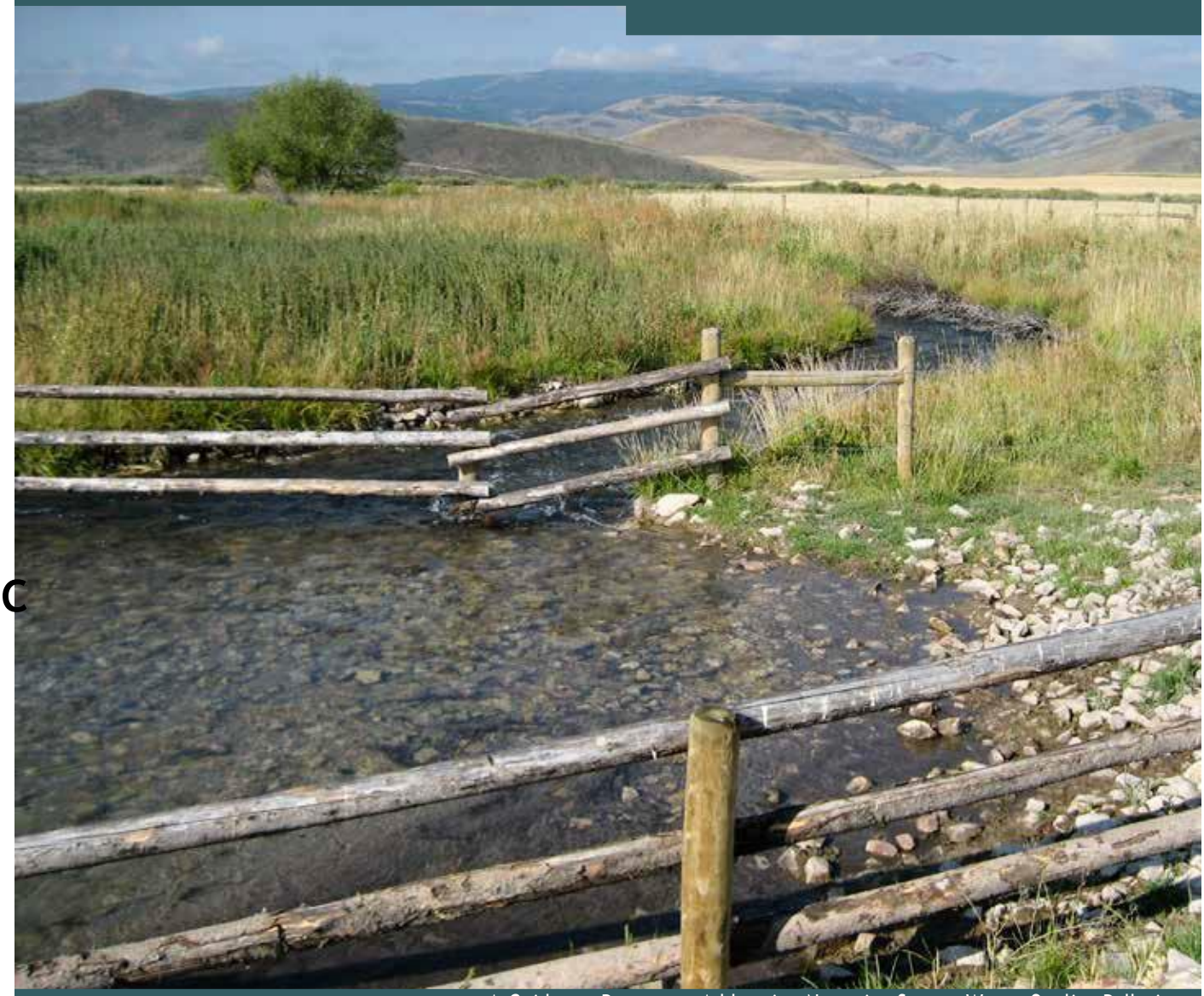
IDAHO AGRICULTURAL POLLUTION ABATEMENT PLAN



A Guidance Document Addressing Nonpoint Source Water Quality Pollution

Idaho Soil & Water
Conservation Commission

Certified 1979
Revised 1983, 1993, 2003, 2015, and 2025

2025

SOIL & WATER CONSERVATION COMMISSION IDAHO

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List of Abbreviations and Acronyms

AFO ➡ Animal Feeding Operation
Ag Plan ➡ Idaho Agriculture ollution Abatement Plan
ARS ➡ United States Department of Agriculture – Agricultural Research Service BAG Basin Advisory Group
BLM ➡ United States Department of Interior – Bureau of Land Management BMP Best Management Practice
BOR ➡ Bureau of Reclamation
CAFO ➡ Concentrated Animal Feeding Operation
ISWCC ➡ Idaho Soil & Water Conservation Commission
CORPS ➡ United State Army Corps of Engineers
CREP ➡ Conservation Reserve Enhancement Program CWA Clean Water Act
IDEA ➡ Idaho Department of Environmental Quality
SWC ➡ Idaho Soil & Water Conservation Districts
EPA ➡ US Environmental Protection Agency
EQIP ➡ Environmental Quality Incentives Program
EPHA ➡ Environmental Protection and Health Act
ESA ➡ Endangered Species Act
FPA ➡ Idaho Forest Practices Act
FOTG ➡ USDA Natural Resources Conservation Service Field Office Technical Guide
FSA ➡ USDA Farm Services Agency
FWS ➡ US Fish and Wildlife Service
ISACD ➡ Idaho Association of Soil Conservation Districts
IDAPA ➡ Idaho Administrative Procedures Act
IDFG ➡ Idaho Department of Fish and Game
IDWR ➡ Idaho Department of Water Resources
ISDA ➡ Idaho State Department of Agriculture
IWRB ➡ Idaho Water Resource Board
NEPA ➡ National Environmental Policy Act
NMFS ➡ USDC NOAA Fisheries – National Marine Fisheries Service
NPDES ➡ National Pollutant Discharge Elimination System
NPS ➡ Plan Idaho Nonpoint Source Management Plan
NRCS ➡ USDA Natural Resources Conservation Service
OSC ➡ Idaho Office of Species Conservation
PL ➡ Public law
RCPP ➡ Rural Conservation Partnership Program
RCRDP ➡ Resource Conservation and Rangeland Development Program Loans
SPCC ➡ Spill Prevention, Control, and Countermeasure
TMDL ➡ Total Maximum Daily Load
US ➡ Extension University of Idaho Extension
UIC ➡ Underground Injection Control
USDC ➡ United States Department of Commerce
USFS ➡ United States Department of Agriculture – Forest Service
WAG ➡ Watershed Advisory Group

INTRODUCTION

The original Idaho Agricultural Pollution Abatement Plan (Ag Plan) was certified in 1979 by Governor John Evans. The Ag Plan was Idaho's response to §208 of the Federal Water Pollution Control Act (33USC 1251 et seq.), referred to as the Clean Water Act (CWA) and represented the agricultural portion of the State Water Quality Management Plan.[1] The previous Ag Plan versions detailed how agricultural nonpoint source pollution was to be addressed. The Ag Plan was revised in 1983, 1991 (published in 1993), 2003, and 2015.

This version of the Ag Plan builds on the foundation laid specifically by the Idaho Nonpoint Source Management Plan (NPS Plan),[2] which describes Idaho's strategy for collaboratively addressing nonpoint source pollution with local, state and federal partners. The NPS Plan identifies the Idaho Department of Environmental Quality's (IDEQ) efforts for protecting and restoring beneficial uses of Idaho waters. In addition, the NPS Plan identifies goals and objectives, agreed upon by various state and federal agencies, for addressing nonpoint source pollution. The NPS Plan provides guidance on evaluating and measuring success in meeting water quality goals for the state.

The Ag Plan is the action plan for all nonpoint source agricultural activities in the state. This latest revision of the Ag Plan was undertaken with the review, guidance and input of representatives of local, state, and federal agencies with water quality responsibilities.

The Ag Plan is intended to be a dynamic guidance document, with periodic updates provided as needed. Water quality laws, policies and programs are constantly changing to meet resource and societal needs. The Ag Plan will be reviewed and amended as necessary to ensure consistency and compatibility with state water quality programs and plans, state and federal legislation and local needs. The Idaho Soil & Water Conservation Commission (Conservation Commission) will be responsible for initiating and coordinating this review. When substantial revision is warranted, an Advisory Committee will be convened to provide guidance.

The Ag Plan is structured to include eight main sections, including:

Section A: GOAL AND STRATEGY
Section A outlines the Ag Plan's purpose, goal and implementation strategy.

Section B: AUTHORITIES, ROLES AND RESPONSIBILITIES
Section B describes the authorities of numerous units of state and federal government and their roles and responsibilities as they relate to addressing agricultural nonpoint source pollution of surface and ground waters of Idaho.

Section C: AGRICULTURAL ACTIVITIES WHICH MAY IMPACT WATER QUALITY
Current agricultural activities and associated potential pollutants which may cause water quality impacts, are reviewed in Section C.

[1] Idaho Department of Environmental Quality is required by §303(e) of the Clean Water Act to develop a continuing planning process that describes ongoing processes and planning requirements of the state's Water Quality Management Plan. The Water Quality Management Plan is a compilation of the guidance and programs Idaho Department of Environmental Quality uses to implement Clean Water Act requirements. Further detail can be found at https://www.deq.idaho.gov/public-information/laws-guidance-and-orders/guidance/

[2] The NPS Plan was published in 2015 and updates the state's 1999 version developed by Idaho Department of Environmental Quality.

Section D: WATER QUALITY LAW

Section D provides a background and overview of current Idaho water quality law. The section reviews the elements of applicable statutes and discusses agency authorities relating to carrying out water quality protection.

Section E: BEST MANAGEMENT PRACTICES

Best management practices (BMPs) for the reduction of nonpoint sources of pollutants from agricultural activities are listed in Section E. This section contains the Catalog of Component Practices and reviews BMP application, selection, and evaluation as well as the development and modification process for component practices.

Section F: IMPLEMENTATION

Section F defines the implementation strategy that includes action items necessary to reach the goal of restoring and maintaining surface and ground water quality.

Section G: MONITORING AND EVALUATION

Section G reviews the feedback loop process—a process designed to reduce nonpoint source pollution through the development, installation, evaluation, and refinement of BMPs.

Section H: PLAN DEVELOPMENT

Section H describes the development of this plan and lists the Advisory Committee members.

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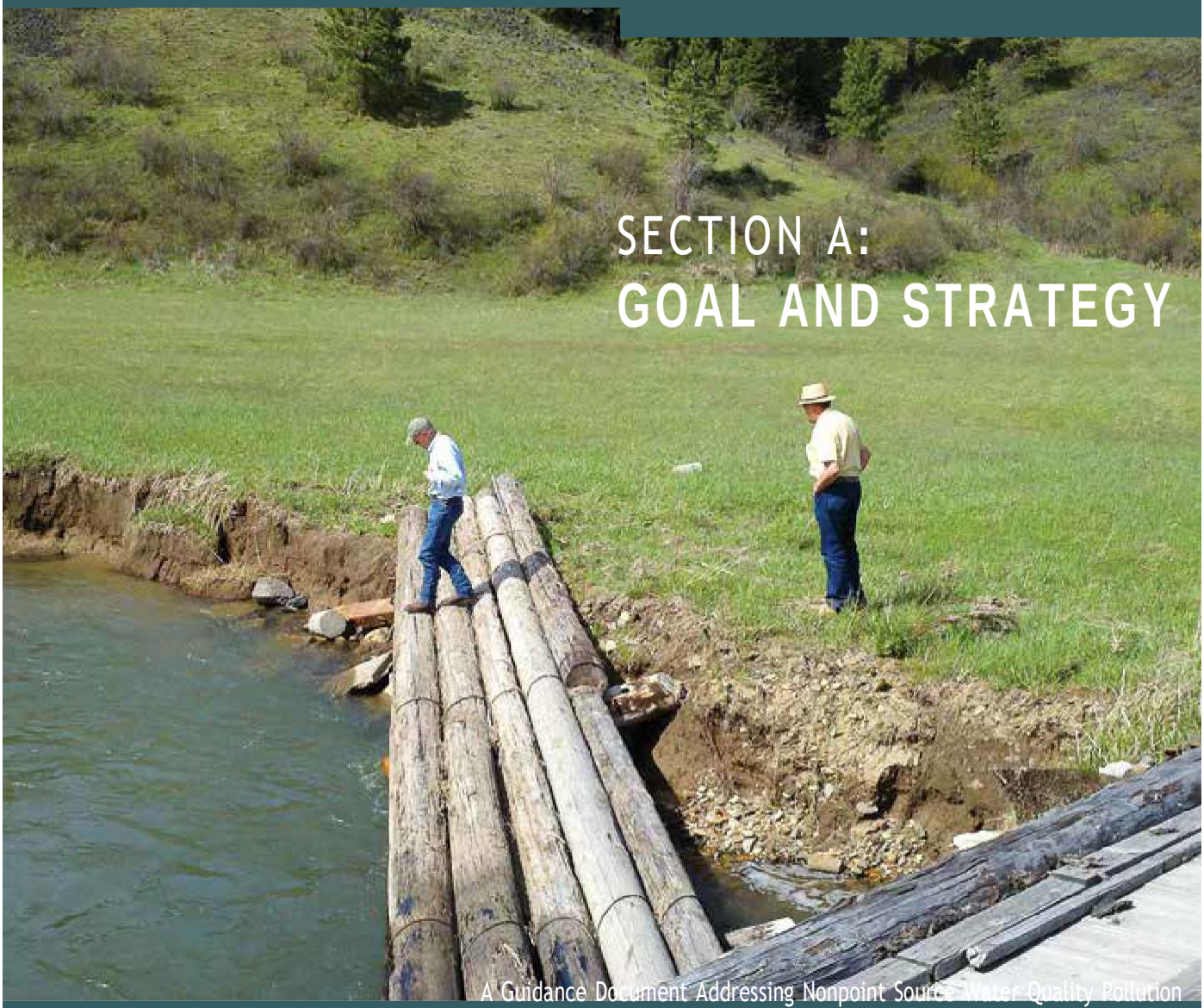

SECTION A:
GOAL AND STRATEGY

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GOAL AND STRATEGY

Purpose

The Ag Plan is a guidance document that describes the state's process for the abatement of agricultural nonpoint source pollution as it relates to water quality.

Goal

The goal of the Ag Plan is to:

> *Contribute toward full support of identified beneficial uses through enhancement and maintenance of the quality of surface and ground waters of Idaho, to the extent that they are impacted by agricultural nonpoint source pollutants.*

The goal is based on implementing federal and state water quality laws. Implementation of these laws occurs through adoption of state water quality rules, standards, state policy statements, agreements, and development of specific programs.

Mechanism

The Ag Plan's mechanism to address nonpoint source pollution is the feedback loop process, which is based on the implementation and effectiveness evaluation of BMPs.[3] The process provides a mechanism to direct BMP implementation adjustments and follow-up monitoring requirements. It is critical that results of agricultural nonpoint source pollution abatement activities are evaluated, communicated, and made available for review so program adjustments and recommendations can continue to be implemented.

Implementation Strategy

The Ag Plan's goal is achieved through an implementation strategy containing action items. The implementation strategy and development are discussed in complete detail in Section F (Implementation). Overviews of the action items are listed as follows:

> Action Item 1: Identify waters and/or watersheds in which beneficial uses are threatened or impaired by agricultural activities.
>
> Action Item 2: Prioritize waters and/or watersheds to determine level of implementation efforts needed.
>
> Action Item 3: Identify specific watershed management strategies for implementation and allow for the continued use of voluntary BMPs and accepted agricultural practices.

[3] The feedback loop process is discussed in Section G (Monitoring and Evaluation) and referenced in federal and state water quality laws—CWA §319 Nonpoint Source Management Program, and the Idaho Water Quality Standards and Wastewater Treatment Requirements.

Action Item 4: Define authorities, regulations and commitments to ensure that implementation will take place.

Action Item 5: Implement the feedback loop process.

Action Item 6: Communicate evaluation results, conclusions, and recommendations from the process of assessing agricultural BMP effectiveness in achieving water quality goals.

