

Chapter 7 – Plan and Program Effectiveness Evaluation

This chapter describes how the different NPS program implementation elements will be evaluated for effectiveness. Certain elements of the Management Plan contribute directly to the accomplishment of the Plan while others are in a supportive role. For evaluation purposes, these elements can be sorted in four groups: program, process, projects and partnerships. The basis for measurement is the accomplishment of the series of outcomes associated to each element, as shown in Table 7.1

The **program** component evaluates how the NPS Management Plan is being implemented and is based on the EPA Nine Key Elements to administer the program. Program reporting measures, which actually direct NPS program strategies to a significant degree, are formalized in the Colorado/EPA performance partnership agreement (PPA) and associated program activity measures (PAMs) (see Chapter 1 for more discussion and reference on the PPA and PAMs). The NPS program also creates an annual report and highlights success stories as part of the overall reporting obligations.

Process components evaluate internal and external processes that ensure the quality and accuracy of program implementation. They encompass mostly administrative elements such as compliance with contracting and reporting requirements, fiscal tracking, etc. **Projects** are evaluated at several levels such as technical implementation of the PIP, administrative and financial. The basis for measurement is the accomplishment of the series of outcomes associated to each element as shown in Table 7.1.

Evaluation outputs noted in the table below are used to evaluate current status of the program and also to refine objectives, tasks, timeframes, and evaluation processes, thus building a feedback mechanism to keep the program updated.

Element Group	Plan Elements	Outputs	Evaluation Frequency		
			Every Month	Every Six Months	Yearly
Program					
	<i>Management Plan</i>	Progress in Implementing Tasks			✓
	<i>Planning</i>	Workable and Current Plan			✓
	<i>Annual Report</i>	Up-to-Date Report Status			✓
	<i>Measurable Results</i>	Load Reduction Reports		✓	
	<i>Measurable Results</i>	NPS Assessments			✓
	<i>Success Stories</i>	PPA Commitments Met			✓
	<i>Fiscal Management</i>	Grants Properly Managed			✓
	<i>Administrative Management</i>	Grants Properly Managed			✓
Process					
	<i>Project Solicitation</i>	Completed Process			✓
	<i>PIP Development</i>	Completed PIPs			✓
	<i>Contracting</i>	Completed Contracts			✓

Table 7.1 – Evaluation of NPS Program Elements					
Element Group	Plan Elements	Outputs	Evaluation Frequency		
			Every Month	Every Six Months	Yearly
Projects					
	<i>Progress Reports</i>	Up-to-Date Project Files	✓		
	<i>EPA GRTS</i>	All Updates Done by Deadlines		✓	
	<i>Construction Inspect</i>	Implementation According to PIP			✓
	<i>Field Review</i>	Implementation According to PIP			✓
	<i>Fiscal Review</i>	Projects are Properly Managed		✓	
Partners					
	<i>NPS Team</i>	Program Staff	✓		
	<i>WQCD Management</i>	Informed Supportive Management	✓		
	<i>EPA</i>	Support and Review			✓
	<i>Alliance</i>	Technical Support			✓
	<i>Watershed Groups</i>	Open Communication			✓
	<i>Universities/Colleges</i>	Staff Communication			✓
	<i>State Government</i>	Staff Communication			✓
	<i>Federal Government</i>	Staff Communication			✓
	<i>Federal Consistency</i>	Annual Review Complete			✓

7.1 Reporting

The annual report presents accomplishments of NPS Management Plan implementation milestones, including but not limited to the following examples:

- Grant status by grant year with updates on active projects and on project closures;
- Project status on data collection and reporting;
- Federal grant expenditure and match accrual totals updates;
- Colorado Success Story Report identification;
- Information dissemination regarding NPS activities including the funding application process;
- Request for Proposals (Project Solicitation) process implementation and results;
- Other state and federal agencies and the general public involvement on nonpoint source pollution issues through the Nonpoint Source Alliance; and,
- Outreach activities include the www.npscolorado.com website.

Colorado has taken great strides to improve the NPS contract completion practices. Project closing instructions and expectations, such as final invoice, match reconciliation and final reports, are being communicated clearly and systematically to project sponsors.

