

IDAHO

Nonpoint Source Management Plan



State of Idaho
Division of Environmental Quality
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LIST OF ABBREVIATIONS

§	Section
AML	Abandoned Mine Lands
APAP	Agricultural Pollution Abatement Plan
ARS	Agricultural Research Station
ASIWPCA	Association of State and Interstate Water Pollution Control Administrators
BAG	Basin Advisory Group
BIA	Bureau of Indian Affairs, U.S. Department of Interior
BLM	Bureau of Land Management, U.S. Department of Interior
BMP	Best Management Practice
BOR	Bureau of Reclamation, U.S. Department of Interior
CERCL	Comprehensive Environmental Response Compensation and Liability Act synonymous with “Superfund”
CES	Cooperative Extension Service
CWA	Clean Water Act
COE	Army Corp of Engineers
CRP	Conservation Reserve Program
DOT	Department of Transportation
EPA	Environmental Protection Agency
FERC	Federal Energy Regulatory Commission
FHWA	Federal Highway Administration
FIFRA	Federal Insecticide Fungicide Rodenticide Act
FOTG	Field Office Technical Guide
FWS	Fish and Wildlife Service
FPA	Forest Practices Act
FY	Fiscal year
GIS	Geographic Information System
GPS	Global Satellite Positioning System
GWMTCC	Ground Water Monitoring Technical Committee
HU	Hydrologic Unit Area
IASCD	Idaho Association of Soil Conservation Districts
IDAPA	Idaho Administrative Procedures Act
IDEQ	Idaho Division of Environmental Quality, Dept. of Health & Welfare
IDFG	Department of Fish and Game, State of Idaho
IDL	Department of Lands, State of Idaho
IDWR	Department of Water Resources, State of Idaho
IFOA	Idaho Forest Owners Association
IGS	Idaho Geologic Survey
I&E	Information and Education
ISDA	Idaho State Department of Agriculture
ITD	Idaho Transportation Department

LHTAC	Local Highway Technical Assistance Council
mg/l	milligrams per liter (synonymous with parts per million (ppm))
MOA	Memorandum of Agreement
MOU	Memorandum of Understanding
NEPA	National Environmental Policy Act
NMFS	National Marine Fisheries Service
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service, U.S. Department of Agriculture
ORV	Off Road Vehicle
ORW	Outstanding Resource Water
PL	Public Law
PL-566	Public Law 566, Watershed Protection and Flood Prevention
ppm	parts per million (synonymous with milligrams per liter (mg/l))
RBC	Risk-Based Corrective Action
RC&D	Resource Conservation and Development, U.S. Department of Agriculture
RCR	Resource Conservation Recovery Act
RCWP	Rural Clean Water Project
SAWQP	State Agricultural Water Quality Program
SARA	Superfund Amendments and Reauthorization Act
SCAA	Stream Channel Alteration Act
SLB	State Land Board
SCC	Soil Conservation Commission, State of Idaho
SCD	Soil Conservation District
SMP	State Pesticide Management Plan
SRF	State Revolving Fund
SRW	Special Resource Waters
TAC	Technical Advisory Committee
TCLP	Toxicity Characteristic Leaching Procedures
TMDL	Total Maximum Daily Load
TSCA	Toxic Substances Control Act
UIC	Underground Injection Control
USDI	U.S. Department of Interior
USFS	U.S. Forest Service, U.S. Department of Interior
USDA	U.S. Department of Agriculture
USGS	U.S. Geological Survey, U.S. Department of Interior
UWA	Unified Watershed Assessment
WAG	Watershed Advisory Group
WBAG	Water Body Assessment Guidance
WPCA	Water Pollution Control Act
WRAS	Watershed Restoration Action Strategies

INTRODUCTION

The significant problems we face cannot be solved at the same level of thinking we were at when we created them.

--Albert Einstein

The following overview of the State processes provides an outline of the historical background and current approaches the State of Idaho has taken to expand and enhance its nonpoint source control efforts with the goal of meeting state water quality standards. The overview focuses on the significant changes that have taken place among all agencies of the State and the processes through which the State presently works to ensure full statewide participation. All agencies are striving to achieve a consistent and uniform approach for water quality management. This effort includes all state and federal partners and the general public within the context of the Total Maximum Daily Load (TMDL) issue, as well as nonpoint source pollution prevention and control, in general.

If the State of Idaho were to be sectioned according to the major contributors of nonpoint source pollutants affecting both surface water and ground water, the result would partition the State as: 63% of the land ownership in federal lands, 33% private forest and agricultural, with the remaining largely devoted to the urban sector. This shows that by the State having a strong presence through the Nonpoint Source Management Plan in the agricultural partnerships of agencies, producer groups, Soil Conservation Districts, and the public, the State gains significant steps toward addressing the leading contributor to nonpoint source (NPS) pollution.

State Overview

Background - Historical

Historically, water has been an important issue in Idaho with mining, agriculture and hydropower playing the larger roles in the development and management of the State's water. With abundant water resources, conservation and water quality were at the bottom of the priorities to be addressed. As water resources became over-allocated, and conflicting issues between surface and ground water uses mired decision-making, the State legislature saw a need for a comprehensive water use plan. They created the Water Resource Board in 1965 with the charge "to formulate, adopt and implement a comprehensive state water plan for conservation, development management, and optimum use of all unappropriated water resources and waterways of the state, in the public interest" (Idaho Water Resource Board, 1992). Formulation and adoption of the plan started in 1974 and continued with periodic updating throughout the 80's. Seen as a dynamic process the plan included extensive public involvement through informational meetings and public hearings to ensure public input for all adopted policies and programs; set the roles of the various state agencies; set the stage for a basin approach to addressing the major stream systems; addressed both surface and groundwater conservation and protection; recognized equal consideration for fish, wildlife, and recreation; and otherwise strove to balance water quantity and quality issues in the State.

Comprehensive water planning set new directions for state water agencies. The new direction reached beyond the traditional uses of water and began to look at the associated environmental benefits and the water quality necessary to achieve those benefits. As the state agencies matured in their roles and federal pressures increased to protect water quality - processes, policies, and tools were developed to address the negative impacts to water quality from both point and NPS pollutants. These sector based tools became more important as the state integrated federal laws and regulations into its processes. Notable among those tools developed in response to Clean Water Act (CWA) §208 to address NPS pollution was the Idaho Agricultural Pollutants Abatement Plan (APAP or Ag Plan) (IDHW, 1991). It was developed by the Soil Conservation Commission (SCC) under contract with EPA between 1976-1979. The Ag Plan was first certified in 1979 as the agricultural portion of the Statewide Water Quality Management Plan, with the goal of restoring and maintaining the state's waters impacted by agricultural nonpoint sources to the point of fully supporting identified beneficial uses.

Under the leadership of the SCC, the Ag Plan was designed cooperatively by many local, state and federal agencies, individuals, and organizations. The Ag Plan identified areas where water quality impacts could result from agricultural activities, described the agencies responsible for addressing those water quality impacts, identified Best Management Practices (BMPs) needed to reduce those impacts, and recommended changes needed to reduce agricultural NPS pollution. The Ag Plan was revised in 1983 to address the newly developed State Agricultural Water Quality Program. It was revised again in 1991 to incorporate the many changes in issues and impacts resulting from agricultural uses not adequately addressed previously. At that time the Ag Plan was initiated by adding it as an appendix (A-4) to the Idaho Nonpoint Source Management Plan MOU (Appendix A-1). In addition to irrigated and nonirrigated crop production, the Ag Plan includes livestock grazing/riparian management, non-permitted livestock confinement areas, agricultural chemical management, ground water protection and wetlands. The Ag Plan in conjunction with the *Coordinated Nonpoint Source Monitoring Program For Idaho* (IDHW, 1990) and operating under the auspices of the new roles and direction of Water Quality Law §39-3601 et. seq., remains "the operational guideline" by which the SCC, as the designated agency for private and state agriculture and grazing lands, conducts business with its state and federal partners to address agricultural NPS pollution. As an addendum to the Ag Plan, the MOU (Appendix A-5) adopting the Coordinated Resources Management Planning process (CRMP) was included as the vehicle by which the SCC works with the NRCS, Forest Service (FS) and Bureau of Land Management (BLM), as well as other state agencies and producer groups on federal land use issues, relating to crop or livestock production.

Individual agricultural landowners and operators work in cooperation with numerous entities to achieve the goals of the Ag Plan. Chief among those are the 51 Soil Conservation Districts (SCDs) administered statewide by the SCC. In partnership with the SCC and Natural Resource Conservation Service (NRCS), they address the management of all state and private agricultural lands within their boundaries. This partnership is further enhanced by the co-location of the offices of the local SCD, SCC technical representative and NRCS field office. They collectively include any other state or federal land management agency, and local government into resource planning or implementation decisions. SCDs are partially funded by counties and regularly provide input

for planning and zoning or other resource issues to local entities. SCDs are required to develop Five Year Plans for local implementation of statewide priorities. Setting of these priorities were initially an ongoing process which used: information from §208 watershed studies, Clean Lakes studies, Idaho Water Resources basin studies, Basin Area Meetings held across Idaho, priority stream segments as listed in the Ag Plan, and the State's assessment of nonpoint sources as its basis. This represents a vehicle by which long term state priorities are updated and incorporated into local decision-making. With the adoption of Water Quality Law §39-3601 (Appendix B) Basin Area Meetings and Stream Segments of Concern, as listed in the Ag Plan were rescinded to incorporate the Basin and Watershed Advisory Group process and 303(d) priority list.

The State Agricultural Water Quality Program (SAWQP) co-administered by the SCC and IDEQ, was designed and incorporated as the planning and implementation component of the Ag Plan in 1979. The SAWQP was initiated on a watershed scale project basis, with projects selected jointly by the SCC and IDEQ from a competitive priority list made up from proposals submitted by SCDs statewide. It provided funding for watershed scale planning projects, which if selected for implementation included; information and education, administrative, technical assistance, and BMP implementation funding for up to 75% of the installation costs. Within these project areas critical acreage and pollutant sources were identified, and specific BMPs initiated to prevent and control NPS pollution. The planning process required input and participation by all state and federal land agencies having management activities within the project area. BMPs applied were those listed within the Ag Plan, which originated from the NRCS field office technical guide determined to provide the most benefit toward protection and enhancement of surface and ground water quality. Any changes made to the Ag Plan are required to be signed off jointly by both IDEQ and the SCC.

As the SAWQP program expanded and was revised to meet changing needs, it undertook some steps that produced significant changes in statewide agricultural operations, and in statewide program delivery. Among those changes on farming operations was a focus on adoption of no-till and reservoir tillage technology. The program adopted and promoted use of these practices, even paying for the purchase of no-till drills by SCDs to further encourage adoption. A significant changeover from traditional flood irrigation to sprinkler systems occurred throughout irrigated cropland as the practice was incorporated for cost-share into the Ag Plan. A nutrient management standard was adopted and recently updated which should go far toward reducing the impacts from fertilizers and soil amendments to surface and ground waters. Inclusion of non-traditional recipients for project benefits, such as canal companies increased the ability of the state to encourage water quality protection, while at the same time increasing the number of partnerships into NPS planning and implementation activities.

Important to comprehensive statewide planning and consistency, the SAWQP was also instrumental in providing interagency state/federal integration of planning through the CRMP process. The CRMP process is enhanced watershed planning and implementation by incorporation of all land users/managers and has included the FS, BLM, BOR, F&WS, NRCS, SCC, IDFG, ISDA, IDL, IDEQ, ICA, and others. The process has resulted in integrated contracts and cost share for cooperator projects (e.g., grazing management, stream renovation, enhancement of fish

and wildlife habitat, wetland restoration and protection). Also tied into this cooperative watershed planning and implementation process were many joint NRCS Farm Bill, PL566, Clean Lakes, and SAWQP projects implemented around the State. NPS Program elements were integrated by the agencies through cooperative MOUs, so the cooperator had just one contract containing only those programs in which they chose to participate.

From initiation of the SAWQP program in 1981 and continuing through the present day, the State has allocated approximately \$40 million to providing 34 planning and 48 implementation projects for agricultural NPS prevention and control. This has led to widespread adoption of BMPs statewide that would not otherwise have been implemented. It has funded important local strategies for specific projects that led to significant reductions in sediments and nutrients entering 303(d) listed stream segments. Additionally, it has initiated collaborative planning efforts from many local, state, and federal entities working together on watershed planning and implementation projects. Much of the technical assistance paid for through SAWQP was provided by MOUs between local SCDs and their NRCS counterparts. These efforts represent approximately 1,200 contracts covering 320,000 acres where BMPs have been applied. This does not account for numerous water quality, wildlife, and fish enhancement projects undertaken by joint efforts (e.g., removal of agricultural drains from streams, providing fish passage through culvert sizing and relocation, fish ladders, fish diversion screens, wetland and habitat development), cooperative projects with SCDs, BOR, ISDA, IDEQ, IF&G, and numerous private entities. Additionally these efforts do not account for the extensive CRMP partnerships covering large areas of federal grazing lands. Associated monitoring with these projects included instream work by IDEQ, and various private contractors, site specific monitoring and BMP effectiveness by ISDA, NRCS, SCC, SCDs and others.

The working relationship involving all land users in local decision-making has made the transition into the changes specified under Water Quality Law §39-3601 an easy transition. The groundwork for the transition had been laid by many years of watershed scale planning through SAWQP projects. The largest change was in refinement of the process to ensure all entities were at the table that were affected by, or had an interest in the process, and secondly to ensure a entities which participated in the process were able to tap into some source of funding to implement planned activities. As the §319 NPS program process became more refined, it became the tool to fill the gap between NRCS Farm Bill programs, CRMP efforts, and the SAWQP program. Projects were funded consisting primarily of urban components, and site specific projects which did not require a full NRCS Resource Management Plan, nor watershed scale planning (e.g., artificial wetlands, riparian fencing, storm water treatment, etc.).

The SAWQP program has been under a new contract moratorium for approximately the last two years, during which the SCC has been formulating a new state funded program to address agricultural NPS prevention and control. The rules for the new program will be submitted to the FY2000 legislature. The new program will primarily mirror the previous SAWQP effort in that it will be targeted to NPS pollution prevention and control activities for 303(d) listed stream segments. SCC has been additionally working on a proposal to apply for a federal Conservation Reserve Enhancement Program (CREP), which will also be finalized during FY2001. As a result

of these changes in programs, and due to the increased programming requirements to meet the Nine Key Elements for enhanced benefits, the §319 NPS Program has taken on the role as the umbrella program designed on a watershed scale, inclusive of all entities receiving a load allocation from the TMDL, and targeted to implementation of TMDL activities.

State Overview

Background - Recent

Revisions of the Clean Water Act of 1987 established new directions to improve water quality efforts in the United States. Recognizing the importance of nonpoint source water pollution, the Clean Water Act was amended to include the §319 nonpoint source management program. The IDEQ developed its initial nonpoint source program in 1989 through the coordinated effort of representatives of numerous organizations having an interest in the management of nonpoint source water pollution. Idaho has ambitiously pursued implementation of its program over the past seven years, dedicating personnel and monetary resources to the advancement of nonpoint source water pollution control activities.

In 1995, Idaho undertook a nonpoint source program audit with an eye to recommending changes that would increase the effectiveness of the various ongoing nonpoint source efforts. The audit was one step in the process to determine if nonpoint source management practices were being implemented and maintained on the ground, and if they were being effective in controlling water pollutants. Findings and recommendations from the audit were reported to the management staff of the IDEQ and the resource agencies that had participated in the initial establishment of the nonpoint source program.

The task summary report from the audit revealed that 87% of the tasks originally laid out in the *1989 Idaho Nonpoint Source Management Program* (IDHW, 1990) were accomplished. However, the audit also pointed out that the long term effectiveness in documented water quality improvements was lacking. The major challenges before the program included: (1) a systematic way to assess nonpoint source problems statewide; (2) a clear prioritization process that helps provide solutions to areas of concern; (3) coordination and collaboration among state, federal, and local entities committed to water quality protection and restoration; (4) change from the historical focus at the landscape level into the watershed or drainage basin level; (5) long term maintenance and upkeep of nonpoint source controls after project monies cease; and (6) documenting lasting water quality improvements in project areas.

It is clear that these challenges are bigger than the nonpoint source program alone. In order to meet the challenges that Idaho water quality programs faced, new partnerships among agencies, tribes, and local stakeholders needed to be forged. Toward this end, in 1995, the Idaho legislature adopted a law (Water Quality Law §39-3601, Appendix B) to provide direction for local watershed planning and management. Under the new law, community-based advisor committees recommend to the IDEQ and other resource agencies how to properly manage the state's watersheds.

Basin Advisory Groups (BAGs) have been established in each of the six river basins around the state. BAG membership:

Shall be representative of the industry and interests directly affected by implementation of water quality programs within the basin, and either reside within the basin, or represent persons with real property interests within the basin. The shall reflect a balanced representation of interests in the basin and include; representatives of forest products, agriculture, mining, local government, livestock, water based recreation, environmental interests, non-municipal dischargers, tribes, and the general public.

Their responsibility is to make recommendations to IDEQ on water quality issues, including monitoring, revisions to beneficial use status, prioritization of impaired waters, review development and implementation of TMDL processes, and solicitation of public input

The 18 Watershed Advisory Groups (WAGs) recognized to date, are developing watershed management plans (TMDLs) necessary to protect and restore Idaho's water quality. WAG membership is open to all interested parties:

Shall be representatives from industry and other interests affected by the management of a given watershed, along with representatives of local government and the land managing or regulatory agencies with an interest in the management of that watershed and quality of the water bodies within it

They advise IDEQ on the development and implementation of those actions needed to effectively control pollution sources within a watershed, so that within a reasonable period of time designated beneficial uses are fully supported. Implementation strategies developed may include educational, voluntary, and regulatory approaches. The proposed strategies include actions required of each agency and affected industry, implementation schedules, estimated costs and budgets, a strategy for coordination, ongoing planning and management, provisions for public involvement, and evaluation of the effectiveness of the actions taken.

Under current operations, as outlined in Water Quality Law §39-3601, SCDs are members of WAGs and have been instrumental in formation of WAGs if none currently exists. WAG technical assistance is provided through cooperative technical committees made up of all agency water quality technicians available to the WAG. Their technical input is used in conjunction with technical assistance provided from other agencies, local interest groups, and the public for planning and priority setting used for the implementation of watershed NPS prevention and control activities. The local input assures all participants - various interest groups, citizens, producers, regulated and nonregulated groups have input into the decision making process. Statewide priorities are provided by the designated agencies to the BAGs and WAGs. SCDs are direct recipients of §319 funding, as well as other federal and state funding for NPS prevention and control, and therefore act as one of the primary implementation entities for TMDL activities.

The WAG and the lead agency forward completed watershed (TMDL) plans to the BAG for review and comment. The final plan is sent to IDEQ for adoption as part of the state's water quality management plan. TMDL implementation plans on a watershed or subwatershed scale are sent by the WAGs to the BAGs, are ranked statewide by the BAG chairmen and IDEQ staff, and are then sent to IDEQ administration with a recommendation for §319 funding. IDEQ adopts and implements the plans according to statewide priorities, and as funding is available.

The local advisory group approach goes a long way towards rectifying the fragmented nature of resource management by achieving a satisfactory level of rational local comprehensive planning and compatible institutional arrangements to facilitate watershed planning and implementation. This arrangement also affords the opportunity for input from various interest groups, including state and federal agencies, and serves as a vehicle for ensuring that these locally developed plans are compatible with the physical environment, reflect social values, and meet the desirable technical goals of sound watershed management. Additionally, IDEQ and other involved agencies benefit through the advice of the BAGs and WAGs, by gaining an incredible amount of input for the enhancement and focusing of all watershed based actions.

As integral components of the BAG/WAG process, technical committees of state and federal agencies play important roles. They help with planning and development of local priorities and direction for water quality protection and restoration based on state and federal guidance, BAG/WAG input, and the State NPS Plan. Examples of these interagency committees for statewide priority setting and inclusion into ongoing processes are the Ground Water Cooperative Agreement Implementation Group, Agricultural Groundwater Coordination Committee, NRCS State Technical Committee, Forest Practices Act Advisory Committee, the State BMP Committee, State Water Quality Committee and the Agricultural TMDL Technical Committee.

Water Quality Law §39-3601 also further defined the roles of the State agencies by assigning designated agencies for those activities within the State that are major contributors of nonpoint source loadings to waterbodies. These are:

The Department of Lands for timber harvest activities, for oil and gas exploration and development and for mining activities; the Soil Conservation Commission for agriculture and grazing; the Department of Transportation for public road construction; Department of Agriculture for aquaculture, and the Department of Health and Welfare Division of Environmental Quality for all other activities.

The designation of specific agencies gives the State the ability to target projects and programs toward specific activities. By working through the designated agencies the State also gains consistency in adoption and application of prevention and restoration activities statewide. Additionally, it ensures that any given agency has a recognized responsibility for a consistent and uniform approach for dealing with their constituency. Inclusive in the roles for these agencies are other state and federal programs with funding sources, 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 SCC and SCDs with the NRCS. Setting of similar goals, priorities, and program requirements has enhanced the ability of a partners to get the job done, stretched available funding, and ensured state/federal consistency in approaching the challenges posed by nonpoint source pollution and TMDL implementation.

Additional statewide tools provided by the water quality law included continuation of the Beneficial Use Reconnaissance Program (BURP) which conducts beneficial use attainability and status surveys to identify appropriate designated uses, and determine the status of designated beneficial uses in each waterbody. It also provided for ongoing associated monitoring to measure protection and restoration efforts toward achieving and/or maintaining water quality standards. The monitoring by IDEQ has been enhanced by cooperative watershed projects, site-specific projects, and BMP effectiveness monitoring by ISDA, the SCC, and IASCD.

The law also forced an element of statewide coordination and collaboration among state, federal and local entities focusing on TMDL issues and priorities that were not fully achieved in prior planning and restoration efforts. The State stream priority 303(d) list and categorization according to the Idaho Unified Watershed Assessment and Restoration Process (UWA MOU Sep 1998, Appendix A-7) has become the “driver” for watershed based activities. The Idaho Unified Watershed Assessment and Restoration Process has occurred at a time where there has also been a focus on integration of endangered species, Bull Trout restoration planning, groundwater and sole source aquifer protection, urban impacts, point source, and interagency land use issues—into watershed-based implementation activities. Ongoing interagency technical committees work together to forge priorities, develop and merge available tools, and strive to integrate other environmental and natural resource management programs to enhance the environmental benefits achieved statewide.

An example of the technical achievements gained by the state/federal interagency State BMP Technical Committee, which reviews, updates, and adopts BMPs for inclusion into the Ag Plan, would be the new revision of the nutrient management standard (NRCS 590 - July, 1999). The new standard requires use of a nutrient management budgeting approach for application of a fertilizers and soil amendments, if applicable to the farming operation for operators applying for state or federal cost-share funding. It also specifies a minimum amount of soil testing and field level record keeping that will help the State in meeting surface and groundwater nutrient reductions. This will also be important to forging new directions for implementation efforts under the new source water protection planning for municipalities over the next few years. It is also currently a component of the ISDA comprehensive farm planning efforts under the Dairy Initiative (MOU, Appendix A-6), and will be included in the new “Swine and Poultry” Rulemaking currently underway by the State.

Purpose and Objectives

In 1996, the Association of State and Interstate Water Pollution Control Administrators and the Environmental Protection Agency (EPA) restructured the guidelines for state nonpoint source programs. Nine key elements were identified as necessary components for successful programs.

The nine key elements are:

1. Explicit short and long-term goals, objectives and strategies to protect surface and ground water.
2. Strong working partnerships and collaboration with appropriate state, tribal, regional, and local entities, private sector groups, citizens' groups, and federal agencies.
3. A balanced approach that emphasized both statewide nonpoint source programs and on-the-ground management of individual watersheds where waters are impaired or threatened.
4. The State program (a) abates known water quality impairments resulting from nonpoint source pollution, and (b) prevents significant threats to water quality from present and future activities.
5. An identification of waters and watersheds impaired or threatened by nonpoint source pollution and a process to progressively address these waters.
6. The State reviews, upgrades, and implements all program components required by §319 of the Clean Water Act and establishes flexible, targeted, interactive approaches to achieve and maintain beneficial uses of waters as expeditiously as practicable.
7. Identification of Federal lands and objectives which are not managed consistently with State program objectives.
8. Efficient and effective management and implementation of the State's nonpoint source program, including necessary financial management.
9. A feedback loop whereby the State reviews, evaluates, and revises its nonpoint source assessment and its management program at least every five years.

The purpose of the 1999 Idaho Nonpoint Source Management Program is to describe how the State of Idaho intends to meet these nine key elements and the §319 requirements of the Clean Water Act. Chapters 1 through 9 address each of the key elements separately with the final, Chapter 10 outlining specific conclusions and recommendations.

State Overview

Current

Local, regional, and statewide nonpoint source pollution control projects, meeting the criteria set forth in this document, will be eligible for §319 funding. Additionally, Idaho in revising its nonpoint source management program plan is placing a concerted emphasis on the implementation of measures identified in approved TMDL implementation plans and/or Watershed Restoration Action Strategies (WRAS) in accordance with its Unified Watershed Assessment process, as necessary to protect or restore beneficial uses impaired by nonpoint source pollution. With the recent federal protocol for addressing 303(d) listed waters IDEQ will be expanding its efforts for developing collaboration with all its federal partners to ensure listed stream segments meet water quality standards and beneficial uses. Additionally IDEQ has expanded efforts to tie in the urban runoff (stormwater, construction, state and federal roads, etc.) industrial land application, stream alteration (401), and animal feeding operation components into TMDL/WRAS planning and implementation. IDEQ feels that the new Water Quality Law §39-3601 et. seq., and ensuing processes has greatly enhanced Idaho's ability to address the six challenges set forth in the ***Background*** section above. Additionally since passage of Water Quality Law §39-3601 IDEQ has continually worked to broaden and strengthen its nonpoint

source management program through increased partnerships, better public education, and enhanced implementation efforts. These efforts have directed the State of Idaho toward further consistency with the nine key elements of an enhanced program delivery.

This document was sent to each of the designated state agencies, the federal natural resource agencies, the 51 soil and water conservation districts, and several other groups and organizations for review at a number of stages. The final draft is being provided for public comment on the IDEQ website. Newspaper advertising and a concurrent mailing notice through the NPS Program mail list will provide statewide notice of a 60-day comment period to ensure public comments are incorporated prior to submittal of the final document to EPA. All public comments have been incorporated as appropriate into the final document. A "Responsiveness Document" has been compiled for all general comments. It has been mailed to all entities who submitted comments and is available upon request through IDEQ, c/o Gary Dailey, 1410 North Hilton, Boise, ID 83706.

IDEQ would like to specifically thank the following individuals for providing their insight, guidance, and constructive comments during the development of this document.

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Erwin Cowley	BLM	Winston Wiggins	IDL	Jerry West	IDEQ
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Dave Gregor	IDWR	Sally Goodell	IDEQ	Teena Reichgott	EPA
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Joe King	IDEQ	Roy Jost	ITD	Mike McIntyre	IDEQ
Todd Maguire	IDEQ	Larry Koenig	IDEQ	Jim Wood	NRCS
Byron Keel	LHTAC	Don Martin	EPA	Dave Zimmer	BOR
Ronda Hirnyck	CES				
Boise Cascade Corporation				Southwest Idaho Basin Advisory Group	
Payette Soil and Water Conservation District				State of Idaho Mining Advisory Committee	

CHAPTER 1 - NONPOINT SOURCE PROGRAM GOALS AND OBJECTIVES

Key element #1 states that " *The State program contains explicit short and long-term goals, objectives, and strategies to protect surface and ground water.*"

The vision of the Idaho Nonpoint Source Management Program is that all long-term goals and short-term objectives listed in tables 1.1 through 1.9 be implemented in a manner to protect or restore (where possible) the beneficial uses of the State's surface and ground water. A discussion of Idaho's TMDL and implementation strategy, consistent with the State of Idaho's *Unified Watershed Assessment and Watershed Restoration Action Strategies* (WRAS) (Appendix A-7) is outlined throughout this document. Supplemental guidance from IDEQ which outlines the state of Idaho's TMDL process *Guidance for Development of Total Maximum Daily Loads* (IDEQ 1999a) and *FINAL DRAFT Overview of the Implementation of Nonpoint Source TMDLs* (IDEQ 1999b) are attached in Appendix C and D. The continuing focus for the State of Idaho within the foreseeable future will be to develop and implement TMDLs/WRASs for §303(d) listed water bodies. The state of Idaho has committed to the completion of TMDL implementation plans within an 18 month period following the EPA approval of a TMDL.

The nonpoint source management revision team comprised of state and federal natural resource agency representatives focused on developing action oriented long-term goals and short-term objectives which could be readily included in either nonpoint source management plans or as part of the implementation of TMDLs being developed or scheduled for development by the State of Idaho. A TMDL is a strategy for bringing a water body back into compliance with water quality standards and for improving water quality to the point where designated beneficial uses are full restored. Indicators of success will be the reduction in the numbers of surface water bodies included on the state's §303(d) list throughout Idaho and the reduction in priority ground water sites and areas where nonpoint sources may be threatening ground water quality.

Figure 1.1 outlines the parameters reported to be contributing to the possible impairment of beneficial use(s) and the subsequent surface water listing in the Idaho 1996 §303(d) list. Table 1.1 outlines the major sources of ground water contamination in Idaho as reported in the 1996 §305(b) report and summarized in Chapter 5 of this document.

The State Nonpoint Source Management Program Plan will be used as a significant tool by which the State will achieve restoration, maintenance and protection of the beneficial uses of both surface and ground water bodies. Milestones have been placed on both the long-term goals and short-term objectives which outline the State's implementation strategy for the restoration of beneficial uses impaired due to nonpoint source pollution.

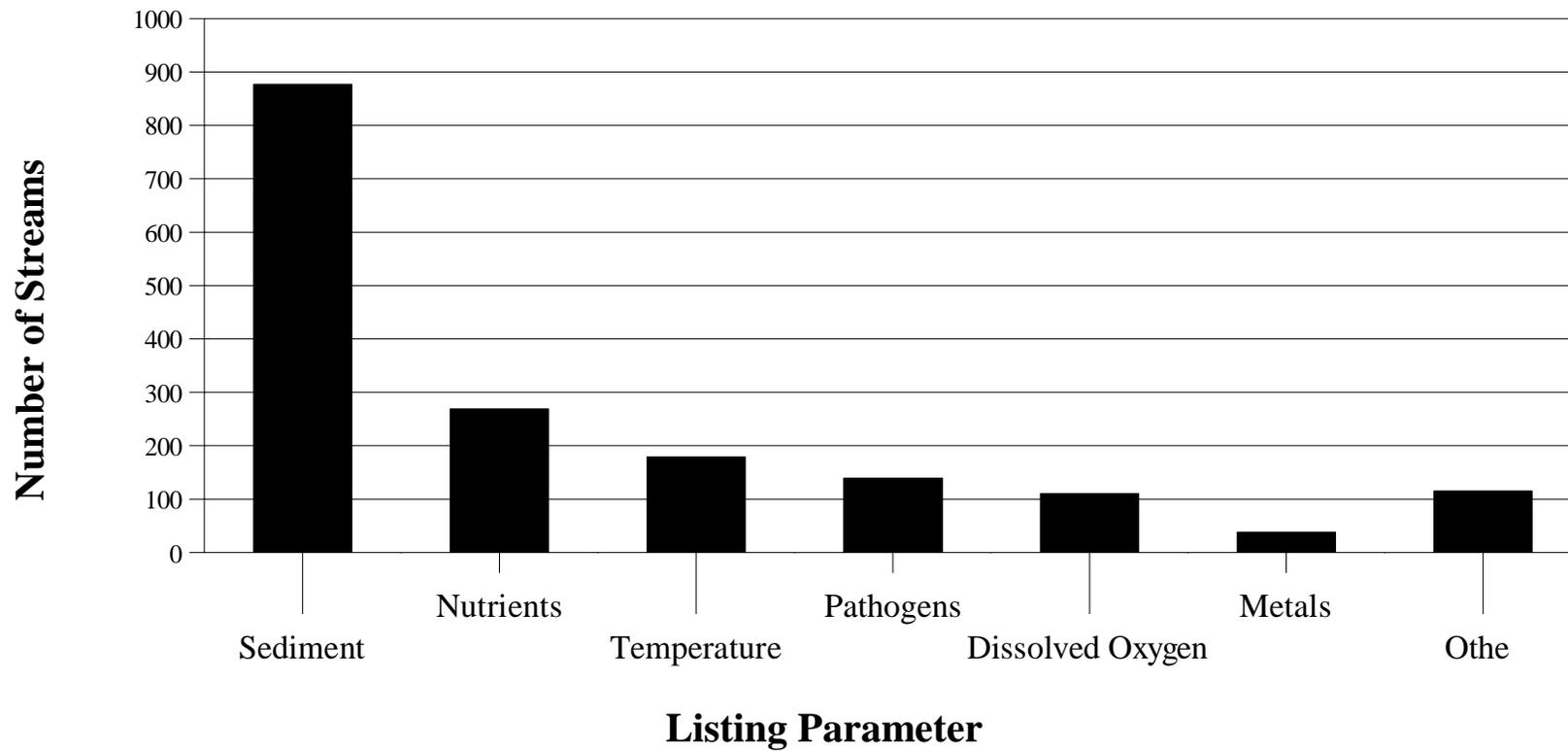


Figure 1.1 1996 §303(d) Surface Water Listing by Parameters.

Table 1.1 Major sources of ground water contamination in Idaho (Source: 1996 §305(b) Report).

<ul style="list-style-type: none"> • Animal feedlots • Fertilizer applications • Pesticide applications • Shallow injection wells/Urban Runoff • Landfills • Industrial facilities • Storage tanks (underground) • Septic systems • Land application • Waste tailings 	<ul style="list-style-type: none"> • Agricultural chemical facilities • Drainage wells • Storage tanks (above ground) • Surface impoundments • Waste piles • Deep injection wells • Mining and mine drainage • Spills
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General Program Goals

These general goals should focus the implementation efforts and measures identified in approved TMDL/WRASs strategies necessary to protect and restore beneficial uses, coupled with additional efforts to prevent significant threats from present and future activities to degrade water quality. It will also target nontraditional partners and incorporate their roles into those planning and implementation activities, such as; Idaho Cattle Association, irrigation and canal districts, etc. (See Introduction, and Agency Roles Chapter 2).

When developing goals for the revised nonpoint source management program plan, the nonpoint source revision committee discovered that many goals were common to each category. These are the long-term goals that each agency is intended to work on based on state, or federal statutes, or local legislation. In order to reduce the redundancy of listing the same goal multiple times, common goals have been included in a general program goals section. Each goal listed in Table 1.2 should be considered applicable to all nonpoint source pollution categories. The implementation of the general program goals and the other category specific goals listed in the remainder of the chapter will ensure that Idaho meets its strategic mission to “preserve the quality of Idaho’s air, land, and water for use and enjoyment today and in the future” (IDEQ, 1998c).

Long term goals are designed to be consistent with the time frame of the programs used to achieve the objectives as outlined. Idaho’s TMDL development and implementation schedule extends into approximately 2005. All associated efforts will extend through this time frame, with some indicators for improvements in water quality not evident for several more years. This also provides an adequate time frame for all agencies, groups and tribes to integrate protection and restoration activities for surface and ground waters. Therefore, as a minimum, long-term goals outlined in this document are based on a ten to fifteen year time frame. The short-term objectives listed in this plan will be implemented and revised as necessary over the next five years such that surface and ground water beneficial uses, to the extent practicable, are fully restored or maintained.

Table 1.2 General Long Term Goals (G)									
		Existing	New	1999	2000	2001	2002	2003	Responsible Agency
G-1	Develop and implement coordinated restoration and water quality improvement plans (TMDL/WRAS/ or other implementation plans) which include appropriate BMP design, implementation, monitoring, and maintenance schedules for nonpoint source impacted surface and ground waters that help to restore, protect, or remediate (where appropriate) existing or designated beneficial uses of the State's surface and ground waters. (#/yr)	X		12	13	9	10	9	DEQ, IDFG, IDL, IDWR, ISDA, ITD, BLM, BOR, COE, EPA, NRCS, SCC, SCDs, USFS
G-2	Implement nonpoint source BMPs to meet approved TMDLs, TMDL implementation plans, and ground water standards.		X	—————					IDEQ, IDL, IDWR, ISDA, ITD, BLM, BOR, COE, EPA, NRCS, SCC, SCD's
G-3	Provide technical assistance in the development of surface and ground water BMPs and pollution prevention strategies for nonpoint source categories which are no currently listed as approved in the water quality standards.	X		—————					IDEQ, IDL, IDWR, ISDA, ITD, BLM, BOR, COE, NRCS, SCC, SCD's USFS
G-4	Confirm that all agencies are implementing the nonpoint source management feedback loop in a manner consistent with the nonpoint source management program and, where appropriate, are revising and/or maintaining BMP catalogs and effectiveness protocols.	X		—————					IDEQ, IDL, IDWR, ISDA, ITD, BLM, BOR, COE, NRCS, SCC, SCD's USFS

Table 1.2 General Long Term Goals (G)									
		Existing	New	1999	2000	2001	2002	2003	Responsible Agency
G-5	Support ground or surface water monitoring efforts which provide needed data for contaminant transpor modeling and investigation work.	X		—————					IDEQ, IDWR, ISDA, USGS, SCC, SCD, IASCD, ISDA
G-6	Integrate ground and surface water quality concerns within basins and watersheds to provide for better protection and restoration (where appropriate) of ground and surface water beneficial uses.		X	—————					IDEQ, SCC, SCD, IASCD, ISDA
G-7	Develop and implement pollution trading approaches.		X	—————					IDEQ, All other interested agencies, groups, entities
G-8	Implement measures to protect drinking water from the effects of nonpoint source activities.		X	—————					IDEQ, SCC, SCD, IASCD, ISDA
G-9	Update and maintain the NPS umbrella MOU and appendices.		X		—————				IDEQ, EPA, IDWR, CES, NRCS, FSA, FS, IDFG, BLM, ISDA, SCC, IDL

Background Agriculture/Silviculture/Hydrologic & Habitat Modification

Agriculture, silviculture, hydrologic, and habitat modification for the purposes of the Nonpoint Source Management Program include: the cultivation of cropland; including silvicultural cultivation; raising of livestock; harvesting of forest products; construction of roads on public and private lands; changes to in-channel hydrologic functions; channel and aquatic habitat conditions; and adjacent riparian habitat conditions.

Agriculture and the food processing industry is one of the state's largest industries. Idaho's 22,000 farms and ranches, operating on 13.5 million acres, produced \$3.3 billion in cash receipts in 1997 ranking the state 25th in the nation. Idaho has led the country in potato production since 1957, and is also number one in Austrian winter peas, wrinkled seed peas, trout, sweet corn seed, and vegetable seed. Idaho ranks second through fifth in the production of lentils, sugar beets, dry edible peas, barley, alfalfa seed, hops, peppermint, spearmint, prunes and plums, onions, American cheese and spring wheat. Idaho's cattle industry ranks about seventeenth nationally, with cattle feeding operations of 1,000 or more head capacity ranking eighth, and shifting between seventh and eighth for dairy production. Additionally, in 1997 Idaho's farmland provided \$95.8 million in property tax revenue. Exported agricultural commodities (1996) were valued at approximately \$901 million (Id. Ag. Statistics, 1998).

The forest products industry is also an important segment of the economy in Idaho. Timber is harvested from federal, state, private industrial, and private lands. Forests cover approximately percent of the State's 52.9 million acres. In 1996 the total harvest from these lands was 1.4 billion board feet, while employing approximately 14,450 workers. In 1992 the estimated market value of all lumber and wood related products was approximately \$2 billion (Id. Ag. Statistics, 1998).

Many of Idaho's past Nonpoint Source Management Program projects have focused on the repair and recovery of riparian areas due to past and present agricultural (including grazing) and silvicultural practices. Significant strides have been made with both the timber and agricultural industries at identifying many of the less efficient management practices and other activities to reduce the cumulative impacts from these industries.

In Idaho, the primary pollutants of concern from agriculture and silviculture are sediments and nutrients. These nutrients which include phosphorus and nitrates pose a threat to both surface and ground water quality throughout the State. Applications of nitrogen based fertilizers to cropland has led to localized increases in nitrate levels in both surface and ground water. High levels of nitrates (in excess of 10 mg/l) in drinking water supplies also pose a threat to human health and safety in certain portions of the State. Phosphorus can act as a stimulus for the growth of algae and nuisance weeds in lakes and reservoirs. This results in decreased recreational activities, nutrient over-enrichment, which leads to eutrophication, and may also result in restricting fish populations. Additionally, man's activities can greatly increase the erosion rate above the background level which leads to siltation of stream beds, as well as lakes and reservoirs. Siltation, in turn, can cause the loss of aquatic habitat and beneficial uses in both streams and standing water bodies, and provides much of the mechanism for the movement of nutrients to Idaho's waterways and water bodies.

§401 Certification

All Clean Water Act Section 401 (construction and operations) or 404 (dredge and fill) permits issued by the federal government must meet state water quality standards. All applications are reviewed by IDEQ and a determination is made whether or not the permit will meet the state water quality standards. Application review includes consideration of the potential adverse impacts to designated uses of the waterway, and focuses on possible violations of state water quality standards. Additional information, such as stream mitigation plans, may be requested during the review process and IDEQ may request an extension due to lack of information. After review of the application a written assessment is prepared and IDEQ may certify, waive, or deny certification of the project. If the assessment concludes that the project is consistent with the water quality standards, the applicant will receive a certification approval letter. The approval letter will include a statement indicating there is a reasonable assurance that the activity will be conducted in a manner which will not violate applicable water quality standards. The certification letter may include specific conditions under which the proposed activity must be conducted. In cases where there is no discharge to surface waters, a certification waiver is issued. If IDEQ denies certification for a project, a written notice setting forth the reasons for denial will be provided to the applicant. Certification will be denied if the proposed activity will result in a violation of any applicable provision of the Clean Water Act, or the proposed activity prevents or interferes with the attainment or maintenance of applicable water quality standards.

Finally, provisions are outlined within the State's Forest Practice Act, Stream Channel Protection Act, State Agricultural Water Quality Program, Coordinated Resource Management Planning (CRMP), Agricultural Pollution Abatement Plan (AG Plan) and Dairy Initiative which specifically deal with NPS impacts from agricultural, forestry, and hydrologic modification (See Introduction; and Agency Roles in Chapter 2). The long-term goals and short-term objectives for the agriculture (Table 1.3), silviculture (Table 1.4), and hydrologic/habitat modification (Table 1.5) focus on the continued development of watershed restoration plans and the implementation of best management practices to protect, maintain, or restore (where appropriate) beneficial uses impaired due to nonpoint source pollution.

Long-Term Goals and Short-Term Objectives for Agriculture, Silviculture, and Hydrologic/Habitat Modification

Table 1.3 Agriculture Long Term Goals (AL) and Short Term Objectives (AS)		Existing	New	1999	2000	2001	2002	2003	Responsible Agency
AL-1	Update the Ag Pollution Abatement Plan, (AG Plan) for consistency with the State's NPS Mgt Program Plan.	X		_____					SCC, IDEQ, Partners, IASCD, NRCS, EPA
	Agencies determine need for revisions		X	_____					
	AG Plan WQ Advisory Committee drafts strateg		X	_____					
	Completed revisions of AG Plan		X				_____		
AS-1	Review and revise AG Plan and Idaho One Plan BMP component practices.		X	_____					NRCS, SCC, SCDs, ISDA, IDEQ, IDWR, CES, IDL, IDFG, EPA
	Number of components reviewed	X		32	25	25	10	10	
AL-2	Develop and implement a strategy with public land management agencies for consistent implementation of agricultural nonpoint source programs.		X		_____				ISDA, SCC, NRCS, IASCD, IDEQ, IDL, BLM, USFS
AS-2	Develop state incentive program(s) for installation of agricultural BMPs	X		_____					SCC, ISDA, NRCS, FSA, IDFG
	Idaho Water Quality Program for Agriculture		X		_____				
	Conservation Reserve Enhancement Program		X		_____				
	Idaho Riparian Tax Incentive		X		_____				
AL-3	As ag TMDL/WRAS plans are developed, implement and maintain BMPs on all "critical" ag lands. The Idaho One Plan will be used to assist this process.		X	_____					IASCD, ISDA, NRCS, SCC

Table 1.3 Agriculture Long Term Goals (AL) and Short Term Objectives (AS)									
		Existing	New	1999	2000	2001	2002	2003	Responsible Agency
AL-3	Critical Acres (Cumulative Acres Thousands)	X		331.5	375	440	530	560	IASCD, ISDA, NRCS, SCC
	Number of Participant	X		950	1250	1450	1750	1850	
AS-3a	Integrate state and federal programs for BMP implementation (cum. acres treated in thousands)		X	—————					IDEQ, IASCD, IDFG, ISDA, IDA, SCC, SCDs, NRCS
	Idaho Water Quality Program for Agriculture	X		275	300	350	425	450	
	CREP		X		2.5	2.5	2.5	2.5	
	EQIP	X		144	150	150	150	150	
	PL-566	X		7	7	7	7	7	
	WHIP	X		1.7	1.8	2	2	2	
	CRP	X		753.7	755	755	755	755	
	WRP	X		1.87	2	2.1	2.2	2.3	
AS-3b	Identify agricultural nonpoint sources of pollution to §303(d) waters and develop watershed plans for treating critical acres		X	—————					
	Plans developed (number)	X		2	4	5	8	7	
	Sole Source Aquifer Plans (number)		X	5	5	5	5	5	
	Develop Nutrient Mgmt Plans for all dairies under the Dairy InitiativeMOU (number)		X	100	150	200	200	200	
	On site dairy inspections (number)		X	980	980	908	980	980	
	Develop Comprehensive Nutrient Management Plans for agricultural operations, as appropriat (number)		X	10	20	30	30	30	

Table 1.3 Agriculture Long Term Goals (AL) and Short Term Objectives (AS)									
		Existing	New	1999	2000	2001	2002	2003	Responsible Agency
AL-4	Maintain and enhance fish habitat within impacted streams on agricultural lands.		X	—————					IASCD, IDFG, ISDA, SCC, SCDs, NRCS, Tribes,
	Number of Projects (Cumulative)	X		45	75	100	135	150	
	Stream Miles (Cumulative)	X		60	70	85	95	120	
AS-4	Through Lemhi Model and Clearwater Focus Watersheds coordinate local interests, agencies, landowners, and Indian Tribes to maintain and enhance fish habitat and improve water quality.		X	—————					IDFG SCC, SCDs, NRCS, Tribes
	Habitat Projects (Number)	X		10	14	16	20	22	
	Acres treated (Thousand)	X		3	4	5	6.5	7	
AL-5	Enhance the feedback loop process through design and implementation of BMP effectiveness evaluations and agricultural water quality monitoring.		X	—————					, ISDA, SCC, SCDs, NRCS
	Fate and Transport Studies Developed (Number)	X		12	12	12	12	12	
	BMP Effectiveness Evaluations (Number)	X		20	80	80	100	100	
AS-5	Establish and coordinate technical assistance from multiple sources to assist agricultural BMP installation and maintenance.		X	—————					ISDA, SCC, SCDs, NRCS
	SCC	X		11	12	12	12	12	
	SCC/IASCD	X		3	3	5	5	5	
	ISDA	X		8	9	9	9	9	
	NRCS	X		100	110	120	125	125	

Table 1.4 Silviculture Long Term Goals (SILL) and Short Term Objectives (SILS)										
		Existing	New	1999	2000	2001	2002	2003	Responsible Agency	
SILL-1	Restore, where appropriate, and maintain beneficia uses damaged by silvicultural activities which cause excess erosion and runoff including the construction and maintenance of forest roads.		X	—————					IDL, USFS	
	SILS-1	Develop a program for removal or rehabilitation of forest roads determined to be contributing nonpoint source pollutants to a watershed, which in turn adversely affects water quality.		X	—————					IDL, USFS, BLM
SILL-2	Encourage the review, development, refinement, and implementation of BMPs and encourage the incorporation of new BMPs into the Forest Practices Act Rules.	X		—————					IDL, USFS, IDEQ	
	SILS-2	Continue the use of forestry practices audits to assure compliance with the FPA and State Water Quality Management Plan.	X		—————					IDEQ, IDL, IDFG, IFOA, USFS, BLM,
SILL-3	Coordinate watershed management activities in mixed ownership drainages.	X		—————					IDL, USFS, SCC, ISDA	
SILL-4	Encourage the use of the cumulative effects process to evaluate key forested watersheds. (Approx 80 evaluations on 303(d) watersheds complete) (number)	X		5	5	5	5	5	IDL, IDEQ, USFS, BLM	

Table 1.5 Hydrologic & Habitat Modification Long Term Goals (HML) and Short Term Objectives (HMS)										
		Existing	New	1999	2000	2001	2002	2003	Responsible Agency	
HML-1	Encourage public/private partnerships for preserving lands set aside for stream buffers/greenways (i.e., comprehensive plans such as the American Farmland Trust) as related to nonpoint source pollution.			X	—————					IDFG, IDL, IDWR, ISDA, SCC, SCD's, COE, NRCS
	HMS-1	Investigate the feasibility of developing a riparian/wetland set-aside program		X	—————					IDEQ, IDFG, IDL, IDWR, IP&R, SCC, SCDs, BLM, BOR, COE, NRCS, USFS,
HML-2	Encourage the use of bio-remediation techniques and biofiltration systems for erosion control and stream channel stabilization (i.e., willow plantings, root wads for riprap, etc.).			X	—————					IDEQ, IDFG, IDWR, ISDA, IDL, ITD, SCC, SCDs, BLM, BOR, COE, NRCS, USFS,
	HMS-2	Control or stabilize channels that may adversely affect on-site or downstream water quality while encouraging the preservation and integrity of stream channel.		X	—————					IDEQ, IDL, BLM, BOR, USFS, IDFG, ISDA, SCC, SCDs, NRCS
HML-3	As appropriate, encourage the fencing of riparian areas to better manage stock access to streams.			X	—————					IDL, SCC, BLM, USFS, ISDA, SCDs,

Table 1.5 Hydrologic & Habitat Modification Long Term Goals (HML) and Short Term Objectives (HMS)										
			Existing	New	1999	2000	2001	2002	2003	Responsible Agency
	HMS-3	Quantify the impacts and effectiveness of biofiltration systems (including constructed wetlands) and infiltration basins on water quality. Follow up with management practices to address any potential detrimental impacts.		X	—————					IDEQ, ISDA, SCC, IDFG, NRCS, SCDs
HML-4	Establish protocols to ensure the proper review, implementation, and compliance with the Idaho Stream Channel Protection Act, the Idaho Water Quality Act (§39-3601 et. seq.), the Idaho Water Quality Standards and Wastewater Treatment Requirements, and the Clean Water Act during flood events.			X	—————					IDWR, IDEQ,

Background Mining

Mining and the mineral processing industry have continued to be an important segment of the State economy for over 130 years, beginning with the gold discoveries in the Idaho City area in 1862. Other discoveries were made in the Silver City, Elk City, Atlanta, and Coeur d'Alene mining districts, and ended with the Thunder Mountain Gold Rush of 1902. Most of today's hard rock and placer mining continues in many of these same districts, primarily on public lands. Other available economic resources are also mined today and include base and precious metals, phosphates, gemstones, building stone, sand and gravel operations.

The estimated value of the State's raw non-fuel minerals is \$400 million with an estimated processed value of over \$1 billion. Idaho ranks thirty-second nationally for metallic production, but ranks first in garnet production, third in silver, lead, and phosphorus production, and tenth in gold production (USGS, 1994). Record levels of gold were produced in the State in 1995 with approximately 300,000 troy ounces of gold being produced worth an estimated value of \$115 million (USGS, 1995). Idaho is presently only one of a handful of states in the nation to produce antimony and vanadium

Much of today's mining related nonpoint source pollution occurs in historic mining districts where turn of the century, pre-regulatory mining techniques were employed. Although best management practices prevent the creation of most nonpoint source pollution at new mine sites, some pollution is still generated. The threat of water pollution exists where: areas are cleared for construction or mining; roads are built for access to the project area; or topsoil stockpiles, ore, and waste rock; and alterations to stream channel are made. Regardless of the source of mining related nonpoint source pollution, the long and short-term mining goals and objectives (Table 1.6) focus on providing tools necessary to support the development and implementation of TMDLs, and the assessment of past program effectiveness.

The Mining Advisory Committee (MAC) consists of representatives from eight federal and state agencies that regulate mining in Idaho. Although the MAC is not currently funded by the §319 program, it was originally funded by §319 seed money and is still an important mechanism for statewide NPS coordination and for implementing many of the long-term goals and short-term objectives for mining.

Long-Term Goals and Short-Term Objectives for Mining

Table 1.6 Mining Long-Term Goals (ML) and Short Term Objectives (MS)										
		Existing	New	1999	2000	2001	2002	2003	Responsible Agency	
ML-1	Evaluate and report on the success of the mining nonpoint source program; identify deficiencies and propose remedies to Mining Advisory Committee.			X	—————					IDEQ, IDL, IGS, BLM, USFS
	MS-1a	Through university, state, federal, and industry efforts, compile techniques for predicting acid rock drainage (ARD) and/or metal mobilization.		X	—————					IDL, IDEQ
	MS-1b	Expand the use of technologies for reducing mine-related nonpoint source water quality impacts.	X		—————					IDL
ML-2	Update Best Management Practices handbook for Mining. Amend the handbook to include BMPs for material sources (industrial minerals) operations and the Joint Review Process.		X		—————					IDL, IDEQ, IDWR, USFS, BLM
	MS-2	Through the Mining Advisory Committee, conduct BMPs audits to review the administration and implementation of the nonpoint source program along with BMP implementation and effectiveness.	X		—————					IDEQ, BLM, IDL, USFS, EPA, IDWR
ML-3	Develop a program and incentives for mine operators to control nonpoint source pollution and where appropriate, restore beneficial uses at historic mine sites.		X		—————					IDL, IDEQ, IDWR, USFS, BLM

Table 1.6 Mining Long-Term Goals (ML) and Short Term Objectives (MS)									
		Existing	New	1999	2000	2001	2002	2003	Responsible Agency
MS-3a	Work with the Abandoned Mine Lands program to identify, prioritize and recla abandoned mine sites throughout Idaho.	X							IDEQ, IDL, IDWR, IGS, BLM, USFS
MS-3b	Review and recommend reclamation projects funded through a combination of various funding sources.		X		2	2	2	2	IDEQ, IDL, BLM, USFS, Tri-State Partners

Background Ground Water

Historically, ground water throughout the west has been viewed as an inexhaustible resource: a resource that is inexpensive, readily available, and invulnerable to the detrimental effects of activities occurring on the land surface. This perception has led to the widespread indiscriminate use of this natural resource. With the ever-expanding use of the resource, the need existed to delineate and understand how nonpoint source pollution could affect the State's ground water aquifers.

Idaho's principle aquifers have been mapped by a number of state and federal agencies, and sole source designations have been approved for the Rathdrum Prairie, Lewiston Basin, and the Eastern Snake Plain. Idaho is one of the top five states in the nation for the usage of ground water. Sixty percent of the State's ground water is used by agriculture for crop irrigation; 36 percent is used by industry; and 4 percent is used for domestic drinking water purposes. Idaho's ground water is generally acceptable for drinking water and other designated beneficial uses. However, recent incidents of ground water contamination from such sources as leaking landfills, leaking underground storage tanks, agricultural chemicals, household chemicals, industrial chemicals, and failing septic systems have created an awareness of ground water vulnerability. Naturally occurring contaminants such as dissolved solids, fluoride, iron, arsenic, and Radionuclides may also restrict ground water use in certain areas of the State.

Continued incidents of ground water contamination emphasizes the sensitive relationship between ground water quality and all types of land use activities. These incidences of contamination have underscored or accented the understanding that ground water is a limited resource that is relatively easy to contaminate, and once contaminated, very difficult to clean up. Past and present nationwide efforts have shown that tremendous costs can be incurred when cleaning up ground water contamination. Protection of this resource can be achieved most effectively by preventing contamination.

Prevention efforts through the State have included educating the public and industries on general ground water quality, establishing public participation, providing technical assistance, and most importantly, developing and implementing measures to prevent ground water contamination.

Concerns over ground water contamination led Idaho policy-makers and citizens to coordinate their efforts to protect ground water. In 1989, the Idaho Legislature enacted the Ground Water Quality Protection Act (Idaho Code Chapter 1 Title 39 Sections 120 through 127). The Ground Water Quality Protection Act created a Ground Water Quality Council which was responsible for creation of the state Ground Water Quality Plan. The Idaho Ground Water Quality Plan was adopted by the Board of Health and Welfare and approved by the Idaho Legislature in 1992. The plan includes six key policy areas and a section on development of a ground water quality monitoring program for the State. As a part of this effort, the Division of Environmental Quality developed the Ground Water Quality Rule in 1996 using a negotiated rule making procedure. The rule established minimum requirements for the protection of ground water through ground water quality standards and an aquifer categorization system. The rule contains numerical and narrative standards which apply to all ground water in the state. The numerical standards, in most

cases, are based on the maximum contaminant levels established under the Federal Safe Drinking Water Act. The Ground Water Quality Rule was adopted by the Board of Health and Welfare in 1996 and approved by the 1997 Idaho Legislature as IDAPA 16.01.11. The plan, act, and rule provide the underlying guidance for protection of the State's ground water from nonpoint source contamination.

Additionally, the AG Plan and ensuing priorities within other state and federal programs have been modified to provide further guidance and technical support for the protection of the State's ground water resources. The Agricultural Ground Water Quality Protection Program for Idaho (1996) was signed by the Governor in 1995. Other committees that are vital to managing agricultural nonpoint source pollution are the Agricultural Ground Water Coordination Committee (the CAM Process, 1996) and the Ground Water Monitoring Technical Committee.

Subsurface Sewage Disposal

The Board of Health and Welfare developed and revises, as necessary, the *Regulations for Individuals and Subsurface Sewage Disposal Systems* (IDHW, 1997a) to protect the residents of Idaho from nonpoint source pollutants associated with subsurface wastewater (sewage) disposal. Because of the dynamic and complex nature of small wastewater disposal systems governed by these regulations, the need existed for an ongoing technical guidance manual. To fulfill this need, the Board of Health and Welfare established a Technical Guidance Committee comprised of three District Health Department Environmental Health Specialists, a representative of the Division of Environmental Quality, a professional engineer licensed in the State of Idaho, and a licensed septic tank installer. These individuals are responsible for establishing criteria for alternatives to standard drain field systems. A technical guidance manual was prepared by this committee to provide environmental health specialists, professional engineers, installers, and others with information on the detailed design, construction, alteration, repair, operation, and maintenance of standard and alternative subsurface sewage disposal systems.

If individual and subsurface sewage disposal systems are spaced too closely, not maintained, or are in a state of failure, the resultant waste load can cause nonpoint source pollution and public health concerns. The *Technical Guidance Manual for Individual and Subsurface Sewage Disposal Systems* (IDEQ, 1997a) serves as a guiding document for the State of Idaho's Nonpoint Source Management Program plan for all aspects related to individual and subsurface sewage disposal. District Health Departments are responsible for permitting systems covered by individual/subsurface sewage disposal rules. With permitting proposed subsurface sewage disposal systems, the Health Districts perform on-site inspections, determine site suitability, and take appropriate action to enforce the rules. A Memorandum of Understanding between the Health Districts and the IDEQ should be prepared in 2000. The MOU will strengthen the expressed roles and responsibilities, as well as clarify the authority, between the two agencies for enforcing water quality, sewage disposal, public water systems, and solid waste management.

Industrial Chemicals

Statutes and regulations applicable to industry and in particular to industrial chemicals, have been modified and enhanced at both the state and federal levels. By definition, an industrial chemical becomes a hazardous waste when it is no longer suitable as a commercial product, it is either specifically listed as a hazardous waste, or possesses certain characteristics of ignitability, corrosiveness, reactivity, and toxicity. The Resource Conservation and Recovery Act (RCRA) and its promulgated regulations, along with the Idaho Hazardous Waste Management Act, address the generation, storage, treatment, transportation, and disposal of hazardous and solid wastes. The Comprehensive Environmental Response Compensation and Liability Act (CERCLA) or as it is more commonly known as “Superfund,” provides the means possible to pay for the cleanup of hazardous waste sites when responsible parties cannot be found or are unwilling or unable to pay to clean up the site. It also provides the EPA with the authority to take legal action to force responsible parties to clean up sites or reimburse the federal government for the cost of cleanup.

The Superfund Amendments and Reauthorization Act (SARA) provides the authorities for addressing industrial chemicals that are not waste. SARA Title III requires inventory records be kept. Local emergency preparedness and accident prevention is promoted through local emergency planning committees. Information is available on chemical storage and is made available to local/regional emergency response personnel. Individual classes of potentially hazardous chemicals such as pesticides, herbicides, fungicides, rodenticides, radioactive substances, and petroleum products are regulated under additional programs.

The extent to which industrial chemicals have impacted ground water quality is limited. Monitoring efforts have primarily focused around leaking underground storage petroleum sites, industrial chemical operations, and military installations. Efforts to date have seen the Idaho Emergency Response Commission, and the six Local Emergency Response Commissions implement the community right-to-know, and the emergency planning requirements as set forth in SARA Title III.

Wellhead Protection

Wellhead Protection is a community-based approach to protect ground water used for drinking water. The 1986 Amendments to the Safe Drinking Water Act mandate that every state develop a wellhead protection program. Idaho is one of 47 states with an EPA approved wellhead protection program. Idaho’s voluntary program stresses common sense methods for preventing ground water contamination and is a good companion program to address nonpoint source issues in designated wellhead protection areas.

Source Water Assessment

The Safe Drinking Water Act Amendments of 1996 require states to develop and implement Source Water Assessment Programs (IDEQ, 1999c). Idaho is in the final stages of preparing its source water assessment plan for EPA approval and expects final approval of its source water assessment plan by November 1, 1999. Once approval has been obtained by EPA, the state has approximately 3.5 years to complete the assessments for all public water systems within the state.

A source water assessment includes a source water area delineation, an inventory of significant contamination sources, a determination of risk of public water systems to contamination, and the reporting of the results back to the public water system. Additionally, Idaho will make the final source water assessment report available to the public through its internet site or other public distribution methods.

Long-Term Goals and Short-Term Objectives for Ground Water

The long and short-term ground water goals and objectives focus on areas of ground water concern and provide technical assistance to cities and counties on all aspects of ground water management within the state of Idaho (Table 1.7).

Table 1.7 Ground Water Long-Term Goals (GWL) and Short-Term Objectives (GWS)									
		Existing	New	1999	2000	2001	2002	2003	Responsible Agency
GWL-1	Implement the Idaho Ground Water Quality Plan		X		—————				IDEQ, IDWR, ISDA, Health Districts, SCC
	GWS-1	Develop a ground water appendix to the 1992 Memorandum of Understanding, implementing the Nonpoint Source Water Quality Program.		X					IDEQ
GWL-2	Implement the agricultural BMP feedback loop for priority areas where nonpoint sources are impacting ground water quality.			X	—————				ISDA, IDEQ, NRCS, SCC
	GWS-2	Develop a process that identifies and prioritizes areas in need of best management practice implementation to address nonpoint sources of ground water contamination.		X		—————			ISDA, IDEQ, IDWR
GWL-3	Implement Idaho's Ground Water Quality Rule		X		—————				IDEQ
	GWS-3	Provide technical assistance to ground water users on aquifer categorization, ground water quality standards, and ground water surface water inter-connection.	X		—————				IDEQ, IDWR
GWL-4	Implement a Regional and Local Monitoring Program that prioritizes and addresses monitoring needs in areas where nonpoint sources are potentially impacting ground water quality.		X		—————				IDEQ, IDA

Table 1.7 Ground Water Long-Term Goals (GWL) and Short-Term Objectives (GWS)										
			Existing	New	1999	2000	2001	2002	2003	Responsible Agency
	GWS-4	Routinely (at least once a year) identify and/or update priority sites and areas for regional and local ground water quality monitoring where nonpoint sources may be threatening ground water quality.	X		—————					IDEQ, ISDA, GWMTC
GWL-5	Address ground water quality concerns related to the managed recharge of ground water.			X	—————					IDWR, IDEQ, ISDA
	GWS-5	Provide technical assistance in the area o BMPs and ground water monitoring of recharge water implementing section 600 o the Water Quality Standards			—————					IDWR, IDEQ, ISDA, SCC
GWL-6	Provide technical assistance to local stakeholders, including local units of government, in identifying, developing, and/or implementing nonpoint source BMPs.		X		—————					IDEQ, ISDA, IDWR, Cities, Counties, SCC, NRCS
	GWS-6	Develop BMP implementation plans in at least one large agricultural area every other year to address nonpoint source contamination problems identified through monitoring.		X		—————				IDEQ, ISDA, SCC, SCDs, IASCD

Table 1.7 Ground Water Long-Term Goals (GWL) and Short-Term Objectives (GWS)										
		Existing	New	1999	2000	2001	2002	2003	Responsible Agency	
GWL-7	Develop, modify, and/or maintain state-of-the-art technical guidance manuals to address ground water contamination sources.	X		—————					IDEQ, IDWR, ISDA, Health Districts	
	GWS-7a	Update the technical guidance manual for subsurface sewage disposal.	X		—————				IDEQ, Technical Guidance Committee, Health Districts	
	GWS-7b	Develop subsurface drip irrigation and subsurface biofiltration alternative systems for the Subsurface Sewage Disposal Technical Guidance Manual.		X		—————			IDEQ, Technical Guidance Committee, Health Districts	
GWL-8	Provide technical assistance, as requested from public water systems and/or local units of government to develop voluntar Wellhead/Source Water Protection Plans.	X		—————					IDEQ, Idaho Rural Water Association	
	GWS-8a	Develop source water assessments for Idaho public drinking water systems as per the Idaho Source Water Assessment Plan. (#/yr)		X		350	550	1350	690	IDEQ, Public Drinking Water Systems
	GWS-8b	Provide technical assistance in the area of BMP implementation or other measures to address contaminant inventory results for at least four (4) public water systems per year to support the state’s wellhead protection or source water protection efforts.		X	4	4	4	4	4	IDEQ, Idaho Rural Water Association, Public Drinking Water Systems

Background Urban Stormwater Runoff

Urbanization is the change in land use from rural characteristics to urban or city-like characteristics. In an undeveloped watershed, runoff is less pronounced and often characterized as sheet flow. The topographic relief of the land's natural surface eventually channels runoff toward draws and valleys forming creeks and intermittent streams that come together to form perennial streams and rivers. In some cases, runoff may be stored in natural dips and depressions of the landscape; in others, runoff may contribute to recharging the ground water table and ultimately contributing to stream baseflows.

In contrast, the land's surface within an urbanizing watershed, typically cleared and graded, is paved and covered by impervious surfaces. Much of the natural retention provided by vegetation and soil is lost. The natural storage capacity of the landscape is smoothed over and covered. Traditional engineering design promotes an effective conveyance network for the removal of rainfall and snow-melt (e.g., curb/gutter). The result of this improved conveyance is a change in the natural local hydrology and morphology. In turn, an improved conveyance network generates greater stormwater runoff volume and increased peak discharges over a shorter time-frame. The impact is an increase in the magnitude and frequency of erosive bankfull flooding due to stream channel widening and incision. This can lead to lower stream baseflows which result from a decrease in ground water recharge. Some characteristic changes in water quality related to runoff from impervious surfaces may be:

- increased sediment and nutrient input;
- increased pathogens; lower concentrations of dissolved oxygen; increased organic matter;
- increased pesticides and fertilizers;
- increased oils, grease, and metals; and increased stream temperatures.

The cumulative effects of urbanization are not only characterized by increasing imperviousness, but increased potential for soil loss from banks within unstable stream channels and contributions of nonpoint source contaminants from poorly contained construction activities throughout the watershed. The process of erosion degrades streams in urbanizing watersheds, as more frequent channel scouring events reflect relatively unstable conditions. Channel instability causes the loss of in-stream habitat structures (i.e., pool and riffle sequences) and reduces wetted perimeters for vegetation. In addition, erosion may provide a greater load of nonpoint source pollutants.

The realm of managing urban stormwater runoff includes existing development, as well as plans for new development. In confronting both the correction of existing and the prevention of future problems, two categories of BMPs are often necessary:

- 1) watershed planning source control measures—used to minimize and/or prevent the source(s) of urban pollutants; and
- 2) site design structural measures—designed, constructed, and periodically maintained to interrupt the transport and subsequent discharge of pollutants.

Urban runoff source plans are being developed as part of TMDLs/watershed management plans. These plans identify existing urban stormwater runoff pollutant sources and develop solutions for correcting problems. The second step of TMDLs identifies the priority pollutants and their associated source(s). Pollutants of concern are identified and incorporated together within a source plan. This characterization is used to prioritize pollutant reduction opportunities during the third step to develop the TMDL Implementation Plan. Restoration and other types of retrofit activities should be based on the greatest cost-benefit ratio. Urban runoff implementation plans for new development should emphasize sustaining pre-development runoff volumes through the use of source control BMPs. These plans will vary, but should include design strategies to protect sensitive open space areas, minimize site disturbances, and use the land's natural treatment functions.