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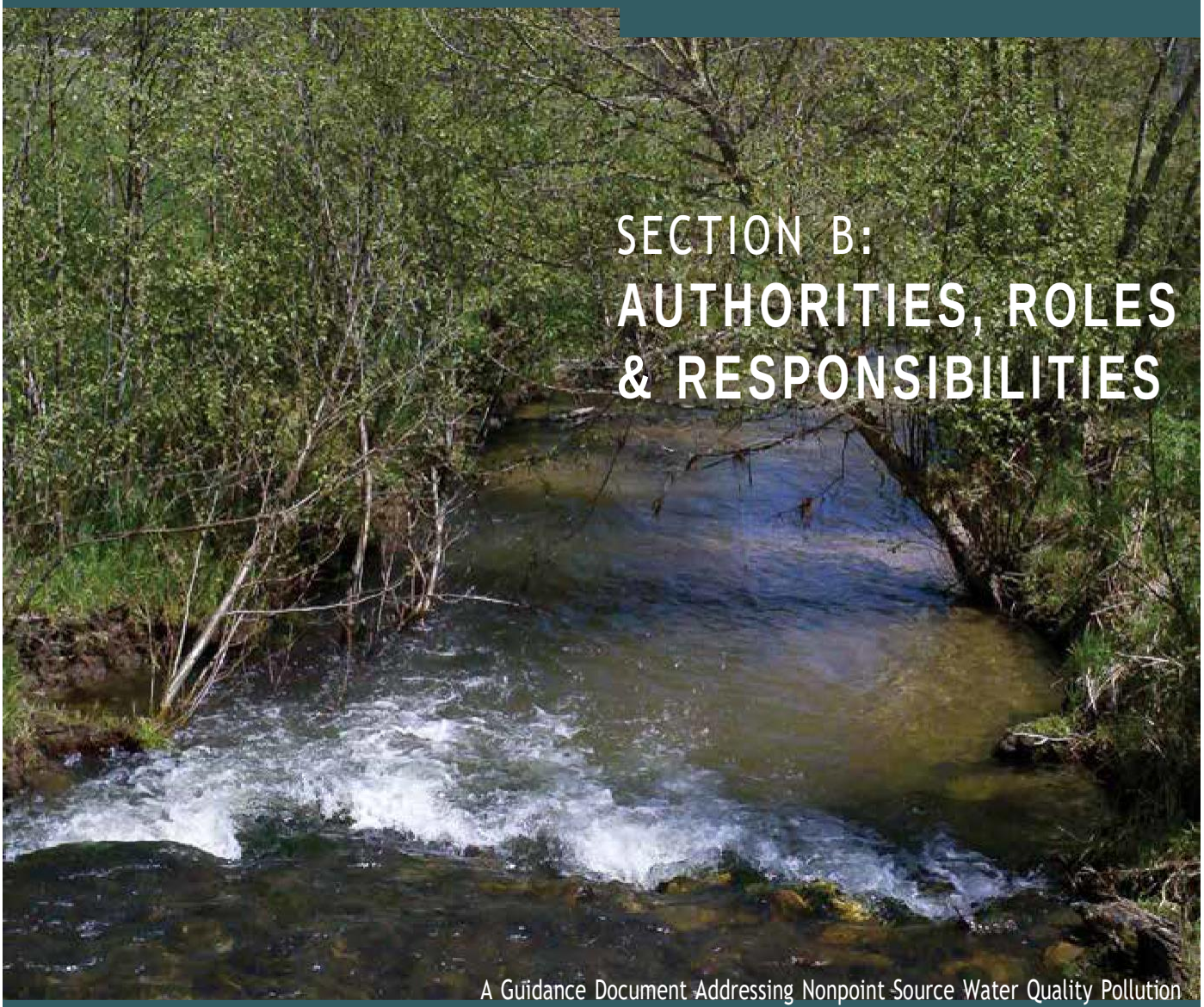

SECTION B:
AUTHORITIES, ROLES & RESPONSIBILITIES

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AUTHORITIES, ROLES & RESPONSIBILITIES

Introduction

Numerous units of local, state, and federal government have authorities, roles, and responsibilities that play a part in addressing nonpoint source pollution of surface and ground waters of Idaho, originating from agricultural activities. The Conservation Commission is the state agency organized to provide guidance and program implementation for private and state agricultural land use activities.

This section outlines the authorities, roles and responsibilities of the Conservation Commission as well as local, state, and federal agencies, and other entities that participate in addressing nonpoint source pollution. Those agencies and other entities include:

Local Agencies:

- Idaho Soil & Water (Conservation Districts}

State Agencies:

- Idaho Conservation Commission
- Idaho Department of Environmental Quality
- Idaho State Department of Agriculture
- University of Idaho Extension
- Idaho Department of Water Resources
- Idaho Water Resource Board
- Idaho Department of Fish and Game
- Idaho Department of Lands
- Office of Species Conservation

Federal Agencies:[4]

- USDA Natural Resources Conservation Service
- USDA Farm Service Agency
- USDA Agricultural Research Service
- US Environmental Protection Agency
- USDA Forest Service
- USDI Bureau of Land Management
- USDI Bureau of Reclamation
- USDI Fish and Wildlife Service
- USDC National Marine Fisheries Service

Other Entities:

- Basin Advisory Groups
- Watershed Advisory Groups

[4] USDA: United States Department of Agriculture
USDI: United States Department of Interior
USDC: United States Department of Commerce.

Conservation Districts (Districts)

Background & Authorities:

The Soil Conservation District Law, Idaho Code, Title 22, Chapter 27, establishes the organization and purposes of Districts. The 50 Districts are governmental subdivisions of the state and include all private, state, and federal land apart from some incorporated cities and portions of the Idaho National Engineering Environmental Laboratory. The Soil Conservation District Law provides the Districts with broad-based natural resource responsibilities.

Districts contribute financial support to the Idaho Association of Soil Conservation Districts (IASCD), a private, non-profit corporation. IASCD assists the Districts by coordinating programs with public agencies and organizations to achieve common goals; encourages coordination between agricultural commodity and conservation programs to achieve long-term conservation goals; and sponsors and conducts many programs which provide information and educational opportunities concerning natural resource concerns and issues to Districts and citizens of Idaho. Roles and Responsibilities of Conservation Districts related to addressing nonpoint source pollution originating from agricultural activities include: (related to addressing nonpoint source pollution originating from agricultural activities):

1. Implement the Ag Plan at the local level for private and state agricultural lands.
2. Aid landowners and land users in the conservation and management of natural resources within District boundaries.
3. Coordinate public outreach activities and bring together technical and financial resources in addressing local and state natural resource concerns.
4. Develop comprehensive natural resource management plans to protect and enhance the quality of soil, water, air, plants and animal resources.
5. Assist landowners in implementing comprehensive natural resource management plans through integration of cooperating state and federal agency programs.
6. Conduct surveys, investigations and research relating to the character of natural resources, for conservation, development and utilization.
7. Conduct local demonstration projects.
8. Through local sponsorship of outreach and incentive programs, provide education, planning, technical assistance and financial incentives to promote the application of BMPs.
9. Develop and update annually Five-Year Resource Conservation Plans establishing and recognizing agricultural nonpoint source water quality priorities.
10. Review local needs, and develop and/or modify and adopt, component practices to be used to develop BMPs to meet state water quality standards and to protect beneficial uses.

Idaho Soil & Water Conservation Commission (formerly the Idaho Soil Conservation Commission)

Background & Authorities:

The Conservation Commission is a non-regulatory state agency created by the Idaho Legislature in 1939. The Conservation Commission is composed of seven members appointed by the Governor for five-year terms. The Conservation Commission and the Districts are the primary entities to provide assistance to private landowners and land users in the conservation, sustainment, improvement and enhancement of Idaho's natural resources. The Conservation Commission assists the Districts in implementing locally led conservation projects and the water quality program for agriculture (Idaho Code Title 22, Chapter 27). Under Idaho Code Title 39, Chapter 36, the Conservation Commission is named the designated agency for grazing and agricultural activities.

Roles & Responsibilities (related to addressing nonpoint source pollution originating from agricultural activities):

1. Implement the Ag Plan at the state level for private and state agricultural lands. Coordinate periodic review and update of the Ag Plan and chair the Ag Plan BMP Technical Committee.
2. Provide technical assistance to owners and operators of private lands for the planning, implementation and evaluation of agricultural BMPs. The Conservation Commission aids in promoting natural resource conservation and the sustainable use of the state's natural resources to benefit the people of Idaho while maintaining and improving those resources for future generations.
3. Assists Conservation Districts in carrying out their powers and programs—allocate state funds to Districts to assist with conservation projects.
4. Inform District supervisors of actions and priorities of other Districts to facilitate a sharing of information and to promote cooperation.
5. Secure the cooperation and assistance of federal and state agencies in District programs.
6. Review and analyze District-related workload inventories and recommend resources needed to apply conservation practices, including those affecting water quality.
7. Support local Districts in the wise use and enhancement of soil, water, and related resources. Assist Districts in the coordination of public outreach activities, and technical and financial resources to develop natural resource conservation improvements in the state.
8. Administer the Water Quality Program for Agricultural cost-share program.
9. Administer the Resource Conservation and Rangeland Development Program providing low interest conservation loans.
10. Lead state efforts on the Conservation Reserve Enhancement Program (CREP); a federal program, which offers financial incentives to landowners to reduce ground water consumption in the Snake Plain Aquifer by taking marginal farm ground out of production.
11. Develop the agricultural component of Total Maximum Daily Load (TMDL) watershed implementation plans in consultation with Districts and watershed advisory groups.
12. Provide technical and administrative assistance to Districts and watershed advisory groups for TMDL planning and implementation.
13. Facilitate cooperative ground water protection programs in conjunction with other state agencies pursuant to a 2008 Interagency Cooperative Agreement. Promote implementation of water quality projects across the state to maintain and enhance ground water quality.

Idaho Department of Environmental Quality (DEQ)

Background & Authorities:

The Environmental Protection and Health Act (EPHA), Idaho Code §39-101 et seq., gives authority to DEQ regarding the protection of public health and the environment, including planning, permitting, enforcement, and certification authorities. The EPHA provides authority for DEQ to administer a system to safeguard the quality of the waters of the state, including but not limited to the enforcement of standards relating to the discharge of effluent into the waters of the state, the storage, handling, and transportation of solids, liquids and gases which may cause or contribute to water pollution, and administration of the Idaho Pollutant Discharge Elimination System permitting program.

Idaho Code §39-3601 et seq. provides authority to DEQ implement applicable provisions of the CWA, including designating beneficial uses for surface waters of the state and determining whether the beneficial uses are supported. For waterbodies that do not fully support beneficial uses, DEQ must develop TMDLs and a priority ranking list for their development. Idaho Code §§39-3613 through 39-3616 provides for the creation of Basin Advisory Groups (BAGs) and Watershed Advisory Groups (WAGs) and outlines their duties in advising DEQ regarding water quality issues. Idaho Code §39-3603 includes an antidegradation policy that requires the protection and maintenance of existing uses of all waters of the state and that precludes a lowering of water quality in high quality waters, unless the lowering is justified.

Under the authority of the EPHA and §39-3601 et seq., DEQ has promulgated the Idaho Water Quality Standards, which includes designated uses for waters of the state and criteria to protect those uses (IDAPA 58.01.02). The Water Quality Standards address nonpoint sources of pollution through the development, application, and review of BMPs. The Water Quality Standards identifies the Ag Plan as the source for BMPs to address nonpoint sources of pollution from agriculture.

The CWA §319 establishes a grant program under which DEQ receives funds for, among other things, nonpoint source BMP implementation projects. DEQ awards CWA §319 grants for nonpoint source projects, including projects associated with agricultural activities.

Idaho Code §39-3624 et seq., provides authority for DEQ to provide grants and loans for eligible projects that include projects for the application of BMPs to manage nonpoint sources of pollution. The funding for these projects is separate from the CWA §319 grants discussed above.

The Ground Water Quality Protection Act, Idaho Code §39-120 et seq., authorizes DEQ to adopt ambient ground water quality standards. Under Idaho Code §39-126, all state agencies shall incorporate the Ground Water Quality Plan, adopted by the legislature, in the administration of their programs and are granted authority to promulgate rules to protect ground water quality as necessary to administer such programs.

Under the authority of the EPHA and the Ground Water Quality Protection Act, DEQ has adopted the Ground Water Quality Rule (IDAPA 58.01.11) that includes ground water quality standards for contaminants, antidegradation provisions, and provisions that require actions in response to the discovery of ground water contamination.

Roles & Responsibilities (related to addressing nonpoint source pollution originating from agricultural activities):

1. Assist in the identification of agricultural BMPs to protect beneficial uses through the Ag Plan.
2. Periodically review progress of the Ag Plan in meeting water quality goals and make recommendations for corrective strategy.

3. Work jointly with the Conservation Commission and the advisory committee to periodically review and update the Ag Plan.
4. Work with state and federal agencies, local user groups, and interest groups to implement the Ag Plan.
5. Provide continuity with EPA to assure the Ag Plan meets the goals and procedural requirements of the federal CWA.
6. Work cooperatively with federal, state, and local entities to implement the Idaho Ground Water Quality Plan (1996).
7. Utilize the Policy for Addressing Degraded Ground Water Quality Areas (Policy No. PM00-4) for identifying, prioritizing, planning and implementing management strategies.
8. Develop TMDLs that may include load allocations for agricultural nonpoint sources, and work with the Conservation Commission and Districts to implement the TMDLs.
9. Coordinate with the ISDA regarding surface and ground water quality associated with CAFOs.
10. Provide grants and loans for the implementation of projects that apply BMPs for agriculture nonpoint sources.
11. Regulate swine facilities through the Rules Regulating Swine and Poultry Facilities (IDAPA 58.01.09).

Idaho State Department of Agriculture (ISDA)

Background & Authorities:

ISDA is responsible for the regulation of pesticides, pesticide registrations, pesticide certification and training, pesticide enforcement, waste pesticide disposal and container recycling programs, urban pesticide programs, pesticide endangered species reviews and the pesticides and water quality programs. ISDA is also responsible for registration of fertilizers and soil and plant amendments. Authority for ISDA's role in the control of nonpoint and point source pollution related to agriculture, including dairy, beef cattle feedlot, and poultry facilities, comes from a variety of laws, rules, plans, programs, and cooperative agreements with EPA.

ISDA is recognized as a lead state water quality agency working to implement laws and rules, water quality management and planning, engineering and technical services, monitoring, permits, and education and licensing efforts related to agriculture. Related to ground water quality protection, ISDA implements the Agricultural Ground Water Quality Protection Program for Idaho (1996). ISDA chairs the Agricultural Ground Water Coordination Committee, which reviews and evaluates potential agricultural point and nonpoint source impacts and coordinates in the development and implementation of prevention and response strategies. ISDA coordinates with DEQ and Idaho Department of Water Resources (IDWR) in administering the Idaho Ground Water Quality Plan under provision of the Ground Water Quality Protection Act of 1989.

The pesticides and water quality program includes the creation and implementation of the Idaho State Pesticide Management Plan for Ground Water Protection, monitoring of ground water for pesticides, education of applicators, identification of potential pesticide ground water BMPs and regulation of specific active ingredients. The control of dairy cattle animal manure and waste[5] is regulated by ISDA through the Dairy Environmental Control Act and related laws and rules. The control of beef cattle animal manure and waste is regulated by ISDA through the Idaho Beef Cattle Environmental Control Program and related laws and rules. The control of poultry manure and waste is regulated by ISDA through the Idaho Poultry Environmental Control.

[5] For the purposes of this Ag Plan, manure refers to animal excrement that may also contain bedding, spilled feed, water or soil. Animal waste refers to a material composed of excreta, with or without bedding materials collected from poultry, ruminants, or other animals except humans.

Program and related laws and rules.

Roles & Responsibilities (related to addressing nonpoint source pollution originating from agricultural activities):

1. Regulate the certification and licensing of pesticide applicators.
2. Regulate the registration and sale of pesticides.
3. Regulate, monitor, and inspect chemigation systems.
4. Collect restricted use pesticide sales records from dealers.
5. Implement the EPA Pesticides Cooperative Agreement including a water quality and pesticide component.
6. Implement the State Pesticide Management Plan for Idaho[6] to address the EPA Pesticides in Ground Water Strategy.[7]
7. Implement the Regional and Local Agricultural Ground Water Quality Monitoring program, which assists in implementing the Agricultural Ground Water Quality Protection Program for Idaho (authorized in 1996), EPA Pesticides and Water Quality Program and Laws, and EPA's Pesticide Management Plan.
8. Participate in the development and evaluation of BMPs for pesticide and fertilizer use.
9. Implement the surface water quality program, which assists in fulfilling CWA and state requirements to implement surface water monitoring related to pesticides. The program conducts monitoring to fill data and information gaps to monitor pesticides in surface waters of the state.
10. Cooperate with industry, federal, and state agencies to develop plans to address nutrient run-off and water quality impacts from dairies, beef cattle animal feeding operations, poultry animal feeding operations, and livestock grazing.
11. Lead the Concentrated Animal Feeding Operation (CAFO) siting team.
12. Regulate beef cattle, dairy, and poultry nutrient management planning and implementation.
13. Work cooperatively with federal, state and local entities to implement the Idaho Ground Water Quality Plan (1996).
14. Participate in the Ground Water Monitoring Technical Committee.

University of Idaho Extension (UI Extension)

Background & Authorities:

Established under the Smith-Lever Act of 1914, UI Extension was designated as the education arm of the USDA. In 1989 the USDA Water Quality Program designated UI Extension as having the key role in water quality education.

Roles & Responsibilities (related to addressing nonpoint source pollution originating from agricultural activities):

1. Conduct research and disseminate findings to landowners, cooperating agencies and the public.
2. Assist agricultural producers with recommendations for application of commercial fertilizers, nutrients and pesticides using research-based information/data.

[6] IDAPA 02.03.01 Rules Governing Pesticide Management Plans for Ground Water Protection (PMP Rule), 2005.

[7] *Pesticides and Groundwater Strategy*. 1991. U.S. Environmental Protection Agency, Office of Prevention, Pesticides and Toxic Substances, Washington, DC.

3. Develop and deliver educational programs to clientele on protecting water quality from agricultural activities.
4. Educate clientele on safe and effective use of pesticides and nutrients.
5. Deliver educational programming for the state pesticide safety education program and subsequent licensing requirements.
6. Develop new irrigation strategies and water use efficiency for Idaho and disseminate research results.

Idaho Department of Water Resources (IDWR)

Background & Authorities:

IDWR has statutory responsibility for administering the appropriation and allotment of surface and ground water resources of the state and to protect the ground water resources against waste and contamination.

