chance of spill occurrence.

2.4.6 Tourism and Recreation

Wyoming's open spaces and extensive public lands draw many visitors each year for tourism and outdoor recreation. In 2008, there were over two million visitors to Wyoming state parks and over eight million visitors to Wyoming's major national parks, monuments, historic sites, or recreation areas (Economic Analysis Division 2009). Outfitting businesses offer hunting, wildlife viewing, or fishing expeditions. Wyoming has extensive wildlife populations and fisheries, and in 2007, over 600,000 hunting and fishing licenses were issued and a total of over $350 million in hunter expenditures was recorded (Economic Analysis Division 2009).

Recreational activities have the potential to contribute to nonpoint source pollution or other water quality issues and can be managed to minimize impacts. The concern over invasive aquatic species being introduced to Wyoming led the Wyoming Game and Fish in 2010 to start

conducting intensive efforts to require boaters to inspect their watercraft for certain invasive species such as the zebra and quagga mussels. Unnecessary off-road vehicle use in recreation areas can increase erosion and in-stream sediment, especially from water crossings. Wilderness areas that are not managed can lead to buildup of human waste, contributing pathogens to surface and ground water. Improper disposal of waste from RV units can also contribute to pathogenic water quality problems.

Managing recreation areas by providing sanitation facilities, controlling refuse disposal, implementing erosion controls, and reducing off-road vehicle use can help prevent nonpoint source pollution being contributed from recreational areas. The National Park Service, the USFS, the BLM, Wyoming State Parks, the BOR and other agencies involved with managing recreational lands within Wyoming are responsible for their management. Section 319 projects have provided information/educational outreach on recreation use and have implemented BMPs to mitigate nonpoint source pollution from recreational activities. The United States Department of Agriculture (USDA) technical guidance documents contain information about recreational BMPs; these guidance documents are referenced in the Cropland and Livestock/Wildlife BMP manuals.

2.5 Wyoming's Impaired Surface Waters

Every two years, the WDEQ evaluates its surface waters for water quality impairments. Those surface waters determined to be impaired for one or more designated uses are listed in the state's 303(d) list, published as part of the 305(b)/303(d) Integrated Report. The CWA requires that states develop a separate Total Maximum Daily Load (TMDL) for each pollutant/segment combination on the 303(d) List. States are required to prioritize waters on the 303(d) List for TMDLs based on the severity of each pollutant/segment combination, or listing. TMDLs are to be completed on these impaired waters "to assure the protection and propagation of a balanced, indigenous population of shellfish, fish and wildlife, and allow recreational activities in and on the water."

The most recent Integrated Report was approved in 2012. The WQD 2012 305(b)/303(d) Integrated Report has a total of 156 waterbody segment/pollutant combinations listed as impaired (see Figure 4). This includes waters listed under Category 4A and Category 5. Category 4A waters are surface waters impaired for a designated use but for which a TMDL has been completed and approved by EPA. Category 5 waters constitute the 303(d) list and include impaired waterbodies requiring TMDL studies. All but 19 of these 156 impairments are caused at least in part by nonpoint source pollution. The most common nonpoint source pollutants causing surface water impairments of lakes and streams in Wyoming are sediment, selenium and pathogens (see Figures 5 and 6).

2.6 Wyoming's High Quality Surface Waters

Protecting high quality waters is as important as restoring impaired waters. It is often more cost-effective to protect high quality waters from degradation than to implement expensive restoration projects. Thus, this plan also identifies those waterbodies that have been targeted by WDEQ or its partners for a higher-than-average level of water quality protection. In Wyoming, these waters include state-designated Class 1 waters, waters in federally-designated wilderness areas, and Class 2 waters not designated as impaired.

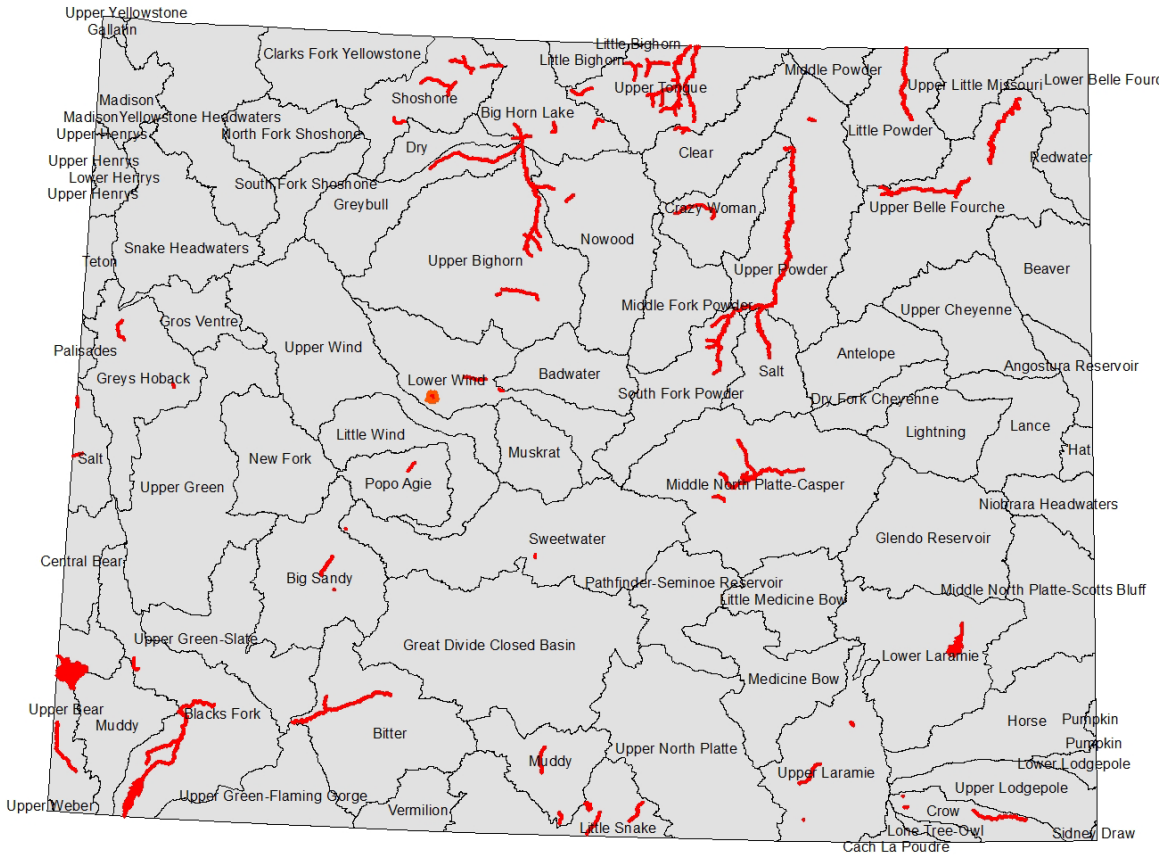

Figure 4. Map of Wyoming showing HUC8 watersheds (black outline). Category 4A and 5 impaired streams and lakes as of the 2012 Integrated Report shown in red.

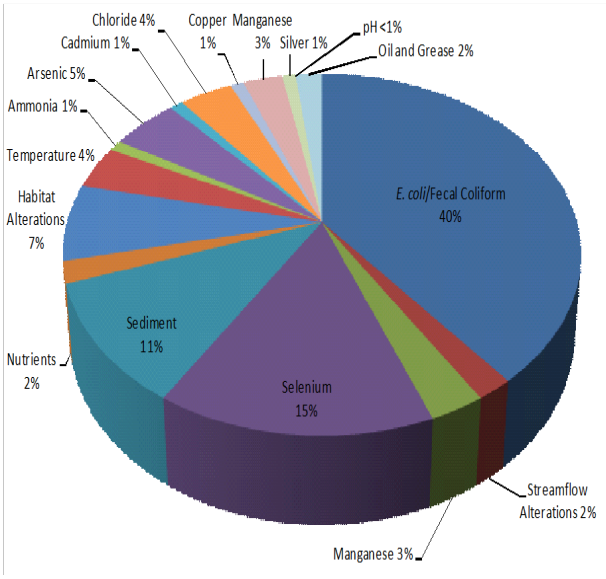

Figure 5. Chart showing the percentage of each cause for Wyoming's impaired streams on the 2012 303(d) List.

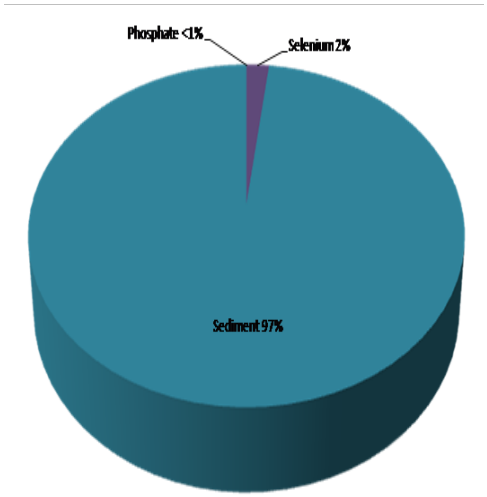

Figure 6. Chart showing the percentage of each cause for Wyoming's impaired lakes and reservoirs on the 2012 303(d) List.

2.6.1 Class 1 Surface Waters

Class 1 waters are specially-designated waters afforded the highest level of protection, for which the existing water quality is protected regardless of the uses supported by the water. Chapter 1 of the WWQRR establishes the following:

> *Class 1 waters are those surface waters in which no further water quality degradation by point source discharges other than from dams will be allowed. Nonpoint sources of pollution shall be controlled through implementation of appropriate best management practices. Pursuant to Section 7 of these regulations, the water quality and physical and biological integrity which existed on the water at the time of designation will be maintained and protected. In designating Class 1 waters, the Environmental Quality Council shall consider water quality, aesthetic, scenic, recreational, ecological, agricultural, botanical, zoological, municipal, industrial, historical, geological, cultural, archaeological, fish and wildlife, the presence of significant quantities of developable water and other values of present and future benefit to the people.*

Class 1 waters are designated by the Environmental Quality Council (EQC) in rulemaking hearings. Both the Wyoming Administrative Procedures Act and the WDEQ Continuing Planning Process provide for public input during regulatory and planning processes. Any interested person may nominate a water for Class 1 designation through the procedures outlined in those documents.

All surface waters located within the boundaries of Yellowstone and Grand Teton National Parks and lands congressionally-designated as wilderness areas as of January 1, 1999 are Class 1 waters. Congressionally designated wilderness areas in Wyoming include:

- Absaroka-Beartooth (Shoshone National Forest)
- Bridger (Bridger National Forest)
- Cloud Peak (Bighorn National Forest)
- Encampment River (Medicine Bow National Forest)
- Fitzpatrick (Shoshone National Forest)
- Gros Ventre (Teton National Forest)
- Huston Park (Medicine Bow National Forest)
- Jedidiah Smith (Targhee National Forest)
- North Absaroka (Shoshone National Forest)
- Platte River (Medicine Bow National Forest)
- Popo Agie (Shoshone National Forest)
- Savage Run (Medicine Bow National Forest)
- Teton (Teton National Forest)
- Washakie (Shoshone National Forest)
- Winegar Hole (Targhee National Forest)

In addition, Appendix A of Chapter 1 of the WWQRR lists additional waterbodies designated as Class 1 waters. Wetlands immediately adjacent to Class 1 waters are also treated as Class 1.

Upon regulatory designation of a surface water as a Class 1 water, the quality of the water shall be maintained and protected pursuant to Chapter1, Section 7 of the WWQRR, which states:

> *Section 7. Class 1 Waters.*
>
> *(a) Except as authorized in paragraph (b), no new point sources other than dams, may discharge, and no existing point sources, other than dams, may increase their quantity of pollution discharge, to any water designated as Class 1.*
>
> *(b) Storm water and construction-related discharges of pollution to Class 1 waters may be authorized and shall be controlled through applicable water quality permits, Section 401 certifications and/or by the application of best management practices. Such discharges shall not degrade the quality of any Class 1 water below its existing quality or adversely affect any existing use of the water. Temporary increases in turbidity that are within the limits established in Section 23 of these regulations and that do not negatively affect existing uses can be permitted. For purposes of this section, temporary increases in turbidity shall not exceed the actual construction period. The department shall impose whatever controls and monitoring are necessary on point source discharges to Class 1 waters and their tributaries to ensure that the existing quality and uses of the Class 1 water are protected and maintained.*
>
> *(c) Nonpoint source discharges of pollution to Class 1 waters or tributaries of Class 1 waters shall be controlled by application of best management practices adopted in accordance with the Wyoming Continuing Planning Process. For Class 1 waters, best management practices will maintain existing quality and water uses.*

Included with the adoption of Chapter 1 is a revision of the antidegradation provisions which established antidegradation protections for Class 1 waters. Federal regulations (40 Code of Federal Regulations 131.12) require state standards programs to address 3 "tiers" of antidegradation protection. Antidegradation protection afforded to Class 1 waters is described in Section II of the WQD's February 2007 Antidegradation Implementation Policy, which states:

> *"Tier 3" protections apply to waters that constitute "outstanding national resource waters" (ONRWs)[1]. Tier 3 requires maintenance of existing quality with no consideration of assimilative capacity or economic or social development. In certain circumstances, temporary lowering of water quality is allowable, however the general rule is that no new point sources or increased pollutant loading from existing point sources is allowable.*

[1]*The Wyoming water quality protection program has no provision for designating waters that have "national" significance, however, waters designated as Class 1 under the surface water standards are*

considered to be outstanding resources. Though not designated as ONRWs, Class 1 waters are afforded a level of antidegradation protection which is a functional equivalent of EPA's tier 3 concept.

The implementation policy further describes restriction of new or expanded point source discharges to Class 1 waters. Because water quality standards prohibit new or increased "end-of-the-pipe" effluent discharges but allow limited discharges associated with stormwater runoff and construction activity, the antidegradation policy for Class 1 waters focuses on WYPDES stormwater permits for industrial activity and construction activity as well as issuance of 401 certifications and turbidity waivers for activities on Class 1 waters. The WQD can authorize new point source discharges or expansions of pre-existing point source discharges to tributaries of Class 1 waters provided the existing quality of the Class 1 water is protected and maintained. The WQD issued in August of 2007 an Interim Policy on Establishing Effluent Limits for Permitted Point Source Discharges to Class 1 Water Tributaries, which describes the process for establishing effluent limits on tributaries to Class 1 waters.

2.6.2 Class 2 Surface Waters

Class 2 waters are waters, other than those designated as Class 1, that support fisheries or drinking water supplies where those uses are attainable. Class 2 waters may be perennial, intermittent, or ephemeral and are further classified into five subcategories as described in Chapter 1—Class 2AB, 2A, 2B, 2C, and 2D. Class 2AB, 2A, 2B, and 2C waters are considered to be high quality waters. The WDEQ may issue a permit or certification for new or increased discharges to these waters upon making a finding that the amount of resultant degradation is insignificant or that the discharge is necessary to accommodate important economic or social development in the area where the waters are located. The February 2007 Antidegradation Implementation Policy outlines how water quality standards will be met for Class 2 waters. The Wyoming Surface Water Classification List (Tables A & B) lists current surface water classifications.

2.6.3 Importance of Riparian Area Protection

The importance of riparian areas to water quality is being increasingly recognized. The ecological benefits of riparian areas are numerous; relating to water quality, they help filter pollutants such as nutrients and sediment, control streambank erosion, and lower water temperatures. Due to land uses such as hydrologic modification, historical overgrazing, and urban development, there are areas in Wyoming where a functional, healthy riparian zone no longer exists. Streams that were once lined with willows or other riparian species may now only be lined with limited grass or sedges that are not capable of stabilizing stream banks.

The voluntary protection of riparian areas is becoming more pronounced within the Wyoming agricultural community. Many ranchers have completed projects where development of off-channel water sources, fencing of riparian areas and implementation of revised grazing strategies within riparian areas are major portions of their overall ranching practice improvements. In addition, an increasing number of urban projects seek to restore riparian areas within local communities, educate the public on the importance of riparian areas, and promote "no-mow" zones next to streams within municipal parks. In timber harvesting, riparian

vegetation is typically protected through stream management zones (SMZs) and any operations that occur in and around the SMZs are carefully monitored.

The majority of Section 319 watershed improvement projects include a riparian protection or improvement component. The Natural Resource Conservation Service (NRCS) Farm Bill programs also offer many mechanisms by which landowners can obtain assistance with riparian area improvement and protection. Due to the importance of riparian areas to wildlife habitat, the Wyoming Wildlife and Natural Resource Trust (WWNRT) has also funded many projects dealing with riparian area improvement. In addition, WQD stresses the importance of riparian areas for water quality and habitat diversity within many of its information and education activities. This is exemplified by including these areas within some of the practices discussed within the program's BMP manuals.

2.6.4 Wetlands Protection

Like riparian areas, wetlands provide numerous ecological functions that improve and protect water quality. The Wyoming Environmental Quality Act makes no distinction between the protection of water quality in rivers and streams versus wetlands. According to the WDEQ WWQRR, Chapter 1, Section 12:

> *Point or nonpoint sources of pollution shall not cause the destruction, damage, or impairment of naturally occurring wetlands except when mitigated through an authorized wetlands mitigation process. However, this section does not apply to wetlands created by point or nonpoint sources; nor are such wetlands required to be maintained through continuation of such discharges.*

The WQD Surface Water Monitoring Program currently monitors wetlands only through a qualitative assessment of riparian wetland conditions. These assessments are done as part of stream and river assessments, which are the focus of the Monitoring Program. The Monitoring Program is considering developing a new, or adopting an existing, rapid assessment methodology to assess both riparian and non-riparian wetlands. If developed, these protocols will be incorporated into the program's ten year and annual monitoring workplans.

In 2010, the Wyoming Chapter of The Nature Conservancy completed a Section 319 project entitled "Wyoming Wetlands—Integrity and Stressor Identification Project." This project identified focal wetland complexes across the state and evaluated both their current integrity as well as potential for impacts from future threats or stressors. Maintenance and restoration strategies were developed for wetlands complexes identified as priority wetlands, based on current condition, biological value, and potential future threats. The results of this project, which have been distributed to project partners and the public, have provided land management agencies with a solid foundation and common language to address wetland protection. Results were provided to the Wyoming Joint Ventures Steering Committee which in September 2010 issued the Wyoming Wetlands Conservation Strategy, available through the Wyoming Game and Fish website. The WQD has been a participating member of the Wyoming Joint Ventures Steering Committee and will continue to do so.

An important issue in Wyoming is the loss of wetlands associated with the application of water conservation practices and improved irrigation techniques. Return flows from flood irrigation projects support a significant part of Wyoming's wetland base. This is a particularly difficult issue because the effort to conserve water has many obvious environmental advantages of its own. The Nature Conservancy project described above has provided a better understanding of the extent and function of the agriculturally-supported wetlands in the state which will help land management agencies to better manage wetland resources in the irrigated basins of the state.

SECTION 3: WDEQ Nonpoint Source Pollution Management

3.1 Water Quality Division, Watershed Protection Program

The WQD is the division of the WDEQ responsible for administering most of the provisions of the CWA delegated to the State of Wyoming. The Nonpoint Source Program is one of several programs within the Watershed Protection Program of the WQD. Together, the programs of the Watershed Protection Program are responsible for a variety of planning, assessment, and implementation efforts on watersheds within the state. Managing nonpoint source pollution is an integrated effort between the multiple programs of the Watershed Protection Program. The Wyoming Nonpoint Source Program is the lead program in addressing nonpoint source pollution, but it is dependent on its sister programs to be successful in its mission. The management steps of the Watershed Protection Program are outlined in Figure 7 and described in the following sections.

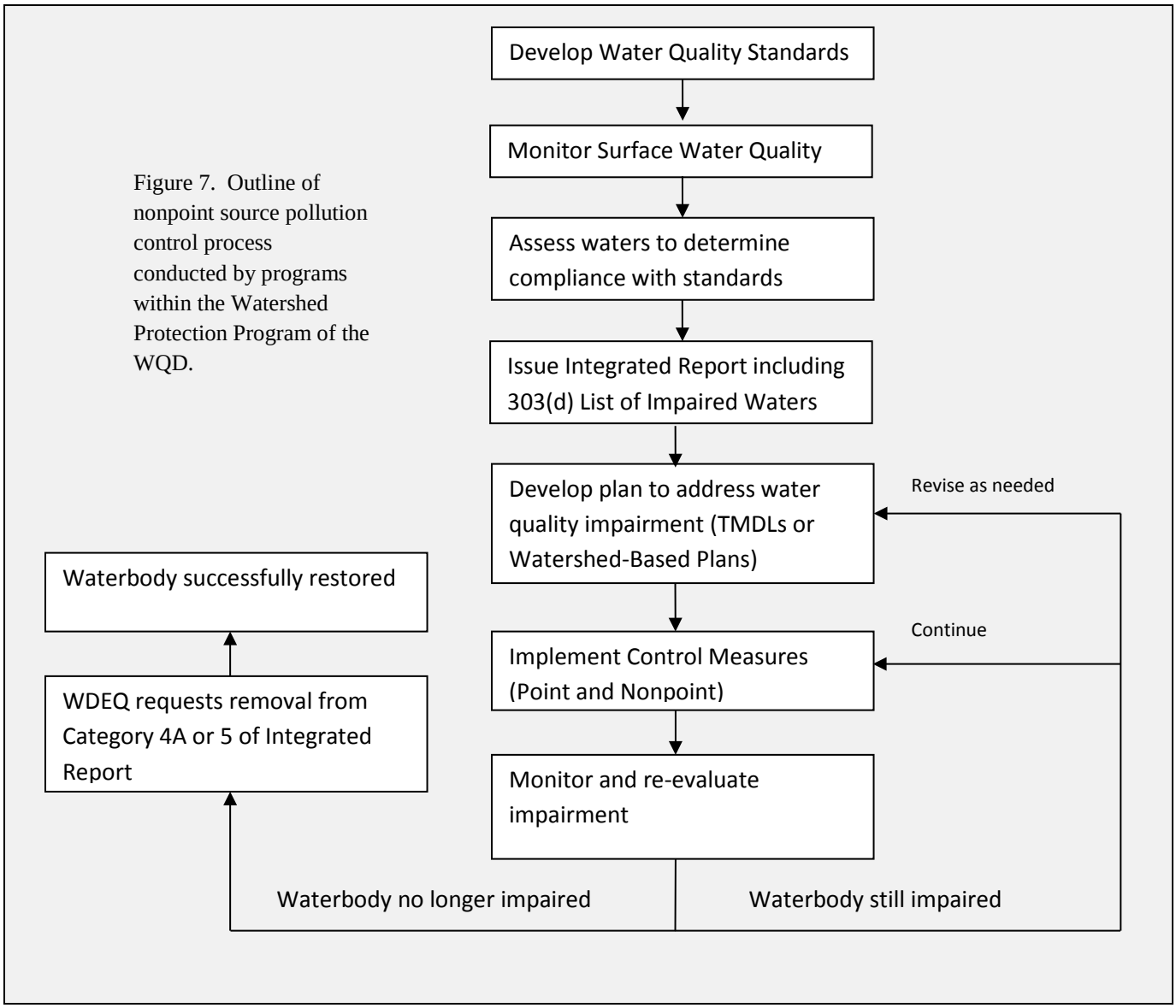

Figure 7. Outline of nonpoint source pollution control process conducted by programs within the Watershed Protection Program of the WQD.

3.2 Surface Water Standards Program

The Surface Water Standards Program establishes water quality standards for surface waters of the state. A water quality standard has three components—determining a waterbody's designated uses, adopting water quality criteria, and adopting an antidegradation policy. Narrative and numeric water quality criteria are established to protect designated uses and to be able to evaluate the health of a waterbody. Wyoming's antidegradation policy is in place to protect those waters whose quality is already better than the standard requires. Ensuring that water quality standards are accurate provides the foundation for the Watershed Protection Program. This program sets the water quality goals that other WQD programs seek to achieve through a collaborative effort. Correct standards ensure that accurate impairment status decisions are made and that restoration efforts through the Nonpoint Source Program are focused where they are truly needed. In accordance with Section 303 of the CWA, every three years, at a minimum, the Standards Program conducts a review of Wyoming's water quality standards and makes revisions as necessary (Triennial Review).

3.3 Surface Water Monitoring Program

The WQD Surface Water Monitoring Program (Monitoring Program) is responsible for collecting scientifically valid water quality monitoring data using established data collection methods and assessing those data in a consistent manner. The Monitoring Program operates on a set of five principles, six primary objectives, and four secondary objectives outlined in the Surface Water Monitoring Strategy 2010-2019. Primary objectives are objectives that the Monitoring Program is required by EPA to meet; these objectives include determining water quality standards attainment, identifying impaired waters, identifying causes and sources of water quality impairments, assessing water quality status and trends at multiple scales, evaluating program effectiveness, and responding to complaints and emergencies. It is critical for all programs within the Watershed Protection Program, including the Nonpoint Source Program, that these primary objectives are met.

The Monitoring Program also has four secondary objectives which the program may or may not be able to meet depending upon available staff and financial resources. These secondary objectives are, in priority order: providing data and technical support to establish and revise water quality standards, provide data and technical support toward development and evaluation of TMDLs, provide data and technical support toward implementation and evaluation of nonpoint source restoration projects, and provide data and technical support toward development of WYPDES program permits and policies. The Manual for Standard Operating Procedures for Sample Collection and Analysis describes the data collection methods used by the Watershed Monitoring Program. In addition to monitoring strategies, WQD also provides Water Quality Monitoring Annual Work Plans to inform the public as well as other state and federal agencies about which streams are scheduled to be monitored by WQD for a given year.

3.4 Water Quality Assessment Program

Section 305(b) of the CWA requires that each state prepare and submit a biennial report to EPA by April 1st of even numbered years. The report must contain a description of the navigable waters of the state for the preceding two years, including the extent to which current conditions allow for the "protection and propagation of a balanced population of shellfish, fish, and wildlife, and allow recreational activities in and on the water". Section 305(b) also requires each state to report on the water quality and the

elimination of pollutants that would be necessary to provide for designated use support. Specifically, each state is to identify waters not meeting the above conditions, recommend strategies to achieve these objectives, and estimate the environmental impacts, economic and social costs and benefits, and the predicted timeline for project completion.

Lastly, Section 305(b) requires that the sources and extent of nonpoint source pollution in each state be estimated, including a description of the current program used to mitigate these pollutants and associated financial costs. Section 303(d) of the CWA requires that states identify and list waters for which the effluent limits outlined in Section 301 are not effective in attaining designated uses. The CWA also requires that states develop a separate TMDL for each pollutant/segment combination on the 303(d) List. States are required to prioritize waters on the 303(d) List for TMDLs based on the severity of each pollutant/segment combination, or listing. The most recent 305(b)/303(d) Integrated Report was approved in 2012. Wyoming's Method for Determining Water Quality Condition of Surface Waters and TMDL Prioritization for 303(d) Listed Waters outlines the methodology used by WDEQ for making designated use support decisions for the surface waters of the state. Water quality data from both the WQD Monitoring Program and from third parties are received and reviewed by the Assessment Program for use in making designated use support decisions.

3.5 Quality Assurance and Quality Control

Quality assurance (QA) is the set of overall management techniques or processes related to planning, implementation, assessment, and reporting that is designed to assure that environmental data are defensible and of the kind and quality needed to make Watershed Protection Program decisions. QA activities conducted by the Watershed Protection Program include issuing standard operating procedures (SOPs), reviewing and revising SOPs as needed, data validation, data verification, data quality assessment, QA reports, project-specific sampling and analysis plans (SAPs), field audits, and technical audits. Quality control (QC) is the set of techniques and/or activities that the Watershed Protection Program uses to assure and document the actual quality of the monitoring data produced and used. QC activities conducted by the Watershed Protection Program include providing metadata files for databases, data qualification codes, chain of custody documentation, instrument calibration, field log books, field and laboratory QC samples (duplicates, blanks, spikes, splits) and training. The bulk of QA/QC activities are conducted by the Watershed Protection Program QA/QC officer. The officer directly supports the Nonpoint Source Program by assisting with project review, providing technical assistance to project sponsors, reviewing and approving SAPs for project sponsors, providing QA/QC reviews for data collected by nonpoint source projects, and reviewing final reports.

Wyoming is committed to making use support determinations based on scientifically valid data which are representative of actual water quality conditions and collected in an objective manner, and which meet all requirements pursuant to Wyoming's "credible data" law. State Law W.S. §§ 35-11-302(b)(ii) requires that only "credible data" be used in making use-support determinations. "Credible data" is defined in W.S. §§ 35-11-103(c) (xix), as *scientifically valid chemical, physical and biological monitoring data collected under an accepted sampling and analysis plan including quality control, quality assurance procedures and available historical data.* All data that are used to determine 303(d) listing or de-listing status go through QA/QC procedures by the QA/QC officer; this includes both data collected by the WQD Monitoring Program and third-party data.

3.6 Total Maximum Daily Load Program

A Total Maximum Daily Load (TMDL) is the amount of pollutant which a waterbody can accept and still meet its designated uses. The CWA requires that TMDLs be established for each pollutant that is a source of a waterbody's impairment. They must be measurable and must consider both point and nonpoint source pollutant loads, natural background conditions, and a margin of safety. As discussed above, Section 303(d) of the CWA requires states to identify all waters of the state which are impaired. The TMDL Program takes the 303(d) list and prioritizes all impaired waterbodies for development of TMDLs. Impaired waterbodies are currently prioritized for TMDL development based on the age of the listing as well as on risks to public health and the environment. Following prioritization, the TMDL Program then determines whether to develop the TMDL by WQD staff or to contract the development to a qualified consultant. Many of the TMDL projects have grouped the listings on a watershed scale to leverage resources for the greatest return.

The WDEQ TMDL Workplan was last updated in August 2008 and describes the scope and extent of work necessary to develop TMDLs for Integrated Report Category 5 waterbodies (303(d) list). A general TMDL pace strategy and 10-year planning schedule was developed by WDEQ and submitted to EPA. The TMDL Workplan Update describes the goals of the TMDL program over the next 10 years and the objectives the Program will complete to achieve those goals.

3.7 Nonpoint Source Program

The Nonpoint Source Program works to implement the final step in the management process by providing financial and technical assistance to implement projects that reduce or prevent nonpoint source pollution. It seeks to correct the nonpoint source water quality problems identified by the Standards, Monitoring, and Assessment Programs by implementing restoration projects based on plans outlined in TMDLs or other watershed-based planning documents.

The majority of work accomplished through the Nonpoint Source Program is funded by annual CWA Section 319 grants awarded to the state by EPA. Additional water quality management planning funds are provided to the Nonpoint Source Program through annual CWA Section 604(b) (also referred to as 205(j)) grants. The Nonpoint Source Program will continue to fund Section 319 nonpoint source reduction projects and Section 604(b) water quality management planning projects on a competitive award basis through a Request for Proposals (RFP) process. Current RFP information is posted on the Wyoming Nonpoint Source Program website. In addition to grant management, the Nonpoint Source Program works to reduce nonpoint source pollution through information/education activities, technical assistance, and partnerships with other agencies and watershed groups.

Detailed information about the specific functions of the Nonpoint Source Program is described in Section 4 and Appendix A.

3.7.1 Nonpoint Source Task Force

The Wyoming Nonpoint Source Program is overseen by a 13-member board of Governor appointed citizens called the Nonpoint Source Task Force. The Task Force was established under the 1989 Nonpoint Source Management Plan and was formally recognized by Executive

Order 1996-2 Revised. Members of the Task Force represent various industries and interest groups across the state, and as such, the Task Force is an important connection between state program management and coordination with local interests. A list of the current Task Force members is posted on the Wyoming Nonpoint Source Program website.