Idaho has been actively involved in developing a comprehensive set of technical guidance manuals for implementing BMPs and performance criteria at both the watershed and site development levels. Example publications that are available from IDEQ include : 1) “*Environmental Planning Tools and Techniques* (IDHW, 1997a),” 2) “*Catalog of Storm Water Best Management Practices for Idaho Cities and Counties* (IDHW, 1997b),” and 3) “*Estimating and Mitigating Phosphorus From Residential and Commercial Areas in Northern Idaho* (Panhandle Health District, 1996).

Additionally, the IDEQ in cooperation with the Idaho Transportation Department holds an annual erosion control workshop which is open to the public to highlight new and advanced methods of erosion control.

The long-term goals and short-term objectives for urban stormwater runoff are listed in Table 1.8. The urban stormwater runoff goals and objectives are to identify and mitigate areas contributing to urban runoff nonpoint source pollution. There is a focus in providing greater technical support to communities as they seek assistance for developing local stormwater and drainage master plans, site disturbance ordinances, and amend comprehensive plans and zoning ordinances. These plans are being integrated into the TMDL/WRAS process for watershed planning and are components of the comprehensive implementation activities funded through §319 funds.

Long-Term Goals and Short-Term Objectives for Storm Water

Table 1.8 Urban Stormwater Runoff Long-Term Goals (USL) and Short Term Objectives (USS)										
		Existing	New	1999	2000	2001	2002	2003	Responsible Agency	
USL-1	Implement Storm Water Program.			X	—————					IDEQ, Health Districts, Cities, Counties
	USS-1a	Acres treated through implemented nonpoint source stormwater/construction runoff demonstration projects.		X	10	20	40	60	80	IDEQ, Health Districts, Cities, Counties, WAGs
	USS-1b	Acres treated through implemented nonpoint source erosion control or construction demonstration projects.	X		5	10	20	30	40	IDEQ, Health Districts, Cities, Counties, WAGs
	USS-1c	Characterize storm water projects using computer models.		X	2	2	4	6	8	IDEQ, ITD, IDL, FS, BOR, BLM
	USS-1d	Incorporate computer model for estimating NPS loads from stormwater runoff and erosion control projects into planning.		X	—————					IDEQ, IDL, ITD, BOR, BLM, FS,
USL-2	Incorporate stormwater BMPs into comprehensive plans and local ordinances.			X	—————					Cities, Counties
	USS-2a	Provide technical assistance to local units of government to develop and adopt urban runoff measures.		X	5	7	10	13	15	IDEQ, Health Districts, Cities, Counties
	USS-2b	Incorporate stormwater BMPs into comprehensive plans and local ordinances.		X	1	1	1	5	10	Cities, Counties
	USS-2c	Recommend minimum statewide guidelines for erosion control near water bodies and other sensitive open-space areas (e.g., wetlands, flood plains, riparian areas, etc.).		X	—————					IDEQ

Background Transportation

Highways, which are defined by Idaho Code as roads, streets, and bridges, are the major mode of transportation in Idaho. Idaho relies heavily on the use of highways to provide essential goods and services. There were approximately 35,000 miles of public highway in Idaho (1997 data, does not include road mileage for state or federal lands). The Idaho Transportation Department (ITD) has 4,953 miles of paved highway and 1,716 bridges. The state highway system accounts for 55% of all vehicle miles traveled. There are 283 local highway jurisdictions in Idaho (cities, counties, and highway districts with jurisdiction over highways). Local Highway Jurisdictions have approximately 30,000 miles of highway (55% unpaved) and 2,352 bridges. These local highway systems accounted for 45% of all vehicle miles traveled.

Many early Idaho highways were built adjacent to or crossing surface waters of the state. Highways can be a primary source of nonpoint source pollution because pollutants derived from highway use, construction, and maintenance wash off roads and roadsides during precipitation or snow and ice melting events. Pollutants commonly associated with roadway runoff include:

- fine-suspended sediment, derived from soil erosion;
- antifreeze, oils and greases, which are leaked or spilled onto roadway surfaces;
- heavy metals, derived from vehicle wear-and-tear;
- fertilizers, and pesticides excessively or improperly used in the green parts of the public right-of-way; and
- road salts.

This polluted runoff or nonpoint source pollution can impair habitat and beneficial uses in the receiving waters. Therefore, highway transportation has been added to the revised "Idaho Nonpoint Source Management Program" plan to assist in raising awareness of highway related nonpoint source pollution.

The jurisdiction for implementation of best management practices in highway construction and maintenance falls to Local Highway Jurisdictions and the ITD. The ITD "*Catalog of Storm Water BMPs for Highway Construction and Maintenance*" (1994) is the preferred statewide technical reference for paved roads. Jurisdiction for implementation of best management practices for roads on public lands falls to the Idaho Department of Lands, U.S. Forest Service, and the Bureau of Land Management. Forest road goals and objectives are found under the silvicultural section of this plan.

Transportation long-term goals and short-term objectives are listed in Table 1.9. The goals and objectives are to implement BMPs on federally aided construction projects and to provide technical assistance on other projects in order to minimize nonpoint source pollution and soil loss due to erosion. IDEQ has a liaison that works closely with the ITD for ensuring they are included into watershed comprehensive planning and that they are partners in TMDL/WRAS activities.

Two sources of additional information for roadway/highway construction and maintenance guidance: (1) Dissmeyer, George, E., 1994, "Evaluating the effectiveness of forestry best management practices in meeting water quality goals or standards," USDA Forest Service, Southern Region, misc. Publication 1520.; (2) MacDonald, Lee, H. and others, 1991, "Monitoring guidelines to evaluate effects of forestry activities on streams in the Pacific Northwest and Alaska," Center for Streamside Studies, University of Washington, EPA 910/9-91-001.

NPS Program Goals Summary

The goals in Chapter 1 are expected to remain driving factors throughout the TMDL schedule and ensuing steps of implementation and evaluation. The timing for completing TMDLs is ideally situated around the year 2015. The multiple time lines for long-term 'sector' goals would be based on specific 18-month implementation plan development periods. Additionally, there would be a 2 to 3 year period of actual implementation, followed with approximately 5 years of iterative, BMP effectiveness monitoring for a running total of about 10 years per given TMDL. At the time of completion of the 1998 303(d) list around 2015, the designated water bodies will have been addressed through TMD implementation.

The Idaho NPS Program serves as the umbrella for all nonpoint source related activities. The NPS Program provides a common vision and leadership for coordinating cross-jurisdictionally among the various land management agencies. The long-term goals contained in Chapter 1 are shared among the various land management partners so as to serve as a foundation for program implementation (Table 1.2). Common goals ensure consistency when approaching the many, diverse challenges posed by nonpoint source pollution and TMDL implementation. A shared foundation makes achieving long-term 'sector' goals and the shorter-term objectives feasible. Further, the sector focus encourages designated agencies to partner and anticipate the need to stretch limited funding sources to account for statewide priorities.

Where the lateral interaction of the various land management partners provides consistency, State Water Quality Law §39-3601 provides a vertical linkage to ensure that NPS Program priorities are focused toward impacted and threatened waters. Under State Law §39-3601, community-based advisory committees serve the roles of coordinator and facilitator. They recommend ways to best manage the state's watersheds in accordance with the Clean Water Act. Through a deliberate design, the intersection of community-based advisory committees with that of the diverse interaction among the various local, state, and federal partners not only augments NPS Program activities toward achieving consistency and statewide priorities, but ensures that performance can be tracked and evaluated for definite, multiple time lines.

The goals and objectives found in Tables 1.2 - 1.9 are sector specific as listed. In meeting those priorities, each sector's set of partners should provide the impetus and reinforce the ability for the state to meet its long-term program goals. Additionally beyond the designated key agency roles and elements for reaching statewide consistency outlined in Chapter 2, the NPS MOUs and appendices (Appendix A) outline the specific agreements, objectives and roles for the associated agencies to ensure meeting statewide water quality and antidegradation goals for forestry, mining and agriculture. The TMDL schedule and subsequent implementation ensures that the NPS feedback loop is a driving factor incorporated into the process. The NPS feedback loop in Chapter 6 is especially significant for showing that protective measures are actually being implemented and assess whether changes are necessary as a result of BMP effectiveness monitoring. The ongoing monitoring and analysis of data, as well as statewide Program performance measures will ensure water quality standards are being reached or maintained through an overall integrated effort.

Meeting short-term objectives and their associated milestones per project, over time should provide the necessary tools to measure performance and gauge process effectiveness. Specific gauges of process effectiveness include:

- Chapter 2: rewriting of all NPS associated MOUs to increase the focus on the Statewide Plan, and provide for an updating of the goals and methods for achieving NPS control for each participant group (completed over the next 2 years); IDEQ will seek to obtain numeric goals and objectives for NPS activities on all State and Federal lands for which designated management agencies are responsible.
- Chapters 3 and 4: meeting the TMDL schedule and actual needs for implementation based on respective TMD Implementation Plans (number of streams taken off 303(d) list each year, implementation plans written and implemented, etc.); and

- Chapters 5 and 6: followup of the implementation measures with monitoring and analysis associated with the feedback loop to ensure all stream segments meet and maintain their beneficial uses (all streams meeting beneficial uses by end date 2015); and
- Chapter 7: identification of impacts and adjustments to management plans in accordance with the April, 1999 *Federal Protocol for Addressing 303(d) Listed Waters* to minimize pollution and protect, and/or restore beneficial uses.

Monitoring and analysis is used throughout the process as laid out in the NPS Plan. It is multifaceted and reflects both statewide and regional needs to target efforts and funding to where the most resource benefits can be attained at the least cost. The major identifiable steps (Figure 1.2) for which monitoring and analysis data is collected and directly used in the State decision making process to meet water quality standards includes:

- initial BURP assessment - defines whether or not a given stream segment is meeting beneficial uses, or if more data is required prior to making that determination,
- statewide surface and groundwater monitoring for characterization, evaluation of impacts, and ambient water quality trends,
- determination and updating of water quality standards and beneficial uses,
- compiling 303(d) list and 305b report,
- targeting of sector based project implementation and BMP effectiveness evaluations,
- assurance for protection of human health and biotic integrity.

A flowchart to show how monitoring and data analysis is generally used in the TMDL decision making process would look like the following:

DEQ Monitoring & Data Analysis for TMDL Decision Making

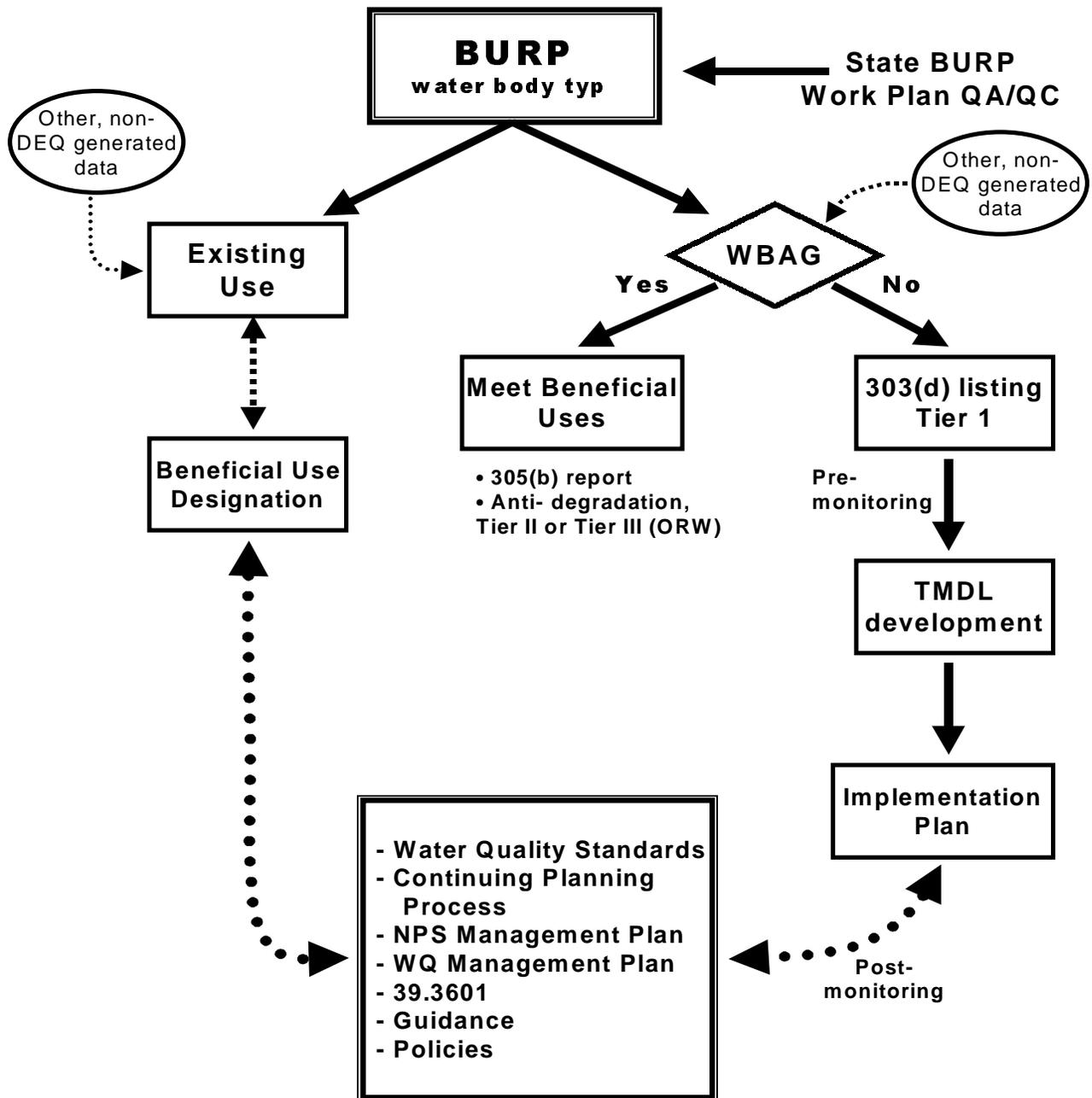


Figure 1.2 Monitoring and Data Analysis for TMDL Decision Making

CHAPTER 2 - NONPOINT SOURCE PARTNERSHIPS

Key element #2 states that a the state will build "*Strong working partnerships and collaboration with appropriate State, tribal, regional, and local entities (including conservation districts), private sector groups, citizens' groups, and Federal agencies.*"

NPS Memorandum of Understanding (MOU)

In 1993, IDEQ finalized a MOU which began the implementation of the nonpoint source water quality program in the State of Idaho (Appendix A-1). The parties to this agreement include: Idaho Department of Lands, Idaho Department of Water Resources, Idaho Soil Conservation Commission, Idaho State Department of Agriculture, Cooperative Extension Service, Soil Conservation Service (now the Natural Resources Conservation Service), Agricultural Stabilization and Conservation Service (now the Farm Service Administration), Forest Service (Northern, Intermountain and Pacific Regions), Bureau o Land Management, Environmental Protection Agency, and the Division of Environmental Quality. The MOU outlines the roles and responsibilities of the management agencies in implementing the nonpoint source water quality provisions of the Clean Water Act for the State of Idaho. Key points addressed in this agreement include:

- ▶ Coordination of water quality management planning and implementation activities;
- ▶ Implementation of the feedback loop concept as described in the Idaho Water Quality Standards and Wastewater Treatment Requirements (IDAPA 16.01.02.350.01.a and 16.01.02.350.02);
- ▶ State and federal agency consistency with the Idaho Nonpoint Source Management Program;
- ▶ Coordination of monitoring activities; and
- ▶ Collection of information on water quality conditions and effectiveness of BMPs biennially to IDEQ for inclusion in the Idaho Water Quality Status Report (§305(b)).

The MOU is updated as necessary to protect Idaho's surface and ground waters from nonpoint source pollution. The IDEQ will work with all of its natural resource agency partners, including EPA, to update the original Nonpoint Source MOU during FY2000, pending final approval of the revised 1999 Idaho Nonpoint Source Management Program Plan. This will include the Silvicultural, Agricultural, and Mining appendices, or the development of new appendices as necessary to ensure capturing those NPS activities and methods by which all land management agencies will participate to ensure meeting State water quality goals. The update will be designed to strengthen its working partnerships and linkages, identify NPS pollution and control activities, and the effectiveness of measures taken to ensure meeting State water quality goals.

Nonpoint Source Program Consistency

Consistency with the Idaho Nonpoint Source Program is provided by:

- As per §39-3601 et. seq., IDEQ lays out the state priorities and processes through the designated agencies; b inclusion of all agency activites through MOUs/MOAs, sharing or combining of funding sources for activities, b ensuring that the agency roles, as outlined below, incorporate the state priorities and processes into their planning and implementation efforts, by integrating those priorities through IDEQ liaisons to multiple State/Federal committees and workgroups, and further by IDEQ Regional Office participation and facilitation of BAGs and WAGs, and other public outreach efforts. This would include the publishing of guidance documents such as the *Guidance for Development of Total Maximum Daily Loads* (IDEQ, 1999a) in Appendix C and its companion, *Final Draft Overview of the Implementation of Nonpoint Source TMDLs* (IDEQ, 1999b) in Appendix D. Additionally, as part of its statewide approach IDEQ works in conjunction with all entities to conduct joint outreach efforts through workshops, meetings, and conferences (such as Water Quality 2000).
- Conducting §319 program and grants training as needed throughout the state to ensure that all programmatic functions are carried out. This training is generally presented to the designated agencies under §39-3601, IDEQ's

partners at soil and water conservation district meetings, BAG meetings, WAG meetings, or upon request by other organizations. In addition, IDEQ has an extensive applicant list it uses to promote the annual §319 nonpoint source management grants program consisting of local governments, cities and counties, Tribal governments, state agencies, soil and water conservation districts, environmental organizations, and various other conservation groups and organizations.

- Utilizing a multi-agency technical advisory committee to develop, refine, and revise the state's Nonpoint Source Management Program Plan as per EPA guidelines (at least once every five years). This committee, (composed of representatives from IDEQ, NRCS, BLM, BOR, USFS, ISDA, IDL, SCC, IDWR, ITD, and EPA) developed, reviewed and refined this document over the course of a two-year period. IDEQ also used the BAGs (developed under Idaho Code §39-3601 et. seq.) to review and provide comments on the draft document. The BAGs are required to be composed of forest products industry, agriculture, mining, local government, livestock, water based recreation interests, non-municipal dischargers, Indian Tribes, conservation interest groups and the public at large. These groups represent a large cross section of the individuals, organizations, and interests affected by the implementation of the state's Nonpoint Source Management Program Plan.
- EPA's role in the State's NPS program is to provide technical assistance and cooperation to help the State with the revision, approval and implementation of the State's NPS Management Program Upgrade that applies the Nine Key Elements. Technical assistance, training, watershed - or community-based projects, cross-boarder, or ecosystem-wide initiatives, and special assistance in working with other Federal agencies, are examples of specific ways in which EPA will collaborate with the State to achieve environmental results. Within resource constraints, EPA will provide more sophisticated assistance such as, advanced modeling and monitoring tools, and design of high-quality watershed projects. EPA will also help arrange for needed technical assistance in monitoring, modeling and best management practices from other Federal agencies, especially the USGS, FS, NRCS, NMFS, BOR, F&WS, and BLM. Where necessary and appropriated EPA will also provide special assistance with Federal agencies where Federal activities may not be consistent with the State's NPS Management Program.

Interagency Cooperation

The IDEQ also provides technical support to a number of interagency groups and organizations to ensure that water quality issues and state priorities are addressed with a watershed focus (TMDLs, §303(d), ORWs, SRWs, etc.), are appropriately addressed within each program, and that programs are coordinated to minimize program overlap or duplication. Examples of interagency cooperation and outreach include:

- The roles of IDEQ and the designated agencies are to work with and advise the BAGs and WAGs. Their operations set the stage for all local watershed and ensuing basin activities. These tie-ins and BAG/WAG roles are further defined in the Introduction and in Chapter 3. Tribal governments have a designated role as participants in both the BAGs and WAGs, have been involved on a regional basis as participants in stream/riparian restoration projects, and work cooperatively with IDEQ and other agencies on integration of water quality monitoring efforts and sharing of information.
- EPA's role in working with Tribal governments and the State on NPS issues will be principally to insure that NPS strategies and efforts are efficient and effective at protecting and restoring beneficial uses of the water resources within each jurisdiction. EPA will work together with the Tribes and the State to build support and cooperation among the citizens, businesses, and governments at the community level for the purposes of formulating effective support for protection, and restoring the ecological health for the on-Reservation waters, and for waters that may be under the jurisdiction of more than one governmental agency.
- Idaho Ground Water Protection Interagency Cooperative Agreement formalized in 1996 between the IDEQ, IDWR, and ISDA. As part of this agreement, the three agencies hold quarterly cooperative agreement meetings (CAMs). These CAMs are used as a forum to coordinate ground water quality related activities statewide, and have been recognized as a tool through which the three state agencies could efficiently coordinate activities necessary to implement the Idaho Ground Water Quality Plan. These efforts mesh with the Agricultural Ground Water Coordination Committee and the GWMTCC.

- 404/NEPA Accord commits the FHWA, ITD, FWS, NMFS, COE, EPA, IDEQ, IDFG, and IDL to integrating the NEPA, Section 404, and Section 10 procedures into transportation programming, project development implementation and construction stages of all federal-aid transportation projects in Idaho for which Section 404 permits may be required. This accord ensures the earliest consideration of environmental concerns pertaining to water of the United States, provides for compensation when impacts cannot be avoided, and also provides for an annual meeting and three regional meetings to share information and concerns.
- Development of a partnership utilizing a liaison with the Association of Idaho Cities (AIC) to promote the preservation of natural resources while maintaining a balance for future economic growth. The liaison is responsible for promoting the Small Communities Improvement Program statewide and assisting in coordinating activities between IDEQ, municipalities, and EPA.
- State Technical Committee for agricultural activities covered by the Food Securities Act is composed of individuals from NRCS, SCC, IASCD, BLM, BOR, EPA, COE, NMFS, ISDA, IDFG, IDWR, University of Idaho CES, Idaho Cattle Association, Idaho Dairymen's Association, Idaho Farm Bureau, Idaho Grain Producers, Idaho Pea and Lentil Commission, Potato Growers of Idaho, Idaho Potato Commission, Idaho Wheat Commission, Idaho Wool Growers Association, Certified Crop Advisors, Idaho Rural Development Council, Idaho Pork Producers, and the Idaho Water Users Association. The State Technical Committee is responsible for the establishment of criteria and guidelines for new conservation practices and systems not already described in the NRCS Field Office Technical Guide and is responsible for the development and implementation of the EQIP, WRP, Wetland Conservation, WHIP, CRP, and FIP programs within the state of Idaho. IDEQ and its partnership agencies have used the State Technical Committee as a forum to help set statewide and regional priorities using: §303(d) list, 305(b) report, §314 Clean Lakes Phase I & II reports, ground water aquifers, Endangered Species list and other information. This criteria for selection and ranking of NRCS projects is also used by the various agencies involved in Locally Led Conservation Committees for funding and implementation tie-ins, as well as by other state and federal agricultural programs.
- The IDEQ Storm Water Program is coordinated and integrated with the Idaho Department of Water Resources, District Health, Idaho Department of Transportation, WAG representatives from city/county (planning and public works) staff, highway districts, and state/federal public agencies. The Storm Water Program also provides TMD support, which encompasses coordination among representatives, the facilitation of agendas and some meetings, providing technical/educational assistance in (nonpoint) source plan development, and knowledge transfer from other watershed planning efforts. These activities include highway and construction related runoff control, integration of stormwater control and treatment into site planning, constructed wetland planning and development, phasing out of shallow injection wells as stormwater collectors, etc. This program has set the stage for the funding of many §319 project proposals.
- The Ag Plan is the operations manual by which the designated agencies and their partners cooperate in prioritizing and implementing programs for agricultural NPS protection and control on state and federal lands in Idaho. It is implemented by a MOU (Appendix A-4) under the NPS MOU appendix for agriculture. The 1991 update of the Ag Plan reflects an increased emphasis on livestock grazing, riparian management, CAFOs, agricultural chemical management, ground water protection, and wetland protection/development. The Ag Plan includes: roles and authorities of nonpoint source agencies and other entities; agricultural nonpoint source water quality priorities of the state; a catalog of best management practices; monitoring and evaluation; and a back-up regulatory program. The following agencies have been designated management responsibilities in the Ag Plan: IDEQ as the overall state water quality management agency; the USFS and BLM for the management of federal lands; the SCC for the management of private and state agricultural and grazing lands; IDL for forestry and mining, and the SCDs as the local management agencies for private and state agricultural lands (See Introduction - Historical).

Agency Key Roles

Numerous units of government have the authority and responsibility to control nonpoint source pollution. The following state and federal agencies are recognized as having key designated roles in the implementation of the state's nonpoint

source management program. The Idaho Nonpoint Source Management Program provides the opportunity to develop new and enhance existing cooperative agreements with the state's natural resource partners. These new agreements will provide for increased coordination and cooperation among those partners to ensure better integration of programs, targeting of state priorities, indicators of effectiveness, and measures of success. Implied in this state and federal partnership approach is the need to not only acknowledge and identify local partnerships, but the necessity to facilitate local involvement and opportunities to encourage local leadership in matters of controlling nonpoint source activities.

Idaho Department of Health and Welfare, Division of Environmental Quality (IDEQ)

The IDEQ is the designated agency for implementation of the Federal Water Pollution Control Act (33 U.S.C.A. §§1251 to 1387) also known as the Clean Water Act. This responsibility involves the control and abatement of all sources of pollution to both surface and ground waters. The Department's authority for the program is derived from the Environmental Protection and Health Act (Idaho Code, Title 39, Chapter 1). Final authority to approve the State's NPS Management Program remains with EPA Region 10.

The IDEQ's delegated authority for nonpoint source control of surface water pollution includes the following state laws and department rules: the Water Quality Law, Title 39, Chapter 36, Idaho Code and IDAPA 16, Title 1, Chapter 2, Water Quality Standards and Wastewater Treatment Requirements. Idaho Code §39-3601 et. seq. requires IDEQ to: 1) designate the beneficial uses which a water body could reasonably be expected to support; 2) identify reference streams, water bodies or conditions to assist in determining when designated uses are being supported; 3) conduct beneficial use attainability and status surveys to identify appropriate designated uses and to determine the status of designated uses of each water body; 4) prioritize water bodies not supporting their uses in cooperation with the BAGs and other resource agencies and the public; and 5) initiate development and implementation of TMDLs through the use of WAGs, affected resource agencies, and the public. IDEQ has additionally entered into MOUs with IDL, USFS, and the BLM for silvicultural and mining activities, SCC for agriculture and grazing, and ISDA for dairy waste management. IDEQ coordinates (with IDFG) the Governor's Bull Trout Conservation Plan. Additionally IDEQ coordinates the implementation of the Ag Plan with the SCC and is a co-signatory for any additions or deletions.

The IDEQ's delegated authority for nonpoint source control of ground water pollution includes the Ground Water Quality Protection Act (Chapter 1, Title 39 Sections 120 through 127, Idaho Code), the Idaho Ground Water Quality Plan approved by the Idaho Legislature in 1992, and the Ground Water Quality Rule promulgated by the Department and approved by the 1997 Idaho Legislature as IDAPA 16.01.11. The plan, act, and rule provide the underlying guidance for protection of the State's ground water from nonpoint source contamination.

To carry out their many roles IDEQ provides not only technical assistance, but partners with many agencies to ensure the state priorities and processes are implemented. IDEQ works with many technical committees and workgroups to help identify or provide the linkages between setting the statewide priorities, ensuring those priorities are evident in various agency programs, providing the tools, as necessary, to each of the programs to ensure they are carried through to implementation, and ensuring that the various agency efforts are effective in meeting water quality standards and beneficial uses.

In general, nonpoint source activities contributing to water quality standard exceedences or beneficial use impairments are not subject to legal actions if BMPs or their equivalents are used. However, injunctive relief can be provided in cases where imminent and substantial danger exists. When beneficial uses are impaired and BMPs have been applied, IDEQ may request modifications of those BMPs until beneficial uses are protected. If BMPs are not modified or recommended measures are not followed, then enforcement actions may be taken. When beneficial uses are impaired and BMPs have not been implemented, or when modified BMPs are not protecting the resource then additional action may ensue including, an enforcement action.

Idaho State Department of Agriculture (ISDA)

The ISDA is the designated agency for aquaculture under Idaho water quality law. Also, ISDA is responsible for regulating the application of pesticides, registration of fertilizers, establishment of safe application requirements for both pesticides and fertilizers, development of the state pesticide management plan, and assisting in the development of agricultural best management practices supporting the Ag Plan. Authority for ISDA's role comes from Idaho Pesticide Law (Title 22, Chapter 34, Idaho Code), the Fertilizer Law (Title 22, Chapter 6, Idaho Code), and for the control of

dairy waste in agriculture from the Idaho Dairy Industry regulation (Title 37, Chapters 3, 4, 5 and 7, Idaho Code). The ISDA also has a cooperative enforcement agreement with the EPA to enforce the provisions of the Federal Insecticide, Fungicide, and Rodenticide Act (7 U.S.C.A. §§1701 to 1784) also known as FIFRA. ISDA is the lead in creating and implementing the Idaho Pesticide Management Plan (PMP).

The ISDA chairs the Agricultural Coordination Committee, which facilitates implementation of the Agricultural Ground Water Quality Protection Program. The coordination committee meets quarterly, and includes state, federal, local, and private sector groups. ISDA is a member of the Ground Water Monitoring Technical Committee that participates in identifying and addressing agricultural water quality impacts through monitoring, and making recommendations for needed protection or remediation to the designated agencies, or WAG as appropriate. ISDA is also implementing an agricultural TMDL water quality monitoring program jointly with the SCC, SCDs, and IASCD (see Agricultural TMD Action Plan Appendix E, Obj. #6). Additionally, they are implementing an agricultural ground water quality regional and local monitoring program related to pesticides and nutrients.

The ISDA is also a major player in working with the SCC as the designated agency for agriculture and grazing to carry out project specific implementation monitoring, and BMP effectiveness monitoring. They work closely with IDEQ, IDWR, USGS and on technical committees of the BAGs/WAGs, and participate on the Ground Water Ambient Monitoring and Surface Water Monitoring Networks to identify problem areas and monitor the effectiveness of implementation actions taken. They also chair the Coordinated Resource Management Planning (CRMP) committee, which plays a large interagency role in planning and implementation related to state and federal grazing lands (See Introduction - Historical, MOU Appendix A-5). As stated above the ISDA has the lead role in regulation of the dairy industry in Idaho. In implementing the dairy program, ISDA monitors ground water under these facilities. Through a MOU (Appendix A-6) between IDEQ, EPA, ISDA, and the Idaho Dairy Association (IDA) the ISDA ensures dairy waste systems and practices are in accordance with the provisions outlined in the *Idaho Waste Management Guidelines for Confined Feeding Operations* (IDEQ, 1993 - updated 1997). This MOU lays out the working arrangement between the agencies to reduce duplicative inspection efforts, increase the frequency of inspections of waste management systems, and provide a sound inspection program to prevent and protect pollution of surface and groundwater. This effort has proven to be successful as dairy compliance is tied to milk sales.

Additionally the ISDA has been a lead agency among the agencies and agricultural interests led by IDEQ, SCC, NRCS, and EPA in the development, promotion, and conduction of field trials for use of the Idaho One Plan. This computer-based program is an interagency effort through an MOU to improve efficiency and effectiveness to the agricultural community by integrating agency programs into a single plan which is user friendly and user driven. The ISDA is also a lead player along with IDEQ, SCC and IASCD for the integration of the Idaho Farm/Home*A*Syst efforts into program and project work. An example of this is the tie-in of farm site evaluations for well head protection using Farm/Home*A*Syst materials, by cooperators attending required annual pesticide training workshops. Many agencies are involved to various degrees in the management of agricultural nonpoint source issues. Table 2.1 outlines the agencies and programs that participate in addressing agricultural water quality impacts.

Idaho Department of Fish & Game (IDFG)

The IDFG is the executive arm of the Fish and Game Commission and is the designated wildlife management agency for the State as outlined in Title 36, Chapter 1, Idaho Code. The IDFG provides the BAGs with information regarding the presence or absence of aquatic species listed as “threatened,” “endangered,” or “candidate” pursuant to the Federal Endangered Species Act. The IDFG also co-coordinates with IDEQ the Governor’s Bull Trout Conservation Plan.

The IDFG also works with their federal partners to ensure consistency in habitat and fish restoration activities statewide. Additionally they are partners in most implementation efforts dealing with riparian/habitat restoration and protection providing both technical assistance and funding as necessary. They work in partnership with the SCC and NRCS to integrate technical assistance and programs to ensure full resource coverage to help all agricultural lands meet state water quality standards and beneficial uses. Additionally, they work in the WAG process to provide technical and financial assistance for threatened and endangered species, and riparian enhancement activities.

Idaho Department of Lands (IDL)

The IDL is responsible for managing public trust lands; administering forestry and mining best management practices on private and state lands; consulting and cooperating with federal land managers; and oversees timber harvest activities, oil and gas exploration and development, and mining activities in Idaho. The IDL has authority to administer the Idaho Forest Practices Act (FPA) (Title 38, Chapter 1, Idaho Code), the Dredge and Placer Mining Protection Act and the Idaho Surface Mining Act (Title 47, Chapters 13 and 15, Idaho Code), and the Idaho Lake Protection Act (Title 58, Chapter 13, Idaho Code). Under the Antidegradation Policy, IDL is designated as the lead agency for surface mining, dredge and placer mining, and forest practices on all lands within the state (Executive order 88-23). IDL works closely with IDEQ in conduction of the FPA audits which form the basis for achieving State/Federal consistency for NPS activities on forest lands (MOU, Appendix A-2). They also work extensively with IDEQ, BLM and FS on the use of the Forest Practices Cumulative Watershed Effect Process (CWE) for watershed evaluation input to the TMDL process. IDL has entered into a MOU (Appendix A-3) with IDEQ, USFS, and the BLM to coordinate the administration of their respective laws and regulations pertaining to mining operations on National Forest and BLM lands.

The Forest Practices CWE Process provides a direct linkage for developing TMDLs and implementation plans for the forested portions of watersheds on the State 303(d) list. To date, IDL, in partnership with the IDEQ has conducted CWE evaluations on approximately eighty 303(d) listed stream segments. IDEQ does intend to use CWE data in developing TMDLs for forested watersheds. In turn, IDL will use this data to identify problem areas within a watershed and develop site specific BMPs for given TMDL implementation plans. Therefore, CWE is considered integral to both development and implementation of TMDLs.

Soil Conservation Commission (SCC)

SCC offers assistance to the supervisors of the 51 Soil Conservation Districts (SCDS) as organized in Soil Conservation District Law (Title 22, Chapter 27, Idaho Code). The SCC is the designated agency for grazing and agricultural activities under Idaho law. As the lead agency for agriculture the SCC has guided the many entities affected by TMD issues to cooperate and coordinate efforts. They provide ongoing interagency education and training to promote integrated planning to address issues leading to effective watershed implementation strategies. They are a significant partner in the BAG/WAG process in furthering the state efforts through their SCC, SCD, and NRCS partnership.

Additionally the SCC has formulated an Agricultural TMDL Action Plan (Appendix E) to develop and implement agricultural portions of TMDL watershed plans. They also formed a parallel interagency coordination and planning committee made up of SCC, NRCS, IASCD, IDL, IDWR, ISDA, IDEQ, EPA, CES, and others. The committee focus is to provide and share information, educate various entities and the public, and ensure program integration for planning and implementation of all watershed activities. The SCC also chairs the State BMP committee which evaluates and adopts all new BMPs into the Ag Plan (see Introduction-Historical).

Soil Conservation Districts (SCDs)

The purpose, organization, and authority of Soil Conservation Districts is vested in Soil Conservation District Law (Title 22, Chapter 27, Idaho Code). The law acknowledges that improper land use practices cause and contribute to soil erosion from farm, ranch, range, and forest lands in Idaho. Fifty-one SCDs cover the 44 counties in Idaho. In some instances, more than one county is included in a SCD while other counties have more than one SCD. The Soil Conservation District Law provides the SCDs with broad-based natural resource responsibilities.

Table 2.1 Agencies and programs addressing agricultural water quality impacts.

AGENCIES AND PROGRAMS	Function				Programs					Specific Roles						
	Regulatory	Land Management	Service Oriented	Research Oriented	Grazing & Range Mgmt.	Water Resource Management	Soil and Water Conservation	Water Supply	Water Pollution Abatement	Advisory	Planning	Technical Assistance	Financing	Monitoring	Regulatory Enforcement	Permit and License Review
FEDERAL																
Environmental Protection Agency	X		X	X					X	X	X	X	X	X	X	X
Bureau of Land Management		X			X	X	X		X		X			X	X	
USDA - Forest Service		X			X	X	X		X		X			X	X	
Bureau of Indian Affairs		X			X	X	X		X		X					
US - Fish and Wildlife Service		X							X	X						X
Bureau of Reclamation			X			X	X	X	X		X			X		
Natural resource Conservation Service			X		X	X	X	X	X	X	X	X				
Farm Services Administration			X				X		X	X		X				
US - Geological Service			X						X	X				X		
National Weather Service			X			X		X	X	X						
Army Corps of Engineers			X					X	X					X		X
Farmers Home Administration			X				X		X			X				
Small Business Administration			X				X		X			X				
Science and Education Administration - Ag Research				X	X	X	X		X	X						
Intermountain Forest and Range Experiment Station				X	X	X	X		X	X						
STATE																
IDH&W - Division of Environmental Quality	X		X						X	X	X	X	X	X	X	X
Department of Agriculture	X		X		X				X	X	X			X	X	X
Department of Water Resources	X		X			X		X	X	X	X			X	X	X
Department of Lands		X	X		X		X		X		X			X	X	
Department of Fish & Game		X	X			X			X	X	X			X		X
Soil Conservation Commission			X		X		X		X	X	X	X				
Cooperative Extension Services - Univ. of Idaho			X			X	X		X		X					
Agricultural Experiment Stations - Univ. of Idaho			X			X	X		X	X						
Idaho Water Resources Research Institute - Univ. of Idaho			X		X	X	X		X	X						
COUNTY AND LOCAL																
County Commissions	X								X	X						
Soil Conservation Districts			X		X	X	X		X	X	X					
Watershed Improvement Districts			X		X	X	X	X	X	X	X					
Irrigation, Drainage and Flood Districts			X		X	X	X		X	X	X					
Basin Advisory Groups			X		X	X	X		X	X	X	X				
Watershed Advisory Groups			X		X	X	X		X	X	X	X				

Nonpoint source planning and implementation efforts for agriculture are carried out at the local level through a partnership of the SCDs, SCC and NRCS (see Introduction - Historical). SCDs are granted broad authority under Soil Conservation District law for the conservation of natural resources. In coordination with Idaho Water Quality Law, SCDs provide input to BAGS and WAGs and represent agricultural interests in drafting TMDLs and agricultural implementation plans. SCDs further assist WAGs by functioning as liaisons to private landowners. SCDs have been instrumental in initiating WAG development where none has been developed and have played a major role in the local administration of State and Federal cost share projects. Through their state (IASCD) and national associations (NACD) they are very active in the oversight of, and participation in, state and federal agricultural efforts statewide and nationally. IASCD has membership on the Board of Directors of the SCC, which enhances the ability for partnerships and cooperation with the designated agency for agricultural and grazing.

Idaho Department of Water Resources (IDWR)

The IDWR is the responsible agency for the development of the State Water Plan, stream channel, dam safety, water storage, mine tailings, and water rights permits, minimum stream flow allocation, and ground water related activities such as well drillers' licenses, well construction permits, geothermal wells, aquifer recharge, and waste disposal b injection wells. The IDWR has authority to regulate stream channel alterations under the Stream Channel Protection Act (Title 42, Chapter 38, Idaho Code) in conjunction with the Corps of Engineers, and the safety of most impoundment structures, including irrigation and stock pond facilities, and mine tailings impoundments under the Dam Safety Act (Title 42, Chapter 17, Idaho Code). Wastewater disposal by injection wells is regulated through the State Underground Injection Control Program, under Title 42, Chapter 39, Idaho Code. The IDWR also has statutory responsibility for administering the appropriation and allotment of surface and ground water resources of the state, including geothermal resources, and to protect the resources against waste and contamination, Title 42, Chapter 2, Idaho Code. IDWR also conducts statewide River Basin Studies used for long term planning related to ground/surface water interactions and use.

Idaho Transportation Department (ITD)

The Idaho Transportation Department is charged with the administration of state highways in Idaho. The ITD operates under internal rules, guidelines, practices, and Federal Highway Administration directives. They have prepared the "Catalog of Stormwater Best Management Practices for Highway Construction and Maintenance."

Local Highway Technical Assistance Council (LHTAC)

The Local Highway Technical Assistance Council (LHTAC) is a public agency created in 1994 to represent Local Highway Jurisdictions (Cities, Counties, and Highway Districts). The council is comprised of nine members, three each appointed by the Association of Idaho Cities, Idaho Association of Counties, and the Idaho Association of Highway Districts. The staff assists Local Highway Jurisdictions (LHJ's) by providing research and data, by developing uniform standards and procedures for construction, maintenance, operation, and administration of local highways, and by representing LHJ's in conferences, meetings and hearings related to highways and other transportation factors affecting local highway system. The staff of the council serves a liaison role in working with IDEQ to develop and implement efforts to prevent and control nonpoint source pollution.

University of Idaho - Agricultural Experimental Stations

Soil, water and crop research is administered and coordinated by the University of Idaho's College of Agriculture. Research is conducted at six research and extension centers throughout the state. Research activities related to water quality include:

- nutrient use and movement;
- pesticide mobility and degradation;
- agricultural impacts on aquatic biota;
- agricultural BMP effectiveness evaluation;
- water budgeting; and
- agricultural waste products handling and disposal.

Their work ensures that the BMPs implemented by the designated agencies are properly designed to improve the situation for which they were designed. Also important to the development of specific tools are the need to gauge the effectiveness of the practice when installed as a component of a system of BMPs. These are assured by their representation on the SCC State BMP committee, IDWR Conservation Committee and many others.

University of Idaho - Cooperative Extension System (CES)

The CES is the primary agency for agricultural water quality information and education program development for the USDA under the Smith-Lever Act of 1914. Research findings are disseminated for use by land users, cooperating agencies, and the general public. Extension specialists and county extension agents assist producers with recommendations for application of fertilizers and pesticides. The CES is a prominent player in multi-interagency efforts for development and implementation of NPS prevention and control efforts statewide. They participate in multilevel information and education, research outreach, and technical advisory for proper implementation, and follow up to measure the success of implementation activities.

Environmental Protection Agency (EPA)

EPA provides training, technical and financial assistance to the state to ensure a viable and effective NPS program. EPA works with the State and Tribes to build community-based support for protection and restoration of beneficial uses of all water resources. They also provide special assistance to the state in working with other Federal agencies and States on ecosystem-wide initiatives. Additionally, in their collaboration with the State to achieve environmental results, they provide sophisticated assistance in the areas of modeling, monitoring and design of high quality watershed projects.

USDA-Agricultural Research Service (ARS)

The ARS conducts research on the cause and effect relationship between agricultural management practices and soil and water conservation. This information is used in evaluating existing management practices, and developing new practices for improvement and protection of surface and ground water quality. Additionally, they are instrumental in the development of new tools used in planning, implementation, and evaluation of NPS protection and improvement activities.

USDA-Forest Service (USFS)

National forest system lands within Idaho are managed from two regional headquarters. The Northern Region (Region 1) is based in Missoula, Montana and has jurisdiction over the Idaho Panhandle, Clearwater, and Nez Perce National Forests. The Intermountain Region (Region 4) is based in Ogden, Utah and includes the Boise, Caribou, Challis, Payette, Salmon, Sawtooth, and Targhee National Forests.

USFS authority is embodied in numerous federal laws and regulations. The USFS is the designated management agency for nonpoint source pollution controls on all national forest lands governed by the Organic Act (16 U.S.C.A. 551), the Multiple Use Sustained Yield Act (16 U.S.C.A. 528), the Wilderness Act, the Forest and Rangeland Renewable Resources Act, the National Forest Management Act (16 U.S.C.A. 1600), the National Environmental Policy Act (42 U.S.C.A. §§ 1600, 1611 to 1614), the Wild and Scenic Rivers Act, and the CWA. The USFS has the statutory authority to regulate and permit land use activities on national forest lands which may affect water quality. As a designated management agency, the USFS is responsible for implementing nonpoint source pollution controls for land use activities such as silviculture, grazing permits, mining, and road construction. A MOU with the State of Idaho provides for State input and coordination with USFS activities, under the NPS program as defined in the MOU (Appendix A-2). Additionally, they are signatories to the CRMP MOU (Appendix A-5, see Introduction - Historical) which sets the stage for interagency cooperative planning and implementation relating to grazing on federal lands.

USDA Natural Resources Conservation Service (NRCS)

The NRCS provides technical assistance to private landowners in an effort to use soil, water and vegetation resources in a manner consistent with their needs and capabilities as outlined in the Soil Conservation and Domestic Allotment Act, Section 7 (Public Law 46-74; U.S.C.A. 590(3)), the Agriculture and Consumer Protection Act, Title 10, and the Agricultural Credit Act, Title 4. The NRCS also conducts natural resource surveys and assists units of government in addressing rural resource conservation and rural economic development issues. Soil conservation districts and the SCC, rely upon the NRCS as a principle cooperating agency to provide technical assistance as a means of implementing resource management goals, objectives, and priorities established at the local level. Additionally, the NRCS and FSA are responsible for administering agricultural programs outlined in the 1996 Farm Bill. The NRCS Field Office Technical Guide is recognized by the State as the technical basis for agricultural water quality and soil erosion measures.

Those NRCS BMP standards relating to water quality have been revised for Idaho and adopted into the Ag Plan. They are reviewed and revised on a 5 year cycle. NRCS chairs the State Technical Committee, as outlined above, through which the State priorities and processes are incorporated into NRCS planning and implementation activities. They co-chair the Agricultural TMDL Action Committee with the SCC and are major players in all state agricultural

implementation efforts, as well as participation in the BAG/WAG process for technical advice. The NRCS programs (PL566, FSA, EQIP, CRP, WHIP, WRP, RC&D, etc.) have been extensively integrated into State program implementation activities for many years (also see Introduction - Historical). NRCS, working with IDEQ, SCC and ISDA have been instrumental in obtaining an Idaho Nutrient Management Standard, and are conducting certification classes for multiagencies, producer groups, associations, and others to provide Comprehensive Nutrient Management Planning for agricultural operations statewide.

USDI-Bureau of Indian Affairs (BIA)

The BIA administers federal programs on Indian reservation lands. Reservations in Idaho are the Kootenai, Coeur d'Alene, Nez Perce, Duck Valley, and Fort Hall. The BIA staff includes soil and water conservation technical personnel who prepare conservation plans, and design and implement conservation practices for reservation crop, grazing, and forest lands. Additionally, surface and ground water concerns related to the CWA on tribal lands within reservation boundaries fall under the jurisdiction of EPA Regions 9 and 10. However, IDEQ along with the other state natural resources agencies actively work with the tribes throughout Idaho to mitigate the effects of nonpoint source pollution which might impact tribal waters and ultimately waters of the State. Joint efforts for stream assessments, monitoring, and implementation are ongoing efforts of the tribes, in their role as members within the BAG/WAG process.

USDI-Bureau of Land Management (BLM)

The BLM is responsible for administration, management, and protection of nearly 12 million acres of public land throughout the State of Idaho. The agency has authority to regulate, license, and enforce land use activities that affect nonpoint source pollution control from the Taylor Grazing Act, the CWA, the Federal Land Policy and Management Act, the Public Rangelands Improvement Act, the National Environmental Policy Act, 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.

The BLM is active in several interagency efforts to integrate priorities and provide implementation opportunities and tools for NPS activities, such as the State Technical Committee Sate BMP Committee, CRMP Committee, and Agricultural TMDL Action Committee. They are receivers of, and participants in several §319 grants for prevention and control of NPS pollutants.

USDI-Bureau of Reclamation (BOR)

The BOR is responsible for planning, construction, operation, and maintenance of federal irrigation projects as outlined in the Federal Reclamation Law and delegation under the CWA. Activities relating to water quality efforts include:

- technical assistance in irrigation BMP evaluation;
- water quality monitoring related to federal irrigation projects;
- coordinated resource management planning;
- implementation of structural and nonstructural water management programs and projects;
- design, financing, and construction of structural aspects of management plans; and
- the scoping of irrigation related aspects of the agricultural nonpoint source management plan.

The BOR has also been an important player in the State for many implementation projects related to enhancing fish passage, habitat, water quality monitoring, agricultural drain relocations and studies. They are participants on the State Technical Committee, Agricultural TMDL Planning Committee, and are active in other coordinated watershed management and implementation activities.

USDI-Geological Survey (USGS)

The USGS water resources division collects, analyzes, and reports general hydrologic and water quality data throughout the State. The USGS also conducts special studies upon request from various state and federal agencies on water supply and quality in areas of changing land and water use patterns. USGS staff and their expertise are well used by the State for monitoring and modeling of water. They are major participants along with IDEQ and IDWR for efforts in ambient ground and surface water monitoring, and information used for the TMDL process.

CHAPTER 3 - ACHIEVING A BALANCED APPROACH FOR CLEAN WATER

Key element #3 states that the state will use *"a balanced approach that emphasizes statewide nonpoint source programs and on-the-ground management of individual watersheds where waters are impaired or threatened."*

As part of the State's Continuing Planning Process (IDEQ, 1998g) the Idaho Nonpoint Source Management Program serves as the umbrella for all nonpoint source related activities, providing for consistent, cross-jurisdictional coordination among the various land management agencies. However, there are clearly challenges beyond this program due to the many impaired and threatened watersheds throughout the state. Additionally, the scale of land management varies widely from the site, to the subwatershed and watershed, to basin scales. With the adoption of Water Quality Law, Idaho Code §39-3601 et. seq. (Appendix B) in 1995, Idaho entered a new era of local watershed planning and management. Under the law, community-based advisory committees have and will continue to serve the role of recommending ways to properly manage the state's watersheds.

This linking of the State NPS program objectives through the roles of the designated agencies to the local planning and implementation at the WAG/BAG level, ensures that the State obtains the balance needed to meet on-the-ground management of individual watersheds (See Agency Roles, Chapter 2).

Water Quality Law and Local Advisory Groups

Water Quality Law §39-3601 set forth a public process which created Basin Advisory Groups (BAGs) in each of the six river basins. The BAGs represent members of the forest products industry, agriculture, mining, livestock, water based recreation, nonmunicipal point source dischargers, local government, conservation groups, Indian tribes, and the general public. The BAGs review data from within the basin watersheds and make recommendations concerning:

- monitoring;
- designated beneficial use status revisions;
- prioritizations of impaired waters;
- public input; and
- establishment of a priority listing of watersheds needing pollution management.

In addition, the Water Quality Law authorized the development of Watershed Advisory Groups (WAGs) and recognized the existence of several ongoing WAGs within each of the six basins. The 18 WAGs recognized to date represent industries and interests affected by the management of their respective watershed. Their primary mission is to advise IDEQ on the development and implementation of actions necessary to achieve full support of designated beneficial uses within a timely manner. There are several items inherent within their mission that make the role of WAGs far reaching. The following are goals of WAGs according the Idaho Water Quality Law:

- required actions of each designated agency;
- implementation plans and schedules;
- estimated costs and budgets;
- strategies for coordinating ongoing planning and management programs within the watershed;
- provisions for public input and involvement; and
- procedures for evaluating the effectiveness of the implemented plan.

Water Quality Law §39-3601 also established and defined roles of other State agencies by assigning designated agencies for those activities within the State that are the major contributors of nonpoint source loadings to waterbodies. The designated, lead agency and a given WAG forward completed TMDLs to the respective BAG for review and comment. The final plan is ultimately sent to IDEQ for adoption as part of the state's water quality management plan. Subsequently, TMDL/WRAS implementation plans are sent by the WAGs to the BAGs, which rank them for each of the six basins. They are then forwarded for statewide ranking by the BAG chairmen and the IDEQ Administration. The plans are compiled into a priority list and forwarded to EPA with a recommendation for §319 funding. IDEQ adopts and implements the plans according to overall statewide priorities, as funding is available.

The designation of lead state agencies provides an ability to target projects and programs toward specific activities. By working through the designated agencies the State also gains statewide consistency in adoption and application of prevention and restoration activities. Additionally, it ensures that any given agency has a recognized responsibility for a consistent and uniform approach for dealing with their constituency. Inclusive of the roles for these agencies are other state and federal programs with funding sources, recommended BMPs, regulatory and nonregulatory 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 SCC and SCDs with the NRCS. Setting of similar goals, priorities, and program requirements has enhanced the ability of all partners to get the job done, stretched available funding, and ensured state/federal consistency in approaching the challenges posed by nonpoint source pollution and TMDL implementation.

IDEQ and other involved agencies benefit through the advice of the BAGs and WAGs, by gaining an incredible amount of input for the enhancement and focusing of all watershed based actions. Most of these advisory committees meet monthly and are very active in integration of water quality activities within their basins and/or watersheds. As integral components of the BAG/WAG process, technical committees of State and Federal agencies help with planning and development of local priorities and direction for water quality protection and restoration based on state and federal guidance, BAG/WAG input, and the State NPS Plan. Examples of these interagency committees for statewide priority setting and inclusion into ongoing processes are the Ground Water Cooperative Agreement Implementation Group, Agricultural Groundwater Coordination Committee, NRCS State Technical Committee, the State BMP Committee and the Agricultural TMDL Technical Committee.

This approach goes a long way towards rectifying the fragmented nature of resource management by achieving a satisfactory level of rational local comprehensive planning and compatible institutional arrangements to facilitate watershed planning and ultimate implementation. This arrangement also affords the opportunity for input from various interest groups, includes state and federal agencies, and serves as a vehicle for ensuring that these locally developed plans are compatible with the physical environment, reflect social and economic values, and meet the desirable technical goals of sound watershed management.

Unified Watershed Assessment

Unified assessments of water quality and watershed conditions will help make the assessment process more efficient and accountable. A watershed approach enables the balancing of improving impaired water bodies and preventing further impacts to threatened and fully supporting waters. In taking the lead in a balanced watershed approach, the State of Idaho has prepared a single, Unified Watershed Assessment (Appendix A-7). The assessment draws on a range of available information to:

- assess the health of watersheds and identify those requiring restoration;
- identify watersheds needing preventive actions to sustain water quality using ongoing state, tribal, and federal programs; and
- identify pristine or sensitive aquatic system conditions on federal, state, and tribal lands needing extra measures of protection, and
- identify processes and activities ongoing, areas of need, and integration opportunities for efforts to maximize benefits to water quality.

As of the June 1998 USDA/EPA Unified Watershed Assessment Framework, “watersheds” throughout the State have been categorized at the sub-basin scale. Most of Idaho’s subbasins, seventy-eight of eighty-four, have waters that do not meet water quality standards. These subbasins have been listed on the State’s 303(d) list (Category 1). Total maximum daily loads (TMDLs) will be prepared in accordance with the 303(d) list schedule over the next seven years or by the year 2005. Further, the assessment recognized three subbasins meeting goals but needing action to sustain water quality (Category 2).

Total maximum daily loads are watershed-based analyses of the quantities and sources of pollutants which prevent a water from meeting its beneficial uses. The aim is to restore those uses through reductions of pollutants. With a subbasin approach all waterbodies and pollutants on the current 1998 303(d) list within a hydrologic subbasin will be addressed

individually in a document. The overall TMDL process follows a logical sequence of assessment, analysis, and planning for each subbasin with three steps:

- subbasin assessment—defines the problem at the geographic scale of the 4th field hydrologic unit;
- loading analysis—estimates a waterbody’s pollutant load capacity, a margin of safety, and allocates loading on a source basis; and
- implementation plan(s)—details actions necessary to achieve load reductions in conjunction with a schedule, and specify monitoring needs.

With a subbasin approach all waterbodies and pollutants on the current 303(d) list within a hydrologic subbasin will be addressed in a single document. The State of Idaho intends to develop TMDL analyses for all water quality limited waters on its’ 1998 Clean Water Act §303(d) list, unless subsequently de-listed, by the end of 2005. There are 84 subbasins which are entirely or partially within Idaho.

The TMDL Process

The order and pace of TMDL development is presented in the State of Idaho eight year TMDL schedule agreed to on April 8, 1997 (TMDL Guidance, Appendix C). The State of Idaho will also develop TMDLs for waterbodies determined to be water quality limited subsequent to the 1996 list. Where possible, additions to Idaho’s §303(d) list will be addressed along with currently scheduled waters in the same subbasin, otherwise a separate date will be specified.

In Idaho’s eight-year schedule, forty-two high priority waterbodies are scheduled individually for completion by the end of 1999. Remaining medium and low priority waterbodies are scheduled, subbasin by subbasin, to be completed by the end of 2005. This schedule is based on calendar years and TMDLs are due to be submitted to the Environmental Protection Agency (EPA) no later than December 31 of the year scheduled (Table 3.1). Totals are provided by year and by region, based on Idaho’s 1998 303(d) List. The final total of subbasins focused on by 2005 is 71 or 878 water quality limited segments.

Table 3.1 Summary of the numbers of subbasins focused on each year by regional office.

	1999	2000	2001	2002	2003	2004	2005	TOTAL BY REGION
Coeur d’Alene	2	2	1	1	1	2	2	11
Lewiston	3	2	1	2	2	1	2	13
Boise	2	3	3	2	2	2	1	15
Twin Falls	2	1	1	2	2	1	1	10
Pocatello	1	2	1	1	1	2	0	8
Idaho Falls	2	3	2	2	1	3	1	14
TOTAL BY YEAR	12	13	9	10	9	11	7	71

By addressing all water quality limited waterbodies on the current §303(d) list in a given subbasin at once an economy of scale in document preparation and review is sought. Furthermore, it is believed such aggregation will often reflect similarities in water quality problems, pollutant sources, and available information that will facilitate timely assessment. Making subbasin assessment the first step allows distinction of waterbodies which are truly water quality limited from those which are documented to be meeting water quality standards. To the extent possible, the subbasin assessment also identifies which pollutants are truly factors in causing impairment of beneficial uses, and the sources of those pollutants. In this way subsequent loading analysis is better defined.

A loading analysis is needed only for those waterbodies and their watersheds which are documented in the subbasin assessment to be water quality limited, and only for those pollutants causing impairment. In addition to a loading

capacity and allocations, a loading analysis sets out a general pollution control strategy and an expected time line for meeting water quality standards. The combination of subbasin assessment and loading analysis constitute the TMDL as required under §303(d) of the Clean Water Act.

Implementation plans are an essential third step in the process of restoring beneficial uses and assuring compliance with water quality criteria. They are not part of a TMDL submitted to EPA. These plans lay out a schedule of specific actions to be undertaken. They are to be developed within 18 months of EPA approval of a TMDL, and in accordance with the water quality goals and load allocations provided in a TMDL. Monitoring to ascertain achievement of water quality goals will be an essential part of implementation plans. Instream monitoring and assessment of water quality is the responsibility of IDEQ. Monitoring the implementation and effectiveness of specific source control actions is the responsibility of designated state agencies as defined in IDAPA 16.01.02.003.23.

Implementation of an approved TMDL is primarily the responsibility of designated agencies, as stated in Idaho Code 39-3612, in cooperation with landowners and managers. These designated agencies are defined in Idaho Code 39-3602 as the Department of Lands (IDL), for timber harvest, oil and gas exploration and development, and for mining; the Soil Conservation Commission (SCC) for grazing and agriculture; the Idaho Transportation Department (ITD) for public roads; the State Department of Agriculture (ISDA) for aquaculture; and the IDEQ for all other activities.

Development of TMDLs will be in accord with the provisions of the federal Clean Water Act, Idaho Code 39-3601 *et seq.*, and all other applicable laws. The Idaho Division of Environmental Quality (IDEQ) is the lead agency for development of TMDLs for Idaho waters. However, the Environmental Protection Agency (EPA) will have a role in coordinating multi-jurisdictional TMDLs involving interstate or tribal waters (see Agency Roles, Chapter 2).

Funding of TMDL implementation plans will require a major effort from all state and federal partners. For TMDL/WRAS plans to be funded under §319, the plans have to go through the following review criteria.

Annual and Multi-year Workplans

Idaho uses a two step technical project selection review process to ensure that both specific priority watersheds and activities of statewide nature are balanced. The review process is tied directly into Idaho's TMDL and the approved state §303(d) listing process, but also recognizes the importance for protection of ground water, special resource waters, and threatened and endangered species to the healthy functioning of a complete water quality system. An example copy of the state's ranking criteria and schedule is included in Appendix F. The specific evaluation criteria may be modified as necessary to reflect the changing water quality priorities within the state.

The first part of the project review is general evaluation to determine if the projects meet the following criteria:

- Complies with all state and federal requirements (including funding match);
- Meets the goals of the State Nonpoint Source Management Program Plan;
- Provides a detailed work plan and implementation schedule;
- Is based on credible data;
- Provides a maintenance agreement that extends beyond the life of the project; and
- Includes a monitoring element that extends beyond the life of the project.

Those projects failing any portion of the general evaluation are not included in the technical review.

Secondly, the technical review is heavily weighted towards the implementation of best management practices and the criteria grades each project based on major and minor project elements. The major elements include:

- Relationship to the implementation of approved TMDLs or other special water quality efforts (e.g., Governor's Bull Trout Conservation Plan);
- Identification of the BMPs to be implemented;

- Identification of the status of the ground or surface water, implication to a threatened or endangered species, impacts to an outstanding resource water, or impacts to a sensitive or general resource ground water;
- Identification of the severity to beneficial uses (e.g., number of stream miles or acres affected, health and safety impacts to ground water); and
- Estimation of the restoration potential (e.g., percent improvement expected based on project implementation).

The technical review of minor elements include:

- Identification of the number of impacted beneficial uses;
- Ability of the project technologies to be transfer to other sites within the state;
- Recognition of the special status of water (e.g., State Park, outstanding resource water, high ground water vulnerability area, etc.);
- Evaluation of the environmental stewardship component; and
- Summation of the community/agency support for the project.

Based on the technical review, points are awarded for each major and minor review category. Each potential project receives a numerical score, which allows a statewide ranking of proposals. The projects are then rank ordered by the BAG for each individual basin based on local priority needs, and submitted to IDEQ. Final project selection is made at a meeting of all the BAG chairs and IDEQ upper management. Using this system the State has been able to achieve a balance between statewide initiatives and on-the-ground implementation projects. Idaho will continue to use this review and project selection method for determining the balance between statewide initiatives and on-the-ground implementation projects. The IDEQ remains responsible for the NPS program implementation and as such, while looking out for the greater interests of the State, may choose not to implement the advice of the BAGs in its funding of NPS projects.

Tracking Statewide and Watershed Projects

Idaho has long realized that unregulated nonpoint pollution sources contribute to reduced water quality. The Idaho Nonpoint Source Management Program uses its \$319 grants funding for various nonpoint source management projects (Figure 3.1). From 1990 through the 1999 program year the NPS Management Grants Program allocated approximately \$16 million in combined private, local, state, and federal monies. Projects have included:

- BMP Implementation;
- Technical Assistance;
- Protocol Development;
- Ground Water Monitoring;
- Information; and
- Education.

Past funding cycles include a wide variety of projects. From 1990 through federal fiscal year 1999, Idaho has funded over 125 projects with the projects from 1997 through 1999 summarized in Tables 8.1 through 8.3. The projects listed in Tables 8.1 through 8.3 reflect the variety and diversity of Idaho's Nonpoint Source Program. Idaho endeavors to seek and fund a balance of projects that protect the beneficial uses of both surface and ground water. Additionally IDEQ strives to balance the management and objectives of the program, with the local BAG/WAG watershed implementation needs.

An example of this balanced approach, for which the NPS Program is striving to attain for all TMDL/WRAS implementation activities, is reflected in the Paradise Creek TMDL Implementation Plan attached as Appendix G.

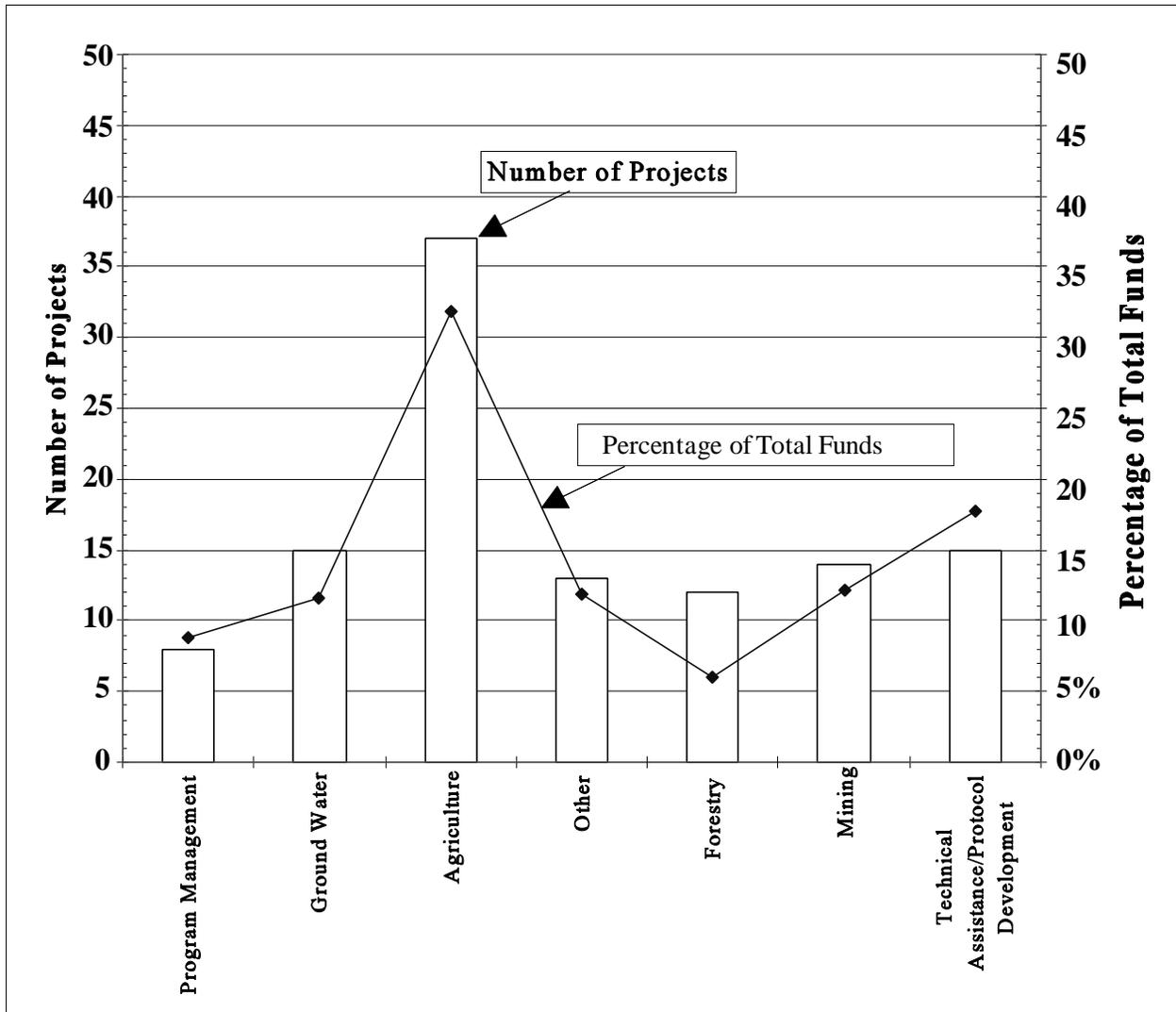


Figure 3.1 Distribution of \$319 projects versus funding through 1997.

CHAPTER 4 - TAKING PROGRAM PLANNING TO ACTION

Key element #4 states that the *"state program (a) abates known water quality impairments resulting from nonpoint source pollution, and (b) prevents significant threats to water quality from present and future activities."*

Identification of the waters and watersheds impaired or threatened by nonpoint source pollution and an outline of the process used to progressively address those waters is included in Chapter 5. Once those waters and watersheds have been identified and prioritized, nonpoint source prevention and abatement activities can be initiated.

The State of Idaho utilizes a variety of legislative and programmatic approaches to protect its waters. Idaho Code §39-3601 et. seq. (Appendix B.) sets the current standard for regulatory action for surface water bodies where beneficial uses are not fully supported. Water bodies that are listed as a "high" priority indicate that unless remedial actions are taken in the near term, there will be significant risk to designated or existing beneficial uses. "Medium" priority water bodies are where water quality data indicates that unless remedial action is taken, there will be risks to designated or existing beneficial uses. "Low" priority water bodies are where limited or subjective water quality data indicates designated beneficial uses are not fully supported, but risks to human health, aquatic life, or the recreational, economic or aesthetic importance of a particular water body is minimal. This legislation provides one of the key ingredients of the nonpoint source management program by identifying waters within the state affected by nonpoint source pollution. This rating from high to low priority affects the TMDL development schedule and impacts the technical evaluation scores of each proposed project. The higher the priority of the water body, the quicker a TMDL is scheduled for development, and the higher the technical evaluation score will be for the proposed project.