Roles & Responsibilities (related to addressing nonpoint source pollution originating from agricultural activities):

1. Administer the Underground Injection Control (UIC) for the State of Idaho.
2. Ensure that all deep injection wells are under state permit and condition permits to protect the ground waters of the state from pollution.
3. Ensure that all active deep injection wells are in compliance with permit conditions.
4. Ensure that non-compliant deep injection wells are brought into compliance or properly decommissioned.
5. Perform periodic reviews of injection wells in Idaho and maintain a current UIC database.
6. Administer the construction and decommissioning of injection wells to prevent pollution of ground waters by injection well activities.
7. Provide public information on UIC activities.
8. Administer the licensing of well drillers operating in the State of Idaho.
9. Collect, review, and assimilate Driller's Reports on wells drilled in Idaho.
10. Permit and regulate the proper construction and abandonment of water wells, monitor wells, injection wells, geothermal or other wells or drilled bore holes which may provide a source of waste or contamination of the ground water.
11. Assist the public and well drillers with geological and technical information that will result in the proper construction of wells and the efficient development of the state's ground water resource.
12. Supervise construction or abandonment of wells which are complicated and/or are located in controversial areas.
13. Administer and enforce the Idaho Stream Channel Protection Act.
14. Consult with other interested state and federal agencies to determine the effects a proposed alteration is likely to have on a stream.
15. Ensure compliance with all permits issued to construct in a stream channel.
16. Provide the United States Army Corps of Engineers (Corps) with the official state position letter on each activity being considered by the Corps for permitting.
17. Seek mitigation, penalties and injunctive relief for all violations of the Stream Channel Protection Act.
18. Work cooperatively with federal, state, and local entities to implement the Idaho Ground Water Quality Plan (1996).
19. Administer the Statewide Groundwater Quality Monitoring Program, including selection of representative replacement wells, and collection of analytical data.
20. Administer the Environmental Data Management System (EDMS), including coordination with data provider agencies to load and publish ground water quality data and make it available to the public.
21. Participate as a member of the statewide CAFO site advisory team. The CAFO site advisory team provides counties with environmental risk characterizations of proposed CAFO sites.

22. Participate in the Ground Water Monitoring Technical Committee.

Idaho Water Resource Board (IWRB)

Background & Authorities:

The IWRB was formed in 1965 under Article 15, Chapter 17 of the Constitution of the State of Idaho to, among other responsibilities, formulate and implement a state water plan for optimum development of the water resources in the public interest. The IWRB is the constitutional water agency within IDWR. IDWR provides staff for the IWRB, and the activities of the two entities are highly collaborative and closely coordinated. However, IWRB duties are defined through constitutional and statutory authorities (Title 42, Chapter 17 Idaho Code) and are separate from IDWR.

Roles & Responsibilities (related to addressing nonpoint source pollution originating from agricultural activities):

1. Develop and implement a statewide water policy plan for conservation, development, management and optimum use of all unappropriated water resources and waterways of the state in the public interest (Comprehensive State Water Plan Part A).
2. Designate natural and protected rivers and files applications for and holds minimum stream flow water rights.
3. Provide financial assistance for water development and conservation projects in the form of revenue bonds, loans, and grants.
4. Adopt rules governing:
   - Well Construction
   - Well Driller Licensing
   - Construction and Use of Injection Wells
   - Drilling for Geothermal Resources
   - Mine Tailings Impoundment Structures
   - Safety of Dams
   - Stream Channel Alteration
5. Administer the water supply bank to make use of and obtain the highest duty for beneficial use from water and to provide a source of adequate water supplies to benefit new and supplemental water uses.

Idaho Department of Fish and Game (IDFG)

Background & Authorities:

Authority for the agency's role comes from Idaho Code, which gives IDFG responsibility to manage fish and wildlife populations. The Department has minimal legal authority over water quality.

Roles & Responsibilities (related to addressing nonpoint source pollution originating from agricultural activities):

1. Monitor fish and wildlife species to assess the status of populations.
2. Assess the potential impacts of land and water management and development on the habitats of fish and wildlife species and populations.
3. Enter into cooperative agreements with universities, state and federal agencies, and other entities to promote wildlife research and to train students for fish and wildlife management careers.
4. Acquire, manage, and administer lands for the purposes of public access for fishing, hunting, and trapping, and to protect important fish and wildlife habitats.
5. Enter into cooperative agreements with state and federal agencies, local government entities, corporations, landowners, associations, or individuals to develop, manage, and protect fish and wildlife habitats.
6. Provide technical assistance, expertise, and support on fish and wildlife matters.

Idaho Department of Lands (IDL)

Background & Authorities:

Under Executive Order 88-23 (the Antidegradation Policy), IDL is designated as the lead agency to address surface mining, dredge and placer mining, and forestry practices on all lands within the state. With respect to agricultural activities, IDL leases state endowment land to generate revenue from grazing and agriculture.

Roles & Responsibilities (related to addressing nonpoint source pollution originating from agricultural activities):

1. Manage approximately 2.5 million acres of state endowment lands for maximum income consistent with sound long term resource management practices and in accordance with existing water quality laws.
2. On state and private forestlands, when carrying out statutorily defined forest practice, implement and regulate the standards defined in the Idaho Forest Practices Act Rules (FPA Rules) to protect water quality. Take enforcement action when needed to ensure compliance with these FPA Rules (the silvicultural nonpoint source BMPs).
3. Provide other state and federal agencies the opportunity to review and comment on mine applications, BMP design and reclamation plans. Preoperational site reviews and subsequent site inspections are often conducted in coordination with other state and federal agencies.
4. Take regulatory responsibility for any encroachment on, in or above the beds or waters of any navigable lake or stream in Idaho (Title 58, Chapter 104 (9) and 142 et seq., Idaho Code).

Idaho State Office of Species Conservation (OSC)

Background & Authorities:

OSC was created by the Idaho State Legislature in 2000 (Idaho Code §67-818). Within the Office of the Governor, OSC provides coordination, cooperation and consultation among state, federal and private interests to preserve and restore species currently listed under the federal Endangered Species Act (ESA) and to preclude future ESA listings in Idaho. OSC coordinates actions with germane state agencies to protect listed species with an overall goal of recovery of the species and removal from federal listing. OSC does not have regulatory authority or licensing authority over water quality or pollution control.

Roles & Responsibilities (related to addressing nonpoint source pollution originating from agricultural activities):

1. Coordinate ESA activities with various state, federal, and private entities.
2. Coordinate ESA activities with water quality activities where they overlap.
3. Where ESA/water quality issues arise on agricultural land, work with the Conservation Commission and landowners to develop management plans for protection of the listed species as well as protection of the landowner's interests.
4. Coordinate Subbasin Planning in Idaho to holistically address fish and wildlife restoration throughout Idaho's watersheds.
5. Through Subbasin Planning, provide a mechanism for Idaho citizens to become involved in ESA/water quality issues.
6. Solicit, provide and delegate funding for ESA programs, including ESA water-related programs.

US Environmental Protection Agency (EPA)

Background & Authorities:

EPA administers the CWA. The CWA embodies a federal-state partnership, where federal guidelines, objectives, and limits are set under the authority of the EPA, while states and authorized tribes largely administer and enforce the CWA programs, with significant federal technical and financial assistance. The CWA directs states to develop and implement voluntary nonpoint pollution management programs and encourages states to pursue groundwater protection.

Roles & Responsibilities (related to addressing nonpoint source pollution originating from agricultural activities):

1. Under §303 of the CWA, review and approve or disapprove Idaho Water Quality Standards. Provide oversight and approval of the CWA §303(d) list of impaired waters and associated TMDLs developed by DEQ.
2. Administer CWA §319, under which, among other things, EPA provides grants to states for nonpoint source BMP implementation projects.
3. Work cooperatively with federal, state, and local entities to implement the Idaho Ground Water Quality Plan (1996), the EPA Pesticides and Water Quality Program and Laws, and EPA's Pesticide Management Plan.
4. Administer the Spill Prevention, Control, and Countermeasure (SPCC) Rule. The 2006 rule outlines requirements for prevention of, preparedness for, and response to oil discharges with 2009 Federal Register SPCC compliance date requirements for 2010. Regulated facilities, including some farms, must develop and implement SPCC Plans that establish procedures and equipment requirements to help prevent oil discharges from reaching waters of the US. The SPCC rule applies to owners or operators of farms that store, transfer, use, or consume oil or oil products; and could reasonably be expected to discharge oil to waters of the United States or adjoining shorelines.

USDA Natural Resources Conservation Service (NRCS)

Background & Authorities:

The NRCS administers the government's conservation policy to benefit natural resources on private lands. The NRCS receives its direction and authority from the Soil Conservation and Domestic Allotment Act (PL 74-46), Flood Control Act (PL 78-534), Watershed Protection and Flood Prevention Act (PL 83-566), the Soil and Water Resources Conservation Act (PL 110-246, as amended), the Food Security Act of 1985 (PL 99-198, as amended by subsequent Farm Bills), and the Agricultural Act of 2014 (PL 113-79).

Roles & Responsibilities (related to addressing nonpoint source pollution originating from agricultural activities):

1. Provide technical assistance to private landowners, units of government, including Tribes, and other organizations for the planning and implementation of water quality and water quantity measures and initiatives.
2. Administer and provide technical assistance and/or financial support to NRCS programs such as Conservation Technical Assistance, Environmental Quality Incentives Program, Agricultural Conservation Easement Program, Conservation Stewardship Program, Regional Conservation Partnership Program, Soil Survey, Snow Survey, Emergency Watershed Protection, and the Plant Materials Program, each of which has a water quality component.
3. Maintain, periodically revise, and supplement the Field Office Technical Guide which serves as the major source of technical information for the state to consider in adopting agricultural BMPs.

4. Provide leadership in implementing USDA water quality initiatives.
5. Assist in developing tools to quantify environmental and economic effects of BMPs.
6. Support and encourage surface and ground water research and data collection, including monitoring.
7. Administer agricultural programs outlined in the adopted Farm Bill.
8. NRCS has the lead responsibility for identifying wetlands on agricultural lands for purposes of implementing the Highly Erodible Land Conservation and Wetland Conservation Compliance provisions introduced in the 1985 Farm Bill, with amendments in 1990, 1996 and 2002 (referred to as Swampbuster). The purposes of the provisions are to remove certain incentives to produce agricultural commodities on converted wetlands or highly erodible land, unless the highly erodible land is protected from excessive soil erosion. The Corps has the lead for identifying wetlands on agricultural lands for purposes of determining CWA jurisdiction through CWA §404. Many normal farming practices are exempt from CWA §404. The CWA §404(f) exempts from regulation discharges associated with certain specified activities, provided the discharges do not convert an area of Waters of the United States (WOTUS) to a new use, and do not impair the flow or circulation of WOTUS or reduce the reach of WOTUS.

USDA Farm Service Agency (FSA)

Background & Authorities:

The FSA administers conservation programs to assist farmers in protecting highly erodible cropland or other environmentally sensitive acreage. The FSA receives its authority and direction for conservation programs from the Food Security Act of 1985, as amended by subsequent Farm Bills.

Roles & Responsibilities (related to addressing nonpoint source pollution originating from agricultural activities):

1. Administer annual and long-term cost-share programs, such as the Conservation Reserve Program and the Conservation Reserve Enhancement Program.
2. Administers eligibility determinations for the Highly Erodible Land and Wetland Conservation Compliance provisions of the 1985 Food Security Act, as amended. NRCS provides technical assistance for conservation compliance.

USDA Agricultural Research Service (ARS)

Background & Authorities:

The ARS is the principal in-house research agency of the USDA. ARS is one of the four component agencies of the Research, Education, and Economics mission area. Congress first authorized federally supported agricultural research in the Organic Act of 1862, which established what is now USDA. That statute directed the Commissioner of Agriculture "to acquire and preserve in his Department all information he can obtain by means of books and correspondence, and by practical and scientific experiments."

Roles & Responsibilities (related to addressing nonpoint source pollution originating from agricultural activities):

1. Plan, develop, and implement research that is designed to produce new knowledge and technologies required to assure the continuing vitality of the nation's food and agricultural enterprise.
2. Conduct research on the cause-and-effect relationships between agricultural management practices and soil and water conservation.
3. Conduct water quality research at the Soil and Water Management Research Unit in Kimberly and at the Northwest Watershed Research Center in Boise.

USDA Forest Service (USFS)

Background & Authorities:

USFS authority and responsibility for management is governed in part by the Organic Act; the Multiple Use, Sustained Yield Act; the Wilderness Act; the Forest and Rangeland Renewable Resources Act; the National Forest Management Act; the National Environmental Policy Act (NEPA); the Wild and Scenic Rivers Act and the CWA.

Roles & Responsibilities (related to addressing nonpoint source pollution originating from agricultural activities):

1. Manage approximately 20.5 million acres of National Forest lands in Idaho.
2. Manage the range resource program on National Forest lands to control or avoid erosion sources, riparian and stream disturbances through the development and implementation of range NEPA decisions, Allotment Management Plans, Annual Operating Plans, and enforcement of permit terms and conditions.
3. Design and implement watershed improvement programs that restore impaired watershed processes and functions including riparian areas and waterbodies. The Watershed Condition Framework (WCF) is the Forest Service's nationally consistent approach to classifying and tracking watershed condition, identifying priority work locations, and carrying out essential project activities in an effort to improve or maintain watershed conditions across NFS-managed lands. More information on the WCF program can be found at this link.
4. Incorporate fish habitat improvements to provide or restore quality fish habitats.
5. Conduct soil and water resource inventories, resource condition analyses and assessments.
6. Conduct forest research to improve management of riparian grazing interactions.
7. Conduct water quality monitoring with emphasis on implementation and effectiveness monitoring of BMPs. The Forest Service's National Core Best Management Practice (BMP) program seeks to improve water quality management through consistent and effective application and monitoring of BMPs associated with NFS land management. More information on the Forest Service's National Core BMP Program can be found at this link.
8. Implement the appropriate Ag Plan strategies and guidelines on federal National Forest lands where agricultural uses are employed.

USDC NOAA Fisheries National Marine Fisheries Service (NMFS)

Background & Authorities:

NMFS is charged by Congress with the protection and enhancement of marine, estuarine, and anadromous species and their habitat. In Idaho the primary species of concern are salmon and steelhead. The primary laws that provide guidance and give NMFS authority in matters relating to the protection salmon, steelhead and their habitat are the Fish and Wildlife Coordination Act, NEPA, the ESA, Magnuson-Stevens Fishery Conservation and Management Act.

Roles & Responsibilities (related to the protection of Salmon, Steelhead and their habitat):

1. Provide management assistance to federal, tribal, state, local, and private organizations toward the protection and restoration of anadromous fish and the habitat upon which they depend.
2. Under the ESA, NMFS provides consultation to federal agencies regarding the effects of an action on listed anadromous fish species. This authority specifically relates to activities that are funded permitted or authorized by a federal agency.
3. Provide grants to state, local, and private organizations to conserve and restore anadromous fish habitat.

USDI Bureau of Land Management (BLM)

Background & Authorities:

The BLM receives its authority from the Taylor Grazing Act, the CWA, the Federal Land Policy and Management Act, the Public Rangelands Improvement Act, NEPA, the Emergency Wetlands Resource Act, the Agricultural Credit Act, the Land and Water Conservation Fund Act, and the Executive Orders for Floodplain Management and Protection of Wetlands.

Roles & Responsibilities (related to addressing nonpoint source pollution originating from agricultural activities):

1. Administer, manage and protect approximately 12 million acres of public lands in Idaho.
2. Regulate, license and enforce land use activities that affect nonpoint source pollution control on public lands.
3. Maintain, restore and improve riparian areas as healthy and productive plant communities.
4. Develop riparian management demonstration areas to evaluate various riparian management techniques.
5. Conduct water quality monitoring with emphasis on implementation and BMP effectiveness monitoring.
6. Implement the Ag Plan on federal agricultural lands administered by the BLM.

USDI Bureau of Reclamation (BOR)

Background & Authorities:

The National Reclamation Act of 1902 authorized the Secretary of the Interior to develop irrigation and hydropower projects in 17 western states, administered by BOR.

Roles & Responsibilities (related to addressing nonpoint source pollution originating from agricultural activities):

1. Manage and administer approximately 130,000 acres of public lands in Idaho.
2. Plan, construct, operate, and maintain federal irrigation projects, until such time as the operation and maintenance of irrigation projects may be transferred to project beneficiaries.
3. Provide technical assistance in irrigation BMP evaluation.
4. Implement structural and nonstructural water management programs.
5. Design, finance and construct structural aspects of irrigation project operations.

US Fish and Wildlife Service (FWS)

Background & Authorities:

Authority for the FWS comes from the Fish and Wildlife Coordination Act; the ESA; the Food Security Act as amended by the Food, Agriculture, Conservation and Trade Act; the Anadromous Fish Conservation Act; the National Wildlife Refuge System Act and the Executive Orders: 11990- Protection of Wetlands and 11988-Floodplain Management. It is the mission of the FWS to provide leadership toward achieving a national net gain of fish and wildlife and the natural systems which support them.

Roles & Responsibilities (related to addressing nonpoint source pollution originating from agricultural activities):

1. Help government agencies, organizations and private landowners to protect, conserve, manage and restore wildlife and fish resources.
2. Provide for the conservation of ecosystems upon which threatened and endangered species of fish, wildlife and plants depend.
3. Provide assistance to the USDA on matters relating to wetland identification, determination of exemptions to the wetland conservation provisions, issuance of implementing regulations, mitigation and restoration of values and functions on converted wetlands.
4. Conduct studies and make recommendations to EPA concerning measures for eliminating or reducing polluting substances detrimental to fish and wildlife in interstate or navigable waters, or their tributaries.
5. Establish National Wildlife Refuges to protect a) areas of high species diversity; b) critical, declining or vulnerable habitats; and c) corridors to link protected habitats.
6. Aid in the review of state water quality standards for BMPs, and the indemnification of areas where water quality adversely affects fish and wildlife or human use

Basin Advisory Groups (BAGs)

Background & Authorities:

BAGs are groups of citizens that advise DEQ's director on water quality objectives within Idaho's six basins: Panhandle, Clearwater, Salmon, Southwest, Upper Snake, and Bear River basin advisory groups. BAG members are appointed by the director of DEQ and represent a cross section of interests in the basin. By statute, the membership of BAGs must be representative of the industries and interests directly affected by implementing water quality programs within the basin. Each member must either reside within the basin or represent persons with a real property interest within the basin. Among the interests that are represented on BAGs are agriculture, mining, non-municipal point source discharge permittees, forest products, local government, grazing, Native American tribes (for areas within reservation boundaries), water-based recreation, and environmental concerns. In addition, each BAG must include a person to represent the public at large who may reside outside the basin.