Members serve at least one four year term. Positions on the Task Force are filled through a request for participants to all interested parties. Upon receipt of the notices of interest, the Governor will select representatives. The table provided below shows the interests represented by Task Force members and the number of positions for each of those interests:

Table 1. Nonpoint Source Task Force representation.

Interest	Number of Representatives
Sheep Industry	1
Cattle Industry	1
Cropland Industry	1
Timber Industry	1
Oil and Gas Industry	1
Local Government	1
Conservation Districts	2
Wildlife/Sportsmen Groups	1
Environmental Groups	2
Recreation and Travel	1
Public At-Large	1

The Nonpoint Source Task Force has the following functions:

- To review and make recommendations for proposed amendments to the Wyoming Nonpoint Source Management Plan,
- To adopt BMPs and recommend modifications to BMPs for nonpoint source pollution,
- To prioritize and recommend nonpoint source pollution control projects for funding,
- To recommend funding for necessary programs for nonpoint source control, and
- To disseminate information and to educate their constituencies or membership.

The WQD retains final authority for actions based on recommendations made by the Task Force; however, guidance provided from the Task Force is a critical component of the connection between WQD and local levels. The WQD will work with the appropriate management agencies to implement Task Force recommendations, and will carry out recommended amendments to this management plan through the appropriate procedures outlined in the Wyoming Continuous Planning Process.

The Nonpoint Source Task Force meets at least twice per year, with additional meetings scheduled as needed. In general, the purpose of the spring meeting is to conduct business and tour completed or in-progress projects. The main purpose of the fall meeting is to recommend projects for grant funding. The Nonpoint Source Program Coordinator will communicate with Task Force members

in the interim between meetings to provide program information and solicit feedback on programmatic decisions.

3.8 Other Work Conducted by the Watershed Protection Program

Other staff within the Watershed Protection Program also conduct activities related to nonpoint source pollution management that are not directly involved in the process outlined in Figure 7. Those programs and their functions related to nonpoint source pollution management are described below.

3.8.1. 401 Certifications

Section 401 of the CWA requires that anyone desiring to obtain a federal permit for any activity that may result in a discharge into waters of the United States must first obtain a state Section 401 water quality certification. This certification ensures that state water quality standards and other state regulations will be met and provides opportunity for states to have input into federally-approved projects that may affect surface waters of the state. The most common type of federal permits in Wyoming for which a state 401 certification is required is Section 404 permits issued by the USACE for discharge of dredge or fill material into waters of the United States or wetlands. The WQD will deny certifications for activities that cannot provide reasonable assurance that state water quality standards will be achieved. WQD reviews all Section 404 individual permits issued by the Wyoming Regulatory Office of the USACE for dredge or fill activity to determine if they comply with water quality standards. The USACE proposed several nationwide permits for Section 404 activity. A letter dated March 16, 2012 to the Wyoming Regulatory Office of the USACE describes WQD's review of the USACE nationwide permits and WQD's determinations. It was determined that many nationwide permits were certified provided the terms and conditions of the permit were followed. Certification was waived for several permits that had little or no applicability in Wyoming. For several permits and for projects on Class 1 waters, certification was denied, thus requiring a project-specific review and certification.

3.8.2 Turbidity Waivers

Section 23 of Chapter 1 of the WWQRR establishes that in cold water fisheries and drinking water supply waters (Class 1, 2AB, 2A, and 2B waters), discharges from anthropogenic activities shall not cause a turbidity increase of more than ten nephelometric units (NTUs). For warm water or non-game fisheries, a turbidity increase of more than 15 NTUs is prohibited. However, short term turbidity increases that are determined to have minimal effect on water use are allowed. Activities that cause such short term increases are approved on a case-by-case basis and are subject to controls, monitoring, or BMPs that the WQD determines are needed to maintain and protect water uses. The February 2007 Turbidity Implementation Policy establishes how the WDEQ will make these case-by-case determinations of acceptable short term turbidity increases. The WDEQ will issue turbidity waivers in accordance with the February 2007 Turbidity Implementation Policy. In instances where activities within a water of the state increase turbidity in that water to levels above the prescribed standard, an authorization for a temporary increase of the turbidity standard for the duration of the activity may be issued if it is determined that the activity will have a minimal effect on water uses. WDEQ will review

all applications for a temporary turbidity increase, coordinate the activity with any water intakes in the area, require daily sampling to indicate the actual increase during the activity, and require BMPs in order to minimize any increase in the turbidity.

3.8.3 National Environmental Policy Act Review Program

The National Environmental Policy Act (NEPA) requires analysis and disclosure of the effects of federal actions; cooperation with other Federal, State, Tribal and local agencies which have jurisdiction by law and/or special expertise; and consideration and disclosure of public comments. The WQD's primary role in the NEPA process is as a cooperating agency in the larger projects and plans that can impact water quality and/or those that require considerable mitigation, monitoring and adaptive management to protect resources. The WQD reviews the NEPA documents and provides comments on the scoping, draft and final documents, but the majority of the work (often measured in years) is done during alternative development – a process between the federal agency and cooperators to develop and analyze alternatives addressing the issues identified in scoping. A strength of Wyoming's NEPA program is the ability to work with project proponents and the federal agencies to develop alternatives which allow development while still protecting Wyoming's natural resources. For example, cooperators have worked directly with oil and gas producers to develop reclamation plans or development plans so development can occur economically while best protecting natural resources.

3.8.3.1 Federal Consistency Review

The federal government is one of the largest land managers within the state, owning approximately 47% of the land; thus, cooperation with federal land management agencies is important to protect natural resources. The WQD does not consider federal facilities, agencies, or lands to be any different from other facilities or landowners in terms of compliance with WWQRR. The Environmental Quality Act and the rules do not contain exemptions for federal facilities. Federal land management agencies such as the BLM and USFS are required to ensure that water quality standards are achieved on public lands under their jurisdiction.

The CWA requires federal agencies and facilities to comply with all federal, state, and local pollution control laws. Section 319(k) of the CWA and Executive Order 12372 require federal entities to allow states to review federal development projects and assistance applications and to accommodate the concerns of the states regarding consistency of such projects or assistance with state management plans.

Maintaining consistency between federal actions within the state and state water quality standards, rules and regulations, and the objectives established in this plan is an important part of the Nonpoint Source Program. Historically, federal consistency in Wyoming was managed through a "single point of contact" approach where all federal assistance applications or development projects were coordinated for review by the Governor's State Planning Coordinator's Office. However, Wyoming has moved away

from this "single point of contact" approach and has developed a more thorough, although more informal, process with several federal partners.

The WQD attempts to review all Environmental Impact Statements, Environmental Assessments, Scoping Statements, Resource Management Plans, Forest Plans, and other environmental documents for potential water quality impacts. However, limited staff and the significant amount of federal lands in Wyoming mean that the WQD does not have the resources to review all federal development projects and assistance applications. The WQD will use the Catalogue of Federal Domestic Assistance to help identify the types of federal assistance applications that the WQD may review for consistency with state water quality regulations and management plans. Common types of federal plans and development projects that may be reviewed are listed in Table 2.

Table 2. Common types of federal plans and development projects potentially reviewed as part of WDEQ federal consistency actions.

Agency	Description
United States Forest Service	Forest Plans, timber sales, grazing allotments, chemical and pesticide use, recreation development, transportation plans, fuels management and prescribed burning, fisheries, water development, watershed rehabilitation projects, public water supply projects, hydrologic modification, riparian management projects, permits to drill, oil and gas leasing and reclamation plans
Bureau of Land Management	Watershed projects; Resource Management Plans, mineral exploration and development; coal, oil, and gas leasing and development; coal reclamation; wind energy projects; pipelines; timber activities; grazing allotments; chemical and pesticide use; wetlands protection; riparian management; transportation plans
Department of Defense	Land management plans, waste management plans, revegetation plans, new or expanded defense installations, storage facilities, restricted use zones
United States Army Corps of Engineers	Dredging, channel improvement, breakwaters, erosion control structures, dams or flood control works, ice management practices
Federal Highway Administration	Highway construction/reconstruction
Bureau of Reclamation	Irrigation Development
Office of Surface Mining	Abandoned Mine Lands Program, mineral development, lease sale activities
United States Fish and Wildlife Service	Management of National Wildlife refuges and proposed acquisitions
National Park Service	National Park management and proposed acquisitions

The majority of the federal consistency review in Wyoming is completed by the NEPA Program as described in Section 3.8.3 above. The WDEQ will work with federal agencies in cases where their activities are falling short of the objectives in this plan and/or in cases where state water quality standards are not being met. In general,

maintaining uniformity of federal land management decisions with state nonpoint source program objectives will be accomplished through:

- periodic meetings with other federal agencies,
- establishing new memorandums of understanding (MOUs) and updating existing MOUs as determined to be necessary,
- agency involvement in working groups and task forces,
- state input on environmental assessments and environmental impact statements, (NEPA document review, see Section 3.8.3),
- Section 401 state certification of Section 404 permits (see Section 3.8.1),
- Review and approval of turbidity waivers for federal activities (see Section 3.8.2), and
- BMP audits and field visits to federally managed watershed restoration projects.

Meetings with federal agencies will be convened to ensure that the federal agencies are conducting necessary monitoring in areas of concern on federal lands, to discuss implementation and consistent application of BMPs, and to exchange and update information regarding the agencies' land management and water quality improvement practices.

The NEPA Program meets with other state cooperators on a monthly basis to discuss BLM activities within the state. Federal cooperators such as USFS and National Park Service are also invited to these meetings. This convening of state and federal cooperators is coordinated by the Governor's Planning Office. The state agencies that participate in each meeting depend on the issues to be discussed, but some of the other state agencies in regular attendance include Wyoming Department of Agriculture (WDA), SEO, Wyoming Game and Fish, Wyoming Water Development Commission, Office of State Lands and Investment, WDEQ Land Quality Division, and WDEQ Air Quality Division. Issues raised at these meetings are then discussed with BLM via monthly meetings hosted by BLM with state and federal cooperators. Project specific MOUs are established between BLM and the State of Wyoming to outline how the agencies will work together and follow the NEPA process.

Section 5 of this document provides further information on partnerships with state and federal agencies and how the WDEQ will coordinate with these agencies.

3.9 Other WDEQ Water Quality Division Programs

Other programs within the WQD also work to address nonpoint source pollution through voluntary means outside of the process diagrammed in Figure 7 for the Watershed Protection Program. In addition, other WQD programs work in coordination with the Nonpoint Source Program to protect and restore water quality through regulatory means. The following sections describe work conducted by other WQD Programs and ways that the Nonpoint Source Program will coordinate with each program.

3.9.1 Wyoming Pollutant Discharge Elimination System

The CWA requires that the discharge of any pollutants from a point source into surface water of the United States must be regulated under the WYPDES Program. Through this program, operators of point source discharges are required to receive coverage under a WYPDES discharge permit. The permits contain limitations and conditions that will ensure that the state's surface water quality standards are protected. Permits are published in a 30-day public notice prior to issuance to provide an opportunity for public comment. The WYPDES Program is also responsible for implementing a compliance and inspection program to enforce permit conditions. Some stormwater discharge activity from urban and construction areas are regulated under the WYPDES Program (see Section 2.4.1). Concentrated animal feeding operations are also regulated under the WYDPES Program (see CAFOs, Section 2.5.2.1).

Nonpoint source related activities that will be coordinated with the WYPDES Program include:

- The Nonpoint Source Program Coordinator will work with the WYPDES Stormwater Program to ensure that urban stormwater activities funded by Section 319 and 604(b) grants do not conflict or overlap with activities required by WYPDES storm water permits.
- The Nonpoint Source Program Coordinator will also work with the WYPDES Stormwater Program when revising and updating the Urban BMP manual to obtain input from that program.
- The Nonpoint Source Program will work with the WYPDES Program to identify CAFOs versus AFOs and implement educational outreach to this effect. WYPDES will permit CAFOs and the Nonpoint Source Program will address water quality impacts from AFOs through voluntary and incentive methods. The WQD will continue to encourage development of nutrient management plans at AFOs to ensure the proper collection, storage, and disposal of animal wastes.
- The TMDL and Nonpoint Source Programs will work with the appropriate WYPDES staff during TMDL development and implementation to address both waste load allocations (point sources) and load allocations (nonpoint sources) in TMDLs.
- The Nonpoint Source Program will obtain updated WYPDES outfall location information on a periodic basis to include as part of programmatic mapping tools to help evaluate potential sources of pollution.

3.9.2 Ground Water Program

The Ground Water Program of the WQD is responsible for monitoring, protecting, and restoring ground water resources within the state. Much of the work done by the program is regulatory, such as permitting through the Underground Injection Control (UIC) Program and oversight of cleanup activities associated with Formerly Used Defense Sites (FUDS), uranium mill tailings legacy sites, and commercial and industrial properties. However, the program is also involved in work and activities related to nonpoint source pollution that may impact ground water. Many of the activities of the Ground Water Program are intended to increase public awareness of the potential for nonpoint sources to contribute to ground water contamination and public health

concerns. For example, the program develops and promotes educational and informational materials, such as a series of fact sheets designed to inform rural water well owners on ways to protect their water wells and drinking water supplies from contamination.

Over the years, the Ground Water Program has co-chaired Wyoming's Groundwater and Pesticides Strategy Committee with the WDA and continues to assist with the implementation of the state's *Management Plan for Pesticides in Groundwater (SMP - 1999).* The program also chaired the Wyoming Wellhead Protection Strategy Committee and coordinated with sister agencies, EPA, and local government organizations to develop *Wyoming's Wellhead Protection Guidance Document (1998).* Staff from the Ground Water Program in 2011 participated with local conservation districts in public meetings designed to educate and inform residents about the potential risks to ground water associated with shale gas development and hydraulic fracturing in southeast Wyoming. Related to this effort, the program developed in 2011 guidance documents providing information to rural well owners regarding the sampling and testing of their wells to evaluate the safety of their drinking water.

The Ground Water Program has also worked closely with sister state agencies, EPA, and the United States Geological Survey (USGS) to develop and implement in 2009 the groundwater monitoring element of Wyoming's monitoring strategy for priority ground water areas. As part of this effort, the Ground Water Program worked closely with these agencies, the University of Wyoming, and others to develop ground water sensitivity and aquifer vulnerability maps, including mapping of 'priority' areas in 2003 where shallow ground water resources are used for drinking water purposes, are sensitive to contamination, and are overlain by land use activities that may release potential pollutants. These tools enable the program to better focus its resources and strategically target monitoring resources, education and outreach to those communities and rural residents who may benefit most from education and technical assistance. The program anticipates much of its nonpoint source assistance being in the form of information, technical assistance, and implementation of projects using Section 319 grant funding to help ensure the development of local ground water protection strategies that are crafted by, and tailored to the needs of the local community.

Protecting ground water resources is one of the objectives of the Nonpoint Source Program as described in a later section (Section 4.6). That section describes activities that the Nonpoint Source Program will conduct in cooperation with the Ground Water Program. In addition, the Ground Water Program will conduct the following nonpoint source pollution activities under the authority of its program:

- As part of Wyoming's monitoring strategy, the Ground Water Program will continue to monitor and assess ground water quality in areas where ground water has been prioritized due to its sensitivity, susceptibility, and use as a source of drinking water (see Figure 2), or may otherwise be at risk due to unanticipated development.
- The Ground Water Program will continue to work toward development and implementation of a ground water data management system and electronic data delivery system for the agency.

- The Ground Water program will continue to work toward development of a ground water protection strategy that focuses resources, monitoring, and education towards high priority aquifers.
- The Ground Water Program will continue to develop guidance documents and fact sheets to better inform and educate Wyoming residents on measures that can be taken to protect the quality of ground water and drinking water supplies.
- The Ground Water Program will continue to provide information, education, and outreach to local groups interested in learning more about potential risks to ground water, approaches and strategies to properly implement ground water and drinking water protection measures.
- The Ground Water Program and Nonpoint Source Program will encourage development of local watershed plans that identify ground water quality protection practices, such as wellhead and source water protection, and proper siting, construction, and maintenance of rural private wells as part of the watershed management and restoration strategies.
- The Ground Water Program will continue to co-chair the Groundwater and Pesticides Strategy Committee and will continue to work to implement the SMP.
- The Ground Water Program will continue to assist and participate in Wyoming's State Ground Water Committee.

3.9.3 Water and Wastewater Program

The Water and Wastewater Program is charged with permitting the construction of public water supply systems, including collection and treatment facilities, permitting and bonding of commercial oil wastewater disposal facilities, and managing Drinking Water and Clean Water State Revolving Funds.

The Water and Wastewater Program will conduct nonpoint source related activities under the authority of its program and will coordinate with the Nonpoint Source Program as described below:

- The Water and Wastewater Program continue to permit septic systems for counties that have not been delegated primacy and provide oversight for delegated counties.
- The Nonpoint Source Program will communicate with the Water and Wastewater Program as needed on septic rehabilitation projects that request Section 319 cost-share assistance to ensure that Water and Wastewater Program regulations and guidance are met.
- The Water and Wastewater Program will issue recommendations to county commissioners based on review of proposed rural residential subdivision developments to evaluate potential septic system impacts on ground water and drinking water supplies.
- The Nonpoint Source Program will provide the Water and Wastewater Program with copies of relevant project final reports that have an impact on drinking water or wastewater treatment.
- The Water and Wastewater Program will continue to manage the technical and contractual oversight of Clean Water State Revolving Funds (CWSRF) projects that the State Loan and Investment Board (Office of State Lands and Investment) has approved for funding. The Nonpoint Source Program will stay informed on the status of CWSRF projects and funding opportunities and will encourage use of those funds on nonpoint source projects as

appropriate. The Nonpoint Source Program will recommend to the CWSRF Program nonpoint source pollution projects that it believes should be included on the Intended Use Plan to be eligible for CWSRF funding and will promote CWSRF as a potential funding source to interested and eligible project sponsors. The Water and Wastewater Program will ensure that nonpoint source pollution control projects funded through CWSRF are in accordance with this Nonpoint Source Management Plan and will determine which portions of nonpoint source projects are eligible for cost-reimbursement under CWSRF. In CWSRF project ranking, higher priority will be given to projects that address a water quality impairment.

- The Nonpoint Source Program will continue working with the CWSRF Program to explore additional ways that CWSRF can be used for nonpoint source projects.

3.9.4 Water and Waste Advisory Board

The Water and Waste Advisory Board (WWAB) advises the public and WQD administration in order to coordinate policies and activities of the WQD. In accordance with the WQD Continuous Planning Process, the WWAB holds meetings, makes recommendations on proposed rules, and adopts management plans. The WWAB, after adoption, submits the management plans to the Governor for state certification.

- The Nonpoint Source Program will coordinate approval of the Nonpoint Source Management Plan and BMP Manuals with the WWAB in accordance with the Continuous Planning Process.

3.10 Programs in other WDEQ Divisions

Other WDEQ divisions also conduct work that directly or indirectly reduces nonpoint source pollution to Wyoming's water resources. These programs and the work conducted by each program are described below. The Nonpoint Source Program will work with these programs as needed to coordinate activities and promote information sharing.

3.10.1 Storage Tank Program

The Storage Tank Program (STP) is part of the Solid and Hazardous Waste Division (SHWD) of the WDEQ. The mission of the STP is to reduce the threat of water pollution caused by storage tanks through environmental remediation, leak prevention, and leak detection. Work performed by the STP is important in protecting public health as well as the environment. The STP operates under two sections—Compliance and Remediation.

The STP regulates underground storage tanks (USTs) if they contain petroleum or a hazardous substance, if they are larger than 110 gallons (or 1,100 gallons on a farm, ranch, or residence), and if they are not heating oil tanks. The STP regulates aboveground storage tanks (ASTs) only if they contain gasoline or diesel, and they are used by a fuel dealer to directly fuel vehicles. The STP Compliance Section is tasked with a multitude of activities centered on 1) ensuring that owners/operators have tanks that are designed, constructed, and operated to protect public health and the environment and 2) conducting compliance inspections to ensure operational

requirements are being met. The STP works to provide outreach and education to owners/operators and the public.

Legislation was passed in 1990 that made the state responsible for remediation of releases from regulated USTs. This legislation also required the state to provide federally mandated financial responsibility to each eligible tank system owner. Legislative amendments in 1995 made certain ASTs eligible for the state remediation program as well. The STP rules and regulations apply to all regulated storage tanks in Wyoming. Storage tank owners/operators are entitled to the state corrective action program if they register their tank(s), pay applicable fees, and complete a minimum site assessment (if applicable). The STP has prioritized contaminated sites and clustered a number of sites and third-party sites into projects to increase cost-efficiency. Prioritization is based on the severity of the release, and a score is calculated for each site based on factors such as potential health exposure and protection of ground water and surface water. Each remediation project consists of five phases: 1) subsurface investigation to determine the lateral and vertical extent of soil and/or ground water contamination, 2) evaluation of remedial alternatives and engineering design of the chosen alternative, 3) construction of the remedial alternative and procurement of the remediation equipment, 4) operation and maintenance of the constructed system(s) until state cleanup objectives have been met, and 5) removal and decommissioning of the remediation systems. Immediate response procedures and contracts have also been developed to address emergency situations for site stabilization.

The STP will continue conducting the work described above to address nonpoint source pollution to surface and ground water caused by USTs and ASTs.

3.10.2 Solid and Hazardous Waste Permitting and Corrective Action Programs

The Solid and Hazardous Waste Permitting and Corrective Action programs of the SHWD is responsible for permitting the location, design, construction, operation, closure and post-closure care of solid and hazardous waste treatment, storage and disposal facilities. The facilities that are regulated by these programs include local community landfills (both operating and closed), municipal waste baling stations and transfer facilities, industrial and hazardous waste landfills, industrial and hazardous waste treatment and storage facilities and units, and used oil storage facilities. Permits are required to ensure that solid and hazardous waste facilities built in Wyoming are designed, constructed, and operated safely, and will not harm public health or the environment.

The Solid and Hazardous Waste Permitting and Corrective Action programs also monitor the quality of ground water around management facilities, and may impose corrective action requirements on facilities whenever ground water contamination is discovered. Currently, the WDEQ is requiring the installation of monitoring networks at municipal landfills statewide. Grant funding is available to reimburse local governments for a portion of this cost. All local government entities that operate municipal landfills were required to prepare Integrated Solid Waste Management plans by July 1, 2009.

The Solid and Hazardous Waste Permitting and Corrective Action programs will continue conducting the work described above to address nonpoint sources of pollution from landfills and other types of solid and hazardous waste treatment, storage, and disposal facilities.

3.10.3 Voluntary Remediation Program

The Voluntary Remediation Program (VRP) of the SHWD sets out a process that can be used by owners of contaminated sites, or by potential developers, to reach decisions about required remedial activities and put contaminated sites back into productive reuses. Any individual, business, or unit of government that conducts an environmental investigation and cleanup of a contaminated property – following state requirements under the VRP – can receive a release from future environmental liability. The SHWD has developed guidance documents, policies, and outreach materials necessary to implement the VRP and assist volunteers.

Many communities in Wyoming have properties that are abandoned or underutilized because of known or suspected environmental contamination. These properties, known as "brownfields," may require cleanup before they are safe for reuse or redevelopment. The WDEQ established the Brownfields Assistance (BA) program under the VRP to help local governments investigate, cleanup, and reuse brownfield properties. Wyoming's BA program can provide technical assistance to brownfield sites through:

- A Phase I environmental site assessment, including an historical investigation of the previous uses of the property and a visual site inspection (no sampling is required),
- A Phase II environmental site assessment, including sampling of ground water, surface water, and soil to identify the types and concentrations of contaminants ,
- Identification of cleanup options and cost estimates based on future uses and redevelopment plans, and
- Some limited site cleanup activities.

If SHWD determines a site is eligible to receive financial BA, SHWD will develop a scope of work for the project, hire a contractor to perform the work, and will oversee the work activities.

"Orphan sites", sites where the SHWD determines that there is no viable party that is responsible for causing or contributing to the contamination present at the site, are also managed by the VRP. The VRP works to identify, evaluate and prioritize orphan sites for remediation, and uses contractors to investigate and remediate sites and to mitigate risks.

The VRP Program will continue conducting the work described above to address potential water quality pollution from contaminated properties. The Nonpoint Source Program will stay informed of VRP projects as needed to ensure that Section 319 funded activities do not overlap or interfere with VRP activity.

3.10.4 Mined Land Reclamation Program

The WDEQ Land Quality Division (LQD) administers and enforces all statutes and regulations on land disturbances dealing with mining and reclamation within the State of Wyoming. The LQD has the authority to require permitting and licensing of all operator actions of surface and

underground mine facilities. Each mining operation must be covered by a reclamation bond in the event the operator is unable to fulfill the reclamation requirements. Work conducted by the LQD helps control sediment and other nonpoint sources of water pollution at active mines. The LQD will continue to issue permits to mines with provisions intended to control nonpoint sources of pollution and will also enforce the runoff control provisions in the mining permits issued by the division. In addition, LQD prepares Cumulative Hydrologic Impact Assessments (CHIAs) for coal mine permit actions. WQD Watershed Section staff review CHIAs review CHIA projects associated with water quality. In addition, WYPDES permits for point source discharges and storm water permits also serve to control pollutant sources from mining operations. Between LQD statutes and regulations that require an operator to prevent all sediment from leaving a mining disturbance area and WYPDES permitting, all pollutants should either be retained on the mine site or allowed to discharge through a permit.

3.10.5 Abandoned Mine Land Division

The Abandoned Mine Land Division (AML) of the WDEQ works to eliminate safety hazards, repair environmental damage, and assist communities impacted from past mining activities. The AML traditional reclamation program has reclaimed thousands of acres of abandoned coal, bentonite, and uranium open pit mines. New projects are initiated each year; many of which impact surface and/or ground water quality. Most AML reclamation projects are performed on currently disturbed, unvegetated lands that have unstabilized mine waste piles and other unsuitable soil materials for plant growth. AML reclamation buries unsuitable soils, stabilizes landforms using a “natural regrade” topographic grading system to reduce erosion, and ultimately re-establishes native vegetation on barren areas. Often, at larger sites, the reconnection and re-establishment of through-flowing drainage channels is part of the abandoned mine restoration project. This reclamation generally reduces potential sediment loads reporting to drainages, and decreases the potential for mine waste to become airborne or to degrade surface waters. AML has also closed several hundred hazardous gold and copper mine openings, abates coal mine fires, and has an ongoing program to mitigate underground mine subsidence risks. AML also makes subsidence insurance available to property owners in affected communities.

The AML will continue to work towards its mission of addressing impacts from past mining activities. The WQD Nonpoint Source and TMDL Programs will coordinate with AML when AML issues are involved in TMDL or Watershed-Based Plan development and/or implementation. The Nonpoint Source Program will communicate with AML to stay informed on AML projects with water quality impacts and will coordinate program activity where possible.

3.10.6 Environmental Quality Council

The Environmental Quality Council (EQC) is a quasi-judicial body whose powers and duties are outlined in §35-11-112 of the Environmental Quality Act. The EQC promulgates rules and regulations and conducts hearings. In accordance with the Wyoming Continuing Planning Process, disputes regarding the Nonpoint Source Management Plan may be appealed to the EQC.

SECTION 4: Objectives of the Nonpoint Source Program

This section provides a description of the process by which the Wyoming Nonpoint Source Program will be implemented. With the oversight of the Nonpoint Source Task Force, the Nonpoint Source Program will work to implement nine objectives to meet its programmatic goal. These objectives are described broadly in the following sections. Appendix A to this document reiterates these objectives and summarizes programmatic activity described throughout this document by providing a list of action items for each objective as well as long-term (two years and beyond) milestones and tracking measures to establish markers for progress towards meeting each objective. Short-term (i.e. annual) milestones will be incorporated into each annual program report for the next fiscal year.

4.1 Objective #1: Identification and Prioritization

The WDEQ will continue to gather and use credible data to accurately and efficiently identify those surface waters of the state whose designated uses are determined to be threatened or impaired due to nonpoint source pollution. Those waters determined to be impaired or threatened by nonpoint source pollution will then be prioritized by the Nonpoint Source Program for restoration efforts.

The process for identifying waters adversely impacted by nonpoint source pollution was described in Sections 3.2 through 3.5. Waters listed in Category 4A or 5 in the Integrated Report as threatened or impaired due to nonpoint source pollution will be considered "priority waters" by the Nonpoint Source Program for restoration efforts. The Nonpoint Source Program will continue to release an annual RFP for Section 319 and 604(b) funds. The RFP will continue to specify that projects conducted to address impaired waterbodies will be higher priority for funding.

4.1.1 The Impaired Waters Index Strategy

The Nonpoint Source Program plans to manage and track priority waters through a strategy called the Impaired Waters Index (IWI). The IWI will be a clearinghouse of information about water quality impairments within the state, including the status of planning and restoration efforts for each impaired water. The IWI will consist of a Microsoft Access database that lists all of the threatened/impaired waters identified as Category 4A or 5 in the Integrated Report that are wholly or partially impaired due to nonpoint source pollution. Category 4A waters are surface waters threatened/impaired for a designated use but for which a TMDL has been completed and approved by EPA. Category 5 waters constitute the 303(d) list and include threatened/impaired waterbodies still requiring TMDL studies. Each impaired waterbody segment will be assigned to a level, designated "A" through "I", based on the status of planning and restoration efforts for that segment. These levels are defined in Table 3. A table produced from the IWI that summarizes nonpoint source threatened/impaired waterbodies and their associated level of planning/restoration is included in Appendix B. This table will be periodically updated and posted on the Wyoming Nonpoint Source Program Website.

Table 3. Levels associated with tracking planning and restoration of impaired waters in the Impaired Waters Index.

Level	Status	Description
A	Impairment identified	Waterbody has been identified as impaired or threatened on 303(d) List. A plan (TMDL or other Watershed-Based Plan) is not yet under development.
B	TMDL being developed	The WQD or other party has begun the process of developing a TMDL for the 303(d) water quality impairment. TMDLs funded with Section 319 grants will include an implementation plan that incorporates the EPA Nine Key Elements of watershed-based planning.
C	Plan other than TMDL being developed	Development of Watershed-Based Plan (WSBP) or other formal strategy to identify and prioritize effective water quality improvement projects for a 303(d) listed impairment. Plan must include all of EPA Nine Key Elements to be considered a WSBP.
D	TMDL/WSBP completed, Implementation not yet begun	The TMDL or WSBP has been completed and approved but implementation efforts for restoration under the TMDL/WSBP have not yet begun.
E	Implementation of TMDL/WSBP	The TMDL or WSBP is at some stage of implementation.
F	Re-evaluation	Watershed is re-evaluated due to post-implementation status, changed water quality standards, or other factors that would warrant re-evaluation.
G	Request Removal	Removal from Category 4A or 5 status in the Integrated Report has been requested by WQD.
H	Fully Restored	The impairment is addressed and the waterbody is considered fully restored to meeting its designated uses.
I	Removals—Other	Removal from Category 4A or 5 has occurred due to reasons other than watershed restoration (i.e. change of standards, correction of error, etc.). This level is for tracking purposes only; waterbodies in this level will not count as successful watershed restorations.

The progression of an impaired segment through the levels may not always be linear and some segments may cycle through multiple stages of planning, implementation, and evaluation before restoration is achieved. For example, impaired waters in Level F may have to return to Level E one or more times until re-evaluation warrants its promotion to Level G when restoration is achieved and the WQD requests removal from Category 4A or 5 status in the Integrated Report. The WQD intends to use Level E to track implementation of TMDLs or Watershed-Based Plans as one way to track program progress. However, the WQD recognizes that local watershed groups have already completed valuable restoration work under local watershed plans; to the extent possible, these efforts will be noted in the IWI database and will be taken into consideration as the WQD evaluates overall watershed restoration efforts.