The State's TMDL process and nonpoint source management program are intimately linked through the regulatory and non-regulatory components of the CWA and the state water quality standards. The TMDL process provides the necessary loading data for impaired waterbodies while the nonpoint source management program acknowledges the appropriate BMP documents, allows owner/operators to selectively choose BMPs best suited to their individual economic, social and water quality objectives; and provides incentives to implement the BMPs on threatened or impaired waters.

As an umbrella program, the Idaho Nonpoint Source Management Program is responsible for coordinating all nonpoint source activities. The primary purposes of the Idaho Nonpoint Source Management Program are to provide comprehensive direction on priorities and implementation guidance for addressing impaired or threatened water quality (see TMDL Guidance, Appendix C and Draft Implementation Guidance, Appendix D).

In keeping in step with the *Clean Water Action Plan* (EPA, 1998), the IDEQ is calling for other state agencies, tribes, and federal agencies to affirmatively engage watershed management as a "core, guiding principle for water quality management." Furthermore, the State is utilizing the NPS plan to encourage the adoption of the States No-Net Increase Policy PM98-2. This antidegradation policy encourages the adoption of BMPs, or knowledgeable and reasonable measures, to prevent discharges of point and nonpoint source pollutants prior to TMDL/WRAS development. Today, there is a growing recognition for the need of better coordination among the varied public agencies involved with water and land management. In fact, this growing recognition for better coordination can be fully realized with tailoring implementation strategies at the watershed level. It has been repeatedly shown that a watershed approach is the most pragmatic and effective means of solving multiple problems and accomplishing diverse water quality objectives.

Idaho's TMDL Implementation Strategy

An implementation plan identifies and describes the specific pollution controls or management measures to be undertaken, the mechanisms by which the selected pollution control and management measures will be put into action, and describes the authorities, regulations, permits, contracts, commitments, or other evidence sufficient to ensure that implementation will take place. The plan also describes when implementation will take place, identifies when various tasks or action items will begin and end, when mid-term and final objectives will be met, and establishes dates for meeting water quality targets.

Application of effective BMPs is crucial to achieving the pollutant load reductions and targets of the TMDL. Consequently, the implementation plan, to the extent practicable, must be explicit about which BMPs or systems or BMPs will be employed to achieve the targets, where and when the BMPs will be employed, and how application of the BMPs will achieve the stated targets. EPA guidance specifically identifies several criteria by which BMPs will be judged:

- A data-based analysis showing that the selected BMPs have been demonstrated to be effective in addressing the issue or pollutant in question (i.e., a history of successful application in similar situations);
- An explanation of the mechanisms by which application of the BMPs will be assured; and
- A plan for tracking the implementation and effectiveness of the BMPs.

The IDEQ and the other designated natural resource agencies will use these criteria in evaluating the likelihood that selected BMPs will achieve the targets and load reductions specified in the TMDL. The selection of BMPs may be very site-specific, and may change over time in response to changing conditions, opportunities, land manager preferences, and lessons learned. To the extent that BMPs can be anticipated to change over time, the TMDL implementation plan must describe the decision making process by which future BMPs will be selected, how effectiveness monitoring and other inputs will factor into the selection, and how interested stakeholders will be involved in the decisions. Effective TMDL implementation plans generally are designed to be flexible and adaptable over time. Therefore, it may be most appropriate to include detailed descriptions of the BMPs in an addendum.

While it is recognized that TMDL implementation is crucial to water quality improvement, it is not currently part of a TMDL submitted to EPA for approval. An implementation plan is a separate document, which is guided by an approved TMDL.

Timeline for Implementation

Implementation plans are to be developed within 18 months of EPA approval of the TMDL and in accordance with the water quality goals provided in a TMDL package. Each associated implementation work plan should contain a Time line with dates for starting and completing the work, and appropriate milestones for interim products. The discussion of midterm reviews and effectiveness evaluations is particularly important. Pursuit of TMDL targets and application of the BMPs may take years, perhaps decades. It may also be desirable to break implementation of the plan into logical sequenced phases.

Implementation will be unique in each subbasin, but two general guidelines apply:

- Address the causes of problems rather than remediate the symptoms or effects; and
- Work from the top of the watershed on down (e.g., upstream before downstream, tributaries before the main stem).

However, adhering rigidly to these first two guidelines can slow down implementation unnecessarily, so also keep the next two guidelines in mind:

- Implementation may be faster and more efficient if measures are applied simultaneously across a whole watershed or if measures are implemented at selected sites throughout the watershed in a carefully considered and coordinated way; and
- Where irreplaceable resources such as threatened or endangered aquatic species are at immediate risk, the implementation plan should move as quickly as possible to enhance critical water quality conditions.

Identification of Participants

The implementation plan must identify the roles, responsibilities, and commitments of the various public and private participants. This will be achieved largely through the description of the implementation plan's objectives. However, other more general commitments from supporters may be worth indicating. For example, certain entities may commit resources to monitoring, public information sharing, technical assistance, and administrative oversight. As outlined throughout the NPS plan and under §39-3601 the public is included and has specific roles through all planning and implementation activities.

Discussion of Costs and Funding

Each TMDL must estimate the costs associated with plan implementation. An implementation plan with no funding will result in little or no action. The plan should identify potential sources of funding, the mechanisms by which those sources will be tapped, and who will conduct the fund raising effort. Funds may come from any public or private source, and will include the investments made by loans, the landowners themselves, grants, cost-share funds, in-kind contributions, and donations. The plan should explore the potential to raise funds both outside and inside the watershed. This chapter includes a listing of local, state, and federal programs which may provide funding or other resources to help with nonpoint source implementation efforts.

Maintenance of Effort Over Time

It is important for the stakeholders to demonstrate an ongoing commitment to long-range implementation. This commitment to ongoing implementation should also be reflected in a number of the plan's elements. These elements could include long-term conservation agreements, maintenance contracts, long-term conservation easements, modifications or revisions to existing land use plans, revisions to or new land use ordinances to name but a few. However, it is beyond the scope of this document to describe how each individual plan will accomplish this task.

In most cases, the problems leading to water quality limitations and §303(d) listing have accumulated over many decades, and may require a number of years to remedy. Some management actions can produce measurable, even visible results within a year or two. However, it may take many years to implement the type of wide scale treatments often necessary to improve water quality throughout a watershed. Additional years of continued effort and maintenance may be necessary before the practices have their desired effect of achieving and maintaining water quality standards and full beneficial use support.

Monitoring and Evaluation

Monitoring for implementation and effectiveness of the TMDL should be guided by targets and load allocations derived from given TMDLs. The approach should track implementation of the selected pollution control measures, collect and analyze information on the effectiveness of the specific measures at achieving water quality goals, and provide feedback to an "adaptive management" process. The types of monitoring which may be needed include chemical, biological, and physical parameters depending on the watershed in question. The watershed advisory group implementing the TMDL should work closely with the designated agencies to ensure that monitoring efforts within the watershed are not duplicated. Cooperative monitoring of implementation activities by IDEQ and others will be an essential component to ensuring the achievement of water quality goals. Agencies, such as IDEQ, have specific monitoring responsibilities (e.g., the IDEQ Beneficial Use Reconnaissance Project, and other pre and post implementation watershed monitoring; ISDA is implementing an agricultural TMDL water quality monitoring program jointly with SCC, SCDs, and IASCD (Appendix E)).

In a phased TMDL, adequate monitoring also provides specific data needed to refine and improve initial loading capacity and allocations. The *Coordinated NPS Water Quality Monitoring Program for Idaho* (IDEQ, 1990) still presents a relevant tool and guideline for coordination and review of NPS activities on federal lands.

A high degree of commitment to ongoing monitoring for project effectiveness is an important element of the implementation plan. IDEQ's Beneficial Use Reconnaissance Project systematically reviews the beneficial use status of Idaho's water ways. Effectiveness monitoring should evaluate the results of implementing various management approaches and document long range water quality improvements and beneficial use support trends. This along with site specific BMP effectiveness data collected by the designated agencies as listed in Idaho Code §39-3601 et. seq. for each NPS category will substantially cover the implementation monitoring needs of the state.

It is very important to use monitoring results in a well thought out feedback loop process to evaluate the effectiveness of the actions and improve the TMDLs and implementation plans in general. Dates for interim project reviews must be built into the implementation timetable. Similarly, the monitoring plan must include at least a brief discussion of how and by whom the collected data will be analyzed and how the results will be used to make and incorporate revisions in the TMDL.

Public Involvement

Each watershed will have a unique set of interested and affected persons with a stake in developing and implementing the TMDL. The public must be involved in all steps of TMDL development, but are most heavily involved in implementation. Ideally, those who will be most closely involved in implementation should be involved in development of the implementation plan. The point is to seek as much public and private support for the implementation plan as possible in order to maximize its likelihood of success. Interested stakeholders may include local land owners, other residents of the watershed, local governments, special districts, state and federal agencies, natural resource stewardship groups with local interests, and others. It is important to note that in addition to those who manage land in the watershed there are other people who will be affected by the TMDL and who will have an active interest in the aquatic resources being treated. Many of these people may have important contributions to make to the successful implementation of the plan.

Many private land owners and managers are understandably reluctant to have other people become involved in their private management decisions, but such interference is not the point of a TMDL or implementation plan. Rather than offering up every private land management plan for review, the emphasis instead should be on a general understanding of the condition of the watershed, what needs to be done within each land use type on an area-wide basis, and how everyone in the watershed can work together in a mutually supportive way, and with the recognition that surface waters of the state are public resources of concern to all. Although specific management measures for the watershed must be identified in the TMDL implementation plan, there is no requirement that they be approved by any public process.

To address these concerns Idaho adopted the Water Quality Law (Idaho Code §39-3601 et. seq.) to provide direction for local watershed planning and management. Under the law, appointed community-based BAGs, recommend water quality objectives to the IDEQ concerning monitoring, designated beneficial use status revisions, prioritization of impaired waterbodies, and solicitation of public input. Local stakeholder based WAGs are appointed by IDEQ with advice from the appropriate BAG. WAGs advise IDEQ on the development and implementation of TMDLs so that within a reasonable period of time beneficial uses are fully supported (See Introduction and Chapter 3).

Addressing Diverse Program Dimensions

The State Nonpoint Source Management Program addresses a wide range of nonpoint source categories and subcategories. The various categories include: agriculture, silviculture, urban runoff, construction activities, transportation, resource extraction, sewage and land disposal, hydrologic/habitat modification, recreation, and ground water (e.g., subsurface sewage disposal, industrial chemicals, wellhead protection, and source water assessment).

By its very nature, nonpoint source pollution is diffuse and may not be easily characterized. Therefore, as the watershed advisory group meets to begin the development of the implementation plan the watershed advisory group must carefully analyze the group of BMPs necessary to restore beneficial uses. However, the listing of BMPs should be broad enough to allow the individual cooperators within the basin the flexibility to choose BMPs which will complement their operations while helping to restore beneficial uses. The watershed advisory groups will need to work closely with each of the designated agencies and local organizations to ensure that the developed plan can and will be implemented.

Coordinating Action

As a result of existing programs or mandates, certain agencies and organizations are particularly likely to take the lead on TMDL implementation. Idaho Code §39-3601 et. seq. specifies certain entities as the designated agencies for various land use activities. In addition to the statewide coordination and priority setting with IDEQ, these designated agencies will take the lead in coordination with their federal counterparts for the lands for which they have a common interest. These designated agencies include the Department of Lands for timber harvest and mining activities, the Soil Conservation Commission for grazing and agricultural activities, the Department of Transportation for public road construction, the Department of Agriculture for aquaculture, and IDEQ for all other activities (See Roles Chapter 2). Over the next year Idaho will work with EPA to facilitate the coordination of funding and to prioritize restoration effects with the Tribes on waters which lie within Indian Reservations, or otherwise have a special Tribal interest. Likel

federal agencies include the FS, BLM, F&WS, and NRCS. Local organizations may include cities and counties, soil and water conservation districts, irrigation districts, and other groups.

There are many scenarios where federal agencies are involved in watershed restoration activities. For example, the NRCS assists under the PL-566 land treatment watershed plans, Environmental Quality Incentive Program (EQIP) geographic priority plans, coordinated resource management plans, and other related efforts (see Introduction, Cooperation and Roles, Chapter 2.). The ICBEMP project by the FS and BLM, which call for watershed analysis and other types of landscape level analyses can help further define and direct restoration priorities. The F&WS and National Marine Fisheries Service (NMFS) biological opinions, recovery plans, and habitat conservation plans for federally listed fish and aquatic species will also target and identify appropriate watershed protection and restoration measures.

Linking Nonpoint Source Pollution Actions

Idaho's many water quality partners provide valuable technical and financial assistance in carrying out the nonpoint source program. These voluntary programs when implemented at the watershed level provide the means to restore, protect, and maintain the beneficial uses of the State surface and ground water. These programs when combined with other required elements of the CWA (e.g., TMDLs/WRASs) provide the basis for restoration and protection of water quality and beneficial uses. As described in Chapter 2, IDEQ provides technical and financial support to many of the agencies responsible for the coordination of these programs to ensure that the State water quality concerns are adequately addressed. Additionally, as part of its statewide approach IDEQ works in conjunction with all entities to conduct joint outreach efforts through workshops, meetings, and conferences (such as Water Quality 2000).

The following is a brief summary of some of the ongoing programs currently used to abate nonpoint source pollution and is not meant to minimize or undermine the importance of those state, federal, local or tribal programs which have not been included in this chapter. Many of these programs have been integrated (such as joint PL566 and SAWQP projects, See Introduction and Chapter 2) to ensure adequate implementation coverage, and ensure all land owners are able to participate and implement BMPs at some level. Additionally, programs such as the Idaho Storm Water Program, Wellhead Protection Program, and the Source Water Assessment Program exclusively focus on *preventing* significant threats to water quality. An example of integration of a prevention program might be the *Idaho Farm/Home*A*Syst* (IASCD, 1995). It has been used in many ongoing programs to ensure homeowner awareness for protection of their water supply from impacts due to the storage and mixing of pesticides or fertilizers at the wellhead, confinement of livestock, or failures from septic systems. Additionally the Clean Lakes Program Phase I and Phase II projects have been widely used in the State for raising the awareness of NPS impacts to waterbodies through monitoring and assessments. Follow up implementation activities has been an important tool to the State used to prevent or mediate those impacts.

Interagency integration of these available tools represents the key to ensuring all interest groups will participate and that all resource concerns are addressed. Each of these listed programs provide important tools which will provide unlimited opportunities for interagency coordination and cooperation for of the many TMDL/WRAS implementation plans needed to completely meet water quality standards in Idaho. An example of use of the cooperation and multiprogram approach for TMDL implementation is attached as the Paradise Creek TMDL Implementation Plan (Appendix G).

- *§104(b)(3)...Tribal and State Wetland Protection Grant, EPA*
This program provides financial assistance to state, tribal, and local government agencies to develop new wetland protection programs or refine and improve existing programs. All projects must clearly demonstrate a direct link to improving an applicant's ability to protect, restore or manage its wetland resources.
- *§303 (d)...Water Quality Planning and Management, IDEQ/EPA*
Water quality standards and implementation plans including review and revision of standards, water quality limited segments, total maximum daily loads, the continuing planning process, and thermal limits. §303 (d) requires states to prepare a prioritized list of water quality limited segments not meeting state water quality standards.

- *§314 Clean Lakes Grants, EPA/IDEQ*
This program has provided financial assistance for: a) Phase 1, for the study and identification of lake water quality problems, and development of restoration plans to address those problems, and b) Phase II, funding for implementation and restoration activities. There is a potential for this to again be a valuable tool available through increased funding under §319 for lake work and associated activities such as; monitoring, volunteer monitoring, fishery and habitat projects, exotics, etc.
- *§319 (h)...Nonpoint Source Grants, EPA/IDEQ*
This program provides financial assistance for the implementation of best management practices to abate nonpoint source pollution. The IDEQ manages the NPS program. All projects must demonstrate the applicant's ability to abate NPS pollution through the implementation of BMPs.
- *Aquatic Ecosystem Restoration, CoE*
Section 206 of the Water Resources Development Act of 1996, provides financial assistance for aquatic and associated riparian and wetland ecosystem restoration and protection projects that will improve the quality of the environment. There is no requirement for an aquatic ecosystem project to be linked to a Corp of Engineers project. The program does require that a non-federal interest provide 35% of construction costs, including all lands, easements, right-of-ways and necessary relocations. The program also requires that 100% of the operation, maintenance, replacement, and rehabilitation be borne by the non-federal interest. The program limits the amount of federal assistance to \$5 million for any single project.
- *Challenge Cost-share Program, BLM*
This program provides 50% cost-share monies on fish, wildlife, and riparian enhancement projects to non-federal entities.
- *Conservation Operations Program (CO-01), NRCS*
The CO-01 program provides technical assistance to individuals and groups of landowners for the purpose of establishing a link between water quality and the implementation of conservation practices. The NRCS technical assistance provides farmers and ranchers with information and detailed plans necessary to conserve their natural resources and improve water quality.
- *Conservation Research and Education, NRCS*
The Conservation Research and Education program was created through the 1996 Farm Bill and is administered by the National Natural Resources Conservation Foundation. The purpose of the program is to fund research and educational activities related to conservation on private lands through public-private partnerships.
- *Conservation Reserve Program (CRP), NRCS*
The CRP program provides a financial incentive to landowners for the protection of highly erodible and environmentally sensitive lands with grass, trees, and other long-term cover. This program is designed to remove those lands from agricultural tillage and return them to a more stable cover. This program holds promise for nonpoint source control since its aim is highly erodible lands.
- *Conservation Technical Assistance (CTA), NRCS*
Technical assistance for the application of BMPs is provided to cooperators of soil conservation districts by the NRCS. Preparation and application of conservation plans is the main form of technical assistance. Assistance can include the interpretation of soil, plant, water, and other physical conditions needed to determine the proper BMPs. The CTA program also provides financial assistance in implementing BMPs described in the conservation plan.
- *Cooperative Studies Program, USGS*
The Cooperative Studies Program provides for up to 50% cost-share on water quality and water quantities studies.

- *Ducks Unlimited Marsh Projects, Ducks Unlimited*
Ducks Unlimited is committed to wetland habitat development through their funding and implementation efforts. The Ducks Unlimited Marsh Project has been active in Idaho and cost shares on the development and/or enhancement of wildlife habitat or wetlands.
- *Environmental Quality Incentives Program (EQIP), NRCS*
EQIP is a program based on the 1996 Farm Bill legislation and combines the functions of the Agricultural Conservation Program, Water Quality Incentives Programs, Great Plains Conservation Program, and the Colorado River Basin Salinity Control Program. EQIP offers technical assistance, and cost share monies to landowners for the establishment of a five to ten year conservation agreement activities such as manure management, pest management, and erosion control. This program gives special consideration to contracts in those areas where agricultural improvements will help meet water quality objectives.
- *Environmental Restoration, CoE*
Section 1135 of the Water Resources Development Act of 1986 provides for modifying the structure, operation, or connected influences or impacts from a Corp of Engineer project to restore fish and wildlife habitat. The project must result in the implementation or change from existing conditions, and the project benefits must be associated primarily with restoring historic fish and wildlife resources. Though recreation cannot be the primary reason for the modification, an increase in recreation may be one measure of value in the improvement to fish and wildlife resources. The program requires a non-federal sponsor which can include public agencies, private interest groups, and large national nonprofit organizations such as Ducks Unlimited or the Nature Conservancy. Operation and maintenance associated with the project modifications are the responsibility of the non-federal sponsor. Planning studies, detailed design, and construction are cost shared at a 75% federal and 25% non-federal rate. No more than \$5 million in federal funds may be spent at a single location.
- *Farm Services Agency Direct Loan Program, FSA*
This program provides loans to farmers and ranchers who are unable to obtain financing from commercial credit sources. Loans from this program can be used to purchase or improve pollution abatement structures.
- *Flood Plain Management Services, CoE*
Section 206 of the Flood Control Act of 1960 authorizes the Corp of Engineers to provide information, technical assistance and guidance upon request to states and local communities to reduce flood damages by informing people who live and work in the flood plain of its hazards, and what actions they can take to reduce property damage and prevent the loss of life.
- *Flood Risk Reduction, FEMA*
The Flood Risk Reduction program authorizes FEMA to develop voluntary contracts that provide a lump sum payment to producers who farm land with a high flood potential. In return for the lump sum payments, the producer agrees to comply with applicable wetlands and high erodible land requirements.
- *Forest Incentives Program (FIP), NRCS*
The FIP program is designed to help small private landowners increase timber production on private-owned, nonindustrial, forest lands. Cost-share funds can be used for a variety of purposes including tree plantings, improving a stand of trees, and site preparation for natural regeneration of trees.
- *Forest Service Challenge Cost-share Program, USFS*
This program focuses on fish and wildlife habitat improvements with funds being cost-shared to any non-federal entity.
- *Forest Service Soil and Water Improvement Program, USFS*
This program includes funds to complete improvement projects designed primarily to reduce erosion and sedimentation, and meet targets identified in National Forest System Land Management Plans.

- *Ground Water Program, IDEQ*

The ground water program provides the statewide leadership role for ground water protection through the implementation of the Ground Water Quality Rule, regional and local monitoring, wellhead protection program, and through technical and educational assistance to local, city, county, and state governments.

In 1989, the Idaho Legislature enacted the Ground Water Quality Protection Act creating a Ground Water Quality Council that developed the state Ground Water Quality Plan. The plan includes six key policy areas and a section on development of a ground water quality monitoring program for the State. The six key ground water policies of the State of Idaho are:

- ▶ Maintain and protect the existing high quality of the State ground water;
- ▶ Prevent contamination of ground water from all regulated and nonregulated sources of contamination to the maximum extent practical;
- ▶ Provide educational programs on ground water protection, prevention of ground water contamination, and ground water restoration;
- ▶ Provide information and encourage public participation in applicable activities related to ground water quality protection;
- ▶ Implement and maintain an ongoing statewide ground water quality monitoring network; and
- ▶ Conduct remediation when feasible and appropriate where contamination resulting from human activities produces a significant potential for the impairment of an existing or protected beneficial use of ground water.

The IDEQ developed the Ground Water Quality Rule in 1996 using a negotiated rule making procedure. This rule establishes minimum requirements for the protection of ground water through ground water quality standards and an aquifer categorization system. The rule contains numerical and narrative standards which apply to all ground water in the state, with the numerical standards being based on the maximum contaminant levels established under the federal Safe Drinking Water Act. The plan, act, and rule provide the underlying guidance for protection of the State's ground water from nonpoint source contamination.

- *Hydrologic Unit Areas (HUAs), NRCS*

The NRCS is responsible for the HUA water quality projects. The purpose of these projects is to accelerate technical and cost-share assistance to farmers and ranchers in addressing agricultural nonpoint source pollution.

- *Idaho Riparian Tax Credit (RTC) (Idaho Code §63-3024B), Interagency State Tax Commission*

The purpose of RTC program is to provide a public and private partnership for the improvement, repair, and rehabilitation of forest, range, and farm lands. Through tax incentives, landowners are encouraged to fence, set aside, or otherwise improve lands to enhance riparian health.

- *Idaho Water Resources Board Financial Programs, IDWR*

The Idaho Water Resources Board Financial Program assists local governments, water and homeowner associations, non-profit water companies, and canal and irrigation companies with funding for water system infrastructure projects. The various types of projects that can be funded include: public drinking water systems, irrigation systems, drainage or flood control, ground water recharge, and water project engineering, planning and design. Funds are made available through loans, grants, bonds, and a revolving development account.

- *National Conservation Buffer Initiative, NRCS*

The National Conservation Buffer Initiative program provides cost-share funds in an effort to use grasses and trees as conservation buffers to protect and enhance riparian resources on farms. This program will be an integral part of TMDL/WRAS implementation planning to ensure land management practices are moved away from streams and riparian areas.

- *Planning Assistance, CoE*

Section 22 of the Water Resources Development Act of 1974 authorizes the Corp of Engineers to assist local governments and agencies, including Indian Tribes, in preparing comprehensive plans for the development,

utilization and conservation of water and related resources. Total costs for projects cannot exceed \$1 million in a single year and are cost-shared at a 50% federal and 50% non-federal rate.

- *Range Improvement Fund - 8100, BLM*
This program focuses on improving rangeland management conditions, including the implementation of best management practices. A portion of the money to operate the program comes from the grazing fees paid by permittees.
- *Small Watersheds (PL-566), NRCS*
The Small Watersheds program authorizes the NRCS to cooperate in planning and implementing efforts to improve soil and water conservation. The program provides for technical and financial assistance for water quality improvement projects, upstream flood control projects, and water conservation projects.
- *Partners for Wildlife (Partners), USFWS*
The Partners for Wildlife program is implemented by the U.S. Fish and Wildlife Service and designed to restore and enhance fish and wildlife habitat on private lands through public/private partnerships. Emphasis is on restoration of riparian areas, wetlands, and native plant communities.
- *Pheasants Forever*
Pheasants Forever can provide up to 100 percent cost-share for pheasant and other upland game projects which establish, maintain, or enhance wildlife habitat.
- *Resource Conservation and Development (RC&D), NRCS*
Through locally sponsored areas, the RC&D program assists communities with economic opportunities through the wise use and development of natural resources by providing technical and financial assistance. Program assistance is available to address problems including water management for conservation, utilization and quality, and water quality through the control of nonpoint source pollution.
- *Resource Conservation and Rangeland Development Program (RCRDP), SCC*
The RCRDP program provides grants for the improvement of rangeland and riparian areas, and loans for the development and implementation of conservation improvements.
- *Source Water Assessment Program (SWAP), IDEQ*
The Safe Drinking Water Act Amendments of 1996 require states to develop and implement the Source Water Assessments Program (IDEQ, 1999c). A source water assessment includes delineation of source water areas, inventories of potential contamination sources, determinations of public health risks to contamination, and informing the public of the results. The primary goal of Idaho's SWAP is to develop information which enables PWS owners, consumers, and others to initiate and/or promote preventative actions to protect their drinking water sources.

The actual source water assessment is not an end product. Instead, it is a first step in providing a sound technical basis for the local public water supply system to consider protection measures appropriate for their particular situation. Information derived from the many source water assessments is intended to be used by other individual environmental programs, both regulatory and non-regulatory, for development and implementation purposes. For example, use of contaminant source inventories to assist in Class V injection well prioritizations. Another example may be for use of the Clean Lakes funding and process to identify and prevent/mediate NPS impacts to surface water supply sources.

The IDEQ is committed to providing leadership to help communities develop and implement protection activities. However, the ultimate goal of protection can be achieved only through local initiatives. The direction and strategies are driven at the local level based on the results of each assessment. IDEQ's vision is to provide technical assistance to those communities and public water supply systems (PWS) with high susceptibility, and to maximize the use of assessment results by assisting PWS and communities in implementing protection strategies at the local

level. Assessment results are helpful in determining strategies and degrees of application for protecting and preventing impacts to source waters.

Source water protection involves a variety of measures taken to ensure the continuing quality of drinking water whether it is supplied by ground water or surface water. It is up to the water system and the public to decide what form of protective measures are appropriate. Some methods may be as simple as ensuring well integrity or managing activities in a manner that is protective of water quality. IDEQ will promote protection through technical assistance, training, and education through its wellhead protection and drinking water programs.

- *State Agricultural Water Quality Program (SAWQP), (1980-1999); Water Quality Cost-Share Program for Agriculture, SCC/ISDA*
SAWQP was the primary state planning and implementation program from 1980 through 1999. The state replaced SAWQP in 1999 with a new agricultural water quality incentive program, under the direction of the SCC as the designated agency for agriculture and grazing, which focuses more directly on implementation of agricultural TMDL plans. Where appropriate, state and federal incentive programs are integrated through the scoping process in the planning phase to maximize nonpoint source water quality protection for agricultural activities (see Introduction-Historical and Chapter 2).
- *State Revolving Fund (SRF), IDEQ*
The IDEQ Grant and Loan Program administers the State Revolving Fund. The purpose of the program is to provide a perpetually revolving source of low interest loans to municipalities for design and construction of sewage collection and treatment facilities to correct public health hazards or abate pollution. State Revolving Loan funds are also used to support the Source Water Assessment Program. The Grant and Loan Program uses a priority rating form to rank all projects primarily on the basis of public health, compliance, and affordability. Additional points are awarded to projects that have completed a source water assessment and are maintaining a protection area around their source.

At this time, IDEQ is reviewing the SRF program for its ability to provide for an expanded role in addressing NPS pollution.
- *Stewardship Incentives Program (SIP), IDL*
SIP provides technical and financial assistance to encourage non-industrial private landowners to keep their lands and natural resources productive and healthy. Qualifying land includes rural lands with existing tree cover or land suitable for growing trees. Eligible landowners must have an approved Forest Stewardship Plan and own less than 1,000 acres.
- *Storm Water Program, IDEQ*
The Storm Water Program is primarily responsible for providing TMDL support, technical assistance and education to community and WAGs to protect both surface and ground water quality from the effects of urban nonpoint source pollution. The Storm Water Program serves a vital role in providing a multiple interface between both surface and ground water protection, as well as the “edge effect” caused by urbanization. The program goal is to encourage watershed-oriented solutions for managing runoff from existing and new site developments. The program provides technical assistance in characterizing community nonpoint source pollutant loads (existing and forecasted), prioritizing local monitoring for select sub-basins, and identifying appropriate load reduction strategies. The program currently works with cities located on §303(d) listed water bodies (urban watersheds) throughout the state. The scope of work includes a watershed approach for managing storm water runoff, and identification of sub-basins with the greatest potential risk of impacting water quality. The process encourages local, consensus-driven solutions through comprehensive planning and zoning techniques, retrofits, and demonstration projects. All of these activities are supported by program guidance (see Chapter 6.).
- *Swampbuster, NRCS*
The Swampbuster program is designed to discourage the conversion of wetlands for agricultural crop production. Under this provision, anyone planting crops on wetlands converted after December 23, 1985, is ineligible for most USDA farm program benefits.

- *Wellhead Protection Program, IDEQ*
Wellhead Protection is a community-based approach to protecting ground water used as drinking water. Idaho has an EPA approved wellhead protection program. The Wellhead Protection Program is voluntary and stresses common sense methods for preventing ground water contamination.
- *Wetlands Reserve Program (WRP), NRCS*
WRP was established to help landowners work toward the goal of "no net loss" of wetlands. This program provides landowners the opportunity to establish 30-year or permanent conservation easements, and cost-share agreements for landowners willing to provide wetlands restoration.
- *Wildlife Habitat Incentive Program (WHIP), NRCS*
WHIP was established to help landowners improve habitat on private lands by providing cost-share monies for upland wildlife, wetland wildlife, endangered species, fisheries, and other wildlife. Additionally, cost share agreements developed under WHIP require a minimum 10 year contract.

Many of programs listed above have been specifically designed to provide the means necessary to implement best management practices, which when correctly maintained abate known nonpoint source water quality impairments. Additionally, programs such as the Idaho Storm Water Program, Wellhead Protection Program, and Source Water Assessment Program focus on preventing significant threats to water quality. Designated agencies and their partners using a mix of regulatory, voluntary, and incentive-based programs, target a given watershed, and in conjunction with the BAG/WAG process as outlined in Idaho's Water Quality Law, provides for the abatement and prevention of nonpoint source pollution in a complementary holistic fashion.

CHAPTER 5 - ADDRESSING IMPACTED AND THREATENED WATERS

Key element #5 states that *"the state program identifies waters and watersheds impaired or threatened by nonpoint source pollution and a process to progressively address these waters."*

State, tribal, and federal agencies use multiple processes to assess water quality and other natural resource conditions. The State of Idaho, in cooperation with many agencies, tribes, and interest groups throughout the state, monitor water quality and identify waters and watersheds not meeting water quality standards through various means:

- Under CWA §303 (d), the IDEQ assembles and evaluates existing and readily available water quality-related data and information to compile the 303(d) list (see Figure 1.2). Much of the data derived from monitoring and other water quality information is related to the Beneficial Use Reconnaissance Project (BURP) (IDEQ, 1998a,b,c). The 1998 303(d) list includes: all "threatened" waters and those water bodies assessed and found to be in full support throughout the State. This list represents a comprehensive status of water quality in Idaho.
- Under the June 1998 USDA/EPA Unified Watershed Assessment Framework, Idaho categorized its watersheds around the state at the subbasin scale (UAW, Appendix A-7).
- Under CWA §305 (b), the IDEQ collects water quality information and reports on conditions of waters every two years.
- Under CWA §314, many agencies and entities conducted lake assessments and implemented lake protection plans statewide. The corresponding information and reports generated have been integrated into water body assessments, priority setting and implementation processes statewide.
- Under CWA §319, the IDEQ works cooperatively with other state, tribal, and federal agencies to develop, integrate, implement and monitor the effectiveness of the State Nonpoint Source Management Program and associated implementation projects.
- In addition to §319, multiple entities monitor water quality in association with ongoing implementation projects such as SAWQP, or for TMDL/WRAS activities through WAGs, such as the ISDA agricultural TMDL water quality monitoring program jointly conducted with the SCC, SCDs, and IASCD (Appendix E, Objective #6).
- Conducting assessments of public drinking water sources as required under the Safe Drinking Water Act. These assessments will serve to inform the public and as a basis for future actions of local source water protection.
- Developing any projected priority systems for clean water and drinking water state revolving loan funding (SRF).

Threatened waters are not specifically defined in the *Idaho Water Quality Standards and Wastewater Treatment Requirements* or in the 1996 EPA guidance titled *Nonpoint Source Program and Grants Guidance for Fiscal Year 1997 and Future Years*. Idaho, in reviewing waterbody conditions, determines if: a) the waterbody is supporting its designated beneficial use, b) is not supporting its designated beneficial use, or c) further evaluation or data is needed to make a scientific determination of the use support. However, in 1993 EPA defined a threatened water as *"those waters that fully support their designated use but may not fully support uses in the future (unless pollution control action is taken) because of anticipated sources or adverse pollution trends."* The State of Idaho's draft 1998 §303(d) report includes approximately 670 miles of water identified by the EPA in 1994 as being threatened. The EPA §305(b) guidance furthermore indicates that threatened waters should be based on actual monitoring or evaluation data that indicate an apparent declining water quality trend (i.e., water quality conditions have

deteriorated, compared to earlier assessments, but the waters still support uses). The state of Idaho uses the methods described in the remainder of the chapter to achieve this goal.

Surface Water

Since 1990, IDEQ has operated a 63 site statewide monitoring network to gather trend data on the six major river basins and other sites. The majority of these sites are on listed water bodies or within watersheds scheduled for the development of a TMDL and provide long-term trend data on the potential improvements in Idaho's water quality through the application of BMPs. Data is collected by the U.S.G.S. on these sites either annually, biennially, or triennially. In addition to the 63 site network, IDEQ uses the Beneficial Use Reconnaissance Project (BURP) process to collect required monitoring data on surface waters of the state. The BURP work plans (IDEQ 1998a, 1998b, 1998c) are broken up into a lake and reservoir section, wadable stream section, and a rivers section. The various BURP workplans outline the following objectives for the program:

- Document the existing beneficial uses of water bodies to the extent possible at the reconnaissance level-intensity;
- Determine if reconnaissance-level protocols are feasible, applicable, and usable;
- Sample potential reference conditions/streams;
- Gain better BURP coverage in hydrologic units with upcoming subbasin assessments and TMDLs; and
- Collect data to assist in the determination of beneficial-use support status.

The BURP and similar data collected by various agencies is entered into a database for analysis (see Figure 1.2). The analysis process follows a step wise approach to determine if: a) a water body is supporting its beneficial use; b) a water body is not supporting its beneficial uses; or c) requires further data to evaluate the beneficial use status. The process can be used to prioritize water bodies for more stringent assessments and identify candidate beneficial uses. The process provides a consistent and statewide water body assessment method which identifies impaired or threatened water bodies. The BURP and *Water Body Assessment Guidance, A Stream to Standards Process*" (IDHW, 1997b) are relative new processes and sufficient data may not be available to make the necessary trend determinations on those waters presently meeting their designated beneficial uses.

The information developed by this assessment process is used to identify problem areas, then prioritize and target those problem areas on a watershed-by-watershed basis for prevention/restoration activities. Idaho proposed an 8 year schedule for the development of TMDLs which was approved in U.S. District Court on April 9, 1997. This approved schedule is consistent with EPA's Healthy Watershed Strategy which states that a key component is "*to rapidly increase development and implementation of total maximum daily loads to manage water quality on a watershed scale.*" To implement provisions of the schedule will take all available federal, state, and local program authorities including non-regulatory, regulatory, or incentive-based programs authorized by federal, state or local law. Additionally, the State of Idaho may require that additional partnerships be developed with EPA and the other federal land management agencies for addressing TMDL/WRAS development and implementation on federal lands. To meet this need IDEQ may develop new partnerships with other natural resource entities to enhance overall efforts for the voluntary implementation of BMPs in watersheds impacted by nonpoint source pollution regardless of the beneficial use support status.

Other regional monitoring efforts such as the BOR SR³ project, IDWR River Basin Studies and efforts through many other agencies, including WAGs, integrate data to characterize watersheds, compile water quality and quantity data, and identify data gaps for needed additional information. This monitoring is done primarily to support TMDL/WRAS planning and targeting of implementation efforts. Further defining of pollutant sources is done locally by IDEQ regional offices in cooperation with Tribes, IF&G, BOR, ISDA, SCC, IASCD and WAGs as appropriate. Many watershed projects funded through §314, §319, EQIP, PL566 and SAWQP had baseline and continuing long term monitoring to assess changing watershed characteristics and BMP effectiveness.

At a minimum, the State is required to update its §319 nonpoint source management program and plan every five years. Every two years, IDEQ prepares an updated §305(b) Water Quality Status Report and a 303(d) list as required by the CWA. The §305(b) status report summarizes the status of Idaho's waters and includes a list of impaired and threatened

waters . The 303(d) list contains waters listed as impaired water quality segments, threatened waters, and water bodies that have been de-listed (Table 5.1). Additionally, the 303(d) list identifies water bodies that have been assessed and found to be in full support (Table 5.2). The current 1998 303(d) list is also divided into subparts and identified by each specific pollutant type (Table 5.3) and is further categorized, according to the Idaho UWA priorities (Appendix A-7).

Table 5.1 Summary of the 1998 303(d) List [Source: the 1998 305(b) Report].

	# Segments	# Miles*
1994 (1996) List	962	10,646
1998 List		
Carryover from 1994 (1996)	List	7,262
New Segments	112	983
Delistings	390	3,388
Threatened		669

* Rounded to the nearest whole mile.

Table 5.2 Summary of Fully Supporting, Threatened, and Impaired Assessment.*

Degree of Use Support	Assessment Category		Total Assessed Size
	Evaluated	Monitored	
Size Fully Supporting All Assessed Uses		3,384	3,384
Size Fully Supporting All Assessed Uses but Threatened for at Least One Use	669		669
Size Impaired for One or More Uses		8,227	8,227
Size Not Attainable for Any Use and Not Included in the Line Items Above			N/A
TOTAL ASSESSED		11,611	11,611

* Reported in miles [Source: State of Idaho 1998 303(d) List].

Table 5.3 Summary of pollutants/contaminants on the 1998 303(d) List [Source: the 1998 305(b) Report].

Pollutants/Contaminants on 303(d) List	Listed Water Bodies (Rivers, Streams, and Creeks)
Bacteria	127
Channel stabilit	2
Dissolved oxygen	101
Flow alteration	159
Habitat alteration	113
Mercury	3
Metals (unspecified)	43
Ammonia	26
Nutrients (unspecified)	214
Oil or grease	15
Organics (unspecified)	7
Pesticides (unspecified)	12
pH	22
Salinit	1
Sediment	573
Dissolved gas	6
Temperature	145
Unknown	109

Federal law requires that the waterbodies on the §303(d) list be prioritized. The higher up on the list a water body is after prioritization, the more urgent it is for the development of a TMDL. To the extent that public agencies are limited in their ability to address waterbodies on the §303(d) list, they will generally focus their limited resources first on the higher priority waterbodies. Public participation is a major element of the IDEQ TMDL Program and is incorporated throughout the BAG/WAG process, as required by Idaho Code §39-3601 *et seq.* These advisory groups make recommendations to the IDEQ on water quality monitoring, water quality standards revisions, §303(d) listings, TMD development, TMDL implementation, and other watershed priorities.

Each watershed will have a unique set of interested and affected persons with a stake in developing and implementing a TMDL. The public must be involved in all steps of TMDL development, but are most heavily involved in implementation. Ideally, those who will be most closely involved in implementation should be involved in development of the implementation plan. The point is to seek as much public and private support for the implementation plan as possible in order to maximize its likelihood of success. Interested stakeholders may include local land owners, other residents of the watershed, local governments, special districts, state and federal agencies, natural resource stewardship groups with local interests, and others.

The implementation plan identifies the targeted pollutants and their sources, describes the specific pollution controls or management measures to be undertaken, the mechanisms by which the selected pollution control and management measures will be put into action, and describes the authorities, regulations, permits, contracts, commitments, or other evidence sufficient to ensure that implementation will take place. The plan also describes when implementation will take place, identifies when various tasks or action items will begin and end, when mid-term and final objectives will be met, and establishes dates for meeting water quality targets.

Application of effective BMPs is crucial to achieving the pollutant load reductions and targets of a TMDL. Consequently, the implementation plan, to the extent practicable, must be explicit about which BMPs or systems or BMPs will be employed to achieve the targets, where and when the BMPs will be employed, and how application of the BMPs will achieve the stated targets. EPA guidance specifically identifies several criteria by which BMPs will be judged:

- A data-based analysis showing that the selected BMPs have been demonstrated to be effective in addressing the issue or pollutant in question (i.e., a history of successful application in similar situations);
- An explanation of the mechanisms by which application of the BMPs will be assured; and
- A plan for tracking the implementation and effectiveness of the BMPs.

The IDEQ and the other designated natural resource agencies will use these criteria in evaluating the likelihood that selected BMPs will achieve the targets and load reductions specified in the TMDL. The selection of BMPs may be very site-specific, and may change over time in response to changing conditions, opportunities, land manager preferences, and lessons learned. To the extent that BMPs can be anticipated to change over time, the TMDL implementation plan must describe the decision making process by which future BMPs will be selected, how effectiveness monitoring and other inputs will factor into the selection, and how interested stakeholders will be involved in the decisions. Effective TMDL implementation plans generally are designed to be flexible and adaptable over time.

Monitoring for implementation and effectiveness of the TMDL should be guided by the targets and load allocations of the TMDL and should track implementation of the selected pollution control measures, collect and analyze information on the effectiveness of the specific measures at achieving the water quality goals, and provide a “feedback” or an adaptive management process. The types of monitoring which may be needed include chemical, biological, and physical parameters depending on the watershed in question. The watershed advisory group implementing the TMDL will be working closely with the designated agencies to ensure that monitoring efforts within the watershed are not duplicated. Certain agencies, such as IDEQ, have inherent monitoring responsibilities (e.g., the IDEQ Beneficial Use Reconnaissance Project).

Effectiveness monitoring should evaluate the results of implementing various management approaches and document long range water quality improvements and beneficial use support trends. EPA guidance defines an adequate monitoring plan as tracking:

- Implementation of BMPs;
- Water quality improvements; and
- Progress toward meeting water quality standards.

In a phased TMDL, adequate monitoring also provides specific data needed to refine and improve initial loading capacity and allocations.

A high degree of commitment to ongoing monitoring of project effectiveness is an important element of the implementation plan. IDEQ’s Beneficial Use Reconnaissance Project systematically reviews the beneficial use status of Idaho’s water ways. This along with, pre and post watershed implementation monitoring by IDEQ and others, and site specific BMP effectiveness data collected by the designated agencies as listed in Idaho Code §39-3601 et seq. for each NPS category will substantially cover the implementation monitoring needs of the state (See Chapter 4 Monitoring and Evaluation).

The use of monitoring results in a well thought out feedback loop process is important in evaluating the effectiveness of actions and improving upon TMDLs and implementation plans. Dates for interim program review must be built into the implementation timetable. Similarly, the monitoring plan must include at least a brief discussion of how and by whom the collected data will be analyzed and how the results will be used to make and incorporate revisions in the TMDL.

Ground Water

The Idaho Nonpoint Source Management Program provides consistency on statewide nonpoint source priorities among all its interagency partners at the various federal, state, and local levels. The Program also provides consistency with respect to implementation, which is predominantly initiated through local watershed planning and TMDL/ WRAS implementation. On the other hand, ground water implementation will most likely be initiated from completed source water assessments. Source water protection involves a variety of measures taken to ensure the continuing quality of drinking water, whether it is supplied by ground water or surface water. Information derived from source water assessments will be used by other environmental programs, both in a regulatory and non-regulatory sense, to develop and implement their program plan goals and objectives.

Aquifers or portions of aquifers impaired or threatened by point and nonpoint sources of pollution are identified primarily through Idaho's ground water quality monitoring program. This program, which is described within the *Idaho Ground Water Quality Plan* (Ground Water Quality Council, 1996), consists of statewide, regional and local monitoring.

Idaho maintains a statistically-designed ground water quality monitoring network consisting of more than 1,500 wells of all types for which the three most common are domestic (67%), irrigation (20%), and public water systems (7%). The network was designed using stratified random site selection to satisfy the sampling program's first objective, to characterize the (ambient) water quality of the state's aquifers. The network is stratified by hydrogeologic subareas, which represent geologically similar areas and generally encompass one or more of the major ground water flow systems identified within the State. Each flow system includes at least one major aquifer, with some systems being comprised of several aquifers which may be interconnected. Tables B-1 through B-20 of Appendix B (IDEQ, 1998e) present ground water quality sampling results for 20 of the 22 subareas.

The goals of statewide monitoring are to characterize major aquifers and identify trends in ground water quality. This is accomplished through the statistically-designed Statewide Monitoring Network, which is comprised of over 1,500 sample locations. Of those approximately 400 different locations are sampled annually, so that all sites are sampled at least once every four years. There is also a subset of about 100 locations sampled on a yearly basis. Primary sample parameters include nutrients, major ions, trace elements, volatile organic compounds, field parameters, Radionuclides, and pesticides.

Idaho's 1998 305(b) report identified the ten highest priority sources of ground water contamination as well as other high priority sources (Table 5.4). The ten highest priority sources of ground water contamination in Idaho, listed in no particular order, were determined to be animal feedlots, fertilizer applications (including land application of manure), pesticide applications, land application (of wastewater, sludge, etc.), underground storage tanks, waste tailings, landfills, septic systems, shallow injection wells/urban runoff, and industrial facilities.

Other high priority sources of ground water contamination in Idaho, listed in no particular order, include agricultural chemical facilities, agricultural drainage wells, above ground storage tanks, surface impoundments, waste piles, deep injection wells, mining and mine drainage, and spills (including spills relating to on-farm agricultural mixing and loading procedures). These numerous ground water contamination sources need to be addressed through protection related activities and programs.

Table 5.5 developed for Idaho's 1998 305(b) report, summarizes some of the existing and potential contamination sites found throughout the State. It is important to note that not all existing and potential sources of contamination are included in Table 5.5. Current efforts associated with Idaho's Source Water Assessment Program are expected to significantly improve available information pertaining to the numbers and locations of contamination sites throughout the State. That information will be used for future 305(b) reporting.

Regional and local monitoring are generally addressed together. Regional and local monitoring is used to investigate ground water contamination that is known or suspected to exist. Several state and federal agencies are or have been involved with regional and local monitoring. To ensure that regional and local monitoring is pursued in a coordinated manner as envisioned within the Idaho Ground Water Quality Plan, the Idaho Ground Water Monitoring Technical Committee (GWMTC) was formed. The GWMTC is chaired by IDEQ and comprised of 12 state and federal agencies and a university representative.

One of the key committee objectives is to identify and prioritize regional and local monitoring needs based on existing ground water quality, vulnerability, and beneficial uses. As part of this effort, aquifers or portions of aquifers which are impaired or threatened are identified and prioritized based on criteria developed through the GWMTC. These prioritized monitoring needs are displayed on a GIS system along with a corresponding database used for tracking purposes.

Monitoring can be pursued in the areas of greatest need to determine the extent of the contamination, potential impacts from the contamination, and causes of the contamination. For example, as the major participant in this effort for agriculture, ISDA is implementing the Agricultural Ground Water Quality Protection Program for Idaho. ISDA also is implementing an agricultural ground water quality regional and local monitoring program related to pesticides and nutrients, as well as monitoring the impacts to ground water from dairy operations (see Chapter 2, Agency Key Roles).

To date, five years of statewide monitoring data and data from several regional and local monitoring projects have been prioritized to determine additional monitoring needs. Prioritization will continue to incorporate these data sources and will use vulnerability information where data may not be available.

Table 5.4 Major sources of ground water contamination in Idaho [Source: 1998 305(b) report].

Contaminant Source	Ten Highest Priority Sources	Other High Priority Sources	Factors Considered in Selecting Contaminant Sources	Contaminants
Agricultural Activities				
Agricultural chemical facilities		(√)	A, B, C, D, E, F	A, B, D, E
Animal feedlots	(√)		A, B, C, D, E, F	E, G, J, K, L
Drainage wells		(√)	A, B, C, D, E, F	A, B, C, E, J, L
Fertilizer applications	(√)		A, B, C, D, E, F, G	E
Irrigation practices				
Pesticide applications	(√)		A, B, C, D, E, F, G	A, B, C, D
Storage and Treatment Activities				
Land application	(√)		A, B, C, D, E, F	E, G, H, J, M (organics)
Material stockpiles				
Storage tanks (above ground)		(√)	A, B, C, D, E, F	A, B, C, D, H
Storage tanks (underground)	(√)		A, B, C, D, E, F	B, C, D, H
Surface impoundments		(√)	C, D	F, G, H, I
Waste piles		(√)	A, E, F	F, H, I
Waste tailings	(√)		A, B, D, E, F	H, M (pH)
Disposal Activities				
Deep injection wells		(√)	A, B, C, D, E, F	B, C, E, J, L
Landfills	(√)		A, B, C, D, E, F	B, C, D, E, H, J, L, M (VOCs, IOCs)
Septic systems	(√)		A, B, C, D, E, F	E, J, L,
Shallow injection wells/Urban Runoff	(√)		A, B, C, D, E, F	A, B, C, D, E, G, H, J, L
Other				
Hazardous waste generators				
Hazardous waste sites				
Industrial facilities	(√)		A, B, D, E, F	C, D, G, H, M (creosote)
Material transfer operations				
Mining and mine drainage		(√)	A, D, E	H, M (cyanide compounds)
Pipelines and sewer lines				
Spills		(√)	A, C, E, F	A, B, C, D, I, M (fertilizer)
Transportation of Materials				

Factors used to select contaminant sources:

- A. Human health and/or environmental risk (toxicity);
- B. Size of the population at risk
- C. Location of the sources relative to drinking water sources
- D. Number and/or size of contaminant sources
- E. Hydrogeologic sensitivit
- F. State findings, other findings
- G. Applies to both dryland and irrigated agriculture

Contaminants/classes of contaminants associated with each of the sources that were checked:

- A. Inorganic pesticides
- B. Organic pesticides
- C. Halogenated solvents
- D. Petroleum compounds
- E. Nitrate
- F. Fluoride
- G. Salinity/brine
- H. Metals
- I. Radionuclides
- J. Bacteria
- K. Protozoa
- L. Viruses
- M. Other

* Information is based on professional judgement and input from each of the six Idaho Division of Environmental Quality Regional Offices, the Idaho Department of Water Resources, and the Idaho Department of Agriculture.

Table 5.5 Statewide summary of existing & potential ground water contamination sites [Source: 1998 305(b) report].

Source Type	Number of Sites	Number of Sites with Confirmed Ground Water Contamination	Typical Contaminants Which Have Been Detected or May Exist
CERCLA sites (includes Department of Defense and Department of Energy sites)	8	7	Metals, VOC
Leaking Underground Storage Tank Sites	992	269	Petroleum Compounds
Underground Storage Tank Sites (no releases found)	2210	0	Petroleum Compounds
RCRA Corrective Action & Misc. Cleanup Sites	8	7	VOCs, Pesticides, Oil, Creosote
Wastewater Land Application Permitted Sites	116	24 (a)	Total Dissolved Solids, Chloride, Iron, Manganese, Nitrate
Ore Processing by Cyanidation Permitted Sites	11	2	Cyanide, Nitrate, Diesel
Septic Systems	190,000	data not available	Nitrate, Bacteria
Class V Underground Injection Wells (excluding septic systems)	>5000	data not available	Bacteria, Nitrate, Pesticide
Historical Landfills	1022	data not available	Metals, VOCs, Oil
Confined Animal Feed Operations (NPDES permitted)	63	data not available	Nitrate, Bacteria
Other Ground Water Contamination Locations (not covered above) (b)	28	19	VOCs, Nitrate, Bacteria, Pesticides, Metal

Notes:

- (a) Some contaminated sites are associated with secondary MCLs such as Total Dissolved Solids.
- (b) Includes voluntary remediation sites and other significant areas of contamination.

Information obtained through the regional and local monitoring projects is used to determine the appropriate measures needed to protect the resource. These measures, which typically would involve the application of BMPs, are applied in a manner consistent with the *Idaho Ground Water Quality Plan* and “Ground Water Quality Rule.” This approach would generally involve the application of a BMP feedback loop for nonpoint source contaminants.

Source Water Assessment and Protection

The 1996 Amendments to the Safe Drinking Water Act requires states to establish and implement a Source Water Assessment Program (SWAP) Plan. A consistent theme in the new amendment is the empowerment of states with new flexibility and resources to tailor programs to their individual needs and conditions. This empowerment carries with it the obligation to solicit extensive public involvement and provide public information with special emphasis on prevention based efforts to ensure that states’ choices respond to their constituents’ needs and conditions.

In conjunction with this nation-wide effort, the primary goal of Idaho’s SWAP is to develop information which enables PWS owners, consumers, and others to initiate and/or promote actions to protect their drinking water sources. Drinking water sources have been impacted by a variety of different water quality parameters (Table 5.6). The actual source water assessment is not an end product. Instead, it is a first step in providing a sound technical basis for the local public water supply system to consider protection measures appropriate for its particular situation. The long range goal of Idaho’s SWAP is drinking water protection, not simply source water assessment.

There are three types of information and GIS products which will be available for distribution to the public. These include:

- Base data and GIS coverages used in the source water assessment process;
- Comprehensive statewide GIS coverages produced from the assessment process; and
- Final source water assessment report and map products.

A limited amount of data will be made available to the public via the IDEQ website. The scope of the information made available will include reports associated with specific assessments and may include the ability to view source water assessment map products. All information related to source water assessments will be archived in digital format at IDEQ. For each PWS, a completed source water assessment will be provided in a report package. The package will include a fact sheet that introduces the purpose of the source water assessment, a narrative of the results, and one or more supporting maps illustrating the delineated source water assessment area along with locations of potential contaminant sources in the form of a list.

The IDEQ is committed to providing leadership to help communities develop and implement source water protection activities through the IDEQ Wellhead Protection Program and partnership with the Idaho Rural Water Association. However, the ultimate goal of protection can only be achieved through local initiatives. The direction and strategies are driven at the local level based on the results of each assessment. IDEQ's vision is to provide technical assistance to those communities and PWSs with high susceptibility, and to maximize the use of assessment results by assisting PWSs and communities in implementing protection strategies. Assessment results are helpful in determining strategies and degrees of application for protecting and preventing impacts to source waters.

By implementing the programs identified in this chapter, Idaho will be able to make the necessary determinations to identify waters and watersheds which are impaired or threatened by NPS pollution. Once these waters have been identified, Idaho will build upon the state, federal, and local agency partnerships identified in Chapter Two and the programs identified in Chapter Four to progressively address these waters.

Table 5.6 Total number of locations exceeding an MCL for a specific water quality parameter; all subareas combined (1996 & 1997 data).

Water Quality Parameter	Number (& %) of Statewide Monitoring Network Locations Exceeding the MCL Value	Number of Public Water System Locations Exceeding the MCL Value (a)
Nitrate	23 (3.3%)	32
Fecal Coliform (b)	20 (2.8%)	Data not calculated for this report
Tetrachloroethylene (also known as Perchloroethylene, Perc, or PCE)	0	4
Trichloroethylene (also known as Trichloroethene or TCE)	3 (0.4%)	2
Dichloroethene	0	2
Ethylene Dibromide (EDB)	1 (0.1%)	0
Di(2-ethylhexyl)phtalate (c)	0	1
Cadmium	3 (0.4%)	1
Barium	0	1
Antimo	0	1
Selenium (d)	1 (0.1%)	1
Arsenic (d)	7 (1.0%)	5
Fluoride (d)	7 (1.0%)	7

NOTES Table 5.6 provides a summary of all constituents where a primary MCL (or state ground water standard) is exceeded [Source: 1998 305(b) Report]. This summary combines all subarea information throughout the State, and shows that nitrate, coliform, fluoride, and arsenic are the more common water quality parameters exceeding an MCL when looking at both data sources.

- (a) Percentages are not calculated due to varying numbers of parameter group samples and a bias toward sampling those locations with VOC detections. Data may also not be reflective of actual ground water quality since many public water systems use treatment or dilution to avoid exceeding an MCL.
- (b) MCL is actually for total coliform, of which fecal coliform is a subset.
- (c) Detection could be representative of system contamination versus contamination within the ground water in the vicinity of the well.
- (d) Arsenic, fluoride and selenium elevated levels are assumed to be from natural background conditions unless determined otherwise.

CHAPTER 6 - NONPOINT SOURCE PROGRAM UPGRADES AND IMPLEMENTATION

Key element #6 states that *"The State reviews, upgrades, and implements all program components required by §319 of the CWA and establishes flexible, targeted, interactive approaches to achieve and maintain beneficial uses of waters as expeditiously as practicable."*

CWA §319 Requirements

The state of Idaho's Nonpoint Source Management Program plan should be viewed as an evolving planning document. This document will be reviewed once every five years to meet the minimum requirements of the CWA and changing state water quality needs. Specifically, §319 of the CWA outlines six specific factors that are to be included for an approved state nonpoint source management program plan. These items are discussed below:

- Identification of best management practices and measures;
Best management practices and measures used for the prevention of nonpoint source pollution are identified in Chapter 6, Table 6.1.
- Identification of existing programs;
The numerous programs in place within the State of Idaho for the control of nonpoint source pollution are discussed in Chapter 2.
- Develop a schedule containing annual milestones;
A schedule containing annual milestones is described in Chapter 1.
- Certification by the state attorney general;
The state attorney general's office in 1989, reviewed the CWA and the various Idaho statutes and regulations. Based on the Attorney General's review it was determined that the laws of the State of Idaho provide adequate authority for the IDEQ to implement the Nonpoint Source Management Program.
- Identification of federal and other sources of assistance;
A description of federal and other financial resources other than those specified under §319 subsection (h) and (I) are described and included in Chapter 4
- Identification of federal programs for review.
A description of federal consistency is identified in Chapter 7.

BMP Identification and Integration

One of the components included within Key Element #6 is the identification of BMPs.

BMPs are defined in the state water quality standards as *"practices, techniques or measures developed, or identified, by the designated agency and identified in the state water quality management plan which are determined to be the cost-effective, practicable means of preventing or reducing pollutants generated from nonpoint sources to a level compatible with water quality goals."* A summary of BMPs by category can be found on Table 6.1.

With the exception of those programs where BMPs are required as part of the Idaho Water Quality Standards and Wastewater Treatment Requirements or by federal statute, the implementation of nonpoint sources BMPs within Idaho are voluntary. In Idaho the selection of appropriate BMPs is the responsibility of the designated agency and the landowner affected by the voluntary implementation of the BMP. Until Congress revises the CWA to regulate the release of all nonpoint source pollutants, the final selection of voluntary BMPs will be made by the landowner with due consideration of the economic, social, and water quality impacts.

However the State, as outlined throughout this document, has historically taken, and is taking a proactive approach to obtain enhanced prevention and protection to both surface and ground waters. Methods to assure probable adoption o

the NPS plan and obtain this enhanced prevention and protection leading to the meeting of State water quality standards, are included throughout this plan. Through the many agency roles and partnerships in Chapter 2, and the program linkages, as outlined in Chapter 4, the State continues to provide enhanced incentives and opportunities for participation. As well as continue its advancement of NPS pollution prevention and control.

Integration of the numerous State and Federal programs, along with the regulatory tie-ins afforded through this integration, allows the State to gain a much higher level of NPS treatment than would be attained by the individual program base level protection and control. As an example, this is evident in the many opportunities afforded to the States' programs by the revision and adoption of the NRCS 590 Nutrient Management Standard. This standard has been incorporated into the Dairy Initiative, Sole Source Protection Program, new Agriculture Water Quality Program, and is being considered for adoption into the new rule development for Swine and Poultry. This standard will become a valuable tool for all interagency programs working with irrigated agriculture, confined animal feeding operations and ground water protection.

As outlined in both the Introduction and Chapter 2, Idaho has many interagency State and Federal committees working together to enhance the effectiveness of all programs by evaluating the priorities, funding, consistency of BMPs used, participation, application methods, contracts, land coverage, and results of implementation. As TMDL/WRAS implementation activities increase, further coordination of State and Federal programs will be necessary to ensure adequate consistency between all land managers. Chapter 7 outlines those elements by which the State and Federal managers will be able to work together to enhance the States' water quality. Using the newly developed guidance documents referenced (*State Guidance for the Development of TMDLs*, *Draft Overview of the Implementation of NPS TMDLs* (Appendix C&D) and the *FS & BLM Protocol for Addressing CWA 303(d) Listed Waters*) will greatly help to focus and increase collaboration by all agencies to ensure meeting beneficial uses and water quality standards.

Idaho NPS Rules

The Rules Governing Nonpoint Source Activities (IDAPA 16.01.02.350), further provide a mechanism for achieving and maintaining beneficial uses of water should voluntary controls not prove successful. A nonpoint source activity conducted in accordance with applicable rules, regulations, and BMPs in a manner to demonstrate a knowledgeable and reasonable effort to minimize adverse water quality effect, are not subject to conditions or legal actions. However, the Director for the Department of Health and Welfare may:

- ▶ seek immediate injunctive relief to stop or prevent an activity determined to be an imminent or substantial danger to public health or the environment, if within a reasonable and timely manner approved BMPs are not evaluated or modified by the responsible agency, or if the control measures are not implemented by the operator; and;
- ▶ prepare a compliance schedule and/or institute administrative civil proceedings for nonpoint source activities that are inconsistent with approved BMPs;
- ▶ request that the responsible agency conduct a timely evaluation and modification of the approved BMPs to insure full protection of beneficial uses;
- ▶ review nonpoint source compliance plans to determine if: a) the proposed activity will comply with approved or specialized BMPs; b) a monitoring plan will provide information to the Director to determine the effectiveness of the approved or specialized BMPs; and c) the plan identifies a process for modifying the approved or site-specific BMPs.

Feedback Loop

The Idaho Water Quality Standards and Wastewater Treatment Requirements were revised in 1987 to address the feedback loop concept. The feedback loop (Figure 6.1) describes a process of nonpoint source pollution management

based on the implementation of BMPs. BMPs are identified through a planning process and applied by land managers or cooperators for site-specific conditions. Onsite effectiveness of the BMPs for restoring water or protecting water quality are evaluated through instream monitoring, well sampling, pollution transport monitoring, and other monitoring processes. The collected data is then evaluated against the appropriate criteria. BMPs are modified, until beneficial uses are restored and maintained.

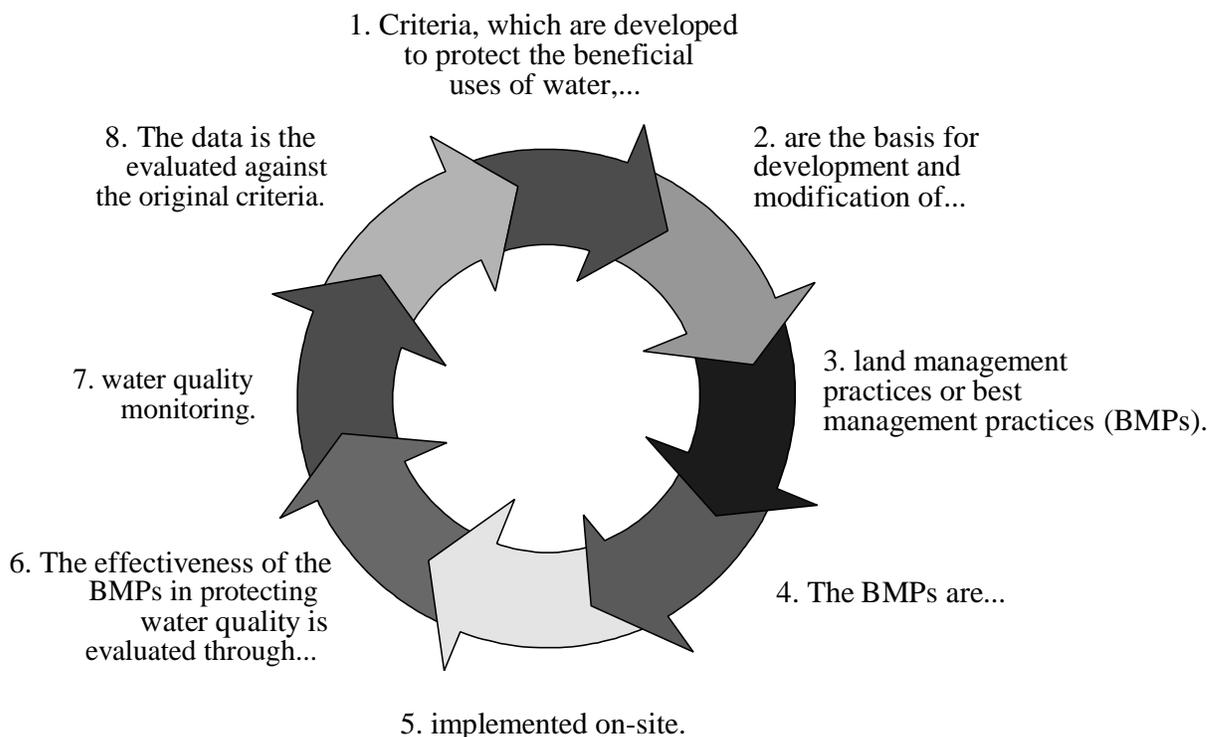


Figure 6.1 The State's feedback loop process.

The Water Quality Standards and Wastewater Treatment Requirements and the Ground Water Quality Rule provide the basis for reviewing and making surface and ground water programmatic recommendations.

State Revolving Fund (SRF)

Under Idaho Code Title 39, Chapter 36, monies from the state revolving fund are currently not eligible for use in the implementation of BMPs related to nonpoint source management projects. However, Idaho is reviewing these procedures to determine what legislation would have to be altered to utilize these funds for nonpoint source related projects. Should Idaho revise its state revolving fund to include nonpoint source management projects, a selection process would be developed to evaluate and rank all projects according to the specific need.

In light of TMDL/WRAS needs, several potential uses for the SRF have been identified for addressing NPS activities. A few examples may include:

- effluent trading activities. Idaho has many entities interested in pollution trading, who are currently working to pave the way for its use between municipalities and agricultural operators,

- Irrigation District use to provide funding for their shareholders for the updating of power delivery systems allowing conversion from flood to sprinkler systems,
- Sewer District use for subdivision conversion from septic to sewer systems,
- animal feeding facility upgrades,
- TMDL/WRAS implementation activities.
- various NPS control methods such as: wetland restoration, purchase of easements, riparian zone buffers, stormwater treatment and control, etc.

Idaho NPS Related Policies

The State of Idaho has developed a number of policies related to NPS pollution. These policies provide state environmental managers with the necessary guidance to deal with NPS pollution and a number of examples are listed below:

- PM 98-2, “Policy for No-Net Increase (TMDL).” This policy provides the State of Idaho with clarification on implementing IDAPA 16.01.02.054.04 and IDAPA 16.01.02.054.05 prior to the development and approval of a TMDL related to discharges of listed point and nonpoint source pollutants on waters which have been shown to not fully support their designated or existing beneficial uses.
- PM 98-3, “Ground Water Quality Protection From Storm Water Runoff.” This policy provides for clarification for the Ground Water Quality Rule (IDAPA 16.01.11) implementation specific to the use of storm water management practices and methods for ground water protection.
- PM 98-4, “Wood and Mill Yard Debris.” This policy temporarily adopted the “Wood and Mill Yard Debris Technical Guidance Manual” until such time that the manual is adopted by reference in the Solid Waste Management Rules and Standards.
- PM 97-1, “Water Quality and Wood Preservatives.” This policy provides the public a concise document outlining BMPs for treated wood in an aquatic environment.
- SWF-1, “Idaho Solid Waste Facilities Guidance.” This policy describes the use of shredded tires as an alternative daily cover material at municipal solid waste facilities, under the authority of the Idaho Solid Waste Facilities Act (§39-7401 et. seq.) and the Waste Tire Disposal Act (§39-6504).

Other Guidance

The State of Idaho has also developed a number of information series which can apply to NPS pollution. The informational series have been developed to demonstrate to local businesses and the public how their daily activities effect NPS pollution. Example documents include:

- The Idaho Recycling Directory (1998d);
- Pollution Prevention for Vehicle Maintenance (1995a);
- A Business Guide to Pollution Prevention (1995a);
- Estimating and Mitigating Phosphorus From Residential and Commercial Areas in Northern Idaho (1996);
- Catalog of Stormwater Best Management Practices for Idaho Cities and Counties (1997a);

- Environmental Planning Tool and Techniques: Linking Local Land Use to Water Quality Through Community-Based Decision Making (Urban Stormwater Runoff) (IDEQ, 1997b);
- Technical Guidance Manual for Individual and Subsurface Sewage Disposal (IDHW, 1997a);
- Idaho Home*A*Syst Project (1995); and
- IDEQ Informational Series 1 through 9.