Roles & Responsibilities (related to addressing nonpoint source pollution originating from agricultural activities):

1. BAGs advise DEQ's director on:
   a. Priorities for monitoring with their respective basin,
   b. Revisions needed in the designated beneficial uses for water bodies within the basins,
   c. Categories to which water bodies in the basin should be assigned,
   d. Members to be appointed to the Watershed Advisory Groups
   e. Priorities for water quality programs within the basin based on available economic resources.

Watershed Advisory Groups (WAGs)

Background & Authorities:

WAGs are groups of citizens that provide DEQ with local public input and guidance regarding specific watersheds during TMDL development. Individual WAG members come from a broad cross section of the community and respective watershed. The DEQ director appoints WAG members after receiving input from the appropriate BAG. As appropriate, WAG members include representatives from the agriculture, mining, forest products, livestock, and water-based recreation industries; point source dischargers; local government; Native American tribes; environmental groups; and affected land management or regulatory agencies.

WAGs help DEQ identify local concerns regarding water quality, provide qualitative and quantitative data, and address the relevance of anecdotal information. WAGs are consulted on water quality problems, advise DEQ on the amount of pollution reduction necessary to meet water quality standards, and suggest options to allocate the necessary pollutant limits among the various pollutant sources in the watershed. The WAG's involvement continues through the implementation phase of the TMDL.

Roles & Responsibilities (related to addressing nonpoint source pollution originating from agricultural activities):

1. Advise DEQ on matters of concern to the community.
2. Contribute, with DEQ, to the education of watershed residents on water quality issues.
3. Help DEQ identify contributing pollution sources in the watershed.
4. Assist DEQ in assigning pollution reduction allocations among contributors.
5. Recommend to DEQ the specific actions needed to effectively control sources of pollution.
6. Help DEQ develop an implementation plan and set in motion what is needed to meet the water quality targets identified in the TMDL.

IDAHO AGRICULTURAL POLLUTION ABATEMENT PLAN

SECTION C:
AGRICULTURAL ACTIVITIES WHICH MAY IMPACT WATER QUALITY

A Guidance Document Addressing Nonpoint Source Water Quality Pollution

2025

SOIL & WATER CONSERVATION COMMISSION
IDAHO

AGRICULTURAL ACTIVITIES WHICH MAY IMPACT WATER QUALITY

Background

The Water Quality Act of 1987 (PL 100-4), commonly referred to as the CWA, is the primary federal law in the United States governing water pollution. The objective of the CWA is to restore and maintain the chemical, physical, and biological integrity of the nation's waters by preventing point and nonpoint pollution sources, providing assistance to publicly owned treatment works for the improvement of wastewater treatment, and maintaining the integrity of wetlands. The CWA authorizes measures to address nonpoint source pollution by directing states to develop and implement nonpoint pollution management programs (CWA §319 of the act). Utilizing EPA guidelines, state water quality agencies are to assess nonpoint sources of water pollution in their states and describe a management plan to deal with identified pollutant sources.

For the purposes of this Ag Plan, agricultural practices are defined as any activity implemented to facilitate the land-based production of crops and livestock. Agricultural practices are one of six major nonpoint source pollution categories assessed in Idaho (agricultural practices, grazing, natural resource extraction, timber/silviculture management, urban/suburban development, and transportation). Four primary subcategories of production and land use activities under the agricultural practice category are addressed in this plan. These sub-categories include:

- Non-irrigated Cropland
- Irrigated Cropland
- Pastureland and Rangeland
- Animal Feeding Operations[8]

To address nonpoint source impacts to surface and ground water quality from agricultural practices, it is necessary to describe the activities and associated potential pollutants causing the water quality impacts, their location, and magnitude. Impacts from hydrologic and habitat modification are addressed in the Ag Plan under the four sub-categories of production and land use activities. Activities in this category include channelization, dredging, dam construction and bridge construction, removal of riparian vegetation and streambank modification or destabilization.

Although timber/silviculture management (forest management and/or harvest activities) are activities closely aligned with agricultural practices, impacts from timber/silvicultural management are not addressed in the Ag Plan because the Idaho Forest Practices Water Quality Management Plan was developed to address silviculture. Rules and regulations concerning private and commercial forestry activities, such as harvesting, are contained in the Idaho Forest Practices Act.[9]

Nonpoint Source Pollution Which May Impact Water Quality

Nonpoint source pollution comes from many diffuse sources, unlike point source pollution originating from permitted industrial and sewage treatment plants and concentrated animal feeding operations. Nonpoint source pollution delivery is caused by rainfall, snowmelt, or irrigation water moving over and through the ground. As the runoff moves, it picks up and carries away naturally occurring and anthropogenic pollutants, and potentially deposits them into streams, lakes, reservoirs, wetlands, and aquifers. Designated beneficial uses and general water quality can be negatively affected

[6] Animal feeding operations, which are Concentrated Feeding Operations, are point sources subject to the National Pollutant Discharge Elimination System permit program (40 CFR 122.23).

[9] Idaho Code Title 38, Chapter 13.

by these pollutants. An excess of these pollutants can result in violations of state surface and ground water quality standards.[10] Some of these pollutants include sediment, nutrients, pathogens, metals, and others (including grease and oil, pesticides, nitrogen compounds). Excessive contributions of these pollutants can result in water quality criteria exceedances and violate state standards for water temperature, dissolved oxygen levels, turbidity, and pH values.

Cropland

In 1982, an inventory tabulated more than 6.38 million cropland acres in Idaho.[11] In 1997, the cropland acreage was reduced to approximately 5.48 million acres. In 2010, the cropland acreage in the state was again reduced, totaling 5.16 million acres. Cropland acres used for annual crop production significantly decreased between 1982 and 2010, decreasing by 1.22 million acres; this decrease is attributed to development and acres enrolled in the federal Conservation Reserve Program. Nearly 47% of Idaho's total cropland tabulated in 2010 is irrigated (2.42 million acres), 26% is non-irrigated (1.36 million acres), and 27% (1.38 million acres) is non-cultivated irrigated and non-irrigated cropland.

Non-irrigated Cropland Activities Which May Impact Water Quality

About 56% of the non-irrigated cropland acreage occurs in the northern part of the state.[12] Approximately 25% occurs in the southeastern corner of the state.[13] The remaining 19% of the non-irrigated cropland[14] is scattered throughout the southwestern corner, south-central section south of the Snake River, and southeast portion north of the Snake River.[15] Surface water runoff containing sediment and associated pollutants generally occurs when two conditions occur simultaneously. One condition is winter and spring snow melt, and heavy rainfall periods when the soil profile is often nearly saturated or frozen. This condition combined with cropland soil surfaces unprotected from erosion by the lack of crop residue and plant growth can result in excess erosion and sediment delivery off site. Erosion, and/or subsequent delivery of sediment and associated pollutants to receiving waters, can also be problematic during early summer rain events that possess enough intensity to erode newly spring seeded fields if soil surfaces are unprotected by the lack of crop residues and/or plant growth. Wind erosion may also contribute sediment, nutrients, pesticides, and other pollutants to nearby surface waters if there is a lack of vegetative cover or crop residue. Removal of excessive amounts of crop residue can result in lower soil organic matter content, depleted soil infiltration rates and reduced moisture holding capacity. These conditions can lead to habitat alterations and hydrologic modifications in downstream receiving waters.

The acres of non-irrigated cropland throughout the state are diverse. For example, the non-irrigated cropland areas in the northern portion of the state, including the Palouse and Camas Prairies, occur on steep, highly erosive, and sometimes shallow soils. Non-irrigated cropland, where the average annual precipitation exceeds 20 inches and occurs predominately in winter and spring months, may leach nutrients and mobile pesticides below the crop root zone. This

[10] Idaho Administrative Code-Department of Environmental Quality, IDAPA 58.01.02 – Water Quality Standards and Wastewater Treatment Requirements, §080 – Violation of Water Quality Standards. Idaho Administrative Code-Department of Environmental Quality, IDAPA 58.01.11 – Ground Water Quality Rule.

[11] USDA Natural Resources Conservation Service, Summary Report National Resources Inventory, 2010. Statistics referenced are for 2010; http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb1167354.pdf

[12] The northern part of the state includes Boundary, Bonner, Kootenai, Shoshone, Benewah, Clearwater, Latah, Nez Perce, Lewis, and Idaho counties.

[13] The southeast corner of the state includes Bannock, Bear Lake, Bingham, Caribou, Franklin, Oneida, and Power counties.

[14] The southwest corner of the state, involves acres within Ada, Adams, Boise, Canyon, Elmore, Gem, Owyhee, Payette, Valley, and Washington counties. The south-central portion of the state south of the Snake River, involves acres within Blaine Camas, Cassia, Gooding, Jerome, Lincoln, Minidoka, and Twin Falls counties.

[15] Statistics derived from USDA Natural Resources Conservation Service, Idaho. 2002. National Resources Inventory, a summary of natural resource trends in Idaho between 1982 and 1997.

creates a potential for excess nutrients and agricultural chemicals to enter receiving streams and/or aquifers through subsurface water movement where plant uptake and soil holding capacity is exceeded.

Southeastern Idaho non-irrigated croplands and those along the Snake River Plain are generally on deep soils with calcic horizons and receive less annual precipitation than areas in the north. Moisture deficit areas have low potential to move agri-chemicals below the crop root zone to pollute ground water supplies or receiving waters through subsurface water movement. The potential for ground water quality impacts is less from non-irrigated cropland than from irrigated cropland, primarily because non-irrigated cropland does not receive as much water compared with irrigated cropland. Non-irrigated cropland could impact ground water quality if certain hydrogeologic conditions are present. A reduction in the amount of water infiltrating through the soil profile reduces the ability of the water to leach agricultural chemicals to the ground water.

Irrigated Cropland Activities Which May Impact Water Quality

An estimated 94% of the total irrigated cropland lies within 30 miles of the Snake River in the southern part of the state. About 39% of irrigated cropland acreage occurs in the south-central portion of the state, south of the Snake River. Approximately 25% occurs in the southeast area of the state, north of the Snake River. The southeast corner of the state includes approximately 19% of the total irrigated cropland acres, while the southwest corner includes 15%. Very few acres of irrigated cropland occur in the northern counties, with only 2% of the overall irrigated cropland acres.[16]

The sedimentation that results from irrigation induced erosion may contribute nutrients and pesticides to receiving surface waters. There can be dissolved nutrients and pesticides in irrigation runoff. As in non-irrigated croplands, wind erosion may also contribute sediment, nutrients, pesticides, and other pollutants to nearby surface waters if there is a lack of vegetative cover or crop residue. Ground water quality below the effective crop root zone can be impacted by deep percolation of improperly managed nutrient and pesticide applications. Drift into surface waters from applied pesticides can be another pollutant source. Pesticide and nutrient impacts on ground water and surface water depends on chemical characteristics, method of chemical application, the soil characteristics, crop needs, and irrigation water management.

Irrigation disposal (injection) wells are used in parts of Idaho to dispose of irrigation wastewater and other agricultural runoff water and are regulated by IDWR. Most of these injection wells are in two regions of the state, the Eastern Snake River Plain, including Madison, Jefferson and Bonneville counties; and the Central Snake River Plain located in Minidoka, Gooding, Jerome and Twin Falls counties. Most of these wells were drilled decades ago when flood irrigation was the prevailing method of applying water to crops and were placed where no return-flow ditches existed to carry the excess water back to the river. Improved irrigation water management and irrigation efficiencies could reduce the problem of excess irrigation wastewater.

Some irrigation disposal wells were drilled to terminate above the water table and some wells were drilled below the water table. Those wells that terminate below the water table have an increased potential to contaminate the ground water due to the lack of separation distance between the well bottom and water table surface. Regardless of the well depth, these wells act as direct conduits connecting the land surface and the subsurface. These wells have the

[16] Statistics derived from USDA Natural Resources Conservation Service, Idaho. 2002. National Resources Inventory, a summary of natural resource trends in Idaho between 1982 and 1997.

potential to degrade water quality if the irrigation water to be injected contains fertilizers, herbicides, and pesticides from the land surface as it flows towards the injection well. The potential for spilled hazardous materials to enter injection wells, either active or those that are improperly abandoned is also of concern.

Pastureland and Rangeland

Today, livestock grazing is the largest single land use in Idaho. Nearly half of the state's land area is grazed, totaling almost 26 million acres. Idaho's grazing resource is composed of 7.2 million acres of private and state-owned rangeland, 1.3 million acres of privately owned pasturelands, and nearly 18 million acres of federally owned (primarily BLM and USFS) rangeland.[17]

Beef and dairy cattle, sheep, hogs, and goats are the primary species involved in land used by animal agricultural activities throughout the state. Some hobby farms may also include horses, llamas, emus, poultry, and other nontraditional livestock. Two principal land uses are associated with domestic animal husbandry—grazing and feeding operations (including dairies and supplemental winter-feeding operations); the following narrative discusses grazing activities.

Pastureland and Rangeland Activities Which May Impact Water Quality

Throughout the state, late spring, summer, fall and winter grazing activities occur, with some yearlong grazing. The proximity of grazed areas to surface waters and aquifers, as well as the intensity at which pastures and rangeland are grazed, determines the impact to water quality from potential nonpoint source contributions. The principal pollutants of concern associated with grazing activities are pathogens, nutrients, and sediment. Pollutants of concern from animal manure and waste may be transported from range and pastureland and/or leach into subsurface waters. Overstocking of pastures and rangelands, inadequate growing-season rest, or prolonged season-long use can lead to plant community changes and an increase in bare soil which may cause these lands to be more susceptible to erosion and offsite sediment delivery as phosphorus often binds to soil organic and mineral particles. Overgrazing of riparian areas can impact riparian and wetland vegetation and may cause stream bank deterioration. Grazing animals with unrestricted access to streams can disturb the streambeds and cause pathogen and nutrient contaminations.

Across the state, there is an increase in urbanization, which includes some hobby farm activity (the activity of raising nontraditional livestock). Although not viewed as a traditional agricultural operation, those activities also have a potential to contribute to nonpoint source pollution. The potential to impact water quality may be as great or greater from multiple small operations as from a single animal agriculture operation.

[17] Information retrieved from the 2003 Idaho Agricultural Pollution Abatement Plan referencing the Idaho Rangeland Resource Commission. 2002.

Animal Feeding Operations (AFO)

In Idaho, there are several categories of animal feeding operations: dairies, beef cattle animal feeding operations, poultry, and swine. ISDA regulates the dairies (IDAPA 02.04.14), beef cattle animal feeding operations (IDAPA 02.04.15), and poultry facilities (IDAPA 02.04.32). DEQ regulates the swine facilities (IDAPA 58.01.09). ISDA references the Ag Plan for the continued review and update of BMPs addressing animal feeding operations, such as the Nutrient Management standard (NRCS Practice Code no. 590).

The Idaho dairy industry has been regulated by ISDA since 1995. All dairies regardless of size must have a state approved nutrient management plan and have a wastewater and process water containment capacity for a minimum storage period of 180 days.

Beef cattle and poultry animal feeding operations are categorized within the state based on the size of the operation, the number of animals in each confined area, the duration of animal confinement, and the amount of surface vegetation present. These beef animal cattle and poultry animal feeding operations are referred to as either an animal feeding operation (AFO) or CAFO.

All large beef cattle concentrated animal feeding operations, and all medium and large poultry concentrated animal feeding operations are required to have a state approved nutrient management plan. Nutrient management plans following the NRCS Nutrient Management standard for designated beef cattle and poultry AFOs are required.

Animal Feeding Operations Which May Impact Water Quality

Animal manure and waste can be considered a nonpoint source of pollution. Riparian areas and wetlands located adjacent to, or within livestock production areas, including grazing lands and AFOs, may be impacted by pathogen and/or nutrient contamination if livestock access is not restricted. Unrestricted access by animals from an AFO may result in the operation being regulated under the Rules of the Department of Agriculture Governing Beef Cattle Animal Feeding Operations (IDAPA 02.04.15.040.01, and 02.04.15.02.01).

Animal manure and waste applied to agricultural land may reach ground water primarily if application rates exceed crop uptake, or if carried below the crop root zone by excessive application of irrigation water or high amounts of precipitation. A nutrient management plan considers this potential impact and is developed to prevent excess amounts of pollutants from entering the ground water (see IDAPA 02.04.15.030 and Dairy Rules IDAPA 02.04.14).

IDAHO AGRICULTURAL POLLUTION ABATEMENT PLAN

SECTION D:
WATER QUALITY LAW

A Guidance Document Addressing Nonpoint Source Water Quality Pollution

2025

SOIL & WATER CONSERVATION COMMISSION
IDAHO

WATER QUALITY LAW

Authority for addressing nonpoint source pollution on a national level is provided in the CWA, administered under the authority of EPA and DEQ. Idaho Code §§39-120 through 127 designates DEQ as the primary state agency to coordinate and administer ground water quality protection programs. Idaho Code §§39-175A through 175F authorizes DEQ to implement and administer the Idaho Pollutant Discharge Elimination System which permits point source pollutant discharges. Rules have been approved under these statutes to ensure DEQ maintains and protects the existing quality of the state's ground water and the existing and projected future beneficial uses of ground water and interconnected surface water.