The IWI database will also include information associated with each impairment, including what restoration efforts have been conducted in the surrounding watershed, what monitoring resources are available in each watershed, and local watershed planning activity. To the extent that the information is available, the Nonpoint Source Program will include information about restoration efforts conducted outside of the Nonpoint Source Program by other agencies and watershed groups. Reports generated from the database will summarize this information and will be linked to an interactive GIS-based mapping tool. The map will show impaired waters within the state along with other relevant shapefile layers, such as watershed boundaries, major cities, roads, WYPDES outfalls, and conservation district boundaries. Clicking on an impaired water segment in the map will bring up a report showing the compiled information about the impaired water segment as well as a summary of restoration and planning efforts completed or underway for the impaired segment.

This map will be made available internally to WQD staff to encourage integration and coordination between Watershed Programs, most notably the Assessment, TMDL, and Nonpoint Source Programs. The Nonpoint Source Program intends to make this tool available to the public as well at a future date. Links to the IWI and the associated map will be posted on the Nonpoint Source Program website once available.

Thus, the IWI is a tool that will be used by the Nonpoint Source Program to continually track and evaluate planning and restoration efforts while promoting information sharing between WQD programs and facilitating reporting to EPA and the public. It can be used as a tool to focus programmatic resources in many ways. For example, it can help identify impaired watersheds that have not had any restoration or planning efforts and conversely, can help identify watersheds where significant restoration efforts have been undertaken and further effectiveness monitoring might be warranted to evaluate watershed improvement.

4.1.2 Recovery Potential Screening Tool

In January 2012, EPA released a new "Recovery Potential Screening Tool" to provide a systematic method for comparing waterbodies or watersheds and evaluating how well they may respond to restoration efforts. While this tool has many applications, some of its intended uses were to help states prioritize TMDL development and focus efforts to achieve watershed restoration through nonpoint source reduction projects. Recovery Potential Screening is a technical method that measures, for each water or watershed, several ecological, stressor, and social context indicators that are associated with the likelihood that a restoration effort may succeed. The tool is not intended to be used to establish whether restoration can or cannot be achieved, but rather, to evaluate relative restorability between waterbodies or watersheds. Detailed information about this method can be found on EPA's Recovery Potential Screening website.

The Nonpoint Source Program received preliminary training on the use of this tool in February 2012 and believes it has the potential to assist with prioritization of watersheds for restoration efforts. The Nonpoint Source Program will continue working during 2012 and beyond to obtain further training on this method and depending on available staff resources, will begin compiling

the data necessary to evaluate watershed prioritizations. The Nonpoint Source Program anticipates that this tool can help address the following types of programmatic issues:

- Analyzing statewide impairments to evaluate relative watershed restorability with the goal of accelerating the rate of successful watershed restoration.
- Determining whether targeting Section 319 funds within specific watersheds is appropriate.
- Within watersheds with water quality impairments, evaluating which subwatersheds are most likely to respond to restoration efforts and communicating this information to local stakeholders and project sponsors.
- Working with the TMDL Program to provide input on prioritization of TMDLs.

EPA has indicated that technical assistance is available for the use of this tool; the Nonpoint Source Program will request assistance from EPA as needed.

4.2 Objective #2: Planning

The WDEQ will continue to work with local stakeholders to develop and promote the development of tools that provide accurate, efficient, and comprehensive plans on how the impairments to priority waters identified in Objective #1 will be addressed. This includes the development of EPA-approved Total Maximum Daily Loads (TMDLs) and the development of Watershed-Based Plans that meet all of EPA's Nine Key Elements for Watershed-Based Planning.

Watershed restoration efforts are most effective when a comprehensive, watershed-wide plan is available that identifies pollutant sources and outlines actions items as a "road map" of how to address those sources in such a way that designated uses can be achieved. This helps avoid randomly placed BMPs and promotes the greatest "return" (i.e. water quality improvement) for the investment of resources within a watershed. The two major vehicles by which this planning is done in Wyoming are TMDLs and local watershed-based planning.

Conditions established in Section 319 grants awarded to the State by EPA require that planning documents incorporate EPA's "Nine Key Elements for Effective Watershed-Based Planning" before projects that implement those plans can be eligible for the majority of Section 319 funding. The Nine Key Elements are established in EPA's Nonpoint Source Program and Grants Guidelines for States and Territories published in the October 23, 2003 Federal Register. These Nine Key Elements include, in summary, the following components:

- causes and sources of pollution,
- expected load reductions,
- management measures,
- technical and financial assistance,
- information/education component,
- schedule,
- measurable milestones,
- evaluation of progress, and

- effectiveness monitoring.

Thus, most of the annual Section 319 funding can only be awarded to restoration projects on impaired or threatened waters that implement a TMDL, Watershed-Based Plan, or other planning document that incorporates these Nine Key Elements.

Because of this restriction on Section 319 funding, the Nonpoint Source Program will work closely with the TMDL Program to support, track, and participate in TMDL development and incorporate the Nine Key Elements as a part of TMDL development. The Nonpoint Source Program has used funds from past Section 319 grants to financially support TMDL development and plans to continue reserving a portion of funds from each annual Section 319 grant for TMDL development. This will not only help the TMDL Program meet its required pace of development, but will also produce quality planning documents to guide restoration efforts. The Nonpoint Source Program will reserve funds for TMDL development to be in accordance with current national Section 319 Program guidance on allowable funding amounts for planning purposes. The Nonpoint Source Program will continue to focus its efforts on implementation (see Section 4.3) but recognizes the importance of nine-element planning to guide implementation. The Nonpoint Source Program will work with regional EPA oversight to ensure that an appropriate balance between planning and implementation is being achieved.

Furthermore, in order to streamline fulfillment of the Nine Key Element requirement, the WQD will require that all TMDLs funded with Section 319 or Section 604(b) funds include an implementation plan that incorporates the Nine Key Elements. This will facilitate the ability for local watershed groups to apply for Section 319 funding following completion of the TMDL and will eliminate the need to supplement the TMDL with further information to meet Section 319 grant requirements, thereby producing nine-element planning documents in the most efficient and cost-effective manner. The TMDL Program has used and will continue to commit to using a significant amount of local involvement in the TMDL development process and will encourage the use of existing local watershed planning information in the development of the TMDL implementation plans.

Local watershed groups also have the option of completing a Watershed-Based Plan in the absence of a TMDL. Provided the completed plan addresses the Nine Key Elements with WQD approval, such a plan would also enable a project sponsor to apply for Section 319 funds. The Nonpoint Source Program and TMDL Program will provide technical assistance, as resources allow, to support local watershed groups in the development of Watershed-Based Plans that meet the Nine Key Elements.

In limited cases, a Nine Key Element Watershed-Based Plan may be determined to be unnecessary in order to be eligible for Section 319 implementation funds. Such cases could include small watersheds with limited landownership where nonpoint sources of pollution are readily apparent. In such cases, the Wyoming Nonpoint Source Program will work with potential project sponsors to provide a sufficient level of planning through alternative documents such as project implementation plans. Such waivers of Nine Key Element planning will be in accordance with national Section 319 program guidance and will be discussed with regional EPA staff.

The Nonpoint Source Program will continue to accept proposals for planning and assessment projects in response to the annual Section 319 and Section 604(b) RFPs. Planning and assessment projects on

impaired waterbodies will be given higher priority for funding than planning and assessment projects on unimpaired waterbodies.

4.3 Objective #3: Implementation

The WDEQ will provide financial and technical assistance to implement efficient and effective watershed restoration projects in accordance with the watershed planning tools established in Objective #2 above. The purpose of the restoration projects will be to implement best management practices that reduce or eliminate nonpoint sources of pollution such that surface water quality standards are achieved and maintained.

As described above, threatened and impaired waters with a Nine Key Element planning document (TMDL or Watershed-Based Plan) will be eligible for Section 319 funding. This includes Level D and E waters under the IWI (see Section 4.1.1). The Nonpoint Source Program will continue to accept proposals for implementation projects in response to the annual Section 319 RFP.

A 2009 internal program evaluation showed that over the last 11 years, the Wyoming Nonpoint Source Program has awarded most of its Section 319 project funding to BMP implementation (watershed restoration) projects. This reflects the focus of the program to produce measurable water quality improvement by implementing on-the-ground BMPs. The Nonpoint Source Program will continue to focus the majority of its annual funding and efforts towards BMP implementation to achieve restoration of threatened/impaired waterbodies. It must be noted, however, that BMP implementation is not possible without the support of planning, assessment, and other activities that are needed to coordinate and manage watershed-wide restoration.

National directives are reinforcing the need to focus Section 319 funds towards on-the-ground improvements (USEPA 2011). The Nonpoint Source Program will comply with national guidance and grant requirements established to this effect. By focusing the majority of annual funding on activities that implement BMPs or support BMP implementation on impaired waters, and by continuing to evaluate all project proposals based on their ability to produce measurable improvements in water quality (see Section 4.9), the Nonpoint Source Program will seek to maximize water quality improvement.

Historically, the Nonpoint Source Program has accepted proposals for Section 319 projects statewide with each annual RFP. This “shotgun” approach to project funding has not been ineffective; however, the Nonpoint Source Program believes that focusing Section 319 funds within targeted watersheds across the state may be appropriate in some years in order to more effectively address water quality impairments on a watershed scale and more quickly realize water quality improvement. A targeted watershed approach can potentially facilitate coordination with other funding sources and WQD monitoring efforts. Thus, the Nonpoint Source Program may choose to further prioritize watersheds containing Level D and E waters for restoration efforts in each annual Section 319 RFP by designating one or more watersheds as targeted watersheds for that fiscal grant year. Targeted watersheds would be based on factors such as threat to human health or the environment, amount of local support obtained for restoration projects, and other funding sources available for restoration projects. The annual RFP will indicate that targeted watersheds will receive highest priority for funding; however, proposals will still

be accepted statewide. The EPA Recovery Potential Screening Tool (Section 4.1.2) may help the Nonpoint Source Program select targeted watersheds.

The decision to target one or more watersheds for funding will be made by the Nonpoint Source Program with approval from the Nonpoint Source Task Force. The Nonpoint Source Program Coordinator will compile a list of watersheds containing impaired waters in Levels D and E and will consult with potential project sponsors in those watersheds to get an idea of interest in funding, local support, and available non-federal match funding. This information will be presented to the Task Force for approval in order to make informed decisions about selecting targeted watersheds. The decision to target or not target watersheds will be recorded in meeting minutes and/or through correspondence with the Task Force.

Because Wyoming is in the beginning stages of developing TMDLs and other planning documents that contain the Nine Key Elements, there is currently limited eligibility for BMP implementation funding. Therefore, it may not be appropriate to pursue targeted watersheds for several years to come. The Nonpoint Source Program and Task Force may opt to not target watersheds if they feel that leaving the RFP open to statewide proposal submission is the best option. The Nonpoint Source Program and Task Force may also choose to target a portion of the funding and leave the remaining funding open to statewide proposals.

While Wyoming is in the beginning stages of developing TMDLs and other Nine Key Element watershed-based planning documents, it is important to recognize that there are currently in excess of 20 completed watershed plans in Wyoming. These watershed plans were largely initiated and completed by local watershed steering committees, with the guidance of local conservation districts and the Wyoming Association of Conservation Districts (WACD), prior to EPA's nine-element requirement for watershed-based planning. While these watershed plans do not meet EPA's nine-element requirement for watershed-based planning, a tremendous amount of effort and energy has been invested into developing and implementing these plans, and the WQD acknowledges the planning and water quality improvement work accomplished under this process.

Section 319 funding will only provide a small fraction of the funding necessary to implement BMPs to achieve watershed restoration statewide. Many other state, local, and federal funding sources as well as in-kind labor and volunteer time will be needed to achieve the goals set forth in this plan. Appendix E lists other funding sources available to project sponsors within Wyoming that are related to natural resource conservation.

4.4 Objective #4: Documenting Environmental Results

The WDEQ will develop and implement methods to accurately and efficiently monitor and/or evaluate project effectiveness in terms of water quality improvements realized from watershed restoration project implementation.

It is important for the Nonpoint Source Program to be able to measure and document success from the funds that it expends towards water quality improvement. In terms of watershed restoration, success involves realizing water quality improvement due to implemented projects with the overall goal of restoring impaired waterbodies to meeting water quality standards and achieving designated uses.

Soliciting high quality projects is one way to help achieve this objective. To this effect, the Nonpoint Source Program will focus on evaluating projects based on their ability to produce measurable improvements to water quality (see Section 4.9). In addition, the Nonpoint Source Program will ensure that projects are following high-quality, detailed plans as described in Objective #2 and that those projects utilize the targeted watershed approach as described in Objective #3 when determined to be appropriate.

While it is important to be proactive in soliciting high quality projects, it is also important to evaluate projects after they are completed, referred to as project effectiveness monitoring. Project effectiveness monitoring is important to determine whether the goals and objectives of each project, and ultimately the program, are being met. It helps to answer the critical questions of whether implemented BMPs are working, and if so, are water quality standards now being achieved? Besides tracking watershed restoration and demonstrating program accountability, having this information will also help the program make better management decisions by understanding which BMPs were most effective for the cost, which were not effective, and what situations led to successful restoration. This information will in-turn help produce better TMDLs and Watershed-Based Plans.

Project effectiveness monitoring will be accomplished by the Nonpoint Source Program in multiple ways. The first, and most ideal, way to document success is through water quality data that indicate improving water quality trends and/or demonstrate that water quality standards are being achieved. The collection of scientifically credible water quality data is not always an easy task, especially with nonpoint source pollution, for which several years may be needed before water quality improvement is seen after the source(s) has been addressed or for which multiple BMPs may be needed to address a source that is diffuse in nature. Often, baseline data that establish pre-BMP conditions are lacking, which hinders pre-and post-BMP water quality comparison.

The Nonpoint Source Program will use credible water quality data from both WQD monitoring efforts and third-party monitoring efforts when possible to evaluate project effectiveness. In the absence of credible water quality data, the Nonpoint Source Program will use accepted predictive modeling methods to estimate pollutant load reductions from implemented BMPs. Data management and tracking methods will be implemented to manage water quality data. Each of these tools is described in further detail in the following sections.

4.4.1. Water Quality Data Obtained by the WQD Monitoring Program

As described in Section 3.3, one of the secondary objectives of the WQD Monitoring Program is to provide data and technical support toward implementation and evaluation of nonpoint source restoration projects. Thus, the Nonpoint Source Program will work with the Monitoring Program to utilize Monitoring Program staff for project effectiveness monitoring as resources allow. This will involve utilizing staff to conduct project-specific water quality monitoring, whether it be for baseline condition monitoring (pre-BMP implementation) or monitoring after the project is closed (post-BMP implementation). As mentioned above, nonpoint source pollution mitigation projects may require several years post BMP-implementation before water quality improvements are seen. Due to the relatively short time-frame of most Section 319 projects (one to four years), it is not always practical to expect that the project sponsor can implement BMPs and conduct water quality sampling for more than one year after BMP implementation. The benefit of having assistance from

WQD Monitoring Program staff is that selected projects can be monitored several years after BMP implementation, making it more likely to detect water quality improvement. Monitoring Program staff also provide technical assistance during monitoring plan development and in some cases have directly trained project sponsors in monitoring methods and protocols used by WQD.

Nonpoint Source Program project effectiveness monitoring overlaps with TMDL effectiveness monitoring, which is a requirement of the TMDL Program. Assistance with TMDL effectiveness monitoring is also a secondary objective of the Monitoring Program. TMDL effectiveness monitoring is done to determine if water quality has improved since the TMDL was implemented and whether compliance with state water quality standards has been achieved. Because it is anticipated that a significant portion of TMDL implementation will be done through Section 319 projects, it will be important for the Nonpoint Source Program to coordinate with the TMDL Program for project effectiveness monitoring in cases where these efforts overlap.

The Nonpoint Source, Monitoring, and TMDL Programs will meet annually to discuss monitoring needs and available Monitoring Program resources. The Nonpoint Source Program Coordinator will prepare a list of active or pending projects for which baseline monitoring is needed or closed projects for which post-BMP implementation monitoring is needed. This will include waters in Level F of the IWI (waters for which restoration efforts have been completed but impairment status is unknown). Based on what staff resources are available, the Monitoring, TMDL and Nonpoint Source Programs will determine which projects, if any, the Monitoring Program can assist with for each upcoming year.

After this meeting, the Nonpoint Source Program will provide to EPA a summary of the projects whose effectiveness monitoring will be assisted by the Monitoring Program, either through direct monitoring or technical assistance/training, for the upcoming year. Appendix A of the Surface Water Monitoring Strategy 2010-2019 shows indicators that the Monitoring Program will use to assess water quality for both primary and secondary objectives. Each annual Nonpoint Source Program report will also contain a summary of Monitoring Program assistance with project management and project effectiveness monitoring.

4.4.2. Water Quality Data Obtained by Project Sponsors or Other Third-Party Entities

The Nonpoint Source Program also relies on water quality data submitted by third-parties to document environmental results. This most commonly includes grant sub-recipients who sponsor BMP implementation projects but can also include other agencies or organizations that collect credible data, such as Wyoming Game and Fish, BLM, or USFS.

The Nonpoint Source Program has historically required grant sub-recipients who sponsor BMP implementation projects to include a water quality monitoring component for purposes of evaluating project effectiveness. As described above, however, there is often insufficient time for the sponsor to implement BMPs and conduct enough baseline and long-term monitoring to detect water quality changes that have occurred. All too often, results of project effectiveness monitoring are inconclusive for this reason. While some project sponsors have the resources to monitor with or without Section 319 funding, many do not, making monitoring after project closure unlikely for many sponsors.

Therefore, the Nonpoint Source Program has concluded that for some BMP implementation projects, water quality monitoring may not be the most effective use of funds. Beginning with the FY2013 RFP, sponsors of BMP implementation (Watershed) projects have the option of requesting a waiver to the water quality monitoring requirement under circumstances in which it is determined that monitoring is not an effective use of funds. Such instances could include: (1) the project implements BMPs for which alternate methods are more appropriately used to calculate effectiveness; (2) the project is in a watershed where the project sponsor believes it is most appropriate to implement several phases of BMPs before effectiveness monitoring is warranted; (3) the project implements BMPs for which it is believed that several years (beyond the scope of the proposed project) will be needed to realize water quality improvement; or (4) other circumstances in which the project sponsor can justify that water quality monitoring is not the best use of funds. In such circumstances where the project sponsor wishes to waive the requirement for monitoring, the sponsor must contact the Nonpoint Source Program for approval prior to submitting a final proposal. The Nonpoint Source Task Force, while making funding recommendations, may require that sponsors add, remove, or modify monitoring plans to receive final funding. The Nonpoint Source Program will evaluate this approach after five years to ensure a balance exists between quantitatively measuring the environmental benefits of projects and maximizing effectiveness of grant funds.

Water quality data obtained by project sponsors can be and has been a useful tool that the Nonpoint Source Program believes can be enhanced with assistance from the WQD Monitoring Program. Many project sponsors, most notably the state's 34 individual conservation districts, have provided data that have helped to evaluate projects, have contributed to impairment and de-listing decisions, and have been critical in TMDL and Watershed-Based Plan development. By focusing project sponsor monitoring where it is most appropriate and most warranted, and supporting these efforts with technical assistance and monitoring conducted by the WQD Monitoring Program, the Nonpoint Source Program believes it can improve the ability to quantify environmental impacts of the program.

In order to assist local groups with collecting data that would comply with the State of Wyoming Credible Data Act, the University of Wyoming, in collaboration with WACD, NRCS, and WDEQ, initiated a water quality monitoring training program in 2005. This training, which is broken into three modules, including both classroom and fieldwork, has helped local groups collect data that allows them to meet objectives of their local watershed plans. WQD Watershed Protection Program staff will provide assistance with this training as resources allow.

The WQD will continue to provide assistance with training, SAP design, QA/QC, and data interpretation to project sponsors as resources allow. The Nonpoint Source Program Coordinator will provide a copy of all Section 319 and 604(b) project final reports, including water quality data submitted as part of those reports, to the Assessment Program for consideration in each biannual Integrated Report.

4.4.3. Pollutant Load Reduction Estimates

The Nonpoint Source Program is required through Section 319 grant conditions to report environmental data to the Grant Reporting and Tracking System (GRTS). Specifically, the Nonpoint Source Program is required to report to GRTS the estimated annual reduction in pounds of nitrogen, phosphorus, and tons of sediment from Section 319 nonpoint source reduction projects. Where possible, the Nonpoint Source Program will use pre- and post-BMP water quality and flow data to determine such pollutant load reductions. For projects where pre- and post-BMP implementation water quality data are not available, the Nonpoint Source Program will estimate the above load reductions using approved predictive models such as the EPA Spreadsheet Tool for the Estimation of Pollutant Load (STEPL) and EPA Region 5 model. Pollutant load reduction estimates will also be presented in each annual report for the Nonpoint Source Program.

4.4.4. Data Management and Tracking

Data management and tracking are important to facilitate review of data to look for water quality trends and to facilitate public access to the data. The WQD has developed and implemented an EPA-approved Quality Assurance Project Plan (QAPP) that documents planning, implementation, assessment procedures, and QA/QC objectives to ensure that all data and information collected are sufficient for their intended purposes. Within the next three years, the Monitoring Program plans to revise the QAPP so that it more accurately reflects the current directions and objectives of the Monitoring Program. In addition, standard operating procedures (SOPs) have been developed for most field and laboratory operations implemented by the Monitoring Program. These SOPs describe the methodologies used by the Monitoring Program to meet their objectives. The SOPs will also be updated within the next three years to reflect all methodologies currently used by the Monitoring Program. Sponsored Section 319 projects that conduct water quality monitoring will be required to provide a SAP and a QAPP before monitoring activities begin. The WQD QA/QC officer and other WQD Watershed Section staff assist sponsors with development, review of, and approval of these documents.

Several database systems have been used to electronically manage Monitoring Program water quality data. An Access database known as Ecological Data Application System (EDAS) was originally used in conjunction with EPA's Storage and Retrieval Data Warehouse (STORET) system. With the recent EPA switch from STORET to Water Quality Exchange (WQX), EDAS is being updated to better communicate with WQX. A WDEQ-wide Information Technology initiative has also affected the development of EDAS; a system called SWIM (Surface Water Information Management) will be the final product and will eventually house all water quality data collected by the Monitoring Program. Currently, the Nonpoint Source Program is exploring options within and outside of SWIM to determine the best way to manage Section 319 and 604(b) project data reported by project sponsors. The Nonpoint Source Program will continue working over the next five years to develop an electronic data tracking system for Section 319 and 604(b) project water quality data.

4.5 Objective #5: Protection and Prevention

In addition to restoring impaired waters, the WDEQ will seek to protect those waters that are not listed as impaired or threatened, but may nonetheless be adversely impacted by nonpoint source pollution or may be high quality, unique waters that warrant special protection. The quality of these surface waters will be maintained and improved through coordinated regulatory and non-regulatory methods, including nonpoint source pollution reduction and control, permitting of point sources, the National Environmental Policy Act (NEPA) review process, Clean Water Act Section 401 certifications, and providing technical assistance and public education. Where possible, the WDEQ will seek to be proactive to prevent new water quality impairments from arising.

It is often more cost-effective to prevent water quality impairments from occurring than trying to remediate impairments after they have occurred. There is increasing interest from state and national levels to not only work towards restoration but to also proactively protect unimpaired waters and prevent new sources of nonpoint source pollution from occurring. The ecological and economic benefits provided from healthy watersheds are numerous. Thus, while the Nonpoint Source Program will maintain a focus on using Section 319 funding to restore impaired waters, the Program will also work towards protection of unimpaired watersheds and prevention against new sources of nonpoint source pollution.

The Nonpoint Source Program will use voluntary mechanisms for protection and prevention. This includes proactive information and education as well as providing financial assistance for implementation of projects that will protect unimpaired waters and prevent new sources of pollution from occurring. The Nonpoint Source Program will continue to conduct effective information and education activities as aspects of the program, as described in detail below in Section 4.7 and Appendix A. Project sponsors will continue to be able to apply for a portion of Section 319 funding for protection/prevention projects.

In addition, other WDEQ programs seek to protect water quality and prevent pollution through regulatory and/or voluntary mechanisms (see programs described in Sections 3.8-3.10).

In 2011, the EPA launched its Healthy Watersheds Initiative by releasing the *Healthy Watersheds Initiative: National Framework and Action Plan 2011*. The purpose of the Healthy Watersheds Initiative is to supplement watershed restoration efforts with proactive, holistic aquatic ecosystem conservation and protection. The initiative involves "…assessment and management approaches that encourage states, local governments, watershed organizations, and others to take a strategic, systems approach to conserve healthy components of watersheds, and, therefore, avoid additional water quality impairments in the future." The Wyoming Nonpoint Source Program supports proactive efforts to maintain healthy watersheds and will work with EPA as a partner in protecting healthy watersheds in Wyoming as opportunities arise and as available resources allow.

Activities conducted by programs or agencies outside of the WDEQ also contribute to protection of high quality watersheds and prevention of new pollution. The activities of these agencies and Nonpoint Source Program cooperation with these partners is described in detail in Section 5.

4.6 Objective #6: Ground Water Protection

The WDEQ will work to understand current ground water quality conditions, improve ground water quality, protect drinking water supplies from nonpoint sources of pollution, protect the public health, and increase public awareness of the potential for nonpoint sources to contribute to ground water contamination and public health concerns.

The dependence of the majority of Wyoming residents on ground water for drinking water makes protection of ground water resources from nonpoint source pollution an important activity. The WQD Ground Water Program has broad responsibilities for developing and implementing ground water protection strategies within the state. The activities of this program were described in detail in Section 3.9.2. The Nonpoint Source Program will coordinate ground water protection activities with the Ground Water Program. The annual Section 319 RFP will continue to allow and encourage submission of ground water projects for funding; however, with national directives focusing the use of Section 319 funds to on-the-ground projects that address impaired surface waterbodies, ground water projects may be a lower priority for Section 319 funding. In accordance with the CWA and EPA guidelines, the maximum amount of funds that that Nonpoint Source Program will award to a ground water project is $150,000. The importance of protecting aquifers as drinking water sources may elevate a ground water project in priority during review of project proposals.

The Nonpoint Source Program and Ground Water Program will also work to coordinate outreach and training opportunities. The Nonpoint Source Program will continue to solicit expertise and technical assistance from the Ground Water program to help with proposal reviews and project management. Final reports from ground water projects will be made available to the Ground Water Program.

4.7 Objective #7: Information and Education

The WDEQ will work to increase and maintain general public awareness of water quality and nonpoint source pollution through an effective education and outreach program.

The Nonpoint Source Program believes that education and information activities that lead to long-term behavior changes are important to the success of nonpoint source pollution control. In order to ensure that the water quality protection measures of the nonpoint source program are properly implemented, the importance of public education and participation must be stressed. One goal of the Nonpoint Source Program is that the public increases their awareness of the extent of the problems to better understand how an individual's activities might contribute to those problems. Secondly, education is important to empower local groups to actively sponsor and/or participate in planning and project implementation activities. Additionally, appropriate BMPs must be disclosed to potential users and made available to treat identified sources of nonpoint pollution.

In 1999, the WQD contracted with Western Management Services, LLC to prepare an information and education strategy for the program. This report summarized information and education needs, discussed shortcomings of the program at that time, described targeted audiences and available tools, and made recommendations for future strategies. In summary, the following strategies were recommended:

- increase the level of information/education coordination,
- develop a comprehensive Nonpoint Source Program website,

- write numerous, periodic, carefully targeted informational articles to be published in established newsletters and other media,
- develop one or more listserve groups,
- maintain a mailing list database to track interested individuals, and
- conduct other activities such as presentations, speaking events, hosting conferences and workshops, as time and resources allow.

The Nonpoint Source Program has met most of these strategies. The Program has worked with partners to implement information/education projects, develop educational tools, and coordinate educational efforts. A Nonpoint Source Program website has been created with information about the program and nonpoint source pollution. Articles have been contributed to newsletters and other publications. An electronic Nonpoint Source Program email listserve was created in 2010 and a mailing list database has been maintained. WQD staff regularly present to other groups primarily through PowerPoint presentations at speaking events, conferences, training sessions, and workshops.

While these strategies have been met, there is much room for improvement on these strategies which are still relevant and applicable to the program. Limited staff resources have not always been available to maintain information/education efforts that continue to become increasingly important, and revitalizing these information/education strategies is a current objective of the Nonpoint Source Program. The Nonpoint Source Program plans to revitalize these strategies through the following general tasks (described in further detail in Appendix A):

- Update the Nonpoint Source Program website to improve the quantity and quality of information posted to better educate the public about nonpoint source pollution in Wyoming.
- Maintain the Nonpoint Source Program listserve and facilitate registration to the listserve.
- Regularly publish nonpoint source and water quality-related articles to established newsletters or other media with cooperation and permission by the sponsors of those media.
- Begin issuing an electronic nonpoint source newsletter through the Nonpoint Source program listserve.
- Continue presenting to other agencies and local groups through meetings, workshops, conferences, and training sessions. Host training sessions, workshops, and conferences as resources allow.
- Watershed Protection Program staff offer K-12 school education and outreach as resources allow.
- Improve mapping tools to provide GIS-based information to the public.
- Explore ways to better recognize and celebrate program successes.

Project sponsors will continue to be able to apply for a portion of Section 319 funds for information/education projects. However, with national directives focusing the use of Section 319 funds to on-the-ground projects that address impaired waterbodies, information/education projects may be a lower priority for Section 319 funding. High quality information/education projects, especially those that target impaired watersheds or will have a statewide impact, those that clearly identify the targeted audience, and those that include an evaluation mechanism will be more likely to be funded. Demonstration projects that seek to test new BMPs will also be eligible for funds; however, the Nonpoint Source program will continue emphasizing watershed restoration over demonstration projects.

The Nonpoint Source Program also maintains BMP Manuals for Cropland, Livestock/Wildlife, Stream and Lake Restoration, Urban, and Silviculture. The Nonpoint Source Program will update these BMP manuals once every five years. It should be emphasized that BMPs are not static. Over time, additional information will show that some BMPs are ineffective, while other practices, which have not been formally adopted as BMPs, may be very effective. The WQD will work with management agencies, the Nonpoint Source Task Force and private landowners to identify needed BMP modifications. In addition to documenting which BMPs the Nonpoint Source Program feels are appropriate for Section 319 funding, the BMPs are an important educational tool and as the Nonpoint Source Program works to revise manuals, it will do so with an emphasis on providing educational information and references to technical documents for each BMP. All current BMP manuals are posted on the Nonpoint Source Program website.

The Teton Science Schools are a non-profit organization that since 1993 has worked to educate the Wyoming public about water quality, nonpoint source pollution, and monitoring methods. Section 319 funding has supported these efforts, which have included the formation of a volunteer monitoring network largely composed of Wyoming teachers. The WQD will work to support the efforts of Teton Science Schools and the volunteer monitoring network by helping to coordinate volunteer monitoring efforts with local groups implementing watershed restoration projects. In addition to providing water quality data for the state, an effective volunteer monitoring network has the potential to provide significant educational opportunities to adults and youth that can lead to long-term behavior changes.

In 2009, the Southeast Wyoming Resource Conservation & Development Council initiated a Pathway to Water Quality Project at the Wyoming State Fairgrounds. The purpose of this project is to construct a dynamic, outdoor water quality classroom to educate Wyoming residents about the importance of water quality and what actions can be done to protect water quality. The project will consist of a permeable pathway along the North Platte River through the fairgrounds, along which will be constructed a variety of water quality exhibits that demonstrate new and innovative BMPs and educate viewers about water quality. This project represents the opportunity for collaboration between statewide agencies, nonprofit organizations, and private businesses to implement a high quality statewide educational project with high visibility. A steering committee has been developed to guide project implementation and the WQD will participate on this committee for the duration of the project.