Information Series #1 - Idaho Risk-Based Corrective Action (RBCA), Cleanup Requirements for Petroleum releases;

Information Series #2 - Petroleum Release Response and Corrective Action Requirements;

Information Series #3 - Recommended Practices for Site Assessments During Closure of Underground Storage Tanks and Accidental Releases (Spills) of Petroleum Hydrocarbon Products;

Information Series #4 - Permanent Tank Closure;

Information Series #5 - Guidelines for Total Petroleum Hydrocarbon (TPH) Analysis of Petroleum Contaminated Soils;

Information Series #6 - Protocol for Sampling and Analysis of Used Oil; and

Information Series #7 - Procedures for Land Treatment of Petroleum Contaminated Soils.

Information Series #8 - Unused Underground Heating Oil Tanks

Information Series #9 - Recommendations for handling of sludge from UST closures.

Through the review and updating of this document once every five years Idaho maintains all programmatic requirements set forth under §319 (b) (1) State Management Programs. The feedback loop process will also continue to be implemented in such a way as to achieve and maintain the beneficial uses of water as expeditiously as possible. As needed, Idaho will also develop various policy guidelines and informational series to help mitigate the effects of NPS pollution. Practicable application of these tools occur through increased education and training by designated agencies. BAGs and WAGs are regularly targeted with outreach efforts, and they in turn target their participants and the public through SCD newsletters, TMDL workshops, monitoring, training, etc. to encourage participation, find solutions to the resource issues, and make use of the tools provided. However, should these processes fail to achieve and maintain the beneficial uses of water, the State of Idaho will use the mechanisms outlined in the Rule Governing Nonpoint Source Activities (IDAPA 16.01.02.350) to achieve and maintain those uses.

Table 6.1 List and Status of Best Management Practices

CATEGORY	RESPONSIBILITY	LOCATION	In Section 350 of the Water Quality Standards	
			Yes	No
Agriculture	IDEQ/SCC/ISDA	Agriculture Pollution Abatement Plan (APAP or Ag Plan) *		X
		Rules Governing Dairy Wastes	X	
		Idaho Waste Management Guidelines for Confined Feeding Operations		X
<p>*The APAP is referenced in the Idaho Water Quality Standards and Wastewater Treatment Requirements (IDAPA 16.01.02.054), and section 054 stipulates that “<i>nothing in this section shall be interpreted as requiring best management practices for agricultural operations which are not adopted on a voluntary basis.</i>” Sub-section 07 of the IDAPA 16.01.02.054 identifies that “<i>use of best management practices by agricultural activities is strongly encouraged in high, medium and low priority watersheds.</i>” Sub-section 07 further indicates that “<i>the APAP is the source of best management practices for the control of nonpoint sources of pollution for agriculture.</i>”</p>				
Forest Practices	IDEQ/IDL	Idaho Forest Practices Rules	X	
Road Construction	ITD	Best Management Practices for Road Activities (Vol I&II)		X
		Catalog of Storm Water BMPs for Highway Construction and Maintenance		X
Urban Runo	IDEQ, IDWR, Local Government	Estimating & Mitigating Phosphorus from Residential and Commercial Areas in Northern Idaho		X
		Environmental Planning Tools and Techniques		X
		Catalog of Storm Water BMPs for Idaho Cities & Counties		X
Biosolids / Sludge	EPA/IDEQ	NPDES Permit		Can be found in section 650 of the standards.
Mining	IDL	Rules Governing Exploration and Surface Mining Operations in Idaho	X	
	IDL	Rules Governing Placer and Dredge Mining in Idaho	X	

CATEGORY	RESPONSIBILITY	LOCATION	In Section 350 of the Water Quality Standards	
			Yes	No
	IDEQ	Rules and Regulations for Ore Processing by Cyanidation		X
Mining	IDL	Best Management Practices for Mining in Idaho		X
Wastewater - Industrial Land Treatment	IDEQ	Land Application Permit Regulations		Can be found in section 600 of the Standards
		Guidelines for Land Application of Municipal and Industrial Waste Water		X
Landfills	IDEQ	Solid Waste Management Rules & Standards	X	
On-site Wastewater Systems	IDEQ	Rules for Individual Subsurface Sewage Disposal Systems	X	
	District Health Departments	Sewage Disposal Regulations		See IDAPA 41.04.01 41.03.01 41.04.02 41.04.03
Hydrologic / Habitat Modification	IDWR	Rules and Minimum Standards for Stream Channel Alterations	X	
Aquaculture	ISDA/IDEQ	The Idaho Waste Management Guidelines for Aquaculture		X
Well Drilling / Abandonment	IDWR	Administrative Rules for Well Construction and Abandonment		X

CHAPTER 7 - FEDERAL CONSISTENCY

Key Element #7 requires the *"identification of Federal lands and objectives which are not managed consistently with State program objectives."*

With the vast holding of federal lands in the State (Figure 7.1) the need for all land management agencies to coordinate their monitoring and remediation activities for nonpoint source pollution control remains a large and formidable task. The state's BURP, water body assessment protocol, and watershed approach incorporates federal and tribal lands use issues into both the BAG and WAG processes. This provides the opportunity to review federal land management and identify those lands which are not managed consistently with the state Nonpoint Source Management Program. Federal agencies routinely notify IDEQ regional offices of planned actions and send environmental assessments, management plans, and environmental impact statements to solicit state input on a wide range of environmental effects including water quality. Once a contributing source to nonpoint source pollution is identified each of the appropriate designated state agencies can work with the corresponding federal resource agency to develop the necessary adjustments to management plans to minimize pollution and protect, and/or restore beneficial uses.

Section 313 of the CWA states that *"each department, agency, or instrumentality of the Federal Government having jurisdiction over any property or facility, or engaged in any activity resulting, or which may result, in the discharge or runoff of pollutants shall be subject to, and comply with, all Federal, State, interstate, and local requirements, administrative authority, and process and sanctions in a like manner as any nongovernmental entity."* Additionally, Bob Perciasepe, EPA Assistant Administrator, emphasized in an August 1997 letter to EPA Regional Water Division Directors that *"Federal land management agencies have responsibilities to resolve nonpoint source problems on Federally owned and managed lands."* The letter goes on to state that *"Federal land management agencies with such responsibilities may establish a memorandum of understanding with the State water quality agency to accomplish implementation of nonpoint source controls necessary to meet water quality standards, and implement practices through Federal licenses and permits."*

In determining whether a federal agency has conducted its operations consistent with the Idaho Nonpoint Source Management Program, the specific agency should address the following series of questions. These questions apply to any federal, local or state agency conducting nonpoint source activities:

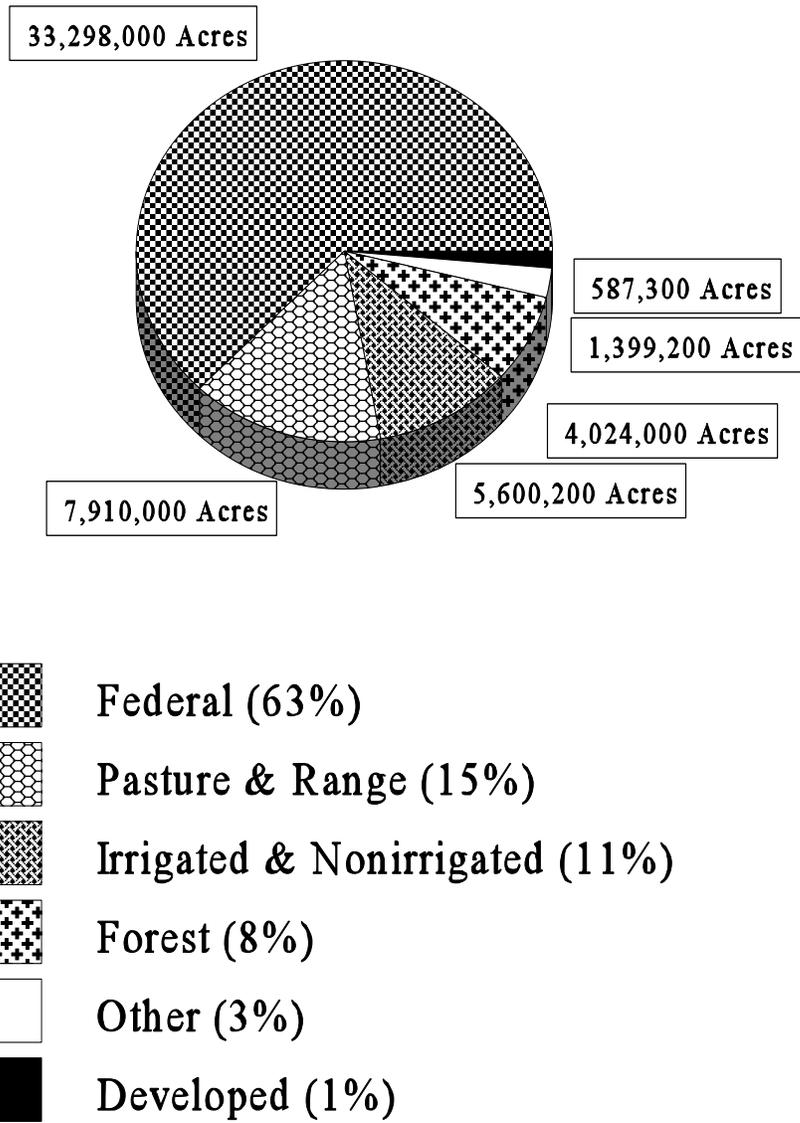


Figure 7.1 Land ownership in Idaho (Source 1992 Natural Resource Inventory Data).

- Was the appropriate regional office of IDEQ informed of the activity and steps to be taken to minimize nonpoint source pollution.
- Was a determination made if water quality limited (State of Idaho §303(d) list) stream segments exist within the project area
- Was a determination made if Outstanding Resource Waters (ORWs) exist within the project area
- Were the "appropriate beneficial uses" for the water bodies in the project area identified
- Were the water quality standards and criteria to protect the "appropriate beneficial uses" identified and are they being met
- Have the nonpoint source activities regulated by the Idaho Water Quality Standards been identified
- Were state approved BMPs for each nonpoint source activity identified
- For each nonpoint source activity that does not have approved BMPs, were management practices identified that demonstrate a knowledgeable and reasonable effort to minimize resulting water quality impacts
- Was a monitoring plan developed, and when implemented, did it provide adequate information to determine the effectiveness of the approved or specialized BMPs in protecting the beneficial uses
- Was a process (including feedback from water quality monitoring) identified for modifying the approved or specialized BMPs in order to protect beneficial uses of water identified
- Did pre-project planning and design include an analysis of water quality resulting from the implementation of the proposed activity sufficient to predict exceedences of water quality criteria for the beneficial use(s), or in the absence of such criteria, sufficient to predict the potential for beneficial use impairment

The State of Idaho entered into a memorandum of understanding in 1992 (Appendix A-1) with the participating federal land management agencies within Idaho specifying that each agency would incorporate these items into all planned activities. These items for achieving federal consistency are based on, and consistent with, the State of Idaho *Forest Practices Water Quality Management Plan* (IDEQ, 1988) and the ensuing antidegradation agreements which produced the *Coordinated Nonpoint Source Water Quality Monitoring Program For Idaho* (IDEQ, 1990). IDEQ will review the existing memorandum of understanding and modify it as necessary to ensure that all federal land management activities are consistent with the state's Nonpoint Source Management Program plan. However, with the vast holdings of federal lands within the state, IDEQ will rely on the internal policing of each federal land management agency and periodic program reviews (e.g., §401 certifications, Forestry Practices Act audits (FPA), etc.) to ensure that this provision of the nonpoint source management program plan is met.

The State of Idaho has developed: *Guidance for the Development of Total Maximum Daily Loads* (IDEQ, 1999a) and its companion Draft document *Overview of the Implementation of NPS TMDLs* (IDEQ, 1999b) (Appendices C & D). These documents call for the cooperation with federal agencies and the need for their assistance. In addition the April, 1999 *Forest Service and Bureau of Land Management Protocol for Addressing Clean Water Act 303(d) Listed Waters*, outlines the process of how these federal agencies can work with the State to support State TMDL/WRAS requirements. The State will collaborate with these agencies statewide to ensure combined planning and implementation efforts eliminate as much duplication as possible to attain State water quality goals. Also on a watershed basis, IDL as the designated agency for silviculture, will help to integrate those TMDL/WRAS planning and implementation activities which will lay out those necessary actions or ongoing processes to ensure that overall watershed implementation will meet water quality standards and beneficial uses. Where such cooperative spirit breaks down, or proves inadequate, the state will request EPA assistance in resolving actions affecting water quality under the CWA.

To ensure consistency, the State may request EPA assistance to conduct educational and liaison activities and provide technical assistance to State and Federal agencies. If requested EPA may facilitate State-Federal negotiations and assist with mediation and conflict resolution. EPA may also work with IDEQ to support their pollution abatement and environmental protections efforts, and their efforts to ensure all federal programs and policies are compatible with the State's water quality standards and program implementation goals.

CHAPTER 8 - NONPOINT SOURCE PROGRAM MANAGEMENT

Key element #8 states that the nonpoint source program include an “*Efficient and effective management and implementation of the State’s nonpoint source program, including necessary financial support.*”

IDEQ provides for an efficient and effective NPS program by coordinating, defining the direction of, and leading NPS pollution prevention and control efforts throughout Idaho. The role of IDEQ is to lay out the state priorities and processes through the designated agencies, ensure that those agencies incorporate the state priorities and processes into their planning and implementation efforts, help those agencies to integrate those priorities through IDEQ liaisons to multiple state/federal committees and workgroups, through IDEQ Regional Office participation and facilitation of BAGs and WAGs, and other public outreach and training efforts. IDEQ helps to provide the linkages between setting the statewide priorities, and ensuring those priorities are evident in the various agency programs; by providing the tools as necessary, ensuring they are carried through to implementation, and by ensuring that the various agency efforts are effective in meeting water quality standards and beneficial uses.

Congress provides limited grant funds to those states with approved Nonpoint Source Management Programs. Idaho is eligible for these monies and makes them available to various local, county, tribal and state governments as well as nonprofit organizations, special interest groups, universities, etc., for the implementation of the State’s Nonpoint Source Management Program. Proposals can be based on water quality limited water bodies from the State of Idaho approved §303(d) list, approved TMDLs, waters reported in the §305(b) report, waters of special concern (e.g., threatened and/or endangered species, sole source aquifer, etc.), or waters where beneficial uses are fully supported, but where documented nonpoint source pollution threatens future use.

Project Timing and Accounting

Nonpoint Source Management Program project development generally follows the EPA guidance and schedule listed in Appendix D of the “*Nonpoint Source Program and Grants Guidance For Fiscal Year 1997 and Future Years*” (EPA, 1996). In addition, the state has added elements to the schedule to include preliminary project reviews by the appropriate designated agency and prioritization by the appropriate BAGs. The State schedule (Appendix F-2) outlines the Nonpoint Source Management Program milestones.

As part of the 319 program requirements, the state utilizes the Grants Tracking and Reporting System by inputting the required elements into EPA's computer database. The state also produces an annual report to congress and a semi-annual report summarizing and highlighting the accomplishments of the program. In addition, the state uses a fiscal accounting system to track expenditures of both 319 funds and non-matching funds for projects within the program. These accounting procedures meet all required state and federal audit provisions.

Project Proposals

The IDEQ annually requests project proposals for the coming federal fiscal- year. Applications for proposed nonpoint source projects are narrative in nature and generally range from six (6) to twelve (12) pages in length. However, IDEQ has no minimum length or places no restriction on length of proposed projects.

Each applicant is provided with an application package that includes guidance from IDEQ and a list of water quality project types, areas, or topics developed in cooperation between IDEQ and the BAGs. This list represents the priorities that IDEQ and/or the BAGs believe need to be addressed to restore or protect water quality throughout the state. The guidance documents which are provided to each applicant provide the applicant with the materials necessary to develop a comprehensive project and include such items as:

- application checklist;
- nonpoint source project summary and budget form;

- EPA required elements list;
- IDEQ program contact list;
- nonpoint source grant schedule; and
- IDEQ nonpoint source technical evaluation form.

In the proposed project, each applicant must specifically address a series of required elements. (Appendix F-3). These elements are necessary to facilitate the technical evaluation and ranking of the proposed projects (Appendix F-1). Staff from IDEQ and the other state designated agencies routinely work with applicants to develop projects and to ensure that proposed projects meet the state and federal project requirements.

Past funding cycles include a wide variety of projects. From 1990 through federal fiscal year 1999, Idaho has funded over 125 projects with the projects from 1997 through 1999 summarized in Tables 8.1 through 8.3.

Table 8.1 Nonpoint Source Projects for 1997

Project Title	Description
Nonpoint Source Program Implementation	Provides for a IDEQ staff member to coordinate nonpoint source program and grant.
Idaho Storm Water Management	Develop statewide stormwater guidance for local communities.
Minidoka/Cassia Ground Water Monitoring	Provide funding for a national ground water monitoring and BMP demonstration project.
Environmental Solutions Class	Develop and implement high school science, math, and English curriculum related to water quality.
Thomas Fork Restoration	Stream bank restoration on the Thomas Fork of the Bear River.
Water Management and Apatite Binding of Heavy Metals	Treat mine tailings at the Rex Mill site in northern Idaho and restore ground water using an apatite filter.
Coeur d'Alene Tribes Sediment	Watershed and stream restoration throughout the Coeur d'Alene Indian Reservation.
Evaluation of Silvicultural Practices	Monitoring project through the University of Idaho to evaluate the effectiveness of forest BMPs prior to and after logging.
Paradise Creek Restoration	Urban stream restoration within the city of Moscow.
Ground Water Protection from Urban Runoff	Development and implementation of urban stormwater runoff controls for the city of Boise.
PAM Demonstration	Area wide demonstration of the use of poly acrylamide (PAM) to reduce soil erosion.
Lower Boise Water Quality Information and Education	Develop and implement an educational program targeting the citizens of the valley regarding the TMDL development for the Boise River.
Ada County Constructed Wetlands	Develop and implement a project to demonstrate the treatment capacity of constructed wetlands.

Project Title	Description
Cascade Reservoir Sediment Control	Implementation of constructed wetlands and erosion control BMPs associated with the Cascade Reservoir TMDL.
City of McCall Stormwater	Develop a management plan for treating stormwater runoff through the city of McCall.

Table 8.2 Nonpoint Source Projects for 1998

Project Title	Description
Nonpoint Source Program Implementation	Provides for an IDEQ staff member to coordinate nonpoint source program and grant.
Nonpoint Source Water Quality Data Compilation	Provide funding to locate and acquire existing water quality data.
Nonpoint Source GIS	Provide funding to create GIS data layers associated with TMDLs
Environmental Indicators	Develop a set of environmental indicators associated with nonpoint source pollution.
Wellhead Protection Viability	Implement Idaho's Wellhead Protection Plan for four communities per year throughout the state.
Thomas Fork Restoration	Stream bank restoration on the Thomas Fork of the Bear River.
Preston Stormwater Runoff	Develop a stormwater runoff plan for the City of Preston.
Canyon Creek/Osborn Flats Tailings Removal	Remove and impound heavy metal contaminated sediment and restore stream system.
Paradise Creek Restoration	Urban stream restoration north of the City of Moscow.
Lemhi County Road Restoration	Implement a variety of road restoration activities throughout Lemhi County.
Cascade Watershed Restoration	Implementation BMPs associated with the Cascade Reservoir TMDL.
McCall Basin Stormwater	Implement approved BMPs to treat stormwater related runoff within the City of McCall.
McCall Marina Stormwater	Implement approved BMPs to improve stormwater drainage system near the Big Payette Lake marina.
Sheridan Creek Restoration	Implement a series of irrigation BMPs to restore beneficial uses on Sheridan Creek.
Grazing Sediment Model	Develop a grazing sediment model for southern Idaho for use in TMDL development.

Table 8.3 Nonpoint Source Projects For 1999

Project Title	Description
Nonpoint Source Progra Implementation	Provides for a IDEQ staff member to coordinate nonpoint source program and grant.
Source Water Assessment	Provides for the creation of a source water assessment GIS database necessary to implement IDEQ Source Water Assessment Program.
Pine Creek Mine Restoration	Remove and impound heavy metal contaminated sediment.
Cataldo Mine Dredge Site Restoration	Remove and impound heavy metal contaminated sediment and restore stream system.
Valley County Road Restoration	Implement a variety of road restoration activities throughout Valle County associated with the Cascade Reservoir TMDL.
Raft River Restoration	Implement area-wide BMPs for the Almo sub-watershed of the Raft River.
Lower Coeur d'Alene River Demonstration	Demonstration project of various stream bank restoration techniques and filter fabrics to remove heavy metals.
Coeur d'Alene Tribal Restoration	Implementation of various BMPs throughout the Coeur d'Alene Indian Reservation.
University of Idaho CAFO	Develop and implement a wetland project in association with the Paradise Creek TMDL to treat CAFO related runoff.
Thomas Fork Restoration	Stream bank restoration on the Thomas Fork of the Bear River.
ISDA Drain and Ground Water Monitoring	Ground water monitoring project to determine the nutrient loading to the Boise River.
DNA Finger Printing	Demonstration project to test bacterial DNA techniques on the Lower Boise River.
Vandenakker Ditch	Implement BMPs associated with the Vandenakker drain failure.

The projects listed in Tables 8.1 through 8.3 reflect the variety and diversity of Idaho's Nonpoint Source Program. Idaho endeavors to seek and fund a balance of projects that protect the beneficial uses of both surface and ground water, and target critical areas and sources contributing to NPS pollution.

Project Evaluation and Administratio

As with any review process, a set of evaluation criteria are necessary to evaluate the project proposals. These criteria are subject to a yearly review and are updated as the priorities within the State Nonpoint Source Management Program change. The criteria are provided to each agency or group seeking funding during the initial request for projects phase. This enables each applicant to understand programmatic and state priorities. Additionally, project applicants should communicate with all pertinent natural resource agencies, organizations, and industries when developing a nonpoint source project. This provides natural resource agencies the opportunity for review and comment on projects prior to IDEQ's evaluation. This up-front work with the other agencies should also help identify those areas for which, joint

efforts could enhance the benefits to the resource base. It should identify the various roles and requirements of each agency, ensure all current and ongoing NPS prevention and control efforts are recognized in the plan, represents a comprehensive working plan, and incorporates the various commitments for technical assistance or funding from the partnering agencies. Participants are encouraged to submit draft proposals to IDEQ for a preliminary project review. Any deficiencies with the project submittal are communicated back to participants so that changes can be made prior to the application due date. These preliminary reviews have provided applicants with additional technical assistance to meet Nonpoint Source Program goals.

The final evaluation phase has several steps. First, a technical project evaluation is completed at IDEQ's regional offices. During this phase the projects are reviewed to ensure that all state and federal programmatic criteria have been met (see Annual and Multi Year Work Plans, Chapter 3). Next, each project is reviewed to ensure that it demonstrates availability of resources to maintain the project for a minimum of 10 years following the close of the contract and will yield lasting water quality improvement in the project areas. Those projects which pass the technical evaluation are routed to the appropriate BAG for review and ranking. The proposals are reviewed by the BAGs to determine how they fit into the overall water quality management of the basin. Once all the projects have been reviewed and ranked by the BAGs, they are submitted to the IDEQ central office where a review panel composed of BAG chairmen and appropriate IDEQ staff prioritize all Idaho projects.

Project Exemptions

The CWA and other federal programs emphasize remediation and reduction of generated waste. One purpose of Idaho Nonpoint Source program is to effectively administer the CWA §319 grant program. As such, IDEQ is reluctant to become involved with those projects which could generate a regulated waste or involve IDEQ in future clean-up activities which may be mandated as part of the Comprehensive Environmental Response Compensation and Liability Act (CERCLA). Therefore, projects will not be eligible for funding which generate a waste by-product that is designated and/or regulated by Resource Conservation and Recovery Act (RCRA) or Toxic Substances Control Act (TSCA), which cannot be disposed of in a nonhazardous manner (i.e., RCRA subtitle "D" landfill), or which would implicate the State of Idaho in future CERCLA related clean-up activities. Additionally, projects will not be eligible for funding under this plan that would include an activity associated with the removal, transport, or disposal of materials which cannot be permanently and safely entombed in a RCRA subtitle "D" landfill or which fails the Toxicity Characteristic Leaching Procedures (TCLP) testing procedures. The exception to these provisions are for those projects dealing with nonpoint source materials exempted through the Bevill amendments (e.g., mine tailings).

Project Subgrants

Individual project subgrants are issued to each successful applicant. The subgrant includes a copy of the applicants work plan and schedule along with an estimated completion date of the project. Individual subgrants developed through IDEQ are subject to all federal and state grant reporting requirements. Should IDEQ determine that a subgrantee is not providing the services or products outlined in the subgrant, IDEQ may terminate the subgrant.

The focus of the NPS program is to implement on-the-ground BMPs that reduce nonpoint source pollution and therefore, IDEQ encourages participants to keep capital and operating costs for equipment purchases low. IDEQ encourages participants to use match monies to purchase needed equipment. Project administrative costs are limited to 10 percent of the total project costs. Administrative costs include combined salaries, overhead, and indirect costs.

Additionally, IDEQ reviews all project invoices to ensure that charges submitted to IDEQ for payment are appropriate and compatible with the established subgrant work plan. Any questions related to submitted invoices are returned to the subgrantee for resolution prior to payment being issued. Subgrant revisions and extensions are allowed under the NPS program, but must be submitted in writing and approved by IDEQ prior to any revisions being enacted.

Project Reviews and Reporting

Projects are subject to a programmatic task and financial review once 90 percent of the tasks have been completed. IDEQ attempts to visit and review 50% of the projects yearly to ensure that work is being completed according to the prepared contract. Project participants are required to submit progress reports to IDEQ as specified by contract. A final report on the project is due to IDEQ ninety (90) days from completion of the last scheduled task. Once the final report has been completed, the project is closed out and EPA is notified.

Project Monitoring

IDEQ is the designated state agency for the collection of instream water quality monitoring data. It is incumbent on the designated agency to conduct the proper testing and field studies to document BMP effectiveness prior to project implementation (see Agency Roles IDEQ, SCC, ISDA, Chapter 2). Therefore, the State NPS program shall not use §319 grant funds for “end of field” effectiveness monitoring for BMPs identified in the State Water Quality Standards or as adopted by the appropriate designated State agency. However, this does not preclude project participants from submitting projects with proper ground water or surface water monitoring plans, including “end of field” monitoring for experimental BMPs. The monitoring and QA/QC plans for projects are subject to review and approval by IDEQ sixty (60) days prior to the commencement of field operations.

IDEQ encourages project participants to use monitoring methods which are simple in nature and can easily demonstrate the project effectiveness. For example, many participants have chosen to use photographic monitoring to demonstrate improvements to riparian habitat and vegetation or measuring the number of yards of sediment removed from gully plugs or sediment basins during scheduled maintenance. These types of monitoring activities have proven to be an effective and a cost-efficient method of determining BMP effectiveness when compared to the development and implementation of a more rigorous chemical specific monitoring program (see Feedback Loop, Chapter 6).

However, IDEQ does recognize that in some instances (e.g., ground water projects) this type of monitoring activity would be insufficient to demonstrate certain types of BMP effectiveness. Under this type of circumstance, IDEQ does allow for chemical specific monitoring. However, the goals and objectives of chemical specific monitoring plans must be worked out with IDEQ staff during the development of the project to ensure that the data collected will provide for the best analytical results and a true indication of the BMPs effectiveness.

CHAPTER 9 - PROGRAM REVISIONS OR UPDATES

Key element #9 states that *“the State periodically reviews and evaluates its nonpoint source management program using environmental and functional measures of success, and revises its nonpoint source assessment and it’s management program at least every five years.”*

As part of its strategic planning process the IDEQ is responsible for implementing environmental protection laws and programs within the state of Idaho. In 1995, IDEQ completed its first strategic plan, which provided a framework to build a system for continual assessment and improvement of programs and services. As part of this assessment process, each state agency is required to prepare an annual performance plan covering each budgeted program, function, and activity. This plan establishes outcome-based performance goals and objectives, and sets performance standards to define and measure the levels of accomplishment or results that are achieved by the program, function, or activity. The plan defines both performance measures and environmental indicators. Performance measures define the level of progress of a program, whereas environmental indicators reflect program results and outcomes.

IDEQ prepares a comprehensive inventory of environmental indicators for assessing the current level of scientific knowledge of Idaho’s environment. The goal is to determine what additional information, data, and trends are necessary to adequately monitor the environment. Incorporated in this process is the “feedback loop” to appropriately address and modify existing monitoring and implementation methods. With complete information, environmental problems are identified and prioritized, and environmental results are documented. In many instances, ongoing federally mandated programs (i.e., CWA §303(d), §305(b)) require IDEQ to utilize performance standards, measurements, goals, and objectives. These program descriptions serve well to satisfy the requirements of the Idaho Code and the guidance established by EPA.

IDEQ will continue to facilitate periodic nonpoint source program audits similar in nature to the audit done in 1995. By performing these periodic audits, IDEQ can ensure that each of the nine key elements are being adequately addressed and institute changes as required to ensure that the beneficial uses of Idaho’s waters are being maintained and/or restored. The writing of this document has helped IDEQ focus on its priorities and processes. It has helped to further define and evaluate the major changes the State has undertaken since the TMDL lawsuit and ensuing passage of Water Quality Law §39-3601 et seq. The revision of this document will be of significant help to the State as it undergoes the review and revision of its man MOUs during FY2000. This MOU revision will require a full audit of the State processes and linkages between its man state and federal partners to build the structure needed to ensure the completion of its aggressive TMDL schedule, and that TMDL/WRAS implementation ensures the State meets water quality standards for all waterbodies.

The strategy developed throughout this document will be reviewed and evaluated a minimum of once every five years. However, the delisting of water quality limited water bodies and the restoration or the preservation of existing surface water designated beneficial uses, or ground water beneficial uses will serve as the primary indicators of success for the nonpoint source program.

CHAPTER 10 - RECOMMENDATIONS AND CONCLUSIONS

The State of Idaho recognizes that nonpoint source water pollution has been and continues to be a serious impediment to meeting the goals of the Clean Water Act. In keeping with the goals of the CWA, the IDEQ and its natural resource agency partners developed this revision to the Idaho Nonpoint Source Management Program Plan. Idaho will ambitiously pursue implementation of this program over the next five years dedicating personnel and monetary resources to the advancement of nonpoint source water pollution control activities. This plan, when implemented provides:

- a systematic way to assess nonpoint source problems statewide;
- a clear prioritization process that helps provide solutions to areas of concern;
- for coordination and collaboration among state, federal, and local entities committed to water quality protection and restoration;
- for change from the historical focus at the landscape level into the watershed or drainage basin level;
- for long term maintenance and upkeep of nonpoint source controls after project monies cease; and
- for lasting statewide water quality improvements through the enhancement of beneficial uses and meeting of water quality standards.

Recommendations

In order to effectively achieve our NPS goals, IDEQ will have to create and foster new partnerships. These partnerships will provide opportunities for input from the various agencies and interest groups and serve as a vehicle for ensuring that project plans are compatible with the physical environment, reflect social values, and meet the desirable technical goals of sound watershed management.

Additional recommendations by the NPS Revision Committee to improve Idaho's program include:

- Focus §319 grant resources on measures outlined in approved TMDLs and TMDL implementation plans;
- Revise the nonpoint source interagency Memorandum of Understanding, as necessary to incorporate ground water;
- An enhanced focus for all agency resources on the implementation of nonpoint source best management practices to protect and/or restore beneficial uses of both surface and ground waters of the State;
- Develop criteria and a schedule for implementing the federal consistency reviews within the state of Idaho;
- Limit the individual costs of administrative functions related to salaries, indirect, and fringe on all subgrant activities to 10% of the project cost; and
- Convene the nonpoint source revision committee as needed to review and update the Nonpoint Source Management Program Plan to meet the state's changing environmental needs.

IDEQ has already incorporated many of these elements by: 1) tying future grants to meeting TMDL/WRAS implementation needs, 2) challenging designated agencies to ensure proper application of BMPs, monitoring to evaluate effectiveness, and ensuring all entities receiving load allocations from a given TMDL are addressed in watershed implementation plans, 3) commit to updating umbrella MOU and associated appendices to include greater consistency of issues, and to better outline the various roles and methods used for the achievement of the State water quality goals in FY2000, 4) challenging designated agencies and state/federal partners to focus tools to identify priorities and needs through the TMDL process to ensure effectiveness of efforts statewide, 5) follow-up achievements by program reviews and updating of goals, objectives, and indicators of success as necessary.

Inherent in the incorporation and completion of the above elements by IDEQ are the additional objectives and performance measures achieved toward meeting the nine key elements.

Conclusions

Focusing nonpoint source pollution control measures at a watershed level in priority areas is an effective method of targeting the most critical problems while reducing duplication and inconsistency among regulatory entities, and increasing harmon

and cooperation between user groups. It allows public involvement to be focused on defined areas, where results can be measured, and fosters cooperative problem solving where players can assist each other to reach mutually beneficial results.

IDEQ recognizes that to be successful in the nonpoint source program, the process must be inclusive and must be driven by local wisdom and experience. The role of IDEQ in solving nonpoint source problems is typified by providing support to local sponsors and partners to guide decision-making on local issues. This support is provided through sound fiscal management of the §319 grants, scientific-based technical assistance, and integration of related aspects of water management, such as surface and groundwater, water quantity and quality, economic development and environmental protection. IDEQ ensures these elements for planning and implementation are received and incorporated at the local level by providing continuous information, education, and technical support through the designated agencies and their partner agencies, and by insuring BAG/WAG involvement throughout its NPS process.

Throughout the statewide, regional and local monitoring process tied to UAW watershed priorities, the implementation phase of TMDL/WRAS will have been targeted, with pollutants identified and pollutant sources known. An initial scoping process (such as the NRCS Preliminary Investigation Process, see Ag TMDL Action Plan, Appendix E) will tie implementation activities to the BMPs needed to achieve water quality standards. These will be included into implementation plans which include all entities receiving a load allocation from the TMDL. It will show the BMPs needed, where needed, who will participate, and identify the programs and funds needed to implement the plan. Site specific and BMP effectiveness monitoring will be performed by the SCC, IASCD, ISDA and others, in conjunction with ongoing monitoring by IDEQ to ensure beneficial uses and water quality standards are met.

Implementation of this plan moves IDEQ closer to meeting Idaho's objectives by providing a forum for greater public involvement in state nonpoint source decisions; promoting the formation of local partnerships to set priorities and be more responsive to public needs; maximizing the efficient and effective allocation and use of resources; coordinating planning and implementation activities with other agencies and government entities; and fostering an open and continuous evaluation process.

The Paradise Creek Implementation Plan attached (Appendix G) is an example of the projects for which the NPS Management Program has been striving to achieve. It should represent a good use of §319 funds by the State, as well as representing how the State has enhanced its program toward meeting the Nine Key Elements necessary for an approvable NPS Management Plan for Idaho.

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APPENDIX A - 1

MEMORANDUM OF UNDERSTANDING IMPLEMENTING THE NONPOINT SOURCE WATER QUALITY PROGRAM IN THE STATE OF IDAHO

I. AGENCIES TO THE AGREEMENT

This Memorandum of Understanding is made between: U.S. Environmental Protection Agency (EPA); Idaho Department of Health and Welfare, Division of Environmental Quality (IDHW); Idaho Department of Lands (IDL); Idaho Department of Water Resources (IDWR); Idaho Soil Conservation Commission (SCC); Cooperative Extension Service, University of Idaho (CES); U.S. Department of Agriculture, Soil Conservation Service (SCS); U.S. Department of Agriculture, Agricultural Stabilization and Conservation Service (ASCS); U.S. Department of Agriculture, Forest Service, Northern, Intermountain and Pacific Northwest Regions (Forest Service); U.S. Department of Interior, Bureau of Land Management (BLM).

II. PURPOSE

This agreement outlines the roles and responsibilities of the management agencies in implementing the nonpoint source water quality provisions of the Federal Clean Water Act for the State of Idaho.

State agencies may enter into interagency cooperative agreements under authority of Title 67, Chapter 23, Idaho Code.

III. AUTHORITIES, ROLES, AND RESPONSIBILITIES

U.S. Environmental Protection Agency

The Environmental Protection Agency (EPA) has authority under Section 319 of the Clean Water Act (33 U.S.C. 466 et seq.) to ensure that nonpoint source impacts to water quality are adequately addressed by the state. EPA has authority to review and approve, or disapprove, state water quality standards (Section 303). EPA has authority under Section 309 of the Clean Air Act to comment on National Environmental Policy Act (NEPA) documents developed by the federal land management agencies.

Idaho Department of Health and Welfare, Division of Environmental Quality

The Idaho Department of Health and Welfare, Division of Environmental Quality (IDHW) is delegated authority for control of water pollution under the Clean Water Act; the Idaho Environmental Protection and Health Act of 1972, Title 39, Chapter 1, Idaho Code, as amended; and Title 1, Chapter 2, Water Quality Standards and Wastewater Treatment Requirements, Rules and Regulations of IDHW.

Under the Antidegradation Policy, IDHW is the lead state agency for holding Basin Area meetings, implementing a procedure for identifying Stream Segments of Concern and designating Outstanding Resource Waters, and implementing a coordinated monitoring program (Executive order No. 83-23).

IDHW is the statewide designated management agency for implementation of Section 319 of the Clean Water Act. The Nonpoint Source Management Program (1989) contains the implementation actions prepared by an interagency work group. The IDHW administers (jointly with SCC) the State Agricultural Water Quality Program (Title 39, Chapter 36, Idaho Code). IDHW addresses waste treatment aspects of mining through plan and specification review, and provides direct regulatory oversight for cyanide leaching facilities (Title 39, Chapter 1, Idaho Code). IDHW addresses forest practices through implementation of the Forest Practices Water Quality Management Plan (1988), revision of water quality standards, and assessment of BMP effectiveness (Title 39, Chapter 13, Idaho Code). IDHW is responsible for implementation of the State Nutrient Management Act (Title 39, Chapter 1, Idaho Code), and Rules and Regulations for Nutrient Management (Title 1, Chapter 16).

Pursuant to the Ground Water Quality Protection Act, IDHW is designated as the primary agency to coordinate and administer ground water quality protection programs for the State of Idaho (Title 39, Chapter 1, Idaho Code). IDHW has the responsibility for collecting ground water quality monitoring data for management of regional and local ground water quality. IDHW is the lead agency in coordinating the preparation of a Comprehensive Ground Water Quality Protection Plan and Ground Water Quality Standards with the Ground Water Council. IDHW addresses ground water quality protection through the permitting of land application of waste water (Title 1, Chapter 17, Idaho Code) and regulation of on-site sewage disposal systems (Title 39, Chapters 1 and 16, Idaho Code). IDHW is the designated lead agency for the Public Drinking Water Program (Title 37, Chapter 21 and Title 39, Chapters 1 and 18, Idaho Code), the Underground Storage Tank Program and the Wellhead Protection Program. Agricultural ground water issues are addressed through the state's Nonpoint Source Section 319 Program and the Ground Water Quality Council.

Idaho Department of Lands

The Idaho Department of Lands (IDL) has authority to administer the Idaho Forest Practices Act (Title 38, Chapter 1, Idaho Code), the Dredge and Placer Mining Protection Act and the Idaho Surface Mining Act (Title 47, Chapters 13 and 15, Idaho Code), and the Idaho Lake Protection Act (Title 58, Chapter 13, Idaho Code). Under the Antidegradation Policy IDL is designated as the lead agency for surface mining, dredge and placer mining, and forest practices on all lands within the state (Executive order 88-23).

IDL has the responsibility to ensure compliance with forest practice BMPs on all lands in the state. on state forest lands, IDL has the responsibility to apply BMPs which will provide for protection of beneficial uses of water. On private lands, IDL has the responsibility to administer the Forest Practice Act, Rules and Regulations, and take enforcement action when needed. IDL provides other state

agencies the opportunity to review and comment on mine applications, BMP design, and reclamation plans. Pre-operational site reviews and subsequent site inspections are often conducted in coordination with other state and federal agencies.

IDL has entered into separate MOUs with the USFS and BLM to coordinate the administration of their respective laws and regulations pertaining the mining operations on National Forest System and Bureau of Land Management lands.

Idaho Department of Water Resources

The Idaho Department of Water Resources has authority to regulate stream channel alterations under the Stream Channel Protection Act (Title 42, Chapter 38, Idaho Code) and the safety of most impoundment structures, including irrigation and stock pond facilities, and mine tailings impoundments under the Dam Safety Act (Title 42, Chapter 17, Idaho Code). Wastewater disposal by injection wells is regulated under Title 42, Chapter 39, Idaho Code. The Idaho Department of Water Resources also has statutory responsibility for administering the appropriation and allotment of surface and ground water resources of the state, including geothermal resources, and to protect the resources against waste and contamination, Title 42, Chapter 2, Idaho Code.

IDWR has the responsibility to administer the Stream Channel Protection Act on all continuously flowing streams within the state boundaries for any activity which will alter a stream channel. IDWR has entered into separate MOUs with the USFS, BLM, Idaho Department of Transportation and other road districts to protect streams and their associated environments by close coordination and cooperation on all projects with the potential to alter stream channels. Other projects must seek individual permits through an application and permit process involving all interested agencies, and the Army Corps of Engineers, for review under Section 404. Applications are processed simultaneously under a joint state and federal review with separate approvals. IDWR cannot subrogate permitting authority.

IDWR has the responsibility to maintain the natural resource geographic information system for the state as well as a comprehensive ground water data system which is accessible to the public. This is an integral part of the ground water protection program.

Idaho Department of Agriculture

Authority for the Department's role for control of nonpoint source pollution in agriculture comes from the Idaho Pesticide Law (Title 22, Chapter 34, Idaho Code), the Idaho Fertilizer Law (Title 22, Chapter 6, Idaho Code), and the Idaho Chemigation Law (Title 22, Chapter 14, Idaho Code). The Idaho Department of Agriculture is responsible for regulating the use of pesticides and fertilizers and for licensing applicators, and provides assistance in the monitoring, development and evaluation of the effectiveness of best management practices relating to agricultural chemicals. The Department has a cooperative enforcement agreement with the Environmental Protection Agency (EPA) to enforce the provisions of the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) in Idaho. The

Department coordinates with the Department of Health and Welfare - Division of Environmental Quality (DEQ) and the Idaho Department of Water Resources (IDWR) in administering the Idaho Ground Water Quality Protection Act of 1989.

Authority for the Department's role for control of dairy waste in agriculture comes from the various Chapters which regulate the Idaho dairy industry (Title 37, Chapter 3, 4, 5, and 7 Idaho Code), the Pasteurized Milk Ordinance, as amended, and the regulations adopted pursuant thereto which authorizes the Department to inspect the sanitary conditions of dairy products, dairies, dairy processing facilities, warehouses, etc.

State Soil Conservation Commission

The responsibilities of the State Soil Conservation Commission, Department of Lands, are defined by Title 22, Chapter 27, Idaho Code. The Commission offers assistance to the supervisors of the 51 Soil Conservation Districts (SCDs), organized as provided in the Soil Conservation District Law in carrying out their powers and programs.

SCC jointly (with IDHW) administers the State Agricultural Water Quality Program (SAWQP). SCC is authorized to contract with IDHW to provide technical assistance for SAWQP projects. The State Agricultural Pollution Abatement Plan designates the SCC and SCDs as the agricultural nonpoint source management agencies at the state and local level, respectively. The SCDs may enter into contracts with IDHW for planning and implementation of ground water and surface water projects pursuant to rules and regulations of the Agricultural Water Quality Program (Title 39, Chapter 36, Idaho Code).

The SCC is the lead agency for coordination, implementation of the Antidegradation Policy for agricultural activities through the SCDs (Executive order 88-23). The Commission works to secure the cooperation and assistance of state and federal agencies in the work of the Districts.

University of Idaho, Cooperative Extension Service

The extension system, under the Smith-Lever Act of 1914, was designated as the education arm of the United States Department of Agriculture. In July of 1989, the USDA Water Quality Program that supports the President's Water Quality initiative designated Extension as having the key role in water quality education and a lesser role of technical assistance.

Extension has responsibility to prepare news items, bulletins, publications and educational material to inform and educate the general public about water quality issues and enacted legislation. Extension provides agri-chemical application and rate recommendations, based on research, and consistent with water quality goals.

Cooperation and coordination with other agencies is of utmost importance. Extension will assist in building staff capacity for the planning, delivery and analysis of water quality procedures. Production

management systems will be expanded and enhanced through cooperation with SCS in updating field office technical guides, other references, and through organized professional training. Extension is one of three lead agencies (CES, SCS, ASCS) in implementing USDA water quality initiatives such as hydrologic unit planning and demonstration project activities.

United States Department of Agriculture, Soil Conservation Service

The Soil Conservation Service (SCS) receives its authority and direction from the Soil Conservation and Domestic Allotment Act, Section 7 (Public Law 46-74; USC 590a (3)), the Agriculture and Consumer Protection Act, Title 10, and the Agricultural Credit Act, Title 4. The SCS provides technical assistance to units of government and private land users for the planning and implementation of water quality measures and initiatives.

The SCS maintains, periodically revises, and supplements the Field Office Technical Guide which serves as one source for the state to consider in adopting agricultural best management practices.

The SCS administers USDA-SCS programs such as PL-566 Small Watershed Program, Conservation Operations, Resource Conservation and Development (RC&D), River Basin Planning, Soil Survey, Snow Survey, Emergency Watershed Protection, and the Plant Materials Program, each of which has a water quality component. The SCS shares leadership with ASCS and CES in implementing USDA water quality initiatives such as hydrologic unit planning and demonstration project activities.

The SCS assists in developing tools to quantify environmental and economic effects of BMPS, and supports and encourages more resource data collection and research, including monitoring, in the areas of surface and ground water.

Agricultural Stabilization and Conservation Service

The ASCS administers a number of agricultural programs, several of which directly benefit Idaho's water quality. Conservation and land-use adjustment assistance is provided through sharing with individual farmers the cost of installing needed soil, water, woodland, and wildlife conserving practices under the annual and long-term Cost-Share Programs, the Conservation Reserve Program, and the Rock Creek Rural Clean Water Program. The ASCS shares leadership with the SCS and CES in implementing USDA water quality initiatives; which include hydrologic unit planning and demonstration project activities, and Agricultural Conservation Program (ACP) special water quality projects.

United States Department of Agriculture, Forest Service

The Forest Service, under the Organic Act Of 1897 (16 U.S.C. 551), the Multiple Use Sustained Yield Act of 1960 (16 U.S.C. 528), as amended, and the National Forest Management Act of 1976 (16 U.S.C. 1600), is directed to regulate the occupancy and use of National Forest System Lands.

The Clean Water Act, as amended, (33 U.S.C. 1323) directs the Forest Service to meet state, interstate and local substantive as well as procedural requirements respecting control and abatement of pollution in the same manner, and to the same extent as any nongovernmental entity.

Executive Order 12372 (September 17, 1983) directs the Forest Service to make efforts to accommodate and foster intergovernmental partnership by relying on state processes, to the extent feasible for state coordination and review of proposed federal financial assistance and direct federal development.

The U.S. Forest Service is responsible for the management of over 20.4 million acres of National Forest Service lands in Idaho. These are public lands that form the headwaters of many of Idaho's important river systems. The Forest Service has the statutory authority to regulate, permit and enforce land-use activities on the National Forest System lands that affect water quality.

As the designated management agency, the Forest Service is responsible for implementing 1) nonpoint source (NPS) pollution control; and 2) the Idaho State Water Quality Standards on National Forest System lands. The basis of the Forest Services's nonpoint source pollution control policy stems from the: National Nonpoint Source Policy (December 12, 1984) ; Forest Service Nonpoint Strategy (January 29, 1985); and the USDA Nonpoint Source Water Quality Policy (December 5, 1986). The Forest Service's water quality policy is to: 1) promote the improvement, protection, restoration and the maintenance of water quality to support beneficial uses on all national forest service waters; 2) promote and apply approved best management practices to all management activities as the method for control of NPS pollution; 3) comply with established state or national water quality goals; and 4) design monitoring programs for specific activities and practices that may affect or have the potential to affect in-stream beneficial uses on National Forest System lands.

The Forest Service also coordinates all water quality programs, on National Forest System lands within its jurisdiction, with the local, state and federal agencies, affected public lands users, adjoining land owners, and other affected interests.

Bureau of Land Management

The Taylor Grazing Act of 1934, as amended, authorizes livestock grazing on public land and provides for protection from erosion and soil deterioration.

The Federal Land Policy and Management Act of 1976, as amended, requires that public lands be managed in a manner that will protect the quality of water resources, and that in developing or revising land use plans the Secretary shall provide for compliance with applicable pollution control laws, including state and federal air, water, and noise, implementation plans.

The Public Range Lands Improvement Act of 1973 requires that the public lands be managed to maintain and improve condition of rangeland values.

The Federal Water Pollution Control Act of 1972, as amended, requires federal agencies to meet state, interstate, and local substantive as well as procedural requirements respecting control and abatement of pollution. Executive Order 12372 (September 17, 1983) directs BLM to foster intergovernmental partnership by relying on state processes for coordination and review of proposed federal financial assistance and federal programs.

BLM is responsible for the administration, management and protection of 12 million acres of public land in Idaho. It has statutory authority to regulate, license, and enforce land use activities that affect water quality. BLM is the designated nonpoint source managements agency on the lands under its management. The BLM's goals are to maintain or improve surface and ground water quality consistent with state and federal water quality standards, minimize harmful consequences of activities that result in nonpoint source pollution, and inventory, monitor, and evaluate water quality data necessary for the proper management of the public lands. The BLM also coordinates all water quality programs with the local, state and federal agencies, affected public land users, adjoining land owners, and other affected interests.

IV. DEFINITIONS

Best management Practice (BMP) A practice or combination of practices determined by the state to be the most effective and practicable means of preventing or reducing the amount of pollution generated by nonpoint sources. (IDHW, 1985. Idaho Water Quality Standards.)

Designated Management Agency: An agency identified by an Area Waste Treatment Plan or the Nonpoint Source Management Program and designated by the Governor as lead in implementing the program on lands which the agency administers.

Federal Lands: For this agreement only, lands administered by the USDA, Forest Service, and USDI, Bureau of Land Management.

Federal Land Management Agencies: For this agreement only, lands administered by the USDA, Forest Service, and USDI, Bureau of Land Management.

Nonpoint Source Pollution: Ground and surface water pollution that comes from many varied, non-specific and diffused sources and can be categorized by the general land disturbing activity that causes the pollution (Title 39, Chapter 36, Idaho Code) .

V. NOW THEREFORE THE PARTIES MUTUALLY AGREE:

- 1 . To implement the feedback loop concept as described in the Idaho Water Quality Standards and Wastewater Treatment Requirements (Section 16.01.2050,06. and Section 16-01.2300,04). This standard is based on implementation of BMPs and use of a process to evaluate the effectiveness of BMPs in restoring and maintaining the beneficial uses of the waters of the state as designated in the Idaho water quality standards.

- 2 . To be consistent with the Idaho Nonpoint source Management Program, 1989, as required by Section 319 of the Clean Water Act. For federal agencies, criteria for federal consistency are contained as a checklist in the Nonpoint Source Management Program.
- 3 . To jointly coordinate monitoring activities as outlined in the Coordinated Nonpoint Source Water Quality Monitoring Program for Idaho, 1990 (IDHW). Included are development of standard monitoring techniques, cooperative monitoring programs, and sharing of water quality data.
- 4 . To provide information on water quality conditions and effectiveness of BMPs biannually to IDHW for inclusion in the Idaho Water Quality Status Report (Section 305-b) and updates of the Nonpoint Source Assessment (Section 319) of the Federal Clean Water Act.
- 5 . To participate in the Basin Area Meetings implementing the Antidegradation Policy.
6. To utilize a common data base, such as EPA's STORET and BIOS system or IDWR's Environmental Data Management System as the central repository for water quality data in the state and to coordinate the training to implement such a system.
- 7 . To develop and encourage interagency participation in water quality training programs.
8. To develop and implement specific agreements on topics such as agriculture, forestry, and mining nonpoint source water quality control programs. These agreements will be incorporated as appendices to this memorandum.

VI. IDAHO DEPARTMENT OF HEALTH AND WELFARE AGREES:

1. To coordinate water quality management planning and implementation efforts by the state with other state and federal agencies and keep them updated on any changes to state standards, regulations or guidelines.
- 2 . To invite other Idaho State and federal agency representation on policy or technical advisory committees that relate to water quality issues.
3. To review the federal agency's listing of proposed projects and activities scheduled for NEPA process, participate in those affecting water quality and provide timely review comments for finalizing the NEPA documents.
4. If a drainage has a significant acreage of mixed ownership, the Department shall take the lead in coordinating participation of various landowner, development of the monitoring plan and implementation of the field work.

VII. THE FEDERAL LAND MANAGEMENT AGENCIES AGREE

- 1 . That federal agencies will be subject to, and comply with, state requirements in the same manner and to the same extent as any other party to this agreement, or other nongovernmental entity.
- 2 . To annually, by May 1, develop or update water quality monitoring plans to meet the intent of the Antidegradation Policy and the NPS Water Quality Management Program, and provide to IDHW monitoring results information relative to the feedback loop.
3. To annually provide, to the designated IDHW and IDL offices, by May 1, a general schedule of proposed land-disturbing activities during the forthcoming year. Projects and programs for which the federal agencies specifically request assistance will be identified.
4. To involve the IDWR, IDHW and IDL at the appropriate time in the NEPA process for projects having significant potential to impact beneficial water uses.
5. To incorporate the ten items for Federal Consistency Review Criteria (pages 26-28 of the Idaho Nonpoint Source Management Program) into NEPA documents.
6. To insure that all new and renewed plans, leases, contracts, special use authorizations, easements, right-of-way documents and other agreements involving permitted activity on federal lands, contain provisions for compliance with all water pollution control statutes and regulations (federal and state) under the authority of the Clean Water Act.
- 7 . To provide in-house training to federal Personnel to increase employee awareness of, and sensitivity to, the importance of maintaining water quality, potential impacts to water quality, applicable state and federal law, and state-of-the-art techniques used to prevent water quality problems.

VIII. IT IS FURTHER AGREES:

1. That in cases of conflict between agency missions, the agencies will provide an opportunity for informal conflict resolution prior to taking other actions provided by law.
- 2 . That nothing in this agreement shall be construed as limiting or affecting in any way the legal authority of the federal agencies in connection with the proper administration and protection of federal lands in accordance with federal laws and regulations.
3. That nothing in this agreement shall be construed as obligating the signing parties to expend funds in any contract or other obligation for future payment of funds or services in any contract in excess of those available or authorized for expenditure.

4. To periodically (two-year interval) review this Memorandum of Understanding and make revisions and updates as necessary to meet the purpose of the agreement. Amendments shall become effective following written approval by all parties.
5. That this agreement shall become effective as soon as it is signed by the parties and shall continue in force unless terminated by mutual written consent or any party upon thirty days notice in writing to the other parties of intention to terminate upon a date indicated.
6. That no member of, or delegate of Congress, or Resident Commissioner of the United States, shall be admitted to any share or part of this agreement, or to any benefit that may arise therefrom.
7. That each provision of this agreement is subject to the laws and regulations of the State of Idaho, and the laws and regulations of the United States.
8. The program or activities conducted under this agreement or memorandum of understanding will be in compliance with the nondiscrimination provisions contained in the Titles VI and VII of the Civil Rights Act of 1964, as amended; the Civil Rights Restoration Act of 1987 (Public Law 100-259); and other nondiscrimination statutes: namely, Section 504 of the Rehabilitation Act of 1973, Title IX of the Education Amendments of 1972, and the Age Discrimination Act of 1975.

They will also be in accordance with regulations of the Secretary of Agriculture (7 CFR-15, Subparts A & B), which provide that no person in the United States shall on the grounds of race, color, national origin, age, sex, religion, marital status, or handicap, to be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity receiving federal financial assistance from the Department of Agriculture or any agency thereof.

That the Memorandum of Understanding of September 1, 1988, between the Forest Service and Department is replaced upon approval and execution of this Memoranda of Understanding and its appendices.

This Memorandum of Understanding is made between: U.S. Environmental Protection Agency (EPA); Idaho Department of Health and Welfare, Division of Environmental Quality (IDHW); Idaho Department of Lands (IDL); Idaho Department of Water Resources (IDWR); Idaho Soil Conservation Commission (SCC) ; Cooperative Extension Service, University of Idaho (CES); U.S. Department of Agriculture, Soil Conservation Service (SCS); U.S. Department of

Agriculture, Agricultural Stabilization and Conservation Service (ASCS); U.S. Department of Agriculture, Forest Service, Northern, Intermountain and Pacific Northwest Regions (Forest Service); U.S. Department of Interior, and the Bureau of Land Management (BLM).

Lynn McKee
U.S. Environmental Protection Agency

Richard Donovan
Idaho Department of Health & Welfare

Stan Hamilton
Idaho Department of Lands

R. Keith Higginson
Idaho Department of Water Resources

Wayne E. Faude
Idaho Soil Conservation Commission

Leroy Luft
Cooperative Extension Service

Paul S. Calverley
Soil Conservation Service

Trent Clark
Agricultural Stabilization & Conservation
Service

David F. Jolly
US Forest Service, Region 1

Grey Reynolds
US Forest Service Region 4

John F. Butruille
US Forest Service, Region 6

Delmar Vail
Bureau of Land Management

Dr. W. G. Nelson
Idaho Department of Agriculture

APPENDIX A - 2

FORESTRY PRACTICES APPENDIX TO THE MEMORANDUM OF UNDERSTANDING IMPLEMENTING THE NONPOINT SOURCE WATER QUALITY PROGRAM IN THE STATE OF IDAHO

I. PARTIES TO THE AGREEMENT

Idaho Department of Health and Welfare, Division of Environmental Quality, hereinafter referred to as IDHW. Idaho Department of Lands, hereinafter referred to as IDL. U.S. Department of Agriculture, Forest Service, Intermountain, Northern and Pacific Northwest Regions, hereinafter referred to as the Forest Service. Bureau of Land Management, Idaho State Office, hereinafter referred to as the BLM.

II. PURPOSE

The purpose of this appendix to the Memorandum of Understanding Implementing the Nonpoint Source Water Quality Program in the State of Idaho is to coordinate water pollution control activities on federal, state, and private forest lands in Idaho to protect, maintain and restore the beneficial uses, as defined in the Idaho water quality standards, of the waters of the state.

III. LEGAL AUTHORITIES

The legal authorities of the agencies participating in forest practices water quality management are listed in the Memorandum of Understanding Implementing the Nonpoint Source Water Quality Program in the State of Idaho.

IV. DEFINITION

Best Management Practice (BMP): For this appendix, means a practice or combination of practices determined by the Land Board, in consultation with the IDL and the Idaho Forest Practices Act (IFPA) Advisory Committee, to be the most effective and practicable means of preventing or reducing the amount of nonpoint source pollution generated by forest practices. BMPs at a minimum shall include those management practices included in the Rules and Regulations pertaining to the Idaho Forest Practices Act (IDAPA 20.02.01); and the Rules and Regulations pertaining to the Idaho Stream Channel Protection Act (IDAPA 37.I). IDHW has listed the practices in the rules and regulations as approved BMPs in the Idaho Water Quality Standards and Wastewater Treatment Requirements, as amended (IDAPA 16.01.02300,05). Site specific BMPs, above and beyond those listed in this definition, may be necessary to avoid an impairment of beneficial uses.

V. OBJECTIVES

The agencies party to this agreement mutually agree to implement the:

- A. Water quality protection provisions of the Rules and Regulations pertaining to the Idaho Forest Practices Act (IDAPA 20.02.01);
- B. Idaho Forest Practices Water Quality Management Plan, as revised (1988);

C. Forestry sections of the Idaho Nonpoint Source Management Plan Program, 1989.

VI. AGREEMENTS

Therefore, the parties agree as follows:

A. The IDHW agrees:

1. To coordinate water quality management planning and implementation efforts with the:
 - a. IDL, where state and private forest lands administered or regulated by IDL are involved;
 - b. Forest Service where National Forest Service lands are involved; and
 - c. BLM where public lands administered by the BLM are involved.
2. To coordinate and chair the statewide interagency Forest Practices Audit every fourth year and involve IDL, the Forest Service, private forest land owners, and the BLM on the Forest Practices Audit Team.
3. To provide technical support to and participate on the forest practices cumulative effects task force.
4. To request in writing the IDL conduct a timely evaluation and modification of the relevant forest practice rule(s) should monitoring and surveillance or other evidence indicate that a IFPA rule or regulation is not providing adequate protection of water quality to insure full protection of beneficial use as defined in the Idaho water quality standards.
5. To include the following information in a requested modification of an IFPA rule or regulation:
 - a. Reference to the rule to be modified on a statewide, geographic or watershed basis.
 - b. Reference to evidence which indicates the rule is not fully protecting beneficial uses.
 - c. Name(s) of IDHW staff who may be contacted for further information.
 - d. Recommended additions or modification to the forest practices rules.
6. In the event that beneficial uses are not protected, IDHW will pursue enforcement actions in cooperation with the appropriate agencies.

B. The IDL agrees:

1. To comply with the water quality protection provisions of the Idaho Forest Practices Act Rules and Regulations (IFPA) on state and private forest lands.
2. To provide training to IDL staff, forest landowners, and operators regarding potential impacts to water quality, applicable state and federal law and state-of-the-art techniques used to prevent water quality problems.

- 3.To review variance policies, developed by federal agencies, to assure that they meet the substantive and procedural requirements of the water quality protection provisions of the IFPA rules and regulations.
- 4.To provide training to federal agencies regarding interpretation and implementation of the water quality protection of the IFPA rules and regulations.
- 5.To provide federal agencies technical support in the administration and implementation of the water quality protection provisions of the IFPA rules and regulation on federal lands.
- 6.To conduct interim internal reviews of BMPs by annually examining a representative sample (10 per ownership category) of timber related projects and prepare written BMP evaluation reports. Summaries of these reports, and similar reports from the federal agencies, will be provided to IDHW for inclusion in the annual Forest Practices Water Quality Management Plan Report.
- 7.To participate in the statewide Forest Practices Audit Team, provide necessary information for selection of timber sales, and provide technical expertise in audit procedures.
- 8.To notify the Federal agencies of suspected non-compliance with water quality protection provisions of the IFPA rules and regulations on federally administered lands.
- 9.To notify IDHW of all suspected occurrences of beneficial use impairments on state and private forest lands, and to coordinate enforcement efforts with the appropriate agencies.
- 10.To conduct an evaluation of any request for an alternation of an IFPA rule or regulation and respond in writing within 30 days indicating action which will be taken. The IDL may deny the request, stating the reasons for denial, refer the request to the Forest Practices Act Advisory Committee, or initiate rule making procedures in accordance with section 67-5203, Idaho Code.
- 11.To involve the Forest Practices Act Advisory Committee in all requests for a modification of an IFPA rule or regulation by soliciting their technical advice and recommendations. The director of IDL will consider all factors involved when making recommendations for modifications of an IFPA rule or regulation to the State Board of land Commissioners.

C. The Federal Agencies Agree:

- 1.To comply with the water quality protection provisions of the IFPA Rules and Regulations.
- 2.To conduct interim internal reviews of best management practices (BMPs) by annually examining a representative sample (target 10%) of timber related projects on lands they administer and prepare written BMP evaluation reports. Summaries of these reports will be provided to IDL and IDHW, for inclusion in the annual Forest Practices Water Quality Management Plan Report.

- 3.To participate in the statewide Forest Practices Audit Team, provide necessary information for selection of timber sales and provide technical expertise in audit procedure.
- 4.To develop and implement a variance policy that assures that when a specialized BMP is used, instead of a specific IFPA rule or regulation, that the practice selected protects beneficial uses.
- 5.To provide technical support to IDL and participate on the forest practice cumulative effects tasks force.
- 6.To notify IDHW of any suspected occurrences of beneficial use impairment that occur on National Forest System lands and public lands administered by the BLM.
- 7.To notify IDL of all suspected non-compliance with water quality protection provisions of the IFPA rules and regulations on federally administered lands.
- 8.To provide technical support, to IDL, in the administration and implementation of the water quality protection provisions of the rules and regulations pertaining to the IFPA on federally administered lands.

D. It is mutually agreed:

- 1.The mechanism for implementing pollution control on forest practices is described in the State of Idaho *Forest Practice Water Quality Management Plan*, 1988, as revised.
- 2.That nothing in this appendix shall be construed as limiting, or affecting in any way, the legal authority of the participating agencies in connection with the proper administration and protection of affected lands in accordance with federal and state laws and regulations.
- 3.That nothing in this appendix shall be construed as obligating the participating agencies to expend funds in any contract, or other obligation, for future payments of funds or services in excess of those available or authorized for expenditure.
- 4.To periodically (two year interval) review this cooperative appendix, and make revisions and updates as necessary to meet the purpose of the appendix. Amendments shall be effective following written approval by all parties to the appendix.
- 5.That the appendix shall become effective as soon as it is signed by the parties, and shall continue in force unless terminated by mutual written consent, or by any party, upon sixty days notice in writing to the other parties of intention to terminate upon a date indicated.
- 6.That this appendix supersedes the MOU between: IDHW and IDL dated 1/8/88; IDHW and the Forest Service dated 9/1/88; and IDHW and BLM dated 9/21/79.

IN WITNESS THEREOF, the parties hereto have caused this cooperative appendix to be executed.

IDAHO DEPARTMENT OF HEALTH AND WELFARE

By _____ Date _____
Jerry L. Harris
Director, Idaho Department of Health and Welfare

IDAHO DEPARTMENT OF LANDS

By _____ Date _____
Stanley F. Hamilton
Director, Idaho Department of Lands

United States Forest Service

By _____ Date _____
Gray F. Reynolds
Regional Forester, Intermountain Region

By _____ Date _____
David F. Jolly
Regional Forester, Northern Region

By _____ Date _____
John E. Lowe
Regional Forester, Pacific Northwest Region

BUREAU OF LAND MANAGEMENT

By _____ Date _____
Delmar D. Vail
State Director, Bureau of Land Management

APPENDIX A - 3

APPENDIX TO THE MEMORANDUM OF UNDERSTANDING IMPLEMENTING THE NONPOINT SOURCE WATER QUALITY PROGRAM . IN THE STATE OF IDAHO SPECIFYING IMPLEMENTATION OF THE MINING WATER QUALITY PROGRAM

I. AGENCIES TO THE AGREEMENT

This Appendix to the Memorandum of Understanding (MOU) is made between the Idaho Department of Lands (IDL), Idaho Department of Health and Welfare, Division of Environmental Quality (DEQ), Idaho Department of Water Resources (IDWR), Idaho Department of Fish and Game (IDFG), U.S. Department of Agriculture, Forest Service, Northern, Intermountain and Pacific Northwest Regions (Forest Service); the United States Environmental Protection Agency (EPA); and the U.S. Department of Interior, Bureau of Land Management, Idaho State Director (BLM).

II. PURPOSE AND SCOPE

This is an appendix to the memorandum of understanding IMPLEMENTING the nonpoint source water quality program in the State of Idaho. The purpose of this agreement is to coordinate the implementation of the antidegradation policy of the state and the nonpoint source water quality management program for all mining operations. The Appendix also describes the relationship and supporting activities of the agencies with regard to nonpoint source discharges which have surface or ground water quality impacts, generated by mining activities under their jurisdiction. This Appendix is not intended to transfer any regulatory authorities or responsibilities from coordinating agencies to the lead agency.

III. LEGAL AUTHORITIES

The legal authorities of the agencies participating in water quality management, as it relates to mining, are listed in the Memorandum of Understanding IMPLEMENTING the Nonpoint Source Water Quality Program in the State of Idaho.

IV. DEFINITIONS

Best Management Practice (BMP): A practice or combination of practices determined by the state to be the most effective and practicable means of preventing or reducing the amount of pollution generated by nonpoint sources (IDHW, 1985). Idaho Water Quality Standards and Wastewater Treatment Requirements). For the purpose of this Appendix, mining BMPS are listed in the Idaho Surface Mining Act, Dredge and Placer Mining Protection Act, and BMP Manual for Mining Operations in Idaho. BMPS may be comparable to soil and water conservation practices required by the USFS or BLM.

Coordinating Agency: An agency which is party to this agreement and which works with the lead agency to implement the nonpoint source surface and ground water quality programs for mining operations under its jurisdiction.

Coordination Meeting: A meeting of the lead and coordinating agencies with a mining project representative, usually conducted on the project site, to review progress and compliance with agency regulations and the approved plans. Frequency of meetings is dependent on project size and complexity.

Designated Uses: The designated uses for which waters of the State are to be protected include: agricultural and domestic water supplies; cold and warm water biota; salmonid spawning; primary and secondary contact recreation; industrial water supplies; wildlife habitat; and aesthetics. Special resource waters may be designated and listed in the Idaho Department of Health and Welfare Rules Sections 01.02110 - 01.02160. Modification of these rules can be made only through amendment, pursuant to Section 67-52, Idaho Code. Idaho water right law which prioritizes beneficial uses of water as those uses for mining, agriculture, domestic, commercial purposes and fish and wildlife does not supersede the Idaho Environmental Protection and Health Act which guarantees the protection of water quality for coexisting uses.