The Idaho Statutes include 73 titles. Individual titles include a set of chapters which are further divided into numerous sections. Within those sections, applicable to the implementation of this Ag Plan, authorities, rules, regulations and standards necessary to address problems related to personal health and water pollution are defined. The elements within each section are defined within the Idaho Administrative Procedures Act (rules), referred to as IDAPA. To provide a background and overview of current Idaho water quality law, several citations within the Idaho Administrative Code address water quality and are referenced as follows:

- Violations of Water Quality Standards (IDAPA 58.01.02.080-Violation of Water Quality Standards)

  "No pollutant shall be discharged from a single source or in combination with pollutants discharged from other sources in concentrations or in a manner that: will or can be expected to result in violation of the water quality standards applicable to the receiving water body or downstream waters; or will injure designated or existing beneficial uses."

- Surface Water Use Designations (IDAPA 58.01.02.100-Surface Water Use Designation)

  "Waterbodies are designated in Idaho to protect water quality for existing or designated uses. …Wherever attainable, the designated beneficial uses for which the surface waters of the state are to be protected include aquatic life; recreation; water supply; wildlife habitats; and aesthetics."

- Administrative Policy (IDAPA 58.01.02.050.02-Administrative Policy, Protection of Waters of the State)

  "Whenever attainable, surface waters of the state shall be protected for beneficial uses…"

- Antidegradation Policy (IDAPA 58.01.02.051.01-Antidegradation Policy, Maintenance of Existing Uses for All Waters)

  "The existing in stream water uses and the level of water quality necessary to protect the existing uses shall be maintained and protected."

- Ground Water Quality Protection (IDAPA 58.01.11.006.01-Ground Water Quality Protection)

  "It is the policy of the State of Idaho to maintain and protect the existing high quality of the state's ground water."

- Prevention of Ground Water Contamination (IDAPA 58.01.11.006.05-Prevention of Ground Water Contamination)

  "The policy of the State of Idaho is to prevent contamination of ground water from all regulated and nonregulated sources of contamination to the maximum extent practical."

Idaho Code §39-101 et seq.[18] and 39-3601[19] et seq., define authorities of DEQ, including the authority to adopt rules as necessary to address problems related to public health and water pollution. The Idaho legislature, in Idaho Code §39-3601, recognizing that surface water is one of the state's most valuable natural resources, has approved the adoption of water quality standards and granted legal authority to the DEQ Director to implement these standards.

The purpose of the Idaho Code water quality chapter, Idaho Code §39-3601 et seq., is to enhance and preserve the quality and value of the navigable waters of the United States within the State of Idaho and to define the responsibilities of public agencies in the control and monitoring of water pollution. This purpose addresses the expressed intent of Congress to control pollution of streams, lakes, and other navigable waters to maintain and achieve existing and designated beneficial uses.

With the adoption of Idaho Code §39-3601 et seq. in 1995, Idaho entered a new era of local watershed planning and management. Idaho Code §39-3601 et seq. sets forth a public process which created BAGs in each of the State's six hydrologic basins.[20] The BAGs represent members of agriculture, livestock, forest products, mining, water-based recreation, non-municipal point source dischargers, local government, conservation groups, Indian tribes, and the public.

In addition, these Code Sections authorized the development of WAGs and recognized the existence of several ongoing WAGs throughout the state. The 27 WAGs recognized to date represent industries and interests affected by the management of their respective watershed.

Both BAGs and WAGs advise DEQ on water quality objectives for each basin and provide guidance on specific pollution control actions to restore designated beneficial uses of impaired water bodies. For waters on the state's CWA §303(d) list, an action plan is formulated by DEQ, referred to as the TMDL. The TMDL quantifies the acceptable pollutant level for each point and nonpoint source necessary to achieve the applicable water quality standard within a specified amount of time.

Because the Ag Plan focuses on nonpoint source pollution prevention from agricultural activities, a reiteration of definitions is appropriate. Nonpoint source activities are defined as, "Activities on a geographical area on which pollutants are deposited or dissolved or suspended in water applied to or incident on that area, the resultant mixture being discharged into the waters of the state. Nonpoint source activities include but are not limited to irrigated and non-irrigated lands used for grazing and/or crop production; silviculture including log storage or rafting; construction sites; recreation sites; septic tank disposal fields; mining; runoff from storms or other weather-related events; and other activities not subject to regulation under the federal national pollutant discharge elimination system."[21]

Idaho Code §39-3601 et seq. also established and defined roles of other state agencies by assigning designated agency responsibilities for those activities within the state that are the major contributors of nonpoint source loadings to waterbodies. These designations are: IDL for timber harvest activities, for oil and gas exploration and development and for mining activities; the Conservation Commission for grazing activities and for agricultural activities; the Idaho Transportation Department for public road construction; the ISDA for aquaculture; and the DEQ for all other activities.

[18] Idaho Code, Title 39 (Health and Safety), Chapter 1 (Environmental Quality-Health). 39-105: Powers and Duties of the Director.

[19] Idaho Code, Title 39 (Health and Safety), Chapter 36 (Water Quality). 39-3601: Declaration of Policy and Statement of Legislation.

[20] The six hydrologic basins in Idaho include the Panhandle, Clearwater, Salmon, Southwest, Upper Snake, and Bear River basins.

[21] IDAPA 58.01.02.003.63-Definitions

The designation of lead state agencies provides an ability to target projects and programs toward specific activities. Inclusive of the roles for these agencies are other state and federal programs with funding sources, recommended best management practices, regulatory and non-regulatory components, and indicators of program achievements, available at their disposal to help ensure meeting the state standards for water quality. These state designated roles are also significant in that the designated agencies automatically partner with those federal agencies having similar traditional roles, such as the agricultural partnership of the Conservation Commission and Districts with the NRCS. Setting of similar goals, priorities, and program requirements has enhanced the ability of project implementation, stretched available funding, and ensured state/federal consistency in approaching the challenges posed by nonpoint source pollution and TMDL implementation.

Minimum stream flows may be appropriated by the Idaho Water Resource Board for the protection of fish and wildlife habitat, aquatic life, recreation, aesthetic beauty, transportation and navigation values, and water quality. These minimum stream flow water rights are subject to senior water rights.[22]

Ground Water

The Ground Water Quality Protection Act of 1989, Idaho Code §39-120 through 39-127, designates DEQ as the primary agency, along with ISDA and IDWR as partner agencies, in coordinating and administering ground water quality protection programs for the state.

DEQ, IDWR, and ISDA are responsible for adopting applicable rules which specify the standards for determining actions necessary to prevent ground water contamination and cleanup actions necessary to meet the goals of the state. It is the policy of the state to maintain and protect the existing quality of the state's ground water. The existing and projected future beneficial uses of ground water shall be maintained and protected, and degradation that would impair existing and projected future beneficial uses of ground water and interconnected surface water shall not be allowed. Additionally, the policy of the state is to prevent contamination of ground water from all regulated and non-regulated sources of contamination to the maximum extent practical.[23]

No person shall cause or allow the release, spilling, leaking emissions, discharge, escape, leaching, or disposal of a contaminant into the environment in a manner that causes ground water quality standards to be exceeded; injures a beneficial use of ground water; or is not in accordance with a permit, consent order or applicable BMP, best available method or best practical method.[24]

When a numerical standard is not exceeded, but degradation of ground water quality is detected and deemed significant, DEQ can take several actions: 1) require a modification of regulated activities to prevent continued degradation; 2) coordinate with appropriate agencies and responsible persons to develop and implement prevention measures for activities not regulated by DEQ; or 3) for certain pollutants, allow limited degradation of ground water quality for the identified constituents if BMPs, best available methods or best practical methods are applied and the degradation is justifiable based on necessary and widespread social and economic considerations. For other specified pollutants, DEQ may also allow limited degradation up to the standards if BMPs are being applied and the degradation will not adversely impact a beneficial use.[25]

22 Idaho Statute, Title 42, Irrigation and Drainage-Water Rights and Reclamation, Chapter 15, Minimum Stream Flow (42-1501 et seq.)

23 IDAPA 58.01.11.006-Policies

24 IDAPA 58.01.11.400.01-Releases Degrading Ground Water Quality

25 IDAPA 58.01.11.400.02-Prevention Measures

Enforcement Provisions

Enforcement provisions for nonpoint source activities have been incorporated into several state statutes and rules, including the Water Quality Standards,[26] the Ground Water Quality Rule,[27] the Rules Governing Dairy Waste,[28] the Beef Cattle Environmental Control Act,[29] and the Rules Regulating Swine and Poultry.[30]

These rules governing nonpoint source activities recognize that nonpoint source pollution management, including BMP implementation and follow-up monitoring and evaluation, is a process for protecting designated beneficial uses and ambient water quality. This process is referred to as the feedback loop and is described in Section G of this Ag Plan. The Idaho Administrative Code cites that BMPs should be designed, implemented and maintained to provide full protection or maintenance of beneficial uses and cites this Ag Plan as the source for applicable BMPs.[31]

Violation of Water Quality Standards[32]

Violations of water quality standards that occur despite implementation of approved BMPs, or if no approved BMPs, that occur despite an activity that is conducted in a manner that demonstrates a knowledgeable and reasonable effort to minimize resulting adverse water quality impacts, will not be subject to enforcement action. However, in this situation, the approved BMPs or other control measures may be evaluated and modified as necessary by the appropriate agencies in accordance with the provisions of the Administrative Procedure Act. In other words, the feedback loop process will be implemented. The Ag Plan is the source for approved BMPs for agricultural activities.

For an activity occurring in a manner not in accordance with approved BMPs, or in a manner which does not demonstrate a knowledgeable and reasonable effort to minimize resulting adverse water quality impacts, the DEQ Director may, with appropriate inter-departmental coordination, prepare a compliance schedule or institute administrative or civil proceedings (IDAPA 58.01.02.350.02.b.i). This authority, however, must be read together with statutory provisions that specify the agency responsible for certain nonpoint source activities. For example, the Dairy Environmental Control Act specifies that ISDA is solely responsible for protecting surface water within the boundaries of dairy farms that are not under, or required to be under, an Idaho Pollutant Discharge Elimination System (IPDES) permit (Idaho Code §37-175A et seq.). In all cases, if imminent and substantial danger to the public health or environment is occurring, or may occur because of a nonpoint source by itself or in combination with other point or nonpoint source activities, then the DEQ Director may seek immediate injunctive relief to stop or prevent that danger, as provided in Idaho Code §39-108.

Proper application of BMPs on one agricultural nonpoint source may not adequately meet a beneficial use need. Unless a particular agricultural nonpoint source is proven solely responsible for degradation of natural resources that directly affect beneficial use support, multiple nonpoint source pollution controls may be necessary.

[26] IDAPA 58, Title 01, Chapter 2, the Water Quality Standards and Wastewater Treatment Requirements

[27] IDAPA 58, Title 01, Chapter 11, the Ground Water Quality Rule

[28] IDAPA 02.04.14 Rules of the Department of Agriculture Governing Dairy Waste

[29] IDAPA 02.04.15 Rules of the Department of Agriculture Governing Beef Cattle Animal Feeding Operations

[30] IDAPA 58.01.09 Rules Regulating Swine and Poultry Facilities

[31] IDAPA 58.01.02.055.07-Idaho Agricultural Pollution Abatement Plan

[32] IDAPA 58.01.02.080-Violation of Water Quality Standards

Application to Agricultural Land Use - Private Lands

The state has adopted a voluntary approach for the implementation of TMDLs with respect to agricultural nonpoint source water quality pollution consistent with the CWA and Idaho Code §39-3610. BMPs are applied on private agricultural lands through landowner initiative often facilitated through incentive programs such as the Environmental Quality Incentive Program and CWA §319 Nonpoint Source Management Program, which are based on provision of technical assistance, information and education, and cost-share incentives.

Districts are the local delivery system for the voluntary pollution abatement programs; Conservation Commission is the designated agency for grazing activities and agricultural activities; and DEQ is responsible for implementing and enforcing the water quality standards.

Application to Agricultural Land Use – State Lands

The nonpoint source provisions of the water quality standards apply to state lands in the same manner as private lands. DEQ has entered into memorandums of understanding with IDL for silviculture and mining activities; Conservation Commission for agriculture and grazing; and ISDA for dairy manure and waste management. The IDFG is responsible for ensuring consistency in habitat and fish restoration activities statewide on state and private lands, as well as coordinating efforts with the agency's federal partners on federal lands. Enforcement of agricultural BMPs on lands managed by state agencies is implemented through the respective state agency's policies.

Application to Agricultural Land Use – Federal Lands

The enforcement mechanism for nonpoint source pollution control is different on federal lands than it is on state and private lands due to the nature of the state-federal relationship as described in the CWA and implementing executive orders.

CWA §313 directs federal agencies to meet state requirements with respect to the abatement of pollution in the same manner and to the same extent as any nongovernmental entity. Under "Executive Order 12088" a federal agency is to promptly consult with the state upon notification of a violation of water quality standards and develop a mitigation plan with an implementation schedule to come into compliance.

IDAHO AGRICULTURAL POLLUTION ABATEMENT PLAN

SECTION E:
BEST MANAGEMENT PRACTICES

A Guidance Document Addressing Nonpoint Source Water Quality Pollution

2025

SOIL & WATER CONSERVATION COMMISSION
IDAHO

BEST MANAGEMENT PRACTICES

As set forth in the Idaho Administrative Code,[33] the Ag Plan is the source for BMPs for the control of nonpoint sources of pollution from agriculture. In the context of this Ag Plan, BMP is defined as a practice or combination of component practices determined to be the most effective, practicable means of reducing the amount of nonpoint source pollution generated by agricultural activities.[34] BMP component practices are defined as practices used alone or in combination to address site-specific issues.

For a BMP to accomplish the task of reducing nonpoint source pollution on a voluntary basis, it must meet three criteria. BMPs must be: 1) technically feasible; 2) economically feasible; and 3) acceptable. By meeting all three of these criteria the BMP is defined as practicable.

> **Technical Feasibility** is based on research findings, field trials and years of practical field experience that demonstrate the BMP's effectiveness, alone or in combination with other component practices, in reducing the amount of nonpoint source pollution from agricultural activities.
>
> **Economic Feasibility** is based on economic evaluation and practical experience that demonstrate the BMP to be cost-effective in reducing the amount of pollution from agricultural nonpoint source activities.
>
> **Acceptable** practices are those component practices that the responsible party is willing to apply and maintain.

BMP Application

A BMP is developed for application to a particular site to address a specific nonpoint source pollution concern based on site-specific data gathered and analyzed by a trained and experienced resource specialist. Site data may include soils, slope, climate, topography, crops grown, equipment used, water quality, water quantity, pests, and resource conditions. The landowner/operator's objectives, site data, and natural resource needs are used to select the BMP component practices. The conservationist or resource specialist may prescribe several alternative practices that not only meet the natural resource objectives but also meet the landowner/operators' needs and capabilities. Because of the distinctive combination of site characteristics and natural resource objectives, the selected BMP and component practice(s) applied is unique.

On state and federal lands, the process involves environmental evaluations, land use plans, and interdisciplinary teams of resource specialists. BMP implementation is generally accomplished through contract or direct involvement of the management agency, such as the USFS or the BLM.

[33] IDAPA 58.01.02 – Water Quality Standards. §054.07 – Idaho Agricultural Pollution Abatement Plan (3-20-97).

[34] IDAPA 60.05.02 – The Antidegradation Plan for Agriculture for the Idaho Soil Conservation Commission and Soil Conservation Districts. §011.02 – Best Management Practice (12-11-89).

BMP Selection

During the Ag Plan revision in 2003, the technical solutions or practices selected to obtain water quality benefits were referred to as component practices that are used individually or in combination to develop BMPs. The NRCS Field Office Technical Guide (FOTG) is the source of BMP component practices accepted by the Conservation Commission and DEQ and included in the Ag Plan's Catalog of Component Practices (see Table E-2). The Catalog, housed and updated by the Conservation Commission, contains those practices determined to be effective in the treatment of natural resource concerns.

The FOTG is maintained in each local NRCS Field Office[35] and includes the standards and specifications for conservation practices designed and adapted to solve local land use concerns and natural resource problems. The Technical Standard for each component practice sets forth the minimum limits of technical excellence for its planning, design and construction. The following information is given in the Technical Standard:

- Definition – a description of the character or nature of the component practice.
- Purpose – a description of the use of and specific needs filled by the component practice in the overall effort to control natural resource impacts.
- Conditions Where Component Practice Applies – a statement of the specific condition or pollution control needs that can be met by the component practice alone or in combination with others.
- Key Points in Component Practice Application – a list of special features, ideas and suggestions for practice application such as timeliness, soil conditions, and/or special equipment needs that significantly influence the success or failure of the practice. Key points are practice-specific and may not be included in the standard for all component practices.
- Specifications Guide – a statement of where the technical requirements for the planning, designing, construction or application of the component practice can be found, e.g. NRCS FOTG. The referenced specifications set forth the required materials, operations and procedures to obtain the desired standards of construction and installation.

Component practices are modified or new ones developed when there is improvement in technology through research and demonstration; change in crops and cropping systems; change in economic conditions; change in social conditions; and/or change in water quality concerns, such as ground water emphasis. This is an ongoing process to keep up with technology and needs identified at the local level.