Finally, WACD has been an important entity for information and education efforts within the state. With the assistance of individual conservation districts, they have implemented numerous statewide information/education and demonstration projects. Through some of these projects, they have regularly promoted and implemented World Wide Day of Monitoring activities to educate Wyoming youths about water quality and monitoring. WACD has also published the biennial Watersheds Progress Report which summarizes actions taken by conservation districts to restore impaired waterbodies. This informative publication is distributed to agencies, legislators, and local groups across the state. The WQD will continue to provide technical assistance to World Wide Day of Monitoring activities and the Watersheds Progress Report as resources allow and as requested by WACD.

4.8 Objective #8: Partnerships and Interagency Cooperation

The WDEQ will work to maintain and improve existing partnerships and develop new partnerships with other agencies, non-profit organizations, local watershed groups, and

individuals who also seek to reduce nonpoint source pollution and improve water quality. Partnerships and coordination will allow watershed restoration and protection efforts to occur more efficiently and effectively.

Efforts to reduce nonpoint source pollution extend well beyond the WDEQ. Other agencies at all levels of government conduct activities directly or indirectly related to nonpoint source pollution management. State and federal land management agencies are charged with administering public lands under their jurisdiction and conserving natural resources on those lands. State and federal agencies also assist private landowners with natural resource conservation. Local agencies, watershed groups, and non-profit organizations work to manage local resources, implement BMPs and provide information and education to the public. The Nonpoint Source Program relies on partnerships with local watershed groups and other agencies to implement Section 319 projects. Knowledge and initiative from local agencies, watershed groups, and private individuals is a cornerstone in nonpoint source pollution management. Finally, the costs of watershed restoration are typically greater than the resources of any one funding source, including Section 319 grants, meaning that coordination will be required to fully restore most watersheds. The importance of partnerships with other non-WDEQ entities, therefore, cannot be emphasized enough.

Developing and strengthening partnerships is a continuous process. The WDEQ will continue to actively promote coordination and cooperation with state, tribal, regional, and local entities, private and nonprofit organizations, and federal agencies to increase the effectiveness and efficiency of the Nonpoint Source Program. Outreach efforts may include regularly scheduled meetings, information dissemination, soliciting and encouraging participation in program planning and project sponsorship, renewing existing memorandums of agreement, and developing new agreements when opportunities arise.

Due to the importance of partnerships and interagency cooperation, Section 5 of this document provides detailed information about key partners and how the Nonpoint Source Program will coordinate with these groups to help achieve the goal of the Nonpoint Source Program.

4.9 Objective #9: Efficient and Effective Program Administration

The WDEQ will administer its Nonpoint Source Program as effectively and efficiently as possible, with a focus on integration of Watershed Protection Program programs, demonstration of accountability, and continual program evaluation.

An effectively administered Nonpoint Source Program will be able to achieve a significant portion of the objectives established in this management plan. Long-term milestones (two years and beyond) by objective are included in Appendix A; short-term milestones (i.e. annual) for each objective will be established in each Nonpoint Source Program Annual Report for the next fiscal year. Therefore, this plan, coordinated with information provided in annual reports, will be used as a way to gauge the progress and effectiveness of the Nonpoint Source Program. An efficiently administered Nonpoint Source Program will be able to achieve its milestones and objectives given current staff and financial resources. This involves managing the program with limited staff resources, ensuring that a water quality benefit will be received for expended funds, integrating Watershed Management programs, and building partnerships to reduce redundancy and promote information-sharing. By measuring and

documenting success through environmental monitoring and other means, the Nonpoint Source Program will demonstrate accountability for expended funds and its activities. Continual program evaluation in relation to milestones and objectives outlined in this plan will help provide direction for the Nonpoint Source Program and indicate when programmatic changes need to be made.

4.9.1 EPA Grant Administration

The Nonpoint Source Program will work with EPA to administer its program in accordance with CWA requirements and national EPA guidance for state nonpoint source management programs. EPA is the granting authority for activities funded under the CWA and EPA Region 8 provides federal oversight for the Wyoming Nonpoint Source Program. EPA also helps secure cooperation of other federal agencies in Wyoming that manage lands or have jurisdiction over activities that can cause or contribute to nonpoint source pollution. To work effectively with its federal oversight agency, the Nonpoint Source Program will meet grant conditions, work to achieve goals established in the annual Performance Partnership Agreement (PPA), attend regional and national nonpoint source meetings, and provide comments on regional and national EPA policies, guidance, and regulations concerning nonpoint source pollution management.

4.9.2 Staffing and Support

The WDEQ has historically used a portion of annual Section 319 grant funding to support staff within the Watershed Protection Program and staff in administrative departments that assist the Watershed Protection Program. Section 319 staffing funds are incorporated into the WDEQ Performance Partnership Grant (PPG) and managed separately from Section 319 project funds. Within the PPG, Section 319 staffing funds are used to support staff that conduct the following types of Nonpoint Source Program-related activities:

- Nonpoint Source Program administration,
- Section 319 and 604(b) grant management,
- Section 319 and 604(b) project management,
- TMDL development and implementation,
- Watershed-based planning,
- GRTS data entry,
- Website development and maintenance,
- Nonpoint Source Program database development and maintenance,
- QA/QC related to nonpoint source projects,
- Federal consistency review,
- NEPA review,
- Section 401 certifications,
- Turbidity waivers
- Monitoring and assessment activities related to nonpoint source pollution and TMDL development,
- GIS support,
- Review of nonpoint source project data for inclusion in the Integrated Report and listing/de-listing decisions,

- Providing technical assistance to nonpoint source project sponsors,
- Collaboration with partner agencies and organizations,
- Public education and outreach on nonpoint source pollution, and
- General administrative and managerial support.

In addition, funds are used for computers, phones, vehicles, travel expenses, supplies/equipment, and other types of support expenses for staff who conduct the activities outlined above.

In the past, EPA encouraged states to use PPGs for grant management in order to simplify the management of multiple grants. However, PPG systems make it difficult for states to track staff that are paid with specific grants. The WDEQ has implemented a time coding system to be able to track staff time within the PPG associated with the nonpoint source pollution management activities outlined above and support expenses for those activities.

A Performance Partnership Agreement (PPA) is established between the WDEQ and EPA each year. The PPA establishes the commitments of the WDEQ/WQD in order to receive staffing and support Section 319 grant funding and other sources of grant funding through EPA. The PPA is essentially the "workplan" for these funds, and documents the commitments of EPA and the WDEQ for implementation of several CWA Programs, including the Nonpoint Source Program. The Nonpoint Source Program will work to fulfill all commitments outlined in the PPA. The WDEQ will request financial and/or technical assistance for staff training as needed to achieve PPA commitments.

4.9.3 Reporting

As outlined in grant requirements and as committed to in the PPA, the Nonpoint Source Program will submit accurate and timely reports to EPA to inform them of program status and accomplishments. Annual reporting requirements outlined in Table 4 are based on grant requirements and deadlines current as of the date this document was prepared. The Nonpoint Source Program will adjust reporting as necessary to be in compliance with grant conditions should revisions to national program guidance change reporting requirements.

Table 4. Annual Nonpoint Source Program reporting requirements

Report	Submitted By
Annual Nonpoint Source Program (Section 319) Report	January 31st
Annual 604(b) Program Report	December 31st
Grant Progress Reports	October 30th
Grant Close-Out Reports	Within 90 days of grant expiration
GRTS Load Reduction Estimates Entered	February 15th
GRTS Annual Project Reports Entered	December 31st
GRTS Mandated Elements Entered (National and Regional)	October 1st

4.9.3.1 Annual Nonpoint Source Program Report

The purpose of the annual Nonpoint Source Program report is to provide a summary of the activities and accomplishments of the Wyoming Nonpoint Source Program for each federal

fiscal year. This report is also prepared to meet requirements of Section 319(h)(11) of the CWA which requires that States report annually on 1) the progress in meeting the schedule of milestones contained in their nonpoint source management programs, and 2) to the extent that appropriate information is available, reductions in nonpoint source pollutant loadings and improvements in water quality resulting from program implementation. Finally, this report is prepared to educate the public about nonpoint source pollution in Wyoming and actions being taken by local, state, and federal agencies to address nonpoint source pollution. Annual reports, beginning with federal fiscal year 2011, are posted on the Nonpoint Source Program website.

The annual report also contains information to allow EPA Region 8 to perform a "Satisfactory Progress Review" of the Nonpoint Source Program. EPA must determine that satisfactory progress is being made in state nonpoint source management programs before next year's federal funding can be released to the state. EPA is currently revising criteria to be used for satisfactory progress determinations, and the WDEQ will work with EPA to ensure that all information is provided to allow EPA to conduct this review. The Annual Nonpoint Source Program Report is anticipated to include most, if not all, of the information needed for the satisfactory progress determinations, and will include the following information:

- Current information describing progress made in meeting the schedule of milestones required under CWA 319(b)(2)(C). Milestones required under CWA Section 319(b)(2)(C) are the milestones established in this Nonpoint Source Management Plan. Appendix A includes long-term (two years and beyond) milestones. Additional short-term milestones (i.e. annual) will be presented in each annual report for the upcoming fiscal year. This will allow flexibility in keeping program milestones up-to-date and relevant to program priorities, while still aiming for "big picture" program goals.
- Nonpoint source pollutant load reductions resulting from implementation of its program. Load reductions will be reported for all applicable pollutants in the annual report; load reductions for sediment and nutrients will also be reported to GRTS on an annual basis.
- Improvements in water quality resulting from the implementation of the Nonpoint Source Management Program. This will include identifying impaired watersheds that are now achieving water quality standards due to restoration efforts and, using best professional judgement, watersheds where water quality improvement has been documented but water quality standards are not yet being achieved.
- An overview of program activities and accomplishments for the previous fiscal year, highlighting development of Nine Key Element watershed planning documentation and implementation of those plans in priority watersheds.
- Information documenting rate of grant expenditures including for each active grant.

Additional information to evaluate satisfactory progress determinations may be included in PPA/PPG annual reports, grant progress reports, and/or GRTS.

4.9.3.2 GRTS Reporting

The Nonpoint Source Program will enter in all national and regional mandated elements into the national GRTS database. This includes the following:

- Pollutant load reduction estimates for active projects with significant sediment and nutrient load reductions entered by February 15th of each year
- National and regional mandated elements entered by October 1st of each year, including geolocational tags where available.

4.9.4 Project Evaluation Criteria

In order to solicit high quality projects that help fulfill the objectives of this Nonpoint Source Management Plan, the Nonpoint Source Program and Nonpoint Source Task Force will evaluate submitted proposals on the criteria shown in Table 5.

Table 5. Criteria used to evaluate project proposals.

Criteria	Explanation
Demonstrated Water Quality Need	What is the nonpoint source pollution issue that needs to be addressed? The applicant must make a strong demonstration that there is a nonpoint source water quality need justifying their proposal, and the proposal should clearly explain how that need will be addressed.
State Strategy and Priority	Do the project's Outcomes and Targets comply with the State strategy as reflected in the Nonpoint Source Management Plan? Projects that address impaired waterbodies will be highest priority for funding.
Project Products	What are the specific projects to be delivered to the Wyoming Nonpoint Source Program? What are the measurable outcomes? Are the products delivered from this project clearly identified? Are they adequately quantified? Will these specific products adequately address the "Demonstrated Water Quality Need" and "State Strategy and Priority" information presented?
Efficient/Effective Funding	Are the costs associated with delivering these products the most efficient and effective use of funds? Do the project costs justify the degree to which the products from this project will address the demonstrated water quality need? Can products that are expensive to deliver but will only represent a minor fraction in addressing the demonstrated water quality need be adequately justified?
Program Coordination and Commitment	Are all the right cooperators involved in a comprehensive, integrated fashion? Have cooperators demonstrated serious commitment to the project?
Reasonable Costs/Justifiable	Are the proposed costs reasonable and justifiable? Can all items in the budget be found in the project description? Is 319 the appropriate source of funding for this project?
Information and Education Projects	For information/education projects (or tasks), does the project clearly identify the targeted audience? Does the project address an information/education need that has not been previously addressed? Does the project involve technology transfer that will potentially lead to on-the-ground improvements or is the project likely to result in behavioral changes? Does the project include an evaluation mechanism?
Evaluation and Monitoring Component	Monitoring is an important component of implementation programs to evaluate effectiveness. All monitoring must be done in accordance with appropriate Standard Operating Procedures (SOPs), an approved Sampling and Analysis Plan (SAP), and Quality Assurance Project Plan (QAPP). Have monitoring objectives been clearly identified? Will proposed monitoring plans achieve the desired objectives?
Project Proponent's Past	The DEQ will complete a past performance assessment for each project proponent for review by EPA and the Nonpoint Source Task Force to help

Performance with Section 319 Projects	determine project funding. This performance assessment will include the proponent's quality of product, compliance with time schedules, project administration, and reporting.

4.9.5 Project Management

The Nonpoint Source Program will help project sponsors with project management to ensure that projects are implemented on-schedule and within the established scope of work. After being recommended for funding by the Nonpoint Source Task Force, the Nonpoint Source Program will work with project sponsors to finalize project implementation plans and develop agreements for project funding. Each project will be assigned to a WQD project officer who will manage the project to ensure appropriate expenditures of funds and timely completion of projects, and to provide technical assistance when needed. The project officer will assist the sponsor with project management, provide oversight to ensure funding requirements are being met, review reimbursement requests, obtain progress reports, obtain a project final report, and make sure the project stays on-schedule and within the scope of the agreement. Project information will be entered into GRTS to meet national and regional mandated elements. Annual progress reports will be obtained for each project and uploaded into GRTS. Final reports for each project will also be uploaded into GRTS and submitted to EPA.

In cases where the project officer is not the Nonpoint Source Program Coordinator, the project officer will communicate to the Coordinator as needed. Should the project need to be amended, the project officer will communicate the need for an amendment to the Coordinator. It is the goal of the Nonpoint Source Program to amend project agreements as little as possible; while unforeseen circumstances do arise, the Nonpoint Source Program will work to plan projects and track project progress to ensure that timelines, budget, and scope of work objectives can be met.

Beginning with federal fiscal year 2012 projects, the Nonpoint Source Program will distribute a Microsoft Access-based database to project sponsors to facilitate project management and reduce the administrative burden of Section 319 projects. This database facilitates the preparation of reimbursement requests, progress reports, and annual reports. The database will also be used to generate reports providing detailed information about BMP implementation to help the Nonpoint Source Program document and report on environmental results for the program.

4.9.6 Financial Tracking

The Nonpoint Source Program Coordinator will work closely with WDEQ-Administration as part of grant and project management to ensure accurate financial tracking and ensure that state and federal grant conditions are met. This includes the Nonpoint Source Program Coordinator working with WDEQ-Administration on the following activities:

- tracking project and grant financial status,
- requesting and reviewing monthly financial reports to ensure accurate tracking throughout the life of each grant,
- ensuring correct budget coding for grant expenditures,

- reimbursing project sponsors in a timely manner,
- ensuring projects stay within project and task budgets and within their scope of work,
- submitting grant applications in a timely manner,
- documenting financial expenditures,
- ensuring expenditures meet program eligibility requirements,
- spending grant balances prior to grant expiration, and
- providing necessary financial and grant reporting to EPA and other parties by established deadlines.

4.9.7 Program Evaluation

In 2009, the Nonpoint Source Program evaluated the use of Section 319 grant funds awarded to the state between federal fiscal year 1999 and federal fiscal year 2009. The purpose of this evaluation was to better understand what programmatic strategies have been successful in reducing nonpoint source pollution and to identify areas where the program can improve. Findings of the program evaluation were presented to the Nonpoint Source Task Force at the July 2009 meeting and are summarized in the federal fiscal year 2009 Annual Program Report.

Most importantly, the program evaluation helped identify what the program has been doing right and what can it do better. Lessons learned from the program evaluation have helped establish the directions set forth in this updated management plan. At a minimum, the Nonpoint Source Program will conduct a program evaluation every five years to help monitor program effectiveness and evaluate new directions as needed to reflect lessons learned. Results of the program evaluation will be presented to the Task Force and summarized in the Nonpoint Source Program Annual Report in the years that it is conducted.

4.9.8 Electronic Library

During 2010, the Nonpoint Source Program began conversion of its closed Section 319 and 604(b) project files into an electronic SharePoint Library. All WQD staff will have access to view electronic project files in .pdf format. Library users are able to search for projects based on project type, project sponsor, watershed, and other project attributes. The SharePoint Library system will help promote information-sharing between the various programs of WQD and help integrate activities of the Watershed Protection Program. The IWI and associated GIS-based mapping tool is another example of how the Watershed Protection Program will work towards integration and better communication (see Section 4.1.1).

SECTION 5: Partnerships with Non-WDEQ Entities

Addressing nonpoint source pollution within Wyoming includes the efforts of many state, federal, and local agencies, as well as those of local watershed groups and private citizens and businesses. As described in Section 4.8, one of the objectives of the Nonpoint Source Program is to maintain and improve existing partnerships and develop new partnerships with other agencies, non-profit organizations, local watershed groups, and individuals who also seek to reduce nonpoint source pollution and improve water quality. Partnerships and coordination will allow watershed restoration and protection efforts to occur more efficiently and effectively. This section provides further information on this subject by identifying these partnerships and describing each partner's role in nonpoint source pollution management as well as how WDEQ will coordinate with these partners. These partners help to provide technical assistance, financial assistance, education, training, technology transfer, and/or demonstration projects needed to achieve goals in this plan. Please see Appendix E for further information about financial and technical assistance provided by these partners. The WDEQ will coordinate with new agencies and organizations not listed below as the need arises and will update this management plan to reflect new partnerships as they develop.

The following agencies are listed in alphabetical order.

5.1 Bureau of Land Management

The Bureau of Land Management (BLM) works to protect water quality as part of its administration of federal lands under its jurisdiction. The BLM is required to comply with provisions of the CWA and is required to meet the water quality standards and other state rules and regulations established by the WDEQ. The BLM works to address current water quality issues as well as to prevent future issues from occurring due to land management decisions.

It is the policy of the BLM to manage public lands in a manner that will conserve, protect, and improve the condition and productivity of renewable natural resources. Through its multiple resource management responsibilities, the BLM is responsible for allowing the extraction and use of non-renewable resources where appropriate. As directed by the Federal Land Policy and Management Act and Bureau policy, the BLM has developed a three tiered resource management planning process to make land use planning decisions. These tiers are policy, resource management plans, and activity plans. The BLM's planning process is the principal mechanism for guiding the implementation and management of soil and water resource conservation practices. Formal comments are requested at several key points in the resource management planning process and public involvement is encouraged. Areas of accelerated soil erosion, critically eroding stream channels, and water quality impaired stream reaches can be identified as issues during the resource management plan tier of the process. Soil and water conservation practices are addressed in a general fashion during the land use planning tier and in site-specific detail during the activity planning and implementation parts of the process.

The BLM's nonpoint source strategy is to continue to 1) provide cooperation and assistance to state agencies in the management of the public lands to reduce nonpoint source pollution sources, 2) consider and address where appropriate water quality impacts as part of land management actions planned and implemented by the Bureau, 3) identify and address nonpoint source water quality issues in activity plans,

4) provide personnel and resources to identify nonpoint source pollution and control techniques through coordinated research efforts and the implementation of BMPs, and 5) implement program practices in conducting land use and land management activities to reduce or avoid water quality impacts and to improve water quality as necessary to meet management objectives and regulatory requirements.

The NEPA Program meets with other state cooperators on a monthly basis to discuss BLM activities within the state. Federal cooperators such as USFS and National Park Service are also invited to these meetings. This convening of state and federal cooperators is coordinated by the Governor's Planning Office. State agencies that participate in each meeting depend on the issues to be discussed, but some of the other state agencies in regular attendance include Wyoming Department of Agriculture, State Engineer's Office, Wyoming Game and Fish, Wyoming Water Development Commission, Office of State Lands and Investment, WDEQ Land Quality, and WDEQ Air Quality. Issues raised at these meetings are then discussed with BLM via monthly meetings hosted by BLM with state and federal cooperators. Project specific memorandums of understanding are established between BLM and the State of Wyoming to outline how the agencies will work together and follow the NEPA process.

The WDEQ will coordinate with the BLM and ensure federal consistency in the following ways:

- The WQD will participate as cooperators during the NEPA process and implementation of major BLM plans and projects with water quality implications to ensure consistency with the Nonpoint Source Management Program and other WQD water quality goals. This includes environmental assessments (EAs), environmental impact statements (EISs) and Implementation for Resource Management Plans (RMPs), oil and gas development, pipelines, wind energy development, and grazing allotment management plans with identified water quality issues.
- The WQD NEPA Program will meet with state and federal cooperators as coordinated by the Governor's Planning Office to discuss BLM activities within the state. The WQD NEPA Program will convene additional meetings with cooperators to discuss site-specific and project-specific BLM activities as needed. The WQD NEPA Program will attend monthly state cooperator meetings hosted by BLM and will convene additional meetings with BLM as necessary to resolve any identified issues.
- The BLM will be notified when the Nonpoint Source Program updates its Livestock/Wildlife BMP manual and comments and cooperation will be requested from that agency.
- The Nonpoint Source Program will notify BLM of the release of Requests for Proposals for Section 319 and 604(b) grants. The Nonpoint Source Program will notify BLM when specific watersheds are selected by the WQD and Nonpoint Source Task Force for targeted Section 319 funding.
- On an annual basis, the Nonpoint Source Program Coordinator will request information from BLM on projects related to nonpoint source reduction conducted during the previous year and will include a summary of this information in the annual program report.
- The BLM will be notified by WQD of opportunity to participate in triennial review of State water quality standards.
- The TMDL Program will provide outreach to the BLM when TMDL development indicates a connection with BLM lands.

5.2 Bureau of Reclamation

The United States Bureau of Reclamation (BOR) is responsible for several water storage and irrigation projects in Wyoming. BOR participates in water quality studies and protection practices in facilities under its jurisdiction. Construction practices for reducing pollution from nonpoint sources are implemented as part of all BOR construction projects. Such practices include sediment and erosion controls, wastewater and storm water management controls, construction site management practices (such as proper management of oil storage tanks, material stock piles, and borrow or waste piles), and other controls, including state and local control requirements. In addition to implementing the above controls and practices, all BOR contractors are required to submit a water quality management plan for review and approval. This plan is to describe how the contractor intends to protect water quality from activities related to the construction project. To ensure the construction specifications are adhered to, BOR regularly inspects the construction sites.

The WDEQ will coordinate with BOR in the following ways:

- The WQD and BOR will meet as needed to discuss water quality-related issues and BOR projects.
- The WQD will notify BOR of programmatic activities and vice versa through State Engineer's Office (SEO) State Water Quality Forum meetings which both agencies attend.
- WQD will work with BOR as needed on a project-by-project basis to provide input on water quality issues related to BOR projects.
- Major BOR activities requiring the NEPA process will be reviewed by the WQD NEPA Program.

5.3 National Park Service

The National Park Service is a bureau of the United States Department of the Interior whose purpose is to "conserve the scenery and the natural and historic objects and the wild life therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations." In Wyoming, the National Park Service is responsible for administering two national parks, Grand Teton and Yellowstone, as well as the administration of several historic trails, recreation areas, national monuments, and historic sites. The National Park Service seeks to maintain the waters within the national parks in a natural condition, free from pollutants generated by human activity. The majority of water quality issues identified within the National Park system are associated with nonpoint source pollution. The scope and extent of water quality issues varies greatly, but the majority is related to surrounding land use activities such as oil and gas development, mining, encroaching urbanization, industrial activity, agricultural practices, or land development.

The National Park Service seeks to restore or maintain the quality of all surface and ground water within the parks. The quality of water originating within the parks will be maintained through the implementation of nonpoint source pollution BMPs with respect to National Park Service administered activities. The National Park Service will enter into agreements or compacts with other agencies and governing bodies to secure their cooperation in avoiding degradation of water resources. Consistent with the rights of others, the service will maintain a continuous vigilance by observing and monitoring upstream diversions, adjacent uses, and ground water withdrawals and their effects on the occurrence, quantity and quality of water necessary for the continued preservation of park biota and ecosystems.

The WDEQ will coordinate with the National Park Service in the following ways:

- The National Park Service will be notified by WQD of opportunity to participate in triennial review of State water quality standards.
- The National Park Service and WQD will work together as needed to implement nonpoint source pollution controls within the national parks and on adjacent watershed lands to protect waters within the parks.
- The National Park Service and WQD will work together as needed to implement ground water protection programs.
- Coordination and data sharing will occur between the WDEQ Monitoring Program and National Park Service units and/or the National Park Service Inventory and Monitoring Program when monitoring on National Park Service lands.
- Major activities conducted by the National Park Service that require the NEPA process and are related to water quality will be reviewed by the WQD.

5.4 Natural Resources Conservation Service

The Natural Resources Conservation Service (NRCS) is an agency of the U.S. Department of Agriculture (USDA) charged primarily with helping individuals, groups, organizations, and governmental agencies plan and apply conservation treatment to protect their soil and water resources. The NRCS works primarily with private landowners to solve the natural resource challenges on the nation's private lands. Landowners get help from the NRCS mainly through partnership with Wyoming's 34 locally organized and managed conservation districts. Conservation districts provide local leadership for natural resource conservation within their boundaries. The districts work with farmers, ranchers, towns, counties, and government agencies at all levels. They determine local priorities for natural resource conservation concerns. Through a MOU with the USDA, the NRCS provides technical assistance to conservation districts in carrying out their locally established priorities.

Through Wyoming's conservation districts, the NRCS provides technical, educational, and financial assistance to address natural resource concerns. This assistance is provided through a variety of USDA programs administered or jointly administered by the NRCS. The Farm Bill provides for a State Technical Committee to advise the NRCS State Conservationist concerning criteria and priorities for implementing Farm Bill programs in the state. The WQD is a participating member of the State Technical Committee. One such financial assistance program is the USDA Environmental Quality Incentive Program (EQIP).

A significant number of Section 319 projects have utilized NRCS resources for technical assistance and/or financial assistance through EQIP. Nationally, the reduction of nonpoint source pollution is a priority for EQIP. Water quality is one of NRCS-Wyoming's priorities for EQIP funds as based on recommendations from the State Technical Committee. Specifically, improving water quality through Livestock Waste Management has been identified as a top priority for the state.

The USDA Agricultural Research Service (ARS) has also been an important resource to producers and land managers of the states. The Nonpoint Source Program will work to collaborate with ARS on

technical issues related to agricultural production and nonpoint source pollution and will promote ARS as a resource of technical knowledge for the state.

The WDEQ will coordinate with NRCS in the following ways:

- The WQD will continue to participate on Wyoming NRCS State Technical Committee meetings to encourage the use of Farm Bill funding towards water quality improvement.
- The Nonpoint Source Program will notify NRCS of the release of Requests for Proposals for Section 319 and 604(b) grants. The Nonpoint Source Program will notify NRCS when specific watersheds are selected by the WQD and Nonpoint Source Task Force for targeted Section 319 funding.
- On an annual basis, the Nonpoint Source Program Coordinator will request information from Wyoming NRCS on projects related to nonpoint source reduction conducted during the previous year and will include a summary of this information in the annual program report.
- The WQD has an MOU with the NRCS defining roles in addressing comprehensive nutrient management systems for Animal Feeding Operations/Confined Animal Feeding Operations. The WQD and NRCS will continue to operate under that MOU and update it as necessary.
- The NRCS will be notified of TMDL development activities.
- The NRCS will be notified when the Nonpoint Source Program updates its Livestock/Wildlife BMP manual and comments and collaboration will be requested from that agency.
- The WQD will provide input to NRCS on the use of National Water Quality Initiative funds with the goal of focusing those funds in impaired watersheds to accelerate restoration.

5.5 Tribal Governments and Bureau of Indian Affairs—Rocky Mountain Region

Two Native American tribes, the Eastern Shoshone and Northern Arapahoe, jointly govern the Wind River Reservation, which encompasses approximately 1.9 million acres within Wyoming.

In addition, the mission of the Bureau of Indian Affairs (BIA) is to "… enhance the quality of life, to promote economic opportunity, and to carry out the responsibility to protect and improve the trust assets of American Indians, Indian tribes, and Alaska Natives." The Rocky Mountain Regional Office (RMRO) of the BIA serves the Northern Arapaho and Eastern Shoshone tribes in Wyoming. The RMRO's mission is to provide services to American Indian Tribes, Individual American Indians and other Agencies, effectively managing and protecting the Trust Resources, enhancing the quality of life and supporting Tribal Sovereignty, while actively promoting Self-Determination, and Economic Development opportunities.

The WDEQ will work directly with the Arapaho and Shoshone Tribes and with the BIA RMRO on water-quality issues and nonpoint source pollution management on an as-needed basis.

5.6 United States Army Corps of Engineers Regulatory Program

The United States Army Corps of Engineers (USACE) regulates the discharge of dredged or fill material into the waters of the United States in Wyoming. The USACE exercises jurisdiction over Wyoming's rivers, lakes, reservoirs, most smaller creeks and streams, and some intermittent waterways, including adjacent wetlands and, in some cases, man-made ditches and wetlands. The routine administration of the program is delegated to the Wyoming Regulatory Office of the Omaha District of the Corps of Engineers

in Cheyenne, Wyoming. Section 404 of the CWA is administered by the USACE with oversight by the EPA. Section 404 requires a permit to place dredged or fill material into the waters of the United States. Typical activities resulting in discharge of dredged or fill material to waters of the United States that are regulated by the USACE's 404 program include linear transportation and utility line projects, bank stabilization, aquatic habitat enhancement, site development for agriculture, residential or industrial purposes, mining, and construction of dams and levees.

The WQD also reviews all activities proposed for authorization under Section 404 of the CWA to determine whether the actions could cause, or contribute to, a violation of state water quality standards. This review and determination by the state is authorized under section 401 of the Clean Water Act, and is known as a "401 Certification" (see also Section 3.8.1). No activity that requires an individual, regional, or nationwide permit is authorized until 401 certification has been granted. The WQD has denied 401 certification of several nationwide permits, and also for certain activities which could be covered under a nationwide permit but which would be located in waters classified as Class 1 by WQD. In these cases, project-specific review and certification is required.

The WDEQ will coordinate with USACE in the following ways:

- WQD will issue or deny state certification of Section 404 permits submitted by the USACE in accordance with the state Section 401 certification process. The WQD will request additional information as necessary from the USACE as needed to evaluate Section 404 permits (see Section 3.8.1).
- WQD will provide copies of all 401 certification decision letters and approved turbidity waivers to the USACE.
- The WQD and USACE will meet to discuss water-quality related issues as needed.

5.7 United States Environmental Protection Agency

The United States Environmental Protection Agency's mission is to protect human health and the environment. EPA works to achieve its mission by developing and enforcing regulations, providing financial assistance through grant programs, studying environmental issues and publishing information, providing information and education on environmental issues, and sponsoring partnerships. The EPA is the federal granting authority for Section 319 funds and as described in Section 4.9, the WQD will work with EPA to administer its Nonpoint Source Program in accordance with the CWA.

The WDEQ is located in EPA Region 8 and will work with regional and national EPA offices as needed to ensure implementation of its programs are meeting federal regulations. Coordination activities with EPA vary across the WDEQ programs described in this document; however, in general, the following list summarizes how WDEQ will coordinate with EPA.

- Meet with EPA as needed to discuss federal/state coordination and authority issues.
- Manage state programs to meet federal regulations while maintaining state authority.
- Develop workplans and partnership agreements as necessary and work to accomplish all tasks established in those workplans.
- Manage programs to meet requirements in grants awarded to the state.