Field Inspection: A meeting or review conducted at the mine site by a regulatory agency to ensure compliance with that agency's specific laws, rules, plans or permits. Field inspections are conducted as deemed necessary by the regulatory agency for the proper administration of its laws, rules, plans or permits.

Lead Agency: An agency, either BLM, USFS, or IDL, which has the lead responsibility for coordinating the administration of the approved plan of operation, reclamation plan or permit, and inspecting the operation for compliance with the approved plan of operation or reclamation plan.

Nonpoint Source Pollution: Ground and surface water pollution that comes from many varied non-specific and diffused sources and can be categorized by the general land disturbing activity that causes the pollution [Idaho Code title 39, chapter 36).

V. GENERAL

The agencies mutually agree that:

1. For operations on federal mining claims, the lead agency will be determined as outlined in the Memorandums of Understanding between the Idaho Department of Lands and the U.S. Department of Interior, Bureau of Land Management (January 28, 1987) and the U.S. Department of Agriculture, Forest Service, Regions 1 and 4 (November 27, 1985). These memoranda of understanding are intended to coordinate the administration by the Idaho Department of Lands and U.S. Forest Service or U.S. Bureau of Land Management of their respective authorities and regulations pertaining to mining operations on private, state, and federal lands under state and federal jurisdictions. These memoranda are also intended to achieve efficient use of manpower and appropriations by reducing unnecessary, duplicative, and overlapping applications, notices, and inspections by Department of Lands, U.S. Forest

Service, and Bureau of Land Management, and double bonding, to the extent legal and practicable.

2. The lead agency and the IDL will require and ensure that BMPS are designed, implemented and maintained at each operation for the purpose of protecting or maintaining the designated uses of the waters of the state, and for providing protection for public health and safety.
3. In cases of conflict between agency opinions, requests, or time frames, the agencies will provide an opportunity for informal conflict resolution prior to taking independent actions provided by law.
4. Project reviews and coordination for federal, state, and local permit evaluations will be scheduled concurrently with the National Environmental Policy Act (NEPA) process, when NEPA is applicable. The IDL is responsible for ensuring that mine operators implement and maintain their BMPS to protect designated uses of waters in Idaho.
5. The DEQ is responsible for monitoring water quality and notifying the IDL when mining operations may be degrading waters of Idaho.
6. Each managing agency should consider modifying existing mining regulations or policies as needed to incorporate the provisions of Idaho's Ground Water Quality Plan.

VI. AGENCY REVIEW AND PRE-PROJECT COORDINATION

The Idaho Department of Lands will:

This section will apply when a reclamation plan or placer mining permit is required by the IDL. Coordinating agencies should be aware that mining and milling on National Forest System lands and BLM administered lands, which do not require a placer permit or reclamation plan, are reviewed under the NEPA process.

- 1) Forward one copy of a complete dredge and placer mining permit application, plan of operation or reclamation plan to the coordinating state and federal agencies for review and comment. The application shall include information identifying foreseeable site-specific nonpoint sources of water quality impacts and a water management plan which outlines how ground and surface water quality will be protected during each phase of the mining operation.
- 2) When the director of the IDL determines, after consultation with DEQ, that there is a reasonable potential for nonpoint source pollution of adjacent surface and ground waters, the director shall request, and the operator shall provide to the director, baseline pre-project water monitoring information and furnish specified ongoing monitoring data during the life of the project as required in the monitoring plan. When monitoring is required, IDL will forward a copy of the monitoring plan and information to the DEQ.

- 3) Specify the lead agency and their field contact and phone number.
- 4) Specify the IDL field contact and phone number.
- 5) Specify the date that all comments must be received by the IDL. Also, specify whether IDL will act as a clearinghouse for state agency comments or whether the state agencies should comment directly to the federal agency responsible for the NEPA process.
- 6) After coordinating schedules with the coordinating agencies, specify the date and time for a field review or the date by which a review must be requested.
- 7) Incorporate the coordinating agency's written comments, that are relevant to IDL's authorities, in the dredge and placer mining permit, or reclamation plan. Verbal comments will be accepted by the due date provided they are followed-up with written comments within specified time frames. Plans or I permits may be approved with conditions that address a coordinating agency's concerns. The IDL should notify an operator when a coordinating agency does not feel that the proposed BMPS are adequate to protect water quality.
- 8) The best management practices, initially proposed by an operator, shall be considered accepted at the time the IDL approves the reclamation plan or placer permit.

The U.S. Forest Service will:

- 1) Provide a scoping statement to the coordinating agencies for projects that require an Environmental Assessment or an Environmental Impact Statement on National Forest System lands.
- 2) Provide one (1) copy of the complete plan of operation to the IDL.

The Bureau of Land Management will:

- 1) Provide a scoping statement to the coordinating agencies for projects that require an Environmental Assessment or an Environmental Impact Statement on BLM land.
- 2) Provide one (1) copy of the complete plan of operations to the IDL.
- 3) Forward Notices to the IDL.

The US. Environmental Protection Agency will:

- 1) Administer and oversee the implementation of the Clean Water Act Sections 402 and 319, which require the states to address and control point and nonpoint source impacts to water quality.
- 2) Coordinate with IDL to complete a field review, when any portion of the operation falls under the administration of the EPA.

- 3) Coordinate with the IDL and DEQ to develop and establish any EPA required water quality monitoring programs.

The Division of Environmental Quality will:

- 1) Coordinate with the IDL to complete field reviews.
- 2) Review the dredge and placer mining permit application, plan of operation or reclamation plan with respect to the following areas:
 - C The need for a monitoring plan.
 - C The location of water quality monitoring sites.
 - C Identification and use of BMPS.
 - C Adequacy of wastewater impoundments under 30 feet in height, such as settling ponds and tailings ponds.
 - C Potential threats to surface and ground water quality.
 - C Handling and storage of hazardous and deleterious materials, such as fuels, chemicals, and toxic substances.
 - C Other laws and rules administered by DEQ.
- 3) Forward comments, verbally with written follow-up at a minimum, to IDL for a reclamation plan, plan of operation or placer permit by the time specified by IDL.
- 4) Consult with the IDL and the lead agency to determine if there is a reasonable potential for nonpoint source pollution. When pre-project baseline and ongoing water quality monitoring is necessary; request, through IDL, that the operator provide such water quality monitoring data. The DEQ will specify the general locations, frequency, parameters, duration and methods of sampling that need to be in the monitoring plan. The operator is responsible for submitting a site specific monitoring plan for approval.
- 5) Review and approve water quality monitoring plans for operations required to have them.
- 6) The DEQ has responsibility for permitting and administration of a cyanidation facility. They will provide notice to the lead and coordinating agencies of receipt of an application for a cyanidation permit.

The Department of Fish and Game will:

- 1) Conduct, review and approve, or provide fisheries monitoring when the operator is required by IDL, to monitor fisheries.
- 2) Provide information, to the IDL and the lead agency, regarding potential threats to fish, aquatic biota, avian and terrestrial wildlife, and recommend mitigation measures.

- 3) Provide information to the IDL regarding the need for permits required by the IDF&G, by the time specified by IDL.

The Department of Water Resources will:

- 1) Coordinate with IDL to complete a field review, when any portion of the operation falls under the administration of the IDWR.
- 2) Review and comment on the permit application, operation or reclamation plan with respect to the following regulatory functions of the IDWR:
 - a. The need for a Stream Channel Alteration Permit;
 - b. The need for dam or tailings dam construction approval;
 - c. The need for Well Construction Permits;
 - d. The need for Water Appropriation Permits;
- 3) Review and comment on the permit application, operation or reclamation plan with respect to:
 - a. Other laws, rules and regulations administered by the IDWR;
 - b. Identification and use of BMPS required for stream channel alteration permits;
 - c. Need for additional information from the operator required to evaluate the project.
- 4) Provide the lead agency and/or IDL with copies of all applications filed by the operator or his agents with the IDWR.

VII. INSPECTIONS (Mine Reviews)

This section applies to all mineral operations where inspections may be required for compliance with state and federal law. This section is not intended to limit or increase an agency's authority. All agencies that are party to this MOU recognize the need for voluntary cooperation. As referenced on page 2, paragraph 6 herein, there are two MOUs which determine the lead agency for each mining site. The lead agency designates one person to oversee operations at the site. All other agencies should coordinate with this lead agency coordinator. The lead agency is responsible for ensuring compliance with the plan of operation (USFS or BLM), placer permit or reclamation plan, whichever are applicable. If the lead agency/minerals administrator decides there is a compliance problem with a coordinating agency's permit, they should contact the appropriate coordinating agency. If a coordinating agency decides there is a compliance problem with the plan of operation, placer permit or reclamation plan, they should contact the lead agency's field representative, not the operator. Regional inter-agency coordination groups may develop site-specific MOUs to coordinate mine permitting and administration.

The lead agency will:

- 1) Conduct field inspections of mining operations on a regular basis, as determined by the lead agency, during which the operation is inspected for compliance with the plan of operation, dredge and placer mining permit or surface mine reclamation plan.

- 2) Ensure that the operator implements BMPS on the mine site in accordance with the approved plan of operation, placer mining permit or reclamation plan.
- 3) Inform the coordinating agencies of the lead agency's inspection schedule and provide an opportunity for participation by the coordinating agencies.
- 4) Forward copies of the field reports to the coordinating agencies, on request.

The Division of Environmental Quality will:

- 1) Participate in field inspections, as necessary.
- 2) Ensure that the mining operation is using correct water quality monitoring techniques and water quality assurance in implementing the approved monitoring plan. DEQ will conduct water quality monitoring and surveillance to assure compliance with Water Quality Standards.
- 3) Inform the lead agency in advance of water quality monitoring schedules, cyanidation facility inspections and field inspections being conducted for assuring water quality compliance.
- 4) Notify the lead agency, when a field inspection by DEQ is necessary due to a water quality complaint.
- 5) Notify the lead agency of existing or potential water quality violations on a mine site.
- 6) Document inspections of a water quality complaint with a field report and photos, and forward a copy of the report to the lead agency.

The U.S. Environmental Protection Agency will conduct inspections as necessary to fulfill its statutory obligations. The EPA will notify the lead agency of any planned inspections and of the inspection results.

The Department of Water Resources will inform the lead agency and/or IDL of monitoring schedules, compliance inspections and any enforcement actions taken or being considered against the operator and/or his agents.

The Department of Fish and Game will inform the lead agency of monitoring schedules planned by the department.

VIII. INTERAGENCY COORDINATION MEETINGS INSPECTIONS

This section applies to operations where a reclamation plan or a placer mining permit is required by IDL.

The lead agency will:

- 1) Conduct coordination meetings on mining operations when the lead agency determines, based on potential water quality impacts, size, or permitting logistics, that periodic interagency coordination is necessary.
- 2) Provide advance notice to the coordinating agencies of the time and place of the meeting.
- 3) Provide a written agenda for the meeting.
- 4) Will notify the operator, in advance, of the agencies who are attending the meeting.
- 5) Discuss BMP implementation and effectiveness.
- 6) Provide meeting notes from the coordinating agencies and operator, within 30 days.

The coordinating agencies will:

- 1) Attend coordination meetings or provide adequate prior notice of absence.
- 2) Provide information on issues within the agency's areas of authority and expertise.
- 3) Provide recommendations, as appropriate, on BMP design and implementation as they affect resources within that agency's jurisdiction and expertise; and
- 4) The DEQ will provide information on water quality conditions and documented water quality violations and impairment of designated uses.

IX. FEEDBACK LOOP PROCESS/ANTIDEGRADATION

This section applies to all mineral operations, regardless of size or permit requirements.

The lead agency or the Department of Lands will:

1. Require and ensure that the water management plan, as part of the reclamation plan, will be implemented and maintained for the purpose of providing full protection and maintenance of designated uses and providing for protection of the environment, public health, safety and welfare as identified in the state water quality standards.
2. Request that operators submit two copies of ongoing monitoring data, as required for the life of the project, and ensure that the DEQ receives one (1) copy of all monitoring data.
3. Notify DEQ and IDF&G as soon as possible of suspected impairment of designated or existing beneficial uses, and submit any available documentation of the problem, such as photos or field reports.

4. Notify DEQ and coordinating agencies as soon as possible after a plan or permit violation is identified.
5. Follow up on suspected plan of operation, reclamation plan or placer permit violations reported by a coordinating agency by inspecting the mine site as soon as possible and documenting any plan or permit violations.
6. Notify the operator when a water quality problem has been identified. If BMPS are being implemented properly but water quality criteria are not being met, or the designated and existing uses are being impaired, the lead agency, and IDL when requested by the lead agency, will conduct a timely evaluation and require BMP installations or modifications. No agency may design BMPS for an operator. However, the lead agency must ensure that an operator installs or modifies the BMPS when water quality is being degraded or designated uses are not being protected.
7. Review and confirm, based on a prearranged schedule that recommended BMP installations or modifications, needed to correct a water quality problem, have been implemented at the mine site. If they have not been implemented, the lead agency may initiate enforcement action pursuant to its authorities. The lead agency will notify DEQ and IDL of the intent to initiate an enforcement action and of any threat to water quality the plan or permit violation may impose. DEQ may then proceed as directed under Section IX, DEQ paragraph 5. If BMPS have been modified, DEQ shall proceed as outlined in Section IX, DEQ paragraph 1.

The Division of Environmental Quality will:

1. Determine, by water quality monitoring and surveillance, whether the BMPS are meeting water quality criteria or fully protecting designated uses and providing for protection of the environment, and the health, safety and welfare of the people of this state.
2. Follow up on suspected water quality violations by inspecting the site as soon as possible and documenting or sampling as necessary to verify water quality violations and identify source areas.
3. Notify the lead agency and IDL as soon as possible of suspected plan or permit violations of the plan of operation, reclamation plan or placer mining permit. When appropriate, provide written and photo documentation.
4. If water quality criteria are not being met, or designated uses are being impaired, provide the lead agency with a written report within ten days after a suspected water quality violation is discovered. The report should document the water quality violations, and contain recommendations for correcting the problems. Photographs should be used to document problems whenever possible. DEQ will request in writing that the lead agency evaluate the best management practices and modify those on-site practices to protect water quality and designated uses. The lead agency will then proceed as outlined in Section IX, lead agency or IDL paragraph 6.

5. If water quality criteria are not being met, or designated uses are being impaired, or water quality impairment results from a cyanide facility, and the operator refuses to modify or upgrade existing BMPS, as required by the IDL, the DEQ may initiate enforcement action by preparing a compliance schedule or instituting administrative or civil proceedings. DEQ shall notify the lead agency of the intent to initiate enforcement action. This shall not preclude the lead agency from taking its own enforcement action.
6. The director may seek injunctive relief to prevent or stop imminent and substantial danger to the public health or the environment as provided in Section 39-108, Idaho Code.

The Department of Fish and Game will,

1. Determine by monitoring and surveillance, whether the BMPS are effective in protecting fish and wildlife resources.
2. If fish and wildlife are being adversely impacted by mining, then IDF&G will provide the IDL with appropriate documentation and request that BMPS be modified.

X. *LIMITATIONS*

Nothing in this Appendix shall be construed as increasing, limiting or modifying, in any way, the authority or statutory or regulatory responsibilities of the State or the Federal Government, or bind either to perform beyond their respective authorities, or require any agency to assume or expend any sum in excess of available appropriations. Each and every provision of this Appendix is subject to the laws and regulations of the State of Idaho, the laws of the United States, and the regulations of the Secretary of Agriculture and Secretary of the Interior.

Xi. EFFECTIVE DATE

This Appendix shall become effective upon the signature of all agencies and will remain in force unless formally amended and approved by all agencies.

This Appendix may be formally terminated by any agency after sixty (60) days written notice to the other signators of his intention to do so.

Stanley F. Hamilton, Director
Department of Lands

Date

Jerry L. Harris, Director
Department of Health & Welfare

Date

R. Keith Higginson, Director
Department of Water Resources

Date

Jerry M. Conley, Director
Department of Fish & Game

Date

M. Lynn McKee, Director
Idaho Operations Office, EPA Region 10

Date

David F. Jolly, Regional Forester
USDA Forest Service, Region 1

Date

Gray F. Reynolds, Regional Forester,
USDA Forest Service, Region 4

Date

Delmar D. Vail, State Director
Bureau of Land Management

Date

APPENDIX A - 4

APPENDIX TO THE MEMORANDUM OF UNDERSTANDING IMPLEMENTING THE NONPOINT SOURCE WATER QUALITY PROGRAM IN THE STATE OF IDAHO SPECIFYING IMPLEMENTATION OF THE AGRICULTURAL POLLUTION ABATEMENT PLAN, 1991

I. AGENCIES TO THE AGREEMENT

Idaho Soil Conservation Commission (SCC); Idaho Department of Health and Welfare-Division of Environmental Quality (DEQ); U.S.D.A.-Soil Conservation Service (SCS); University of Idaho-Cooperative Extension System (CES); U.S. Environmental Protection Agency (EPA); U.S.D.A. - Agricultural Stabilization and Conservation Service (ASCS); U.S.D.I.-Bureau of Land Management (BLM); U.S.D.A.-Forest Service, Intermountain, Northern and Pacific Northwest Regions (Forest Service); Idaho Department of Lands (IDL); Idaho Department of Agriculture (IDA); Idaho Department of Water Resources (IDWR).

II. PURPOSE

This appendix to the Memorandum of Understanding Implementing the Nonpoint Source Water Quality Program in the State of Idaho is to identify roles and responsibilities for implementing the Idaho Agricultural Pollution Abatement Plan, 1991 (Ag Plan) that coordinates nonpoint source water pollution control activities on all federal, state and private agricultural lands in the state.

III. DEFINITIONS

Best Management Practice (BMP): (for this appendix) A *component practice* or *combination of component practices* determined to be the most effective, practicable means of preventing or reducing the amount of pollution generated by nonpoint sources to a level compatible with water quality goals. The Catalog of Component Practices is part of the Ag Plan and the listing of practices approved for use in the development of agricultural BMPs.

Coordinated Resource Management Planning (CRMP): A process by which natural resource owners, managers, and users, working together as a team, develop and implement plans for the management of all major resources and ownerships within a specific area and/or resolve specific conflicts.

Federal Land Management Agencies: (for this appendix) The U.S.D.A.-Forest Service, and the U.S.D.I.-Bureau of Land Management.

Soil Conservation Districts (SCDs): The Soil Conservation District Law, Idaho Code, Title 22, Chapter 27 establishes the organization and purposes of Soil Conservation Districts (SCDs). The 51 SCDs are governmental subdivisions of the state and include private, state and federal lands, with the exception of some incorporated cities and portions of the Idaho National Engineering Laboratory.

IV. AUTHORITIES

State agencies may enter into interagency cooperative agreements under authority of Title 67, Chapter 23, Idaho Code.

The legal authorities of the agencies to the agreement are listed in the Memorandum of Understanding Implementing the Nonpoint Source Water Quality Program in the State of Idaho.

V. NOW THE PARTIES MUTUALLY AGREE:

1. To implement the Idaho Agricultural Pollution Abatement Plan, as revised in 1991 and thereby is consistent with and meets the goals of the Idaho Nonpoint Source Management Program and the requirements of Section 319 of the federal Clean Water Act.
2. To establish a Best Management Practice (BMP) Technical Committee and to participate in the evaluation, modification and development of component practices through that committee.
3. To implement Coordinated Resource Management Planning (CRMP) as an instrument to accomplish agricultural water quality planning on a watershed basis when ownership is mixed public and private.
4. To implement and integrate the 1991 Idaho Ground Water Quality Plan agricultural chemical and nutrient management policy along with the supporting monitoring program.
5. To cooperate in the development of the Pesticides State Management Plan (SMP) as an integral part of agricultural chemical management.
6. To annually confirm or update the beneficial use status and pollutant magnitude of agricultural nonpoint source water quality priorities listed in **the Ag Plan**.
7. To provide information and education to agricultural land users and to the general public about agricultural nonpoint source pollution problems and the solutions and activities that address those problems.
8. To review proposed revisions of the Ag Plan that are either substantial or involve changes in policy, and which subsequently shall be effective following written approval by SCC and DEQ.

VI. IDAHO SOIL CONSERVATION COMMISSION AGREES:

1. To coordinate the implementation of the Ag Plan on all state and private agricultural lands in the state.
2. To organize, convene and chair the BMP Technical Committee.
3. To ensure that BMPs and component practices are evaluated by the BMP Technical Committee for effectiveness in providing water quality benefits for both surface and ground water.
4. To participate in BMP implementation and effectiveness evaluations through State Agricultural Water Quality Program (SAWQP).
5. To be lead agency for Coordinated Resource Management Planning within SAWQP.
6. To jointly (with DEQ) evaluate research needs identified by Soil Conservation Districts (SCDs) or technical agencies and to work with research agencies and groups to initiate needed research.
7. To provide leadership to SCDs in developing information and education programs that target local audiences.
8. To review jointly with DEQ) agricultural nonpoint source water quality priority lists (established in the SCDs' Five Year Programs) for completeness and consistency with Stream Segments of Concern, Outstanding Resource Waters and 319 Assessment information.
9. To update annually, with the concurrence of DEQ, the Catalog of Component Practices (Section VIII) and the List of Agricultural Nonpoint Source Water Quality Priorities (Section VI) of the Ag Plan.
10. To conduct periodic (two year interval) evaluations of the Ag Plan for compatibility with new legislation, policies, programs and plans and for responsiveness to local needs. Revisions that are either substantial or involve changes in policy will be submitted to all parties (including SCDs) for review and finally to DEQ for written approval.

VII. IDAHO DEPARTMENT OF HEALTH AND WELFARE - DIVISION OF ENVIRONMENTAL QUALITY AGREES:

1. To be the lead agency for water quality monitoring activities.
2. To participate in BMP implementation and effectiveness evaluations through the State Agricultural Water Quality Program (SAWQP).

3. To jointly (with SCC) evaluate research needs identified by Soil Conservation Districts (SCDs) or technical agencies and to work with research agencies and groups to initiate needed research.
4. To coordinate the distribution of agricultural nonpoint source water quality priority lists (established in the SCDs' Five Year Programs) to appropriate agencies for confirmation or updating of the beneficial use status and pollutant magnitude as listed in the 319 Assessment.
5. To review annual updates of the Catalog of Component Practices (Section VIII) and the List of Agricultural Nonpoint Source Water Quality Priorities (Section VI) of the Ag Plan.

VIII. FEDERAL LAND MANAGEMENT AGENCIES AGREE:

1. To coordinate the implementation of the Ag Plan on all federal agricultural lands in the state.
2. To ensure the technical adequacy of the design and installation of each BMP and component practice applied on lands they administer.
3. To coordinate with SCDs in the establishment of nonpoint source water quality priorities during development or revision of land use plans.

IX. UNITED STATES DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE AGREES:

1. To ensure the technical adequacy of the design and installation of each BMP and component practice applied on privately owned lands.
2. To participate in BMP implementation and effectiveness evaluations through the State Agricultural Water Quality Program (SAWQP).

X. IDAHO DEPARTMENT OF AGRICULTURE AGREES:

1. To be the lead agency in the development of the Pesticides State Management Plan (SMP) in consistency with the 1991 Idaho Ground Water Quality Plan agricultural chemical and nutrient management policy.
2. To participate in BMP and component practice effectiveness evaluations and water quality monitoring activities relating to the use of agricultural chemicals and nutrients.

XI. IT IS FURTHER AGREED:

1. That nothing in this appendix shall be construed as limiting or affecting in any way the legal authority of the participating agencies in connection with the proper administration and protection of affected lands in accordance with federal and state laws and regulations.
2. That nothing in this appendix shall be construed as obligating the participating agencies to expend funds in any contract or assume any other obligation for future payment of funds or services in excess of those available or authorized for expenditure.
3. That this appendix shall become effective upon an agency as soon as it is signed by that agency. This appendix shall continue in force unless terminated by mutual written consent, except that any agency shall have the right to terminate that agency's participation as a party to the agreement upon sixty days notice in writing to the other parties of their intention to terminate upon a date indicated.
4. That this appendix shall be administrated by the SCC.
5. That this appendix shall be reviewed periodically (two-year interval) so that revisions and updates necessary to meet the purpose of the appendix are made. Amendment shall be effective following written approval by all parties to the appendix.
6. That the program and activities conducted under this agreement will be in compliance with the nondiscrimination provisions contained in the Titles VI and VII of the Civil Rights Act of 1964 as amended; the Civil Rights Restoration Act of 1987 (Public Law 100-259); and other nondiscrimination statutes: namely, Section 504 of the Rehabilitation Act of 1973, Title IX of the Education Amendments of 1972, and the Age Discrimination Act of 1975.
7. That each provision of this agreement is subject to the laws and regulations of the State of Idaho, and the laws and regulations of the United States.

WITNESS THEREOF, the parties hereto have caused this cooperative appendix to be executed.

IDAHO DEPARTMENT OF HEALTH & WELFARE -
DIVISION OF ENVIRONMENTAL QUALITY

U.S. ENVIRONMENTAL PROTECTION AGENCY

Joe Nagel, Administrator

M. Lynn McKee, Asst. Regional Admin.

IDAHO SOIL CONSERVATION COMMISSION

U.S. D. A. –SOIL CONSERVATION SERVICE

Paul Calverley, State Conservationist

Wayne R. Faude, Administrator

IDAHO DEPARTMENT OF LANDS

U.S.D.I. - BUREAU OF LAND MANAGEMENT

Stanley Hamilton, Director

Delmar D. Vail, State Director

IDAHO DEPARTMENT OF AGRICULTURE

U.S.D.A. - FOREST SERVICE~ REGION 1

Dr. W. G. Nelson, Director

David F. Jolly, Regional Forester

IDAHO DEPARTMENT OF WATER RESOURCES USDA - FOREST SERVICE, REGION A

R. Keith Higginson, Director

Gray F. Reynolds, Regional Forester

UNIVERSITY OF IDAHO -
COOPERATIVE EXTENSION SYSTEM

U.S.D.A. AGRICULTURAL STABILIZATION AND
CONSERVATION SERVICE

Dr. LeRoy D. Luft, Director

Bruce Bradshaw, Act. State Exec. Director

U.S.D.A. FOREST SERVICE. REGION 6

John E. Lowe, Regional Forester

APPENDIX A - 5 DRAFT

**COORDINATED RESOURCE MANAGEMENT
MEMORANDUM OF UNDERSTANDING**

**Between
STATE OF IDAHO**

**Soil Conservation Commission (SCC)
Department of Fish and Game (IDFG)
Department of Agriculture (IDA)
Department of Lands (IDL)
University of Idaho, Cooperative Extension System (CES)
Department of Health and Welfare, Division of Environmental Quality (DEQ)**

and

**UNITED STATES DEPARTMENT OF AGRICULTURE
Natural Resources Conservation Service (NRCS)
Forest Service (FS)**

and

**UNITED STATES DEPARTMENT OF INTERIOR
Bureau of Land Management (BLM)**

and

**Idaho Cattle Association (ICA)
Idaho Wool Growers Association (IWGA)
Idaho Association of Soil Conservation Districts (IASCD)**

PURPOSE

The agencies and associations signatory to this Memorandum Of Understanding will cooperate with private landowners and natural resource users to foster Coordinated Resource Management (CRM).

THE PROCESS/ACTION (CRM) - CRM is a process that considers the resources and resource users within a geographical area. The process encourages active involvement and input from all interested parties, with management decisions made by a consensus of the group.

THE PRODUCT/PLAN - A CRMP is a management plan developed to document a resource management program that attempts to integrate and make provisions for all appropriate resource values and uses within a geographical area. The plan is developed by a group of individuals representing different interests concerned with the area. The plan is built upon the formulation of goals for the area through a consensus decision making process. These goals form the basis for all management alternatives considered for the area.

POLICY

The BLM, FS, IDFG, IDA, IDL, CES, NRCS, SCC, DEQ, ICA, IWGA, IASCD and private landowners and natural resource users, will cooperate to foster CRM. Techniques and procedures may be implemented through CRM where statutory authority, resource needs, public support, and financial capability exists.

In implementing the provisions of this memorandum, each agency's participation will vary depending upon the landownership and the land use and administrative responsibility within the area. Other agencies, associations, organizations, and individuals will be asked to participate as appropriate.

CRM is an approach for reaching decisions and resolving resource conflicts. It can complement any planning or management situation where mixed land ownership or multiple resource management use is involved. Some of the elements common to the CRM approach are:

- Cooperation and equitable voluntary participation of all affected interests, using a "team" approach.
- Open communication among all participants.
- Availability of technical expertise.
- Strong and effective local leadership.
- Agreement by consensus of the team.
- Commitment to monitoring, review and revision of plans, agreements and projects to ensure objectives are met.

OBJECTIVES

The objectives of CRM are to:

- A. Improve management of land resources while promoting cooperation among the agencies, associations, landowners, interest groups, and individuals responsible for or interested in these resources.
- B. Develop and implement resource management programs and activities to achieve compatible resource uses based on sound ecological and economic relationships.
- C. Achieve optimum sustained production of food, fiber, and other goods, services, and benefits from such lands, consistent with State and Federal policies.
- D. Increase efficiency and reduce resource management costs of public agencies, private landowners, communities, and the general public.

- E. Improve communications among those interested in and affected by land and resource management decisions.

RESPONSIBILITIES

The responsibilities of the participants in CRM are:

- A. The BLM and FS plan and conduct multiple use resource management and conservation programs on lands under their jurisdiction in accordance with their pertinent laws and authorities.
- B. The NRCS provides technical assistance to private operators for planning and applying conservation programs on private and other non-Federal lands.
- C. The SCC provides assistance to the Soil Conservation Districts (SCD) to develop long-range programs, and to secure and coordinate assistance from appropriate agencies and organizations.
- D. The SCD provides a means for determining local attitudes and objectives, and serve as a catalyst to develop and maintain local interest in and support for conservation and development of lands in Soil and Water Conservation Districts.
- E. The CES provides and conducts local educational activities which compliment research and assistance programs.
- F. The IDFG has responsibility for management of fish and wildlife resources within Idaho.
- G. The IDA will assist in the development and implementation of Best Management Practices and Resource Management Plans.
- H. The IDL plans and conducts multiple use resource management and conservation programs on lands under their jurisdiction and private operators for practices on private and other non-Federal lands.
- I. The DEQ is responsible for the administration of State Water Quality Standards.
- J. The ICA and IWGA encourage members to take full responsibility for rangeland stewardship and promote wise grazing use of the resource.

The signatory agencies and associations will cooperate with all owners, managers, and users of land and resources within each specific area, including Federal, State, counties, and private landowners. Other persons, agencies and organizations with interest in the CRM area will be involved as appropriate.

MODIFICATION

This MOU shall remain in effect until modification by the parties in writing and is renegotiable at the option of any one of the parties.

SIGNATORIES

Chairman, Idaho Soil Conservation Commission Date

Director, Idaho Department of Lands Date

Director, Idaho State Department of Agriculture Date

Director, Idaho Department of Fish and Game Date

State Director, Cooperative Extension System Date

Regional Forester, USDA Forest Service, R-1 Date

Regional Forester, USDA Forest Service, R-4 Date

State Conservationist, Natural Resources Conservation Service Date

Administrator, Idaho Department of Health and Welfare Date
Division of Environmental Quality

State Director Bureau of Land Management Date

President, Idaho Cattle Association Date

President, Idaho Wool Growers Association Date

President, Idaho Association of Soil Conservation Districts Date

APPENDIX A - 6

THE IDAHO DAIRY POLLUTION PREVENTION INITIATIVE MEMORANDUM OF UNDERSTANDING

OBJECTIVE

The objectives of this Memorandum of Understanding (MOU) are to define roles of the agencies in regulating the dairy industry in Idaho and to recognize the Idaho State Department of Agriculture's (ISDA's) lead role in ensuring dairy waste systems and practices in accordance with the provisions outlined in the Idaho Waste Management Guidelines for Confined Feeding Operations (CFO Guidelines), a 1993 publication by the Idaho Department of Health and Welfare's Division of Environmental Quality (IDEQ). This MOU sets forth a working arrangement between the agencies and the Idaho dairymen to reduce duplicative inspection efforts, increase the frequency of inspections of dairy waste management systems and to provide a sound inspection program, in order to prevent pollution and protect Idaho's surface and groundwater from dairy waste contamination.

BACKGROUND

This MOU has been developed because of the recognition by the Idaho Dairymen's Association (IDA), ISDA, the U.S. Environmental Protection Agency (EPA), IDEQ, and other interested parties for the need to formalize an ongoing effort to conserve resources, to more effectively and efficiently use personnel, to reduce duplicative inspection services, and to ensure Idaho dairymen comply with the Clean Water Act (CWA) and the Idaho Water Quality Standards and Wastewater Treatment Standards (IWQS). This approach will capitalize on the already frequent presence of ISDA dairy inspectors on dairy farms and is intended to enable IDEQ and the EPA to redirect and focus resources.

AGREEMENT

Whereas the ISDA routinely inspects dairies for milk sanitation issues, and;

Whereas the ISDA, the IDEQ, and the EPA conduct routine environmental inspections on these same dairy farms, and;

Whereas it is in the best interests of the people residing in the State of Idaho to support more efficient governmental programs, and;

Whereas the protection of water quality will be enhanced through a more cooperative and efficient approach, the undersigned agencies hereby acknowledge the ISDA as the lead agency for dairy waste

management inspections to ensure compliance with the CWA and the IWQS, and agree to the following:

GENERAL POLICIES

- 1) Inspections of dairies should generally include a visual inspection of the waste containment and runoff control facilities.
- 2) Inspections of dairies will be conducted so that reliable information concerning operating conditions applicable to water quality requirements will be documented.
- 3) Inspections may include the collection of discharge samples and photographs. Any sampling of discharges and subsequent analyses will be conducted according to procedures subsequently approved by ISDA, IDEQ, and EPA with consultation with IDA.
- 4) Meetings between the ISDA, the IDEQ, the EPA, and the IDA will be the primary method for discussion of program progress. The ISDA, IDEQ, and EPA may also identify those instances where enforcement action may be appropriate. An annual mid-year review meeting will be held each April between the ISDA, the IDEQ, the EPA, and the IDA to address issues regarding waste management and the environment relative to the dairy industry.
- 5) ISDA, IDEQ and EPA files will be mutually available under applicable law to the ISDA, IDEQ and EPA for inspection and copying. They shall respect the confidentiality of files or materials designated CONFIDENTIAL in accordance with federal and state regulations.

RESPONSIBILITIES

The ISDA will:

- 1) Promulgate and enforce rules for the purpose of carrying out the objective of this MOU. Non-compliance with these rules or discharge violations may result in revocation of authority to sell milk for human consumption.
- 2) Initiate appropriate dairy waste inspection protocols to prevent dairy waste releases.

- 3) Conduct periodic inspections of all dairies to include evaluation of waste collection, treatment, handling, disposal, and management procedures for compliance with the CWA and the IWQS. Respond to all complaints and information regarding dairy waste management.
- 4) Notify IDEQ immediately of all releases that cannot be stopped within 24 hours. All releases that present a substantial present or potential hazard to human health and the environment shall be immediately reported to the IDEQ.
- 5) Provide a written summary report of all observed releases from dairies that reach waters of the United States on a quarterly basis to the EPA and the IDEQ. The report will include, at a minimum, the number of releases by watershed, the number of inspections conducted, and a summary of the resolution actions taken.
- 6) Prepare and submit an annual report to the IDEQ and the EPA prior to the annual mid-year review. The report will include activities for the past year as well as planned and ongoing activities for the current year.
- 7) Not revoke a dairy facility's authorization to sell milk if there is a discharge from that facility if that facility has a National Pollution Discharge Elimination System (NPDES) permit and the discharge is not in violation of the NPDES permit.
- 8) Approve the design, construction, and location of dairy waste management systems for dairy farms, per the CFO Guidelines.

The IDEQ will:

- 1) Provide training, information, education, and technical assistance for waste handling and disposal to the ISDA, and/or to dairies upon request, to the extent of available resources.
- 2) Discontinue routine compliance inspections on dairies, consistent with the terms of this MOU.
- 3) Conduct inspections of dairies only when requested by the ISDA. However, the IDEQ retains the right to inspect in any situation it considers to present a substantial present or potential hazard to human health and the environment after due notification to ISDA.

- 4) Initiate enforcement actions under the authority of the Idaho Environmental Protection and Health Act, only upon request or referral by the ISDA or as a direct result of the investigation actions outlined in paragraph 3 above.
- 5) Evaluate ISDA inspection records annually, or at a frequency determined to be necessary by the parties to this agreement during the annual mid-year review. The IDEQ will prepare and submit a report of this review to the ISDA.

The EPA:

- 1) Will provide NPDES permit coverage for those dairy operations wishing protection afforded through the authority of the CWA.
- 2) Will discontinue routine compliance inspections on dairies during the term of this agreement.
- 3) Intends to conduct inspections of dairies only when requested by the ISDA. However, the EPA retains the right to inspect in any situation it considers to present a substantial present or potential hazard to human health and the environment after due notification of ISDA.
- 4) May initiate enforcement action under the CWA upon request or referral by the ISDA or the IDEQ, or as a direct result of investigations conducted as outlined in the preceding paragraph.
- 5) Will provide annual training, information, education, and technical assistance for waste handling and disposal to the ISDA and/or dairies upon request, to the extent of available resources.
- 6) Will review the ISDA inspection program twelve months after its initiation. A small number of dairies (not to exceed ten) across the state will be visited as part of the oversight review to determine program success. During the oversight review, these dairies will be visited by an ISDA inspector or field person and an EPA staff person for the following purposes: (1) to ensure that inspections are occurring as provided by this MOU and ISDA rules; and (2) to ensure inspections are conducted in a consistent manner across the state. Information collected by EPA during oversight visits will be for the purpose of providing feedback to ISDA. As ISDA will be the lead agency in Idaho for dairy inspections, EPA does not intend to use information resulting from the oversight visits to initiate independent enforcement actions except as provided in paragraph #3 above. EPA will submit a report of the review to the parties. This on-site

inspection process will be reviewed annually to determine if it is needed for the following year and be renewed, modified or canceled.

The IDA will:

- 1) Continue the concept of the "Dairy of Merit" program which acknowledges dairies that operate in an environmentally responsible manner.
- 2) Support continuing education of dairies concerning necessary waste management practices to protect surface and ground water from contamination.
- 3) Participate in the annual review with the signatory parties and work cooperatively with the signatory parties to achieve the objectives of this MOU.

GENERAL PROVISIONS

- 1) Nothing in this agreement shall be construed as surrendering existing statutory or regulatory authority of any party. However, the IDEQ and the EPA recognize the lead role of the ISDA in inspecting dairies as set forth in this MOU and will exercise their authorities accordingly.
- 2) Nothing in this agreement shall be construed to release a dairy from complying with applicable local, state, and federal environmental statutes, regulations, permits, or consent orders.
- 3) The term of this agreement shall be 5 years, unless otherwise revoked by any one of the signatory parties following 30 day notice to all parties. This agreement may be amended or extended through mutual agreement of the parties. This agreement, when accepted by each agency, will be effective from date of the last signature.

SIGNATORY PARTIES:

John Hatch, Director
Idaho Department of Agriculture
Date:

Wallace N. Cory, P.E.
Administrator
Division of Environmental Quality
Idaho Department of Health and Welfare
Date:

Chuck Clarke, Administrator
Region 10, U.S. EPA
Date:

Pete Lizaso
Chairman
Idaho Dairymen's Association, Inc.
Date:



Appendix A-7

September 18, 1998

Carol M. Browner
Administrator
Environmental Protection Agency
401 M. St. S.W.
Washington, D.C. 20460

Daniel Glickman
Secretary of Agriculture
United States Department of Agriculture
1400 Independence Avenue S.W., Ste. 200A
Washington, D.C. 20250

Dear Ms. Browner and Mr. Glickman:

On June 9, 1998, the Idaho Division of Environmental Quality and the Natural Resources Conservation Service convened an Executive Briefing session on the Clean Water Action Plan (CWAP) for the heads of the federal and state natural resources agencies, federal and state elected officials, directors of city and county organizations, conservation leaders and presidents and executive directors of state level agricultural, natural resources, water user associations and organizations. The tribes were invited to participate. The purpose and elements of the CWAP were discussed in detail.

The participants came to the consensus that Idaho is already using a form of the Unified Watershed Assessment. Idaho is under a court-approved schedule for development of TMDLs. The TMDLs are being completed on a watershed basis. The eight-year schedule establishes the state priorities for the watersheds within the state. The schedule was developed after consultation with state and federal land management agencies and will be completed in concert with these agencies.

Carol M. Browner, EPA
Daniel Glickman, USDA
September 18, 1998
Page 2

Attached for your information is the justification for the TMDL schedule prepared by Region 10 of the Environmental Protection Agency. In addition, Idaho is preparing the 305(b) report as required by the Clean Water Act which will provide additional information on the status of our watersheds.

We will continue to focus our limited financial and staff resources on these planned actions. If you have any questions, please feel free to contact Larry Koenig, Assistant Administrator for Water Quality and Remediation at (208) 373-0407.

Sincerely,

Wallace N. Cory
Administrator
Idaho Division of
Environmental Quality

Lynn McKee
Assistant Regional Administrator
Environmental Protection Agency

Luana E. Kiger
State Conservationist
Natural Resources
Conservation Service

Draft 1998 Unified Watershed Assessment and Restoration Priorities for Idaho

Introduction

In February 1998, the Environmental Protection Agency and the U. S. Department of Agriculture issued a “Clean Water Action Plan” (CWAP) that provides a strategy for restoring and protecting the Nation’s water resources. One of the initial elements of the CWAP asks States and Tribal governments to work with agencies, governments, and the public to assess the conditions of the state’s water resources and to prioritize watersheds for restoration. The State Conservationist for the Natural Resource Conservation Service (NRCS) in Idaho and the Administrator for the Idaho Division of Environmental Quality (DEQ) convened a process to develop a Unified Watershed Assessment (UWA) and to prioritize watersheds for restoration in Idaho. Existing assessments and prioritization efforts, developed with extensive public input, will be used in this effort. These priorities will be reviewed annually and updated as needed to reflect changing conditions and more detailed watershed information. The UWA will be used to help target increased funding associated with the CWAP and identify where collaborative restoration opportunities exist.

Unified Watershed Assessment Categorization

The “June 9, 1998 Framework for Unified Watershed Assessments, Restoration Priorities, and Restoration Action Strategies” issued by the U. S. Department of Agriculture (USDA) and the Environmental Protection Agency (EPA) requested states to categorize watersheds into four categories:

1. Watersheds not meeting, or in imminent threat of not meeting, clean water or natural resource goals,
2. Watersheds meeting goals but needing action to sustain water quality,
3. Watersheds with pristine/sensitive aquatic system conditions on federal/state/tribal lands, and
4. Watersheds where more information is needed to assess conditions.

Categorization Approach

The June 1998 USDA/EPA UWA Framework called for categorizing “watersheds” at the sub-basin scale. Most of Idaho’s sub-basins have waters that do not meet water quality standards (WQS) (Category 1) therefore, all sub-basins containing waters listed or proposed for listing in on the 303(d) list are categorized as UWA Category 1 sub-basins. The use of sub-basins that contain 303(d) listed waters is a practical categorization approach for the following reasons:

1. 303(d) listings are based on water quality data and indicate that water quality goals are not being met;

2. The 303(d) list is developed with public and agency input;
3. The use of the 303(d) list is consistent with the court approved schedule for completion of TMDLs ;
4. This approach received consensus support during June 9 Executive Briefing session for the heads of federal and state natural resource agencies, federal and state elected officials, directors of city and county organizations, conservation leaders, and presidents and executive directors of state level agricultural, natural resources, water user associations and organizations.

Seventy-eight of the eight-four sub-basins fall into Category 1 because of the 303(d) listing process. Three fall into Category 2 because the available information indicates that they meet water quality goals. Three sub-basin were listed in Category 3 they are located on federal lands, some within designated wilderness areas. The attached Table 1 and Figure 1 depict the sub-basin categorization.

Tribal II

Many sub-basins in Idaho's Unified Watershed Assessment include lands within Tribal Reservations. Over the next year Idaho intends to coordinate funding and prioritize restoration efforts with the Tribes on waters which lie within or are adjacent to Indian Reservations, or otherwise have special Tribal interest. The Nez Perce Tribe has developed a Unified Watershed Assessment which is consistent with the Idaho Assessment in that sub-basins included in both the Tribe and State Assessments are high priority. We look forward to further coordinating with the Tribe in developing restoration plans in these watersheds.

Watershed Plans and Assessments

Total Maximum Daily Loads (TMDLs) will be developed in accordance with the schedule contained in Table 2 (Attached). All of the Category 1 sub-basin will be assessed within the next 7 years or by the year 2005. In addition, implementation plans will be developed for each of these TMDLs by the appropriate agencies. For agricultural lands, the Soil Conservation Commission is developing these plans. For forestry, plan development is the responsibility of the Department of Lands.

In addition to the above assessments, efforts of the NRCS under the PL-566 land treatment watershed plans, Environmental Quality Incentive Program (EQIP) geographic priority plans, coordinated resource management plans and related efforts utilize a watershed approach to restoration. The ICBEMP effort by the Forest Service and BLM which call for watershed analysis and other types of landscape level analyses can help further define and direct restoration priorities. In addition, U.S. Fish and Wildlife Service and National Marine Fisheries Service biological opinions, recovery plans, and habitat conservation plans for federally listed fish and aquatic species can help target and identify appropriate watershed protection and restoration measures.

Public Participation

Because of the dynamic nature of the document, public participation activities are on-going. Refinement of priorities and projects will be developed annually.

TABLE 1: Idaho's Unified Watershed Assessment Categorization

<u>HUC</u>	<u>Acres</u>	<u>Category</u>	<u>HUC</u>	<u>Acres</u>	<u>Category</u>	<u>HUC</u>	<u>Acres</u>	<u>Category</u>
17060308	"736,535.00"	1	17050104	"1,013,027.00"	1	17010214	"751,879.00"	1
17060307	"827,624.00"	1	17050103	"1,283,245.00"	1	17010213	"139,058.00"	1
17060306	"1,498,987.00"	1	17050102	"1,601,640.00"	1	17010105	"113,591.00"	1
17060305	"752,248.00"	1	17050101	"1,362,523.00"	1	17010104	"528,419.00"	1
17060304	"138,676.00"	1	17040221	"730,454.00"	1	16020309	"456,084.00"	1
17060303	"752,000.00"	1	17040220	"438,140.00"	1	16010204	"321,028.00"	1
17060302	"655,610.00"	1	17040219	"950,500.00"	1	16010203	"27,412.00"	1
17060301	"627,477.00"	1	17040218	"1,272,112.00"	1	16010202	"607,378.00"	1
17060210	"349,310.00"	1	17040217	"616,385.00"	1	16010201	"629,546.00"	1
						16010102	"140,995.00"	1
17060209	"756,167.00"	1	17040216	"464,819.00"	1	17060203	"1,163,276.00"	1
17060208	"839,149.00"	1	17040215	"584,914.00"	1	17060109	"12,395.00"	2
17060207	"1,094,295.00"	1	17040214	"649,040.00"	1	17040203	"429,478.00"	2
17060206	"878,256.00"	1	17040213	"548,147.00"	1	17080308	"15,776.00"	2
17060205	"963,157.00"	1	17040212	"1,627,276.00"	1	17050106	"57,217.00"	4
17060204	"804,555.00"	1	17040211	"466,149.00"	1	17010101	"45,533.00"	4
17060202	"531,110.00"	1	17040210	"791,875.00"	1			
17060201	"1,570,934.00"	1	17040209	"2,291,829.00"	1			
17060108	"339,493.00"	1	17040208	"852,532.00"	1			
17060103	"119,668.00"	1	17040207	"697,288.00"	1			
17060101	"221,210.00"	1	17040206	"1,809,182.00"	1			
17050201	"424,171.00"	1	17040205	"415,707.00"	1			
17050124	"1,077,345.00"	1	17040204	"514,509.00"	1			
17050123	"594,740.00"	1	17040202	"694,555.00"	1			
17050122	"784,505.00"	1	17040201	"809,376.00"	1			
17050121	"217,670.00"	1	17040105	"263,049.00"	1			
17050120	"523,690.00"	1	17040104	"553,093.00"	1			
17050115	"79,847.00"	1	17010306	"156,606.00"	1			
17050114	"883,626.00"	1	17010305	"235,606.00"	1			
17050113	"835,486.00"	1	17010304	"1,179,436.00"	1			
17050112	"395,554.00"	1	17010303	"407,245.00"	1			
17050111	"485,728.00"	1	17010302	"192,059.00"	1			
17050108	"386,805.00"	1	17010301	"573,588.00"	1			

Summary		
	<u>Number</u>	<u>Acres</u>
Category 1	78	"52,885,716.00"
Category 2	3	"457,649.00"
Category 3	0	0.00
Category 4	2	"102,750.00"

17050107	"188,534.00"	1	17010216	"12,742.00"	1
17050105	"155,618.00"	1	17010215	"488,621.00"	1

APPENDIX B.

IDAHO WATER QUALITY LAW §39-3601 et.seq.

39-3601. DECLARATION OF POLICY AND STATEMENT OF LEGISLATIVE INTENT. The legislature, recognizing that surface water is one of the state's most valuable natural resources, has approved the adoption of water quality standards and authorized the administrator of the division of environmental quality of the department of health and welfare in accordance with the provisions of this chapter, to implement these standards. In order to maintain and achieve existing and designated beneficial uses and to conform to the expressed intent of congress to control pollution of streams, lakes and other surface waters, the legislature declares that it is the purpose of this act to enhance and preserve the quality and value of the surface water resources of the state of Idaho, and to define the responsibilities of public agencies in the control, and monitoring of water pollution, and, through implementation of this act, enhance the state's economic well-being. In consequence of the benefits resulting to the public health, welfare and economy, it is hereby declared to be the policy of the state of Idaho to protect this natural resource by monitoring and controlling water pollution; to support and aid technical and planning research leading to the control of water pollution, and to provide financial and technical assistance to municipalities, soil conservation districts and other agencies in the control of water pollution. The director, in cooperation with such other agencies as may be appropriate, shall administer this act. It is the intent of the legislature that the state of Idaho fully meet the goals and requirements of the federal clean water act and that the rules promulgated under this act not impose requirements beyond those of the federal clean water act.

39-3602. DEFINITIONS. Whenever used or referred to in this act, unless a different meaning clearly appears from the context, the following terms shall have the following meanings

- (1) "Applicable water quality standard" means those water quality standards identified in the rules of the department.
- (2) "Best management practice" means practices, techniques or measures developed, or identified, by the designated agency and identified in the state water quality management plan which are determined to be a cost-effective and practicable means of preventing or reducing pollutants generated from nonpoint sources to a level compatible with water quality goals.
- (3) "Board" means the board of health and welfare.
- (4) "Department" means the department of health and welfare.
- (5) "Designated agency" means the department of lands for timber harvest activities, for oil and gas exploration and development and for mining activities; the soil conservation commission for grazing activities and for agricultural activities; the transportation department for public road construction; the department of agriculture for aquaculture; and the department of health and welfare's division of environmental quality for all other activities.
- (6) "Designated use or designated beneficial use" means those uses assigned to waters as identified in the rules of the department whether or not the uses are being attained. The department may adopt subcategories of a use.

- (7) "Director" means the director of the department of health and welfare, or his or her designee.
- (8) "Discharge" means any spilling, leaking, emitting, escaping, leaching, or disposing of a pollutant into the waters of the state. For the purposes of this chapter, discharge shall not include surface water runoff from nonpoint sources or natural soil disturbing events.
- (9) "Existing use" means those surface water uses actually attained on or after November 28, 1975, whether or not they are designated uses. Existing uses may form the basis for subcategories of designated uses.
- (10) "Full protection, full support, or full maintenance of designated beneficial uses of water" means compliance with those levels of water quality criteria listed in the appropriate rules of the department, or where there is no applicable numerical criteria, compliance with the reference streams or conditions approved by the director in consultation with the appropriate basin advisory group.
- (11) "Lower water quality" means a measurable adverse change in a chemical, physical, or biological parameter of water relevant to a designated beneficial use, and which can be expressed numerically. Measurable adverse change is determined by a statistically significant difference between sample means using standard methods for analysis and statistical interpretation appropriate to the parameter. Statistical significance is defined as the ninety-five percent (95%) confidence limit when significance is not otherwise defined for the parameter in standard methods or practices.
- (12) "National pollutant discharge elimination system (NPDES)" means the point source permitting program established pursuant to section 402 of the federal clean water act.
- (13) "New nonpoint source activity" means a new nonpoint source activity or a substantially modified existing nonpoint source activity on or adversely affecting an outstanding resource water which includes, but is not limited to, new silvicultural activities, new mining activities and substantial modifications to an existing mining permit or approved plan, new recreational activities and substantial modifications to existing recreational activities, new residential or commercial development that includes soil disturbing activities, new grazing activities and substantial modifications to existing grazing activities, except that reissuance of existing grazing permits, or grazing activities and practices authorized under an existing permit, is not considered a new activity. It does not include naturally occurring events such as floods, landslides, and wildfire including prescribed natural fire.
- (14) "Nonpoint source activities" includes grazing, crop production, silviculture, log storage or rafting, construction, mining, recreation, septic systems, runoff from storms and other weather related events and other activities not subject to regulation under the federal national pollutant discharge elimination system. Nonpoint source activities on waters designated as outstanding resource waters do not include issuance of water rights permits or licenses, allocation of water rights, operation of diversions, or impoundments.
- (15) "Nonpoint source runoff" means water which may carry pollutants from nonpoint source activities into the waters of the state.
- (16) "Outstanding resource water" means a high quality water, such as water of national and state parks and wildlife refuges and water of exceptional recreational or ecological significance, which has been so designated by the legislature. It constitutes an outstanding national or state resource that requires protection from point source and nonpoint source activities that may lower water quality.

- (17) "Person" means any individual, association, partnership, firm, joint stock company, joint venture, trust, estate, political subdivision, public or private corporation, state or federal governmental department, agency or instrumentality, or any legal entity, which is recognized by law as the subject of rights and duties.
- (18) "Point source" means any discernible, confined, and discrete conveyance including, but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft, from which pollutants are, or may be, discharged. This term does not include return flows from irrigated agriculture, discharges from dams and hydroelectric generating facilities or any source or activity considered a nonpoint source by definition.
- (19) "Pollutant" means dredged spoil, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical waste, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, silt, cellar dirt; and industrial, municipal and agricultural waste, gases entrained in water; or other materials which, when discharged or released to water in excessive quantities cause or contribute to water pollution. Provided however, biological materials shall not include live or occasional dead fish that may accidentally escape into the waters of the state from aquaculture facilities.
- (20) "Reference stream or condition" means one (1) of the following: (a) The minimum biological, physical and chemical conditions necessary to fully support the designated beneficial uses; or (b) A water body representing natural conditions with few impacts from human activities and which are representative of the highest level of support attainable in the basin; or (c) A water body representing minimum conditions necessary to fully support the designated beneficial uses. In highly mineralized areas or in the absence of such reference streams or water bodies, the director, in consultation with the basin advisory group and the technical advisers to it, may define appropriate hypothetical reference conditions or may use monitoring data specific to the site in question to determine conditions in which the beneficial uses are fully supported.
- (21) "Short-term or temporary activity" means an activity which is limited in scope and is expected to have only minimal impact on water quality as determined by the director. Short-term or temporary activities include, but are not limited to, maintenance of existing structures, limited road and trail reconstruction, soil stabilization measures, and habitat enhancement structures.
- (22) "Silviculture" means those activities associated with the regeneration, growing and harvesting of trees and timber including, but not limited to, disposal of logging slash, preparing sites for new stands of trees to be either planted or allowed to regenerate through natural means, road construction and road maintenance, drainage of surface water which inhibits tree growth or logging operations, fertilization, application of herbicides or pesticides, all logging operations, and all forest management techniques employed to enhance the growth of stands of trees or timber.
- (23) "Soil conservation commission" means an agency of state government as created in section 22-2718, Idaho Code.
- (24) "Soil conservation district" means an entity of state government as defined in section 22-2717, Idaho Code.
- (25) "State" means the state of Idaho.

(26) "State water quality management plan" means the state management plan developed and updated by the department in accordance with sections 205, 208, and 303 of the federal clean water act.

(27) "Total maximum daily load (TMDL)" means a plan for a water body not fully supporting designated beneficial uses and includes the sum of the individual wasteload allocations for point sources, load allocations for nonpoint sources, and natural background levels of the pollutant impacting the water body. Pollutant allocations established through TMDLs shall be at a level necessary to implement the applicable water quality standards for the identified pollutants with seasonal variations and a margin of safety to account for uncertainty concerning the relationship between the pollutant loading and water quality standards.

(28) "Waters or water body" means all the accumulations of surface water, natural and artificial, public and private, or parts thereof which are wholly or partially within, flow through or border upon this state. For the purposes of this chapter, water bodies shall not include municipal or industrial wastewater treatment or storage structures or private reservoirs, the operation of which has no effect on waters of the state.

(29) "Water pollution" is such alteration of the thermal, chemical, biological or radioactive properties of any waters of the state, or such discharge or release of any contaminant into the waters of the state as will or is likely to create a nuisance or render such waters harmful or detrimental or injurious to public health, safety or welfare or to domestic, commercial, industrial, recreational, aesthetic or other legitimate uses or to livestock, wild animals, birds, fish or other aquatic life.

(30) "Watersheds" means the land area from which water flows into a stream or other body of water which drains the area. For the purposes of this chapter, the area of watersheds shall be recommended by the basin advisory group described in section 39-3613, Idaho Code.

39-3603. GENERAL WATER QUALITY STANDARD AND ANTIDegradation POLICY.

The existing instream beneficial uses of each water body and the level of water quality necessary to protect those uses shall be maintained and protected. Where the quality of waters exceeds levels necessary to support propagation of fish, shellfish and wildlife and recreation in and on the water, that quality shall be maintained unless the department finds, after full satisfaction of the intergovernmental coordination and public participation provisions of this chapter, and the department's planning processes, along with appropriate planning processes of other agencies, that lowering water quality is necessary to accommodate important economic or social development in the area in which the waters are located. In allowing such reductions in water quality, the department shall assure water quality adequate to protect existing uses fully.

39-3604. DESIGNATION OF INSTREAM BENEFICIAL USES. For each surface water body, the director shall designate, pursuant to chapter 52, title 67, Idaho Code, and specifically list in the rules of the department, the beneficial use which that water body can reasonably be expected to support without regard to whether that use is fully supported at the time of such designation. In making such designations, the director shall consider the existing use of the water body and such physical, geological, chemical and biological measures as may affect the water body and shall make such designations

utilizing fully the public participation provisions set forth in this chapter. Designated uses as set forth in this chapter shall fully support existing uses. Designations of beneficial uses shall be reviewed as necessary and revised when such physical, chemical or biological measures indicate the need to do so. In revising a designated beneficial use, the director shall consider the economic impact of the revision and the economic costs required to fully support the revised designated beneficial use. There shall be no requirement for persons who either conduct nonpoint activities or who conduct operations on waters described in section 39-3609, Idaho Code, pursuant to a national pollution discharge elimination system permit to meet water quality criteria other than those necessary for the full support of the existing beneficial use for the water body pertinent to either the nonpoint activity or point source permit in question, except as provided in section 39-3611, Idaho Code.

39-3605. IDENTIFICATION OF REFERENCE STREAMS OR CONDITIONS. The director shall, in a manner consistent with the public participation provisions set forth in this chapter and in accordance with chapter 52, title 67, Idaho Code, identify reference streams or conditions to assist in determining when designated beneficial uses are being fully supported. Streams or conditions shall be selected to represent the land types, land uses and geophysical features of the basins described in this chapter. Reference streams or conditions shall be representative of one (1) of the following:

- (1) A stream or other water body reflecting natural conditions with few impacts from human activities and which is representative of the highest level of support attainable in the basin; or
- (2) A stream or water body reflecting the minimum conditions necessary to fully support the designated beneficial uses; or
- (3) Physical, chemical and biological indicators identified in the rules of the department which reflect full support of designated beneficial uses.

39-3605C. ENVIRONMENTAL REMEDIATION FUND ESTABLISHED. There is hereby created in the state treasury a fund to be known as the environmental remediation fund. Surplus moneys in the environmental remediation fund shall be invested by the state treasurer in the manner provided for idle state moneys in the state treasury under section 67-1210, Idaho Code. Interest received on all such investments shall be paid into the environmental remediation fund. The fund may have paid into it:

- (1) Legislative appropriations and transfers from other funds;
- (2) All donations and grants from any source which may be used for the provisions of this act;
- (3) Any other funds which may hereafter be provided by law.

39-3606. USE OF REFERENCE STREAMS OR CONDITIONS TO DETERMINE FULL SUPPORT OF BENEFICIAL USES. The director, in consultation with the basin advisory group, shall conduct monitoring to determine if designated beneficial uses are fully supported. In making such determination, the director shall compare the physical, chemical and biological measures of the water body in question with the reference stream or condition appropriate to the land type, land uses and geophysical features of the water body in question as described in section 39-3605(2), Idaho Code. If the water body in question has such physical, chemical or biological measures as the reference water body or condition, even though such measures may be diminished from the conditions set forth in

section 39-3605(1), Idaho Code, then the director shall deem the designated beneficial uses for the water in question to be fully supported and as having achieved the objectives of the federal clean water act and of this chapter. When site-specific standards have been developed for an activity pursuant to the rules of the department, the use of reference streams as described in this section shall not be necessary.

39-3606C. APPROPRIATION OF ENVIRONMENTAL REMEDIATION FUND -- PURPOSE OF CHAPTER. Moneys in the environmental remediation fund may be used for annual legislative appropriations for the purpose of environmental cleanup and remediation and restoration in, but not limited to, the following areas:

- (1) To provide the state's matching share of grants for remediation including superfund grants;
- (2) To provide for the operations of remediation activities.

39-3607. MONITORING TO DETERMINE SUPPORT OF BENEFICIAL USES. The director shall conduct a beneficial use attainability and status survey to identify appropriate designated uses and to determine the status of designated beneficial uses in each water body. Measures to determine appropriate designated uses and the status of designated beneficial uses shall include appropriate water quality standards as identified in the rules of the department in conjunction with biological or aquatic habitat measures that may include, but are not limited to: stream width, stream depth, stream shade, sediment, bank stability, water flows, physical characteristics of the stream that affect habitat for fish, macro invertebrate species or other aquatic life, and the variety and number of fish or other aquatic life. Previous assessments of beneficial use attainability and status which are of a quality and content acceptable to the director shall constitute the baseline data against which future assessments shall be made to determine changes in the water body and what beneficial uses can be attained in it. In addition, the director, to the extent possible, may determine whether changes in the condition of the water body are the result of past or ongoing point or nonpoint source activities. The director shall also seek information from appropriate public agencies regarding land uses and geological or other information for the watershed which may affect water quality and the ability of the water body in question to fully support or attain designated beneficial uses. In carrying out the provisions of this section, the director may contract with private enterprises or public agencies to provide the desired data.

39-3608. REGULATORY ACTIONS FOR WATER BODIES WHERE BENEFICIAL USES ARE FULLY SUPPORTED. For streams or other water bodies where the director has determined that designated beneficial uses are being fully supported, the director shall assure, in a manner consistent with other existing applicable statutes, and rules, that all programs deemed necessary to maintain full support of designated beneficial uses are employed. In providing such assurances, the director may enter together into an agreement with public agencies in accordance with sections 67-2326 through 67-2333, Idaho Code.

39-3609. IDENTIFICATION OF WATER BODIES WHERE BENEFICIAL USES ARE NOT FULLY SUPPORTED. In accordance with the provisions set forth in the federal clean water act and the public participation provisions set forth in this chapter, the director shall notify the appropriate public agencies of any water bodies in which the designated beneficial uses are not fully supported. For water bodies so identified, the director shall place such water bodies into one (1) of the following priority classifications for the development of total maximum daily load or equivalent processes:

(1) "High," wherein definitive and generally accepted water quality data indicate that unless remedial actions are taken in the near term there will be significant risk to designated or existing beneficial uses of a particular water body. The director in establishing this category, shall consider public involvement as set forth in this chapter.

(2) "Medium," wherein water quality data indicate that unless remedial actions are taken there will be risks to designated or existing beneficial uses.

(3) "Low," wherein limited or subjective water quality data indicate designated uses are not fully supported, but that risks to human health, aquatic life, or the recreational, economic or aesthetic importance of a particular water body are minimal.

39-3610. GENERAL LIMITATIONS ON POINT AND NONPOINT SOURCES FOR WATER BODIES NOT FULLY SUPPORTING BENEFICIAL USES. The director shall assure, in a manner consistent with existing statutes or rules, that for each category of water body, as described in section 39-3609(1) through (3), Idaho Code, the following limitations shall apply:

(1) For waters in the "high," category a total maximum daily load or equivalent process as described in this chapter shall be undertaken. Provided however, that nothing in this section shall be interpreted as requiring best management practices for agricultural operations which are not adopted on a voluntary basis.

(2) For waters in the "medium" category, such changes in permitted discharges from point sources on the water body or to the best management practices for nonpoint sources within the watershed deemed necessary to prohibit further impairment of the designated or existing beneficial uses.

(3) For waters in the "low" category, such changes in permitted discharges from point sources on the water body or to the best management practices for nonpoint sources within the watershed deemed necessary to prohibit further impairment of the designated or existing beneficial uses.

39-3611. DEVELOPMENT AND IMPLEMENTATION OF TOTAL MAXIMUM DAILY LOAD OR EQUIVALENT PROCESSES. For water bodies described in section 39-3609, Idaho Code, the director shall, in accordance with the priorities set forth in section 39-3610, Idaho Code, and in accordance with sections 39-3614 and 39-3616, Idaho Code, and as required by the federal clean water act, develop a total maximum daily load to control point source and nonpoint sources of pollution on the water body. For water bodies where an applicable water quality standard has not been attained due to impacts that occurred prior to 1972, no further restrictions under a total maximum daily load process shall be placed on a point source discharge unless the point source contribution of a pollutant exceeds twenty-five percent (25%) of the total load for that pollutant.

Existing uses shall be maintained on all such water bodies. Total maximum daily load processes developed pursuant to this section shall include, but not be limited to:

- (1) Identification of pollutant(s) impacting the water body;
- (2) An inventory of all point and nonpoint sources of the identified pollutant, if practical, or an analysis of the land types, land uses and geographical features within the watershed that may be contributing identified pollutants to the water body;
- (3) An analysis of why current control strategies are not effective in assuring full support of designated beneficial uses;
- (4) A plan to monitor and evaluate progress toward water quality progress and to ascertain when designated beneficial uses will be fully supported;
- (5) Pollution control strategies for both point sources and nonpoint sources for reducing those sources of pollution;
- (6) Identification of the period of time necessary to achieve full support of designated beneficial uses; and
- (7) An adequate margin of safety to account for uncertainty. Point source discharges for which a national pollutant discharge elimination system permit is approved after January 1, 1995, shall be deemed to have met the requirements of this section.

39-3612. INTEGRATION OF TOTAL MAXIMUM DAILY LOAD PROCESSES WITH OTHER PROGRAMS. Upon completion of total maximum daily load processes as set forth in section 39-3611, Idaho Code, the director shall, subject to the provisions of chapter 52, title 67, Idaho Code, adopt such processes as part of the state's water quality management plan developed pursuant to the federal clean water act. Upon such adoption, the provisions of these processes shall be enforced through normal enforcement practices of designated agencies as set forth in the state's water quality management plan.

39-3613. CREATION OF BASIN ADVISORY GROUPS. (1) The director, in consultation with the designated agencies, shall name, for each of the state's major river basins, no less than one (1) basin advisory group which shall generally advise the director on water quality objectives for each basin and work in a cooperative manner with the director to achieve these objectives. Each such group shall establish by majority vote, operating procedures to guide the work of the group. Members shall be compensated pursuant to section 59-509(c), Idaho Code. The membership of each basin advisory group shall be representative of the industries and interests directly affected by the implementation of water quality programs within the basin and each member of the group shall either reside within the basin or represent persons with a real property interest within the basin. Recognized groups representing those industries or interests in the basin may nominate members of the group to the director. Each basin advisory group named by the director shall reflect a balanced representation of the interests in the basin and shall, where appropriate, include a representative from each of the following agriculture, mining, nonmunicipal point source discharge permittees, forest products, local government, livestock, Indian tribes (for areas within reservation boundaries), water-based recreation, and environmental interests. In addition, the director shall name one (1) person to represent the public at

large who may reside outside the basin. Members named to the basin advisory groups shall, in the opinion of the director, have demonstrated interest or expertise which will be of benefit to the work of the basin advisory group. The director may also name as may be needed those who have expertise necessary to assist in the work of the basin advisory group who shall serve as technical nonvoting advisers to the basin advisory group. (2) The governor shall establish a commission to be known as the Coeur d'Alene River basin commission whose membership is stated below for the Coeur d'Alene River basin, including the north and south forks of the Coeur d'Alene River, the main stem of the Coeur d'Alene River, Lake Coeur d'Alene and the Spokane River to replace and fulfill the duties of the basin advisory group and the watershed advisory group for those rivers and Lake Coeur d'Alene as stated in this section and sections 39-3614 through 39-3616, Idaho Code, as these duties related to heavy metal impacts in the Coeur d'Alene River basin. At the discretion of the governor, the commission may be asked to perform duties other than those specified in sections 39-3613 through 39-3616, Idaho Code. For duties related to sections 39-3613 through 39-3616, Idaho Code, the commission shall report to the director. For all other duties assigned the commission by the governor, the commission shall report to the governor, the speaker of the house of representatives and the president pro tempore of the senate. The governor shall appoint the following members of the commission one (1) representative of the governor; one (1) representative of the division of environmental quality of the department of health and welfare; one (1) representative of the department of lands; one (1) representative each of the county governments of Benewah county, Kootenai county and Shoshone county; one (1) representative of the trustees established under the settlement agreement of May 3, 1986, entered in State of Idaho v. Bunker Hill Co., No. 83-3161 (D. Idaho); two (2) representatives of the citizen's advisory committee of the Coeur d'Alene basin restoration project; one (1) representative of the mining industry; and one (1) representative of other affected industries. In addition to the governor's appointees, the commission shall have the following representatives appointed one (1) representative of the U.S. environmental protection agency appointed by the agency; one (1) representative of the U.S. department of agriculture and the U.S. department of interior to be appointed jointly by those agencies; and one (1) representative of the Coeur d'Alene tribe appointed by the tribe. The term of a member of the commission shall be three (3) years. The governor may remove at his discretion any members appointed by him. The commission shall operate by a simple majority vote of the members of the commission. The members of the commission shall elect a chairperson annually from the members of the commission. Members of the commission who are not state employees shall be compensated as provided in section 59-509(b), Idaho Code, if they are not otherwise being compensated for travel costs and per diem for serving on the commission.