Evaluation of Applied BMPs

Water Quality Law, Idaho Code §39-3621[36] states that the Conservation Commission, in cooperation with appropriate land management agencies, is responsible for ensuring agricultural BMPs are monitored for their effect on water quality. BMP effectiveness evaluation has been identified as imperative for the validation of successful TMDL implementation within the agricultural sector. Monitoring programs are dependent on appropriations. The Idaho Agricultural Best Management Practices Field Guide for Evaluating BMP Effectiveness[37] provides guidelines for evaluating site specific

35 Located at http://www.nrcs.usda.gov/wps/portal/nrcs/main/national/technical/fotg/

36 Idaho Code Title 39 (Health and Safety), Chapter 36 (Water Quality), §3621 (Monitoring Provisions).

37 Idaho Agricultural Best Management Practices Field Guide for Evaluating BMP Effectiveness. Revised April 2013.

BMPs and the cumulative effects of BMPs within a watershed. The focus of the field guide is the onsite BMP evaluation process. The process serves as a guide for developing a plan for site-specific BMP effectiveness evaluation and the cumulative effects of BMPs within a watershed.

Technical evaluation of applied agricultural BMPs is a part of the feedback loop mechanism and is a two-step process. The first step, implementation monitoring, is carried out to ensure the adequacy of each of the component practices as designed and installed. The NRCS is the technical agency that provides assistance in the planning and implementation of BMPs on privately owned and state lands. NRCS conservation planning is guided by the NRCS National Planning Procedures Handbook. This is a three phase, nine step planning process that evaluates soil, water, air, plant and animal resources. Resource quality criteria in the FOTG for resource sustainability are used to identify resource problems and the BMPs that will solve those problems. The result is a conservation plan developed at the Resource Management System level. The three phase, nine step process is as follows.

Phase I - Collection and Analysis (Understanding the Issues and Opportunities)

1. Identify Issues and Opportunities
2. Determine Objectives
3. Inventory Resources
4. Analyze Resource Data

Phase II - Decision Support (Understanding the Solutions)

5. Formulate Alternatives
6. Evaluate Alternatives
7. Make Decisions

Phase III - Application and Evaluation (Understanding the Results)

8. Implement the Plan
9. Evaluate the Plan

Implementation monitoring is accomplished through a formal quality check procedure in which a representative number of practices are evaluated annually by the NRCS on private lands. The USFS and BLM have been delegated the responsibility to assure implementation quality control on federal lands they administer.

The second step in the evaluation of BMPs is effectiveness monitoring. This requires monitoring and evaluation of water quality following BMP application. If effectiveness monitoring indicates that natural resource objectives have been met, the applied BMP(s) are effective. If, on the other hand, the objectives are not met, the findings may be used to modify the BMP to attain the desired natural resource objectives. Part of this process will involve an assessment of the natural resource objectives and monitoring procedures. As implementation of the BMP occurs and more site-specific information is gathered, the compatibility of the natural resource objectives with the site potential will be reevaluated. Likewise, the monitoring procedures will be reevaluated to see if the proper water quality parameters are being evaluated by the appropriate techniques. All component practices need to be evaluated for effectiveness in providing water quality benefits for both surface and ground water. Pollution source identification may show that other non-agricultural sources hinder the effectiveness of applied agricultural BMPs on the quality of a water body. It is important to note that where multiple pollutant sources exist, complete treatment of agricultural lands alone may not meet watershed-scale natural resource objectives.

Component Practice Development and Modification Process

The Catalog of Component Practices is developed and maintained through the following process.

1) The first step in modifying or developing new component practices is for the Districts, in consultation with the Conservation Commission, and the technical agencies to review current component practices and identify local needs that are not being addressed. The review will be conducted by the District Board of Supervisors and include area agency representatives and others as needed and appropriate. Factors considered in the review will include but are not limited to:

    - Research findings
    - BMP evaluation and monitoring information from demonstration projects
    - All pertinent water quality monitoring information
    - Experience and observations of individuals and groups as to the economic, social and practical application aspects of the practice, and its effectiveness in achieving the desired results

2) If a need for modifications or development of new component practices is identified as a result of the review, the District will hold a meeting to provide an opportunity for public input on the proposals. This meeting may be held in connection with the monthly District Board of Supervisors meeting.

3) The proposed modifications or development of new component practices along with comments from the public input meeting will be forwarded to the Conservation Commission with recommendations.

4) The Conservation Commission will convene the BMP Technical Committee as needed and present the proposals and recommendations forwarded through Districts for evaluation. This committee will be chaired by the Conservation Commission. Membership consists of a technical representative from:

    - Conservation Commission
    - Districts
    - DEQ
    - EPA
    - ISDA
    - FSA
    - IDL
    - BLM
    - IDWR
    - USFS
    - UI Extension
    - NRCS
    - Agricultural Industries
    - Others as needed and appropriate

Technical specialists from these or other entities with expertise needed to review specific component practices may be appointed as ad hoc members. Also, it is appropriate for the BMP Technical Committee to call upon industry and conservation group technical specialists to assist in evaluating the practicability of component practices.

5) The BMP Technical Committee will evaluate each recommendation forwarded through the District by comparing existing component practices to see if any of these meet the identified needs. If modifications or development of new component practices are needed, the Technical Committee will use research data, monitoring, project evaluations, experience and observations to modify existing or develop new component practices. Resulting component practices will be evaluated for technical feasibility, economic feasibility and social acceptability.

6) The BMP Technical Committee's recommendations on component practices will be forwarded to the Conservation Commission and DEQ. The Conservation Commission and DEQ will act upon modified or newly developed component practices, by accepting them into the Ag Plan Catalog of Component Practices, rejecting them, or returning them to the BMP Technical Committee for further action.

7) NRCS develops practice standards and receives input from the Conservation Commission and DEQ.

8) The Districts or local technical agency may adopt modified or newly developed component practices that are listed in the Ag Plan Catalog of Component Practices. Each District or technical agency local unit will maintain a list of the adopted component practices along with the appropriate standards and specifications.

9) The Conservation Commission will convene the BMP Effectiveness Subcommittee as needed for the review and evaluation of the effectiveness of BMP component practices.

Developing BMPs from Component Practices

Typical agricultural BMPs that are developed using the Catalog of Component Practices (Table E-2) include the following categories:

- Non-irrigated Cropland
- Irrigated Cropland
- Grazing Land
- Animal Manure and Waste
- Riparian/Wetland

A BMP usually requires the use of several component practices to meet natural resource objectives. A combination of BMPs may be needed to meet natural resource objectives on a particular land management unit, for example it may require both an Animal Waste Management BMP and an Irrigated Cropland BMP to adequately treat an individual farm.

Component practices listed in the Catalog of Component Practices are referenced by the NRCS FOTG number along with other pertinent rules, regulations, and guidelines. Guidelines other than those specified in the NRCS FOTG can be used for application of a component practice, if such guidelines have been approved as adequate to meet the desired water quality objectives by the agency responsible for ensuring the technical adequacy of the design and installation of the component practice.

Practices considered normal and proper components of a selected BMP are identified in the Catalog of Component Practices. Such designation is not intended to be limiting or comprehensive since each situation is unique and may require other component practices from the catalog for the BMP to be functional. The following are lists of component practices commonly selected to develop each of the five agricultural BMP categories.

Non-irrigated Cropland BMPs

- Conservation Crop Rotation
- Contour Farming
- Cover Crop
- Critical Area Planting
- Deep Tillage
- Diversion
- Filter Strip
- Grade Stabilization Structure
- Grassed Waterway
- Integrated Pest Management
- Lined Waterway or Outlet
- Nutrient Management
- Residue Management—No Till
- Residue Management—Reduced Till
- Sediment Basin
- Surface Roughening
- Subsurface Drain
- Terrace
- Underground Outlet
- Water and Sediment Control Basin

Irrigated Cropland BMPs

- Agrichemical Handling Facility
- Anionic Polyacrylamide (PAM)
- Conservation Crop Rotation
- Constructed Wetland
- Cover Crop
- Critical Area Planting
- Deep Tillage
- Filter Strip
- Grade Stabilization Structure
- Integrated Pest Management
- Irrigation Field Ditch
- Irrigation Land Leveling
- Irrigation Reservoir
- Irrigation System, Micro irrigation
- Irrigation System, Surface and Subsurface
- Irrigation System, Tailwater Recovery
- Irrigation Water Management
- Land Smoothing
- Mulching
- Nutrient Management
- Pumping Plant
- Residue Management—No Till
- Residue Management—Reduced Till
- Sediment Basin
- Sprinkler System
- Structure for Water Control
- Underground Outlet
- Well Decommissioning

Grazing Land BMPs

- Access Control
- Brush Management
- Critical Area Planting
- Fence
- Forage and Biomass Planting
- Forage Harvest Management
- Grade Stabilization Structure
- Grazing Land Mechanical Treatment
- Integrated Pest Management
- Livestock Pipeline
- Nutrient Management
- Pond
- Prescribed Grazing
- Range Planting
- Riparian Forest Buffer
- Spring Development
- Trails and Walkways
- Upland Wildlife Habitat Management
- Watering Facility

Animal Manure and Waste Management BMPs

Access Road
Composting Facility
Constructed Wetland
Critical Area Planting
Dike
Diversion
Fence
Grade Stabilization Structure
Heavy Use Area Protection
Livestock Pipeline
Nutrient Management
Pond Sealing or Lining
Pumping Plant
Roof Runoff Structure
Underground Outlet
Waste Facility Closure
Waste Recycling
Watering Separation Facility
Waste Storage Facility
Waste Transfer
Waste Treatment
Waste Treatment Lagoon
Water Well

Riparian/Wetland BMPs

Access Control
Aquatic Organism Passage
Constructed Wetland
Critical Area Planting
Dam, Diversion
Fence
Filter Strip
Grade Stabilization Structure
Heavy Use Area Protection
Livestock Pipeline
Pond
Prescribed Grazing
Riparian Forest Buffer
Spring Development
Stream Channel Stabilization
Stream Crossing
Stream Habitat Improvement and Management
Streambank and Shoreline Protection
Trails and Walkways
Tree/Shrub Establishment
Watering Facility
Wetland Wildlife Habitat Management
Wetland Restoration

Water Quality Standards and Beneficial Uses

This Ag Plan provides guidance to contribute toward full support of identified beneficial uses through enhancement and maintenance of the quality of surface and ground waters of Idaho, to the extent that they are impacted by agricultural nonpoint source pollutants. Water quality standards are set for each designated beneficial use within Idaho. Meeting those surface and ground water quality standards ensures support of designated beneficial uses.

Designated beneficial uses for surface waters within the state include the following:[38]

- Aquatic Life
- Recreation
- Water Supply
- Wildlife Habitats
- Aesthetics

38 IDAPA 58.01.02 – Water Quality Standards. §100 – Surface Water Use Designation (3-15-0

Designated beneficial uses for ground water include the following:[39]

- Domestic Water Supplies
- Industrial Water Supplies
- Agricultural Water Supplies
- Aquaculture Water Supplies
- Mining

Water quality standards listed per beneficial use are shown in table E-1. Table E-2 lists component practices found in the Idaho Agricultural Nonpoint Source Pollution Abatement Plan Catalogue of Component Practices (July 2015). Tables E-3 through E-7 display agricultural BMP component practices and their ability to improve beneficial uses for each of the five BMP categories. The water quality standards directly affected are shown for each component practice per BMP.

[39] IDAPA 58.01.11 – Ground Water Quality Rule. §007.04 – Beneficial Uses (3-20-97).

Table E-1. Water Quality Standards per Designated Beneficial Use

Designated Beneficial Use – Surface Water	Water Quality Standards
Aquatic Life	pH dissolved gas chlorine residual water temperature ammonia turbidity dissolved oxygen
Recreation	E. coli
Water Supply	hazardous materials toxic substances deleterious materials radioactive materials (radioactivity) floating, suspended or submerged matter excess nutrients oxygen demanding materials sediment turbidity
Wildlife Habitats	hazardous materials toxic substances deleterious materials radioactive materials (radioactivity) floating, suspended or submerged matter excess nutrients oxygen demanding materials sediment
Aesthetics	hazardous materials toxic substances deleterious materials radioactive materials (radioactivity) floating, suspended or submerged matter excess nutrients oxygen demanding materials sediment
Designated Beneficial Use – Ground Water	**Water Quality Standards**
Domestic Water Supplies Industrial Water Supplies Agricultural Water Supplies Aquaculture Water Supplies Mining	primary constituent standards (numerical)[40] secondary constituent standards (numerical) narrative standards[41]

40 IDAPA 58.01.11.200.01 Numerical Ground Water Quality Standards

41 IDAPA 58.01.11.200.02 Ground Water Quality Rule-Narrative Ground Water Quality Standards

Table E-2. Idaho Agricultural Nonpoint Source Pollution Abatement Plan Catalog of Component Practices

NRCS Practice Code	Component Practice
472	Access Control
560	Access Road
702	Agrichemical Handling Facility
311	Alley Cropping
366	Anaerobic Digester
450	Anionic Polyacrylamide (PAM) Erosion Control
396	Aquatic Organism Passage
314	Brush Management
340	Cover Crop
317	Composting Facility
327	Conservation Cover
328	Conservation Crop Rotation
656	Constructed Wetland
332	Contour Buffer Strips
330	Contour Farming
585	Contour Strip cropping
340	Cover and Green Manure Crop
342	Critical Area Planting
348	Dam, Diversion
349	Dam, Multiple-Purpose
324	Deep Tillage
356	Dike
362	Diversion
382	Fence
386	Field Border
393	Filter Strip
394	Firebreak
512	Forage and Biomass Planting
511	Forage Harvest Management
410	Grade Stabilization Structure
412	Grassed Waterway
548	Grazing Land Mechanical Treatment
561	Heavy Use Area Protection
595	Integrated Pest Management
320	Irrigation Canal or Lateral
388	Irrigation Field Ditch
464	Irrigation Land Leveling
436	Irrigation Reservoir
441	Irrigation System, Micro irrigation
443	Irrigation System, Surface and Subsurface
447	Irrigation System, Tailwater Recovery
428	Irrigation Water Conveyance, Ditch or Canal Lining
430	Irrigation Water Conveyance, Pipeline
449	Irrigation Water Management
466	Land Smoothing
468	Lined Waterway or Outlet
516	Livestock Pipeline

Table E-2. Idaho Agricultural Nonpoint Source Pollution Abatement Plan Catalog of Component Practices *(Continued)*

NRCS Practice Code	Component Practice
484	Mulching
590	Nutrient Management
378	Pond
521	Pond Sealing or Lining
338	Prescribed Burning
528	Prescribed Grazing
533	Pumping Plant
550	Range Planting
329	Residue Management—No Till
345	Residue Management—Reduced Till
329C	Residue Management, Ridge Till
344	Residue Management, Seasonal
391A	Riparian Forest Buffer
558	Roof Runoff Structure
350	Sediment Basin
572	Spoil Spreading
442	Sprinkler System
574	Spring Development
578	Stream Crossing
395	Stream Habitat Improvement and Management
580	Streambank and Shoreline Protection
584	Stream Channel Stabilization
586	Strip cropping, Field
587	Structure for Water Control
606	Subsurface Drain
607	Surface Drainage, Field Ditch
608	Surface Drainage, Main or Lateral
609	Surface Roughening
600	Terrace
575	Trails and Walkways
612	Tree/Shrub Establishment
620	Underground Outlet
645	Upland Wildlife Habitat Management
360	Waste Facility Closure
633	Waste Recycling
313	Waste Storage Facility
634	Waste Transfer
614	Watering Facility
632	Waste Separation Facility
629	Waste Treatment
359	Waste Treatment Lagoon
636	Water Harvesting Catchment
638	Water and Sediment Control Basin
351	Well Decommissioning
657	Wetland Restoration
644	Wetland Wildlife Habitat Management
380	Windbreak/Shelterbelt Establishment

Table E-3. Agricultural BMP Component Practices and Their Ability to Improve Beneficial Uses for the **Non-irrigated Cropland** BMP Category

Designated Beneficial Use Affected		Ground Water	Surface Water											
		Ground Water Supplies*	Recreation	Aquatic Life	Aquatic Life Water Supply Wildlife Habitat Aesthetics	Aquatic Life Water Supply Wildlife Habitat Aesthetics	Aquatic Life Water Supply Wildlife Habitat Aesthetics	Aquatic Life Water Supply Wildlife Habitat Aesthetics	Aquatic Life	Aquatic Life Water Supply Wildlife Habitat Aesthetics	Aquatic Life Water Supply Wildlife Habitat Aesthetics	Aquatic Life Water Supply Wildlife Habitat Aesthetics	Aquatic Life Water Supply Wildlife Habitat Aesthetics	Aquatic Life Water Supply Wildlife Habitat Aesthetics
NRCS Practice Code	Water Quality Standards Directly Affected^	Primary, Secondary and Narrative	E. coli	Water Temperature	Sediment and Turbidity	Excess nutrients	Ammonia	Dissolved oxygen	pH	Oxygen demanding materials	Floating, suspended, submerged matter	Hazardous materials	Toxic substances
328	Conservation Crop Rotation				•	•							
330	Contour Farming				•	•							
340	Cover Crop				•	•							
342	Critical Area Planting				•	•							
324	Deep Tillage				•	•							
362	Diversion				•	•							
393	Filter Strip				•	•					•		
410	Grade Stabilization Structure				•	•							
412	Grassed Waterway				•	•							
595	Integrated Pest Management	•										•	•
590	Nutrient Management	•				•							
329	Residue and Tillage Management—No Till				•	•							
345	Residue and Tillage Management—Reduced Till				•	•							
350	Sediment Basin				•	•							
606	Subsurface Drain				•	•					•		
609	Surface Roughening				•	•							
612	Terrace				•	•							
620	Underground Outlet				•	•							
638	Water and Sediment Control Basin				•	•							

^ Water quality standards **directly** affected are shown for each component practice per BMP category. Nearly all water quality standards are indirectly affected by component practices.