- Provide information to EPA through required reporting mechanisms.
- Comment on proposed EPA regulation, policy, and guidelines during public comment opportunity.
- Request technical assistance from EPA staff when needed.

5.8 United States Fish and Wildlife Service

The United States Fish and Wildlife Service (USFWS), an agency within the United States Department of the Interior, is the federal agency responsible for administering the Endangered Species Act for all plant and animal species, except marine species and anadromous fish which are addressed by the National Marine Fisheries Service. The Fish and Wildlife Coordination Act (FWCA) mandates that federal agencies consult with the U.S. Fish and Wildlife Service (USFWS) prior to initiating an action that may have an adverse effect on fish and wildlife resources. The Act requires that recommendations for conserving fish and wildlife resources be given full consideration in the decision-making process. This legislation gets the USFWS and the WG&F involved in small projects that do not require an EA or EIS under NEPA. For projects falling under the jurisdiction of the FWCA, the act allows the USFWS to address virtually any aspect of a proposed project, including protection of water quality to maintain fish or wildlife resources. The Fish and Wildlife Service also administers a variety of natural resource assistance grants to governmental, public and private organizations, groups and individuals.

- The Nonpoint Source Program will document Endangered Species Act Section 7 reviews for all Section 319 and 604(b) funded projects to determine potential effects to endangered and threatened species from the projects. Review conclusions will be provided to USFWS for all projects even if a determination of no significant impact is made. The Nonpoint Source Program will work with EPA and USFWS to resolve any potential impacts that are determined to be significant.

5.9 United States Forest Service

The United States Forest Service (USFS) is an agency within the U.S. Department of Agriculture that is responsible for the management of the nation's National Forests and Grasslands. The USFS is working cooperatively with the state to restore impaired waters in a manner that will also allow legitimate and needed land management projects to continue. The USFS will cooperate with WDEQ on the development of TMDLs and TMDL implementation plans to address pollutants of concern for those portions of a watershed on National Forest System (NFS) lands having impaired waters.

The general approach to nonpoint source pollution management for the USFS is to: 1) apply the National Core BMPs when implementing all land management projects, 2) monitor implementation and effectiveness of those practices, and 3) adjust those practices where monitoring shows concerns about the effectiveness of the practice. National Forests in Wyoming use state BMPs, Watershed Conservation Practices (WCPs), Soil and Water Conservation Practices (SWCPs), other locally developed BMPs, and Forest Plan standards and guidelines to develop site-specific BMP prescriptions consistent with the National Core BMPs to ensure that State water quality standards are met and existing and designated uses of water are protected when projects are designed and implemented on the ground. National Forest staff conduct formal and informal monitoring of these practices and adjust them as necessary.

The USFS also has direction in a number of program areas to restore watersheds to reduce or prevent additional nonpoint source pollution. The Burned Area Emergency Response Program is to alleviate emergency conditions following wildfire to help stabilize soil; to control water, sediment and debris movement; to prevent unacceptable degradation of ecosystem structure and function; and to mitigate significant threats to health, safety, life, property or downstream values. The Healthy Forests and Rangelands – Hazardous Fuels Reduction and Landscape Restoration Program is to treat the excessive accumulation of hazardous or unusually flammable fuels in the forests and rangelands that are the root cause of an unprecedented fire risk on National Forest System lands. The Watershed Restoration Program is to improve watershed conditions using upland and in-stream treatments. The Road Maintenance Program includes inventory for maintenance needs, actual maintenance of roads to improve travel-ability and reduce resource damage, and road decommissioning. The Legacy Road and Trail Remediation Initiative provides funds to be used for road decommissioning and road and trail repair in environmentally sensitive areas with water quality issues. The Watershed Condition Framework is a program initiated in FY2011 in which the condition of all 6th level (HUC) watersheds containing NFS lands were evaluated and rated based on twelve indicators, including water quality, aquatic communities and terrestrial disturbance factors. Priority watersheds were then identified for protection or restoration work to maintain or improve their conditions. Watershed Restoration Action Plans are written and implemented, as budgets allow, for the identified priority watersheds.

The WDEQ will coordinate with the USFS and ensure federal consistency in the following ways:

- The WQD and USFS will operate under the MOU established between the two agencies and will update this MOU as needed.
- The WQD and USFS will meet as needed to discuss water-quality related issues and provide updates on activities conducted by each agency.
- The WQD will participate as cooperators during the NEPA process and implementation of major USFS plans and projects with water quality implications to ensure consistency with the Nonpoint Source Management Program and other WQD water quality goals. This includes environmental assessments (EAs), environmental impact statements (EISs), and Implementation for Forest Plans, oil and gas development, vegetation management, and grazing allotment management plans with identified water quality issues. The NEPA Program reviews USFS SOPAs to stay informed on that agency's activities.
- The USFS will be notified when the Nonpoint Source Program updates its Livestock/Wildlife and Silviculture BMP manuals and comments and collaboration will be requested from that agency.
- The Nonpoint Source Program will notify USFS of the release of Requests for Proposals for Section 319 and 604(b) grants. The Nonpoint Source Program will notify USFS when specific watersheds are selected by the WQD and Nonpoint Source Task Force for targeted Section 319 funding.
- On an annual basis, the Nonpoint Source Program Coordinator will request information from USFS on projects related to nonpoint source reduction conducted during the previous year and will include a summary of this information in the annual program report.
- The USFS will provide WQD with BMP audit reports on an annual basis.
- WQD staff will participate in BMP audit reviews as staff time allows.
- USFS will be notified of TMDL development activities when USFS lands are within the watershed where TMDLs are being developed.

- The USFS will be notified by WQD of opportunity to participate in triennial review of State water quality standards.

5.10 United States Geological Survey

The United States Geological Survey (USGS) provides water quality assessment assistance to the WQD through cooperative agreements. WDEQ has worked cooperatively with the USGS since the 1970s on water quality monitoring of fixed stations around the State. Today, most of these stations are located on larger rivers and co-located with USGS stream gaging stations. Currently, the USGS ambient network includes 16 water quality monitoring stations and one stream gage station. Data from these stations are used for surveillance of water quality trends, identification of emerging water quality issues, evaluation of impacts downstream of reservoirs, the Wyoming 305(b) report, the 303(d) list of impaired waters, and the development of WYPDES permits. WQD has worked cooperatively with the USGS since 2000 on water quality monitoring at fixed stations in areas where active coalbed methane (CBM) and other natural gas development is occurring. Most fixed stations are located in the Powder River Basin, although several are located in south-central and southwest Wyoming. Data are used for development of WYPDES permits and policies and to evaluate attainment of water quality standards and designated uses. The USGS also participates in the monitoring of pesticides in Wyoming's ground water and ambient monitoring of shallow aquifers in coordination with the WQD Ground Water Program.

The WDEQ will coordinate with USGS in the following ways:

- The WQD will continue to work cooperatively with USGS on the ambient monitoring network as long as the need and funding exists.
- The WQD will continue to work cooperatively with USGS on monitoring of pesticides in Wyoming's ground water and ambient monitoring of shallow aquifers as long as the need and funding exists.
- The WQD will continue to work cooperatively with USGS on the CBM monitoring network as long as the need and funding exists.
- The WQD will continue to use USGS data to evaluate water quality trends, develop WYPDES permits, and develop the 305(b) report and 303(d) list of impaired waters as appropriate and as those data are available.
- The WQD will continue to evaluate the need to expand or reduce the network of monitoring stations for collecting data based on available funding resources.

5.11 University of Wyoming, Wyoming Community Colleges, and University of Wyoming Cooperative Extension Service

The University of Wyoming (UW), located in Laramie, is the state's only accredited four-year college. Multiple Section 319 projects have been sponsored by various departments or programs at the University. University staff have provided technical help directly to the Nonpoint Source Program or indirectly by assisting cooperating agencies with research, technical assistance, or input into project implementation. In addition, community colleges throughout Wyoming have assisted with project management and/or technical assistance. Finally, the University of Wyoming Cooperative Extension Service (UWCES) has done extensive outreach and education to the Wyoming public about water quality and nonpoint source

pollution and is an excellent resource for producers and the general public. UWCES has been an active partner in the Nonpoint Source Program and has sponsored several Section 319 projects.

The WDEQ will coordinate with UW, Wyoming Community Colleges (WCC), and UWCES in the following ways:

- The WQD Program will continue to request technical assistance from UW, UWCES, and WCC staff as needed.
- The Nonpoint Source Program will continue to review Water Research Proposals for funding as coordinated by UW in cooperation with WWDC/WWDO.
- The Nonpoint Source Program will work with UWCES to evaluate ways to continue providing nonpoint source pollution education to the public.

5.12 Wyoming Association of Conservation Districts

The Wyoming Association of Conservation Districts (WACD) is an agency that represents the interests of the state's 34 individual conservation districts. The WACD states their mission as follows: "The Wyoming Association of Conservation Districts provides leadership for the conservation of Wyoming's soil and water resources, promotes the control of soil erosion, promotes and protects the quality of Wyoming's waters, reduce siltation of stream channels and reservoirs, promote wise use of Wyoming's water, and all other natural resources, preserve and enhance wildlife habitat, protect the tax base and promote the health, safety and general welfare of the citizens of this state through a responsible conservation ethic." Conservation districts have sponsored the majority (65%) of the Section 319 projects funded since 1999 and are the primary local watershed groups within Wyoming. Their ability to implement Section 319 projects and gain cooperation of local watershed residents is important to the success of the Nonpoint Source Program. In addition, WACD as an agency has been instrumental in sponsoring statewide information/education, technical assistance, and demonstration projects that have helped the Nonpoint Source Program achieve its goals. Thus, coordination and cooperation with the individual districts and WACD is important to the Nonpoint Source Program.

The WDEQ will coordinate with WACD in the following ways:

- WQD and WACD will meet on a regular basis to provide updates on program activities and programmatic issues, to promote information sharing between the two agencies, and to identify areas where the agencies share common goals and can coordinate efforts.
- The Nonpoint Source Program will notify WACD of the release of Requests for Proposals for Section 319 and 604(b) grants. The Nonpoint Source Program will consult with WACD on any targeted watershed approaches, and will notify WACD when specific watersheds are selected by the WQD and Nonpoint Source Task Force for targeted Section 319 funding.
- The Nonpoint Source Program will request assistance from WACD in soliciting project sponsorship from the individual conservation districts, in providing technical assistance on proposal preparation and project management, and in providing communication to the districts on general program issues.
- The WQD will provide input into the content of the Watershed Progress Report if requested to do so by WACD.

- The TMDL Program will outreach to WACD staff and individual conservation districts early in the process of and throughout TMDL development.
- The Nonpoint Source Program will notify WACD when programmatic BMP manuals are updated and will request comments from WACD on the revised manuals.
- The WQD will provide assistance to WACD for training needs as requested by WACD and as resources allow.
- WQD staff will attend WACD annual conventions.
- The WQD and WACD will work together to provide technical assistance to the Conservation Districts on Sampling Analysis Plans, Quality Assurance Project Plans, Use Attainability Analyses and other technical documents.
- The WQD will keep WACD informed on the progress of developing the Impaired Waters Index planning and tracking tool and where appropriate, will work with WACD to coordinate this effort with the SuiteWater GIS-based watershed planning tool or other planning/tracking tools developed/used by WACD.
- The WQD will keep WACD informed on the EPA Recovery Potential Screening Tool and how this tool may be integrated into Nonpoint Source Program decision-making.

5.13 Wyoming Department of Agriculture

The Wyoming Department of Agriculture (WDA) is the state agency "dedicated to the promotion and enhancement of Wyoming's agriculture, natural resources, and contribution to Wyoming quality of life." In 1979, Governor Herschler designated the Wyoming Department of Agriculture as the functional management agency for the control of nonpoint source pollution from agricultural activities. The department recognizes nonpoint source pollution from agriculture as a potential state water quality concern. The WDA coordinates with Wyoming's conservation districts in the planning, development and implementation of water quality and watershed programs through technical, financial, and educational assistance. WDA administers the Wyoming Environmental Pesticide Control Act (1973) and is responsible for regulation of pesticides through registration, training and certification of applicators. As such, the WDA has been a lead agency for the Groundwater and Pesticides Strategy Committee (GPSC) which has developed a generic State Management Plan for Pesticides in Groundwater for the State of Wyoming (SMP) and has worked to monitor baseline ground water conditions regarding pesticide contamination (see also Section 3.9.2).

The WDEQ will coordinate with the WDA as follows:

- The WQD and WDA will meet as needed to discuss water quality issues, including coordination of outreach and education efforts and addressing site-specific water quality concerns.
- The WDA will continue to be a lead agency on the Groundwater and Pesticides Strategy Committee, coordinating this activity with the WQD Ground Water Program.
- The WQD will notify the WDA of public comment opportunities, including revisions to water quality standards.
- The Nonpoint Source Program will notify WDA when revisions to its agricultural BMP manuals are scheduled for revision and will request comments from that agency.

5.14 Wyoming Department of Transportation

The Wyoming Department of Transportation (WYDOT) is the state agency charged with providing a safe, high quality, and efficient transportation system. WYDOT Environmental Services administers and executes NEPA and ensures that state and federal environmental laws and mandates are followed and include public disclosure. It establishes policies to protect Wyoming's environment while meeting transportation goals. In addition to preparing environmental documents, Environmental Services provides field assistance to reduce pollution during design, construction, and maintenance activities.

The WDEQ will coordinate with WYDOT on nonpoint source pollution management as follows:

- WQD and WYDOT will meet as-needed to discuss WYDOT projects, WYDOT's use of BMPs, and whether or not BMPs need to be improved.
- The WQD will notify WYDOT when its Urban BMP manual is revised and will request comments from that agency.
- WYDOT and/or its contractor will apply for stormwater permit coverage for all activities regulated under WYPDES. The WYDPES Stormwater Permitting Program will communicate with WYDOT as needed to ensure permit conditions are met and to evaluate mitigation measures.
- WYDOT or Federal Highway Administration actions that require the NEPA process and that are related to water quality issues will be reviewed by the WQD NEPA Program.

5.15 Wyoming Game and Fish Department

The Wyoming Game and Fish Department (WG&F) is mandated to manage the fish and wildlife resources of the state. Although this primarily applies to the direct management of fish and wildlife populations, there is an implied connection to manage fish and wildlife habitats on lands owned by the department, as well as to assist private landowners and land management agencies with information about proper habitat management activities. Terrestrial habitat, such as riparian areas, can be critical in maintaining water quality. Although the WG&F has no regulatory mandate or authority in nonpoint source pollution control, the department is involved in the oversight process through the Habitat Protection Program and the Aquatic and Terrestrial Habitat Management Programs. The Habitat Protection Program coordinates the review and analysis of all proposed federal, state, and local policies, plans, projects, and activities with potential to adversely impact fish and wildlife habitat in Wyoming, and recommends and negotiates impact mitigation. The Aquatic and Terrestrial Habitat Management Programs stress the importance of habitat management from a watershed and ecological landscape perspective.

In recent years, the department has placed an emphasis on creating and enhancing wetlands. Wetlands provide habitat for wildlife and assist in maintaining or enhancing water quality. In 2010, the WG&F also implemented emergency regulations to prevent the establishment of aquatic invasive species, primarily zebra and quagga mussels. Recreationists using Wyoming waters are now required to purchase and display an aquatic invasive species decal before launching their watercraft. Coordination between the WQD and WG&F has become increasingly important as the two agencies seek to achieve goals that are often similar. The WG&F has also provided technical assistance to numerous Section 319 projects, helping these projects to achieve water quality goals.

The WDEQ will coordinate with the WG&F in the following ways:

- The WQD will meet with the WG&F as needed to discuss water quality related issues.
- The WQD Nonpoint Source Program will notify WG&F of Section 319 or 604(b) project proposals that might be of interest to that agency and will solicit comments from them as appropriate.
- The WQD will participate in the Joint Ventures Steering Committee led by the WG&F to build wetland capacity within the state.
- The WQD Monitoring Program and WG&F will coordinate on monitoring efforts where appropriate.
- The WQD TMDL Program will outreach to the WG&F personnel during TMDL development to obtain their input on and participation in the TMDL process.
- The WQD will notify and seek input from the WG&F on other CWA activities, including WYPDES permitting actions, standards revisions, and BMP manual revisions as appropriate.
- The WQD will send the WG&F copies of approved turbidity waivers.
- Both the WQD and WG&F will continue to be participants on the Aquatic Task Group of the Powder River Interagency Working Group.
- The WQD will coordinate with WG&F and local public health departments regarding fish consumption advisories based on mercury levels.
- The WQD will seek WG&F input on 401 certification and turbidity waiver decisions as appropriate.
- The WQD will review WG&F recommendations and plans to protect aquatic habitat.
- The Nonpoint Source Program will notify WG&F when its Livestock/Wildlife BMP manual is scheduled for revision and will request comments from that agency.
- The WQD will coordinate Section 319 project review with WG&F to be in compliance with the Governor's Executive Order on Greater Sage Grouse Core Area Protection (Executive Order 2011-5).

5.16 Wyoming Office of State Lands and Investment

The Office of State Lands and Investment (OSLI) manages the approximately 3.5 million surface acres and 3.9 million mineral acres owned by the State of Wyoming. The State Trust Land, State Trust Minerals, and State Permanent Fund are the three assets that compose the State Land Trust. The Board of Land Commissioners manages trust assets for the purposes of "long-term growth in value" and "optimum, sustainable revenue production". Thus, preserving and enhancing trust asset values on state lands is one of the most important functions for OSLI, and the agency seeks to achieve sustainable use and conservation of natural resources on state lands. This includes 1) efficient, effective and proactive land management practices; 2) the control and eradication of noxious weeds and designated pests; 3) lease stipulations to protect surface and subsurface resources; and 4) adequate inspection, bonding and reclamation programs.

The Mineral Leasing and Royalty Compliance Division provides oversight for mineral extraction activity on state lands, including bonding, inspection, and reclamation activities. The Real Estate Management and Farm Loans Division administers surface leases, temporary use permits, and easements. This includes ensuring rules, regulations and statutes governing surface leases are followed. The Division is committed to environmental enhancement of the land as part of its mission. This may include land preservation and enhancement projects, vegetation monitoring, and control of noxious weeds and pests. The Forestry Division is responsible for managing the state's forestry resources (described in detail in

Section 5.8). Off-road vehicle use, overnight camping, and open fires are prohibited on State land and all motor vehicles must remain on established roads.

The State Loan and Investment Board (SLIB) manages the permanent land funds and provides grant or loan funding to local governments for projects that have a public benefit. Funds from the State Land Preservation and Enhancement Account are to be used to "fund projects which will preserve and enhance the asset value of all surface and mineral lands held in trust by the State". Priorities for projects funded through this account include unauthorized dump cleanup; reclamation of damaged riparian areas, roads or erosion control; water improvements; timber/forest product management; improving existing access to trust lands; soil survey; habitat protection and enhancement; and regulatory compliance and alleviation of public health and safety concerns.

The WDEQ will coordinate with OSLI in the following ways:

- The WQD Monitoring Program will work with OSLI to coordinate access to state lands for water quality sampling.
- The WQD will notify OSLI of instances of water quality problems on state lands, including cases of illegal dumping and aquatic habitat degradation.
- Coordination with OSLI on water quality issues will occur through the BLM State Cooperators meetings which both agencies attend.
- On an annual basis, the Nonpoint Source Program Coordinator will request information from OSLI on preservation and enhancement projects related to nonpoint source reduction conducted during the previous year and will include a summary of this information in the annual Nonpoint Source Program report.

5.17 Wyoming Oil and Gas Conservation Commission

The Wyoming Oil and Gas Commission is charged with overseeing the development of the state's oil and gas resources. It is the goal of the WOGCC to see that oil and gas resources are developed in an environmentally responsible manner and to promote the benefits of such development to the state. The WOGCC works to prevent soil, surface water, and ground water contamination during the drilling process and during production, as well as to ensure that drilling locations are reclaimed after production. WOGCC functions include approving permits and maintaining well records, conducting field inspections, regulating some underground injection wells, and plugging orphan wells.

- The WQD will communicate with the WOGCC as needed, including for purposes of preventing and addressing spills, addressing water quality concerns in the WYDPES permitting process, and seeking solution to water quality issues as they arise.
- The WQD and WOGCC will both continue to be participating members of the Powder River Interagency Workgroup, which is a workgroup established to identify, discuss, and find solutions to issues of common concern (including water quality) to government agencies involved with coal bed methane production in the Powder River Basin.

5.18 Wyoming State Engineer's Office

The Wyoming State Engineer's Office (SEO) is responsible for the regulation and administration of water resources in Wyoming, including the permitting, allocation, and assuring beneficial use of the state's water resources. According to the Wyoming Constitution, all natural waters within the boundaries of the state are the property of the state. Permits are required through the SEO for diverting surface waters for beneficial use as well as for drilling wells to utilize ground water for beneficial use. The SEO also administers the Safety of Dams Program for Wyoming. As a key player in interstate water issues, the SEO participates in interstate compacts as well as basin-wide and region-wide water resource groups and associations.

The WDEQ will coordinate with SEO in the following ways:

- The WQD and SEO will meet quarterly to discuss water quality and water quantity issues and to address emerging water quality issues, particularly those that may involve flow and quantity issues.
- The WQD will attend monthly Water Forum meetings hosted by the SEO. Other major agencies attending these meetings include BOR, WG&F, WYDOT, USACE, WWDC, WDA, NRCS, and USGS.
- The WQD will coordinate with the SEO on interstate water issues via the Bear River Water Quality Task Force.
- The WQD will coordinate with the SEO on interstate water issues via the Colorado River Basin Salinity Control Forum.
- The WQD will coordinate with the SEO on interstate water issues via the Yellowstone River Compact Technical Committee.

5.19 Wyoming State Forestry Division—Office of State Lands and Investment

The Wyoming State Forestry Division (WSFD) is the division of OSLI that is charged with managing forest resources under the jurisdiction of the State. Their mission is "To utilize science based, professional forestry practices to establish, enhance, protect, and utilize Wyoming's forests, trees, and associated resources to contribute to the socio-economic well being of Wyoming." The Division works to directly manage timber resources on state lands, including harvesting, fire protection, and fire suppression with a goal of long-term forest health and productivity. The Division also works to promote good forest management and protection throughout the state. The Wyoming Forestry Best Management Practices publication was revised in 2006 and provides a good reference for silviculture practices that reduce nonpoint source pollution. In 2000, 2001, 2004, and 2007, audits of silviculture BMPs were conducted by a multi-disciplinary team of forestry professionals on state, federal, and private timber harvest areas. The audits were followed by statewide training sessions to increase BMP knowledge. Audit and training activities were partially funded by past Section 319 grants. The Wyoming State Forestry Division conducts projects to promote overall forest health and minimize nonpoint source pollution from timber harvesting and fire events.

The WDEQ will coordinate with WSFD in the following ways:

- The Nonpoint Source Program will notify WSFD when it revises the WQD Silviculture BMP Manual and will request comments and cooperation from that agency.

- The WQD will participate in silviculture BMP audits.
- The Nonpoint Source Program will notify WSFD of the release of Requests for Proposals for Section 319 and 604(b) grants. The Nonpoint Source Program will notify WSFD when specific watersheds are selected by the WQD and Nonpoint Source Task Force for targeted Section 319 funding.
- On an annual basis, the Nonpoint Source Program Coordinator will request information from WSFD on projects related to nonpoint source reduction conducted during the previous year and will include a summary of this information in the annual Section 319 program report.
- The WQD will provide assistance with wildfire restoration efforts as resources allow.

5.20 Wyoming Water Development Commission

The Wyoming Water Development Commission (WWDC) was established to "promote the optimal development of the state's human, industrial, mineral, agricultural, water and recreational resources." Ten members are appointed by the governor to serve on the WWDC, and the Wyoming Water Development Office (WWDO) is composed of 26 staff who administer the Water Development Program as approved by the WWDC, the Legislature, and the Governor. As the lead agency for water development in the State of Wyoming, the WWDO recognizes its responsibility for wisely developing Wyoming's water resources for the benefit of the people of the State. Projects funded through the Water Development Program serve many purposes, including conserving, storing, conveying, and putting to beneficial use the waters of the State, and thus may include water quality protection components. The Water Development Program also funds research projects, conducted at the University of Wyoming (UW), to identify and develop topics of interest in water resources and promote water related expertise in our University of Wyoming graduates. Most WWDO construction projects require permits or authorizations from various agencies and may require NEPA compliance. Water projects planned and financed by the Water Development Program may include mitigation and enhancement features to maintain or improve water quality.

The WDEQ will coordinate with WWDC/WWDO in the following ways:

- The WQD and WWDO will meet as needed to discuss water quality related issues.
- The WQD will provide input on Water Development Program projects as appropriate. WWDO and WQD will coordinate as needed with other appropriate agencies to ensure implementation of appropriate environmental safeguards on Water Development Program projects.
- The WQD will encourage the use of Water Development Program Water Research funding for research projects that relate to issues being addressed by WQD.
- The WQD will stay informed on Water Development Program River Basin Planning and watershed planning activities to reduce redundancy with WQD funded watershed planning efforts and to promote information sharing.
- WWDO and WQD will continue to ensure that reduction or prevention of nonpoint source pollution is a component of construction activities.
- The Nonpoint Source Program will notify WWDO of RFP releases for Section 319 and 604(b) funding. The Nonpoint Source Program will notify WWDO when specific watersheds are selected by the WQD and Nonpoint Source Task Force for targeted Section 319 funding.

- The WQD TMDL Program will outreach to WWDO personnel during TMDL development to obtain their input on and participation in the TMDL process as appropriate.

5.21 Wyoming Wildlife and Natural Resource Trust Fund

The Wyoming Legislature created the Wyoming Wildlife and Natural Resource Trust (WWNRT) in 2005. Funded by interest earned on a permanent account, donations, and legislative appropriation, the purpose of the program is to enhance and conserve wildlife habitat and natural resource values throughout the state. Any project designed to improve wildlife habitat or natural resource values is eligible for funding. The WWNRT is a popular and important source of funding for natural resource conservation projects throughout the state, a notable number of which directly or indirectly improve water quality. Section 319 projects often use WWNRT funds as a source of non-federal match.

The WDEQ will coordinate with WWNRT in the following ways:

- The Nonpoint Source Program will communicate as needed with WWNRT to stay updated on that program's activity and funding opportunities. The annual Nonpoint Source Program report will include information about water quality-related WWNRT activities for the past year based on the availability of that information.
- The Nonpoint Source Program will provide information to WWNRT about Section 319 and Section 604(b) projects as requested by WWNRT.
- The Nonpoint Source Program recognizes that Section 319 funds may be able to fund the planning aspects of natural resource conservation projects that WWNRT cannot fund, as a possible opportunity for coordination of funding.
- The Nonpoint Source Program will notify WWNRT of the release of Requests for Proposals for Section 319 and 604(b) grants. The Nonpoint Source Program will notify WWNRT when specific watersheds are selected by the WQD and Nonpoint Source Task Force for targeted Section 319 funding.

5.22 Cooperation with Local Agencies, Nonprofit Organizations, and Private Individuals

The Nonpoint Source Program maintains informal participatory association with many groups that represent local interests. The Nonpoint Source Program will seek to build partnerships with these groups for purposes such as soliciting input into watershed planning, sponsoring and implementing projects, building relationships with local landowners, providing input on programmatic decisions, providing input on BMP manuals, participating in TMDL development, disseminating informational and education materials, and as recruitment pools for Nonpoint Source Task Force vacancies.

The importance of building partnerships and coordinating efforts with local agencies, watershed groups, and private businesses and individuals cannot be emphasized enough in the challenge of addressing nonpoint source pollution. It is these local groups who know their watersheds the best and have the most vested interests in maintaining environmental quality. Promoting locally led initiative to improve water quality is critical for successful projects. Thus, the Nonpoint Source Program will work to build relationships with the following local agencies and groups:

- The 34 individual Conservation Districts
- Wyoming Irrigation Districts
- All municipal and local government agencies (cities, towns, and counties)
- Wyoming Weed and Pest Districts
- Wyoming Stock Growers Association
- Wyoming Farm Bureau Federation
- Wyoming Wool Growers Association
- Rocky Mountain Farmers Union
- Wyoming Outdoor Council
- Powder River Basin Resource Council
- Greater Yellowstone Coalition
- Wyoming Wildlife Federation
- Wyoming County Commissioners Association
- The Nature Conservancy
- Wyoming Audubon Society
- Trout Unlimited
- Soil and Water Conservation Society
- Wyoming Association of Municipalities
- Wyoming Wheat Growers
- Wyoming Chapter Sierra Club
- Wyoming Project Learning Tree
- Black Hills Forest Resource Association
- Wyoming Tree Farm
- Society of American Foresters
- Petroleum Association of Wyoming
- Ducks Unlimited
- Teton Science School
- Wyoming Outfitters and Guides Association
- Rocky Mountain Elk Foundation
- Wyoming Resource and Conservation Development Councils
- Jackson Hole One Fly Foundation
- Wyoming Agriculture in the Classroom
- USDA Agriculture Research Station
- University of Wyoming Cooperative Extension Service
- Wyoming Community Colleges

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Appendix A

Summary of Nonpoint Source Program Objectives, Action Items, Milestones, and Tracking Measures

This Appendix summarizes and expands upon information presented in Section 4 by providing action items for each of the nine objectives of the Nonpoint Source Program. The action items represent the checklist of "to-do" items for the WDEQ to follow during the term of this management plan to make progress towards achieving each objective. Long-term (i.e. two years and beyond) milestones are provided in this Appendix to establish tangible targets to mark progress towards achieving objectives. In addition, tracking measures are provided for each objective help to quantify and document program progress. Reports on tracking measures will be provided in each annual Nonpoint Source Program report. Additional short-term (i.e. one year) milestones will also be presented in each annual report for the upcoming fiscal year. This will allow flexibility in keeping program milestones up-to-date and relevant to program priorities, while still aiming for long-term, "big picture" program accomplishments.

OBJECTIVE #1: IDENTIFICATION AND PRIORITIZATION

> *The WDEQ will continue to gather and use credible data to accurately and efficiently identify those surface waters of the state whose designated uses are determined to be threatened or impaired due to nonpoint source pollution. Those waters determined to be impaired or threatened by nonpoint source pollution will then be prioritized by the Nonpoint Source Program for restoration efforts.*

Action Items:

- ✓ Periodically review surface water quality standards to determine if new standards are needed or existing standards need to be revised (Triennial Review).
- ✓ Continue to gather surface water quality data in accordance with the established 2010-2019 Monitoring Strategy and annual monitoring workplans.
- ✓ Continue to request surface water quality data from non-WQD parties such as conservation districts and watershed groups for consideration in the Integrated Report.
- ✓ Provide the Assessment Program with copies of Section 319 project final reports, including water quality data obtained as part of those projects.
- ✓ Continue to provide quality assurance and quality control of all ambient surface water quality data from WQD and non-WQD monitoring activities that will be used in the Integrated Report for 303(d) listing and de-listing decisions.
- ✓ Assess surface water quality data and make determinations of impaired waterbody status. Every two years, publish the Integrated Report, including the 305(b) report of the surface water quality condition of the state as well as the 303(d) list of threatened or impaired waters that require a TMDL study. The WQD will abide by credible data laws in making 303(d) listing or de-listing decisions.
- ✓ Use the current 303(d) list to identify those waterbodies impaired or threatened in part or wholly by nonpoint source pollution and consider these waters to be high priority for restoration efforts. Use the Impaired Waters Index (Section 4.1.1) to manage and track planning and restoration efforts for each priority water.