39-3614. DUTIES OF THE BASIN ADVISORY GROUP. Each basin advisory group shall meet as necessary to conduct the group's business and to provide general coordination of the water quality programs of all public agencies pertinent to each basin. Duties of the basin advisory groups shall include, but not be limited to, providing advice to the director for:

- (1) Determining priorities for monitoring;
- (2) Revisions in the beneficial uses designated for each stream and the status and attainability of designated or existing beneficial uses for the water bodies within the basin;

- (3) Assigning water bodies to the categories described in section 39-3609, Idaho Code;
- (4) Reviewing the development and implementation of total maximum daily load processes as described in section 39-3611, Idaho Code;
- (5) Suggesting members of the watershed advisory groups described in section 39-3615, Idaho Code; and
- (6) Establishing priorities for water quality programs within the basin based on the economic resources available to implement such programs. In carrying out the provisions of this chapter, the director and the basin advisory groups shall employ all means of public involvement deemed necessary, including the public involvement required by section 39-3603, Idaho Code, or required in chapter 52, title 67, Idaho Code, and shall cooperate fully with the public involvement or planning processes of other appropriate public agencies.

39-3615. **CREATION OF WATERSHED ADVISORY GROUPS.** The director, with the advice of the appropriate basin advisory group, may name watershed advisory groups which will generally advise the department on the development and implementation of TMDLs and other state water quality plans, including those specific actions needed to control point and nonpoint sources of pollution within the watersheds of those water bodies where designated beneficial uses are not fully supported. Members of each watershed advisory group shall be representative of the industries and interests affected by the management of that watershed, along with representatives of local government and the land managing or regulatory agencies with an interest in the management of that watershed and the quality of the water bodies within it. Members of each watershed advisory group shall serve and shall not be reimbursed for their expenses during their term of service.

39-3616. **DUTIES OF EACH WATERSHED ADVISORY GROUP.** Each watershed advisory group shall generally be responsible for recommending those specific actions needed to control point and nonpoint sources of pollution within the watershed so that, within reasonable periods of time, designated beneficial uses are fully supported and other state water quality plans are achieved. Watershed advisory groups shall, as described in this chapter, develop and recommend actions needed to effectively control sources of pollution. In carrying out the provisions of this section, the director and the watershed advisory groups shall employ all means of public involvement deemed necessary or required in chapter 52, title 67, Idaho Code, and shall cooperate fully with the public involvement or planning processes of other appropriate public agencies.

39-3617. **DESIGNATION OF OUTSTANDING RESOURCE WATERS.** Any person may request, in writing to the board of health and welfare, that a stream segment may be considered for designation as an outstanding resource water. The board shall recommend to the legislature those stream segments the board proposes for designation as outstanding resource waters. The legislature shall determine by law which such stream segments to designate as outstanding resource waters. Stream segments so designated shall be included in a list of outstanding resource waters to be compiled and updated by the department of health and welfare in its rules governing water quality standards. Interim status or special protection shall not be provided to streams recommended by the board prior

to legislative designation as an outstanding resource water. No state agency shall delay actions, or deny or delay the processing or approval of any permit for a nonpoint source activity based on nomination of a segment for designation as an outstanding resource water, or while the legislature is considering such designation.

39-3618. RESTRICTION PROVISIONS FOR NEW NONPOINT SOURCE ACTIVITIES ON OUTSTANDING RESOURCE WATERS. No person shall conduct a new or substantially modify an existing nonpoint source activity that can reasonably be expected to lower the water quality of an outstanding resource water, except for short-term or temporary nonpoint source activities which do not alter the essential character or special uses of a segment, issuance of water rights permits or licenses, allocation of water rights, or operation of water diversions or impoundments.

39-3619. CONTINUATION PROVISIONS FOR EXISTING ACTIVITIES ON OUTSTANDING RESOURCE WATERS. Existing activities may continue and shall be conducted in a manner that maintains and protects the current water quality of an outstanding resource water. The provisions of this section shall not affect short-term or temporary activities that do not alter the essential character or special uses of a segment, allocation of water rights, or operations of water diversions or impoundments, provided that such activities shall be conducted in conformance with applicable laws and regulations.

39-3620. APPROVAL PROVISIONS FOR BEST MANAGEMENT PRACTICES FOR NEW NONPOINT SOURCE ACTIVITIES ON OR AFFECTING OUTSTANDING RESOURCE WATERS. No person may conduct a new nonpoint source activity on or affecting an outstanding resource water, except for a short-term or temporary activity as set forth in section 39-3602, Idaho Code, prior to approval by the designated agency as provided in this section.

- (1) Within six (6) months of designation of an outstanding resource water by the legislature, the designated agency shall develop best management practices for reasonably foreseeable new nonpoint source activities. In developing best management practices the designated agencies shall:
 - (a) Solicit technical advice from state and federal agencies, research institutions, and universities and consult with affected landowners, land managers, operators, and the public; and
 - (b) Shall assure that all public participation processes required by law have been completed, but if no public participation process is required by law, will require public notification and the opportunity to comment;
 - (c) Recommend proposed best management practices to the board of health and welfare.
- (2) The board of health and welfare and designated agencies shall adopt the proposed best management practices that are in compliance with the rules and regulations governing water quality standards, and based on the recommendations of the designated agency and the comments received during the public participation process;
- (3) After adoption, these best management practices will be known as the outstanding resource water best management practices and will be published by the designated agency. Outstanding resource water approved best management practices will be reviewed and revised where needed by the designated

agency every four (4) years in consultation with the department, landowners, federal managers, operators and the public to determine conformance with objectives of this act;

(4) Following adoption of best management practices, the designated agency shall require implementation of applicable outstanding resource water best management practices which will assure that water quality of an outstanding resource water is not lowered;

(5) Where outstanding resource water best management practices have not been adopted as set forth in subsections (1) through (4) of this section, the designated agency shall:

(a) Assure that all public participation processes required by law have been completed, but if no public participation process is required by law, the designated agency shall provide for public notification of the new activity and the opportunity to comment;

(b) Determine that the site-specific best management practices selected for a new nonpoint source activity are designed to ensure that water quality of the outstanding resource water is not lowered; and

(c) Provide for review by the department that the activity is in compliance with rules and regulations governing water quality standards.

(6) When the applicable outstanding resource water best management practices are applied, the landowner, land manager, or operator applying those practices will be in compliance with the provisions of this act. In the event water quality is lowered, the outstanding resource water best management practices will be revised within a time frame established by the designated agency to ensure water quality is restored.

39-3621. **MONITORING PROVISIONS.** The designated agencies, in cooperation with the appropriate land management agency and the department shall ensure best management practices are monitored for their effect on water quality. The monitoring results shall be presented to the department on a schedule agreed to between the designated agency and the department.

39-3622. **ENFORCEMENT PROVISIONS.** (1) The designated agency shall ensure that the approved outstanding resource water best management practices are implemented for new nonpoint source activities. If a person fails to obtain approval from a designated agency for a new nonpoint source activity as set forth in section 39-3620, Idaho Code, or if a person fails to implement approved best management practices and water quality is lowered, the designated agency may institute a civil action for an immediate injunction to halt the activity or pursue other remedies provided by law.

(2) Nothing in this act shall restrict the enforcement authority of the department or designated agencies as provided by law.

39-3623. **EFFECT OF RULES.** Every rule promulgated within the authority conferred in sections 39-3617 through 39-3622, Idaho Code, shall be of temporary effect and shall become permanent only by enactment of statute at the first regular session following adoption of the rule. Rules not approved in the above manner shall be rejected, null, void and of no force and effect on July 1, following submission of the rules to the legislature. The rules promulgated within the authority conferred in this act and

adopted by the board of health and welfare on January 31, 1990, and contained in IDAPA 16.01.2003,31 and 16.01.2003,32 and 16.01.2053,01 through 16.01.2053,07, are hereby approved by the legislature.

39-3624. DECLARATION OF POLICY -- DESIGNATION OF DIRECTOR. The legislature, recognizing that water is one (1) of the state's most valuable natural resources, has adopted water quality standards and authorized the director of the department of health and welfare to implement these standards. In order to provide and maintain maximum water quality in the state for domestic, industrial, agricultural (irrigation and stock watering), mining, manufacturing, electric power generation, municipal, fish culture, artificial ground water recharge, transportation and recreational purposes at the earliest possible date, and to conform to the expressed intent of congress to abate pollution of ground waters, streams and lakes, the legislature declares the purpose of this act is to enhance and preserve the quality and value of the water resources of the state of Idaho and to assist in the prevention, control, abatement and monitoring of water pollution. In consequence of the benefits resulting to the public health, welfare and economy it is hereby declared to be the policy of the state of Idaho to protect this natural resource by assisting in monitoring, preventing and controlling water pollution; to support and aid technical and planning research leading to the prevention and control of water pollution, and to provide financial and technical assistance to municipalities, soil conservation districts and other agencies in the abatement and prevention of water pollution. The director of the department of health and welfare shall administer this act and nothing herein shall be construed as impairing or in any manner affecting the statutory authority or jurisdiction of municipalities in providing domestic water, sewage collection and treatment.

39-3625. DEFINITIONS.

A. "Sewage treatment works" means any facility for the purpose of collecting, treating, neutralizing or stabilizing sewage or industrial wastes of a liquid nature, including treatment by disposal plants, the necessary intercepting, outfall and outlet sewers, pumping stations integral to such plants or sewers, equipment and furnishings thereof and their appurtenances.

B. "Construction" means the erection, building, acquisition, alteration, reconstruction, improvement or extension of sewage treatment works or best management practices, preliminary planning to determine the economic and engineering feasibility of sewage treatment works or best management practices, the engineering, architectural, legal, fiscal and economic investigations, reports and studies, surveys, designs, plans, working drawings, specifications, procedures, and other action necessary in the construction of sewage treatment works or best management practices, and the inspection and supervision of the construction of sewage treatment works or best management practices.

C. "Eligible construction project" means a project for construction of sewage treatment works or for a project for the application of best management practices as set forth in the approved state water quality plan, in related project areas:

1. For which approval of the Idaho board of health and welfare is required under section 39-118, Idaho Code;
2. Which is, in the judgment of the Idaho board of health and welfare, eligible for water pollution abatement assistance, whether or not federal funds are then available therefor;

3. Which conforms with applicable rules of the Idaho board of health and welfare;
 4. Which is, in the judgment of the Idaho board of health and welfare, necessary for the accomplishment of the state's policy of water purity as stated in section 39-3601, Idaho Code; and
 5. Which is needed, in the judgment of the Idaho board of health and welfare, to correct existing water pollution problems or public health hazards and to provide reasonable reserve capacity to prevent future water pollution problems or public health hazards.
- D. "Municipality" means any county, city, special service district, nonprofit corporation or other governmental entity having authority to dispose of sewage, industrial wastes, or other wastes, any Indian tribe or authorized Indian tribal organization, or any combination of two (2) or more of the foregoing acting jointly, in connection with an eligible project.
- E. "Board" means the Idaho board of health and welfare.
- F. "Department" means the Idaho department of health and welfare.
- G. "Director" means the director of the Idaho department of health and welfare.
- H. "Nondomestic wastewater" means wastewater whose source of contamination is not principally human excreta.
- I. "Best management practice" means practices, techniques or measures identified in the state water quality plan which are determined to be the most effective, practicable means of preventing or reducing pollutants generated from nonpoint sources to a level compatible with water quality goals.
- J. "Soil conservation district" means an entity of state government as defined in section 22-2717, Idaho Code.
- K. "Soil conservation commission" means an agency of state government as created by section 22-2718, Idaho Code.
- L. "Nonpoint source pollution" means water pollution that comes from many varied, nonspecific and diffused sources and can be categorized by the general land disturbing activity that causes the pollution.
- M. "Training program" means any course of training established to provide sewage treatment plant operating personnel with increased knowledge to improve their ability to operate and maintain sewage treatment works.

39-3626. AUTHORIZATION OF GRANTS AND LOANS -- DESIGNATION OF ADMINISTERING AGENCY -- RESERVATION OF FUNDS FOR OPERATIONS -- CRITERIA -- PRIORITY PROJECTS -- ELIGIBLE PROJECTS.

- A. The state of Idaho is hereby authorized to make grants and loans at or below market interest rates, as funds are available, to any municipality or soil conservation district to assist said municipality or soil conservation district in the construction of sewage treatment works or application of best management practices and to provide for training of treatment plant operating personnel.
- B. The Idaho board of health and welfare through the department of health and welfare shall be the agency for administration of funds authorized for grants or loans under this act, and may reserve up to four percent (4%) of the moneys accruing annually to the water pollution control and wastewater facility loan accounts to be appropriated annually for the purpose of operating the water quality programs

established pursuant to this chapter. The board may also reserve up to six percent (6%) of the moneys accruing annually to the water pollution control account to be appropriated annually for the purpose of conducting water quality studies including monitoring.

C. In allocating state construction grants and loans under this act, the Idaho board of health and welfare shall give consideration to water pollution control needs and protection of public health.

D. Pursuant to subsection C the Idaho board of health and welfare shall establish a list of priority municipal sewage facility projects. The Idaho board of health and welfare with the approval of the Idaho soil conservation commission shall establish a list of priority projects for control of agricultural nonpoint source pollution. These priority lists shall be used as the method for allocation of funds granted or loaned under this act.

39-3627. PAYMENTS BY STATE BOARD OF HEALTH AND WELFARE -- CONTRACTS WITH MUNICIPALITIES, SOIL CONSERVATION DISTRICTS OR SOIL CONSERVATION COMMISSION -- RULES -- APPROVAL OF ATTORNEY GENERAL -- AUDIT OF PAYMENTS.

A. The Idaho board of health and welfare may make payments not to exceed ninety percent (90%) of the estimated reasonable cost of an eligible construction project funded by a grant. Payments may be made which are equal to one hundred percent (100%) of the estimated reasonable cost of an eligible construction project funded by a loan.

B. The Idaho board of health and welfare may, in the name of the state of Idaho, enter into contracts with municipalities or soil conservation districts, and any such municipality or soil conservation district may enter into a contract with the Idaho board of health and welfare, concerning eligible construction projects. Any such contract may include such provisions as may be agreed upon by the parties thereto, and shall include, in substance, the following provisions:

1. An estimate of the reasonable cost of the project as determined by the Idaho board of health and welfare.
2. An agreement by the municipality, binding for the actual service life of the sewage treatment works:
 - a. To proceed expeditiously with, and complete, the project in accordance with plans approved pursuant to section 39-118, Idaho Code.
 - b. To commence operation of the sewage treatment works on completion of the project, and not to discontinue operation or dispose of the sewage treatment works without the approval of the board of health and welfare.
 - c. To operate and maintain the sewage treatment works in accordance with applicable provisions and rules of the board.
 - d. To make available on an equitable basis the services of the sewage treatment works to the residents and commercial and industrial establishments of areas it was designed to serve.
 - e. To provide for the payment of the municipality's share of the cost of the project when the project is built using grant funds.

- f. To develop and to secure the approval of the department of plans for the operation and maintenance of the sewage treatment works; and of plans and programs for the recovery of the capital costs and operating expenses of the works or system.
 - g. To allow the board to make loans of up to one hundred percent (100%) and supplemental grants based upon financial capability to a municipality for the estimated reasonable cost of an eligible project, which may include treatment of nondomestic wastewater.
 - h. To provide for the accumulation of funds through the use of taxing powers, through charges made for services, through revenue bonds, or otherwise, for the purposes of (1) capital replacement, (2) future improvement, betterment, and extension of such works occasioned by increased wastewater loadings on the works, and (3) establishing a fund dedicated solely to repayment of principal and interest of loans made subsequent to this chapter.
 - i. To commence annual principal and interest payments not later than one (1) year from the date construction is completed and to provide for full amortization of loans not later than twenty (20) years from the date project construction is completed.
3. The terms under which the Idaho board of health and welfare may unilaterally terminate the contract and/or seek repayment from the municipality or soil conservation district of sums already paid pursuant to the contract for noncompliance by the municipality or soil conservation district with the terms and conditions of the contract and the provisions of this chapter.
4. An agreement by the soil conservation district, binding for the life of the eligible project:
- a. To develop water quality plans for landowners in the project areas and provide cost-share payments to landowners for installation of best management practices.
 - b. To determine cost-share rates in conjunction with the state soil conservation commission for best management practices.
 - c. In conjunction with the state soil conservation commission establish a method for project administration and provisions for technical assistance to landowners.
 - d. To allow the state to give grants of up to ninety percent (90%) of the estimated reasonable cost for best management practices installation, technical assistance and project administration of an eligible project.
 - e. To develop and to secure the approval of the department and the state soil conservation commission of plans for operation of the eligible project.
 - f. To ensure that the local matching share of the cost of the project is provided.
 - g. To assure an adequate level of landowner participation and application of best management practices to insure water quality goals are met.
- C. The Idaho board of health and welfare may, in the name of the state of Idaho, enter into contracts with the soil conservation commission, and the soil conservation commission may enter into contracts with the Idaho board of health and welfare, to provide technical assistance to soil conservation districts which have entered grant agreements pursuant to this chapter. Any such contract may include such provisions agreed upon by the parties thereto, and shall include, in substance, the following provisions:

1. An estimate of the reasonable cost of technical assistance as determined by the Idaho board of health and welfare.
2. The terms under which the Idaho board of health and welfare may unilaterally terminate the contract, and/or seek repayment of sums paid pursuant to the contract, for noncompliance by the soil conservation commission with the terms and conditions of the contract, the provisions of this chapter, or rules adopted pursuant thereto.

D. The board may adopt rules necessary for the making and enforcing of contracts hereunder and establishing procedures to be followed in applying for state construction grants or loans or training grants herein authorized as shall be necessary for the effective administration of the grants and loans program.

E. All contracts entered into pursuant to this section shall be subject to approval by the attorney general as to form. All payments by the state pursuant to such contracts shall be made after audit and upon warrant as provided by law on vouchers approved by the director.

39-3628. WATER POLLUTION CONTROL ACCOUNT ESTABLISHED. There is hereby created and established in the state treasury a separate account to be known as the water pollution control account. The account shall have paid into it:

1. The moneys provided for in section 14-425, Idaho Code, that are paid over to the state treasurer shall be deposited to the credit of the water pollution control account, and not to the credit of the state general account;
2. All donations and grants from any source which may be used for the provisions of this act;
3. Any other funds which may hereafter be provided by law.

39-3629. WASTEWATER FACILITY LOAN ACCOUNT ESTABLISHED. There is hereby created and established in the agency asset fund in the state treasury an account to be known as the wastewater facility loan account. Surplus moneys in the wastewater facility loan account shall be invested by the state treasurer in the manner provided for idle state moneys in the state treasury under section 67-1210, Idaho Code. Interest received on all such investments shall be paid into the wastewater facility loan account. The account shall have paid into it:

1. Federal funds which are received by the state to provide for wastewater facility loans together with required state matching funds coming from a portion of the moneys in the water pollution control account as established in section 39-3628, Idaho Code;
2. All donations and grants from any source which may be used for the provisions of this section;
3. All principal and interest repayments of loans made pursuant to this chapter; and
4. Any other moneys which may hereafter be provided by law.

39-3630. APPROPRIATION OF WATER POLLUTION CONTROL ACCOUNT -- PURPOSE OF CHAPTER. Moneys in the water pollution control account are hereby perpetually appropriated for the following purposes:

1. To provide the state's matching share of grants made under the provisions of this chapter.

2. To provide revenue for the payment of general obligation bonds issued pursuant to section 39-3633, Idaho Code, and general obligation refunding bonds issued pursuant to chapter 115, 1973 laws of the state of Idaho.
3. To provide for the operations of the water quality programs established pursuant to this chapter.
4. To provide direct grants or contracts for the purpose of providing training for drinking water system and sewage treatment plant operating personnel.
5. To provide payments for contracts entered into pursuant to this chapter.
6. To provide funds to capitalize the wastewater facility loan account established in section 39-3629, Idaho Code, including the required matching share of federal capitalization funds.
7. To provide funds to capitalize the drinking water loan account established in section 39-7602, Idaho Code, including the required matching share of federal capitalization funds.

39-3631. APPROPRIATION OF WASTEWATER FACILITY LOAN ACCOUNT -- PURPOSE OF CHAPTER. Moneys in the wastewater facility loan account are hereby perpetually appropriated for the following purposes:

1. To provide loans and other forms of financial assistance authorized under title VI of the federal water quality act of 1987, P.L. 100-4, to any municipality for construction of sewage treatment works.
2. To provide funds, subject to annual federal and state appropriation and applicable federal limitations, for operation of the wastewater facility loan program by the department of health and welfare.

39-3632. GRANTS AND LOANS FOR DESIGN, PLANNING OR CONSTRUCTION -- LIMITS ON AMOUNT OF GRANTS AND LOANS.

- (1) The board of health and welfare may divide financial assistance for eligible construction projects into separate grants, loans or a combination of grants and loans for the design, planning, and construction stages of project development. The making of a grant or loan for early stages of a project does not obligate the state to make a grant or loans for later stages of the same project.
- (2) The board may make grants from the water pollution control account; provided, that the projected payments for such grants would not cause the projected balance in the account to fall below zero at any time. All grant payments shall be subject to the availability of moneys in the account.
- (3) The board may make loans from the wastewater facility loan account, provided that the projected payments for such loans would not cause the projected balance in the account to fall below zero at any time. All loan payments shall be subject to the availability of moneys in the account.

39-3633. WATER POLLUTION CONTROL BONDS.

A. Water pollution control bonds, as provided by section 5, article VIII of the constitution of the state of Idaho, shall be authorized by resolution of the state board of health and welfare. The bonds may be issued in one or more series, may bear such date or dates, may be in such denomination or denominations, may mature at such time or times, may mature in such amount or amounts, may bear interest at the most advantageous rate or rates available to the state at the time offered, payable semiannually, may be in such form, either coupon or registered, may carry such registration and such

conversion privileges, may be executed in such manner, may be payable in such medium of payment, at such place or places, may be subject to such terms of redemption, with or without premium, as such resolution or other resolutions may provide. The bonds, if sold to a federal agency, may be sold at a private sale at not less than par and accrued interest, without advertising the same at competitive bidding. If not sold to a federal agency, the bonds shall be sold publicly in a manner to be provided by the state board of health and welfare. The bonds shall be fully negotiable within the meaning and for all purposes of the Uniform Commercial Code.

B. The moneys derived from the sale of any bonds shall be deposited in the state treasury to the credit of the water pollution control fund for the purposes of that fund.

C. All bonds issued pursuant to this act shall be obligations of the state and shall be payable in accordance with the terms of this act and the provisions of section 5, article VIII of the constitution of the state of Idaho.

39-3634. COTTAGE SITE DEFINED. "Cottage site" is defined as a state owned lot containing one (1) acre or less which is or may be leased by the state of Idaho primarily for recreational or homesite use by a lessee.

39-3635. COTTAGE SITE LEASES -- REQUIREMENTS -- CONSTRUCTION OF SEWAGE DISPOSAL FACILITIES -- CONNECTION TO WATER AND SEWER DISTRICT SYSTEMS -- PAYMENT OF CHARGES -- NOTIFICATION OF DEFAULTS -- SATISFACTION OF REQUIREMENTS.

(1) After the effective date of this act all cottage site leases authorized by the state of Idaho shall require that each lessee must construct, at his cost and expense, sewage disposal facilities, certified by the director of the department of health and welfare as adequate, as follows:

(a) For all new cottage or house construction completed after July 1, 1971 on any cottage site the certificate shall be issued prior to occupancy.

(b) Those cottages or houses existing on the cottage sites prior to the effective date of this act shall meet those standards required by the director of the department of health and welfare for certification within two (2) years of the effective date of this act, unless a public or private sewage collection or disposal system is being planned or constructed in which case the director of the department of health and welfare may grant extensions on a year by year basis but not exceed three (3) such extensions for any one (1) cottage site.

(c) Isolated dwellings on sites situated on mining, grazing or other similar types of state land board leases shall not be affected unless within two hundred (200) yards of any flowing stream or a lake.

(2) Wherever any cottage site is located within the boundaries of a district organized for water or sewer purposes, or a combination thereof, pursuant to the provisions of chapter 32, title 42, Idaho Code, as amended, the cottage site lessee shall connect his property to the sewer system of the district within sixty (60) days after written notice from the district so to do, provided, however, no cottage site lessee shall be compelled to connect his property with such sewer system unless a service line is brought by the district to a point within two hundred (200) feet of his dwelling place. All cottage site leases hereafter issued shall require, as a condition of acceptance thereof by the lessee, that the lessee

will connect his property to a district sewer system as required in this subsection (2). With respect to all cottage site leases issued subsequent to July 1, 1970, filing with the department issuing the lease of evidence of connection to the district sewer system as contemplated in this subsection (2) shall be conclusive evidence of compliance by the cottage site lessee with the requirements of subsection (1) of this section and of the provisions of the cottage site lease to provide sewage disposal facilities at the expense of the cottage site lessee. Each cottage site lessee whose cottage site is subject to connection to a district sewer system as required in this subsection (2) shall pay to the district to which the cottage site is required to be connected, in a timely manner and when due, all connection fees and charges, all monthly rates, tolls and charges, as provided by chapter 32, title 42, Idaho Code, as amended, and all special benefits payments in lieu of tax payments provided for in subsection (3) of this section.

(3) Notwithstanding that title to a cottage site remains in the state of Idaho, each cottage site lessee shall pay to any district operating a sewer system to which the cottage site is connected as provided in subsection (2) of this section, each year in the same manner and at the same time as county taxes are paid and collected a sum of money in lieu of taxes equal to the sum which would have been paid had the cottage site been held in private ownership, hereinafter called special benefits payments. The special benefits payments shall be computed by applying the millage levy of the district to the cottage site in the ordinary course to the assessed valuation of the property as determined by the county assessor of the county in which the cottage site is located. No special benefits payments shall be imposed prior to January 1, 1980. The cottage site lessee shall have such rights of protest, hearings and appeals with respect to the valuation of the cottage site for purposes of determining the special benefits payments as if such cottage site were held in private ownership. It shall be the duty of the county assessor to establish the value of each cottage site as compared to like property upon the request, in writing, of the district.

(4) Each water and sewer district shall immediately notify the department issuing a cottage site lease of the failure of any cottage site lessee to connect to the district sewer system, or to pay any connection fee or charge, monthly rate, toll or charge, or any special benefits payments, all as required or provided for in subsection (3) of this section. Any such notification shall set forth the amount of any such fees, charges or payments which are delinquent.

(5) Approval, pursuant to the provisions of section 39-118, Idaho Code, by the department of health and welfare of the plans and specifications of a sewer system to be constructed, acquired, improved or extended by a water and sewer district shall, as to all cottage sites connected to the district sewer system, satisfy the requirements of section 39-3637, Idaho Code.

(6) The state of Idaho, its boards, agencies or departments, shall not be liable, directly or indirectly, for any connection fees and charges, monthly rates, tolls and charges, or special benefits payments charged to cottage site lessees beyond those fees or payments collected from new lessees pursuant to section 58-304A, Idaho Code, and placed in the revolving fund created by section 58-141A, Idaho Code.

39-3636. FAILURE TO PROVIDE SEWAGE DISPOSAL -- PENALTIES. Failure to provide certified sewage disposal as provided in section 39-3635(1), Idaho Code, or failure to connect to a district sewer system or to pay, when due, any connection fee or charge, any monthly rate, toll or

charge, or any special benefits payment, all as required and provided for in subsections (2) and (3) of section 39-3635, Idaho Code, shall result in the following:

(a) Forfeiture of lease to the state of Idaho after reasonable notice and hearing, as shall be prescribed in rules to be adopted by the department issuing the lease pursuant to the applicable provisions of chapter 52, title 67, Idaho Code, as now or hereafter in force.

(b) Loss of sewage treatment facility credit on any transfer of lease or new lease of such site after notice and hearing before the department issuing such lease. The department issuing any cottage site lease, upon its own motion or upon receiving notice from a water and sewer district pursuant to the provisions of section 39-3635(4), Idaho Code, of the failure of a cottage site lessee to connect to a district sewer system or to pay any connection fee or charge, any monthly rate, toll or charge, or any special benefits payments, when due, is authorized to invoke either or both remedies at its discretion or may take such other action allowed by law to enforce the provisions of the lease and the requirements of section 39-3635, Idaho Code, that each cottage site lessee connect to a district sewer system and pay all fees, charges and payments when due.

39-3637. STATE BOARD OF HEALTH AND WELFARE -- RULES -- INSPECTION. The state board of health and welfare shall adopt reasonable rules and standards for the installation and operation of cottage site sewage treatment facilities, and shall provide adequate inspection services so as not to delay unreasonably the construction of any lessee. Duplicate originals of all certificates issued by the director of the department of health and welfare shall be filed with the director of the department issuing a cottage site lease. The director of the department of health and welfare shall initiate on or before July 1, 1971, a site by site inventory of such sewage disposal systems that may exist. The inventory shall ascertain:

(a) If the existing system meets the board standards. If the system meets all standards and rules for cottage sewage disposal systems a certificate shall be issued immediately.

(b) If the system does not meet the board standards. In such case, the lessee shall be advised in writing of the actions necessary to meet the proper standards. A copy of such report shall be filed with the state agency granting the lease. The modifications, unless specifically exempted from the time limit, as provided in this act, shall be completed within two (2) years of the date of the written notice.

39-3638. FINAL DETERMINATION BY ISSUING DEPARTMENT AUTHORIZED. In the event of dispute, unreasonable delay on the part of lessee or the department of health and welfare, the department issuing a cottage site lease may, upon notice and hearing, make a final determination consistent with control of water pollution and public health.

39-3639. CONTINUATION OF COTTAGE SITE LEASE PROGRAM.

(1) The legislature of the state of Idaho recognizes that certain state lands are presently leased for cottage site uses and are subject to leases and contracts duly authorized by law. It is legislative intent to continue to recognize such leases. However, it is also legislative intent that no new or additional lands be platted, subdivided or leased for cottage site leases, unless and until the condition and precedents listed below have been met.

- (2) No additional state lands shall be further platted or subdivided, nor any new cottage site leases entered into, unless and until the following provisions have been met:
- (a) The department of lands shall have completed a comprehensive planning process, as to its further participation in, and extension of, the cottage site lease program;
 - (b) The department of lands shall complete a comprehensive planning process as to the extension of cottage site leasing for that immediate geographic area;
 - (c) No new cottage site leases shall be entered into unless and until an adequate water system and an adequate sewage collection and treatment system have been installed. Both of these systems shall meet applicable state health standards and rules. (i) The costs for providing these systems shall be incorporated into the annual lease rates for the newly created serviced lots, unless other specific provisions for payment have been required by the state board of land commissioners. (ii) As an alternate means of securing the necessary funds for the construction of water and sewer systems which must meet state standards and rules, the state board of land commissioners may include as a condition of the new lease the requirement that the lessee must prepay his share of the construction costs of the water and sewer system. In all cases, however, such prepayment shall be made, and adequate water and sewer systems shall be installed and in operation before such cottage sites may be inhabited.
- (3) The provisions of subsection (1) herein shall not apply to unimproved lots within cottage subdivisions in which at least eighty per cent (80%) of the lots already have cottages upon them.

State of Idaho

Guidance for Development of Total Maximum Daily Loads

June 8, 1999

**Water Quality Programs / Surface Water Section
Idaho Division of Environmental Quality**

IDAHO TMDL Development Guidance

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A Brief TMDL Background

The Clean Water Act and Section 303(d)

Section 303(d)(1) of the Clean Water Act requires states to prepare a list of waters not meeting state water quality standards in spite of technology based pollution control efforts. This list must include a priority ranking "... taking into account severity of the pollution and the uses to be made of such waters." The prescribed remedy for these water quality limited waters is for states to determine the total maximum daily load (TMDL) for pollutants "... at a level necessary to implement applicable water quality standards with seasonal variations and a margin of safety ..." A margin of safety is included to account for any lack of knowledge about how limiting pollutant loads will attain water quality.

Section 303(d)(2) requires both the list and any total maximum daily loads developed by the state be submitted to the Environmental Protection Agency (EPA). The EPA is given thirty days to either approve or disapprove the state's submission. If the EPA disapproves, the agency has another thirty days to develop a list or TMDL for the state. Both the list and all TMDLs, either approved or developed by EPA, are incorporated into the state's continuing planning process as called for in section 303(e).

This language has been in the Clean Water Act since it was passed in 1972. It is the cornerstone of the approach of using instream standards to protect water quality, and provides an essential complement to technology-based controls, including required best management practices used for non-point source pollution control. Technology-based control sets minimum levels of waste treatment applied to all dischargers irrespective of receiving water quality. These controls are incorporated in discharge permits, focused on discernable point sources, and have been very successful in improving this nation's water quality in many areas.

However, with increasing population density and intensive land use, technology based control is not always enough. This is where water quality standards and TMDLs come in. By an analysis of pollutant loads and how they affect receiving water quality, an additional degree of pollution control is determined which goes beyond the practical or achievable minimums set by technology. In this way TMDLs are the backup to technology-based controls, they are waterbody, rather than source, dependent.

What is a TMDL Really?

A TMDL is a pollutant budget. This budget is most simply expressed in terms of loads, the quantities or mass of pollutants added to a waterbody. Pollutant loads can be calculated as the product of concentration and flow much like earnings can be calculated from hourly pay rate and number of hours worked. According to EPA regulations and guidance, this budget takes into account loads from point and non-point sources, and human-caused as well as natural background loads. The budget is

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balanced at the point where water quality standards are just being met and is allocated among all the various sources. Like keeping money in the bank for a rainy day, some of the budget is set aside as the margin of safety. And like a business's cash flow concerns, the pollution budget must take into account the seasonality or cyclic nature of pollutant loads and receiving water capacity, so that a temporary shortfall does not occur.

In cases where numeric criteria for water quality criteria have been established, the balance point is fairly clear, but dependent on stream flow. However, fixed value criteria do not always make sense. Some pollutants are natural constituents of water and become a problem only when present in abnormal amounts, abnormality being very much tied to and confounded by natural environmental variations. Sediment and nutrients are two such complex pollutants, and narrative criteria are used in Idaho to address these. A narrative criterion simply says the water should not contain a pollutant in amounts that will impair the water's beneficial uses.

Idaho has moved to direct assessment of aquatic biology to determine if certain beneficial uses are impaired. Though powerful, biological assessment does not provide a numeric water column value with which to establish a water's pollutant load capacity. This requires a case by case evaluation to establish a site specific numeric target, greatly complicating TMDL development unless 'other appropriate measures' are used in place of a traditional load.

Some 303(d) History

Under section 303(d)(1), EPA was required to identify pollutants suitable for TMDL calculation, which they finally did in late 1978. Many of the issues regarding scope and applicability of TMDLs heard today were also voiced in 1978, but far fewer people were taking notice then. The EPA itself downplayed the role and importance of TMDLs, instead focusing on point source discharge permits and attending to oversight of waste water treatment construction grants.

The first Water Quality Planning and Management rules implementing 303(d), were adopted 11 January 1985 in 40 CFR, Part 130. At that time EPA still saw a limited role for TMDLs, stating in the Federal Register that "EPA believes it best serves the purposes of the [Clean Water] Act to require States to establish TMDLs and submit them to EPA for approval only where such TMDLs are needed to 'bridge the gap' between existing effluent limitations, other pollution controls, and WQS [Water Quality Standards]". In these rules EPA defines load, loading capacity, load allocations, and wasteload allocations and the requirements for a 303(d) list.

In April 1991, EPA published its first guidance document on TMDLs: *Guidance for Water Quality-based Decisions: The TMDL Process*. That document is still current and speaks to both the listing process and TMDL development. It is here that EPA first formalizes the ideas of phased TMDLs,

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pollution source trade-offs, reasonable assurance, negotiating a schedule for pace of development, listing of threatened good quality waters, and biennial submission of lists starting in 1992. Biennial submission of lists was subsequently codified in July 1992 amendments to 40 CFR Part 130 as a step to merge reporting requirements under 305(b) and 303(d). It was specified that 1992 lists were due 22 October 1992. These amendments also require specific identification of TMDLs to be completed in the two years before the next list.

A compilation of EPA regulations, guidance, and policy memos was assembled and published in February 1997 as *Total Maximum Daily Load (TMDL) Program: Policy and Guidance Volume 1*. This three-inch ring binder includes the SF Salmon River TMDL in Idaho as one of thirteen case studies.

Recognizing a need to revise its regulations in the face of rising questions about the scope and requirements of TMDLs, EPA's Administrator requested a subgroup of the National Advisory Council for Environmental Policy be convened to provide advice. With 20 members representing state government, private industry, and environmental activists, the TMDL Federal Advisory Committee received its charge in November of 1996 and delivered a report of its recommendations 28 July 1998.

The EPA is currently drafting revised regulations based upon the FACA report which it hopes to promulgate by spring of 2000. Draft regulations are expected to be proposed and available for public review in the summer of 1999. These new rules will change the requirements for TMDL content and process. One likely major change is a FACA recommendation that implementation plans become an integral part of a TMDL submitted to EPA for approval.

The Idaho Experience (The Lawsuit)

In June 1989 Idaho submitted its first 303(d) list (as Appendix D of 1988 Water Quality Status Report and Nonpoint Source Assessment) with 31 waters. No pollutants or priority were stated and EPA neither approved or disapproved this list.

Idaho submitted its second list in August of 1992, as a separate list, ahead of schedule, but again specifying no pollutants or priorities. This list of 31 waters (8 additions and 8 deletions from 1989) received no response from EPA within the allotted 30 days. Not until 12 February 1993 did EPA issue a letter of "conditional approval" of the 1992 list, asking Idaho to evaluate certain EPA proposed additions of segments and pollutants. The letter also asked Idaho to solicit and respond to public comment, giving the state 90 days to reply. Idaho did not respond by 12 May, and EPA extended its deadline to 19 July 1993.

Tired of the lack of action, the Idaho Sporting Congress and Idaho Conservation League filed a 60 day notice of intent to sue EPA on 14 May 1993. Idaho submitted a revised 1992 list with 36 waters,

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including pollutants and priorities (22 high, 4 medium, & 10 low) by the extended deadline, just five days after the plaintiffs filed their complaint.

The environmentalist's complaint faulted EPA for approval of a 303(d) list which did not include all water quality limited (WQL) waters in Idaho. They asked the court to order EPA to disapprove the 1992 list and all Idaho TMDL submissions (of which there was only one at the time, the SF Salmon River). As a further remedy, the plaintiffs sought court directive for EPA to identify WQLs, develop and implement TMDLs for Idaho, and to prohibit permitting of point source discharges until TMDLs were in place. Before the case was heard, EPA approved Idaho's 1992 list in a letter dated 18 August 1993.

As the case was being considered, Idaho developed a 1994 303(d) list of 61 waterbodies and submitted it to EPA on 9 February 1994. On 15 March 1994, EPA responded by asking the state to consider adding 200 waters and specific pollutants to the list. The state responded 8 April, with a 1994 list of 62 waters, 45 of which were high priority, 8 medium, and 9 low. This list also identified 31 TMDLs underway or targeted for initiation in the next two years.

On 13 April 1994, in a partial summary judgement, the court found EPA approval of Idaho's 1992 list "arbitrary and capricious" and remanded the issue to EPA with direction to develop a new list within 30 days. The EPA published notice of a draft list of 788 waters on 13 May and in the ensuing months went through a protracted public process to develop a comprehensive list for Idaho. Public comment was voluminous, causing EPA to extend the comment deadline once and take until 7 October to review all input and produce a final list with 962 303(d) waters. Despite this new list the lawsuit was not dismissed.

The EPA list became acknowledged to contain many errors (stream names, duplication, overlap, etc.) and streams not necessarily water quality impaired. In developing their 1994 list, EPA scoured several Idaho and federal agency reports. These consisted primarily of Idaho's 1992 303(b) report, 1991 Basin Status Reports and their Stream Segments of Concern (SSOCs), 1993 Lake Water Quality Assessment Report and several Forest Plans. Some streams ended up on the list, not for failure to meet Idaho Water Quality Standards, but rather for failure to meet other criteria such as Forest Service standards and guidelines. Others were added simply because of great public interest regardless of water quality, or because of good water quality the public wanted maintained, or because of perceived threats to water quality, all expressed as SSOC's. Much of the information used was qualitative rather than quantitative.

The 1995 Idaho legislature responded by passing SB 1284, codified in IDAPA 39-3601 *et seq.* Among other things, this new water quality law established Basin Advisory Groups (BAGs) and allowed for Watershed Advisory Groups (WAGs) to assist DEQ in prioritizing and implementing TMDLs. The legislature also responded by funding DEQ's biological assessment program known as BURP (Beneficial Use Reconnaissance Program). Not until 1996 did the legislature fund additional positions for DEQ to meet its obligations under the new law.

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Upon review of a plaintiff motion, the court on 19 May 1995 ruled against EPA for its failure “to determine, with Idaho, a reasonable schedule for the development of TMDLs for all waterbodies designated as WQLSs.” Judge Dwyer ordered a schedule to be filed with the court within one year. Working with EPA, Idaho delivered a schedule on 15 May 1996, which set short term due dates (by year) for 42 high priority waters, and a long term commitment to develop 2 TMDLs per year in each of Idaho’s six administrative basins. Taking Idaho’s assumptions regarding de-listing of many streams, EPA estimated it would take 25 years, or until 2021, to work through the 1994 list. While the court considered this “25 year” schedule, Idaho submitted a 1996 303(d) list with only minor changes. Later, in April 1997, DEQ submitted some technical corrections to the list, eliminating some duplications. This trimmed the list slightly to 950 waters.

Dwyer rejected the “25 year” schedule on 26 September 1996 criticizing it for a lack of firm dates for all waters and finding no assurance that all necessary TMDLs would be developed even in 25 years “... unless hundreds of WQLS were to fall off the list.” He agreed with the plaintiffs that massive adjustments to the list were unlikely. Figuring it would take Idaho a hundred years to complete all TMDLs at two per year per basin, he described the pace as glacial and ordered EPA to work with Idaho to provide a schedule for all 303(d) waters within six months. He further suggested that an overall time frame of five years was appropriate for the schedule, a time frame stated in a Georgia decision just days earlier.

The DEQ worked closely with EPA and negotiated with the plaintiffs to develop an eight-year schedule, as well as an administrative record to support it. This schedule was built around a subbasin by subbasin approach to grouping waters for assessment and loading analysis. It was predicated on agreement with EPA that TMDL implementation is a separate step in the process which comes after approval of a TMDL. Under this agreement implementation is not included as part of a TMDL submitted to EPA (page 2-1 of *Idaho TMDL Development Schedule: EPA Review and Evaluation*, April 1997). Idaho’s Eight-year TMDL Development Schedule was presented to Dwyer on 8 April 1997 (Attachment A), along with EPA’s review and evaluation and a stipulation that the schedule was reasonable and could be carried out by Idaho. The stipulations were so ordered the following day, and the case was finally dismissed on 24 June 1997.

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Introduction

The remainder of this document addresses various aspects of how DEQ and the State of Idaho intends to go about development of TMDLs. Though much discussion and review has gone into each section it is expected that our plan of attack will continue to change some with further experience and future changes in federal or state rules.

As one example of such change, this document originated as specific policy statements intended only to guide internal working arrangements. The document has evolved into guidance and broadened its audience somewhat to other agencies and interests outside DEQ.

Not all the answers you may seek about TMDLs will be answered herein, but hopefully the general framework will become clear. It is important to note that TMDLs are the focus of a lot of interest and discussion throughout this nation. Events outside Idaho have and will continue to shape what we call TMDLs and how we in Idaho deal with complex issues such as habitat and flow, narrative criteria, and estimating non-point source loads.

General Statement on Development Pace and Process

The State of Idaho intends to develop total maximum daily load (TMDL) analyses for all water quality limited waters on its' 1996 Clean Water Act §303(d) list, unless subsequently de-listed, by the end of 2005. The order and pace of TMDL development is presented in the State of Idaho eight year TMDL schedule agreed to on April 8, 1997 (Attachment A). The State of Idaho will also develop TMDLs for waterbodies determined to be water quality limited subsequent to the 1996 list. Where possible, additions to Idaho's §303(d) list will be addressed along with currently scheduled waters in the same subbasin, otherwise a separate date will be specified.

Development of TMDLs will be in accord with the provisions of the federal Clean Water Act, Idaho Code 39-3601 *et seq.*, and all other applicable laws. The Idaho Division of Environmental Quality (DEQ) is the lead agency for development of TMDLs for Idaho waters. However, the Environmental Protection Agency (EPA) will have a role in coordinating multi-jurisdictional TMDLs involving interstate or tribal waters.

Implementation of an approved TMDL is primarily the responsibility of designated agencies, as stated in Idaho Code 39-3612, in cooperation with landowners and managers. These designated agencies are defined in Idaho Code 39-3602 as the Department of Lands (IDL), for timber harvest, oil and gas exploration and development, and for mining; the Soil Conservation Commission (SCC) for grazing and agriculture; the Department of Transportation (IDT) for public roads; the Department of Agriculture (IDA) for aquaculture; and the DEQ for all other activities.

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Purpose

Total maximum daily loads are watershed-based analyses of the quantities and sources of pollutants which prevent a water from meeting its beneficial uses. The aim is to restore those uses through reductions in pollutants added to the water. A watershed-based approach recognizes the effect of both point and nonpoint sources of pollution in degrading water quality. The analysis must identify the causes of beneficial use impairment and estimate pollutant loads which will meet water quality criteria and restore impaired uses within a specified time. Additional corrective actions will be needed only where application of required and other existing pollution controls are, or are expected to be, inadequate to meet Idaho's water quality standards.

Idaho's Eight-year Schedule

In Idaho's eight-year schedule, 42 high priority waterbodies are scheduled individually for completion by the end of 1999. Remaining medium and low priority waterbodies are scheduled, subbasin by subbasin, to be completed by the end of 2005. This schedule is based on calendar years and TMDLs are due to be submitted to the Environmental Protection Agency (EPA) no later than December 31 of the year scheduled.

The schedule allows that larger or more complex subbasins may be split for practical reasons. Where such splits occur, a portion may be done earlier than the date specified, but the entire subbasin will be completed by the date specified. It is also allowed that future conditions may warrant delay or advancement of a particular subbasin, therefore the schedule may be adjusted so long as the overall schedule and pace of development is met and concerned parties are consulted (see Appendix A, endnote 1).

Subbasin Approach

With a subbasin approach all waterbodies and pollutants on the current 303(d) list within a hydrologic subbasin should be addressed in a single document. Idaho has chosen this approach as a way to package adjacent waters and gain economy of scale in preparation of documents. There are 84 subbasins which are entirely or partially within Idaho (Figure 1).

The overall process may be broken down into three steps:

- 1) subbasin assessment,
- 2) loading analysis, and
- 3) implementation plan(s).

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These steps reflect a logical sequence of assessment, analysis and planning. The first two steps constitute the TMDL document, the product required under §303(d) to be submitted for EPA approval. The 8 April 1997 TMDL development schedule commits Idaho to deliver TMDLs in the years specified by subbasin. Implementation plans are not covered by the current schedule. This separation is made in consideration of meeting an eight-year time frame for the entire state and a distinction between §303(d) and §303(e) of the Clean Water Act.

Subbasin Assessment

Subbasin assessments are problem assessments conducted at the geographic scale of 4th field hydrologic units (cataloging units of the USGS), also referred to as subbasins. A subbasin assessment describes the affected area, the water quality concerns and status of beneficial uses of individual water bodies, nature and location of pollution sources, and a summary of past and ongoing pollution control activities. This may be a separate document or combined with the subsequent loading analyses.

Loading Analysis

Loading analysis provides an estimate of a waterbody's pollutant load capacity, a margin of safety, and allocations of load to pollutant sources defined as the TMDL in EPA regulations (40 CFR 130.2). Load capacity is the maximum quantity of a pollutant a water can receive and still meet water quality standards. This capacity is calculated for some critical or limiting condition, typically based on receiving water flow. In the classic case, maximum pollutant load must be limited so as not to exceed a statistically set minimum in load capacity based on receiving water low flow. Methods of determining load capacity will vary but generally fall into one of three categories: 1) product of an instream criterion concentration and flow; 2) modeled; or 3) reference conditions.

Once determined, the load capacity is divided up or allocated to sources. Allocations are required for each point source, categories of non-point sources, and must include a margin of safety, whose total will not exceed the load capacity. Allocations to non-point sources are termed load allocations, while point source allocations are termed wasteload allocations. Load allocations may be made by source type or land use (e.g roads, agriculture, forestry), or tributary watershed, or a combination. Each point source must have its own wasteload allocation. Minor non-point sources may receive a lumped allocation or a single 'gross allotment' may represent all non-point sources.

It is desirable to know the existing load as well. For waters not meeting criteria, the existing load must be greater than the load capacity at times. Determining the existing load provides information on how much over load there is, and allows expression of needed load reductions in terms of percent reduction from current conditions.

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Analysis of pollutant loading will usually be performed at the scale of smaller watersheds (5th or 6th field hydrologic units) of listed streams within a subbasin. Generally a loading analysis is required for each pollutant of concern. But it is recognized that some listed pollutants are really responses to other pollutants. For example, habitat and dissolved oxygen (DO) are often listed as pollutants, but they are not pollutants, but rather the effect of other pollutants, e.g. sediment or decomposing organic matter. Addressing the response in a TMDL requires a loading analysis for the right causative pollutant.

This can get complicated. In the case of DO, the organic matter which decomposes to deplete oxygen may be the result of too much aquatic plant growth, in turn caused by excess nutrients. And the cause and effect can be quite far removed from one another. It is the job of the TMDL analyst to determine such links between cause and effect and properly target the cause. Thus one listed pollutant may be addressed by a loading analysis of another, requiring one TMDL not two.

Although loading analysis may take place at finer scales, and address several pollutants, it is intended that documentation of these analyses will cover a subbasin at a time.

While loading analyses is fundamentally a quantitative assessment of pollutant loads, federal regulations allow that '*loads may be expressed as mass per unit time, toxicity, or **other appropriate measures***' (40 CFR 130.2(I), emphasis added). The meaning of other appropriate measures is to date, not well known. It perhaps allows flexibility in the application of TMDLs to problems that are otherwise intractable, or provides the option for use of surrogate measures to address pollutants such as sediment and temperature.

Surrogate measures can be either measures of waterbody response or pollutant sources. They are practical measures used because they are more tangible or easier to quantify than instream concentrations or actual loads. Examples include percent shade instead of the thermal load for temperature, or perhaps percent depth fines as a measure of sediment load. There must be a relation between the surrogate and the pollutant for which a traditional mass per unit time load might be calculated. Most surrogates do not lend themselves to allocation, and are thus coupled to adaptive management in which regular future monitoring feeds back into adjustment to pollutant source control. The DEQ believes use of surrogate measures can be most helpful in implementation of TMDLs for non-point sources.

In many cases, less data will be available than may be considered optimal for loading analysis. This can not delay TMDL development. In his September 26, 1996 ruling, Judge Dwyer made it clear that '*lack of precise information must not be a pretext for delay.*' (see *Idaho Sportsman's Coalition v. Browner*, Case No. C93-943WD, WD Wash.). Federal regulations also acknowledge that '*load allocations are best estimates of the loading, which*

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may vary from reasonably accurate estimates to gross allotments' (40 CFR 130.2(g) emphasis added).

Gross allotments seem most appropriate to non-point sources where little information exists. Accurate and precise load estimation and the definition of the source area is far more complex for non-point sources than for point sources. The differences in control costs and water quality benefits should be weighed and may not justify the effort needed for estimates better than 'gross allotments'. The guiding principal should be 'Will a more accurate load estimate provide for better control actions, more equitable allocation of responsibility for load reduction and quicker improvement in water quality?'

Idaho's short TMDL development schedule and the regulatory allowances emphasized above point to phased TMDLs. In a phased TMDL much is yet unknown and the initial loading analysis may be very inexact with a large margin of safety to account for uncertainty. The initial phase focuses on what is known and load reductions move toward the eventual goal (by targeting more obvious source problems earlier in the implementation plan). Essential to a phased approach is inclusion of a plan to gather the data needed to refine load estimates and their allocation.

The EPA recognizes any TMDL can be revised at any time following due process, and that phased TMDLs will be the rule rather than the exception when dealing with non-point sources. The expectation is that rough load estimates will be counterbalanced by a greater commitment to future monitoring designed to better those estimates.

A complete loading analysis lays out a general pollution control strategy and an expected time frame in which water quality standards will be met. For narrative criteria, e.g. sediment and nutrient, the ultimate measure of attainment of Idaho's water quality standards is full support of beneficial uses. Idaho DEQ uses rapid bio-assessment techniques and has adopted a waterbody assessment process for determining beneficial use support taking into account biological, chemical and physical data. The DEQ will use its waterbody assessment process to ultimately determine when narrative criteria are being met. Long recovery periods (greater than ten years) are expected for TMDLs dealing with non-point sources, especially for sediment and temperature.

Implementation Plans

While it is recognized that TMDL implementation is essential to water quality improvement, it is not currently part of a TMDL submitted for EPA approval. An implementation plan is a separate document, guided by an approved TMDL, which provides details of the actions needed to achieve load reductions, a schedule of those actions, and specifies monitoring needed to document action and progress toward meeting water quality standards. The state has

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committed itself to developing implementation plans within 18 months of TMDL approval. Important elements of these plans are:

- CPollutant control actions are based on the load allocations in the TMDL
- CSets a time by which water quality standards are expected to be met, including interim goals or milestones as deemed appropriate
- CSchedules the what, where, and when of actions that are to take place
- CIdentifies who will be responsible for undertaking planned actions
- CSpecifies how completion of actions will be tracked
- CIcludes a follow-up monitoring plan to address data gaps, and how data will be evaluated and used to recommend revisions to the TMDL
- CDescribes monitoring to document attainment of water quality standards, including evaluation and reporting of results

Where long recovery times are expected it is recommended that interim water quality targets be established. Interim targets allow finer tuning of mid-course corrections in actions particularly relevant to non-point source controls. Surrogate measures may be employed, commonly for narrative criteria. Surrogates are a characteristic of a water, its biota, or environs related to or affected by pollutant loads, but not something which is directly discharged or could be allocated to sources. Use of surrogates often provide the link to beneficial uses and they are employed to more easily gauge the progress of implementation. For example, pool volume may be a surrogate for sediment loading which more directly expresses the affect of increased sediment on fish and more visibly responds to sediment load reductions.

There may be more than one implementation plan which cover different water quality limited waterbodies within a subbasin. An implementation plan (or plans) is expected to be completed and on file at DEQ within 18 months of EPA approval of a TMDL.

Implementation plans will be cooperatively developed by DEQ, the WAG, if one exists, and 'designated agencies' (see page 6). Specific control actions will be those recommended by the WAG. These plans will be reviewed by the WAG and BAG, and subject to DEQ approval that they will lead to meeting state water quality standards. DEQ will be a repository for approved implementation plans and will incorporate them into Idaho's water quality management plan.

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Workplans and Critical Milestones

Workplans will be developed which identify the principal author and a time line with dates for the following critical milestones:

- CDraft Subbasin Assessment prepared by DEQ
- CSubbasin Assessment presented to WAG or BAG
- CInstream water quality targets determined
- CDraft Loading Analysis ready for review
- CProposed load allocations presented to WAG or BAG
- CCompleted Draft TMDL ready for formal public comment
- CFinal TMDL ready for submittal to the EPA

Total maximum daily loads should be initiated by a workplan. The workplan, and any subsequent revisions will be on file with the DEQ TMDL coordinator. These workplans will be made available to the interested public, particularly BAGs, WAGs and designated agencies assisting in TMDL development. To allow sufficient time for public comment and response prior to submittal, the time line should provide for a completed draft TMDL ready for public comment by September 1st of the year of completion.

Phased TMDLs and Implementation Ramp

A phased approach is typically needed when nonpoint sources are a large part of the pollutant load, information is limited, or narrative criteria are being interpreted. Under these circumstances, common among Idaho TMDLs, there is often great uncertainty in the load capacity and a large margin of safety is used to assure meeting Idaho water quality standards. Consequently, there is great uncertainty in load allocation.

This calls for a “ramping up” of implementation in which the more obvious sources of load reduction are scheduled for action first, with increasingly difficult and less cost effective load reductions scheduled later. Essential to this strategy is gathering of information which will allow refinement of the loading analysis and will document whether restoration of beneficial uses occurs earlier than first thought.

The TMDL can be revised upon new data which indicate a revision in the loading capacity (better knowledge of relation between loading and water quality), or deviation from anticipated load reductions. These revisions may be up or down, resulting in less or more control actions needed than originally determined. In theory, great initial uncertainty and a corresponding large margin of safety results in an initial load capacity conservative on the side of assuring water quality.

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Assistance of Other Agencies

The DEQ welcomes the assistance of other agencies, or private organizations, with the resources and interest in TMDL development. We recognize that many others hold information and expertise important to TMDL development and encourages those entities to work with DEQ. Furthermore, DEQ believes outside assistance will be essential to the development of sound implementation plans and practical actions needed to restore beneficial uses in impaired waters. As the lead agency in TMDL development, DEQ lists the following requirements for assistance:

- ! Must be willing to meet Idaho's schedule for TMDL completion.
- ! Efforts must be coordinated with DEQ and products are subject to review and acceptance by DEQ.
- ! Content must follow format set by DEQ (e.g Suggested TMDL Outline).
- ! The appropriate BAG and, if applicable, the WAG will be informed of such cooperative arrangements.
- ! Cooperators must have the expertise and resources to follow through.

In most subbasins DEQ will do the water quality assessment and look to other entities to assist in the loading analysis and especially implementation. Exceptions may occur in subbasins or smaller watersheds where land management agencies or other groups are responsible for more than 75% of the land. The Forest Service, for example, may want to develop TMDLs for watersheds they largely manage. But only DEQ can submit TMDLs for Idaho waters to EPA for approval.

Public Involvement and Comment

Idaho Code section 39-3611 states that TMDLs shall be developed in accordance with section 39-3614 (duties of the basin advisory group), section 39-3616 (duties of each watershed advisory group) and the federal Clean Water Act. Idaho Code section 39-3612 states that after a TMDL is completed the Director shall, subject to the provisions of Idaho Code section 67-5200, adopt the processes as part of the state's water quality management plan pursuant to the federal Clean Water Act. Federal regulations act also require public participation in Clean Water Act decisions (40 CFR Part 25)

BAGS are to review the development and implementation of the TMDL processes.

WAGs are to develop and recommend actions needed to effectively control sources of pollution. In doing so, the WAGs and the Director are to employ all means of public involvement deemed necessary

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or required under Idaho Code section 67-5200 and shall cooperate fully with the public involvement or planning processes of other appropriate public agencies.

In meeting these various requirements, DEQ will seek public involvement as follows:

Drafts of the subbasin assessment and loading analysis will be presented to the WAG representing the geographic area covered. If no WAG exists, the applicable BAG will review these draft documents. Water quality targets and proposed load allocations will be shared with these groups prior to incorporation in a draft report. All WAG and BAG meetings are open to the public.

DEQ will publish notice in newspapers covering the TMDL geographic area advertising a thirty (30) day period for interested persons to review the draft TMDL and present comments to DEQ. If no WAG is involved in the development of the TMDL, DEQ will hold a public information meeting early in the comment period. The notice should be published with enough lead time to reasonably advise the public of the meeting. The notice should also provide where the public may obtain a copy of the draft TMDL prior to the meeting and a contact person for questions and to receive comments on the draft TMDL. At the meeting, DEQ should present information on how the TMDL was developed, how implementation will be planned and answer questions from the public, as well as take written comments.

If a WAG is involved in the development of the TMDL, a public meeting is not necessary but the thirty (30) day public comment period is still required. Public comments will be considered in preparing the final draft to be submitted to EPA.

The final TMDL document will have a section discussing public participation which will describe the WAG and BAG involved, attendance, and meeting dates. This section of the document will also have a copy of the public notice and the dates and newspapers in which it ran.

DEQ will prepare a summary of public comments received. This summary should consist of a list of those who commented, a compilation of comments into major points, and DEQ's response to each point. This responsiveness document will be part of the TMDL submittal package but not a part of the TMDL document.

Required Elements of Submittal

Idaho's DEQ must submit TMDLs developed pursuant to 303(d)(1) to the Environmental Protection Agency (EPA). They are required by law to review and consider approval of these TMDLs within 30 days of submittal. A proper TMDL submittal package consists of at least the following items:

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1) A transmittal letter:

This submittal letter must state the included document is to be considered as a TMDL, which §303(d) listed waterbodies are addressed, the geographical area covered, and the responsible contact person.

2) Subbasin assessment:

A subbasin assessment can be a separate document, but will generally be combined with a loading analysis. Based on best available information, a subbasin assessment describes the affected area, the water quality concerns and status of beneficial uses of individual water bodies, nature and location of pollution sources, and a summary of past and ongoing pollution control activities.

If a subbasin assessment finds that beneficial uses are met and developing a TMDL is not needed, it should be organized to end with a summary of the status of beneficial uses. Such a document is not subject to EPA approval but will be provided to EPA to apprise them of the rationale for not developing a TMDL. Because of the import of such conclusions and to the extent interim revisions to the current 303(d) list are being made, formal public review is still necessary.

3) Loading analysis

This may or may not be a second separate document, but it builds upon the subbasin assessment and is thus generally combined with it. The loading analysis presents the rationale and selection of instream water quality targets, a determination of the loading capacity for each water quality limited waterbody, an estimate of the current loads, and an allocation of loads or load reductions among sources of a pollutant. The load capacity is the level of pollutant loading expected to meet water quality criteria and thus restore beneficial uses to full support. A loading analysis is pollutant specific, but a single loading analysis might address more than one listed pollutant.

4) Public Comments and Response

Each TMDL document will go out for formal 30 day public comment as described more fully under public involvement and comment earlier in this policy statement. The package submitted to the EPA will include a summary of public comments received and DEQ's response to those comments.

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The submittal package is due to the EPA on or before December 31st of the year the TMDL is scheduled. With several TMDLs due in any given year it is desirable to stagger delivery dates. Without staggered delivery dates review times are likely to lengthen.

Specific Position Statements

Three Step Process

It is the intent of the DEQ that the TMDL process be divided into three distinct steps. These steps are 1) subbasin assessment, 2) loading analysis, and 3) implementation plan. This separation is taken for several practical reasons.

By addressing all water quality limited waterbodies on the current §303(d) list in a given subbasin at once an economy of scale in document preparation and review is sought. Furthermore, it is believed such aggregation will often reflect similarities in water quality problems, pollutant sources, and available information that will facilitate timely assessment. Making subbasin assessment the first step allows distinction of waterbodies which are truly water quality limited from those which are documented to be meeting water quality standards. To the extent possible, the subbasin assessment also identifies which pollutants are truly factors in causing impairment of beneficial uses, and the sources of those pollutants. In this way subsequent loading analysis is better defined.

A loading analysis needed only for those waterbodies and their watersheds which are documented in the subbasin assessment to be water quality limited, and only for those pollutants causing impairment. In addition to a loading capacity and allocations, a loading analysis sets out a general pollution control strategy and an expected time line for meeting water quality standards. The combination of subbasin assessment and loading analysis constitute the TMDL as required under §303(d) of the Clean Water Act.

Implementation plans are an essential third step in the process of restoring beneficial uses and assuring compliance with water quality criteria. They are not part of a TMDL submitted to EPA. These plans lay out a schedule of specific actions to be undertaken. They are to be developed within 18 months of EPA approval of a TMDL, and in accordance with the water quality goals and load allocations provided in a TMDL. Monitoring to ascertain achievement of water quality goals will be an essential part of implementation plans. Instream monitoring and assessment of water quality is the responsibility of DEQ. Monitoring the implementation and effectiveness of specific source control actions is the responsibility of designated state agencies as defined in IDAPA 16.01.02.003.23.

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Dynamic Nature of Water Quality Assessments

Because of possible mistakes in Idaho's §303(d) list, ongoing availability of more current water quality data, and evolving water quality sources and controls, it is expected that subbasin assessments will differ from the §303(d) list. On one hand, listed waters may be found to support beneficial uses, or listed pollutants may be found to not be causing violation of water quality standards. In such cases a loading analysis would not be required for the water or pollutant listed in error.

On the other hand, it is also expected that waters or pollutants not currently listed may be identified in the subbasin assessment as not meeting Idaho's water quality standards. Consideration of new waters versus new pollutants presents two different situations.

Take the case of a waterbody which is on the list. If a pollutant is identified as causing water quality impairment, but that pollutant is not listed, a loading analysis will be developed for that currently unlisted pollutant.

Now consider waterbodies which are not listed. If a currently unlisted water is identified as water quality limited in the assessment, the facts will be presented but no loading analysis will be performed. Simply identifying these new waters provides notice of impairment without preempting the normal 303(d) listing process and may allow time for voluntary actions prior to the next §303(d) list.

De-listing of Waterbodies Supporting Beneficial Uses

EPA guidance allows that §303(d) lists are dynamic and that the need for changes may arise between normal listing cycles. It is the position of the DEQ that load allocations are developed only for waters or portions of waters documented to be water quality limited during the subbasin assessment step of TMDL development. But federal regulations require TMDLs be developed based on the current list.

Therefore section §303(d) listed waters, or portions thereof, which are shown to be meeting their beneficial uses must de-listed or appropriate boundary changes made on or before TMDL submittal, or non-submittal as the case may be. To handle this situation DEQ will propose such modifications to the list concurrent with public review of the TMDL, or subbasin assessment if such changes result in no TMDL. When done concurrently, it will be clearly stated in the public notice that the public comment period is for review of both the proposed TMDL or subbasin assessment and any proposed changes to the §303(d) list identified in the subbasin assessment.

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Multiple Stressors

Stressors is a general term for pollutants and other factors which can affect beneficial uses. Total maximum daily loads will address all §303(d) listed stressors that are confirmed to be causative factors in water quality impairment for a particular waterbody. To the greatest extent possible, the DEQ will use its staff expertise and available information to economize by addressing multiple related stressors with allocation of one stressor. In some waters both a causative factor and its water quality effect are listed, e.g. nutrients & dissolved oxygen (DO) or sediment & habitat modification. Where the subbasin assessment demonstrates this link, the loading analysis will be developed for the cause and not the effect.

Factors Other Than Pollutants

It is Idaho DEQ's position that habitat modification and flow alteration, while they may adversely affect beneficial uses, are not suitable for development of TMDLs per §303(d) of the Clean Water Act. There are no Idaho water quality criteria for habitat or flow, nor are they suitable for estimation of load capacity or load allocations. In addition, jurisdiction over stream flow is not the purview of DEQ. Because of these practical limitations, TMDLs will not be developed to address habitat modification or flow alteration.

For many of the water quality limited waters on Idaho's §303(d) list this will have little effect. This is because concerns which resulted in a listing for habitat modification are often reflected in other listed *pollutants*—sediment or temperature, for example. In this case, actions taken to address sediment or temperature are likely to improve habitat as well. For flow alteration, other management alternatives, outside the TMDL process, will likely be needed.

Applicability of Other Water Quality Projects

Much good work has already been done or is underway in Idaho to improve water quality. This work includes many projects under the Non-point Source Program, State Agricultural Water Quality Program, Clean Lakes Program, Superfund/RCRA cleanup plans, storm water control, federal watershed analyses, Cumulative Watershed Effects analysis (CWE) and others. The DEQ intends to build on these earlier efforts, which in some cases may largely meet the requirements of a TMDL. But it is expected that the many of these other efforts will assist more in implementation of TMDLs than their development.

Coordination With Bull Trout Plans

The development of TMDLs in Idaho will be closely coordinated with the preparation of bull trout key watershed plans. Where bull trout occur, the TMDL process will incorporate the

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work of bull trout recovery efforts and great care should be taken to avoid contradictions in findings or duplication of effort. However, the issues involved in bull trout conservation will often go beyond concerns about water quality addressed by a TMDL and will be addressed outside of the TMDL.