* Ground Water designated beneficial uses include Domestic Water Supplies, Industrial Water Supplies, Agricultural Water Supplies, Aquaculture Water Supplies, and Mining.

Table E-4. Agricultural BMP Component Practices and Their Ability to Improve Beneficial Uses for the **Non-irrigated Cropland** BMP Category (continued)

		Ground Water	Surface Water											
	Designated Beneficial Use Affected	Ground Water Supplies*	Recreation	Aquatic Life	Aquatic Life Water Supply Wildlife Habitat Aesthetics	Aquatic Life Water Supply Wildlife Habitat Aesthetics	Aquatic Life Water Supply Wildlife Habitat Aesthetics	Aquatic Life Water Supply Wildlife Habitat Aesthetics	Aquatic Life	Aquatic Life Water Supply Wildlife Habitat Aesthetics	Aquatic Life Water Supply Wildlife Habitat Aesthetics	Aquatic Life Water Supply Wildlife Habitat Aesthetics	Aquatic Life Water Supply Wildlife Habitat Aesthetics	Aquatic Life Water Supply Wildlife Habitat Aesthetics
NRCS Practice Code	Water Quality Standards Directly Affected^	Primary, Secondary and Narrative	E. coli	Water Temperature	Sediment and Turbidity	Excess nutrients	Ammonia	Dissolved oxygen	pH	Oxygen demanding materials	Floating, suspended, submerged matter	Hazardous materials	Toxic substances
350	Sediment Basin				•	•					•		
442	Sprinkler System	•			•	•					•		
587	Structure for Water Control				•	•					•		
620	Underground Outlet				•	•					•		
351	Well Decommissioning	•											

^ Water quality standards **directly** affected are shown for each component practice per BMP category. Nearly all water quality standards are indirectly affected by component practices.

* Ground Water designated beneficial uses include Domestic Water Supplies, Industrial Water Supplies, Agricultural Water Supplies, Aquaculture Water Supplies, and Mining.

Table E-5. Agricultural BMP Component Practices and Their Ability to Improve Beneficial Uses for the **Grazing Land** BMP Category

Designated Beneficial Use Affected		Ground Water	Surface Water											
		Ground Water Supplies*	Recreation	Aquatic Life	Aquatic Life Water Supply Wildlife Habitat Aesthetics	Aquatic Life Water Supply Wildlife Habitat Aesthetics	Aquatic Life Water Supply Wildlife Habitat Aesthetics	Aquatic Life Water Supply Wildlife Habitat Aesthetics	Aquatic Life	Aquatic Life Water Supply Wildlife Habitat Aesthetics	Aquatic Life Water Supply Wildlife Habitat Aesthetics	Aquatic Life Water Supply Wildlife Habitat Aesthetics	Aquatic Life Water Supply Wildlife Habitat Aesthetics
NRCS Practice Code	Water Quality Standards Directly Affected^	Primary, Secondary and Narrative	E. coli	Water Temperature	Sediment and Turbidity	Excess nutrients	Ammonia	Dissolved oxygen	pH	Oxygen demanding materials	Floating, suspended, submerged matter	Hazardous materials	Toxic substances
474	Access Control	•	•	•	•	•		•				•	
314	Brush Management				•								
342	Critical Area Planting			•	•	•							
382	Fence		•		•	•							
512	Forage and Biomass Planting				•	•							
511	Forage Harvest Management				•	•							
410	Grade Stabilization Structure				•	•							
548	Grazing Land Mechanical Treatment				•	•							
595	Integrated Pest Management	•										•	•
516	Livestock Pipeline		•		•	•							
590	Nutrient Management	•				•							
528	Prescribed Grazing			•	•	•							
550	Range Planting				•	•							
391A	Riparian Forest Buffer		•	•	•	•							
574	Spring Development		•										
575	Trails and Walkways				•	•							
645	Upland Wildlife Habitat Management			•	•	•							
614	Watering Facility				•	•							

^ Water quality standards **directly** affected are shown for each component practice per BMP category. Nearly all water quality standards are indirectly affected by component practices.

* Ground Water designated beneficial uses include Domestic Water Supplies, Industrial Water Supplies, Agricultural Water Supplies, Aquaculture Water Supplies, and Mining.

Table E-6. Agricultural BMP Component Practices and Their Ability to Improve Beneficial Uses for the **Animal Manure and Waste** BMP Category

Designated Beneficial Use Affected		Ground Water	Surface Water											
		Ground Water Supplies*	Recreation	Aquatic Life	Aquatic Life Water Supply Wildlife Habitat Aesthetics	Aquatic Life Water Supply Wildlife Habitat Aesthetics	Aquatic Life Water Supply Wildlife Habitat Aesthetics	Aquatic Life Water Supply Wildlife Habitat Aesthetics	Aquatic Life	Aquatic Life Water Supply Wildlife Habitat Aesthetics	Aquatic Life Water Supply Wildlife Habitat Aesthetics	Aquatic Life Water Supply Wildlife Habitat Aesthetics	Aquatic Life Water Supply Wildlife Habitat Aesthetics	Aquatic Life Water Supply Wildlife Habitat Aesthetics
NRCS Practice Code	Water Quality Standards Directly Affected^	Primary, Secondary and Narrative	E. coli	Water Temperature	Sediment and Turbidity	Excess nutrients	Ammonia	Dissolved oxygen	pH	Oxygen demanding materials	Floating, suspended, submerged matter	Hazardous materials	Toxic substances
560	Access Road				•								
317	Composting Facility	•	•			•	•						
656	Constructed Wetland				•	•		•					
342	Critical Area Planting				•	•							
356	Dike		•		•	•							
362	Diversion		•		•	•							
382	Fence		•	•	•	•							
410	Grade Stabilization Structure				•	•							
561	Heavy Use Area Protection			•	•	•							
590	Nutrient Management	•				•				•	•		
521	Pond Sealing or Lining	•	•										
533	Pumping Plant	•											
558	Roof Runoff Structure	•	•			•					•		
620	Underground Outlet				•								
360	Waste Facility Closure		•			•							
633	Waste Recycling	•	•										
632	Waste Separation Facility	•	•			•				•	•		
313	Waste Storage Facility	•	•			•				•	•		
634	Waste Transfer	•	•										
633	Waste Treatment	•	•			•	•			•	•	•	•
359	Waste Treatment Lagoon	•	•			•	•			•	•		

^ Water quality standards **directly** affected are shown for each component practice per BMP category. Nearly all water quality standards are indirectly affected by component practices.

* Ground Water designated beneficial uses include Domestic Water Supplies, Industrial Water Supplies, Agricultural Water Supplies, Aquaculture Water Supplies, and Mining.

Table E-7. Agricultural BMP Component Practices and Their Ability to Improve Beneficial Uses for the **Riparian/Wetland** BMP Category

Designated Beneficial Use Affected		Ground Water	Surface Water											
		Ground Water Supplies*	Recreation	Aquatic Life	Aquatic Life Water Supply Wildlife Habitat Aesthetics	Aquatic Life Water Supply Wildlife Habitat Aesthetics	Aquatic Life Water Supply Wildlife Habitat Aesthetics	Aquatic Life Water Supply Wildlife Habitat Aesthetics	Aquatic Life	Aquatic Life Water Supply Wildlife Habitat Aesthetics	Aquatic Life Water Supply Wildlife Habitat Aesthetics	Aquatic Life Water Supply Wildlife Habitat Aesthetics	Aquatic Life Water Supply Wildlife Habitat Aesthetics
NRCS Practice Code	Water Quality Standards Directly Affected^	Primary, Secondary and Narrative	E. coli	Water Temperature	Sediment and Turbidity	Excess nutrients	Ammonia	Dissolved oxygen	pH	Oxygen demanding materials	Floating, suspended, submerged matter	Hazardous materials	Toxic substances
474	Access Control	•	•	•	•	•		•				•	
656	Constructed Wetland				•	•		•					
342	Critical Area Planting			•	•	•							
348	Dam, Diversion				•								
386	Fence		•										
393	Filter Strip		•	•	•	•		•				•	
410	Grade Stabilization Structure			•	•			•					
561	Heavy Use Area Protection			•	•	•							
516	Livestock Pipeline				•								
378	Pond		•		•	•							
528	Prescribed Grazing			•	•	•		•				•	
391A	Riparian Forest Buffer		•	•	•	•		•					
574	Spring Development		•										
580	Streambank and Shoreline Protection			•	•	•		•					
584	Stream Channel Stabilization			•	•								
518	Stream Crossing			•	•								
395	Stream Habitat Improvement and Management			•	•								
575	Trails and Walkways				•	•							
612	Tree/Shrub Establishment			•	•	•							
614	Watering Facility		•		•	•							
644	Wetland Wildlife Habitat Management		•	•	•	•							
657	Wetland Restoration			•	•	•							

^ Water quality standards **directly** affected are shown for each component practice per BMP category. Nearly all water quality standards are indirectly affected by component practices.

* Ground Water designated beneficial uses include Domestic Water Supplies, Industrial Water Supplies, Agricultural Water Supplies, Aquaculture Water Supplies, and Mining.

IDAHO AGRICULTURAL POLLUTION ABATEMENT PLAN

SECTION F: IMPLEMENTATION

A Guidance Document Addressing Nonpoint Source Water Quality Pollution

2025

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IDAHO

IMPLEMENTATION

The NPS Plan serves as the foundation for management of all nonpoint source related activities throughout the state. Agricultural activities are identified as one of six nonpoint source sectors of water pollution in the state (as mentioned, other sectors include grazing, natural resource extraction, timber/silviculture management, urban/ suburban development, and transportation). The NPS describes the State of Idaho's strategy for addressing nonpoint source pollution collaboratively with local, state, and federal partners and serves as the basis for which to achieve the goal of this Ag Plan. General and specific goals for addressing nonpoint source pollution from agricultural activities are identified in the NPS Plan and include:

General NPS Plan Program Goals

- Continue to build and maintain partnerships. Partnerships are needed to utilize a collaborative approach to addressing issues associated with NPS water pollution.
- Provide continued technical assistance, outreach, and education. Providing these services and tools will help facilitate nonpoint source assessment, planning, and implementation.
- Continue to support ground and surface water monitoring efforts.
- Continue to integrate ground and surface water quality activities within basins and watersheds to improve program efficiencies and provide for better protection and restoration (where needed) of ground and surface water beneficial uses.
- Implement pollutant trading through the on-going policy and requirements addressed in the Water Quality Pollutant Trading Guidance.
- Continue to implement measures to protect drinking water from the effects of NPS pollution.
- Encourage the use of bioremediation techniques and biofiltration systems in project plans that involve a need for erosion control and stream channel stabilization.
- Implement the Ground Water Quality Rule.
- Provide a minimum of ten WQ-10 success stories by 2020 (EPA National Measure WQ-10, known as the 319 Program Measure, looks at the number of water bodies identified by states as being primarily nonpoint source pollution impaired that are partially or fully restored. These success stories include projects designed to reduce nonpoint source pollution and attain sediment TMDL goals).

Agricultural Activities Goals

- Update, maintain, and implement the terms of the AG Plan.
- Update and maintain the Idaho OnePlan.
- Update the Field Guide for Evaluating BMP Effectiveness (updated in 2014).
- Maintain and improve fish habitat within impacted streams on agricultural lands.
- Complete TMDL implementation plans (watershed management plans) and conservation accomplishment components of 5-year reviews.
- Encourage farm planning and BMP implementation.
- Encourage and implement, when possible, the use of grazing control methods such as fencing, developing riparian buffer zones, implementing grazing systems, providing alternative water sources and supplemental feed, and providing alternative shade sources to limit livestock impacts to streams.
- Restore riparian functions affected by past hydrological modification through BMPs.
- Develop and implement other initiatives to address channel modification, irrigation practices, and flow issues.

The stated goal of the Ag Plan is: Contribute toward full support of identified beneficial uses through enhancement and maintenance of the quality of surface and ground waters of Idaho, to the extent that they are impacted by agricultural nonpoint source pollutants. To achieve this goal, an implementation strategy that includes pollution prevention tactics and programs for all identified nonpoint source pollutants from agricultural activities must be developed, executed, evaluated, maintained and improved as water quality laws and circumstances change, and as funds become available.

The Ag Plan implementation strategy builds on the Idaho NPS Management Plan goals and includes several action items discussed on the following pages.

Action Item 1: Identify waters and/or watersheds threatened or impaired by agricultural activities.

Land managers and natural resource specialists will continue to evaluate existing information from monitoring and watershed inventories, and collect information as needed. Waters and/or watersheds threatened or impaired by agricultural nonpoint source pollution are identified using these ongoing evaluations.

Action Item 2: Prioritize waters and/or watersheds to determine the level of implementation efforts needed, including pollution prevention tactics and programs.

Currently, priorities for implementing agricultural BMPs are established through the Idaho TMDL schedule; ground water Nitrate Priority Areas; Drinking Water Protection Plans; Agricultural Ground Water Protection Program for Idaho; District five-year plans; impacted habitat areas related to aquatic species listed under the Endangered Species Act; NRCS water quality priorities, and other local water quality and habitat protection priorities.

Action Item 3: Identify specific watershed management strategies for implementation.

Specific water quality or watershed management strategies are identified by initiating communication and planning at the local level with Districts, Watershed Advisory Groups, and technical agencies, with overall guidance and support from the designated state or federal agencies. Landowners, operators and agency representatives should define and verify water quality priorities, identify appropriate BMPs and component practices needed for effective treatment, and proceed with protective or restorative land treatment through the voluntary implementation of BMPs. BMP implementation strategies should also define the implementation schedule and project anticipated time frames necessary to meet water quality goals.

Action Item 4: Define authorities, regulations and commitments to ensure that implementation will take place.

Authorities, regulations, permits, contracts, commitments, and other evidence sufficient to ensure that implementation will take place should be defined. Technical and financial resources at the local, state and federal levels will be coordinated.

The Idaho Soil & Water Conservation Commission is the state agency organized to provide guidance and program implementation for private and state agricultural land use activities with respect to water quality. Numerous units of state and federal government also have authorities, roles and responsibilities that play a part in the control and management of nonpoint source pollution, originating from agricultural activities, of surface and ground waters of

Idaho (see Section B). Implementation of the Ag Plan is accomplished through a variety of programs which provide:

a) Technical assistance to identify problems, design solutions, and evaluate practice effectiveness.
b) Information and education to raise awareness of agricultural pollution problems and solutions available; and
c) Financial resources as they become available and tax incentives to assist with the cost of BMP installation.

Planning water quality improvement projects requires integrating water quality objectives, resource needs, operator needs, and capabilities among many ownerships and available programs.

The implementation of Idaho's Ag Plan will involve coordination and cooperation among appropriate agencies and entities to ensure its use on all federal, state, and private agricultural lands in the state. Programs that may be available to assist landowners and operators with technical assistance and the voluntary installation of BMPs include:

- Agricultural Conservation Easement Program (ACEP)
- Columbia Basin Fish & Wildlife Program
- Conservation Operations Program
- Conservation Reserve Program (CRP)
- Conservation Reserve Program Continuous Sign-up
- Cooperative River Basin Studies Program (CRBS)
- Emergency Watershed Protection Program (EWP)
- Environmental Quality Incentives Program (EQIP)
- Fish and Wildlife Service Partners Program
- Food Security Act of 1985 (FSA)
- Food, Agricultural, Conservation and Trade Act of 1990 (FACTA)
- Grazing Lands Conservation Initiative
- Natural Resource Conservation Credit
- Resource Conservation and Development (RC&D)
- Resource Conservation and Rangeland Development Program (RCRDP) loans
- Rural Clean Water Program (RCWP)
- Rural Conservation Partnership Program (RCPP)
- CWA §319 Nonpoint Source Management Program Grants
- Soil and Water Conservation Assistance Program
- Source Water Protection Program
- State Revolving Fund
- Wetland Reserve Program

Action Item 5: Implement the feedback loop process.

The feedback loop process should be implemented as an imperative step for program effectiveness appraisal. The feedback loop describes a process of nonpoint source pollution management based on the implementation and evaluation of BMPs (see Section G). Evaluating the results of the feedback loop process should direct BMP implementation adjustments and follow-up monitoring requirements.

Action Item 6: Communicate evaluation results, conclusions, and recommendations from the process of assessing agricultural BMP effectiveness in achieving water quality goals.

Through the feedback loop review, the effectiveness of the BMP, as well as the BMP's ability to assist in achieving water quality goals, is evaluated. Results of agricultural nonpoint source pollution abatement and its effect on water quality improvement should be communicated and made available for review so program adjustments and recommendations can continue to be implemented.