- ✓ Work to integrate the EPA Recovery Potential Screening Tool (Section 4.1.2) into Nonpoint Source Program activities to help evaluate relative potential for watershed restoration both statewide and within subwatersheds.
- ✓ Utilize optional "targeted watersheds" approach to select watersheds to be prioritized for watershed restoration funding each fiscal year (see Section 4.3).

Long-Term Milestones:

- ❖ By the end of FFY2016, have the internal version of the Impaired Waters Index completed.
- ❖ By the end of FFY2020, have the public version of the Impaired Waters Index completed.
- ❖ By the end of FFY2017, have the EPA Recovery Potential Screening Tool integrated into the Nonpoint Source Program.

Tracking Measures:

- ➢ Number of stream miles assessed and use support status determined.
- ➢ Number of stream miles impaired/threatened due to nonpoint source pollution (includes Category 4 and 5 waters of Integrated Report).
- ➢ Number of lake/reservoir acres assessed and use support status determined.
- ➢ Number of lake/reservoir acres impaired/threatened due to nonpoint source pollution (includes Category 4 and 5 waters of Integrated Report).
- ➢ Total number of impaired/threatened waterbodies (pollutant/segment combinations) due to nonpoint source pollution (includes Category 4 and 5 waters of Integrated Report).
- ➢ Number of HUC12 watersheds with data compiled for EPA Recovery Potential Screening Tool.
- ➢ Progress towards completion of Impaired Waters Index.

OBJECTIVE #2: PLANNING

The WDEQ will continue to work with local stakeholders to develop and promote the development of tools that provide an accurate, efficient, and comprehensive plan on how the impairments to priority waters identified in Objective #1 will be addressed. This includes the development of EPA-approved Total Maximum Daily Loads (TMDLs) and the development of watershed-based plans that meet all of EPA's Nine Key Elements for Watershed-Based Planning.

Action Items:

- ✓ Continue to develop TMDLs for EPA approval in accordance with the EPA-approved Pace of TMDL Development.
- ✓ Provide financial assistance with federal Section 319 and 604(b) grant funds for TMDL development as appropriate and as resources allow, recognizing the need to balance planning with project implementation.
- ✓ Require TMDLs that are funded through the Nonpoint Source Program to incorporate all of EPA's Nine Key Elements required for watershed-based planning. The Nonpoint Source Program will work with the TMDL program to ensure compliance with this requirement.

- ✓ Support local groups in the development of watershed-based plans that meet the Nine Key Elements in the absence of a TMDL. WQD will review and approve these plans to ensure that the Nine Key Elements are met.
- ✓ Emphasize public involvement and stakeholder participation in the TMDL development process and watershed-based planning process. Public and stakeholder participation in the planning process is critical to increase the quality of these plans and increase the success of subsequent restoration efforts. The WQD will work to outreach to local groups in advance of the scheduled TMDL start date, during the TMDL process, and after the TMDL is completed. This includes providing updated and accurate information on the TMDL and Nonpoint Source Program websites, requiring public participation and stakeholder involvement throughout the TMDL development process, and having Nonpoint Source Program attendance at key TMDL public meetings.
- ✓ Through previous expenditures of Section 319 and 604(b) funds, the WDEQ has invested a significant amount of grant funds into planning and assessment activity. To the extent possible and practicable, utilize previous planning efforts already accomplished. This includes the incorporation of local watershed plan information into TMDL projects where possible. The WQD will work with conservation districts and other local planning groups to assist them with the TMDL process and incorporating local planning efforts into the TMDL effort.
- ✓ Communicate with other state, federal, and local agencies that also fund or conduct watershed planning activities to ensure that the Nonpoint Source Program is not funding planning or assessment projects that would duplicate efforts. The WQD will promote information-sharing between agencies to reduce redundancy of watershed planning efforts.
- ✓ Continue to release an annual RFP for Section 604(b) funds to be used for water quality management planning activities. The RFP will continue to specify that projects conducted for impaired/threatened waters listed on the 303(d) list will be of higher priority for funding. Watershed-based planning and TMDL projects will be required to incorporate the Nine Key Elements.
- ✓ Continue to issue an annual RFP for Section 319 funds. A portion of Section 319 funds will be available for planning purposes. The RFP will continue to specify that planning and assessment projects conducted for impaired/threatened waters listed on the 303(d) list will be of higher priority for funding than planning and assessment projects on unimpaired waters. Watershed-based planning and TMDL projects will be required to incorporate the Nine Key Elements.
- ✓ Provide technical assistance to third parties developing watershed-based plans and TMDLs as needed and as resources allow.
- ✓ Better integrate Assessment, TMDL, and Nonpoint Source Programs to track impaired waters and current watershed planning efforts through the Impaired Waters Index and interactive GIS map (Section 4.1.1).
- ✓ Maintain regular communication with the Wyoming Association of Conservation Districts about TMDL and Watershed-Based Plan Development, including scheduling of TMDL development, program requirements, and general information sharing.
- ✓ Maintain communication with other partners as needed regarding TMDL development.
- ✓ Evaluate the use of the Watershed Plan Tracker included in GRTS; begin using this tool if determined to be useful to program.

Long-Term Milestones:

- ❖ As of the end of FFY2011, a total of 20 nonpoint source impaired waterbodies were addressed through a nine-element planning document (TMDL or watershed-based plan). This represents 15% of the total nonpoint source impaired segments listed in the Integrated Report at that time. By the end of FFY2016, have at least 40% of the nonpoint source impaired segments in the current Integrated Report addressed by a nine-element planning document. By the end of FFY2020, have at least 90% of the nonpoint source impaired segments in the current Integrated Report addressed by a nine-element planning document.

Tracking Measures:

- ➢ Number of TMDLs approved (total and per fiscal year).
- ➢ Number of TMDLs initiated (per fiscal year).
- ➢ Number of Watershed-Based Plans approved in absence of TMDL (total and per fiscal year).
- ➢ Number and percentage of nonpoint source impaired waterbody/pollutant combinations addressed by an approved TMDL or Watershed-Based Plan (total and per fiscal year).
- ➢ Number and percentage of nonpoint source impaired waterbody/pollutant combinations with a TMDL or Watershed-Based Plan under development (per fiscal year).
- ➢ Number and percentage of nonpoint source impaired waterbody/pollutant combinations without TMDL or Watershed-Based Plan initiated.
- ➢ Number of third-party Section 319 planning/assessment projects active in each fiscal year.
- ➢ Amount and percentage of Section 319 funds reserved/used for planning activities for each active Section 319 grant.

OBJECTIVE #3: IMPLEMENTATION

The WDEQ will provide financial and technical assistance to implement efficient and effective watershed restoration projects in accordance with the watershed planning tools established in Objective #2 above. The purpose of the restoration projects will be to implement best management practices that reduce or eliminate nonpoint sources of pollution such that surface water quality standards are achieved and maintained.

Action Items:

- ✓ Continue to release an annual Section 319(h) funding RFP to provide cost-share assistance for nonpoint source pollution control projects. In the RFP, projects that seek to implement BMPs to restore high priority waters to meeting water quality standards will be given highest priority for funding.
- ✓ Continue to focus the majority of Section 319 project funding towards projects that implement or directly support on-the-ground restoration efforts.
- ✓ Potentially opt to focus annual Section 319 funds within targeted watershed(s) for each fiscal funding year. Projects in targeted watersheds will be given higher priority than non-targeted watersheds for that year although proposals will still be accepted statewide. Targeted watersheds will be determined with input from the Nonpoint Source Task Force and will be based on factors such as level and

quality of planning completed, local support for project, and ability to coordinate with other sources of funding (see Section 4.3).

- ✓ Work to solicit proposals from watershed groups in watersheds selected for targeted funding. If no watersheds are targeted for funding for a given year, the Nonpoint Source Program will outreach to watershed groups in all areas where a TMDL or watershed-based plan has been approved.
- ✓ Work with other funding agencies to coordinate restoration efforts in targeted watersheds where possible.
- ✓ Provide tools to project sponsors to help them understand other potential funding sources and post information to this effect on the program website.
- ✓ Provide technical assistance to project sponsors during project planning, development, and implementation.
- ✓ Promote implementation projects that are locally-led and community driven. In project proposals, require project sponsors to provide a detailed description of local support for the project.
- ✓ Promote product-oriented projects that focus on producing measurable improvements to water quality; projects that are able to produce measurable improvements to water quality will be of higher priority than projects with limited ability to produce measureable improvements.
- ✓ To the extent that information is available, track nonpoint source pollution control efforts done outside of Section 319 funding through other agencies or funding programs. The purpose of this is to have a comprehensive understanding of statewide nonpoint source pollution reduction efforts to better plan projects, maximize efficiency, and coordinate funding. The Nonpoint Source Program will report on selected nonpoint source activities conducted outside of Section 319 funding in each annual program report to the extent that information is available.
- ✓ Use the Impaired Waters Index and associated interactive mapping tool to track watershed restoration efforts and promote information sharing and collaboration between WDEQ programs and other agencies (see Section 4.1.1).
- ✓ Work with the WYDPES Program to ensure that requirements for point source discharges established under TMDLs will be reflected in the permitting process.

Long-Term Milestones:

- ❖ As of the end of FFY2011, a total of 19 nonpoint source impaired segments were being or had been addressed by at least one BMP implementation project in accordance with a nine-element planning document (TMDL or watershed-based plan). This represents 14% of the nonpoint source impaired segments in the 2012 Integrated Report. By the end of FFY2020, have at least 80% of the nonpoint source impaired segments on the current Integrated Report addressed by at least one BMP implementation project. Have at least 40% of the nonpoint source impaired segments addressed by two or more BMP implementation projects.

Tracking Measures:

- ➢ Track watersheds targeted for funding in annual Section 319 RFP.
- ➢ Track number and percentage of nonpoint source impaired segments with an approved nine-element planning document that are being or have been addressed by at least one BMP implementation project.

- Track number and percentage of nonpoint source impaired segments with an approved nine-element planning document that are being or have been addressed by two or more BMP implementation projects.
- For each completed nine-element planning document (TMDL or watershed-based plan), track estimated level of implementation (not implemented, less than 50% implemented, greater than 50% implemented, or fully implemented).
- Track amount of Section 319 funds allocated to BMP implementation tasks for projects that address impaired segments for FFY2011 and later grants.
- Track amount of Section 319 funds allocated to project tasks that support BMP implementation on impaired segments for FFY2011 and later grants.
- Track total amount of Section 319 funds used for BMP implementation or direct support of BMP implementation on impaired segments for FFY2011 and later grants.

OBJECTIVE #4: DOCUMENTING ENVIRONMENTAL RESULTS

The WDEQ will develop and implement methods to accurately and efficiently monitor and/ or evaluate project effectiveness in terms of water quality improvements realized from watershed restoration project implementation.

Action Items:

- ✓ Achieve restoration of impaired waterbodies as reflected by de-listing of waterbodies from the 303(d) list of impaired waters due to nonpoint source remediation efforts. Waterbodies delisted from the 303(d) list for other reasons (change of standards, additional assessment, etc.) will be tracked separately and not reported as part of this management plan.
- ✓ Increase the amount of nonpoint source project effectiveness monitoring assistance provided by the WQD Monitoring Program. This includes assisting project sponsors with developing monitoring plans, training project sponsors on monitoring methods, and having Monitoring Program staff directly conduct effectiveness monitoring. This activity will be completed to the degree that Monitoring Program staff resources are available; the Nonpoint Source Program Coordinator will work with the Monitoring Program Supervisor to coordinate monitoring assistance based on staff availability. WQD staff not in the Monitoring Program may also be trained to assist with project effectiveness monitoring, again based on available resources.
- ✓ Work with TMDL Program to coordinate project effectiveness monitoring with TMDL effectiveness monitoring. Because a significant portion of TMDL implementation projects will likely be funded through Section 319 grants, it will be important to coordinate on this issue to avoid duplication of efforts. TMDL Program staff will assist with project effectiveness monitoring as resources allow.
- ✓ Based on the above two action items, convene an annual meeting between the TMDL, Monitoring, and Nonpoint Source Programs to evaluate what staff resources are available for TMDL and Nonpoint Source project effectiveness monitoring for the upcoming year and identify where coordination can occur.
- ✓ Use mapping tools to identify watersheds where impairments have been addressed through projects (both 319 and non-319) but follow-up monitoring may be needed to better assess project effectiveness. Mapping tools will also be used to identify watersheds where impairments exist but implementation has not occurred as candidates for baseline (pre-BMP) monitoring.

- ✓ For watershed BMP implementation Section 319 projects, continue to require the project sponsor to incorporate in the project scope of work a mechanism for project effectiveness evaluation. This may include providing BMP information that the sponsor and/or WDEQ staff can use to model load reduction estimates, pre- and post-project water quality monitoring, and/or other types of monitoring (i.e. photopoint monitoring) that can help evaluate water quality improvement.
- ✓ Continue to provide project sponsors with QA/QC assistance and SAP/QAPP review.
- ✓ Train WQD staff on tools to estimate load reductions from completed projects. WQD staff will assist third party project sponsors to have access to these tools and estimate their own load reductions whenever possible.
- ✓ Continue requiring the submission of final reports for all Section 319 and 604(b) funded projects. The Nonpoint Source Program will maintain final report format guidance on its website and will post final reports into GRTS in addition to submitting copies of final reports to EPA.
- ✓ Enter load reduction estimates into GRTS in a timely manner on an annual basis. Where possible, load reduction estimates will come from actual monitoring data rather than predictive models. Each annual Section 319 program report prepared by the Nonpoint Source Program will include a section on environmental results, including estimated load reductions from BMPs implemented that year. Nonpoint Source Program staff will attend GRTS regional and national trainings as well as other trainings for load reduction methods that become available.
- ✓ For watersheds that are fully or partially restored to meeting water quality standards and qualify as an EPA Success Story, the Nonpoint Source Program will work with EPA to document and submit Success Stories to be published on the WDEQ and EPA websites.
- ✓ Document Monitoring Program staff assistance in each Section 319 annual report.
- ✓ Develop and distribute an Access-based project management database that will be used by project sponsors to report more timely and detailed BMP implementation information.

Long-Term Milestones:

- ❖ Full restoration of a total of four impaired waterbodies between the 2014, 2016, 2018, and 2020 305(b)/303(d) Integrated Reports (WQ-10 performance measure).
- ❖ For each annual Nonpoint Source Program report prepared through FFY2020, have at least one watershed where improving water quality trends can be documented with monitoring data (SP-12 performance measure).
- ❖ By end of FFY2020, the Nonpoint Source Program will develop a method to electronically manage water quality data submitted by third parties as part of Section 319 or 604(b) project reporting requirements. Electronic management of this data will facilitate its use by the WDEQ, EPA, other agencies, and the public.
- ❖ For each annual Nonpoint Source Program report prepared through FFY2020, have at least one project where collection of BMP effectiveness data was assisted by the WQD Monitoring Program.

Tracking Measures:

- ➢ Number of nonpoint source impaired waterbody segments/pollutant combinations restored to meeting water quality standards due to nonpoint source remediation efforts (total and per fiscal year). Include total mileage/acreage of restored segments.
- ➢ Track development of project management database (BMP reporting).

- Track progress towards electronic data management system completion.
- Number and percentage of BMP implementation projects that close each year that provide pre- and post-BMP water quality monitoring data to evaluate water quality improvement.
- Number of projects where effectiveness monitoring was conducted or assisted in field by WQD Monitoring Program staff.
- Number of projects whose monitoring programs were provided technical assistance by WQD Monitoring Program staff.
- Estimated load reductions for sediment, nitrogen, phosphorus, and other applicable pollutants per fiscal year.
- Acres of wetland created and feet of streambank stabilization accomplished by Section 319 projects for each fiscal year.
- Description of BMPs implemented per fiscal year through Section 319 funding.
- Amount of annual Section 319 funding allocated to project effectiveness monitoring task activities for FFY2011 and later grants.
- Number of third-party projects closed and number of final reports received per fiscal year.

OBJECTIVE#5: PROTECTION AND PREVENTION

In addition to restoring impaired waters, the WDEQ will seek to protect those waters that are not listed as impaired or threatened, but may nonetheless be adversely affected by nonpoint source pollution or may be high quality, unique waters that warrant special protection. The quality of these surface waters will be maintained and improved through coordinated regulatory and non-regulatory methods, including nonpoint source pollution reduction and control, permitting of point sources, the National Environmental Policy Act (NEPA) review process, Clean Water Act Section 401 certifications, and providing technical assistance and public education. Where possible, the WDEQ will seek to be proactive to prevent new water quality impairments from arising.

Action Items:

- ✓ Maintain a proactive, statewide information/education program on water quality, increasing public awareness of nonpoint source pollution, and reducing nonpoint source pollution (see also Objective #7 for specific information/education activities).
- ✓ Maintain protection of Class 1 waters. This includes ensuring that Section 7 of Chapter 1 of the Wyoming Water Quality Rules and Regulations is followed, which establishes control of pollution from point and nonpoint source pollution to Class 1 waters. This also includes ensuring that antidegradation requirements established in the *February 2007 Antidegradation Policy* are followed and ensuring the *August 2007 Interim Policy on Establishing Effluent Limits for Permitted Point Source Discharges to Class 1 Water Tributaries* is followed.
- ✓ Ensure permits are issued for all water pollution sources and facilities for which permits are required by the Environmental Quality Act and the Industrial Siting Act. This includes the WQD issuing point source permits in accordance with requirements of the WYPDES Program.
- ✓ Encourage development of nutrient management plans at AFOs to ensure the proper collection, storage, and disposal of animal wastes. Nutrient management plans for CAFOs will be required under the WYPDES Program.

- ✓ Protect in-stream water quality standards and beneficial uses by maintaining an active inspection program in accordance with the WYPDES enforcement management system.
- ✓ Coordinate efforts between the Nonpoint Source Program and the WYPDES Stormwater Program to ensure Section 319 funds are not used for activities covered under a WYPDES stormwater permit.
- ✓ Reduce the threat of surface and ground water pollution caused by storage tanks through environmental remediation, leak prevention, and leak detection. (Solid and Hazardous Waste Division)
- ✓ Encourage enrollment in the VRP to allow individuals, businesses, or units of government to conduct an environmental investigation and cleanup of a contaminated property in order to receive a release from future environmental liability. (Solid and Hazardous Waste Division)
- ✓ Provide Brownfields Assistance under the VRP to help local governments investigate, cleanup, and reuse brownfield/orphan properties. (Solid and Hazardous Waste Division)
- ✓ Continue to permit septic systems for counties that have not been delegated primacy and provide oversight for those that have been delegated primacy. (Water and Wastewater Program)
- ✓ Permit the location, design, construction, operation, closure and post-closure care of solid waste treatment, storage and disposal facilities. The solid waste facilities that are regulated by this program include local community landfills (both operating and closed), municipal waste baling stations and transfer facilities, industrial waste landfills, industrial waste treatment facilities, and used oil storage facilities. (Solid and Hazardous Waste Division)
- ✓ Work with WYDOT to address runoff from highways, roads, and bridges, and to minimize salt/sand applications and address runoff during construction.
- ✓ Eliminate safety hazards and repair environmental damage from past mining activities through the AML reclamation program. (AML Division)
- ✓ Pursuant to Section 401 of the CWA, issue state certification for any permit or license issued by a federal agency for an activity that may result in a discharge into waters of the U.S. to ensure that projects comply with state water quality standards. Deny certifications for activities that cannot provide reasonable assurance that state water quality standards will be achieved. Coordinate Section 401 certifications with USACE Section 404 permit reviews. WQD will review all Section 404 individual permits and selected regional and nationwide general permit authorizations issued by the Wyoming Regulatory Office of the United States Army Corp of Engineers for dredge or fill activity to determine if they comply with water quality standards.
- ✓ Issue turbidity waivers in accordance with the *February 2007 Turbidity Implementation Policy*. WQD will review all applications for a temporary turbidity increase, coordinate the activity with any water intakes in the area, require daily sampling to indicate the actual increase during the activity, and require BMPs in order to minimize any increase in the turbidity.
- ✓ The WQD will participate as cooperators during the NEPA process and implementation of major federal development projects with water quality implications to ensure consistency with the Nonpoint Source Management Program and other WQD water quality goals. WQD will participate in NEPA process by assisting federal agencies with developing and selecting alternatives for proposed projects, reviewing planning documents for federal activities with water quality impact, and providing input and comments as necessary.
- ✓ Participate in national forest BMP audits with the United States Forest Service and/or Wyoming State Forestry Division.

- ✓ Participate in NRCS State Technical Committee Meeting and encourage projects that protect water quality and funding sources that protect water quality.
- ✓ Participate as member of Wyoming Joint Ventures Steering Committee to implement Wyoming Wetlands Conservation Strategy.
- ✓ Work with WDEQ Water and Wastewater Program to encourage use of nonpoint source CWSRF funds for water quality protection and notify the SRF Program of nonpoint source projects to include on the CWSRF Intended Use Plan.
- ✓ Control sediment and other nonpoint sources of water pollution at active mines through partnership with WDEQ LQD. The LQD will issue permits to mines with provisions intended to control nonpoint sources of pollution. The LQD will enforce the runoff control provisions in the mining permits issued by the division. LQD will prepare CHIAs for coal permitting actions; WQD will review CHIA projects associated with water quality.
- ✓ Encourage protection of riparian areas and wetlands. Encourage the use of BMPs that protect riparian and wetland areas.
- ✓ Consider developing or adopting a Rapid Assessment Methodology for riparian and non-riparian wetlands.
- ✓ Work with EPA as resources allow as a partner in EPA's Healthy Watershed Initiative.

Long-Term Milestones:

- ❖ The 2014, 2016, 2018, and 2020 Integrated Reports will not show more than a 5% increase in the percentage of assessed stream miles designated as impaired due to nonpoint source pollution compared to the 2012 Integrated Report (12% in 2012 Integrated Report).
- ❖ The 2014, 2016, 2018, and 2020 Integrated Reports will not show more than a 5% increase in the percentage of assessed lake/reservoir acreage designated as impaired due to nonpoint source pollution compared to the 2012 Integrated Report (33% in 2012 Integrated Report).

Tracking Measures:

- ➢ Percentage of assessed stream miles designated as impaired due to nonpoint source pollution for each Integrated Report.
- ➢ Percentage of assessed lake/reservoir acres designated as impaired due to nonpoint source pollution for each Integrated Report.
- ➢ Number of project-specific 401 certifications issued per fiscal year.
- ➢ Number of turbidity waivers issued per fiscal year.
- ➢ Number USFS BMP audits WQD participated in.
- ➢ Number of Section 319 Protection/Prevention projects active in each fiscal year.
- ➢ Amount of Section 319 funding allocated to BMP implementation tasks on unimpaired segments for FFY2011 and later grants.
- ➢ Amount of Section 319 funding allocated to tasks that directly supported BMP implementation tasks on unimpaired segments for FFY2011 and later grants.
- ➢ Track total amount of Section 319 funds used for BMP implementation or direct support of BMP implementation on unimpaired segments for FFY2011 and later grants.

OBJECTIVE #6: GROUND WATER PROTECTION

The WDEQ will work to understand current ground water quality conditions, improve ground water quality, protect drinking water supplies from nonpoint sources of pollution, protect the public health, and increase public awareness of the potential for nonpoint sources to contribute to ground water contamination and public health concerns.

Action Items:

- ✓ Continue to implement the ground water monitoring element of the state monitoring strategy to assess conditions of ground water resources within priority ground water protection areas and other areas that become at risk due to unforeseen development. Assist with implementation of this strategy at the local level.
- ✓ Coordinate with sister resource agencies to develop, collect and compile information needed to communicate and illustrate ground water conditions to the public.
- ✓ Provide technical assistance, education and information for local groups to properly implement ground water and drinking water protection measures.
- ✓ Develop and implement a ground water data management and electronic data delivery system to capture, store and manage ground water data reported to the agency.
- ✓ Provide technical assistance to local watershed groups that identify ground water and drinking water protection as a goal or objective of their watershed management and restoration strategies.
- ✓ Encourage sound land use planning to protect ground water resources.
- ✓ Continue to develop and maintain guidance documents, fact sheets, etc. used to assist and educate property owners of measures and strategies for protecting ground water and drinking water supplies.
- ✓ Encourage voluntary development of nutrient management plans at AFOs to ensure the proper collection, storage, and disposal of animal wastes.
- ✓ Reduce the threat of ground water pollution caused by storage tanks through environmental remediation, leak prevention, and leak detection. Ensure implementation of proper management practices (BMPs) for use at UST/AST restoration sites. (Solid and Hazardous Waste Division)
- ✓ Encourage enrollment in the Voluntary Remediation Program (VRP) to allow individuals, businesses, or units of government to conduct an environmental investigation and cleanup of a contaminated property in order to receive a release from future environmental liability. (Solid and Hazardous Waste Division)
- ✓ Continue to permit septic systems for counties that have not been delegated primacy.
- ✓ Permit the location, design, construction, operation, closure and post-closure care of solid waste treatment, storage and disposal facilities. The solid waste facilities that are regulated by this program include local community landfills (both operating and closed), municipal waste baling stations and transfer facilities, industrial waste landfills, industrial waste treatment/storage facilities, used oil storage facilities and other low hazard/low volume facilities. (Solid and Hazardous Waste Division)
- ✓ Obtain and use contaminant fate and transport models to protect groundwater and drinking water supplies by predicting contaminant movement from various sources through the unsaturated and saturated zones.
- ✓ Continue to issue an annual RFP for Section 319 funds. Ground water projects will be eligible for funding with a maximum award amount of $150,000, per the CWA.
- ✓ Support land use restrictions or other siting criteria to protect Well Head Protection Areas (WHPAs).

Long-Term Milestones:

- ❖ Expand statewide ground water monitoring into priority ground water areas within five additional counties.
- ❖ Work with other divisions within WDEQ to design and develop a ground water data management and electronic data delivery system. Have data management system designed and operational within three years.
- ❖ Participate and support the State Ground Water Committee in development of measures and strategies to protect groundwater.

Tracking Measures:

- ➢ Number of Section 319 Ground Water projects active in each fiscal year.
- ➢ Track the number of priority ground water areas (and counties) that have been monitored under the statewide monitoring program.
- ➢ Track the progress and status of development of a ground water data management and electronic data delivery system.
- ➢ Track the progress and status of development of ground water protection measures and/or strategies developed or endorsed by the State Ground Water Committee.

OBJECTIVE #7: INFORMATION AND EDUCATION

The WDEQ will work to increase and maintain general public awareness of water quality and nonpoint source pollution through an effective education and outreach program.

Action Items:

- ✓ Report on information/education activity highlights accomplished by the Section 319 program in each annual program report.
- ✓ Provide BMP Manuals for Urban, Cropland, Livestock/Wildlife, Stream and Lake Restoration, and Silviculture. Promote and encourage the use of BMPs identified in these manuals. Update these manuals at least every five years to ensure they include the most up to date information available.
- ✓ Better utilize the Nonpoint Source Program website to provide information to the public about nonpoint source pollution in Wyoming. Information presented on the website will represent a consolidated source of tools for the public, including subjects such as BMPs, funding sources, references to other nonpoint source sites, educational and outreach tools specific to Wyoming, grant writing, project management, project activity, and data analysis. The website will be updated based on educational needs and will be maintained to ensure that accurate information is provided.
- ✓ Support World Wide Monitoring Day within Wyoming. Support will include financial support and/or staff contributing time to this event, both based on available resources.
- ✓ Participate as members of local watershed groups, providing input and technical assistance on water quality issues as needed.
- ✓ Support the publication of the Watershed Progress Report distributed by WACD on a biennial basis. Support will include financial support based on available resources and/or WQD collaboration with WACD on content of report if requested by WACD.

- ✓ Continue to issue an annual RFP for Section 319 funds. Information/education projects will be eligible for a portion of those funds. Within information/education projects proposed for funding, the RFP will give higher priority to projects that focus on permanently changing behaviors, have a clearly defined targeted audience, and include an evaluation mechanism for the success of the project.
- ✓ Regularly contribute nonpoint source and water quality related articles to established newsletters and other media published by other organizations with permission and cooperation of those organizations. Examples of established media include *Barnyards and Backyards*, *Wyoming Wildlife*, *Wyoming Round-Up*, and newsletters issued by cooperative extension services.
- ✓ Begin issuing a biannual electronic nonpoint source newsletter via the Nonpoint Source Listserve. Newsletters will include information such as program activity and updates within the WQD Watershed Management Section, educational articles about nonpoint source pollution and sources, information about new and innovative BMP design, opportunities for public comment, notices of public meeting, and highlights of successful projects.
- ✓ Work with WDEQ-Administration to post nonpoint source educational material on the WDEQ Facebook page, including articles, photos, and video clips.
- ✓ Use Listserve and/or work with cooperating agencies to issue surveys to understand information/education needs of non-WDEQ groups.
- ✓ Work with WACD to understand education and training needs of conservation districts.
- ✓ Through NEPA coordination with federal agencies, educate federal land management agency personnel on water quality issues and WQD standards and policies.
- ✓ Participate on Pathway to Water Quality Steering Committee for duration of that project.
- ✓ Coordinate with other educational efforts across the state to reduce redundancy.
- ✓ Watershed Program Staff will provide lecture and field demonstrations relating to water quality and nonpoint source pollution to interested parties as resources allow.
- ✓ Continue hosting project field trip during the Spring Nonpoint Source Task Force Meeting that is open to the public.
- ✓ Work with Teton Science Schools to support volunteer monitoring networks established by helping to coordinate trained monitoring personnel with local projects through conservation districts, nonprofit organizations, or other local groups.

Long-Term Milestones:

- ❖ By the end of FFY2015, have all BMP manuals updated. Review each manual every five years thereafter at a minimum. Post all current BMPs on Nonpoint Source Program website.
- ❖ By end of FFY2015, have Nonpoint Source Program website updated with improved design and content. Continue to maintain and update website in following years.
- ❖ For each year through FFY2020, issue two electronic Nonpoint Source Program newsletters through the Listserve.

Tracking Measures:

- ➢ Progress towards updating BMP manuals.
- ➢ Progress towards improving the Nonpoint Source Program website.
- ➢ Number electronic newsletters issued per year via Listserve.
- ➢ Distribution of the Nonpoint Source Program annual report.

- Progress towards increased distribution of nonpoint source educational material.
- Number of Information/Education Section 319 projects active per fiscal year.
- Amount of annual Section 319 funding allocated to information/education tasks for FFY2011 and later grants.
- Coordinate with WACD to track number of World Wide Day of Monitoring events held across the state, the number of participating students, and WQD involvement for each year.

OBJECTIVE #8: PARTNERSHIPS AND INTERAGENCY COOPERATION

The WDEQ will work to maintain and improve existing partnerships and develop new partnerships with other agencies, non-profit organizations, local watershed groups, and individuals who also seek to reduce nonpoint source pollution and improve water quality. Partnerships and coordination will allow watershed restoration and protection efforts to occur more efficiently and effectively.

Action Items:

- ✓ Work with partners through actions identified in Section 5 of this management plan.
- ✓ Promote information sharing about nonpoint source reduction activities across the programs, agencies, and other groups conducting these activities. Having an improved understanding of statewide nonpoint source pollution control efforts will allow better coordination of financial and technical resources for these activities. Compile information about statewide activities in the Impaired Waters Index.
- ✓ Include in the annual Section 319 program report summaries of other groups within the state conducting nonpoint source reduction activities. Provide copies of this report to other agencies/groups identified in the report.
- ✓ Continue to participate on State NRCS Technical Committee meetings and providing input on water quality related issues and promote use of Farm Bill funds to water quality improvement. Meet with NRCS on an as-needed basis to further discuss coordination of funding programs and leveraging of funds toward water quality improvement.
- ✓ Work with NRCS to direct National Water Quality Initiative funds towards impaired watersheds where this funding can help accelerate watershed restoration. Provide water quality monitoring assistance for the National Water Quality Initiative as resources allow and based on coordination with NRCS.
- ✓ Participate in Bear River tri-state water quality planning and monitoring activities (Bear River Water Quality Technical Committee).
- ✓ Participate on Colorado River Basin Salinity Control Forum.
- ✓ Use email Nonpoint Source Listserve system or other notification system to notify interested parties of funding opportunities or items released to public notice for comments.
- ✓ Build partnerships with federal agencies through NEPA coordination.