EPA National Program has developed a series of PAMs intended to demonstrate the accomplishments of NPS program management. PAMs are incorporated into the PPA, developed between EPA Region 8 and CDPHE. The PAMs for the Colorado NPS program are:

- Report actual total nitrogen, total phosphorus and total sediment load reductions in GRTS as project-specific information.
- Completed NPS Success Stories of water segments for which water quality is restored and / or fully restored.
- Number of water segments for which water quality restoration planning is complete.
- Number of 12-digit HUC watersheds where water quality improvements have been demonstrated by completion of a watershed success story.

7.2 Grant Reporting and Tracking System (GRTS)

One of the mandated elements for implementation of the NPS program is that every state enter project data in the EPA National Database, the state records (GRTS). GRTS data are reviewed annually by the EPA national office. Reviews for the last few years have been satisfactory for Colorado with very few if any errors. This accomplishment is the result of a concerted staff effort for being current in use of GRTS and utilizing the system for managing information, as well as, reporting to EPA on project status and documentation. GRTS is now used as a reference and in trend analysis of past projects to assist in program planning and management. Colorado continues to develop a process and protocols to better gather sediment and nutrient load reduction data from projects to report in GRTS.

7.3 Financial

Financial records for each project have three levels of records, allowing for thorough checks and balances. The project financial documentation is kept in both hard copy and electronic files by the project coordinator. The program coordinator and the WQCD fiscal office have databases with current balances on all projects. This system has proven consistently valuable at project and grant closure. All balances of grant funding and all sources of match are managed with this system.

7.4 Gauging Effectiveness

Project evaluation throughout the duration of the project and at its conclusion has been given greater emphasis for the last five years. The result is an improvement in the final reports regarding impact of the project and when applicable more usable data. This background created an expectation for project proposals to provide an evaluation matrix to explain clearly the basis and approach for evaluating project outcomes and related impacts. Semi-annual reporting is expected to follow these evaluation approaches to assure progress and determine if any adjustments are necessary for project success.

The NPS program staff and CWCB's Watershed Restoration Program have partnered with Colorado Watershed Assembly to establish the Measurable Results Project (MRP). The MRP will scientifically document the effects of restoration efforts on water bodies in Colorado that receive restoration funding from the NPS program and the WRP. The MRP systematically and quantitatively measures the changes in river systems and, characterizes the aquatic and surrounding terrestrial environment at project sites.

Annual resurveys of these established sites documents the environmental impact benefits of the restoration activities over time. The documentation of these benefits will help the program report on those results and identify and prioritize the most cost effective measures to achieve water quality improvement. Cost-benefits and savings of pollution prevention versus pollution cleanup are additional intended analyses.

7.5 Periodic Assessment of Water Quality and Impairments

Staff from the TMDL and NPS programs collaborate in applying the watershed prioritization criteria and analyze the list of segments that are included in Regulation № 93 Section 303(d) list of Water Quality-Limited Segments Requiring TMDLs. Listed segments are identified for potential implementation projects that meet TMDL needs and leverage NPS resources toward restoration of the water quality-impaired segments.

Colorado regularly reports on load reductions associated with the regulations that govern loading of nutrients (total phosphorus and total nitrogen) into lakes and reservoirs. Colorado also reports on sediment loads into rivers, streams and lakes that are reduced or minimized based on BMPs implemented by the Colorado Department of Transportation.

In order to enhance and expand on current load reduction reporting, the NPS program has a task force to develop protocols to capture load reduction data and meet the required GRTS reporting minimum elements in a more comprehensive manner. This task force is made up of NPS program staff and members of the Alliance.

The objectives of the task force are 1) to develop protocols to capture sediment and nutrients load reduction data associated with NPS BMPs implemented with Section 319(h) funds; and 2) to develop a simple system that allows project sponsors and other users to capture and submit those data to the NPS program. These data will be used to fulfill the minimum reporting requirements in GRTS and to help the NPS program evaluate success, through measurable results.