Best Available Information

In the development of TMDLs, every effort will be made to obtain all information pertinent to subbasin assessment and loading analysis within the time constraints of an eight-year schedule. At the outset of the process for a particular subbasin, a letter will go out to all known potential sources of data. This letter will request specific existing information be provided by a certain date.

Gathering of new information specific to the development of a particular TMDL will be limited by time and money. None-the-less it is desirable to devise plans and seek opportunities to address data gaps prior to and beyond TMDL submittal. Additional data gathering will be an integral part of the implementing a TMDL, and specific monitoring details will be incorporated into implementation plans.

For 1994/1996 listed waters, if sufficient data are not obtained, within the time specified, to resolve the beneficial use status of waterbodies in the “needs verification” category, such waterbodies will be included in the loading analysis as if they were not full support.

Loading estimates will be the best that the methods, time, and data available allow. It is likely that in many cases this will result in use of simple methods, such as export coefficients, and gross allotments for loads. The DEQ will not delay for the anticipated delivery of better data if doing so would jeopardize meeting the schedule for TMDL development. Such additional data would be used for future refinements of loads and implementation schedules following EPA approval of the TMDL.

Reasonable Assurance

EPA coined the phrase reasonable assurance in its April 1991 guidance document on TMDLs: *Guidance for Water Quality-based Decisions: The TMDL Process*. Reasonable assurance applies only to situations in which load reductions necessary to meet the load capacity for a particular pollutant are split among both point and non-point sources. The Clean Water Act provides for certain control, though enforcement, of point sources, but leaves non-point source control to states through largely incentive based mechanisms. Therefore EPA feels assured point source load reductions will happen, and are inclined, in mixed source situations, to require

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all necessary reduction in a pollutants load come from the point sources alone, unless there are reasonable assurances that the non-point sources reduction will indeed be achieved.

While not a regulatory requirement, EPA region 10 considers lack of reasonable assurance, where applicable, to be grounds for disapproval of a TMDL. Idaho has an EPA approved Nonpoint Source Management Plan which includes certification by the attorney general that adequate authorities exist to implement the plan. Idaho's water quality rules (IDAPA 16.01.02.350) states that current best management practices will be evaluated and modified by the appropriate designated agencies if found to be inadequate to protect water quality. In addition, if necessary, injunctive or other judicial relief may be sought against the operator of a nonpoint source activity in accordance with the DEQ Director's authorities provided by Idaho Code 39-108. The DEQ believes these provide all the assurance that is reasonable and necessary for any mixed source TMDL.

Pollutant Trading

The DEQ supports and encourages pollutant trading. Pollutant trading allows for exchange in pollutant reduction responsibilities or allocations identified in the TMDL. Through trading one party pays another to further reduce their reduction of a specific pollutant in exchange for a lessening in their own reductions, in essence buying a larger piece of a water's load capacity for their waste discharge. Clear and precise rules need to be set up and agreed to by all parties to the trading, including DEQ and EPA. Once in place, these rules allow the 'free market' to operate in achieving more cost effective pollutant reductions. Trading will be particularly important in watersheds with a mix of point and non-point sources of the same pollutant.

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Glossary

Allocation - a portion of the loading capacity given to a particular source. Point source allocations are termed **wasteloads**. Every point source must have a wasteload allocation. Non-point source allocations are simply called **loads**. Because of the diffuse nature of non-point sources, loads are typically allocated to particular areas, such as sub-watersheds, or types of activities, such as agriculture or forestry, or a combination.

Loading capacity - the greatest amount of pollutant loading a water can receive without violating water quality standards

Load allocation (LA) - the portion of a receiving water's loading capacity that is attributed either to one of its existing or future non-point sources of pollution or to natural background.

Margin of safety (MOS) - this is a portion of the loading capacity not allocated to pollutant sources so as to account for uncertainty in the relation of loading capacity to water quality standards. A margin of safety is used to assure water quality standards will be met even when loading capacity is not well known.

Subbasin - One of 84 pre-delineated watersheds encompassing the State of Idaho. ~~Subbasins~~ are divided into fourth field hydrologic units as published by the USGS.

Target - a measurable quality of water or stream condition which forms the basis for load capacity. Targets arise from water quality criteria in Idaho's Water Quality Standards and Wastewater Treatment Requirements (IDAPA 16.01.02). Where these criteria are numeric the target is merely the established numeric criterion for the pollutant of concern. When only narrative criteria exist for a pollutant, e.g. sediment or nutrients, a site specific interpretation of the criteria is required.

Total maximum daily load (TMDL) - simply the sum of the individual wasteload allocations (WLAs), load allocations (LAs), natural background, and a margin of safety (MOS); $TMDL = LC = WLA + LA + MOS$. In practice a TMDL includes documentation of the analysis which leads to the numbers.

Wasteload allocation (WLA) - the portion of a receiving water's loading capacity that is allocated to one of its existing or future point sources of pollution.

Water quality limited - denotes a stream or other waterbody not meeting state Water Quality Standards. For purposes of Clean Water Act listing these are waters that will not meet standards even with application of required effluent limitations.

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Attachment A - Idaho's Eight (8) Year TMDL Development Schedule

STATE OF IDAHO

Eight (8) Year TMDL Schedule

April 3, 1997

YEAR	DEQ Region	Subbasin Code (or Waterbody Name)		
1997 (5, 38)	<i>Coeur d'Alene</i> <i>Lewiston</i> <i>Twin Falls</i>	SF Coeur d'Alene (14) Paradise Creek (1) Mid-Snake (14)	Lake Coeur d'Alene (1)	Spokane River(8)
1998 (6, 61)	<i>Boise</i> <i>Coeur d'Alene</i> <i>Idaho Falls</i> <i>Lewiston</i> <i>Pocatello</i> <i>Twin Falls</i>	Lower Boise (11) <i>(working on subbasin assessments for subsequent TMDLs)</i> 17040202 (2) Upper Henry's Fk Winchester Lake (1) <i>(working on subbasin assessments for subsequent TMDLs)</i> 17040208 (27) Portneuf R <i>(working on subbasin assessments for subsequent TMDLs)</i>	17050121 (6) MF Payette 17060204 (14) Lemhi R	
1999 (13, 143)	<i>Boise</i> <i>Coeur d'Alene</i> <i>Idaho Falls</i> <i>Lewiston</i> <i>Pocatello</i> <i>Twin Falls</i>	Lower Payette (7) L. CDA River (10) 17040203-4 (13) Lower Henry's Jim Ford Creek (1) 17040207 (18) Blackfoot R 17040209 (3) Lake Walcott	17050105-7 (9) Owyhee R 17010214 (18) Pend Oreille L 17040217 (6) Little Lost R Cottonwood Cr. (1) 17040212 (31) Upper Snake-Rock	17060303 (26) Lochsa R

YEAR	DEQ Region	Subbasin Code (or Waterbody Name)		
2000 (13, 157)	<i>Boise</i>	17050113 (18) SF Boise R	17060208 (21) SF Salmon R	17050111 (9) N&MF Boise R
	<i>Coeur d'Alene</i>	17010215 (10) Priest Lake	17010305 (8) Upper Spokane R	
	<i>Idaho Falls</i>	17040104 (5) Palisades	17060203 (7) Mid Salmon-Panther	17060207 (9) Mid Salmon -Chamberlin
	<i>Lewiston</i>	17060307 (19) Upper NF Clearwater	17060302 (13) Lower Selway R	
	<i>Pocatello</i>	16010102 (5) Central Bear	16010201 (17) Bear Lake	
	<i>Twin Falls</i>	17050102 (16) Bruneau R		
2001 (9, 130)	<i>Boise</i>	17050115 (1) Mid Snake-Payette	17050201 (8) Brownlee Reservoir	17050104 (10) Upper Owyhee R
	<i>Coeur d'Alene</i>	17010302 (14) SF Coeur d'Alene R		
	<i>Idaho Falls</i>	17060201 (14) Upper Salmon R	17060202 (6) Pahsimeroi R	
	<i>Lewiston</i>	17060305 (55) SF Clearwater R		
	<i>Pocatello</i>	16010202 (14) Middle Bear R		
	<i>Twin Falls</i>	17040219 (8) Big Wood R.		
2002 (10, 143)	<i>Boise</i>	17050103 (21) Middle Snake-Succor	17050120 (11) SF Payette	
	<i>Coeur d'Alene</i>	17010304 (45) St Joe R ²		
	<i>Idaho Falls</i>	17040205 (21) Willow Ck	17040201 (1) Idaho Falls	
	<i>Lewiston</i>	17060304 (8) MF Clearwater R	17060308 (22) Lower NF Clearwater	
	<i>Pocatello</i>	16010204 (5) Lower Bear-Malad R		
	<i>Twin Falls</i>	17040210 (5) Raft R	17040211 (4) Goose Cr	

YEAR	DEQ Region	Subbasin Code (or Waterbody Name)		
<p>2003 (9, 176)</p>	<p><i>Boise</i></p> <p><i>Coeur d'Alene</i></p> <p><i>Idaho Falls</i></p> <p><i>Lewiston</i></p> <p><i>Pocatello</i></p> <p><i>Twin Falls</i></p>	<p>17050123 (15) NF Payette</p> <p>17010301 (35) Upper Coeur d'Alene</p> <p>17040218 (11) Big Lost R</p> <p>17060108 (24) Palouse R</p> <p>17040206 (12) Am Falls Res</p> <p>17040220 (3) Camas Ck</p>	<p>17050124 (12) Weiser R</p> <p>17060306 (58) Clearwater</p> <p>17040221 (6) Little Wood R</p>	
<p>2004 (11, 83)</p>	<p><i>Boise</i></p> <p><i>Coeur d'Alene</i></p> <p><i>Idaho Falls</i></p> <p><i>Lewiston</i></p> <p><i>Pocatello</i></p> <p><i>Twin Falls</i></p>	<p>17050108 (11) Jordan Ck</p> <p>17010104 (9) Lower Kootenai R</p> <p>17040214 (4) Beaver-Camas Ck</p> <p>17060209 (23) Lower Salmon R</p> <p>17040105 (1) Salt R.</p> <p>17050101 (8) CJ Strike Reservoir</p>	<p>17060210 (8) Little Salmon R</p> <p>17010213 (10) Lower Clark Fork</p> <p>17040215 (6) Medicine Lodge</p> <p>16010203 (1) Little Bear-Logan</p>	<p>17040216 (2) Birch Ck</p>
<p>2005 (7, 46)</p>	<p><i>Boise</i></p> <p><i>Coeur d'Alene</i></p> <p><i>Idaho Falls</i></p> <p><i>Lewiston</i></p> <p><i>Pocatello</i></p> <p><i>Twin Falls</i></p>	<p>17050112 (9) Boise-Mores Ck</p> <p>17010105 (6) Moyie R</p> <p>17060205-6 (13) MF Salmon R</p> <p>17060101 (5) Hells Canyon</p> <p>(Will assist adjacent regions in development of TMDLs)</p> <p>17040213 (9) Salmon Falls Cr</p>	<p>17010306 (3) Hangman Ck</p> <p>17060103 (1) Lower Snake-Asotin</p>	

EXPLANATORY NOTES

- a) Named waterbody in bold denotes high priority TMDL identified in Idaho's 1996 § 303(d) list.
- b) Eight digit code denotes subbasin (i.e. USGS Cataloging Unit).
- c) Number in () following 8-digit subbasin code denotes # of segments in subbasin on 1996 § 303(d) list.
- d) Pair of numbers below year indicates number of subbasin TMDLs scheduled for completion in that year followed by the total number of 303(d) listed segments addressed by those TMDLs.
- e) Some large subbasin's (e.g. 17060306 Clearwater) may be split in two for TMDL development. These are not listed twice, but rather are listed only in the final year when the second TMDL for the subbasin is to be completed.

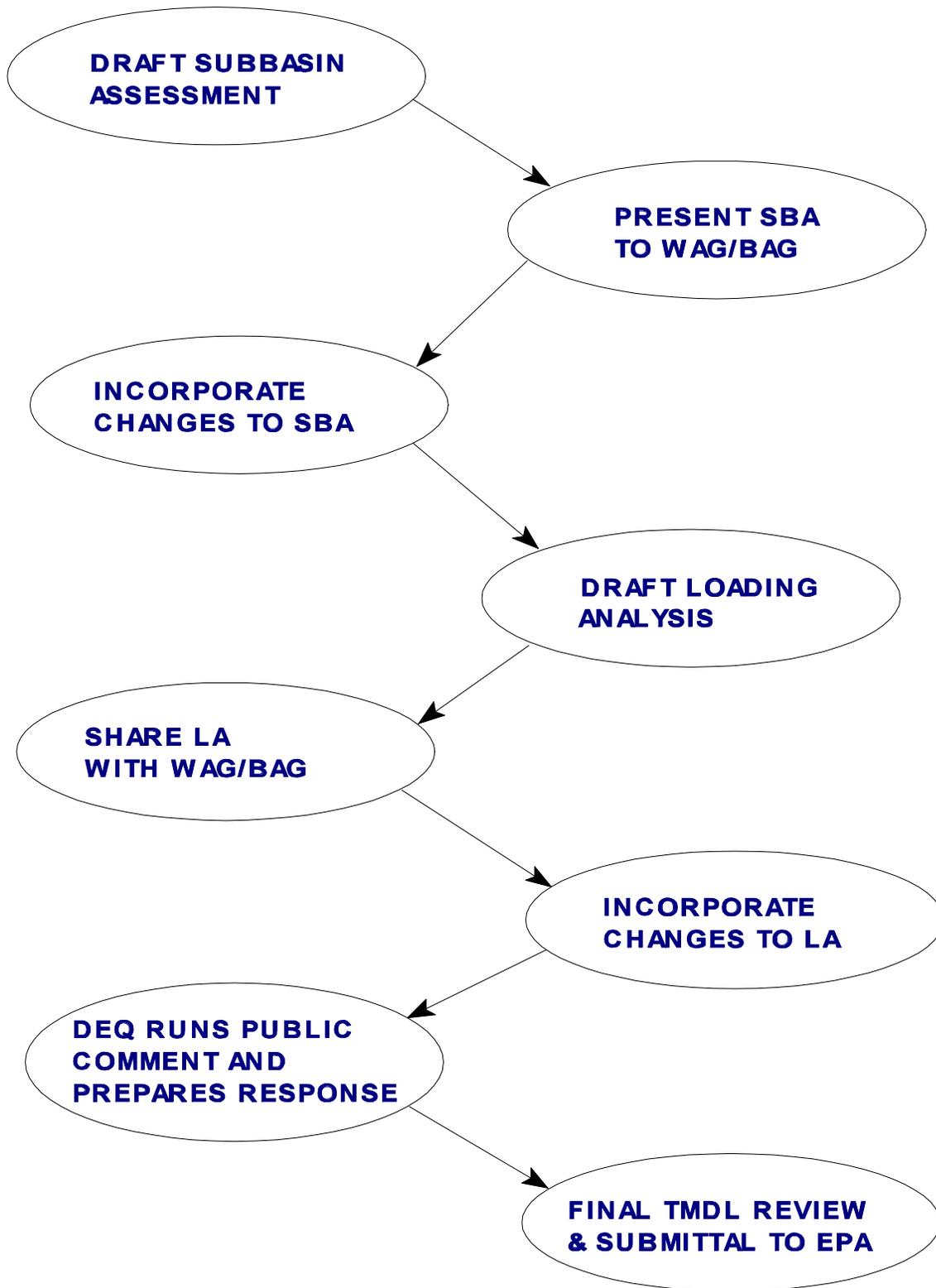
Endnotes:

1. The sequencing of TMDL development reflected in this Schedule is premised upon existing information, severity of pollution, existing resources, priorities established by Basin Advisory Groups and coordination with the activities of other state and federal agencies. The sequencing of TMDL development in Idaho's Schedule may change as additional information becomes available concerning impacts or potential impacts to beneficial uses within particular subbasins, as resources become available to complete development on TMDLs on a particular subbasin, or as priorities and activities of other state and federal agencies change.

Any change in TMDL sequencing from this Schedule will not be made until DEQ receives recommendations from applicable Basin Advisory Groups concerning such change. Thereafter, DEQ will consult with EPA concerning such change and notify Plaintiffs, Intervenors and other interested parties concerning such change. Any change in sequencing of TMDL development will not affect the overall pace or the eight (8) year time to complete TMDLs in this Schedule.

2. The problem assessment for § 303(d) waters flowing into the St. Joe River upstream from the St. Maries River will be completed by 2000. The TMDL for the entire St. Joe River subbasin will be completed by 2002.

Attachment B - TMDL Development Process



A
SUGGESTED
TMDL

Outline

May 23, 1997

prepared by Don A. Essig

Water Quality Assessment and Standards Bureau
Idaho Division of Environmental Quality

Condensed TMDL Outline

1. EXECUTIVE SUMMARY

2. SUBBASIN ASSESSMENT

(Covers all listed pollutants, conducted at scale of 4th field HUC)

2.1 Characterization of Watershed

2.2 Water Quality Concerns & Status

2.3 Pollutant Source Inventory

2.4 Summary of Past and Present Pollution Control Efforts

3.0 TMDL - LOADING ANALYSIS AND ALLOCATION

(For each pollutant contributing to use impairment, conducted at 5th or 6th field watershed scale)

Loads may take non-traditional forms, such as miles of roads of a certain condition, and desired outcome may also take non-traditional form, such as number of active redds, residual pool volume, percent fine, et cetera. If non-traditional pollutant and water quality measures are used the relation of one to the other, and to existing water quality standards, must be clearly explained. Links between pollutants may be used but must be fully explained.

3.1 Instream Water Quality Target(s)

3.2 Load Capacity

3.3 Estimates of Existing Pollutant Loads

3.4 Load Allocation

4.0 REFERENCES

SUBBASIN ASSESSMENT: CRITICAL QUESTIONS

2.1 Characterization of watershed

1. What are the physical and biological characteristics of the subbasin

2.2 Water Quality Concerns and Status

1. Which waterbodies in the subbasin are water quality limited?
2. What are their causes of impairment (ie. pollutants)?
3. What are their beneficial uses and relevant criteria in the Idaho standards?
4. What are the data on current and historic water quality and beneficial use status?
5. Which §303(d) listed waters are truly water quality limited and need a TMDL?
6. What are they key indicators of beneficial use impairment?
7. What gaps in data can be identified?

2.3 Pollutant Source Inventory

1. What and where are the major sources of pollutant in the subbasin?
2. Which subwatersheds likely produce the greatest loads?
3. How are different pollutants related, and how does land use or source type affect their quantity and behavior?
4. What is know about the delivery potential and variability of these sources?
5. What gaps in data can be identified?

2.4 Summary of Past and Present Pollution Control Efforts

1. What have been the pollution control efforts to date?
2. Are present and planned activities expected to achieve water quality standards in a reasonable time?
3. Why have efforts to date been in adequate?

TMDL LOADING ANALYSIS AND ALLOCATION: CRITICAL QUESTIONS

3.1 Instream Water Quality Target(s)

1. What is the critical time period for use impairment?
2. What are the measurable endpoints of water quality restoration?
3. Where will the endpoints be monitored?

3.2 Load Capacity

1. What is the maximum loading of a pollutant which will allow a waterbody to meet water quality standards?
2. How does that capacity vary with season and location in the watershed?
3. What is the uncertainty in the loading capacity?

3.3 Estimates of Existing Pollutant Loads

1. How much greater than the loading capacity is the total existing load?
2. What portion of the existing load is natural or background?
3. What is the estimated contribution of each source to the total existing load?
4. How do these contributions vary with season and location in the watershed?
5. What is the uncertainty in the estimates of these loads?

3.4 Load Allocations

1. How much of the load capacity is reserved as a margin of safety?
2. How much of the load capacity is accounted for by background or other existing loads that will not be allocated an reduction?
3. How much will each source have to reduce its load in order to fit within the remaining load capacity?
4. When will these load reductions be met?

Annotated TMDL Outline

FRONT MATTER

Title Page

- Subbasin Assessment and Total Maximum Daily Load for <Your Watershed>
- Date
- Author(s)

Table of Contents

- for all front matter which follows, the body of report, and the back matter

List of Figures

- numbered consecutively in order of appearance, including any figures in appendices

List of Tables

- numbered consecutively in order of appearance, including any tables in appendices

List of Appendices

- in order of mention in text

List of Abbreviations

Annotated TMDL Outline

1. EXECUTIVE SUMMARY

Suggested Detail:

- 1) Watershed at a glance:
 - Area and streams at question
 - Parameters of concern
 - Beneficial uses affected
 - Known sources

- 2) Key findings
 - Streams requiring TMDLs
 - Key indicators of impairment
 - Water quality targets
 - Major sources and load reductions needed
 - Time by which water quality standards will be met

2. SUBBASIN ASSESSMENT

2.1 Characterization of Watershed

2.1.1 Physical and Biological Characteristics

Narrative, maps, or tables describing location, drainage area, precipitation, runoff, topography, vegetation, soils, geology. Must have map(s) showing major drainages, watershed and sub-watershed boundaries, 303(d) streams, general location within state.

Suggested detail:

- 1) climate description of a representative station
 - precipitation- mean annual & seasonal distribution
 - temperature - monthly mean highs and lows, extreme highs
 - cloudiness - percent possible sunshine by month from nearest station

- 2) subbasin characteristics
 - hydrography (Map showing subbasin & sub-watershed boundaries, drainage network, location of weather and flow gaging stations)
 - geology and/or soils (dominate rock and soil types) - describe soil depth, texture, and erodibility factor
 - topography - elevation, slope, and aspect
 - vegetation - distribution of existing land cover (minimum Anderson level 1)
 - fisheries - key Bull Trout Watersheds, distribution (known occurrence) of sensitive, threatened or endangered aquatic species

- 3) sub-watershed characteristics (5th field HUC)
 - watershed area (Table listing area and attributes by 5th field HUC)

Annotated TMDL Outline

watershed attributes (landform, dominate aspect, relief ratio, mean elevation, dominant slope, hydrologic regimes, annual or unit area runoff)
current mass wasting potential (e.g., landslide frequency)

- 4) stream characteristics
 - narrative description of valley & channel types (e.g., source, transport, and response segments, Rosgen channel types, gradients, width/depth ratios)
 - general bed sediment character (e.g., granitic parent material-sand size substrate)
 - riparian characteristic - floodplain width, riparian vegetation type & extent

2.1.2 Cultural Characteristics

Population, cities, counties, state, land ownership, land use, roads, dams, diversions, history. A map showing prominent cultural features would be useful.

Suggested detail:

- 1) land Use:
 - map or bar chart of different land uses (Anderson Level 1 or better)
 - trends in land use
 - map(s) showing location and types of roads
- 2) land ownership, cultural features, and population
 - map showing county boundaries, location of cities, major land ownership, and cultural features such as dams and major NPDES facilities
 - demographics - brief description of population distribution and trends
- 3) history and economics
 - principal economic activities, industries
 - dates of major water resource activities such as dams & diversions, NPDES facilities
 - existing local government & civic groups working on water quality issues

2.2 Water Quality Concerns & Status

2.2.1 Water Quality Limited Segments Occurring in the Subbasin

Waterbody name & id, boundaries of water quality limited segment, listed pollutants, when first listed, and source of data for listing. This is best summarized in a table.

Suggested detail:

- 1) Narrative description of §303(d) listed segments
- 2) Map showing the location of listed segments

Annotated TMDL Outline

- 3) Table listing segments, water body ID, pollutants, etc...

2.2.2 Applicable Water Quality Standards

What are the designated and existing beneficial uses for waterbody and what water quality criteria (narrative & numeric) are relevant in each case?

Suggested detail:

- 1) Table listing beneficial uses by segment and relevant state criteria including any site specific criteria. Detailed citation of the standards should be left to an appendix.
- 2) Discuss any evaluation of appropriateness of designated uses or development of site specific criteria that may be pursued.

2.2.3 Summary & Analysis of Existing WQ Data

What water quality data exists, including bio-monitoring and particularly BURP results and what does this data say about beneficial use status and exceedance of criteria? All previously reported data should be cited, any new or previously unreported data should go into an appendix. Cover both listed and unlisted waters. Start with graphical analysis (time series, box plots) & keep statistics simple, medians and percentiles may be more appropriate than means and standard deviation. Look for any discernable trends in water quality or beneficial use status. Identify the key indicators, critical reaches and time periods for use impairment.

Suggested detail:

- 1) Table of data sources pertinent to subbasin assessment
- 2) Flow characteristics for a representative station or stations
 - average annual hydrograph (by month or better)
 - average and extreme base and peak flows & bankfull flows
 - any known long term flow trends (i.e., major floods, seasonal patterns, etc..)
 - average annual sediment yield (maybe a sed./discharge ratio)
- 3) Water column data
 - summarize existing water quality data (e.g., time series)
 - compare water quality data to criteria noting frequency and extent of criteria exceedance, by segment and use, as appropriate
 - are any trends in water quality or criteria exceedance evident
- 4) Other water quality data
 - summarize macroinvertebrate data (i.e., BURP), stream inventory data (e.g., BLM proper riparian functioning condition), fish counts (BURP or others), and other data as appropriate to pollutant(s) of concern

Annotated TMDL Outline

compare results to any published or other standards (e.g., Forest Plan standards)
are any trends evident

5) Status of Beneficial Uses

what does above data indicate about support status of beneficial uses when Water Body Assessment process is applied
how are beneficial uses being impaired (e.g. lack of overwintering habitat for trout)

6) Conclusions to be Drawn

identify time or times of critical flow for impaired uses
determine which listed streams are truly water quality limited and need a loading analysis
clarify boundaries or extent of water quality criteria exceedances or use impairment identify critical reaches, areas most sensitive to use impairment
identify key indicators of use impairment (e.g., relative volume of fine sediment in pools (V*))

2.2.4 Identify Any Data Gaps

where would additional monitoring clarify beneficial use support status, or better define extent or timing of water quality impairment

Suggested detail:

- 1) are there pollutants of concern for which data are insufficient to evaluate use impairment (e.g. bacteria and primary contact recreation)
- 2) is flow regime sufficiently known to quantify periods of critical flow
- 3) are there streams for which the beneficial use status is “needs verification”
- 4) where would additional sampling sites allow better resolution of extent of use impairment

2.3 Pollutant Source Inventory

2.3.1 Identify all Sources for Pollutant(s) of Concern

Provide an inventory of known or suspected sources of pollutant(s) including both point sources (type, location, pollutants discharged) and nonpoint sources (acres, location, pollutants yielded). Describe any relation(s) between different pollutants and what is known about the delivery potential to impaired segments of waterbodies. All previously reported data should be cited, any new or previously unreported data should go into an appendix.

Suggested detail:

- 1) Point Sources
 - description of any Superfund or RCRA sites
 - table showing NPDES permitted point sources (location, permit #, permit limits, discharge volume)

Annotated TMDL Outline

table of point sources covered by a general permit (location of each), and description of general permit requirements
list of any unpermitted point sources and what is known about them

2) Nonpoint Sources

table of land use acreage by sub-watershed (5th or 6th field HUC)
identify other sources such as roads, stream crossings, mining sites, etc.
identify natural processes which contribute pollutant loads (e.g. mass wasting)
narrative description of each category of nonpoint source

3) Pollutant Transport

what is known about the relative yield of pollutants from identified sources (by source type and/or subwatershed)
what is known about seasonal pollutant delivery from identified sources
describe relation(s) between pollutants specific to identified sources (i.e. physical or chemical associations)
discuss delivery potential to reaches most sensitive to impairment

2.3.2 Identify Any Data Gaps

where would additional data better define sources of pollution and facilitate later loading estimates

Suggested Detail:

1) Point Sources

are there pollutants of concern generated by existing point source but not currently monitored or for which better data is needed

2) Nonpoint Sources

where are greatest areas of uncertainty in pollution sources
where would more data on pollutant yield or more detailed breakdown of land use be of value

2.4 Summary of Past and Present Pollution Control Efforts

Evaluate successes and failures in pollution control to date. For water quality limited segments, why have efforts to date been inadequate? Are there actions planned which are expected to achieve water quality standards within a reasonable time?

Suggested detail:

- 1) history of issuance and revision to point source permits
- 2) other watershed improvement projects (public and private lands)
- 3) are ongoing activities expected to improve water quality in a reasonable time

Annotated TMDL Outline

3.0 TMDL - LOADING ANALYSIS AND ALLOCATION (For each pollutant)

Regulations allow that “Total maximum daily loads can be expressed in terms of either mass per unit time, toxicity, or other appropriate measures” 40 CFR 130.2(I). Loads may take non-traditional forms, such as miles of roads of a certain condition, and desired outcome may also take non-traditional form, such as number of active redds, residual pool volume, percent fine, et cetera. If non-traditional pollutant and water quality measures are used the relation of one to the other, and to existing water quality standards, must be clearly explained. Links between pollutants may be used but must be fully explained.

3.1 Instream Water Quality Target(s)

Goal is to restore “full support of designated beneficial uses” IC 39.3611, 3615

Select the measurable target(s) for instream water quality and loading analysis. This may involve translation of narrative water quality standards to measurable water quality targets. Be specific about beneficial uses protected, locations (waterbodies) where targets apply, and timeframe for reaching goal. If recovery time will be long it is best to specify interim goals.

Suggested Detail:

1) describe design condition(s) paying attention to critical time periods and reaches for impaired beneficial uses

2) target selection

A) Where numeric criteria exist numeric criteria must be met unless site specific criteria are considered

B) With narrative criteria it will be necessary to look to literature and apply local knowledge to come up with appropriate numeric surrogates, start with key indicator(s) identified in the subbasin assessment

identify possible targets levels for key indicator (e.g. if % bed fines is a key indicator what value is appropriate)

describe relation of considered targets to beneficial uses

look for a suitable reference stream and its value for the key indicator

consider surrogates for key indicator(s) taking into account cost & ease of monitoring and any relations between parameters documented in the subbasin assessment

clearly document rationale for target selection

In setting dates for target milestones try to account for lags in recovery and response to load reductions

3) identify monitoring point(s) (typically at downstream end of a listed segment but may be a critical reach further upstream), parameters to be monitored and methods. A detailed monitoring plan and feedback loop will follow from this in the implementation plan.

Annotated TMDL Outline

3.2 Load Capacity

Determine maximum load each waterbody can accommodate and still meet water quality standards. Must be at a level to meet “ ... water quality standards with seasonal variations and a margin of safety which takes into account any lack of knowledge ...”, CWA §303(d)(C). Likely sources of uncertainty include lack of knowledge of assimilative capacity, uncertain relation of selected target(s) to beneficial use(s), and variability in target measurement. The time period for which loading is calculated needs to be appropriate to the nature of the pollutant and use impairment, e.g. for the episodic discharge of sediment from nonpoint sources filling pools an annual average load is more appropriate than a daily load.

Suggested detail:

- 1) summarize or reference the method(s) of estimation (put details in an appendix)
- 2) describe all assumptions made
- 3) discuss sources and degree of uncertainty in estimate
- 4) describe how load capacity changes with season (based on critical time periods for beneficial uses and flow regime described in subbasin assessment) and location in the waterbody
- 5) present load capacity for each parameter or related parameters with season and location of application

3.3 Estimates of Existing Pollutant Loads

Regulations allow that loadings “... may range from reasonably accurate estimates to gross allotments, depending on the availability of data and appropriate techniques for predicting the loading”. 40 CFR 130.2(I). An estimate must be made for each point source. Non-point sources are typically estimated based on type of source (land use) and area, such as subwatershed, but may be aggregated by type of source or land area. If possible, background loads should be distinguished from man-caused increases in nonpoint loads.

Suggested detail:

- 1) summarize or reference the method(s) of estimation (put details in an appendix)
- 2) describe the data used and all assumptions made
- 3) discuss sources and degree of uncertainty in estimates
- 4) be sure to consider seasonal variation in loads characteristic of each source type
- 5) present loading rates for each parameter

Annotated TMDL Outline

What is background load and extent to which it is purely background or aggregated with other non-point loads. Remember 'background' is load which is not reducible.

Wasteloads are from point sources - summarized in table by source (location, type, load [annual range if known], NPDES permit #, etc.)

Loads are from non-point sources - summarized in a table by sub-basin and/or land use (location, type, load [annual range if possible], estimation method)

3.4 Load Allocation

The total allocations must include a margin of safety to take into account seasonal variability and uncertainty. Uncertainty arises in selection of water quality targets, load capacity and estimates of existing loads, and may be attributed to incomplete knowledge or understanding of system, assimilation not well known, lack of data, or variability in data. The margin of safety is effectively a reduction in loading capacity which 'comes off the top', i.e. before any allocation to sources. Second in line is the background load, a further reduction in loading capacity available for allocation. It is also prudent to allow for growth by reserving a portion of the remaining available load for future sources.

Apportion load capacity among existing and future pollutant sources. Allocations may take into account equitable cost, cost effectiveness, and credit for prior efforts but all within the ceiling of remaining available load. These allocations may take the form of percent reductions rather than actual loads. Each point source must receive an allocation. Non-point sources may be allocated by subwatershed, land use, responsibility for actions, or a combination. It is not necessary to allocate a reduction in load for all nonpoint sources so long as water quality targets can be met.

Suggested detail:

- 1) Margin of Safety
 - summarize sources of uncertainty discussed in previous two sections
 - describe any conservative assumptions in target selection or load estimation and use of critical design conditions that contribute to an implied margin of safety
 - present any explicit margin of safety used
- 2) Background
 - carry forward existing background load from section 3.3
 - note inclusion of any unallocated nonpoint sources
- 3) Reserve
 - discuss any allowance made for future growth, e.g. new or expanded point sources or expansion of nonpoint source activities
- 4) Apportion remaining available load, these are future loading targets, to the extent possible taking into account both spatial (location) and temporal (seasonal) distribution of sources

Annotated TMDL Outline

each point source must receive an allocation (a.k.a. Waste Load Allocation)
nonpoint sources can be allocated by subwatershed, land use category, responsibility for actions, or a combination (a.k.a. Load Allocation)
not all nonpoint sources need to be allocated as long as water quality targets can be met by reductions in those sources that do receive an allocation
allocations are best summarized in a table or tables
a time must be specified by which each (or all) allocations will be met
pollutant trading comes after allocations have been made

4.0 REFERENCES

Includes all literature cited in the main body of text or appendices

Annotated TMDL Outline

BACK MATTER

Appendices (these are where most of the supporting data goes, as well as model output, etc.)

Glossary

Chronology (perhaps, of significant events in TMDL development timeline)

Distribution list (who is supposed to receive a copy of this document)

Attachment D - Example Data Request Letter

January 1, 1998

Interested Party
Near a water quality limited stream
Anywhere, Idaho 88888

Dear Sir/Madam:

The Idaho Division of Environmental Quality (DEQ) is developing a total maximum daily load (TMDL) for the <Subbasin Name> subbasin (4th field Hydrologic Unit Number <8 digit code>). This TMDL is scheduled for submittal to the Environmental Protection Agency (EPA) by Dec. 31, <year due>.

Our first step in TMDL development is a subbasin assessment. This assessment will be used to develop a loading analysis. The contents of an assessment and loading analysis are described in the attached condensed TMDL outline.

To assist us in ensuring that its assessment and loading analysis are based on the best available information, we are soliciting information you may have on the <subbasin name> with regard to the following subject areas:

- CWater Quality Concerns and Status
- CPollutant Sources
- CPrior and Existing Pollution Control Efforts

Specifically the following types of information are requested:

- Cwater column chemistry data;
- Cphysical data - including thermograph, channel stability ratings, riparian proper functioning condition, etc.;
- Cbio-assessment data, particularly aquatic insect and fish sampling results;
- Cdata on location, size, types of specific land uses such as timber harvests, croplands, grazing allotments, and other nonpoint sources of listed pollutants in the watersheds of the attached lists of streams;
- Cand documentation of previous, ongoing, and planned actions to control those sources of pollution and their effectiveness.

We request your reply by March 31st, <year before due>. The data requested should be no more than five years old, though older data may be useful if more recent data is unavailable. Data should be in summary form along with appropriate interpretations, and data should be provided in a computer readable format with the format specified in a cover letter (e.g. Lotus ver 5, d-Base for Windows, Word Perfect 6.1). Please send your pertinent data to <regional office contact> at <OR address> along with the name or names or persons that can answer questions about the data provided.

If you have questions about the types of data requested, think other data may be relevant, or have general questions about the TMDL development process please contact Davy Crocket, 208-yyy-xxxx.

Sincerely,

Davy Crocket
DEQ TMDL Developer

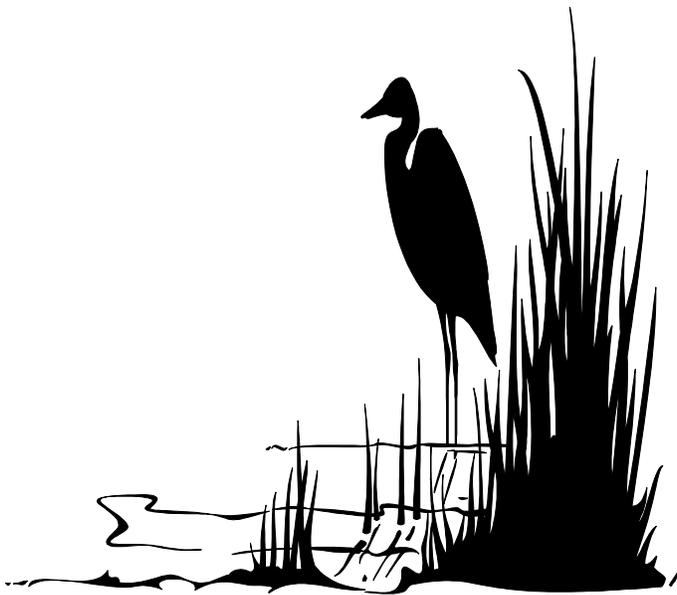
Attachment E - Example TMDL Workplan

This example skeleton workplan is for a subbasin of medium complexity and assumes a January 1 start two years before the TMDL is due. Greater detail is encouraged on a project specific basis. The workplan will need to be compressed if the start has been delayed. Simpler subbasins could be completed in less time and more complicated subbasins may take longer to complete. For complex subbasins an earlier start will be required.

- 1. Jan 1 to Mar 31 - Scoping, including request of data and information from agencies and industry for the subbasin**
- 2. Apr 1 to Jun 30 - Prepare draft Subbasin Assessment (SBA)**
- 3. July - Present draft SBA to WAG or BAG and take comments**
- 4. Aug and Sep - Consider WAG/BAG comments and revise SBA**
- 5. Sep 30 - Revised draft SBA ready**
- 6. Oct 1 to Oct 15 - SBA technical edit**
- 7. Oct 15 - SBA complete**
- 8. Oct 16 to Oct 30 - Select water quality targets**
- 9. Nov 1 to Feb 28 - Prepare drafts loading analysis (LA)**
- 10. Mar - Present draft LA to WAG or BAG**
- 11. Apr to Jun - Consider WAG/BAG comments and revise LA**
- 12. Jun 30 - Revised draft LA ready**
- 13. Jul 1 to Jul 15 - Combine SBA and LA and prepare executive summary**
- 14. Jul 16 to Jul 31 - Draft TMDL technical edit and legal review**
- 15. Aug 1 to Aug 15 - Prepare Draft TMDL for public comment**
- 16. Aug 16 to Sep 15 - Public comment period (30 days)**
- 17. Sep 16 to Oct 15 - Prepare public comment response summary and submittal package**
- 18. Oct 16 to Nov 14 - Final legal/administrative review**
- 19. Nov 15 - Final TMDL package ready to be submitted.**

APPENDIX D.
“DRAFT” OVERVIEW FOR THE IMPLEMENTATION OF NONPOINT
SOURCE TMDLs

FINAL DRAFT



OVERVIEW FOR THE IMPLEMENTATION OF NONPOINT SOURCE TMDLs

August 1999



IDAHO DIVISION OF ENVIRONMENTAL QUALITY
Water Quality & Remediation Division
Watershed & Aquifer Protection Bureau
1410 North Hilton e Boise, Idaho 83706

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1 PURPOSE

This document describes the necessary elements of a Total Maximum Daily Load (TMDL) and the subsequent implementation plan to address nonpoint source (NPS) pollution. This document is written for those who will be involved in preparing and implementing TMDLs. The reader is assumed to have a basic understanding of water quality issues and watershed management principles.

To be acceptable, a TMDL must be a thorough, objective-driven, long-term watershed enhancement plan with significant commitment demonstrated by local land owners and managers. Most importantly, the goals and objectives of the implementation plan must focus on achieving water quality standards and full beneficial use attainment at the earliest possible date.

This document is meant to outline the TMDL development and implementation processes and cannot describe the many and varied issues and technical methods related to overall watershed management practices.

Watershed plans can take many forms. The elements described in this document can be included in any watershed plan, regardless of its particular format. Similarly, the specific management practices and objectives of each watershed plan will be selected to suit the local situation. This document does not recommend management practices or objectives, but describes the necessary elements in a TMDL and implementation plan.

2 TMDLs, IMPLEMENTATION PLANS, WATER QUALITY LIMITED WATERS, AND THE §303(d) LIST

A TMDL is a water quality based loading goal for bringing a water body back into compliance with water quality standards and for improving water quality to the point where designated beneficial uses are fully supported. The implementation plan addresses pollution problems by systematically identifying those problems, linking them to watershed characteristics and management practices, and establishing objectives for water quality improvement. An implementation plan puts a TMDL into practice by identifying and implementing best management practices (BMPs) designed to achieve the targets outlined in the TMDL and restore the impaired beneficial uses.

The Clean Water Act requires states to routinely develop a list of water bodies that cannot meet water quality standards without the application of additional pollution controls. These waters are referred to as "water quality limited" and must be periodically identified in each state by the Environmental Protection Agency (EPA) or by the state agency designated with this responsibility. In Idaho, this responsibility rests with the Division of Environmental Quality (DEQ). Water quality limited water bodies requiring the application of TMDLs are identified in a document commonly referred to as the "§303(d) list." This list, developed by DEQ, is subject to public review and approval by EPA.

The §303(d) list is really a sub-set of the larger list of "water quality limited" water bodies. The §303(d) list consists of only those water quality limited water bodies which (a) do not, or will not, meet state water quality standards even with application of technology based controls (point sources) and required best management practices (non-point sources), and (b) do not yet have an approved TMDL. Water bodies on the mend, those for which implementation of an approved TMDL or other required pollution controls are

expected to lead to attainment of water quality standards, may still be water quality limited for a while, but will not be §303(d) listed. Other water quality limited water bodies are identified in DEQ's biennial Water Quality Status Assessment (§305(b)) report to EPA. In essence, TMDLs are the backstop to address water quality impairment that remains despite application of all existing federal, state, and locally required pollution controls.

The TMDL development process determines the pollutants or stressors causing water quality impairments, and identifies maximum permissible loading capacities for the water body in question. More complex and lengthy processes may be required where the contributions are from both point sources (e.g., sewage treatment plants, industrial facilities) and nonpoint sources (e.g., forestry, agriculture, grazing, and untreated urban storm water runoff). Where only nonpoint sources are involved, the TMDL development process may be less complex, although a thorough understanding of the watershed and its water quality is necessary in either case.

A TMDL should address whole watershed units whenever possible. A "watershed" is simply an area of land within which all surface runoff drains to a single receiving water body. Therefore, one or more TMDLs may be required within a basin. This philosophy of addressing whole watershed units is also consistent with the goals of the President's Clean Water Action Plan which was published in February 1998.

Nonpoint source pollutants are substances of widespread origin which run off, wash off, or seep through the ground, eventually entering surface or ground water. Pollutant loads for nonpoint sources are typically set for geographic units (watersheds)

or categories of nonpoint source (background, forestry, agriculture, etc.).

3 BASIC ELEMENTS OF A TMDL

A TMDL is a three step process and includes:

STEP One—Subbasin Assessment

1. Subbasin Assessment or Problem Description
2. Water Quality Concerns and Status
3. Source Identification
4. Summary of Existing Pollution Controls
5. Public Involvement

STEP TWO—Loading Analysis

1. Water Quality Goals
2. Load Capacity
3. Margin of Safety
4. Load Allocations
5. Public Involvement

STEP THREE—Implementation Plan

1. Proposed Management Measures
2. Timeline for Implementation
3. Identification of Responsible Participants
4. Discussion of Costs and Funding
5. Maintenance of Effort Over Time
6. Monitoring and Evaluation
7. Public Involvement

Many of the requirements for TMDL elements are included in a guidance document entitled Evidence For Development of Total Maximum Daily Loads (June, 1999), Guidance For Water Quality-based Decisions: The TMDL Process (April, 1991), and in a document entitled EPA Program Guidance on the TMDL Concept (1994). This document is written to primarily focus on the characteristics of the implementation plan, Step Three in the three step process for water quality management through TMDLs. However, a brief description of steps one

and two is included in this document for clarity.

Step One: Subbasin Assessment or Problem

Description

A subbasin assessment and problem description is required and should specify the following:

1. The water quality standards and criteria of concern, including the impaired beneficial uses;
 - C Which waterbodies in the subbasin are water quality limited?
 - C What are the causes of the impairment (ie. pollutants)?
 - C What are their beneficial uses and relevant criteria in the Idaho Standards?
 - C What are the data on current and historic water quality and beneficial use status?
2. Water quality conditions;
 - C What §303(d) listed waters are truly water quality limited and need a TMDL?
 - C What are the key indicators of beneficial use impairment?
 - C What gaps in the data can be identified?
3. The sources of pollution; and
 - C What and where are the major sources of pollutants in the subbasin?
 - C Which watersheds likely produce the greatest loads?
 - C How are different pollutants related, and how does land use or source type affect their quantity and behavior?
 - C What is known about the delivery potential and variability of these sources?
 - C What gaps in the data can be identified?
4. Summary of past and present control efforts

- C What have been the pollution control efforts to date?
- C Are present and planned activities expected to achieve water quality standards in a reasonable time?
- C Why have efforts to date been inadequate?

Step Two: Loading Analysis

The TMDL should, whenever possible, address the entire watershed, be based on the best available data, and on an understanding of the problems to be solved and underlying causes. Information on water quality conditions from DEQ's Beneficial Use Reconnaissance Project (BURP) is available from DEQ. Other sources of information may include public agencies, watershed councils, special districts, and a variety of local sources. To some extent, the types and sources of pollution causing the problem may be inferred from the nature of the problem and from local land use patterns and management practices. However, it will be necessary to document watershed conditions and water quality problems.

Short-cutting the assessment phase tends to reduce the opportunity for local stakeholders to examine and understand the issues. However, spending too much time and effort on the assessment phase can delay and draw resources away from implementation of the TMDL.

Documenting the factors in a watershed that influence water quality is difficult, in part due to natural variability. Therefore, TMDLs must accommodate some degree of uncertainty. The Code of Federal Section 40 Part 130.7(c) requires that TMDLs provide a "margin of safety." The greater the uncertainty in the watershed, the greater the margin of safety.

Overall, the purpose of a TMDL is to employ the best information available at the time to reduce pollution, improve water quality, and support beneficial uses. The point is not to exhaustively study natural systems. The subbasin assessment and problem description element of a TMDL will be adequate if it can describe problems sufficiently to justify the proposed objectives and actions.

The water quality target stated in the TMDL should be accompanied by objectives which quantify the desired change in water quality, beneficial use support, pollution loading, and/or other measurable indicators of stream or watershed conditions. In addition, the TMDL assigns load reductions to sources, and provides a target date for achievement of the goals and objectives.

Goals or targets included in TMDLs are general statements of intent, policy, and desired outcomes. Loads are specific, quantified statements of products to be created or conditions to be attained. The achievement of loads is always measurable and should identify the following criteria:

1. Instream water quality targets;
 - C What is the critical time period for use impairment?
 - C Where will the load be monitored?
2. Load Capacity;
 - C What is the maximum loading of a pollutant which will allow the waterbody to meet water quality standards?
3. Estimates of Existing Pollutant Loads; and
 - C How much greater than the loading capacity is the total existing load?
 - C What portion of the existing load is natural or background?
 - C What is the estimated contribution of each

source to the existing load?

- C How do these contributions vary with season and location in the watershed?
- C What is the uncertainty in the estimates of these loads?

4. Load Allocation

- C How much of the load capacity is reserved as a margin of safety?
- C How much will each source have to reduce its load in order to fit within the remaining load capacity?
- C When will these load reductions be met?

The targets and loads are essential because they are the basis for detailed implementation work plans and for the evaluation of program effectiveness.

Beneficial use support and compliance with state water quality standards are the ultimate measures of success for a TMDL and the implementation plan. Other aspects of watershed conditions such as erosion, riparian and upland vegetation, shade cover, and stream channel morphology often are quite useful in the short run as indicators of trends that will lead to water quality improvements. It is also useful to track the implementation and maintenance of the program.

It is critical that the targets and loads:

- C Adequately address water quality issues, with the appropriate margin of safety;
- C Be realistic and achievable;
- C Be measurable; and
- C Be matched to the findings in the subbasin assessment and problem statement.

A TMDL may include short and long-term targets. For example, if sediment reduction is a goal of the

TMDL, the short-term target in the implementation plan might include changing management practices in the riparian zone to protect and perhaps to reintroduce beneficial vegetation. Intermediate-range targets might include road culvert replacement, and long-term targets might include road reconstruction, relocation, or abandonment. DEQ recommends that the implementation plan include milestones with interim or mid-term targets designed to mark progress toward the long-term load reduction and ultimate goal of restoration of designated beneficial uses. For further information on TMDL development see A Suggested TMDL Outline (DEQ, 1997) and the guidance Evidence For Development of Total Maximum Daily Loads (DEQ, 1999).

Step Three: Implementation Plan

Proposed Management Actions

The implementation plan identifies and describes the specific pollution controls or management measures to be undertaken, the mechanisms by which the selected pollution control and management measures will be put into action, and describes the authorities, regulations, permits, contracts, commitments, or other evidence sufficient to ensure that implementation will take place. The plan also describes when implementation will take place, identifies when various tasks or action items will begin and end, when mid-term and final objectives will be met, and establishes dates for meeting water quality targets.

Application of effective BMPs is crucial to achieving the pollutant load reductions and targets of the TMDL. Consequently, the implementation plan, to the extent practicable, must be explicit about which BMPs or systems of BMPs will be employed to achieve the targets, where and when the BMPs will be employed, and how application

of the BMPs will achieve the stated targets. EPA guidance specifically identifies several criteria by which BMPs will be judged:

- C A data-based analysis showing that the selected BMPs have been demonstrated to be effective in addressing the issue or pollutant in question (i.e., a history of successful application in similar situations);
- C An explanation of the mechanisms by which application of the BMPs will be assured; and
- C A plan for tracking the implementation and effectiveness of the BMPs.

The DEQ and the other designated natural resource agencies will use these criteria in evaluating the likelihood that selected BMPs will achieve the targets and load reductions specified in the TMDL. The selection of BMPs may be very site-specific, and may change over time in response to changing conditions, opportunities, land manager preferences, and lessons learned. To the extent that BMPs can be anticipated to change over time, the TMDL implementation plan must describe the decision making process by which future BMPs will be selected, how effectiveness monitoring and other inputs will factor into the selection, and how interested stakeholders will be involved in the decisions. Effective TMDL implementation plans generally are designed to be flexible and adaptable over time. Therefore, it may be most appropriate to include detailed descriptions of the BMPs in an addendum.

Timeline for Implementation

Implementation plans are to be developed within 18 months of EPA approval of the TMDL and in accordance with the water quality goals provided in a TMDL package. Each associated implementation work plan should contain a timeline

with dates for starting and completing the work, and appropriate milestones for interim products. The discussion of midterm reviews and effectiveness evaluations is particularly important. Pursuit of TMDL targets and application of the BMPs may take years, perhaps decades. It may also be desirable to break implementation of the plan into logically sequenced phases.

Implementation will be unique in each watershed, but two general guidelines apply:

- C Address the causes of problems rather, then remediate the symptoms or effects; and
- C Work from the top of the watershed on down (e.g., upstream before downstream, tributaries before the main stem).

However, adhering rigidly to these first two guidelines can slow down implementation unnecessarily, so also keep the next two guidelines in mind:

- C Implementation may be faster and more efficient if measures are applied simultaneously across a whole watershed or if measures are implemented at selected sites throughout the watershed in a carefully considered and coordinated way; and
- C Where irreplaceable resources such as threatened or endangered aquatic species are at immediate risk, the implementation plan should move as quickly as possible to enhance critical water quality conditions.

Identification of Participants

The implementation plan must identify the roles, responsibilities, and commitments of the various

public and private participants. This will be achieved largely through the description of the objectives within an implementation plan. However, other more general commitments from supporters may be worth indicating. For example, certain entities may commit resources to monitoring, public information sharing, technical assistance, and administrative oversight.

Discussion of Costs and Funding

Each TMDL must estimate the costs associated with plan implementation. An implementation plan with no funding will result in little or no action. The plan should identify potential sources of funding, the mechanisms by which those sources will be tapped, and who will conduct the fund raising effort. Funds may come from any public or private source, and will include the investments made by loans, the landowners themselves, grants, cost-share funds, in-kind contributions, and donations. The plan should explore the potential to raise funds both outside and inside the watershed. Chapter Four of the Idaho Nonpoint Source Management Program (1999) includes a listing of local, state, and federal programs which may provide funding or other resources to help with nonpoint source implementation efforts.

Maintenance of Effort Over Time

It is important for the stakeholders to demonstrate an ongoing commitment to long-range implementation. This commitment to ongoing implementation should also be reflected in a number of the plan elements. These elements could include long-term conservation agreements, maintenance contracts, long-term conservation easements, modifications or revisions to existing land use plans, revisions to or new land use ordinances to name but a few. It is beyond the scope of this document to describe how each individual plan will accomplish this task.

In most cases, the problems leading to water quality limitations and §303(d) listing have accumulated over many decades, and may require a number of years to remedy. Some management actions can produce measurable, even visible results within a year or two. However, it may take many years to implement the type of wide scale treatments often necessary to improve water quality throughout a watershed. Additional years of continued effort and maintenance may be necessary before the practices have their desired effect of achieving and maintaining water quality standards and full beneficial use support.

Monitoring and Evaluation

Monitoring for implementation and effectiveness of the TMDL should be guided by the targets and load allocations of the TMDL and should track implementation of the selected pollution control measures, collect and analyze information on the effectiveness of the specific measures at achieving the water quality goals, and provide a “feedback” or “adaptive management process. The types of monitoring which may be needed include chemical, biological, and physical parameters depending on the watershed in question. The watershed advisory group implementing the TMDL should work closely with the designated agencies to ensure that monitoring efforts within the watershed are not duplicated. Certain agencies, such as DEQ, have monitoring responsibilities (e.g., the DEQ Beneficial Use Reconnaissance Project).

Effectiveness monitoring should evaluate the results of implementing various management approaches and document long range water quality improvements and beneficial use support trends. EPA guidance defines an adequate monitoring plan as tracking:

- C Implementation of BMPs;
- C Water quality improvements; and

- C Progress toward meeting water quality standards.

In a phased TMDL adequate monitoring also provides specific data needed to refine and improve initial loading capacity and allocations.

A high degree of commitment to ongoing monitoring of project effectiveness is an important element of the implementation plan. DEQ’s Beneficial Use Reconnaissance Project systematically reviews the beneficial use status of Idaho’s water ways. This along with site specific BMP effectiveness data collected by the designated agencies as listed in Idaho Code §39-3601 et. seq. for each NPS category will substantially cover the implementation monitoring needs of the state.

It is very important to use the monitoring results in a well thought out feedback loop process to evaluate the effectiveness of the actions and to improve the TMDL and implementation plan. Dates for interim program review must be built into the implementation timetable. Similarly, the monitoring plan must include at least a brief discussion of how and by whom the collected data will be analyzed and how the results will be used to make and incorporate revisions in the TMDL.

Public Involvement

Each watershed will have a unique set of interested and affected persons with a stake in developing and implementing the TMDL. The public must be involved in all steps of TMDL development, but are most heavily involved in implementation. Ideally, those who will be most closely involved in implementation should be involved in development of the implementation plan. The point is to seek as much public and private support for the implementation plan as possible in order to maximize its likelihood of success. Interested

stakeholders may include local land owners, other residents of the watershed, local governments, special districts, state and federal agencies, natural resource stewardship groups with local interests, and others. It is important to note that in addition to those who manage land in the watershed there are other people who will be affected by the TMDL and who will have an active interest in the aquatic resources being treated. Many of these people may have important contributions to make to the successful implementation of the plan.

Many private land owners and managers are understandably reluctant to have other people become involved in their private management decisions, but such interference is not the point of a TMDL or implementation plan. Rather than offering up every private land management plan for review, the emphasis instead should be on a general understanding of the condition of the watershed, what needs to be done within each land use type on an area-wide basis, and how everyone in the watershed can work together in a mutually supportive way, recognizing that surface waters of the state are public resources of concern to all. Although specific management measures for the watershed must be identified in the TMDL implementation plan, there is no requirement that they be approved by any public process.

To address these concerns Idaho adopted the Water Quality Law (Idaho Code §39-3601 et. seq.) to provide direction for local watershed planning and management. Under the law, appointed community-based Basin Advisory Groups, recommend water quality objectives to the DEQ concerning monitoring, designated beneficial use status revisions, prioritization of impaired waterbodies, and solicitation of public input. Local stakeholder based Watershed Advisory Groups are appointed by DEQ with advice from the

appropriate Basin Advisory Group. Watershed Advisory Groups advise DEQ on the development and implementation of TMDLs so that within a reasonable period of time beneficial uses are fully supported.

By its very nature, nonpoint source pollution is diffuse and may not be easily characterized. Therefore, as the watershed advisory group meets to begin the development of the implementation plan the watershed advisory group must carefully analyze the group of BMPs necessary to restore beneficial uses. However, the listing of BMPs should be broad enough to allow the individual cooperators within the basin the flexibility to choose BMPs which will complement their operations while helping to restore beneficial uses. The watershed advisory groups will need to work closely with each of the designated agencies and local organizations to ensure that the developed plan can and will be implemented.

4 EXISTING WATERSHED MANAGEMENT EFFORTS WHICH MAY CONTRIBUTE TO A TMDL

Many existing watershed management efforts already include a number of the essential elements of a TMDL. In some cases, it will require only a minor adjustment or expansion of these management plans for them to qualify as an implementation plan. In other cases, existing watershed management plans and projects which lack several key elements still can serve as the basis for a TMDL or implementation plan. Any watershed based natural resource management program with the appropriate water quality objectives can provide the basis for a TMDL if it:

- C Has a basic goal to meet or exceed water

- quality;
- C Fully describes and adequately addresses specific water quality issues (ie., identifies pollutants, loading, etc.);
- C Includes an action plan with quantifiable and measurable loads;
- C Is developed and implemented with the involvement and leadership of local stakeholders; and
- C Is adequately monitored and adjusted over time as indicated by the monitoring results.

Watershed management efforts resulting from the existing programs, such as the Clean Lakes Phase I, Clean Water Act §208 plans, Habitat Conservation Plans, Bull trout Conservation Plans, etc. may contribute significantly to TMDLs. The reader should keep in mind that federal and state programs vary considerably in their nature and scope, and that the site-specific plans resulting from any one of these programs also may vary. However, a review and understanding of existing plans could greatly decrease the time necessary to develop and implement a TMDL.

5 SUMMARY—PROCESS FOR DEVELOPMENT, IMPLEMENTATION, REVIEW, AND APPROVAL OF NPS TMDLs

Development

Total maximum daily loads may be developed by many different groups and organizations, in many different ways, and may even be developed by individual landowners in cases where those landowners manage large areas of land encompassing whole watersheds. In most cases, however, a partnership of watershed stakeholders will form to assist DEQ in producing TMDLs as

outlined in this document. Even if a governmental agency provides administrative leadership for the TMDL development, success depends on the representation and effectiveness of the local partnerships.

Federal law requires that the waterbodies on the §303(d) list be prioritized. The higher up on the priority list a water body is after prioritization, the more urgent it is for the development of a TMDL. To the extent that public agencies are limited in their ability to address waterbodies on the §303(d) list, they will generally focus their limited resources first on the higher priority waterbodies. However, motivated watershed stewards are encouraged to address water quality problems on any water body on the list as soon as possible, regardless of how it may be prioritized.

Review and Approval

Review and approval processes for TMDLs have undergone a number of changes over the years and may change again in the future in response to the changing roles and relationships between various federal and state agencies. In general, the following holds true:

- C DEQ writes the TMDL;
- C DEQ initiates a formal public review of the TMDL as required under the Clean Water Act; and
- C DEQ submits proposed TMDLs to EPA for final approval. Federal law requires that EPA be the agency to approve all TMDLs. At this point, the CWA requires EPA to approve or reject a proposed TMDL within 30 days of its submittal.
- C Implementation plan developed no later than 18 months after the TMDL has been approved as indicated in the *State of Idaho Evidence for Development of Total Maximum Daily Loads*.

Proposed TMDLs, whether new plans tailored specifically to the elements described herein or modifications of preexisting plans, will be evaluated using the criteria presented in the *State of Idaho Evidence for Development of Total Maximum Daily Load*.

Implementation

As a result of existing programs or mandates, certain agencies and organizations are particularly likely to take the lead on TMDL implementation. Idaho Code §39-3601 et. seq. specifies certain entities as the designated agencies for various land use activities. These include the Department of Lands for timber harvest and mining activities, the Soil Conservation Commission for grazing and agricultural activities, the Department of Transportation for public road construction, the Department of Agriculture for aquiculture, and DEQ for all other activities. These designated agencies are expected to take the lead in identifying and selecting BMPs used to reduce non-point source pollution, and leading implementation for their activity. Likely federal agencies include the Forest Service, Bureau of Land Management, Fish and Wildlife Service, and Natural Resources Conservation Service. Local organizations may include cities and counties, soil and water conservation districts, and other groups.

6 REMOVING OR DELISTING WATERS FROM THE §303(d) LIST

Why Bother to Delist?

The waterbodies on the §303(d) list have suspected or documented water quality problems. Federal and state laws require the protection of

beneficial uses and the development of a TMDL for all listed waterbodies. Removing water quality limited waters from the §303(d) list or delisting as TMDLs are developed, or as information is gathered to demonstrate water quality standards are met allows the natural resource agencies, basin advisory groups, watershed advisory groups, etc. to focus limited technical and financial resources on the waterbodies truly needing restoration.

DEQ believes that the best solutions to water quality problems are those with broad and active local support and involvement. Citizens throughout Idaho are anxious to proceed and in some cases are proceeding with ambitious watershed enhancement projects. However, in those areas with listed waterbodies where an effective local commitment to water quality improvement is slow to form, it will be necessary for DEQ (or other agencies) to move ahead with actions to implement the law and protect water quality. Failing to proceed in a timely manner could result in another §303(d) lawsuit with further court action resulting in TMDLs being developed and imposed with even less local involvement and support. The best way to avoid this situation is for local stakeholders and government agencies to join in partnership to address water quality problems and thus remove water bodies from the §303(d) list as soon as possible.

Delisting Water bodies from The §303(d) List

There are several ways that water bodies may be removed from the §303(d) list:

- C The data or analysis used to list the water is shown to be inaccurate or inadequate (i.e., the water body in question actually does meet standards);
- C The water quality standard violated by the water body is changed so that the water body no longer is in violation. This includes the

possibility that local conditions may be officially recognized as the local standard (e.g., allowing a higher stream temperature in a particular water body in recognition of "natural" conditions), or a change in use designation;

- C Water quality improves to meet standards;
- C TMDL is approved. However, this doesn't imply that all beneficial use are met only that the TMDL has been developed as required in the Clean water Act; or

- C Other pollution control requirements (e.g., stemming from agriculture, forestry management programs, etc.) are determined to be sufficiently stringent to lead to water quality standards being met prior to the next listing cycle.

It is the policy of DEQ that load allocations are developed only for watersheds documented to be water quality limited during the subbasin assessment step of the TMDL development. Section 303(d) listed water bodies which are shown to be meeting their beneficial uses or those with recently developed and approved TMDLs will be proposed for de-listing.

7 RE-LISTING WATER BODIES

Water bodies that have been removed from the §303(d) list may be re-listed at any time if DEQ determines the effectiveness of the TMDL is below the level necessary to make adequate progress toward achieving water quality standards. The most likely reasons for re-listing are:

- C Water quality standards are not met;
- C Inadequate implementation of the selected BMPs;
- C Implementation lags considerably behind schedule;
- C The monitoring plan is not carried out; or

- C The selected BMPs prove to be ineffective and are not revised.

Failure to implement the TMDL may be due to lack of technical assistance, funding, political support, land manager support, or to delays brought on by other natural causes. Obstacles to implementation should be identified and special efforts made to eliminate them in a constructive and cooperative manner before the water body is re-listed.

The effectiveness and adequacy of the applied BMPs will be revealed through the results of the monitoring. In general, several cycles of data collection may be necessary to evaluate effectiveness. The onset of desired improvements in water quality and beneficial use support may lag behind the implementation of BMPs. Therefore, the continuation of water quality problems for several years after initiation of the TMDL is not in itself reason to re-list the water body. The important thing is that the TMDL be implemented actively and in good faith, and that the monitoring results show that the plan, or an improved version of the plan, will achieve water quality goals and objectives.

All the water bodies on the State of Idaho 1996 §303(d) list must be addressed in TMDLs by the year 2005. Within this time frame, the state and federal agencies with jurisdiction will begin to take charge of the TMDL programs for those water bodies where plan development and/or implementation have been too slow or have been unsuccessful. The DEQ will make every effort to provide leadership to local interests and to emphasize cooperative and incentive-based approaches, but will also move the process forward at a rapid pace. Ultimately, if voluntary implementation has failed, management measures to protect water quality will be enforced using the authorities provided in federal and state law.

8 CONCLUSIONS

The task of developing and implementing TMDLs for listed water bodies throughout the State of Idaho is challenging. The DEQ encourages individuals from all natural resource agencies, private enterprise, and the public-at-large, to participate in the development of each TMDL and subsequent TMDL implementation plan. Without the full support of all stakeholders, the DEQ's goal to "preserve the quality of Idaho's air, land, and water for use, and enjoyment today and in the future" cannot be obtained. For further information on this process, call, fax, or write the DEQ at 208/373-0502, fax 208-373-0576, or 1410 N. Hilton, Boise Idaho 83706.

9 REFERENCES

- State of Idaho, Division of Environmental Quality, 1998, Idaho 1998 §303(d) List.
- State of Idaho, Division of Environmental Quality, 1997, A Suggested TMDL Outline.
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Appendix E.

AGRICULTURAL TMDL ACTION PLAN May 31,1999

Goal:

Develop and implement agricultural portions of TMDL watershed plans in an equitable manner proportional to the problem, in order to achieve water quality standards and enhance beneficial uses.

Objective 1:

Develop, refine and implement agricultural TMDL process.

Action Items:

1. Assist other agencies with understanding the overall TMDL effort as a dynamic process.
Responsibility: EPA and DEQ
Target Date: Immediately/Ongoing
2. Review Report of the Federal Advisory Committee on the Total Maximum Daily Load (TMDL) Program.
Responsibility: Agricultural TMDL Technical Committee
Target Date: July 1, 1999
3. Evaluate EPA response and adoption of Federal Advisory Committee's recommendations.
Responsibility: Agricultural TMDL Technical Committee
Target Date:
4. Provide feedback to EPA and DEQ with regard to future changes in TMDL process.
Responsibility: Agricultural TMDL Technical Committee
Target Date: Ongoing
5. Follow all TMDL outlines and guidance provided by the Governor's Office, DEQ and EPA.
Responsibility: Agricultural TMDL Technical Committee
Target Date: Immediately/Ongoing

Objective 2:

Accelerate TMDL training and outreach.

Action Items:

1. Emphasize TMDL training to local SCDs, working groups, industry groups, city and county units of government and WAGs.
Responsibility: Training and Outreach Sub-Committee

Target Date: Immediately

2. Accelerate the dissemination of TMDL information and education to agricultural landowners and general public.
Responsibility: SCC, U of I, and SCI)s
Target Date: January 1, 2000
3. Continue providing training to staffs of involved technical agencies. Responsibility: Training and Outreach Technical Committee
Target Date: Ongoing
4. Develop and distribute an electronic newsletter to provide TMDL information and education.
Responsibility: Training and Outreach Technical Committee
Target Date: Starting July 20, 1999
5. Accelerate the distribution of TMDL information and education through the use of local and topic specific workshops.
Responsibility: Training and Outreach Technical Committee
Target Date: Starting fall 1999
6. Develop hard copy TMDL educational publications.
Responsibility: Training and Outreach Technical Committee
Target Date: Ongoing

Objective 3:

Facilitate TMDL development and implementation through enhanced interagency coordination and communication efforts.