Long-Term Milestones:

- ❖ Finish compiling information about statewide nonpoint source reduction activities in the Impaired Waters Index by end of FFY2016.

- Every two years, have documented outreach to/coordination with at least 80% of the partners identified in Section 5.
- By FFY2020, have at least one watershed fully restored due to coordination with NRCS and use of National Water Quality Initiative funds.

Tracking Measures:

- Progress towards entering information about statewide nonpoint source reduction activities in the Impaired Waters Index.
- Highlight important interactions with partner agencies on an annual basis.
- Provide in annual report summaries of non-WDEQ nonpoint source reduction activities.
- Track use of National Water Quality Initiative funds and coordination with NRCS.

OBJECTIVE #9: EFFICIENT AND EFFECTIVE PROGRAM ADMINISTRATION

The WDEQ will administer its Nonpoint Source Program as effectively and efficiently as possible, with a focus on integration of Watershed Management Section programs, demonstration of accountability, and continual program evaluation.

Action Items:

- ✓ Maintain an ongoing program evaluation using records of projects from FY1999 to the most recently approved grant. Update program evaluation information on an annual basis. Conduct a detailed program evaluation once every five years and document results in annual program reports for the years it is conducted.
- ✓ Focus on funding product-oriented projects that will result in measurable improvements to water quality in order to realize the greatest amount of benefit from the funds spent.
- ✓ Continue offering an optional pre-review of Section 319 proposals to increase the quality of final submitted proposals.
- ✓ Notify Nonpoint Source Task Force about expenditures of project turn-back funds.
- ✓ Submit required reports and other information to EPA in a timely manner with minimal need for extensions.
- ✓ NPS Program Coordinator will work with WDEQ Administration accountants to maintain accurate and up-to-date financial records.
- ✓ Manage Section 319 projects such that they are completed in a timely manner with minimal need for amendments.
- ✓ Pay project sponsor requests for reimbursement in a timely manner.
- ✓ Train WDEQ staff who assist with project management and oversight to maintain consistency between projects and ensure that Section 319 grant requirements are being met.
- ✓ Promote information sharing and collaboration between Watershed Programs via use of electronic SharePoint library of project information and Impaired Waters Index.
- ✓ Provide comments on regional and national policy and other guidance documents proposed by EPA for state nonpoint source program management as public comment opportunity allows.

- ✓ Work to solicit high quality proposals from project sponsors by issuing clear guidance for proposal development and continuing to offer an optional pre-review of proposals. The Nonpoint Source Program will offer proposal writing and project management workshops on an as-needed basis.
- ✓ Obligate and expend grant funds in a timely manner with minimal return of funds to EPA at grant closure.

Long-Term Milestones:

- ❖ By the end of FFY2016, no more than 50% of the projects closed in that year will have needed an amendment. No more than 25% of closed projects will have needed more than one amendment.
- ❖ Conduct detailed program evaluations in FFY2015 and FFY2020.

Tracking Measures:

- ➢ Track training of WQD staff and project sponsors for project management.
- ➢ Track program evaluation metrics.
- ➢ Percentage of projects closed each fiscal year that required at least one amendment and percentage of projects closed each fiscal year that required two or more amendments.
- ➢ Release date of Section 319 RFP, number of proposals received, and number of proposals funded.
- ➢ Number of grants closed per year and total amount of funds returned to EPA on closed grants.
- ➢ Information documenting rate of grant expenditures including (for each active grant):
    - Grant information (grant number, fiscal year, project period)
    - Grant award amount
    - Amount and percent liquidated obligations (expended funds)
    - Amount and percent unliquidated obligations (unexpended funds/grant balance)
    - Percentage of funded projects each grant year on or ahead of schedule.

APPENDIX B

Impaired Waters Index Summary Table

Level	EPA Identifier	Surface Water Name	River Basin	Use Support	Pollutant (Year Listed)
A	WYBH100800030207_01	Popo Agie River, Middle Fork	Bighorn	Recreation (Not Supporting)	E. coli (2002)
A	WYBH100800050404_01	Poison Creek	Bighorn	Recreation (Not Supporting)	E. coli (2002)
A	WYBH100800050607_01	Muddy Creek	Bighorn	Recreation (Not Supporting)	E. coli (2002)
A	WYBR160101010801_01	Bridger Creek	Bear	Aquatic Life (Threatened)	Sediment (1998)
A	WYGR140401040303_01	Pacific Creek	Green River	Recreation (Not Supporting)	E. coli (2012)
A	WYGR140401070106_01	Blacks Fork	Green	Recreation (Not Supporting)	E. coli (2000)
A	WYGR140401070205_01	Willow Creek	Green	Aquatic Life, Cold Water Game Fish (threatened)	Habitat (1998)
A	WYGR140401070208_00	Smiths Fork	Green	Recreation (Not Supporting)	Fecal coliform (2002)
A	WYGR140401070208_01	Smiths Fork	Green	Aquatic Life, Cold Water Game Fish (not supporting)	Habitat (2000)
A	WYGR140401070208_01	Smiths Fork	Green	Recreation (Not Supporting)	E. coli (2002)
A	WYGR140401070403_01	Blacks Fork	Green	Recreation (Not Supporting)	E. coli (2000)
A	WYLS140500030408_01	Savery Creek	Little Snake	Aquatic Life, Cold Water Game Fish (threatened)	Habitat (1998)
A	WYLS140500030408_02	Loco Creek West Fork	Little Snake	Aquatic Life, Cold Water Game Fish	Habitat (1996)
A	WYLS140500030408_02	Loco Creek West Fork	Little Snake	Aquatic Life, Cold Water Game Fish (threatened)	Nutrients (1996)
A	WYLS140500030408_02	Loco Creek West Fork	Little Snake	Aquatic Life, Cold Water Game Fish (threatened)	Temperature (1996)
A	WYLS140500040308_01	Muddy Creek	Little Snake	Aquatic Life (not supporting)	Chloride (2010)
A	WYLS140500040308_01	Muddy Creek	Little Snake	Aquatic Life (not supporting)	Selenium (2010)

Level	EPA Identifier	Surface Water Name	River Basin	Use Support	Pollutant (Year Listed)
A	WYNP101800060104_01	Lander Creek	North Platte	Recreation (Not Supporting)	E. coli (2012)
A	WYNP101800100201_01	Laramie River	North Platte	Recreation (Not Supporting)	E. coli (2012)
A	WYNP101800100605_01	Little Laramie River	North Platte	Recreation (Not Supporting)	E. coli (2012)
A	WYNP101800100707_01	Laramie River	North Platte	Recreation (Not Supporting)	E. coli (2012)
A	WYNP101800110502_01	Wheatland Creek	North Platte	Aquatic Life, Non-Game Fish (not supporting)	Ammonia (1996)
A	WYNP101800110502_01	Wheatland Creek	North Platte	Aquatic Life, Non-Game Fish (not supporting)	pH (1996)
A	WYNP101800110502_01	Wheatland Creek	North Platte	Recreation (not supporting)	Fecal Coliform (2002)
A	WYNP101800110502_02	Rock Creek	North Platte	Recreation (Not Supporting)	Fecal Coliform (2002)
A	WYPR100902020102_00	Powder River	Powder	Aquatic Life, Warm Water Game Fish, Wildlife (not supporting)	Selenium (2000)
A	WYPR100902020103_01	Powder River	Powder	Aquatic Life, WW Game Fish, Wildlife (not supp)	Selenium (2000)
A	WYPR100902020103_01	Powder River	Powder	Drinking Water (Not Supporting)	Arsenic (2012)
A	WYPR100902020103_01	Powder River	Powder	Warm Water Game Fish (not supporting)	Chloride (1998)
A	WYPR100902020600_01	Powder River	Powder	Aquatic Life, Warm Water Game Fish, Wildlife (not supporting)	Selenium (2000)
A	WYPR100902020600_01	Powder River	Powder	Drinking Water (Not Supporting)	Arsenic (2012)
A	WYPR100902020808_01	Middle Prong Wild Horse Creek Lower	Powder	Recreation (Not Supporting)	E. coli (2006)
A	WYPR100902030400_01	South Fork Powder River	Powder	Aquatic Life, Non-Game Fish, Wildlife (not supporting)	Selenium (2006)
A	WYPR100902030403_01	Willow Creek	Powder	Aquatic Life, Cold Water Game Fish, Wildlife	Selenium (2006)

Level	EPA Identifier	Surface Water Name	River Basin	Use Support	Pollutant (Year Listed)
				(not supporting)	
A	WYPR100902030404_01	Posey Creek	Powder	Aquatic Life, Wildlife (not supporting)	Selenium (2008)
A	WYPR100902030407_01	Murphy Creek	Powder	Aquatic Life (not supporting)	Selenium
A	WYPR100902040300_01	Salt Creek	Powder	Aquatic Life, Non-Game Fish, (threatened)	Oil Spills (1996)
A	WYPR100902040300_01	Salt Creek	Powder	Aquatic Life, Non-Game Fish, Wildlife (not supporting)	Selenium (2008)
A	WYPR100902050305_01	Crazy Woman Creek	Powder	Drinking Water (Not Supporting)	Manganese (2002)
A	WYPR100902060303_01	North Piney Creek	Powder	Recreation (Not Supporting)	E. coli (2006)
A	WYPR100902060303_02	Dalton Ditch	Powder	Recreation (Not Supporting)	E. coli (2006)
A	WYPR100902060303_03	Piney-Cruse Ditch	Powder	Recreation (Not Supporting)	E. coli (2008)
A	WYPR100902080500_01	Little Powder River	Powder	Recreation (Not Supporting)	E. coli (2002)
A	WYSP101900090101_01	Middle Fork Crow Creek	South Platte	Recreation (Not Supporting)	E. coli (2010)
A	WYSP101900090104_01	Crow Creek North Branch North Fork	South Platte	Recreation (Not Supporting)	E. coli (2004)
A	WYSP101900090107_05	Crow Creek	South Platte	Recreation (Not Supporting)	E. coli (2012)
A	WYSR170401030305_01	Clark's Draw	Snake	Recreation (Not Supporting)	E. coli (2012)
A	WYSR170401050203_01	Stump Creek	Snake	Recreation (Not Supporting)	E. coli (2008)
A	WYSR170401050309_01	Salt River	Snake	Recreation (Not Supporting)	E. coli (2002)
A	WYTR100901010301_01	Tongue River	Tongue	Cold Water Fish (not supporting)	Temperature (2002)
A	WYTR100901010400_01	Prairie Dog Creek	Tongue	Cold Water Fishery (Not Supporting)	Temperature (2012)
A	WYTR100901010400_01	Prairie Dog Creek	Tongue	Drinking Water (Not Supporting)	Manganese (2012)
A	WYTR100901010401_01	Meade Creek	Tongue	Drinking Water (Not Supporting)	Manganese (2012)
A	WYTR100901010402_01	Prairie Dog Creek	Tongue	Cold Water Game Fish (Not Supporting)	Temperature (2012)
A	WYTR100901010402_01	Prairie Dog Creek	Tongue	Drinking Water (Not Supporting)	Manganese (2002)
A	WYPR100902050100_01	Crazy Woman Creek,	Powder	Aquatic Life, Cold Water Game Fish	Habitat (1996)

Level	EPA Identifier	Surface Water Name	River Basin	Use Support	Pollutant (Year Listed)
		North Fork		(threatened)	
A	WYPR100902050100_01	Crazy Woman Creek, North Fork	Powder	Aquatic Life, Cold Water Game Fish (threatened)	Nutrients (1996)
B	WYBR160101010303_01	Bear River	Bear	Aquatic Life, Cold Water Fish (Not Supporting)	Sediment (2002)
B	WYGR140401050506_01	Bitter Creek	Green	Aquatic Life, Non-Game Fish (Not Supporting)	Chloride (2002)
B	WYGR140401050506_01	Bitter Creek	Green	Recreation (Not Supporting)	Fecal coliform (2002)
B	WYGR140401050808_01	Killpecker Creek	Green	Recreation (Not Supporting)	Fecal Coliform (2000)
B	WYBH100800070305_01	Owl Creek	Bighorn	Recreation (threatened)	Fecal Coliform (2002)
B	WYBH100800070500_01	Kirby Creek	Bighorn	Recreation (threatened)	Fecal Coliform (2002)
B	WYBH100800070809_01	Nowater Creek	Bighorn	Recreation (Not Supporting)	Fecal Coliform (2002)
B	WYBH100800070909_01	Fifteenmile Creek	Bighorn	Recreation (Not Supporting)	Fecal Coliform (2002)
B	WYBH100800071000_01	Bighorn River	Bighorn	Recreation (Not Supporting)	E. coli (2002)
B	WYBH100800071000_02	Bighorn River	Bighorn	Recreation (Not Supporting)	Fecal Coliform (2000)
B	WYBH100800071001_01	Sage Creek	Bighorn	Recreation (Not Supporting)	Fecal Coliform (2002)
B	WYBH100800071001_02	Slick Creek	Bighorn	Recreation (Not Supporting)	Fecal Coliform (2002)
B	WYBH100800080603_01	Paint Rock Creek	Bighorn	Recreation (Threatened)	Fecal Coliform (2002)
B	WYBH100800080705_01	Nowood River	Bighorn	Recreation (Not Supporting)	Fecal Coliform (2002)

Level	EPA Identifier	Surface Water Name	River Basin	Use Support	Pollutant (Year Listed)
B	WYBH100800090405_01	Greybull River	Bighorn	Recreation (Not Supporting)	Fecal Coliform (2002)
B	WYBH100800100102_01	Granite Creek	Bighorn	Recreation (Not Supporting)	E. coli (2002)
B	WYBH100800100204_01	Beaver Creek	Bighorn	Recreation (threatened)	Fecal Coliform (2002)
B	WYBH100800100206_01	Shell Creek	Bighorn	Recreation (Not Supporting)	Fecal Coliform (2002)
B	WYBH100800100301_01	Bighorn River	Bighorn	Recreation (Not Supporting)	Fecal Coliform (2002)
B	WYBH100800110204_01	Dry Creek	Bighorn	Recreation (threatened)	Fecal Coliform (2002)
B	WYBH100800140107_01	Dry Gulch	Bighorn	Recreation (Not Supporting)	E. coli (2008)
B	WYBH100800140206_01	Bitter Creek	Bighorn	Recreation (Not Supporting)	Fecal coliform (2000)
B	WYBH100800140303_01	Whistle Creek	Bighorn	Recreation (not supporting)	Fecal Coliform (2000)
B	WYBH100800140307_01	Foster Gulch	Bighorn	Recreation (threatened)	Fecal Coliform (2002)
B	WYBH100800140407_01	Polecat Creek	Bighorn	Recreation (not supporting)	Fecal Coliform (2002)
B	WYBH100800140408_01	Sage Creek	Bighorn	Recreation (Not Supporting)	Fecal Coliform (2002)
B	WYBH100800140408_02	Big Wash	Bighorn	Recreation (not supporting)	Fecal Coliform (2002)
B	WYBH100800140504_00	Shoshone River	Bighorn	Recreation (not supporting)	Fecal Coliform (2002)
B	WYGR140401070701_01	Hams Fork	Green	Aquatic Life, Cold Water Game Fish (not supporting)	pH (1996)
B	WYSP101900090107_01	Crow Creek	South Platte	Recreation (Not Supporting)	E. coli (1996)

Level	EPA Identifier	Surface Water Name	River Basin	Use Support	Pollutant (Year Listed)
B	WYSP101900090107_02	Crow Creek	South Platte	Aquatic Life (not supporting)	Selenium (2010)
B	WYSP101900090107_02	Crow Creek	South Platte	Non-Game Fishery, Aquatic Life other than Fish (Not Supporting)	Sediment (2012)
B	WYSP101900090107_02	Crow Creek	South Platte	Recreation (Not Supporting)	E. coli (2012)
B	WYSP101900090107_03	Crow Creek	South Platte	Cold Water Game Fishery, Aquatic Life other than Fish (not supporting)	Sediment (2010)
B	WYSP101900090107_03	Crow Creek	South Platte	Recreation (Not Supporting)	E. coli (2012)
B	WYSP101900090107_04	Crow Creek	South Platte	Cold Water Game Fishery, Aquatic Life other than Fish (Not Supporting)	Sediment (2012)
B	WYSP101900090107_04	Crow Creek	South Platte	Recreation (Not Supporting)	E. coli (2012)
B	WYSP101900090203_01	Crow Creek	South Platte	Recreation (Not Supporting)	E. coli (1996)
C	WYGR140401040203_01	Little Sandy River	Green River	Cold Water Game Fishery, Aquatic Life other than Fish (Not Supporting)	Sediment (2012)
C	WYTR100901010101_01	North Tongue River	Tongue	Recreation (Not Supporting)	E. coli (2004)
C	WYTR100901010106_01	Columbus Creek	Tongue	Recreation (Not Supporting)	E. coli (2002)
C	WYTR100901010106_02	Smith Creek	Tongue	Recreation (Not Supporting)	E. coli (2002)
C	WYTR100901010107_02	Little Tongue River	Tongue	Recreation (Not Supporting)	E. coli (2002)
C	WYTR100901010108_01	Fivemile Creek	Tongue	Recreation (Not Supporting)	E. coli (2002)
C	WYTR100901010110_01	Wolf Creek	Tongue	Recreation (Not Supporting)	E. coli (2002)
C	WYTR100901010111_01	Tongue River	Tongue	Recreation (Not Supporting)	E. coli (2010)
D	WYBF101202010504_00	Belle Fourche River	Belle Fourche	Aquatic Life, Warm Water (Not Supporting)	Ammonia (2008)
D	WYBF101202010504_00	Belle Fourche River	Belle Fourche	Aquatic Life, Warm Water (Not Supporting)	Chloride (2008)
D	WYBF101202010504_00	Belle Fourche River	Belle	Recreation (Not Supporting)	E. coli (1996)

Level	EPA Identifier	Surface Water Name	River Basin	Use Support	Pollutant (Year Listed)
			Fourche		
D	WYBF101202010600_01	Donkey Creek	Belle Fourche	Recreation (Not Supporting)	E. coli (2000)
D	WYBF101202010602_01	Stonepile Creek	Belle Fourche	Recreation (Not Supporting)	Fecal Coliform (2002)
D	WYBH100800050202_01	Ocean Lake	Bighorn	Aquatic Life, Warm Water (not supporting)	Sediment (1996)
E	WYBF101202010501_01	Belle Fourche River	Belle Fourche	Recreation (Not Supporting)	E. coli (1996)
E	WYBF101202010601_01	Gillette Fishing Lake	Belle Fourche	Aquatic Life, Cold Water Game Fish, Wildlife (not supporting)	Phosphate (1996)
E	WYBF101202010601_01	Gillette Fishing Lake	Belle Fourche	Aquatic Life, Cold Water Game Fish, Wildlife (not supporting)	Sediment (1996)
E	WYBF101202010904_00	Belle Fourche River	Belle Fourche	Recreation (Not Supporting)	Fecal Coliform (1996)
E	WYNP101800070300_01	North Platte River	North Platte	Aquatic Life, Cold Water Game Fish, Wildlife (not supporting)	Selenium (1998)
E	WYNP101800070302_01	Poison Spring Creek	North Platte	Aquatic Life, Wildlife (not supporting)	Selenium (2000)
E	WYNP101800070302_02	Rasmus Lee Lake	North Platte	Aquatic Life, Wildlife (not supporting)	Selenium (2000)
E	WYNP101800070302_03	Goose Lake	North Platte	Aquatic Life, Wildlife (not supporting)	Selenium (2000)
E	WYNP101800070303_01	Oregon Trail Drain	North Platte	Aquatic Life, Wildlife	Selenium (2000)
E	WYNP101800070406_01	Poison Spider Creek	North Platte	Aquatic Life, Cold Water Game Fish, Wildlife (not supporting)	Selenium (2000)
E	WYNP101800070406_02	Poison Spider Creek	North Platte	Aquatic Life, Non-Game Fish, Wildlife (not supporting)	Selenium (2000)
E	WYNP101800070406_03	Poison Spider Creek	North Platte	Aquatic Life, Wildlife (not supporting)	Selenium (2000)

Level	EPA Identifier	Surface Water Name	River Basin	Use Support	Pollutant (Year Listed)
E	WYNP101800070503_01	Ilco Pond	North Platte	Aquatic Life, Wildlife (not supporting)	Selenium (2000)
E	WYNP101800070504_01	Casper Creek	North Platte	Aquatic Life, Cold Water Game Fish, Wildlife (not supporting)	Selenium (2000)
E	WYNP101800070703_01	Thirty Three Mile Reservoir	North Platte	Aquatic Life, Wildlife (not supporting)	Selenium (2000)
E	WYSR170401030205_01	Flat Creek	Snake	Aquatic Life, Cold Water Game Fish (threatened)	Habitat (2000)
E	WYTR100901010204_01	Park Creek	Tongue	Recreation (Not Supporting)	E. coli (2000)
E	WYTR100901010204_02	Rapid Creek	Tongue	Recreation (Not Supporting)	E. coli (2000)
E	WYTR100901010205_01	Big Goose Creek	Tongue	Recreation (Not Supporting)	E. coli (1996)
E	WYTR100901010205_02	Beaver Creek	Tongue	Recreation (Not Supporting)	E. coli (2000)
E	WYTR100901010207_01	Sackett Creek	Tongue	Recreation (Not Supporting)	E. coli (2000)
E	WYTR100901010207_02	Jackson Creek	Tongue	Recreation (Not Supporting)	E. coli (2000)
E	WYTR100901010208_01	Little Goose Creek	Tongue	Aquatic Life, Cold Water Fish (Not Supporting)	Habitat, Sediment (2006)
E	WYTR100901010208_01	Little Goose Creek	Tongue	Recreation (Not Supporting)	E. coli (1996)
E	WYTR100901010208_02	McCormick Creek	Tongue	Recreation (Not Supporting)	E. coli (2004)
E	WYTR100901010208_03	Kruse Creek	Tongue	Recreation (Not Supporting)	E. coli (2000)
E	WYTR100901010209_01	Goose Creek	Tongue	Aquatic Life, Cold Water Fish (Not Supporting)	Habitat, Sediment (2006)
E	WYTR100901010209_01	Goose Creek	Tongue	Recreation (Not Supporting)	E. coli (2000)
E	WYTR100901010209_02	Soldier Creek	Tongue	Recreation (Not Supporting)	E. coli (2000)
E	WYTR100901010400_01	Prairie Dog Creek	Tongue	Recreation (Not Supporting)	E. coli (2004)
E	WYTR100901010401_01	Meade Creek	Tongue	Recreation (Not Supporting)	E. coli (2012)
E	WYTR100901010402_01	Prairie Dog Creek	Tongue	Recreation (Not Supporting)	E. coli (2004)
E	WYTR100901010402_02	Wildcat Creek	Tongue	Recreation (Not Supporting)	E. coli (2012)
E	WYTR100901010405_01	Dutch Creek	Tongue	Recreation (Not Supporting)	E. coli (2012)
F	WYLS140500040104_01	Muddy Creek	Little Snake	Aquatic Life, Non-Game Fish (threatened)	Habitat (1996)

Level	EPA Identifier	Surface Water Name	River Basin	Use Support	Pollutant (Year Listed)
H	WYLS140500040102_01	McKinney Creek	Little Snake	Aquatic Life, Cold Water Game Fish (threatened)	Habitat (1996)
H	WYLS140500040103_01	Muddy Creek	Little Snake	Aquatic Life, Cold Water Game Fish (threatened)	Habitat (1996)
I	WYPR100902050100_01	Crazy Woman Creek, North Fork	Powder	Aquatic Life, Cold Water Game Fish (threatened)	Bioindicators (1996)

Summary		
Total Count	**Level**	**Description**
57	A	Impairment identified
38	B	TMDL being developed
8	C	Plan other than TMDL being developed
6	D	TMDL/WSBP completed, Implementation not yet begun
34	E	Implementation of TMDL/WSBP
1	F	Re-evaluation
0	G	Request Removal
2	H	Fully Restored
1	I	Removals—Other

Appendix C

EPA's NINE KEY ELEMENTS OF AN EFFECTIVE STATE NONPOINT SOURCE PROGRAM

Beginning in fiscal year 1996, the EPA requested that states review and, as appropriate, revise nonpoint source management program plans to reflect nine key components established in an EPA memorandum from Assistant Administrator J. Charles Fox to State and Interstate Water Quality Program Directors, dated January 7, 1999. This appendix lists those nine elements and provides a description of how each element has been addressed in the Wyoming Nonpoint Source Management Plan. As described in Section 1.2, national Section 319 program guidance was being revised during 2012. This management plan will be revised as necessary to be in compliance with updated program guidance.

1. *The State program contains explicit short- and long-term goals, objectives, and strategies to protect surface and ground water.*

The goal of the Wyoming Nonpoint Source Program is stated in **Section 1.3**. Nine objectives that the Nonpoint Source Program has established to meet this goal are described in **Section 4**. **Appendix A** provides further information on these objectives by listing action items, long-term milestones (two years and beyond), and tracking measures that will be used to accomplish and track progress towards meeting each objective. In addition, short-term milestones (annual milestones) will be provided in each annual program report beginning with the FFY2012 report; this will allow the program the greatest flexibility in establishing milestones relative for each fiscal year while still aiming for long-term, "big-picture" milestones. The objectives, action items, milestones, and tracking measures reflect program management in both the short and long terms to protect surface and ground water.

2. The State strengthens its working partnerships and linkages with appropriate State, Tribal, regional, and local entities (including conservation districts), private sector groups, citizens groups, and Federal agencies.

The Wyoming Nonpoint Source Program recognizes the importance of partnerships to achieve its goal. This is demonstrated by the establishment of Objective #8 as described in **Section 4.8** and **Appendix A**. In addition, key partners and WDEQ coordination with these partners is described in detail in **Section 5**. Finally, the Nonpoint Source Task Force (**Section 3.7.1**) is an essential part of the program that works to strengthen partnerships and provide a connection between the state and local interests.

3. The State uses a balanced approach that emphasizes both statewide nonpoint source programs and on-the-ground management of individual watersheds where waters are impaired and threatened.

This element is addressed throughout the plan. Nonpoint source pollution control occurs through both statewide programs as well as programs targeted at restoring individual watersheds with known water quality impairment. Statewide processes and programs conducted by the WDEQ are described in **Sections 3 and 4**, most notably sections **3.7-3.10 and 4.5-4.7**. Examples of statewide nonpoint source pollution control include ensuring federal consistency through NEPA review and 401 certifications, turbidity waivers, allocation of funds to statewide nonpoint source pollution control projects, implementation of statewide information and education activities, protection of high quality waters, and storage tank leak prevention, to name just a few. These state level programs are translated to the local level through various mechanisms. **Sections 3.1-3.7** describe the processes the WDEQ will use to identify individual watersheds where waters are impaired or threatened as well as how the WDEQ will work to restore these priority watersheds. **Sections 4.1-4.3 and Appendix A** provide additional information on this subject.

4. The State program (a) abates known water quality impairments from nonpoint source pollution and (b) prevents significant threats to water quality from present and future nonpoint source activities.

This element is also addressed throughout the plan. **Sections 3.1-3.7 and 4.1-4.3** and **Appendix A** establish processes to address known water quality impairments caused in part or wholly by nonpoint source pollution. Objective #5 (**Section 4.5 and Appendix A**) addresses protection and prevention measures with additional information provided in Objective #7 (Information and Education—**Section 4.7 and Appendix A**) which is part of protection and prevention. **Section 2.6** identifies waters that the WQD considers to be high quality and **Section 3** describes regulatory and non-regulatory means to protect those high quality waters.

5. The State program identifies waters and their watersheds impaired by nonpoint source pollution and identifies important unimpaired waters that are threatened or otherwise at risk. Further, the State establishes a process to progressively address these identified waters by conducting more detailed watershed assessments and developing watershed implementation plans, and then by implementing the plans.

The process to identify waters impaired by nonpoint source pollution is described in **Sections 3.1-3.5**. Prioritization and planning processes to address these impairments are described in **Sections 3.6, 4.1 and 4.2** as well as **Appendix A**. Implementation is described in **Sections 3.7 and 4.3**. **Section 2.6** identifies waters that the WQD considers to be high quality and **Section 3** describes regulatory and non-regulatory means to protect those high quality waters.

6. The State reviews, upgrades, and implements all program components required by section 319(b) of the Clean Water Act, and establishes flexible, targeted, and iterative approaches to achieve and maintain beneficial uses of water as expeditiously as practicable. The State programs include:

> *(a) A mix of water quality-based and/or technology-based programs designed to achieve and maintain beneficial uses of water; and*
>
> *(b) A mix of regulatory, non-regulatory, financial and technical assistance as needed to achieve and maintain beneficial uses of water as expeditiously as practicable.*

This Nonpoint Source Management Plan has been updated to meet requirements of Section 319(b) of the CWA. Major sources of nonpoint source pollution in Wyoming are described in **Section 2.4**; information in this section directs the reader to five BMP manuals prepared to address major sources of nonpoint source pollution. The Wyoming Nonpoint Source Program is concurrently in the process of updating these BMP manuals and will post all current versions of the manuals on its program website. **Section 3** describes the WDEQ framework that will implement BMPs through regulatory and non-regulatory means as well as water quality-based and/or technology-based programs. **Appendix A** provides action items and milestones for implementation of these programs. **Section 1.2** describes state legal authority for this management plan and certifies approval by the Wyoming State Attorney General and the Governor. Partnerships with other agencies and groups whose actions will assist with nonpoint source pollution control are described in **Section 5**. Federal consistency is described in multiple locations throughout the document, most notably **Section 3.8.3 and 3.8.3.1**.

Sections 3.1-3.7 describe the framework of the WQD Watershed Management Section in identifying nonpoint source impairments and restoring these waters to meeting water quality standards in as expeditious a manner as possible. These sections include a description of technical and financial assistance provided (see also **Section 4.3** for Section 319 cost-share assistance and **Appendix E** for other sources of technical and financial assistance). Other programs within WQD and WDEQ that operate

under water quality-based or technology-based programs are described in **Sections 3.8-3.10**. These programs operate with both regulatory and non-regulatory mechanisms and several provide financial assistance in addition to technical assistance.

7. The State identifies Federal lands and activities which are not managed consistently with State nonpoint source program objectives. Where appropriate, the State seeks EPA assistance to help resolve issues.

Section 3.8.3 describes the WQD NEPA Review Program and summarizes other measures implemented to ensure federal consistency. In addition, **Section 5** describes specific coordination activities with federal land management agencies.

8. The State manages and implements its nonpoint source program efficiently and effectively, including necessary financial management.

Objective #9 (**Section 4.9 and Appendix A**) establishes how the Nonpoint Source Program will operate to maximize efficiency, effectiveness, and accountability, including a description of financial management and reporting.

9. The State periodically reviews and evaluates its nonpoint source management program using environmental and functional measures of success, and revises its nonpoint source assessment and its management program at least every five years.

Objective #4 (**Section 4.4 and Appendix A**) describes how the program will document environmental measures of success. Objective #9 (**Section 4.9 and Appendix A**) describes how the program will evaluate itself based on environmental measures of success and other programmatic data to continually re-evaluate program directions and make adjustments as necessary. Appendix A includes milestones that will be used to help gauge progress and success of the program. The Wyoming Nonpoint Source Program is committed to updating its management plan at least once every five years.