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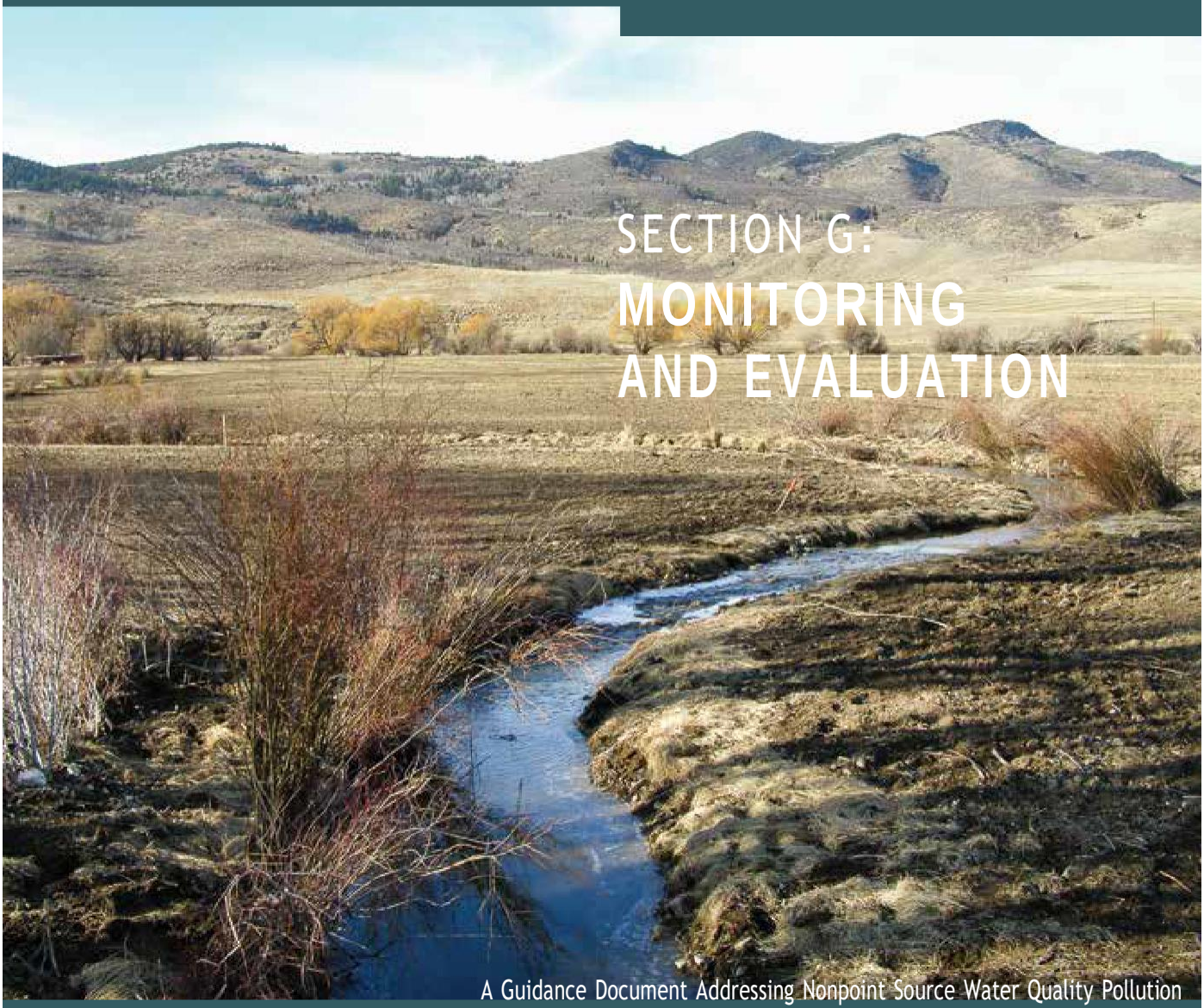

SECTION G:
MONITORING AND EVALUATION

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2025

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BMP MONITORING AND EVALUATION

Introduction

An important part of the Ag Plan is the evaluation of BMPs. Water pollution reductions and beneficial use improvements achieved through application of BMPs are recognized through monitoring and evaluation. When water quality goals are not achieved, monitoring and evaluation are used to determine the need for new or modified BMPs.

Agricultural nonpoint source pollution control in Idaho has been carried out primarily through voluntary actions, state and federal incentive programs, and regulatory programs. Therefore, the review of monitoring and evaluation procedures within these programs is essential for determining overall effectiveness of BMPs in controlling agricultural nonpoint source pollution.

The Feedback Loop Process

The premise of the feedback loop process is that nonpoint source pollution abatement, and ultimately water quality improvements and maintenance, are achieved through BMP installation, evaluation, and modification. An integrated system of BMPs is approved by state process (see Section E, Best Management Practices), implemented on a site-specific basis, evaluated through monitoring and modified as needed to achieve water quality standards. Implementing the feedback loop process to modify BMPs until water quality standards are met results in compliance with the standards.

The feedback loop process is designed to reduce nonpoint source pollution through the development, installation, evaluation, and refinement of BMPs.[42] This process first originated in the Idaho Water Quality Standards and Wastewater Treatment Requirements.[43] An important component in evaluation strategies, which precedes the feedback loop process, is determining whether the designated beneficial uses are appropriate. The process mainly applies to surface waters as drinking water is a beneficial use of all ground water in Idaho. Appropriateness of designated beneficial uses is evaluated on a case specific basis in accordance with DEQ guidelines. The feedback loop process consists of four steps (presented graphically in Figure G-1):

Step 1. The process begins by determining whether the designated beneficial uses are appropriate. The current designated beneficial use status of identified water resources is then reviewed.

Step 2. The existing water quality is compared to the water quality criterion established in Step 1. This comparison is the basis for developing or modifying BMPs.

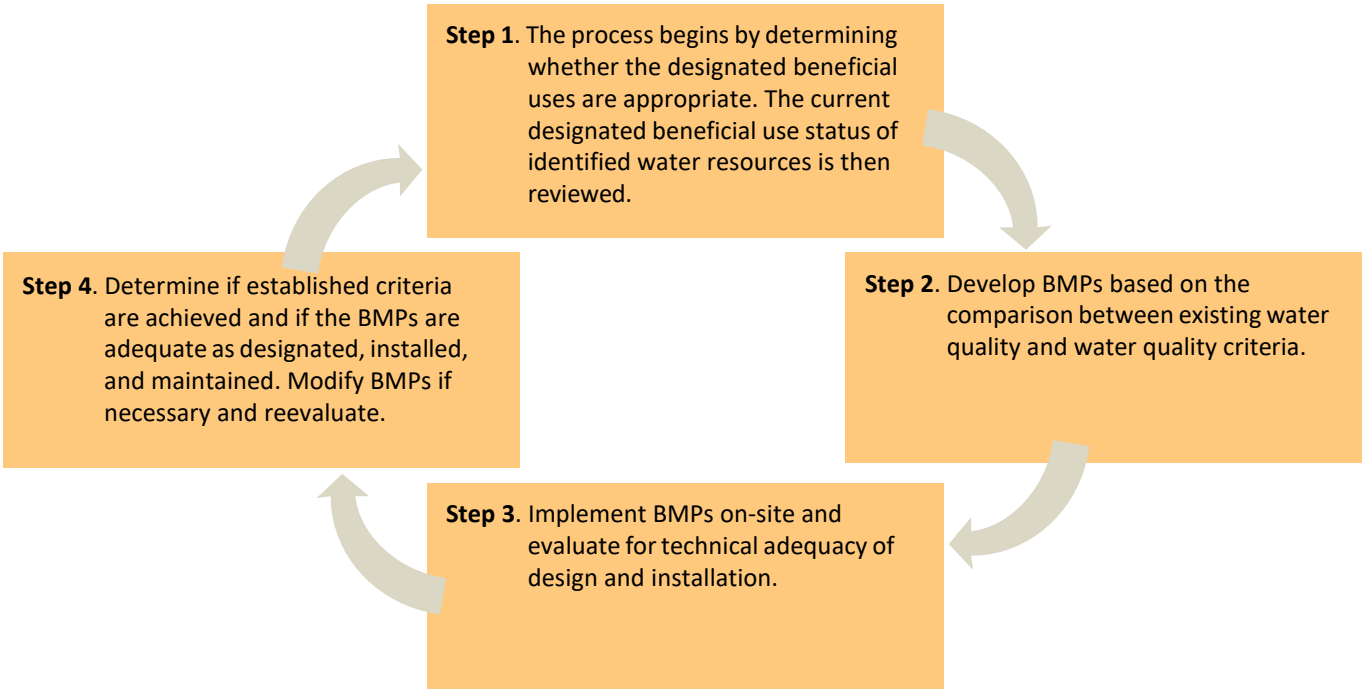
Step 3. The BMP is implemented on-site and evaluated for technical adequacy of design and installation.

Step 4. The effectiveness of the BMP in achieving the criteria established in Step 1 is evaluated by comparison to water quality monitoring data. If the established criteria are achieved, the BMP is adequate as designed, installed, and maintained. If not, the BMP is modified, and the feedback loop continues.

42 As per the Idaho Ground Water Quality Plan, Protecting Ground Water Quality In Idaho. December 1996 (page 77). Idaho Division of Environmental Quality, Department of Water Resources, and Department of Agriculture.

43 IDAPA 58.01.02 – Water Quality Standards and Wastewater Treatment Requirements. Modification of BMPs, §16.01.02350,02.c.iii.

Figure G-1. Feedback Loop Process



Monitoring Approach

BMP Effectiveness Monitoring

The BMP effectiveness review process includes evaluation of installation adequacy of component practices, progress in application of the BMP (resource management systems), and protection of the quality of the water resource. The process involves the entities with appropriate technical capabilities (i.e. Conservation Commission, ISDA, and DEQ) as well as the participating landowner. BMP effectiveness should be an integral component of every monitoring plan and follow these basic steps:

- Categorize appropriate local water quality concerns into measurable monitoring objectives.
- Select parameters that can be used to address each objective.
- Design an appropriate monitoring strategy, describe the rationale for that strategy and the intended and appropriate uses of the data.
- Describe the resources required to do the monitoring; and
- Assign responsibilities for all facets of the monitoring, from sample collection through data assessment and evaluation, to writing the final report.

A comprehensive evaluation of BMP effectiveness requires the integration of three types of monitoring:

- On-site evaluation of practice design and adequacy.
- Pollutant source and transport monitoring; and
- Instream and ground water beneficial use assessment monitoring.

On-site implementation evaluations are used to determine whether component practices are designed and installed according to project plans and in compliance with appropriate practice standards and whether they are being adequately maintained. The practice's relationship with other component practices is also evaluated to help determine if a complete resource management system has been achieved.

Pollutant source and transport monitoring assists in determining movement and delivery of nonpoint source pollution to receiving streams and aquifers. This can be done by sample collection and analysis, modeling, or a combination of the two methods.

Instream and ground water beneficial use assessment monitoring include surface water monitoring, groundwater monitoring, and drinking water monitoring.

Due to the diversity of the monitoring objectives and the plan composition, monitoring intensity will vary between projects. Monitoring intensity can be categorized into the following three levels:

Level I - administrative level: This includes project administration and information gathering activities. Project reviews, financial audits, Level I riparian assessments and ground water vulnerability maps fall into this level.

Level II - field reconnaissance and inventory level: This includes qualitative assessment, expert judgment, and quantitative evaluation to the extent possible. Inventories conducted in the field and visual estimates are means by which information may be gathered. An example of BMP effectiveness monitoring at this level is the process established by Conservation Commission which utilizes on-site evaluation, measurement, and documentation outlined in the Idaho Agricultural Best Management Practices, Field Guide for Evaluating BMP Effectiveness (revised April 2013). BMP implementation reviews and status reports are examples of qualitative monitoring activities.

Level III - intensive level: This is comprised of quantitative assessment techniques. Measurements of hydrology, streambank stability, fish population estimates, water chemistry analysis and vegetation community measurements are examples of pollutant source and transport monitoring and in-stream beneficial use assessment monitoring.

Surface Water Monitoring

Beneficial uses are the desired uses that water bodies should support. Beneficial uses include water supply (domestic, agricultural, and industrial); recreation (such as swimming, boating, and fishing); and aquatic life. Each beneficial use has a unique set of water quality requirements or criteria that must be met for the use to be supported. Most water bodies have multiple beneficial uses. A water body is considered impaired when it does not meet the water quality criteria needed to support one or more of its beneficial uses.

DEQ determines whether a water body fully supports its beneficial uses by evaluating whether the applicable water quality standards and criteria are being achieved and whether a healthy, balanced biological community is present. DEQ's Water Body Assessment Guidance describes a process that uses biological and aquatic habitat parameters, as well as traditional water quality data, to assist in assessing beneficial use status.

Currently, DEQ recognizes three categories of beneficial use support status: fully supporting, not fully supporting, and not assessed. "Fully supporting" means that the water body is in compliance with water quality standards and criteria and meeting the reference conditions for all designated and existing beneficial uses. "Not fully supporting" refers to a water body that is not in compliance with water quality standards or criteria, or not meeting reference conditions for each beneficial use. The "not assessed" category describes water bodies that have been monitored to some extent but are missing critical information needed to complete an assessment. "Not assessed" can also mean that DEQ has not monitored nor assessed the water body.

BMP effectiveness evaluations are conducted by the Conservation Commission at the field level to determine adequacy of installation of selected BMPs, consistency of operation maintenance, and relative effectiveness in reducing water quality impacts. Supporting documentation of water quality effects of applied BMPs was provided through the Agricultural TMDL Implementation Monitoring Program. The program was enabled through a memorandum of understanding, and was coordinated by ISDA, in conjunction with Conservation Commission and Districts, to supply water quality data for identification of agricultural pollution sources, support BMP effectiveness evaluations, and assist in implementing agricultural components of TMDLs. The monitoring program does not currently exist as the memorandum of understanding was eliminated in 2008.

Ground Water Monitoring

Several state agencies currently perform ground water quality monitoring. IDWR conducts the statewide ambient ground water monitoring; ISDA conducts agricultural related regional, local, dairy, enforcement, and BMP effectiveness monitoring; and DEQ conducts regional and local monitoring. Other agencies such as the US Geological Survey also conduct regional and local monitoring. These agencies work together to combine data for review and use by the DEQ lead Ground Water Monitoring Technical Committee. These efforts address objectives within a variety of programs including the Idaho Ground Water Quality Plan (1996), Agricultural Ground Water Quality Protection Program for Idaho (1996), ISDA's Federal Insecticide, Fungicide and Rodenticide Act cooperative agreement with EPA, the NPS Plan, and the Ag Plan.

DEQ issued a policy memorandum on March 1, 2000 to address degraded ground water quality areas (Policy No: PM00-4). The purpose of this policy is to set forth a process to identify, designate, and delineate areas where ground water quality is significantly degraded as defined by rule; prioritize the significantly degraded areas; with the use of local input, develop ground water quality management strategies for improving ground water quality in high priority areas based on current categorization and applicable standards; periodically review the effectiveness of the area-specific ground water quality management strategies; pursue re-categorization of high priority ground water areas when management strategies are ineffective and additional protection to improve or maintain water quality standards or preserve beneficial uses is necessary; and remove high priority designation when management strategies have proven to be protective of aquifer water quality and beneficial uses.

DEQ may initiate an evaluation at any time to determine whether ground water quality trends identify an area as being significantly degraded or having impaired beneficial uses. Water quality data used to identify degraded areas involves samples that are representative of the aquifer in question and/or representative of the impacted beneficial use. The DEQ recognizes that improvements to ground water quality from the effective implementation of BMPs, or other corrective and preventive measures, could involve significant time frames.

The DEQ, the local ground water quality advisory committee, other agencies, and the public will periodically review the implementation strategy and progress toward preventing further contamination of degraded areas. If corrective and preventive measures are being pursued without adequate improvements to ground water quality or other indicators of success, then the DEQ will work with the appropriate entities to refine the existing strategy. If ground water quality objectives are not being met due to inadequate implementation of BMPs, best practical methods, or other corrective or preventive measures, then regulatory actions as authorized by law may be pursued.

Drinking Water Monitoring

The Safe Drinking Water Act Amendments require states to assess the water (called source water) from which public water systems draw to provide drinking water. Once completed, the source water assessments provide information on potential contaminant threats to public drinking water systems. The Idaho Source Water Assessment Plan[44] was developed in response to requirements set forth by the Safe Drinking Water Act Amendments passed by Congress in 1996. The Idaho DEQ, in conjunction with its public advisory committee, has developed the Idaho Source Water Assessment Plan to describe the major components of, and the procedures for, conducting source water assessments. The Idaho Source Water Assessment Plan provides a structure for planning and achieving consistent, rational assessments, while promoting public involvement.

44 Idaho Source Water Assessment Plan. October 1999. State of Idaho DEQ-Ground Water Program.

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SECTION H:
PLAN DEVELOPMENT

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PLAN DEVELOPMENT

The original Ag Plan was certified in 1979 by Governor John Evans. The Ag Plan was Idaho's response to CWA §208 and represented the agricultural portion of the State Water Quality Management Plan. The previous Ag Plan versions detailed how agricultural nonpoint source pollution was to be managed. The Plan was revised in 1983, 1991 (published in 1993), 2003, and 2015.

The Ag Plan builds on the foundation laid specifically by the NPS Plan which sets goals and provides guidance for the management of all nonpoint source related activities throughout the state. The Ag Plan is the implementing action plan for all nonpoint source agricultural sector activities in the state.

The Ag Plan was undertaken with the guidance of representatives of local, state, and federal agencies with water quality responsibilities.

The Ag Plan is intended to be a dynamic guidance document, with periodic updates provided as needed. Sections may need to be updated on a regular basis as new information is accumulated. Development, review, and modification of BMP component practices, as an ongoing process through the Ag Plan, will provide a continual update of the Catalog of Component Practices.

Water quality laws, policies and programs are constantly changing to meet resource and society needs. The Ag Plan will be reviewed periodically and amended as necessary to ensure consistency and compatibility with state water quality programs and plans, state and federal legislation and local needs. The Conservation Commission will be responsible for initiating and coordinating this review. When substantial revision is warranted, an Advisory Committee will be convened to provide guidance.

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Richard Savage, Commissioner
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