Action Items:

1. Use Coordinated Resource Management Process (CRMP) to ensure complete TMDLs and comprehensive watershed management plans for watersheds with mixed federal, state and private ownerships as appropriate. (See CRM handbook).
Responsibility: All core agencies
Target Date: Per TMDL schedule
2. Establish and maintain effective communication linkages between all agricultural agencies, industry organizations, SCDs, individual farmers and ranchers to provide a unified voice for agriculture in the TMDL process.
Responsibility: SCC
Target Date: Immediately
3. Provide forum for upper management within respective agencies to form an executive level, interagency, TMDL leadership committee.
Responsibility: Agricultural TMDL Technical Committee
Target Date: Immediately

Objective 4:

Ensure Effective TMDL Implementation

Action Items:

1. Continue providing technical assistance to SCI)s in gathering and providing information to DEQ for development of subbasin assessments and TMDLs
Responsibility: SCC
Target Date: In accordance with TMDL schedule
2. Continue providing assistance to SCI)s with review and comment on subbasin assessments and TMDLs.
Responsibility: SCC
Target Date: Based on completion by DEQ
3. Initiate agricultural TMDL actions as per Idaho's TMDL schedule.
Responsibility: Agricultural agencies
Target Date: Immediately
4. Work with local SCDs, WAGs, local working groups, DEQ regional offices and NRCS field offices to identify surface and groundwater priorities for implementation.
Responsibility: SCC, NRCS
Target Date: Immediately
5. Develop program neutral agricultural TMDL implementation plans based on local priorities for Paradise Creek, Lower Boise River, Mid Snake River, Winchester Lake, and Portneuf River.
Responsibility: SCC
Target Date: Immediately
6. Initiate and provide leadership for coordination and completion of the Agricultural TMDL Implementation Scoping Process.
Responsibility: SCC
Target Date: Immediately
7. Develop rules for implementation of Senate Bill 1135 (New Cost-share program to replace SAWQP).
Responsibility: SCC and all other state and federal agencies.
Target Date: July 1, 1999
8. Ensure program integration for successful TMDL implementation.
Responsibility: SCC and all other state and federal agencies.
Target Date: Immediately
9. Integrate and capitalize on the "Idaho One Plan process as it is developed.
Responsibility: SCC, NRCS and other agencies as appropriate
Target Date: July 1, 1999
10. Implement BMPs for surface and groundwater in accordance with the Agricultural

Pollution Abatement Plan.
Responsibility: SCC
Target Date:

Objective 5:

Intensify focus on riparian issues involved with TMDL implementation.

Action Items:

1. Provide leadership for developing a statewide strategy to address riparian issues related to TMDL implementation.
Responsibility: SCC and partners
Target Date: Immediately
2. Initiate interagency coordination efforts in order to address riparian issues related to TMDL implementation on private, state, and agricultural and grazing lands.
Responsibility: SCC and partners
Target Date: Immediately
3. Initiate and complete riparian assessments and inventories as part of the TMDL scoping process according to the TMDL schedule.
Responsibility: SCC and partners
Target Date: Ongoing
4. Provide leadership and technical support for riparian and management workshops for landowners.
Responsibility: CES, SCC, NRCS, IDA, IDL, BLM and USFS
Target Date: Salmon
Challis
Dubois
Blackfoot
5. Provide riparian inventory and assessment training to agency technical staff.
Responsibility: SCC
Target Date: Immediately
6. Provide "Proper Functioning Condition" training workshops.
Responsibility: BLM, SCC and NRCS
Target Date: Mackay 6/30 - 7/1
St. Anthony 7/28 - 7/29
Boise 8/18 - 8/19
Lewiston 9/15 - 9/16
7. Evaluate the use of surrogates for use in the TMDL process.
Responsibility: SCC and DEQ
Target Date: Ongoing
8. Develop minimum standards for assessment and monitoring techniques.

Responsibility: SCC and NRCS
Target Date: July 21, 1999

Objective 6.

Agricultural Watershed Source and BMP Effectiveness Monitoring.

Action Items:

1. Create an Agricultural TMDL Implementation Assessment Monitoring Program Guidance Document.
Responsibility: ISDA, SCC and IASCD
Target Date: Immediately
 2. Determine SCD monitoring needs related to Agricultural Watershed Source and BMP Effectiveness Monitoring associated with 303(d) listed watersheds.
Responsibility: ISDA, SCC and IASCD
Target Date: Immediately
 3. Develop BMP Effectiveness Monitoring Protocols for NRCS Component Practice Standards.
Responsibility: ISDA, SCC and IASCD
Target Date: Immediately
 4. Develop research needs associated with BMP Effectiveness Protocols for NRCS Component Practice Standards.
Responsibility: ISDA, SCC, UI-CES, NRCS
Target Date: Beginning immediately and proceeding over the next two years
 5. Plan and implement Agricultural Watershed Source and BMP Effectiveness Monitoring associated with 303(d) listed watersheds.
Responsibility: ISDA, IASCD, SCDs, SCC
Target Date: Immediately and Ongoing
 6. Develop database for monitoring program.
Responsibility: ISDA, IASCD, SCDs, SCC
Target Date: Immediately and Ongoing
 7. Utilize program data in TMDL implementation plans.
Responsibility: ISDA, IASCD, SCDs, SCC
Target Date: Immediately and Ongoing
 8. Develop monitoring outreach program.
Responsibility: ISDA, IASCD, SCDs, SCC
Target Date: Immediately and Ongoing
- Agricultural TMDL Technical Committee is co-chaired by the Idaho Soil Conservation

Commission and Natural Resources Conservation Service.

- The committee is comprised of the following core agencies and organizations:
 - Idaho Soil Conservation Commission
 - Idaho Association of Soil Conservation Districts
 - Idaho Department of Agriculture
 - University of Idaho Extension System
 - Farm Services Agency
 - Idaho Department of Lands
 - Natural Resources Conservation Service

- Other participating entities are listed as follows:
 - Idaho Division of Environmental Quality
 - Idaho Department of Water Resources
 - Idaho Department of Fish and Game
 - US Bureau of Reclamation
 - US Bureau of Land Management
 - US Geological Society
 - US Environmental Protection Agency
 - US Forest Service

- Training and Outreach Sub-Committee members include:
 - University of Idaho Cooperative Extension Service
 - Idaho Association of Soil Conservation Districts
 - Idaho Soil Conservation Commission
 - Idaho Department of Agriculture
 - Idaho Division of Environmental Quality
 - Natural Resources Conservation Service

APPENDIX F - 1
DEQ NONPOINT SOURCE MANAGEMENT PROGRAM PROJECT
TECHNICAL EVALUATION

PROJECT NAME: _____

SECTION I - All statewide initiative or regional on-the-ground implementation projects must provide information to insure that each of the following requirements has been satisfactorily addressed before the project can be considered for ranking in section II. If the answer to any of the following questions is "NO" then the project is not eligible for further funding considerations. Questions E, F, and G in section I do not apply to proposed statewide projects.

A) National EPA Guidelines - The project meets national EPA Nonpoint Source Management Program guidance.

_____ Yes _____ No

B) State Nonpoint Source Management Plan - The project is consistent with the current State Nonpoint Source Management Plan.

_____ Yes _____ No

C) Project Type - The project type deals with either a statewide initiative or a regional on-the-ground implementation project.

_____ Yes _____ No

D) Project Commitment - Matching fund availability is documented by the project applicant for all tasks and letters of commitment provided. Program match is calculated as: **Match = (Federal Dollars divided by 0.6) minus (Federal Dollars)**. The document must include the source(s) of match funds and letters of commitment to spending on the proposed project (e.g., project time line).

_____ Yes _____ No

E) Project Implementation Plan (work plan) - The work plan provides detailed documentation of the proposed project including list of tasks, schedule of tasks, agency/contractor/entity responsible for implementation of the project tasks, adequate time schedules for completion of all tasks, and the anticipated results of the project.

_____Yes _____No

F) Data Credibility - Data used to substantiate a nonpoint source pollutant problem is either included or adequately referenced.

_____Yes _____No _____Not Applicable

G) Maintenance Agreement - Project includes documentation that the project owners, managers, or the sponsoring agency will maintain the project for the life of the project.

_____Yes _____No _____Not Applicable

H) Assessment - Project provides adequate description of the non-instream assessment for water quality improvements funded by either the project owners/managers or the sponsoring agency will throughout the life of the project.

_____Yes _____No _____Not Applicable

Forward Proposal to Section II for Final Project Ranking_____Yes _____No

SECTION II - NPS FINAL PROJECT RANKING **TOTAL SCORE**

PROJECT NAME : _____

SECTION II - Only statewide initiative or regional on-the-ground implementation projects that have satisfactorily completed Section I requirements may continue for ranking consideration under this section. All criteria listed in this section applies to statewide initiative or regional on-the-ground implementation projects

- A. Implementation - The project implements best management practices as part of an approved TMDL, protects threatened waters identified through the State’s Nonpoint Source Management Program plan or is part of a special water quality effort (ie. Governor’s Bull Trout Conservation Plan, etc.).
 - 1. Project is not included as part of an approved TMDL, protects identified waters, or is not part of a special water quality effort. 0 Pts
 - 2. Project is included as part of an approved TMDL, protects identified waters, or is part of a special water quality effort. 100 Pts

- B. Status - Points will be assigned based upon the status in the TMDL schedule, priority of the listed §303(d) water, implications to a threatened or endangered species, impacts to a sole source aquifer, impacts to an outstanding resource water or impacts to sensitive or special resource ground water.
 - 1. Not included on the TMDL schedule, current §303(d) list, or no known special groundwater categories or listings. 0 Pts
 - 2. Low priority §303(d) water body, project is part of the 8-year TMDL schedule, or the project has minimal impacts to a sole source aquifer/sensitive or special resource ground water 20 Pts
 - 3. Medium priority §303(d) water body, suspected impacts to potential or existing threatened or endangered species, project would fit within an approved TMDL, or a sole source aquifer/sensitive or special resource ground water is moderately impacted. 50 Pts
 - 4. High priority §303(d) water body, known impacts to potential or existing threatened or endangered species, project is included as part of the TMDL implementation plan, or a sole source aquifer/sensitive or special resource ground water is highly impacted. 100 Pts

TOTAL THIS PAGE _____

C. Environmental Stewardship Community & Agency Support - Points are awarded based on the commitment to implementing or financing a portion of the proposed project.

1. Community / Agency Commitment

- a. No commitment letters. 0 Pts
- b. One to Two commitment letters. 5 Pts
- c. Three to Four commitment letters. 10 Pts
- d. Five or more commitment letters. 15 Pts

2. Environmental Stewardship

- a. Project incorporates a minimum non-federally funded environmental stewardship component (ex. semi-annual report). 0 Pts
- b. Project incorporates a strong non-federally funded environmental stewardship component through the use public involvement for planning environmental remediation actions, public involvement in project implementation (ex. quarterly newsletter, school, community, agency site tours, etc.), or has specific uses in an implemented TMDL plan. 15 Pts

D. Impacts to Uses - Points will be assigned based upon the documented number of designated beneficial uses impacted by nonpoint source pollutants.

1. Number of use Impacts:

- a. No Impacts 0 Pts
- b. One Use 5 Pts
- c. Two Uses 6 Pts
- d. Three Uses 7 Pts
- e. Four or More Uses 15 Pts

2. State and National Priorities - Points will be assigned based upon recognition of the special status of waters or uses of those waters.

You may answer questions a, b, or c or any combination of the following three statements.

- a. State Priorities - The project impacts either: a State Park or State Recreational Area, a blue ribbon fishery, water classified as a special or outstanding resource water, or designated as part of a sole source aquifer, an area of high ground water vulnerability, or the project enhances the State's nonpoint source management program. 10 Pts
- b. National Priorities - A nonpoint source or statewide initiative project is intended to positively impact either: a threatened or endangered species, a wilderness area, a Wild and Scenic River or a sole source aquifer. 10 Pts
- c. Not Applicable 0 Pts

TOTAL THIS PAGE _____

3. Severity of Impact to Use - Points will be assigned based upon: 1) the number of stream miles impacted; 2) the number of lake/reservoir surface acres impacted; 3) the extent of groundwater impacts to beneficial uses or; 4) the ability of the statewide project to promote nonpoint pollution reduction or remediation. Proposed project applicants must include a map showing the impact area of the proposed BMPs to receive more than the minimal score.
 - a. Low Impact - Little evident impact is noted due to the nonpoint source contribution or NPS project initiative (i.e., less than 5 miles or 200 acres effected or minor impacts to ground water): 5 Pts
 - b. Moderate Impact - Moderate impact is noted due to the nonpoint source contributions or the statewide Nonpoint Source Management Program project (i.e., approximately 5 miles or 200 acres effected or moderate impacts to ground water): 25 Pts
 - c. High Impact - Severe impact is noted due to the nonpoint source contribution or the statewide Nonpoint Source Management Program project initiative (i.e., more than 5 miles or 200 acres effected or severe impacts to ground water): 100 Pts

- E. Potential for Restoration Points - Points are awarded according to the expected effectiveness of the project and the transferability of the demonstrated technologies to other parts of the State of Idaho.
 1. Effectiveness of Project or Improvements - The proposed project will either restore designated or existing beneficial uses, reduce the severity of nonpoint source impacts, or the project will promote statewide nonpoint pollution reduction or remediation
 - a. No load reduction or effectiveness calculations provided 0 Pts
 - b. Improvements are minor(ex. <25% estimated reduction in pollutant load) or statewide project will require substantial capital/manpower commitment: 15 Pts
 - c. Designated or existing beneficial uses of surface or ground water are partially restored or the impacts from the nonpoint source reduced (ex. >25% reduction but <75% reduction in pollutant load) or statewide project will require moderate capital/ manpower commitment: 30 Pts
 - d. Designated or existing beneficial uses of surface or ground water are partially restored or the impacts from the nonpoint source reduced (ex. >75% reduction but <100% reduction in pollutant load) or statewide project will require minimal capital/manpower commitment: 100 Pts

 2. Demonstration value of proposed project -Points are assigned based upon the transferability of the project technologies to other sites in Idaho.
 - a. No additional projects 0 Pts
 - b. Project is site specific 5 Pts
 - c. Project is applicable statewide 25 Pts

APPENDIX F - 2**NONPOINT SOURCE MANAGEMENT PROGRAM PLAN SCHEDULE**

Section 319 project development generally follows the 1996 EPA grant guidance schedule. However, the EPA schedule is being modified to include review and prioritization by IDEQ, and the appropriate BAGs. The following schedule outlines the NPS program timing milestones. Fixed calendar dates are shown in *bold italicized* print.

- C September - October - BAGs meet with IDEQ and other designated agencies to determine the nonpoint source implementation projects within their respective basins that are needed to satisfy TMDL requirements or protect high quality ground and surface waters within their respective basins.
- C December 1 - IDEQ regional and central offices send out request for project letters with scoping list requesting project proposals. All applicants will be encouraged to submit project proposals for preliminary technical review by IDEQ and other designated agencies by February 15. This enables applicants to revise their project proposals as needed prior to the March 1 deadline.
- C **March 1** - All draft §319 project proposals are due to IDEQ.
- C March Weeks 1 & 2 - IDEQ and appropriate designated agencies perform technical evaluations.
- C March Weeks 3-4 and April Weeks 1-4 - BAGs review with regional NPS staff technical merits of eligible §319 projects as determined through technical ranking process. Scores (weakness and strengths) are discussed. BAGs, with regional NPS staff rank the §319 project proposals in order of importance regarding basin restoration efforts.
- C May Week 1 - IDEQ upper management and Basin Advisory Group chairs or the designated representative meet to integrate basin projects into a preliminary priority list of §319 projects.
- C **June 1** - Draft §319 project proposals due to EPA Region 10 and notifies BAGs of the draft §319 projects submitted to EPA.
- C **July 8** - EPA provides comments (ie. required project revisions) on draft §319 project proposals to IDEQ.
- C July Week 3 - Final grant application submitted to the IDEQ administrator for approval.
- C **August 1** - Final revised §319 proposals (if applicable) and grant application due to EPA Region 10.
- C **October 1** - EPA makes the §319 grant award to IDEQ.

**APPENDIX F - 3
NONPOINT SOURCE MANAGEMENT PROGRAM PLAN PROJECT
ELEMENTS**

EPA Required Elements

**Required
NPS Elements:**

The following items are required of all Nonpoint Source Program applications and facilitate in the ranking of Nonpoint Source Management Program projects.

1. Purpose Brief description of why the project is necessary and what benefits will be derived from the project.
 2. Environmental Stewardship How will the proposed project promote environmental stewardship within the project area?
 3. Plan for Monitoring Results How will results of the project be monitored? What long term monitoring will be incorporated into the project design? Who will do the long-term monitoring after the project is completed and how will this monitoring be funded?
 4. Characteristics
 - a. Priority What is the regional priority of the watershed or water body?
 - b. NPS Theme How will this project address the following themes?
 1. Successful Solutions
 2. Good Science
 3. Public Awareness
 4. Financial Forces & Incentives
 5. Regulatory Programs
 - c. NPS Category Within which of the following NPS category does this project fall? Agriculture, silviculture, urban runoff, construction, resource extraction, sewage and land disposal, hydrologic modification, recreation.
 - d. NPS Secondary Does this project address a secondary or tertiary category from the above list?
 - e. Functional Within which of the following functional categories would the project be placed? watershed projects, statewide programs or best management practices
 - f. Pollutant Types List of the known pollutant types which effect the project and may include pollutants which the project will not address.
 - g. Waterbody Type Describe the effected water body. Examples would include the following: rivers, perennial streams, natural lakes, reservoirs, etc.
-

h. Hydrologic Unit Code This is a code developed by the Department of Interior, United States Geologic Survey (USGS) which describes the reach of water being discussed in the project. This number can be obtained from either IDEQ or by contacting the USGS.

APPENDIX G.

Idaho Nonpoint Source Program Grant Proposal
Paradise Creek TMDL Implementation Project

319 FY 1999 Supplemental Proposal/ 319 FY 2000 Proposal

PROJECT NAME: Implementation of Nonpoint Source Controls (BMPs) to Achieve TMDL Pollutant Load Allocations on Paradise Creek, Latah County, Idaho

PROJECT DESCRIPTION SUMMARY INFORMATION

SUMMARY

The purpose of the following project is to use a watershed approach to implement agricultural, forest, and urban BMPs to reduce nonpoint source loading of TMDL-listed pollutants to Paradise Creek. Loading reductions will be accomplished for the following TMDL listed pollutants: nutrients, ammonia, temperature, flow alteration, pathogens, sediments, and habitat modification.

A. Forest Land Implementation Project

The Paradise Creek TMDL (1997) lists road and skid trail construction associated with forest land harvest activities as a nonpoint source of pollution. Forest lands comprise approximately 2000 acres (14%) of the Paradise Creek Watershed. The Idaho Forest Practices Act (FPA), Title 38, Chapter 13, Idaho Code requires forestry BMPs to be implemented on active logging operations. However, site-specific BMPs that are recommended or required beyond standard FPA rules are implemented on a voluntary basis. Some of these site-specific BMPs are needed for maintenance of older forest roads, which were constructed prior to current FPA rules.

Reforestation will be implemented on private lands within the watershed to convert high-erosion lands into long-term low-erosion forestland. Reforestation may also be used in riparian areas for long-term shading of streams to reduce water temperature. This project will focus on installing silvicultural, site-specific voluntary BMPs which are not required under the Idaho Forest Practices Act (IDAPA 20). Best Management Practices to be installed include: constructing road cross-ditches, rocking rolling dips, rocking the length of a main logging road, stabilizing disturbed areas, and rehabilitating an existing sediment basin. (See Appendix A for more detail.)

B. Agricultural Land Implementation Project

Agricultural lands comprise approximately 10,700 acres (69%) of the Paradise Creek Watershed. Agricultural activities in the watershed contribute approximately 75% of the sediment load to Paradise Creek. For Paradise Creek, there are three groups of Best Management Practices that will be applied to reduce sediment and associated nutrient delivery to stream channels: agronomic, structural, and riparian practices. The USDA Conservation Reserve Program (CRP) is viewed as the program most attractive to eligible landowners for installation of filter strips and riparian/forest buffers. Requested 319 monies will be used to address those agricultural lands (about 10%) within the watershed that are not eligible under CRP. The 319 grant funds would also be used for those Best Management Practices (sediment basins, sediment and erosion control structures, continuous direct seeding) that CRP is unlikely to fund. For a more complete description of the Agricultural Implementation project see Appendix B.

C. County Roads Implementation Project

The public county roads in the Paradise Creek watershed are maintained by the North Latah County Highway District. As outlined in the Paradise Creek TMDL, the county roads contribute 8% of the sediment load to Paradise Creek. By stabilizing road cuts and fills and addressing water conveyance problems, the Highway District anticipates reducing the sediment load from county roads to meet TMDL standards. Additionally, decreased sediment delivery will reduce the input of associated nutrients to the stream. The Highway District will focus on areas with the worst erosion problems. The North Latah County Highway District will implement road BMPs focusing on high-priority problem areas, such as eroding road cut and fill banks and water conveyance problems contributing to nonpoint source pollution.

Unstable, eroding road cut and fill banks will be shaped and stabilized by planting woody and herbaceous vegetation. Additional methods to stabilize the slope and reduce erosion include: erosion control blankets, armoring, and mulching. These treatments will greatly reduce the input of sediment and pollutants to the water course, and in addition the significant increase in available habitat will benefit wildlife. These treatments will also provide aesthetic benefits to county residents.

D. Riparian Vegetation and Streambank Stabilization

Urban Restoration

To reduce the amount of sediment entering Paradise Creek from urban runoff and to alleviate severe erosion occurring along the streambanks, the urbanized riparian floodplain and associated wetlands along Paradise Creek within the City of Moscow

will be re-vegetated with native woody plants and emergent herbaceous wetland plants, respectively. Replacement of “lawn grass” and/or invasive non-native plant species with wetland plants in selected urban areas that are frequently inundated with water from storm events will more effectively filter sediments and pollutants from water before it reaches Paradise Creek. Severely eroding streambanks will be stabilized using bioengineering techniques. This project will build on streambank projects located along railroad, university, and local government property and cover areas within the City of Moscow.

Rural Restorations

To increase the filtering and stabilization effects of the riparian zone, streambanks and tributaries of Paradise Creek will be re-vegetated with wetland plants and native grasses. These vegetative plantings and stabilization activities will reduce nonpoint source pollution entering Paradise Creek through filtering excess sediments and nutrients. Segments of the stream, where channelized, may be re-meandered to restore the hydrology and substrate of the creek channel.

E. Wetlands Restorations with Native Vegetated Buffer Strips

Wetlands within the Paradise Creek watershed will be restored according to their natural hydrological levels (when feasible) using clues from hydric soils, existing hydrology, and vegetation to determine these original levels. These restored wetlands will act as buffers to Paradise Creek for sediment and nutrient runoff, provide water storage benefits for heavy storm events, and provide habitat for waterfowl and other wildlife. Restoration techniques may include: filling ditches, construction of small earthen dikes, breaking drainage tile, and/or shallow excavation of restoration areas. Native herbaceous and woody vegetation will be planted around the wetland (where feasible) to provide cover from erosion, filter excess nutrients and sediments, and to provide habitat for wildlife.

F. Animal Waste Prevention

Large agricultural animals will be fenced out of the stream in urban and/or agricultural sections along Paradise Creek to reduce the amount of pathogens, nutrients, and sediments entering the stream. Riparian vegetation planted within the fenced areas will reduce the amount of pollutants entering the stream.

BACKGROUND

Paradise Creek Watershed Advisory Group

This work is endorsed by the Paradise Creek Watershed Advisory Group (PCWAG), which was nominated by the Clearwater Basin Advisory Group and appointed by the Administrator of the Idaho Division of Environmental Quality under Idaho Code 39-3615 in December of 1996. The PCWAG is charged with providing advice to DEQ on the specific actions needed to control nonpoint and point source pollution that affects the quality of water in Paradise Creek. Administrative staff of the Latah Soil and Water Conservation District (LSWCD) provides clerical support to the group. The City of Moscow provides meeting facilities.

Paradise Creek Management Committee

This work is also in keeping with the watershed-oriented approach of the Paradise Creek Management Committee (PCMC) organized by the Palouse Conservation District (Whitman County, Washington) with funding provided by the Washington Department of Ecology and the U.S. Environmental Protection Agency. High-priority implementation activities identified in the Paradise Creek Watershed Plan (PCD, PCMC, 1997) developed by this committee are those identified for funding in this grant proposal.

Both committees are made up of representatives from several agencies, political entities, educational and research institutions, and interested citizens and Landowners. Members include staff from: Latah Soil and Water and Palouse Conservation Districts; Cities of Moscow and Pullman; Latah and Whitman Counties; University of Idaho and Washington State University University; Palouse-Clearwater Environmental Institute; landowners; operators; and other interested parties. Technical support is provided by Idaho Division of Environmental Quality, U.S. Environmental Protection Agency, and the Washington Department of Ecology.

BENEFICIAL USES

Since 1989, Paradise Creek has been listed as a Water Quality Limited Segment by the Idaho Division of Environmental Quality (DEQ) and the Washington Department of Ecology (WDOE). The current designated beneficial uses protected under the Idaho Water Quality Standards are: cold water biota, secondary contact recreation, and agricultural water supply. Downstream in Washington State, Paradise Creek is classified as a Class A Waterbody protecting it for: domestic, industrial, and agricultural water supply; stock watering; primary contact recreation; aesthetic enjoyment; wildlife habitat; and salmonid and other fish spawning, rearing, migration, and harvesting.

A Use Attainability Assessment of Paradise Creek, Latah County, Idaho (Wertz, DEQ, 1994) conducted by DEQ, recommends that "if the water and habitat quality is improved, Paradise Creek

would be capable of supporting salmonid spawning and cold water biota." Secondary contact recreation and agricultural water supply were confirmed as appropriate designated beneficial uses at that time, as was cold water biota, which was later adopted into the Idaho Code. However, Paradise Creek is not considered to be in full support of these beneficial uses because of impaired macroinvertebrate populations and numerous exceedances of water quality criteria recorded over the last five years. Paradise Creek is currently ranked as a high priority water body on the 1996 303(d) list. A TMDL was completed in December 1997 by DEQ, with assistance from the PCWAG, and was approved by the U.S. EPA in early 1998.

POLLUTANTS

The seven pollutants currently identified on Idaho's 1996 303(d) list as limiting water quality in Paradise Creek are: nutrients, sediment, temperature, flow, habitat alteration, pathogens, and ammonia. Nutrients, ammonia, temperature, and flow lead to eutrophic conditions. Sediment, pathogens, and habitat alteration affect cold water biota and secondary contact recreation. All of these pollutants, with the exception of flow and habitat alteration, have pollutant loads assigned to them in the Paradise Creek TMDL recently completed by DEQ.

The Paradise Creek TMDL (DEQ, 1997) explains water quality relationships in Paradise Creek as follows: "Excessive nutrients and high water temperature lead to algal growth and subsequent dissolved oxygen fluctuations. Temperature and dissolved oxygen within Paradise Creek typically do not meet water quality standards during the low flow period of the year. Excessive sediment impairs cold water biota and habitat. Ammonia is toxic to aquatic organisms and consumes oxygen during nitrification. Fecal coliform concentrations have been measured at seven times the maximum limits set by the Idaho Water Quality Standards for secondary contact recreation."

PROJECT BENEFITS

A. Forestry Implementation Project

This project will install erosion control and drainage stabilization measures on forest roads within the Paradise Creek drainage and adjacent areas, which should reduce the Cumulative Watershed Effects (CWE) road score from a moderate hazard to a low hazard. Reforestation will convert high-erosion lands into long-term low-erosion forestland.

B. Agricultural Implementation Project

The Paradise Creek Agricultural Proposal, when fully implemented, will considerably benefit soil and water resources, as well as users of the resource. Benefits will include:

- 1) Soil loss reduction from water (sheet, rill, and gully erosion);

- 2) Decreased sediment delivery, with associated nutrients, to stream channels;
- 3) Improved water infiltration and storage;
- 4) Habitat improvements for both fish and wildlife; and
- 5) Achievement of sediment and phosphorus load reduction targets set in the TMDL.

C. County Roads Implementation Project

By stabilizing road cuts and fills and addressing water conveyance problems, the North Latah County Highway District anticipates reducing the sediment load from county roads to meet TMDL standards. Additionally, decreased sediment delivery will reduce the input of associated nutrients to the stream. The Highway District will focus on the problem areas with the highest erosion problems.

D. Riparian Re-vegetation and Streambank Stabilization

By planting the urbanized riparian and agricultural floodplain and associated wetlands along Paradise Creek with native woody vegetation and emergent herbaceous wetlands plants, stream temperatures will be reduced, dissolved oxygen concentrations will increase, and algae and macrophyte growth will be reduced due to nutrient uptake by the vegetation. Unstable streambanks will be stabilized directly and indirectly through vegetative plantings. Severely eroded vertical streambanks will be stabilized with various “bioengineering” techniques that will not only reduce in-stream erosion potential, but will also improve aquatic habitat. All riparian vegetative plantings will increase in-stream and out of stream habitat diversity as well as reduce overland flow of pollutants.

E. Wetlands Restorations with Native Grass Buffer

The water quality of Paradise Creek will be improved through conducting wetland restoration and native grass planting activities within the Paradise Creek watershed. In agricultural land, comprising approximately 83% of the Paradise Creek watershed, nonpoint source pollutants such as sediments, nutrients, organic materials, pesticides, and herbicides enter the surface water when erosion occurs. Approximately 83% of the total sediments entering the creek are attributed to agricultural runoff. This type of nonpoint source pollution can be greatly reduced (over 80%, estimated) through wetland restorations, native vegetation plantings, and agricultural BMPs.

Through wetland restorations, nonpoint source pollution will be prevented from reaching the creek. As runoff flows through wetlands, the water velocity slows and this

causes organic matter and sediments, including phosphorus, heavy metals and pesticides, to drop out before the water continues to the creek. Additionally, wetland anaerobic and aerobic processes promote de-nitrification, removal of phosphorus, and removal of toxins from water. Wetland plants act as filters to remove excess nutrients from runoff.

By planting a native herbaceous cover to surround the restored wetland, the native plants will act to stabilize the area proximal to the wetland, filter additional sediments and nutrients from runoff, and provide habitat for wildlife.

F. Animal Waste Prevention

Through fencing riparian areas along the creek to exclude livestock, a slight percentage of the needed 75% reduction in nonpoint source fecal coliform loading may be reduced. Although probably negligible in measurable nutrient and/or pathogen-reducing effectiveness, the targeted area to be fenced will be highly visible to the community and may serve as an example of conscientious water resource stewardship.

TREATMENT

A. Forestry Implementation Project

The following BMPs will be implemented within the forested portion (2000 acres) of the Paradise Creek Watershed:

- installing road cross-ditches, rocked rolling dips, and other water drainage measures to reduce erosion;
- cleaning out the sediment trap in Pond #9;
- performing minor dam repair;
- rocking of the main logging road to the top of mountain.; and
- reforesting high-erosion and riparian sites.

B. Agricultural Implementation Project

The following BMPs will be implemented within the agricultural portion of the watershed:

- planting grassed filter strips and riparian forest/buffers along channels on those agricultural lands not eligible for CRP sign-up;
- treatment of approximately 33,000 linear feet of stream and tributary channel to filter sediment and reduce sediment delivery to Paradise Creek;
- engineering and installing sediment basins (21) and sediment and erosion control structures (52) on upland cropped ground to reduce gully erosion

and trap sediment high in the watershed, preventing sediment delivery to creek channels; and

- initiating Continuous Direct Seeding High Residue Management Systems as a desirable agronomic practice within the Paradise Creek Watershed, which will greatly reduce sheet and rill erosion, keeping soil in the fields away from the creeks.

C. County Roads Implementation Project

The North Latah County Highway District will implement road BMPs focusing on high-priority problem areas, such as eroding road cut and fill banks and water conveyance problems contributing to nonpoint source pollution. Approximately 20% of the county road system will be treated.

Unstable, eroding road cut and fill banks will be shaped and stabilized by planting woody and herbaceous vegetation. Additional methods which may be used to stabilize the slope and reduce erosion include placement of erosion control blankets, armoring, and mulching. These treatments will greatly reduce the input of sediment and pollutants to the water course, and in addition the significant increase in available habitat will benefit wildlife. These treatments will also provide aesthetic benefits to county residents.

D. Riparian Vegetation and Streambank Stabilization

Urban Restoration

Approximately 12,500 linear feet of riparian areas along Paradise Creek on properties owned by private landowners, the City of Moscow, the University of Idaho, and/or the Palouse River Railroad will be re-vegetated with native woody and herbaceous vegetation. Unstable eroded streambanks exist along most of these reaches and will be stabilized with various “bioengineering” techniques. Coir logs pre-planted with herbaceous emergent wetlands vegetation will be installed along those reaches with existing invasive aquatic growths.

Rural Restoration

Approximately 3 linear miles of Paradise Creek and /or its tributaries will be planted with riparian vegetation, including wetland plants to increase the filtering and streambank stabilization effects of the riparian zone. Widths of riparian buffers planted will targeted to meet a minimum of 30 feet but will vary according to the needs of private landowners and the opportunity to complement existing buffer strip programs. Channelized portions of the stream will be re-meandered (where feasible) to restore

hydrology and increase flood storage capacity of the stream (through creation of floodplains).

E. Wetlands Restorations

Approximately 12 acres of wetlands will be restored within the Paradise Creek watershed. A variable-width buffer strip using native vegetation will be established around the perimeter of each wetland to increase the water filtering effectiveness by herbaceous plants.

F. Animal Waste Prevention

Approximately 1600 ft. of fencing will be installed along riparian areas to exclude livestock within the Paradise Creek Watershed.

PROJECT GOALS

To reduce loading of TMDL-listed pollutants to Paradise Creek, including pathogens, nutrients, temperature, sediment, and habitat alteration.

To reduce soil erosion, conserve soil resources and decrease sediment delivery throughout forest and farm lands within the watershed.

To improve water conveyance, stabilize road cuts, and reduce sediment loading associated with road systems in the watershed.

To increase the water resources ethic and stewardship within our community.

To improve fish and wildlife habitat throughout the watershed.

To re-vegetate the urbanized riparian floodplain along Paradise Creek with a native plant community and increase shading to reduce stream temperature.

To re-vegetate the rural streambanks along Paradise creek with a native plant community to increase filtering abilities of the riparian area and create shade to reduce stream temperature.

To stabilize severely eroded streambanks and improve aquatic habitat in Paradise Creek.

To enhance the load capacity of Paradise Creek by increasing the diversity of in-stream emergent herbaceous wetlands plants.

To prevent urban nonpoint source pollution through education of landowners about pollution prevention and streambank stabilization techniques.

To educate the urban/rural community that makes up the Paradise Creek watershed on the functions and values of wetlands and riparian areas.

PROJECT SCHEDULE

2000

January – June

Survey and recruit potential wetland restoration sites, animal exclusion projects, and potential streambank restoration and stabilization areas.
Survey and recruit restoration sites for forestry, agricultural, and road BMPs.
Initiate Continuous Direct Seed High Residue Management System demonstration.

July –November

Restore 50% of targeted wetlands
Restore and stabilize streambanks along 50% of targeted length.
Complete riparian fencing.
Install road cross-ditches, rocked rolling dips, Pond #9 maintenance, rock length of main logging road.
Reforest highly-erodible sites and critical riparian sites within the forested portion of watershed.
Stabilize cut and fill banks, improve water conveyance associated with county road system.
Survey and design treatment structures for agricultural riparian and upland BMPs., initiate BMP installation.

2001

January – June

Recruit and survey additional sites for wetland restoration, and streambank restoration and stabilization.

July – October

Restore remaining wetlands.
Complete streambank restoration and stabilization activities.
Complete installation of grassed filter strips, riparian forest buffers, field borders and critical area treatments.

Complete installation of sediment basins and erosion and sediment control structures on agricultural uplands.

Demonstrate Continuous Direct Seeding High Residue Management Systems as viable within watershed.

OTHER PROGRAMS AND PROJECTS

This proposal is being submitted by the Paradise Creek Watershed Advisory Group in partnership with the Palouse-Clearwater Environmental Institute, Natural Resources Conservation Service, Latah Soil and Water Conservation District, Idaho Soil Conservation Commission (ISCC), North Latah County Highway District, University of Idaho, City of Moscow, private companies, and landowners. Please refer to the attached map for a comprehensive depiction of implementation projects presently completed/being completed throughout the Paradise Creek Watershed.

Past and Present Pollution Control Efforts within Watershed

In the past, pollution control and watershed restoration efforts for the Paradise Creek Watershed have been targeted at the urban area. The Palouse-Clearwater Environmental Institute has directed projects to survey discharge pipes, reconfigure channel segments, restore floodplains, re-vegetate riparian areas, stabilize streambanks, and construct wetland areas in and adjacent to the city of Moscow. In addition, PCEI manages the Adopt-A-Stream Program and organizes annual trash removal weekends, arranges riparian plantings, and is working on development of a pedestrian/bicycle path along Paradise Creek. The City of Moscow Wastewater Treatment Plant is in the process of upgrading the treatment facility. In the urban area of the Paradise Creek Watershed, projects completed or in progress include:

Engineering of a stream re-meander and creation of a 3-acre floodplain and riparian buffer strip within the City of Moscow to increase flood storage capacity of Paradise Creek and improve water quality (PCEI, completed 1997).

Construction of a 1250 foot floodplain and stream re-meander project with a riparian buffer strip and pocket wetlands within the City of Moscow to improve water quality and provide additional flood storage to Paradise Creek (To be completed spring 1999, PCEI and University of Idaho).

Stabilization of streambanks and establishment of riparian buffer strips along urban landowners' property situated adjacent to Paradise Creek (850 feet completed, additional projects (1000 ft.) to be completed fall 1999, PCEI).

Stabilization of 2800 ft. of streambanks and planting of a native vegetation buffer strip along University of Idaho property (1400 ft. completed, 1400 additional ft. to be completed fall 1999, University of Idaho, PCEI)

Creation of a wetlands treatment system and passive recreation area along Paradise Creek on University of Idaho property to treat a portion of the effluent from the Moscow Wastewater Treatment Plant (Completed fall 1997, University of Idaho, PCEI).

In the forested portion of the watershed, activities associated with timber harvest must comply with the Idaho Forest Practices Act.

On agricultural land within the Paradise Creek watershed, there are several on-going and planned projects which will provide pollution reduction benefits. Projects include:

The Paradise Creek Demonstration Project, involves establishment of a 300-foot wide riparian/forest buffer on 150 acres of agricultural land adjacent to Paradise Creek and two of its tributaries (landowner, NRCS, LSWCD, ISCC, Idaho Department of Fish and Game).

A stream re-meander and riparian buffer strip demonstration project along approximately .75 miles of Paradise Creek on agricultural land (to be constructed fall 1999, landowner, NRCS, LSWCD, PCEI, ISCC).

A riparian/forest buffer along the main channel of Paradise Creek (landowner, PCEI, LSWCD)

Several ponds with associated vegetative wildlife habitat plantings (landowners, NRCS, LSWCD, PCEI, IDFG)

EPA Required Elements

1) PURPOSE

The purpose of this project is to use a watershed approach to implement agricultural, forest, and urban BMPs to reduce nonpoint source loading of TMDL-listed pollutants and meet TMDL targets and Idaho Water Quality standards for Paradise Creek intended to protect designated beneficial uses. Reduction of these pollutants will be accomplished through restoration, enhancement, and/or protection of riparian and wetland areas associated with the stream, and through installation of forest and agricultural BMPs.

2) ENVIRONMENTAL STEWARDSHIP

The Paradise Creek Implementation Project is the on-the-ground application of the approved Paradise Creek TMDL. This project incorporates public involvement through sponsorship by the Paradise Creek Watershed Advisory Group. In addition, volunteer labor will be used during implementation of some Best Management Practices; and a long-term commitment to volunteer monitoring has been made through the University of Idaho relative to several agricultural implementation projects within the Paradise Creek Watershed. In addition, project tours will be conducted to help educate landowners and interested citizens, and to foster participation in implementation of Best Management Practices. Project progress will be reported in articles in *The Palouse Pulse*, the newsletter of the Latah Soil Water Conservation District. The Paradise Creek Watershed Advisory Group holds regularly scheduled meetings open to the public.

These projects will increase community involvement and awareness regarding water quality issues and translate into a more conscientious water resource ethic in the area. Community citizens will actively participate in these project activities by volunteering their time to conduct streambank stabilization and wetland restoration activities.

Citizen involvement will occur on many levels: school groups from elementary and high schools will help to plant vegetation, university students from the University of Idaho (Moscow) and/ or Washington State University (eight miles from Moscow, Idaho) will provide assistance in planning and bioengineering activities and annual monitoring studies. Private landowners will also be involved in the restoration activities. Where possible, neighbors of the landowners establishing stabilization and/or restoration projects will be informed of the restoration activities, and may be asked to contribute to the restoration, either through actively helping to install restoration treatments, or by allowing volunteers to collect native seed or plant cuttings from their property. These actions will increase community awareness and emphasize the importance of working together to accomplish a shared goal to improve water quality.

3) PLAN FOR MONITORING RESULTS

Annually, the Idaho Riparian Team will conduct a Properly Functioning Condition Assessment along the segments of Paradise Creek that flow through rural areas. The first assessment, to be conducted in August 1999, will assess the entire Paradise Creek Watershed, including segments in the forestry, agricultural, and urban portions of Latah County, Idaho, and extending through areas with similar land uses in Whitman County, Washington, where it terminates. This assessment will include the establishment of permanent photo points and several survey cross-sections along the watercourse. Additionally, the Idaho Division of Environmental Quality will select BURP sampling sites to monitor water quality along chosen stream segments.

The Idaho Department of Agriculture (IDA), through the Idaho Association of Soil Conservation Districts (IASCD), the Latah Soil Water Conservation District, the Idaho Soil Conservation Commission (ISCC), and the Natural Resources Conservation Service (NRCS) will monitor results of implementation actions on agricultural lands within the Paradise Creek Watershed. In addition, volunteers from the University of Idaho will conduct annual surveys on some individual agricultural implementation projects, to monitor change over time in species composition and abundance of vegetation and avian species. A monitoring plan is being developed by the Paradise Creek Watershed Group; the agricultural component is being cooperatively developed by staff of the IASCD, IDA, ISCC, NRCS, and LSWCD.

Monitoring will include: 1) in-stream trend monitoring of sediment, nutrients, and temperature at key locations throughout the watershed to track progress toward meeting TMDL goals; 2) BMP implementation monitoring; 3) BMP effectiveness monitoring; 4) annual greenline and wildlife surveys; and 5) annual BURP monitoring. The Properly Functioning Riparian Condition Assessment will be conducted for the Paradise Creek Watershed prior to implementation of most proposed BMPs.

4) **CHARACTERISTICS**

a) **Priority: 1**

Paradise Creek is a waterbody listed on the 303(d) list for the State of Idaho. The waterbody was designated a high priority for TMDL development by the State of Idaho. During early 1998, a TMDL for the Idaho portion of the Paradise Creek Watershed was approved by the United States Environmental Protection Agency (EPA). Approximately 32 linear miles of Paradise Creek and its tributaries appear on USGS topographic maps and are impacted by NPS effects.

b) **NPS Theme**

- 1) **Successful Solutions:** Through accomplishing BMPs by cooperating with partners from the city, county, state, federal, and private entity levels, these projects may serve as an example for other degraded watersheds in the area, such as the South Fork of the Palouse River.
- 2) **Good Science:** By using a variety of experts from a wide range of sciences, an ecological approach to restoring water quality within the watershed will be accomplished. Monitoring water quality prior to BMP installation will provide baseline data as to the effectiveness of these practices.

- 3) **Public Awareness:** Through extensive promotion of BMPs and involving the community in the watershed restoration process, an increased level of stewardship for water resources will be accomplished. A variety of citizens will be involved to complete these projects: school children from local schools, students at the local universities, scout troops and other youth groups, and private landowners. This wide range of citizen involvement will increase public awareness concerning water quality health and issues, inform them of methods that can be used to improve water quality, and increase community water stewardship responsibility.
- 4) **Financial Forces and Incentives:** Private landowners who are cooperators in the streambank stabilization projects will benefit by losing less of their property to erosion caused by lack of vegetation and unstable streambanks. This benefit will be enjoyed by cooperators within both rural and urban landscapes. Additionally, woody vegetation planted along streams will replace rank stands of invasive grass currently growing alongside many streambanks; this will enhance the aesthetics of the property and may increase property values, especially within urban areas.

Additionally, landowners who cooperate with either wetland and streambank restoration activities will improve habitat for wildlife and provide increased wildlife-based recreational opportunities.

Local government entities will benefit from these projects by having a significant reduction (over 80%) in the amount of sediments that enter and accumulate within the Moscow city limits. This will virtually eliminate the need for costly and controversial dredging practices currently being applied by the City of Moscow to remove sediments. Additionally, the periodic clean-out of road culverts will become less frequent (and less costly) as the creek's sediment loads decrease.

The Natural Resources Conservation Service provides agricultural landowners with financial incentives to restore buffer strips along streams. Some of the rural stream restoration projects will be completed along those sections of stream that will be enrolled into the riparian buffer strip program. These restoration projects will be used for stabilization and re-vegetation activities conducted within the stream channel and will not supplant the landowners' required cost share for the buffer strips.

- 5) **Regulatory Programs:** A Total Maximum Daily Load (TMDL) was completed on December 24, 1997 (Section 303(d) of the federal Clean Water

Act) and approved in early 1998. These projects are targeted to meet the established TMDL standards on the Paradise Creek watershed upstream of the Moscow Wastewater Treatment Plant.

- c) **NPS Category** Agriculture, urban runoff, hydrologic modification, recreation, construction.
- d) **NPS Secondary** Choose from NPS Category above.
- e) **Functional** Watershed projects- implementation.
- f) **Pollutant Types** The pollutants identified for Paradise Creek from the 1996 303(d) list are nutrients, ammonia, sediment, thermal modification, flow, habitat alteration, and pathogens.
- g) **Water Body Type** Streams, wetlands.
- h) **Hydrologic Unit Code** 17060108 – 02100.00.

5) **TASKS**

Task 1: Recruit landowners in priority restoration areas within agricultural lands of the Paradise Creek Watershed for installation of grassed filter strips, riparian/forest buffers, sediment basins, sediment and erosion control structures, field borders and critical area treatments.

- Assignment 1* Latah SWCD/NRCS/SCC
- Output 1:* Obtain restoration agreements.
- Milestone 1:* June 2000

Task 2: Survey and design appropriate treatment structures for riparian and upland BMPs.

- Assignment 2:* Latah SWCD/NRCS/SCC
- Output 2:* Completed project plans and engineering designs
- Milestone 2:* September 2000

Task 3: Install grassed filter strips and riparian/forest buffers along stream channels within the agricultural portion of the Paradise Creek Watershed. Areas targeted will be those riparian areas not eligible for USDA Conservation Reserve Program monies.

- Assignment 3:** Latah SWCD/NRCS/SCC
Output 3: Riparian BMP installation completion
Milestone 3: September 2001
- Task 4:** Install sediment basins (21) and erosion and sediment control structures (52) on agricultural lands.
Assignment 4: Latah SWCD/NRCS/SCC
Output 4: Structural BMPs installed
Milestone 4: September 2001
- Task 5:** Install field borders and critical area treatments.
Assignment 5: Latah SWCD/NRCS/SCC
Output 5: Treat 20 acres
Milestone 5: October 2001
- Task 6:** Establish Continuous Direct Seeding High Residue Management Systems, to show feasibility within the Paradise Creek Watershed.
Assignment 6: Latah SWCD/NRCS/SCC
Output 6: Farming 600 acres managed for two growing cycles using system
Milestone 6: October 2001
- Task 7:** Install road cross-ditches, rocked rolling dips, and other water drainage measures to reduce erosion.
Assignment 7: Idaho Department of Lands and Bennett Tree Farms
Output 7: BMPs installed
Milestone 7: November 2000
- Task 8:** Clean out Pond #9 sediment trap and complete minor dam repair.
Assignment 8: Idaho Department of Lands and Bennett Tree Farms
Output 8: Task completion
Milestone 8: November 2000
- Task 9:** Rock main logging road to the top of mountain.
Assignment 9: Idaho Department of Lands and Bennett Tree Farms
Output 9: Task completion
Milestone 9: November 2000

- Task 10:** Reforest high erosion and riparian sites.
Assignment 10: Idaho Department of Lands with assistance from the Latah Soil Water Conservation District
Output 10: Treatment of critical sites.
Milestone 10: November 2000
- Task 11:** Sign up landowners along targeted priority restoration areas for streambank stabilization and wetlands restoration projects.
Assignment 11: PCEI, with help from the City of Moscow and/or the Latah SWCD and NRCS offices.
Output 11: Obtain restoration agreements.
Milestone 11: June 2000
- Task 12:** Survey and design appropriate treatment structures for wetland and streambank restoration activities.
Assignment 12: PCEI with help from private engineering consultants and/or the University of Idaho.
Output 12: Completed plans and any required permits for fencing project, wetland and streambank stabilization projects.
Milestone 12: June 2000
- Task 13:** Restore 50% of the wetlands and streambanks identified as priority areas by the cooperating partners (City of Moscow, LSWCD, NRCS, SCC); complete fencing project.
Assignment 13: PCEI with extensive help from community volunteers
Output 13: Completed restoration of 50% of outlined streambank and wetland restoration projects. Completion of 1600 ft. fencing project.
Milestone 13: October 2000
- Task 14:** Survey and design structures for remainder wetland and streambank restoration projects.
Assignment 14: PCEI with help from private engineering consultants and/or the University of Idaho.
Output 14: Obtain required permits and plans for streambank and wetland restorations.
Milestone 14: June 2001

- Task 15:** Complete streambank and wetland restoration projects.
Assignment 15: PCEI with volunteers.
Output 15: Completed restoration of wetlands and streambanks.
Milestone 15: October 2001
- Task 16:** Stabilize cut and fill banks.
Assignment 16: North Latah County Highway District with assistance from PCEI and LSWCD
Output 16: Stabilization completed in high priority (15% to 25% of county road system).
Milestone 16: June 2000
- Task 17:** Improve road-related water conveyance systems.
Assignment 17: North Latah County Highway District, with assistance from PCEI and LSWCD.
Output 17: Completed project plans and engineering designs
Milestone 17: June 2000

6) **CONTACTS**

Federal

Don Martin

EPA Nonpoint Source Program Coordinator
 United States Environmental Protection Agency
 1435 North Orchard
 Boise, ID 83706
 Phone: (208) 334-9498
 Fax: (208) 334-1231

Regional

John Cardwell

DEQ NCIRO Project Officer
 Idaho Department of Health and Welfare
 Division of Water Quality (DEQ)
 1118 "F" Street
 Lewiston, ID 83501
 (208) 799-4370

State

Gary Dailey

319 Water Quality Grant Coordinator
 Idaho Department of Health and Welfare

Division of Water Quality (DEQ)
1410 North Hilton
Boise, ID 83720
(208) 373-0444

Local

Ken Stinson
District Administrator
Latah County Soil and Water Conservation District
220 East 5th Street, Room 212-C
Moscow, ID 83843
Phone: (208) 882-4960
Fax: (208) 883-4239
E-mail: latahscd@moscow.com

7) BUDGET

PARADISE CREEK TMDL IMPLEMENTATION PLAN
FY 1999 & FY2000 REQUESTS

DESCRIPTION	UNIT PR	QUANTITY	COST	MATCH	SOURCE	319 REQUEST
<u>FY 1999 REQUEST</u>						
<u>Agriculture BMPs</u>						
Filter Strips	\$80/ac	34 acres	\$2,720	\$560	priv land	\$2,160
Riparian Forest Buffer	\$600/ac	56	\$33,600	\$8,400	priv land	\$25,200
Sediment Basins	\$2,500 ea	21 basins	\$52,500	\$13,125	priv land	\$39,375
Sed & Erosion Cont Stru	\$2,000 ea	52 struct	\$104,000	\$26,000	priv land	\$78,000
Field Bord & C Area Tre	\$500/acre	20 acres	\$10,000	\$2,500	priv land	\$7,500
Cont Direct Seed H Res	\$50/acre	1200 acres	\$60,000	\$15,000	priv land	\$45,000
Monitoring grant				\$78,000	State funds	\$0
Monitoring				\$1,700	student vol	\$0
Subtotals			\$262,820	\$145,285		\$197,235
<u>Forestry BMPs</u>						
Exc forest road imp-D-5	\$68/hr	11 days	\$6,000	\$6,000	Bennett Tree	\$0
Exc forest road imp-225	\$90/hr	4 days	\$3,500		IDL	\$3,500
Rock		1500 ft.	\$3,000			\$3,000
Exc Pond 9 repair-225ex	\$90/hr	2 days	\$1,500		IDL	\$1,500
Exc Pond 9 repair-dump	\$55/hr	2 days	\$1,000		IDL	\$1,000
Road rocking pond 9	\$10,000/mile	1.5 miles	\$15,000	\$7,750	Bennett Tree	\$7,250
Grass seeding & mulchin	\$1,000		\$1,000		IDL	\$1,000
Reforestation	\$200/ac	50 acres	\$10,000	\$6,400	IDL, private	\$3,600
Subtotals			\$41,000	\$20,150		\$20,850

DESCRIPTION	UNIT PR	QUANTITY	COST	MATCH	SOURCE	319 REQUEST
<u>Urban Riparian Restoration</u>						
Excavate Streambanks	\$4 /cu yd	40000	\$160,000	\$160,000	City of Mosc	\$0
Survey and Engineer Tre	\$70/hr	500	\$35,000	\$35,000	City of Mosc	\$0
Eros Cont Blanket	\$1.57/sq yd	20000	\$31,400	\$9,420	BonTerraÖ	\$21,980
12" Biologs*	\$8.93/ft	4500	\$40,185	\$12,056	BonTerraÖ	\$28,130
Aircraft cable	\$.50/ft	1400	\$700		M. Lumber	\$700
Coniferous trees for ba	\$10 per tree	350	\$3,500	\$3,500	Univ Idaho	\$0
Duckbill anchors	\$10 /anchor	350	\$3,500		Wheeler Cons	\$4,000
Cedar tree logs	\$3000/load	2 loads	\$6,000		PCEI	\$6,000
Herb Plants for Coir L	35/plant	25,000	\$8,750		Wildife Habi	\$8,750
Plant / Grow Biologs*	\$15 per foot	4000	\$60,000	\$6,000	Wildlife Hab	\$54,000
Hydroseed Streambanks	\$0.08/sqft	185500	\$14,840	\$7,420	Apex Hydrose	\$7,420
Large woody plants for	\$10/plant	1500	\$15,000		Clifty View	\$15,000
Woody Plants for Stream	\$1.00 per pl	22000	\$22,000		Wildlife Hab	\$22,000
Woody plants for upper	\$1.50 per pl	8500	\$12,750		LawyerÆs Nur	\$12,750
Plant Protectors	\$.60/prot	8500	\$5,100		Forestry Sup	\$5,100
Tree Mats and staples	\$.70/mat	8500	\$5,950		Wildlife Hab	\$5,950
Herbaceous Plants for R	\$0.50 per pl	15950	\$7,975	\$798	Wildlife Hab	\$7,178
Project Labor constr/ma	\$18.23/hr	5550	\$112,598		PCEI staff	\$112,598
Project Labor (PCEI vol	\$15/hour	9000	\$135,000	\$135,000	PCEI volunteers	
PCEI supplies/materials/travel			\$20,000	\$10,000	PCEI	\$10,000
	Subtotals		\$700,248	\$379,193		\$321,555
<u>Animal Waste Prevention</u>						
Fence materials	\$.87/foot	1015	\$883		\$883	
Nose Pumps	\$400 each	2	\$800			\$800
Project Labor coord/con	\$18.23/hr	120	\$2,316		PCEI, volunteers	\$2,316
Project Labor (PCEI vol	\$15 per hour	145	\$2,175	\$2,175	PCEI, volunt	\$0
	Subtotals		\$6,174	\$2,175		\$3,999

DESCRIPTION	UNIT PR	QUANTITY	COST	MATCH	SOURCE	319 REQUEST
<u>Roadside Erosion Control</u>						
Stabilization of cut and fill banks			\$40,000	\$20,000	LatahHwyDist	\$20,000
Impr water convey systems			\$35,000	\$15,000	LatahHwyDist	\$20,000
Hydroseed stabilized banks	\$0.08/sq ft	100000	\$8,000	\$4,000	Apex Hydrose	\$4,000
Woody native plants to	\$1.00/plant	3750	\$3,750		Wildlife Hab	\$3,750
Plant Protectors	\$.60/prot	3750	\$2,250		Forestry Sup	\$2,250
Project labor coord/maint	\$18.23/hr	750	\$11,349		PCEI, volunt	\$11,349
Project labor (voluntee	\$15.00/hr	700	\$10,500	\$10,500	PCEI, volunt	\$0
Subtotals			\$100,349	\$49,500		\$61,349
<u>Project Administration</u>						
Staffing costs+A103	\$15.83/hr	1615	\$25,565			\$25,565
Fringe benefits, insura	at 30%		\$7,670			\$10,790
Indirect costs	at 10%		\$3,324			\$3,636
Subtotals			\$ 36,559			\$ 39,991
			\$1,147,149	\$596,303		\$644,978
					Req match	\$429,985
					Excess match	\$166,318
					Grant Request	\$644,978
					Total Project	\$1,241,281

DESCRIPTION	UNIT PR	QUANTITY	COST	MATCH	SOURCE	319 REQUEST
<u>FY2000 REQUEST</u>						
<u>Rural Riparian Restoration</u>						
Excavation	\$4/cu yd	30000	\$120,000	\$26,000	PCEI, landow	\$94,000
Engineer Wetlands	lump sum	100	\$8,800	\$2,200	TerraGraphic	\$6,600
Survey	\$100/sec	100	\$10,000	\$2,300	Private cons	\$7,700
Duckbill anchors	\$10/anch	400	\$4,000			\$4,000
Equipment Rental/Purch			\$10,000	\$4,000	PCEI, landow	\$6,000
Bank Protection Rock	\$100/load	20	\$2,000		Private cont	\$2,000
Cedar Logs	\$3000/truck	2	\$6,000	\$2,000	PCEI, Potlat	\$4,000
Coniferous Trees for St	\$10 per tree	400	\$4,000	\$4,000	Univ Idaho	\$0
Herbaceous Native Seed	\$300/acre	7	\$2,100		Grasslands W	\$2,100
12" Biologs	\$8.93/ft	2000	\$17,860	\$7,860	BonTerra Ame	\$10,000
Woody Plants for Ripari	\$1 per plant	10560	\$10,560		Wildlife Hab	\$10,560
Herbaceous Plants for R	\$0.50 per pl	15840	\$7,920	\$792	Wildlife Hab	\$7,128
Plant Protectors	\$1.30 per pl	15840	\$20,592	\$2,059	Wildlife Hab	\$18,533
Geotextile fabric	\$1.57 per sq	32000	\$50,240	\$12,560	BonTerra Ame	\$37,680
Supplies/Materials/Travel			\$22,000	\$12,000	PCEI	\$10,000
Project Support	\$20 per hr	1000	\$20,000	\$20,000	PCEI	\$0
Project Labor cood/main	\$18.23/hr	6500	\$136,200		PCEI staff	\$136,200
Project Labor (voluntee	\$15 per hr	9000	\$135,000	\$135,000	PCEI volunteers	
Subtotals			\$587,272	\$230,771		\$356,501
<u>Wetlands Restoration</u>						
Engineer Wetlands	Lump Sum		\$4,800	\$1,200	TerraGraphic	\$3,600
Survey	\$100/cr sec	53	\$5,300	\$300	Private cons	\$5,000
Earth Moving	\$4/cu yd	2500	\$10,000	\$2,000	PCEI/Landown	\$8,000
Native grass seed	\$300/acre	2	\$500		PCEI	\$500
Woody Plants for Wetlan	\$1.00/plant	2000	\$2,000		PCEI	\$2,000
Project Support	\$20/hr	500	\$10,000	\$10,000	PCEI	\$0
Project Labor, Mainten	\$21.45/hr	500	\$10,725		PCEI	\$10,725

DESCRIPTION	UNIT PR	QUANTITY	COST	MATCH	SOURCE	319 REQUEST
Project Labor (voluntee	\$15/hr	1000	\$15,000	\$15,000	PCEI, volunt	\$0
Herbaceous Plants for R	\$0.50/6 cu I	15840	\$7,920	\$2,010	Wildlife Hab	\$5,910
Subtotals			\$66,245	\$30,510		\$35,735
<u>Project Administration</u>						
Staffing costs	\$16	1650	\$26,120			\$26,120
Fringe benefits	at 30%		\$7,836			\$7,836
Indirect costs	at 10%		\$3,396			\$3,396
Subtotals			\$37,351			\$37,351
Subtotals			\$690,868	\$261,281		\$429,587
					Required match	\$286,391
					Excess match	(\$25,110)
					Grant Request	\$429,587
					Total Project	\$690,868

Budget Narrative: Project Labor and Costs (PCEI)

Both the Urban and Rural Riparian Restoration labor totals 6,500 hours each over the two-year period of this grant. The number of hours is based on our experience of the work necessary to complete the restoration of stream miles that we have specified. Each task includes 1.5 Full Time Equivalents per year plus additional volunteer coordination assistance during the three-month low flow restoration period (1.5 FTE * 2000 hours/year * 2 years) + too summer hours = 6500 hours. The per hour rate is \$21.45. This rate includes all salary, taxes, insurance (medical and worker's comp), and other salary expenses. Staff will coordinate volunteers, provide technical expertise, draft and submit all necessary permits, communicate with landowners, coordinate construction and design activities, and communicate with other project entities.

This figure was carefully calculated based on real field experience obtained working on five 319 contracts with DEQ to date in both rural and urban areas. Labor costs will also be incurred on a seasonal basis in response to technical need and volunteer coordination in these tasks: Wetland Restoration, Animal Waste Prevention, and Roadside Erosion Control.

The budget item entitled supplies/materials/travel is based on our previous project experience as well. This item includes all extra material costs used in the field such as fabric stables and stakes, as well as travel and communication needs.

Project Administration costs include:

Staffing costs (30 hours per week for 2 years, at \$15.00 per hour);
Fringe benefits (at 30%, plus cost for medical insurance for 2 years); and
Indirect costs (at 10%).

Funding for items 1 and 2 (staffing costs and fringe benefits) would cover staff costs associated with:

- administering the grant,
- increasing participation in the installation of implementation strategies; and
- coordinating activities between the various grant participants, technical advisers/cooperators, and the landowners/cooperators (City of Moscow, North Latah County Highway District, Palouse-Clearwater Environmental Institute, Bennett Lumber Company, Idaho Department of Lands, Idaho Soil Conservation Commission, Idaho Association of Soil Conservation Districts, Natural Resources Conservation Service, Latah County Commissioners and Planning and Zoning Department, and Latah Soil and Water Conservation District),

These staff duties would include the following tasks:

- set up and maintain fiscal records;
- disburse funds to entities overseeing specific tasks;
- act as liaison between various grant participants (completion of many of the tasks will involve cooperation between two or more entities);
- work closely with staff of PCEI, the City of Moscow, the North Latah County Highway District, Bennett Lumber Company, the Idaho Department of Lands, the University of Idaho, Moscow High School, the Natural Resources Conservation District, the Soil Conservation Commission, the Idaho Association of Soil Conservation Districts, and Latah County on project planning, coordination, implementation, and evaluation;
- assist in identification of priority sites for implementation of specific practices;
- contact landowners to encourage their participation in installation of BMPs; set up contracts with landowners/cooperators for installation of practices in the non-urban settings;
- disburse funds to participating landowners/cooperators;
- produce and collect information from all grant participants on progress;
- combine information from all grant participants and prepare quarterly reports to DEQ; distribute copies to all grant participants;
- prepare and present summaries of progress to grant participants and other entities, as requested;
- disseminate information on progress in Paradise Creek through periodic newsletters, directed to landowners and interested entities and agencies;
- research erosion control and floodplain protection ordinances for rural residential development;
- work with Latah County Planning and Zoning Departments to implement policies and regulations to reduce or eliminate development within the floodplain and to prevent erosion from development in the rural setting;
- research and develop site-specific species planting lists and conservation plans;
- arrange, coordinate, and design long-term monitoring of specific sites by university and high school students and volunteers;
 - annual vegetation surveys in and adjacent to stream and on uplands, to detect trends in establishment/expansion/survival of planted vegetation, and to detect changes in stream channel configuration;
 - annual breeding bird surveys, to detect change in use/presence of wildlife, using annual bird surveys as an index to wildlife use.
- recruit volunteer labor for various tasks
 - volunteer labor pools could be developed through contacts with environmental clubs, birding groups, plant societies, and sportsmen's groups;
 - tasks could involve fencing riparian areas, planting vegetation in riparian/forest buffers or along roadbanks, and weed control.
- provide clerical and administrative support to the Paradise Creek Watershed Advisory Group, including:

arrange, provide notice of, and conduct public meeting(s) to solicit public input on the
ag portion of the Implementation Plan;

participate in preparation of the final draft of the Implementation Plan; photocopy and
collate copies of the final Implementation Plan; prepare cover letters and
distribute copies;

prepare press releases and news articles on the Implementation Plan, the 319 grant
funding, and progress toward accomplishment of tasks; may involve offering
tour(s) to news reporters;

attend monthly meetings of the Paradise Creek Watershed Advisory Group (PCWAG)
and the Monitoring Subcommittee (MS); taking minutes at each meeting;

prepare for monthly meetings of the PCWAG and MS by developing agendas, securing
speakers (when needed), completing minutes, and preparing mailings and press
releases;

review notices of hearings on requests for rezone or conditional use permits within
Paradise Creek Watershed; prepare and deliver comments, as directed by
members of the PCWAG.

organize and coordinate preparations for watershed-level assessment:

act as liaison between multiple entities, agencies, and individuals (including Palouse
Conservation District in Whitman County, Washington, Idaho Department of Fish
and Game, Bureau of Land Management, Palouse-Clearwater Environmental
Institute, Natural Resources Conservation Service, Idaho Soil Conservation
Commission, Idaho Association of Soil Conservation Districts, Latah Soil and
Water Conservation District, Planning Departments for Latah County, Idaho and
Whitman County, Washington, and landowners) to identify data gaps, gather
relevant information, stratify stream segments, contact landowners for access,
complete the two-week on-site assessment of the Paradise Creek Watershed,
compile and analyze the collected data, prepare a final report, and present results
and recommendations in written and verbal formats to participants, stakeholders,
news media, and the public.

identify and pursue additional funding sources for activities and practices that will
complement and enhance tasks accomplished with the 319 funding; for example:
recruit additional landowners interested in animal waste control; enlist volunteer labor
for fencing and planting; seek funding for fencing from
interested entities, such as the Idaho Department of Fish and Game;

identify and pursue funding for, and develop, educational brochures; for example:
on riparian restoration (values, benefits, techniques, appropriate plants)
on erosion control for rural residential development (techniques, benefits, plants,
etc., for developers and homeowners)

identify landowners willing to place riparian areas in easement; identify potential funding
sources for easements (for instance, Palouse Land Trust, Idaho Department of Fish
and Game); and assist in linking landowners and purchasers of easements

and perform other duties and activities as necessary

Funding for item 3 would be used as follows:

To cover costs of photocopies, development of presentation materials (such as slides or overheads), and costs of mailings.

Projections for staffing and indirect costs are based on past experience. The Latah Soil and Water Conservation District (LSWCD) has provided support to the Paradise Creek Watershed Advisory Group (PCWAG) for several years.

This support has included clerical support, including staff time to prepare for meetings, develop agendas, schedule speakers, make phone calls, and complete and mail minutes, agendas, and miscellaneous items, etc. The LSWCD has also covered mailing and photocopying costs for minutes and notices, press releases, maps, and newsletters. The indirect costs, to cover a two-year period, are intended to cover ongoing costs associated with normal requirements of support for the PCWAG, as well as additional anticipated costs associated with Paradise Creek newsletters, notices of meetings, arrangements for public meetings, and outreach letters (for instance, to request permission for access for riparian assessment, or to describe and encourage additional participation in installation of BMPs).

The estimate for need for administrative staff support time is also based on experience. Over the past several months, the LSWCD's District Administrator has spent, on average, between 2/3 and 3/4 of her time on activities and tasks associated with the Paradise Creek Watershed. This includes time spent on duties associated with support for the PCWAG and the PCWAG's Monitoring Subcommittee; attendance at several related public meetings on Paradise Creek; gathering information and preparing several grant proposals and soliciting letters of support; presenting information on the draft implementation plan and grant proposal to several different entities; preparing and presenting a paper at the Water Quality Beyond 2000 Conference; attending training on the riparian assessment methodology; gathering information for, and coordinating, workshops on the riparian assessment methodology. Continuation and expansion of time spent on the foregoing activities, as well as those tasks listed earlier, is conservatively estimated to require at least 30 hours per week over the two-year period.

Summary Budget Information

PROJECT NAME: Implementation of Nonpoint Source Controls (BMPs) to Achieve TMDL Pollutant Load Allocations on Paradise Creek, Latah County, Idaho

Budget Categories	319 Grant Funds	Local Match	Category Total
Staffing Cost	\$54,600.00	\$0.00	\$54,600.00
Fringe Benefits (30%)	\$19,500.00	\$0.00	\$19,500.00
Indirect Costs (10%)	\$7,410.00	\$0.00	\$7,410.00
Supplies, Operating, and	\$1,042,416.00	\$840,747.00	\$1,883,163.00
Grand Total	\$1,123,926.00	\$840,747.00	\$1,964,673.00

The Latah Soil and Water Conservation District was designated as the lead agency for this proposal by the Paradise Creek Watershed Advisory Group. The Latah Soil and Water Conservation District has accepted that responsibility and is committed to administering the implementation program in the Paradise Creek Watershed.

Signed:

Kevin Meyer
Chairman
Latah Soil and Water Conservation District