APPENDIX D

REFERENCED WEBSITE LINKS

Page 1

- Clean Water Act: http://www.waterboards.ca.gov/laws_regulations/docs/fedwaterpollutioncontrolact.pdf

Page 2

- A National Evaluation of the Clean Water Act Section 319 Program, November 2011 http://www.epa.gov/owow/NPS/pdf/319evaluation.pdf

- Nonpoint Source Pollution: Greater Oversight and Additional Data Needed for Key EPA Water Program, May 2012 http://image.exct.net/lib/fe6515707660027970 17/m/1/GAO+319+Report+2012.pdf

- Wyoming Environmental Quality Act: http://legisweb.state.wy.us/statutes/statutes.aspx?file=titles/Title35/T35CH11.htm

Page 4

- Chapter 1 Wyoming Water Quality Rules and Regulations http://soswy.state.wy.us/Rules/RULES/6547.pdf

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- WQD 2012 305(b)/303(d) Integrated Report http://deq.state.wy.us/wqd/watershed/Downloads/305b/2012/WY2012IR.pdf

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- Wyoming Nonpoint Source Program Website http://deq.state.wy.us/wqd/watershed/nps/NPS.htm

- WYPDES Storm Water Program Website http://deq.state.wy.us/wqd/WYPDES_Permitting/WYPDES_Storm_Water/stormwater.asp

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- Wyoming Nonpoint Source Program Website http://deq.state.wy.us/wqd/watershed/nps/NPS.htm

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- Wyoming Nonpoint Source Program Website http://deq.state.wy.us/wqd/watershed/nps/NPS.htm

- Wyoming State Forestry Division—Wyoming Forestry Best Management Practices http://lands.state.wy.us/index.php/forestry/2012-04-27-17-44-52/forestry-mgt/best-management-practices

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- Wyoming Nonpoint Source Program Website http://deq.state.wy.us/wqd/watershed/nps/NPS.htm

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- WQD 2012 305(b)/303(d) Integrated Report http://deq.state.wy.us/wqd/watershed/Downloads/305b/2012/WY2012IR.pdf

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- Chapter 1 Wyoming Water Quality Rules and Regulations http://soswy.state.wy.us/Rules/RULES/6547.pdf

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- Chapter 1 Wyoming Water Quality Rules and Regulations http://soswy.state.wy.us/Rules/RULES/6547.pdf

- Antidegradation Implementation Policy http://deq.state.wy.us/wqd/watershed/surfacestandards/Downloads/Standards/Policies_Final_Ag_rev.pdf

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- Interim Policy on Establishing Effluent Limits for Permitted Point Source Discharges to Class 1 Water Tributaries http://deq.state.wy.us/wqd/watershed/surfacestandards/Downloads/Standards/InterimPolicy_EffluentLimitsforClass1Tributaries.pdf

- Antidegradation Implementation Policy http://deq.state.wy.us/wqd/watershed/surfacestandards/Downloads/Standards/Policies_Final_Ag_rev.pdf

- Wyoming Surface Water Classification List (Tables A & B) http://deq.state.wy.us/wqd/watershed/surfacestandards/Downloads/Standards/2-3648-doc.pdf

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- Wyoming Wetlands Conservation Strategy http://gf.state.wy.us/habitat/WetlandConservation/Wyoming%20Wetlands%20Conservation%20Strategy%20September%207,%202010.pdf

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- Surface Water Monitoring Strategy 2010-2019
  http://deq.state.wy.us/wqd/watershed/Downloads/Monitoring/WY_strategy2010_final.pdf

- Manual for Standard Operating Procedures for Sample Collection and Analysis
  http://deq.state.wy.us/wqd/watershed/Downloads/QA/12-0698-JAC-SOP_July2012.pdf

- Water Quality Monitoring Annual Work Plans
  http://deq.state.wy.us/wqd/watershed/index.asp#Mon

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- WQD 2012 305(b)/303(d) Integrated Report http://deq.state.wy.us/wqd/watershed/Downloads/305b/2012/WY2012IR.pdf

- Wyoming's Method for Determining Water Quality Condition of Surface Waters and TMDL Prioritization for 303(d) Listed Waters
  http://deq.state.wy.us/wqd/watershed/Downloads/305b/Final%20Methodology.pdf

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- TMDL Workplan
  http://deq.state.wy.us/wqd/watershed/Downloads/TMDL/Final%20TMDL%20Workplan%20Update%208_5%2008.pdf

- Wyoming Nonpoint Source Program Website
  http://deq.state.wy.us/wqd/watershed/nps/NPS.htm

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- Wyoming Nonpoint Source Program Website
  http://deq.state.wy.us/wqd/watershed/nps/NPS.htm

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- Letter dated March 16, 2012 to the Wyoming Regulatory Office of the USACE
  http://deq.state.wy.us/wqd/watershed/Downloads/401/WDEQ%20NP%20Cerification%20letter%203-19-2012.pdf

- February 2007 Turbidity Implementation Policy
  http://deq.state.wy.us/wqd/watershed/surfacestandards/Downloads/Standards/Policies_Final_Ag_rev.pdf

Page 32

- Catalogue of Federal Domestic Assistance
  https://www.cfda.gov/

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- Wyoming Nonpoint Source Program Website
  http://deq.state.wy.us/wqd/watershed/nps/NPS.htm

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- EPA's Recovery Potential Screening website
  http://water.epa.gov/lawsregs/lawsguidance/cwa/tmdl/recovery/index.cfm

Page 44

- Nonpoint Source Program and Grants Guidelines for States and Territories
  http://www.epa.gov/fedrgstr/EPA-WATER/2003/October/Day-23/w26755.htm

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- Surface Water Monitoring Strategy 2010-2019
  http://deq.state.wy.us/wqd/watershed/Downloads/Monitoring/WY_strategy2010_final.pdf

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- Quality Assurance Project Plan
  http://deq.state.wy.us/wqd/watershed/Downloads/QA/QAP.pdf

- Standard Operating Procedures
  http://deq.state.wy.us/wqd/watershed/Downloads/QA/12-0698-JAC-SOP_July2012.pdf

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- Healthy Watersheds Initiative: National Framework and Action Plan, 2011
  http://water.epa.gov/polwaste/nps/watershed/hwi_action.cfm

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- Wyoming Nonpoint Source Program Website
  http://deq.state.wy.us/wqd/watershed/nps/NPS.htm

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- Wyoming Nonpoint Source Program Website
  http://deq.state.wy.us/wqd/watershed/nps/NPS.htm

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- Bureau of Land Management
  http://www.blm.gov/wo/st/en.html

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- Bureau of Reclamation
  http://www.usbr.gov/

- National Park Service
  http://www.nps.gov/index.htm

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- Natural Resources Conservation Service
  http://www.wy.nrcs.usda.gov/

- USDA Agricultural Research Service
  http://www.ars.usda.gov/main/main.htm

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- Bureau of Indian Affairs—Rocky Mountain Region
  http://www.bia.gov/WhoWeAre/RegionalOffices/RockyMountain/index.htm

- Eastern Shoshone Tribe
  http://www.easternshoshonetribe.com/

- Northern Arapahoe Tribe
  http://www.northernarapaho.com/

- United States Army Corps of Engineers Regulatory Program
  http://www.usace.army.mil/Pages/default.aspx

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- United States Environmental Protection Agency
  http://www.epa.gov/

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- United States Fish and Wildlife Service
  http://www.fws.gov/

- United States Forest Service
  http://www.fs.fed.us/

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- United States Geological Survey
  http://www.usgs.gov/

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- University of Wyoming
  http://www.uwyo.edu/

- Wyoming Community Colleges
  http://communitycolleges.wy.edu/

- University of Wyoming Cooperative Extension Service
  http://www.uwyo.edu/ces/

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- Wyoming Association of Conservation Districts
  http://www.conservewy.com/

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- Wyoming Department of Agriculture
  http://wyagric.state.wy.us/

- Wyoming Department of Transportation
  http://www.dot.state.wy.us/wydot/

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- Wyoming Game and Fish Department
  http://gf.state.wy.us/

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- Wyoming Office of State Lands and Investment
  http://slf-web.state.wy.us/

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- Wyoming Oil and Gas Conservation Commission
  http://wogcc.state.wy.us/

- Wyoming State Engineer's Office
  http://seo.state.wy.us/

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- State Forestry Division—Office of State Lands and Investment
  http://lands.state.wy.us/index.php/forestry

- Wyoming Water Development Commission
  http://wwdc.state.wy.us/

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- Wyoming Wildlife and Natural Resource Trust Fund
  http://wwnrt.state.wy.us/

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- Wyoming Weed and Pest Districts
  http://www.wyoweed.org/index.html

- Wyoming Stock Growers Association
  http://www.wysga.org/

- Wyoming Farm Bureau Federation
  http://www.wyfb.org/

- Wyoming Wool Growers Association
  http://www.wyowool.org/

- Rocky Mountain Farmers Union
  http://www.rmfu.org/

- Wyoming Outdoor Council
  http://www.wyomingoutdoorcouncil.org/

- Powder River Basin Resource Council
  http://www.powderriverbasin.org/

- Greater Yellowstone Coalition
  http://www.greateryellowstone.org/

- Wyoming Wildlife Federation
  http://www.wyomingwildlife.org/

- Wyoming County Commissioners Association
  http://www.wyo-wcca.org/

- The Nature Conservancy
  http://www.nature.org/

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- Wyoming Audubon Society
  http://www.audubonwyoming.org/

- Trout Unlimited
  http://www.tu.org/

- Soil and Water Conservation Society
  http://www.swcs.org/

- Wyoming Association of Municipalities
  http://www.wyomuni.org/

- Wyoming Wheat Growers
  http://www.wyomingwheat.com/

- Wyoming Chapter Sierra Club
  http://wyoming.sierraclub.org/

- Wyoming Project Learning Tree
  http://www.wyomingplt.org/

- Black Hills Forest Resource Association
  http://www.bhfra.org/

- Society of American Foresters
  http://www.safnet.org/

- Petroleum Association of Wyoming
  http://www.pawyo.org/

- Ducks Unlimited
  http://www.ducks.org/

- Teton Science School
  http://www.tetonscience.org/

- Wyoming Outfitters and Guides Association
  http://www.wyoga.org/

- Rocky Mountain Elk Foundation
  http://www.rmef.org/

- Wyoming Resource and Conservation Development Councils
  http://www.wy.nrcs.usda.gov/rcd/index.html

- Jackson Hole One Fly Foundation
  http://www.jhonefly.org/

- Wyoming Agriculture in the Classroom
  http://www.wyomingagclassroom.org/

- USDA Agriculture Research Station
  http://www.ars.usda.gov/main/main.htm

- University of Wyoming Cooperative Extension Service
  http://www.uwyo.edu/ces/

- Wyoming Community Colleges
  http://communitycolleges.wy.edu/

APPENDIX E

SOURCES OF FINANCIAL AND TECHNICAL ASSISTANCE

The following table provides a list of potential funding and/or technical assistance sources at the federal, state, and local levels that may be applicable to nonpoint source reduction projects. Listing in this table does not guarantee eligibility for nonpoint source reduction projects; please review funding and eligibility requirements of each source carefully.

Name	Description	Reference
Federal Agencies		
NRCS—Environmental Quality Incentives Program (EQIP)	Provides technical and financial assistance to agricultural producers to implement conservation practices on eligible agricultural land. It is a voluntary program that promotes environmental quality in agricultural production.	http://www.wy.nrcs.usda.gov/programs/eqip/eqip.html
NRCS—Conservation Innovation Grants (CIG)	Helps fund innovative conservation approaches and technologies. The purpose of CIG is to stimulate the development and adoption of new conservation methods, practices, or activities that would benefit EQIP eligible producers.	http://www.wy.nrcs.usda.gov/, http://www.nrcs.usda.gov/technical/cig/index.html
NRCS—Conservation Technical Assistance (CTA)	Provides technical assistance supported by science-based technology and tools to help people voluntarily conserve, maintain, and improve their natural resources. The CTA Program provides the technical capability, including direct conservation planning, design, and implementation assistance, that helps people plan and apply conservation on the land.	http://www.wy.nrcs.usda.gov/programs/cta/cta_index.html
NRCS—Grazing Lands Conservation Initiative (GLCI)	GLCI is a nationwide collaborative process of individuals and organizations working to maintain and improve the management, productivity, and health of the Nation's privately owned grazing land. This process has formed coalitions that represent the grass root concerns that impact private grazing land. The coalitions actively seek sources to increase technical assistance and public awareness activities that maintain or enhance grazing land resources.	http://www.wy.nrcs.usda.gov/programs/GLCI.html
NRCS—Agricultural Management Assistance (AMA)	Provides financial assistance to agricultural producers to voluntarily address resource issues such as water management, water quality, invasive species control, and erosion control by incorporating conservation into their farming or ranching operations.	http://www.wy.nrcs.usda.gov/programs/AMA/ama.html
NRCS—Conservation Reserve Program (CRP)	A voluntary program that provides technical and financial assistance to eligible farmers and ranchers to address soil, water, and related natural resource concerns on their lands in an environmentally beneficial and cost-effective manner.	http://www.wy.nrcs.usda.gov/programs/crp/CRP.html
NRCS—Conservation	Encourages land stewards to improve their conservation performance by installing and	http://www.wy.nrcs.usda.go

Name	Description	Reference
Stewardship Program (CSP)	adopting additional activities, and improving, maintaining, and managing existing activities on agricultural land and nonindustrial private forest land.	v/programs/csp/csp_stewardship.html
NRCS—Emergency Watershed Protection (EWP)	Undertake emergency measures, including the purchase of flood plain easements, for runoff retardation and soil erosion prevention to safeguard lives and property from floods, drought, and the products of erosion on any watershed whenever fire, flood or any other natural occurrence is causing or has caused a sudden impairment of the watershed.	http://www.nrcs.usda.gov/programs/ewp/
NRCS—Wetlands Reserve Program (WRP)	A voluntary program offering landowners the opportunity to protect, restore, and enhance wetlands on their property. The NRCS provides technical and financial support to help landowners with their wetland restoration efforts.	http://www.wy.nrcs.usda.gov/programs/WRP/wrp-home.html
NRCS—Grassland Reserve Program (GRP)	A voluntary program that helps landowners and operators restore and protect grassland, including rangeland and pastureland, and certain other lands, while maintaining the areas as grazing lands.	http://www.wy.nrcs.usda.gov/programs/grp/grp.html
NRCS—Wildlife Habitat Incentives Program (WHIP)	Provides assistance to people who want to develop and improve wildlife habitat primarily on private land.	http://www.wy.nrcs.usda.gov/programs/whip/whip.html
United States Fish and Wildlife Service (USFWS)	The USFWS administers a variety of natural resource assistance grants to governmental, public and private organizations, groups and individuals. See link for more information	http://www.fws.gov/grants/
USFWS—North American Wetlands Conservation Act (NAWCA)	NAWCA provides matching grants to organizations and individuals who have developed partnerships to carry out wetlands conservation projects in the United States, Canada, and Mexico for the benefit of wetlands-associated migratory birds and other wildlife.	http://www.fws.gov/birdhabitat/Grants/NAWCA/index.shtm
USFWS—Partners for Fish and Wildlife Program	The Partners Program provides technical and financial assistance to private landowners and Tribes who are willing to work with USFWS and other partners on a voluntary basis to help meet the habitat needs of Federal Trust Species. The Partners Program can assist with projects in all habitat types which conserve or restore native vegetation, hydrology, and soils associated with imperiled ecosystems such as longleaf pine, bottomland hardwoods, tropical forests, native prairies, marshes, rivers and streams, or otherwise provide an important habitat requisite for a rare, declining or protected species.	http://www.fws.gov/partners/
USFWS Region 6 Cost Share Challenge	Developed to promote partnerships between the Service and other organizations (private groups, government agencies, and individuals) which focus on a common shared conservation goal. These partnerships are intended to support our Nation's wildlife resources, their habitat, and the people who care for them. This program is designed to	http://www.fws.gov/mountain-prairie/ChallengeCostShare/

Name	Description	Reference
	plan and implement projects on the ground, as well as bring in, perpetuate, and encourage involvement with partners.	
USFWS Region 6 Fisheries Conservation Management	The Region 6 USFWS Fisheries Program and its partners recognize that we share responsibilities for managing and conserving fish and other aquatic resources, and success is contingent on partnerships that cut across jurisdictions. The Region 6 Fisheries Program embraces a balanced approach toward aquatic resource stewardship that recognizes a need to conserve and manage self-sustaining populations and their habitats while providing quality recreational fishing. Region 6 covers the states of Montana, North Dakota, South Dakota, Wyoming, Utah, Colorado, Nebraska, and Kansas. Proposals will only be considered for projects within these states. Proposals may include but are not limited to: Assessment, Planning and Coordination, Implementing and Evaluating Water Quantity, Water Quality, Fish Passage, In-stream and Riparian Habitat, Introduced Species (including Aquatic Nuisance Species), Introgression, and culture aspects of brood stock development, production and re-introduction.	http://www.grants.gov/search/search.do?mode=VIEW&oppId=40605 (Grants.gov)
EPA—Targeted Watersheds	EPA initiated the Targeted Watersheds Grant Program in 2002 to encourage successful community-based approaches to protect and restore the nation's watersheds. Watershed health is important to providing clean, safe water where Americans live, work and play. Since 2003, more than $50 million has been provided to 61 organizations through EPA Targeted Watersheds Grants.	http://water.epa.gov/grants_funding/twg/initiative_index.cfm
EPA—Environmental Education Grants	The Grants Program sponsored by EPA's Office of Environmental Education (OEE), Office of External Affairs and Environmental Education, supports environmental education projects that enhance the public's awareness, knowledge, and skills to help people make informed decisions that affect environmental quality.	http://www.epa.gov/enviroed/grants.html
EPA—Environmental Justice Grants	The Environmental Justice Grants Program was established in 1994 and designed to provide funding assistance to community based, non-profit grassroots organizations to work on Environmental Justice projects.	http://www.epa.gov/region8/ej/index.html
EPA—Five Star Restoration Grant Program	The Five Star Restoration Program brings together students, conservation corps, other youth groups, citizen groups, corporations, landowners and government agencies to provide environmental education and training through projects that restore wetlands and streams. The program provides challenge grants, technical support and opportunities for information exchange to enable community-based restoration projects.	http://www.epa.gov/owow/wetlands/restore/5star/
Bureau of Reclamation—WaterSMART Grants	Through the WaterSMART Grants (formerly Challenge Grants) Reclamation provides 50/50 cost share funding to irrigation and water districts, Tribes, States and other entities with water or power delivery authority. Projects should seek to conserve and use water more efficiently, increase the use of renewable energy, protect endangered species, or	http://www.usbr.gov/WaterSMART/market.html

Name	Description	Reference
	facilitate water markets.	
National Park Service: Rivers, Trails, and Conservation Assistance Program (RTCA)	The Rivers, Trails, and Conservation Assistance Program is the community assistance arm of the National Park Service. RTCA supports community-led natural resource conservation and outdoor recreation projects. RTCA staff provide technical assistance to communities so they can conserve rivers, preserve open space, and develop trails and greenways.	http://www.nps.gov/ncrc/programs/rtca/
USFS—Forest Legacy Program (FLP)	The FLP, a Federal program in partnership with States, supports State efforts to protect environmentally sensitive forest lands. Designed to encourage the protection of privately owned forest lands, FLP is an entirely voluntary program.	http://www.fs.fed.us/spf/coop/programs/loa/flp.shtml
USFS—Community Forest Program	The Community Forest Program is a grant program that authorizes the Forest Service to provide financial assistance to local governments, Tribal governments, and qualified nonprofit entities to establish community forests that provide continuing and accessible community benefits.	http://www.fs.fed.us/spf/coop/programs/loa/cfp.shtml
USFS—Forest Stewardship Program (FSP)	Authorized by the Cooperative Forestry Assistance Act of 1978, the FSP provides technical assistance, through State forestry agency partners, to nonindustrial private forest owners to encourage and enable active long-term forest management.	http://www.fs.fed.us/spf/coop/programs/loa/fsp.shtml
United States Department of Agriculture—Western Sustainable Agriculture Research & Education (SARE)	SARE is a USDA competitive grants program that supports agricultural systems that are economically viable, environmentally sound and socially responsible.	https://wsare.usu.edu/grants/
State Agencies		
Wyoming Department of Environmental Quality—Section 319 Grants	Clean Water Act Section 319 funds to effectively and efficiently address nonpoint source pollution are available to state, federal and local agencies, nonprofit organizations, and private individuals on a competitive basis.	http://deq.state.wy.us/wqd/watershed/nps/NPS.htm
Wyoming Department of Environmental Quality—Section 604(b) Grants	Clean Water Act Section 205(j) funds to address water quality planning and assessment are available to cities, counties, and conservation districts on a competitive basis.	http://deq.state.wy.us/wqd/watershed/nps/NPS.htm
Wyoming Department of Environmental Quality—State Revolving Funds Program	The Wyoming SRF of the WDEQ Water Quality Division consists of two separate but similar funds. Both funds make loans to public entities for infrastructure improvements. SRF loans are at 2.5% interest rate and up to a 20 year term. The Drinking Water State Revolving Fund (DWSRF) is for drinking water systems, including source, treatment plant,	http://deq.state.wy.us/wqd/www/srf/index.asp

Name	Description	Reference
	storage tank, and transmission and distribution line projects. The Clean Water State Revolving Fund (CWSRF) is for sanitary sewer treatment and collection, storm water control, landfill water pollution control, and other water pollution control projects, including projects that reduce nonpoint source pollution.	
Wyoming Department of Environmental Quality—Brownfields Assistance	Many communities in Wyoming have properties that are abandoned or underutilized because of known or suspected environmental contamination. These properties, known as "brownfields," may require cleanup before they are safe for reuse or redevelopment. The WDEQ established the Brownfields Assistance program under the Voluntary Remediation Program to help local governments investigate, cleanup, and reuse brownfield properties. Wyoming's Brownfields Assistance program can provide technical assistance to brownfield sites and financial assistance based on eligibility requirements.	http://deq.state.wy.us/volremedi/brownfields.asp
Wyoming Department of Agriculture—Water Quality Grants	Water quality grants available to conservation districts for water quality related projects, such as education, BMP projects, water quality monitoring, or research.	http://wyagric.state.wy.us/divisions/nrp/conservation-districts/funding-resources/water-quality
Wyoming State Forestry—Community Forestry Tree Planting	The Wyoming State Forestry Division in cooperation with the Wyoming Community Forestry Council and the USDA Forest Service has developed these guidelines for distributing available funds for tree planting. Money allocated for the grant program is from federal funds provided by the National Urban and Community Forestry program. The grants are intended to assist local communities, non-profit groups, conservation organizations, and others improve the quality of the state's urban and community forests.	http://lands.state.wy.us/index.php?option=com_content&view=article&id=334&Itemid=58
Wyoming State Forestry—Community Forestry Education	The Wyoming State Forestry Division in conjunction with the Wyoming Community Forestry Council and the USDA Forest Service has developed these guidelines for distributing available funds for education and program development projects. Some examples of projects may include a community tree care workshop, publication of brochures on recommended trees or proper tree care, interpretive signs for an arboretum, a tree inventory, a community forestry management plan, development of training materials, media projects, etc.	http://lands.state.wy.us/index.php?option=com_content&view=article&id=334&Itemid=58
Wyoming Wildlife Natural Resource Trust Fund (WWNRTF)	Funded by interest earned on a permanent account, donations, and legislative appropriation, the purpose of the WWNRTF is to enhance and conserve wildlife habitat and natural resource values throughout the state. Any project designed to improve wildlife habitat or natural resource values is eligible for funding. See website for further	http://wwnrt.state.wy.us/

Name	Description	Reference
	information.	
Wyoming Water Development Commission—Small Water Project Program (SWPP)	The purpose of the SWPP is to participate with land management agencies and sponsoring entities in providing incentives for improving watershed condition and function. Projects eligible for SWPP grant funding assistance include the construction or rehabilitation of small reservoirs, wells, pipelines and conveyance facilities, springs, solar platforms, irrigation works, windmills and wetland developments.	http://wwdc.state.wy.us/small_water_projects/small_water_project.html
Local, Private, and Other Sources		
National Fish and Wildlife Foundation: Keystone Initiatives	The National Fish and Wildlife Foundation grant programs provide funding on a competitive basis to projects that sustain, restore, and enhance our Nation's fish, wildlife, and plants and their habitats. Keystone Initiatives are a core portfolio of multi-year initiatives through which the Foundation and its partners seek to achieve measurable outcomes. There are currently four Keystones, each of which has multiple Initiatives: Bird Conservation, Fish Conservation, Marine and Coastal Conservation, and Wildlife and Habitat Conservation	http://www.nfwf.org/Content/NavigationMenu/GrantPrograms/ProgramsOverview/Keystones/default.htm
National Fish and Wildlife Foundation and Wal-Mart Stores, Inc. Partnership—Acres for America	Acres for America is a partnership between Walmart Stores, Inc. and the National Fish and Wildlife Foundation. The Acres for America program was established to provide funding for projects that conserve important habitat for fish, wildlife, and plants through acquisition of interest in real property. The goal of the Acres for America program is to offset the footprint of Walmart's domestic facilities on at least an acre by acre basis through these acquisitions.	http://www.nfwf.org/AM/Template.cfm?Section=Charter_Programs_List&Template=/TaggedPage/TaggedPageDisplay.cfm&TPLID=60&ContentID=17798
National Fish and Wildlife Foundation—Bring Back the Natives (BBN)	The National Fish and Wildlife Foundation, in cooperation with the USFWS, BLM, USFS, and Trout Unlimited, is pleased to request pre-proposals from nonprofit organizations, universities, Native American tribes, and local, state, and federal agencies interested in restoring, protecting, and enhancing native populations of sensitive or listed aquatic species, especially on lands on or adjacent to federal agency lands. Funding for the BBN program is administered through National Fish and Wildlife Foundation from federal agencies cooperating to support this program. This funding suggests a $2 non-federal match for each federal dollar requested by applicants.	http://www.nfwf.org/AM/Template.cfm?Section=Charter_Programs_List&CONTENTID=18470&TEMPLATE=/CM/ContentDisplay.cfm
National Fish and Wildlife Foundation and ConocoPhillips Partnership—SPIRIT of	The SPIRIT of Conservation Migratory Bird Program is a partnership between ConocoPhillips (www.ConocoPhillips.com) and the National Fish and Wildlife Foundation (www.nfwf.org). The purpose of this partnership is to provide grants for bird habitat conservation projects in areas where ConocoPhillips has an operating presence.	http://www.nfwf.org/AM/Template.cfm?Section=Charter_Programs_List&CONTENTID=17135&TEMPLATE=/

Name	Description	Reference
Conservation Migratory Bird Program		CM/ContentDisplay.cfm
NRCS and National Fish and Wildlife Foundation Partnership—Private Landowner Technical Assistance Program (TAP)	The Private Landowner Technical Assistance Program is a partnership between the NRCS and the National Fish and Wildlife Foundation. The purpose of this partnership is to provide grants on a competitive basis to support field biologists and other habitat professionals (botanists, ecologists, foresters, etc.) working with NRCS field offices in providing technical assistance to farmers, ranchers, foresters and other private landowners to maximize wildlife conservation on private lands.	http://www.nfwf.org/AM/Template.cfm?Section=Charter_Programs_List&Template=/TaggedPage/TaggedPageDisplay.cfm&TPLID=60&ContentID=18689
National Fish and Wildlife Foundation—Pulling Together Initiative (PTI)	The Pulling Together Initiative seeks proposals that will help control invasive plant species, mostly through the work of public/private partnerships such as Cooperative Weed Management Areas. PTI applications are accepted from private non-profit (501)(c) organizations, federally recognized Tribal governments, local, county, and state government agencies, and from field staff of federal government agencies. Individuals and for-profit businesses are not eligible to receive PTI grants, but are encouraged to work with eligible applicants to develop and submit applications to PTI. PTI applications must provide a 1:1 non-federal match for their grant request	http://www.nfwf.org/AM/Template.cfm?Section=Charter_Programs_List&CONTENTID=17853&TEMPLATE=/CM/ContentDisplay.cfm
Wyoming Community Foundation (WYCF)	The WYCF makes grants across a broad array of charitable areas including arts and culture, conservation and natural resources, education, civic projects and health and human services. Eligible organizations include nonprofit organizations exempt from federal taxation under Section 501(c)(3) of the Internal Revenue Code, and on occasion, to public/governmental agencies. Grants are not made to individuals.	http://www.wycf.org/grants/index.html
Jackson Hole One Fly Foundation (Partnership with National Fish and Wildlife Federation)	Supports cold water fisheries conservation projects, particularly in the tributaries and mainstem Snake and Yellowstone Basins.	http://www.jhonefly.org/cf/cf_proposals.htm
Wildlife Heritage Foundation of Wyoming	Seeks to sponsor proposals from not for profit organizations for projects that directly benefit wildlife through species conservation and/or habitat improvement for game and non-game species and fisheries.	http://www.whfw.org/
Wyoming Agriculture in the Classroom—Wyoming Youth for Natural Resources	Wyoming Youth for Natural Resources (WYNR) is a grant program designed to encourage Wyoming youth to develop imaginative wildlife and natural resources conservation projects that incorporate education, technology, volunteering and service to others. The program is a collaborative effort of the Wyoming Community Foundation and Wyoming	http://www.wyomingagclassroom.org/grants.asp

Name	Description	Reference
(WYNR)	Agriculture in the Classroom. Grants may be made to public schools, youth organizations or other nonprofit organizations exempt from federal taxation under Section 501(c)(3) of the Internal Revenue Code and, on occasion, to public/governmental agencies. Grants are not made to individuals.	
Union Pacific Foundation	The Union Pacific Foundation is the philanthropic arm of Union Pacific Corporation and Union Pacific Railroad. Union Pacific believes that the quality of life in the communities in which its employees live and work is an integral part of its own success. The Foundation has a strong interest in promoting organizational effectiveness among nonprofits. To that end, the Foundation will dedicate the majority of grants to help nonprofit organizations build their capacity, increase their impact, and operate more efficiently and effectively. The Foundation will be particularly receptive to proposals that fall within one of several categories, including community and civic projects that assist community-based organizations and related activities that improve and enrich the general quality of life in the community.	http://www.up.com/found/grants.shtml
Intermountain West Joint Venture Capacity Grants	The IWJV has developed a new Capacity Grants Program to provide an opportunity for JV partners organized through the IWJV's 11 State Steering Committees to strategically deliver partnership-based bird habitat conservation.	http://iwjv.org/funding-opportunity/iwjv-capacity-grants-program

Please also see the following grant search resources for assistance in finding additional state, federal, local, and private sources of funding related to natural resource conservation and nonpoint source pollution reduction:

- **Grants.gov**
  - http://grants.gov/

- **Catalog of Federal Domestic Assistance**
  - https://www.cfda.gov/

- **Boise State University Environmental Finance Center Directory of Watershed Resources**
  - http://efc.boisestate.edu/Default.aspx?alias=efc.boisestate.edu/watershed

- **EPA Catalog of Federal Funding Sources for Watershed Protection**

- http://cfpub.epa.gov/fedfund/

- **Foundation Center: Philanthropy News Digest**
  - http://foundationcenter.org/pnd/rfp/cat_environment.jhtml

- **USDA National Agriculture Library: Water Quality Information Center**
  - http://wqic.nal.usda.gov/nal_display/index.php?info_center=7&tax_level=2&tax_subject=589&level3_id=0&level4_id=0&level5_id=0&topic_id=2342&&placement_default=0