7.6 Annual Report Shows Progress

The NPS annual report describes the ongoing implementation of the watershed approach, which incorporates the use of EPA's Nine Elements for watershed planning components with NPS implementation activities. The WQCD is committed to the coordination of the Water Quality Programs including NPS, TMDLs, Integrated Reporting, Source Water Protection, Groundwater, Clean Water State Revolving Loan Fund and 319 projects to accomplish this ongoing work.

The annual report fulfills the requirements of CWA Section 319(m). The NPS program prepares this report to inform the public, the U.S. Congress and EPA on the state's progress in the area of NPS water pollution abatement. Although this report should not be considered a complete enumeration of all nonpoint source activities, it describes the most important features of Colorado's NPS program.

7.7 Federal Consistency

Federal agencies manage a significant portion of Colorado's land area: nearly 37% of the surface land and water of the state is federally owned, largely in headwaters areas. Consequently, federal consistency with state water quality standards is critical to achieving water quality goals in all river basins in the state.

The NPS program has developed MOUs with the US Forest Service and with US BLM (see Appendices I and J) to create a framework within which the agencies involved can effectively cooperate on projects of mutual concern to protect water quality⁴. As part of these collaborative efforts, the NPS program conducts annual tours and discussions with BLM and FS staff to review BMP implementation on projects and activities on selected managed lands. EPA is invited to be on the review team. In the course of over a decade, this review has been a positive exchange of information and support without any need for type of enforce action or intervention by EPA.

The US Department of Agriculture has several programs that can be used for NPS activities. For example, the Small Watershed Program may provide local land operators with significant cost-share assistance. The

4 - The NPS program recognizes BMPs from US Forest Service and BLM as acceptable for use in Colorado.

Environmental Quality Incentive Program, established in the 1995 Farm Bill, also provides the opportunity for locally identified priorities to receive cost-share assistance. Farm Bill programs offer potential coordination opportunities for Selenium reduction strategies in some basins, and are also important for sediment, bacteria and nutrient management.

In addition to the federal land management agencies, the Water Quality Control Division, as well as several NPS Council agencies, participate on the USDA State Technical Committee, and provide input to the USDA agencies on a variety of programs including the Environmental Quality Incentive Program (EQIP), Wetland Reserve Program, and Farmland Protection Program

Colorado no longer participates in the “Single Point of Contact (SPOC)” process, as described in Executive Order 12372 that discusses the intergovernmental review process for federal assistance programs and development projects. In addition, Colorado currently does not have the resources to review each forest plan, grazing allotment plan and other routine management tools developed by the different agencies. Therefore, a somewhat informal process, which will be further refined and improved, has evolved with various federal partners. For example, a BMP review process was developed to evaluate US Forest Service and Bureau of Land Management activities.

BMP reviews are conducted by the NPS program staff and intended to evaluate the effectiveness of an individual practice or set of practices on water quality. Lessees, permittees, and other public lands users are invited to accompany the WQCD and other agencies on the review tours. BMPs are evaluated for a number of activities, for example, timber sales, road construction, grazing allotments, and ski run stabilization. Should a review identify areas of concern in how a BMP is implemented, the WQCD would notify the appropriate agencies and EPA of the findings, and strongly encourage a collaborative process to identify options for improving the use of a particular practice in protecting water quality.

**Table 7.2 –Federal Assistance Programs or
Federal Actions with Potential Water Quality Impacts**

US Department of Agriculture	Emergency Conservation Program
	Environmental Quality Incentive Program
	Forestry Incentive Program
	Wildlife Habitat Incentive Program
	Wetland Reserve Program
	Conservation Reserve Program
	Watershed Protection and Flood Prevention
	River Basin Surveys
	Revisions or Amendments to Land and Management Programs, including timber sales and grazing allotments
	Colorado River Salinity Control Program
US Department of Transportation	Highway Planning and Construction
US Department of Interior	Abandoned Mine Reclamation Program
	Mineral Development
	Revisions or Amendments to Land and Management Programs, including timber sales and grazing allotments
	Irrigation Systems Rehabilitation or Development
	Management of National Wildlife refuges and proposed acquisitions
	National Park Management Plans and proposed acquisitions
US Department of Defense	Colorado River Salinity Control Program
	Flood Plains Management Services
	Flood Control Projects
	Planning Assistance to States
	Defense Installations Land Management Plans