USDA

United States Department of Agriculture

**DECISION MEMORANDUM FOR THE ACTING CHIEF**

**THROUGH:** Thomas W. Christensen 4/4/2018
Associate Chief for Operations

James E. Tillman, Sr. 4-4-18
Acting Associate Chief for Conservation

**FROM:** Mark Xu 4/3/18
Acting Deputy Chief for Strategic Planning and Accountability

Kurt Readus
Acting Deputy Chief for Science and Technology 4/3/18

**SUBJECT:** Implementation of the Principles, Requirements, and Guidelines (PR&G) for NRCS Watershed Programs

**ISSUE/RECOMMENDATION**:

Department of Agriculture (USDA) Departmental Regulation (DR) DR9500-13 and accompanying Departmental Manual (DM) DM9500-13 provides a common USDA framework for evaluating covered water and land resource projects.

DM9500-13 describes the NRCS programs and project scales covered by the PR&G process. It establishes that the PR&G process applies to watershed project activities authorized by the Watershed and Flood Prevention Act (P.L. 83-566) where the Federal contribution is greater than $10 million. This decision memorandum provides for NRCS to implement PR&G for all P.L. 83-566 watershed projects, regardless of cost, and directs the revision of NRCS policy to accomplish the implementation process before June 1, 2018.

Approve Option 1.

**OPTIONS:**

Option 1: Implement the PR&G as required in DR9500-13 and outlined in DM9500-13 by including the benefit/cost evaluation concepts and process into relevant NRCS Watershed Policies, Handbooks and Instructions for Watershed activities with a Federal contribution of $10 million or more. Require a benefit/cost evaluation based on PR&G-based processes for watershed activities with a Federal contribution of less than $10 million with the analysis using a level of detail commensurate with the scale of the project.

**Pros:**

- NRCS will be in full compliance with DR9500-13
- Enables one consistent process for all watershed projects of any size
- Provides maximum flexibility in the decision process because the PR&G process does not contain decision rules for project selection

**Cons:**

- Increasing flexibility in the decision process will require enhanced evaluation and documentation of the tradeoffs considered
- Increased administrative effort to assure consistent implementation
- Will require up-front effort to include the PR&G ecosystem services evaluation framework into NRCS policy and guidance documents
- Leadership and staff must be trained on the process and decision options

Option 2: Do not Implement PR&G; continue to implement existing P&G.

**Pros:**

- NRCS can rely on an agency modified 1983 P&G process
- Minimal implementation and training costs would be required

**Cons:**

- NRCS will not be in compliance with DR9500-13
- The modified 1983 P&G evaluation process does not meet current science standards and would need to be updated

**BACKGROUND:**

In 2009, the Council for Environmental Quality (CEQ) began a process to revise, update, and expand the applicability of Federal water investment evaluations to all Federal agencies that affect water quantity, water quality, and water-based environmental restoration. Toward this goal, CEQ released Final Principles and Requirements and Final Interagency Guidelines. Those documents required Agencies define the program coverage and the implementation process in Agency Specific Procedures (ASP). USDA developed a Departmental-wide ASP coordinated by National Resources and Environment and the Office of the Chief Economist, with contributions by NRCS, Farm Service Agency, Forest Service, and Rural Development. USDA issued its ASP as DR9500-13 and DM9500-13 in January 2017. Thus, the PR&G water resource investment evaluation guidance is now complete and NRCS can implement it.

Integration of the PR&G evaluation process in NRCS analysis and decision-making will necessitate revisions at all levels of the evaluation to decision process. Some revisions may be significant and others minor. A description of the PR&G evaluation process is provided in the attachment. Under the PR&G, the Agency decision-makers will have more flexibility in plan selection but will need to carefully evaluate and document the tradeoffs among the possible

benefits options.

**DECISION BY THE ACTINGCHIEF:**

Approve: Leonard Jordon 4/5/18

Disapprove: _____

Discuss with me: _____

Date: _____

Attachment

**Decision Process:**

The PR&G does not contain a specific decision rule, instead it relies on the decision maker to evaluate the tradeoffs of the different alternatives and select the "best" option. "Best" is very much in the "eye of the beholder" and whatever the decision, the justification for that decision should be documented to support the "best" alternative's selection. The PR&G does provide some support for the decision maker's selection process. The PR&G states a general goal and specific Federal objectives:

> *In consideration of the many competing demands for limited Federal resources, it is intended that Federal investments in water resources as a whole should strive to maximize public benefits, with appropriate consideration of costs. Public benefits encompass environmental, economic, and social goals, include monetary and non-monetary effects and allow for the consideration of both quantified and unquantified measures.*
>
> *The Federal Objective, as set forth in the Water Resources Development Act of 2007, specifies that Federal water resources investments shall reflect national priorities, encourage economic development, and protect the environment by:*
> *(1) seeking to maximize sustainable economic development;*
> *(2) seeking to avoid the unwise use of floodplains and flood-prone areas and minimizing adverse impacts and vulnerabilities in any case in which a floodplain or flood-prone area must be used; and*
> *(3) protecting and restoring the functions of natural systems and mitigating any unavoidable damage to natural systems.*

PR&G allows for maximizing public benefits (of all types) relative to costs, the use of quantified and unquantified information in the tradeoff analysis, flexibility in decision making to promote localized solutions, ability to rely on the best available science and objectivity, and advance transparency for Federal investments in water resources.

In addition, the PR&G process developed guiding principles to assist both decision makers in weighing the tradeoffs of alternatives and analysts when developing and evaluating alternatives. More detail may be viewed in the PR&G document, but briefly the guiding principles are:

(a) Healthy and Resilient Ecosystems,
(b) Sustainable Economic Development,
(c) Floodplains (avoid unwise use),
(d) Public Safety (reduce risks to public health and safety),
(e) Environmental Justice, and
(f) Watershed Approach.

It is unlikely that any single alternative will provide the greatest social, environmental, and economic benefits. Thus, the comparison of alternatives will require tradeoffs between these effects, as well as the degree to which the investment's goals are achieved. The analysis should

display tradeoffs and effects in a transparent manner to help inform the public and the decision makers.

**Evaluation Process:**

The PR&G evaluation process is based on a relatively standard eight step watershed planning process, not much different than that currently utilized in most organizations involved in watershed planning: The steps are:

(1) Identify Problems and Opportunities;
(2) Inventory Existing Resources and Conditions;
(3) Forecast Future Conditions;
(4) Develop Array of Alternatives;
(5) Evaluate Effects of Individual Alternatives;
(6) Compare Alternatives;
(7) Identify Recommended Alternative; and
(8) Implement and Evaluate.

One of the characteristics that makes the PR&G process different than previous planning processes is the use of an ecosystem services framework as a way of framing and describing the comprehensive set of benefits that people receive from nature. Ecosystem services can be characterized as the ecological goods and services provided by a healthy, functioning environment. Ecosystem services (either tangible or intangible) are the critical link between ecological function and social well-being. By analyzing and monitoring the ecosystem services produced from a given Federal investment, natural resource managers also can ensure that the detrimental ecological impacts decisions are minimized to the extent possible. For the purposes of PR&G, the ecosystem services framework provides an integrated approach that articulates the relevant costs and benefits inherent in a decision-making process, to complement any economic, social and ecological assessment of magnitude. The framework will identify, describe, and quantify environmental impacts through the flows of ecosystem services that result, directly and indirectly, from a Federal investment. Such values must be elicited through stakeholder engagement, professional judgement, expert analysis, and process models.

In 2005, the Millennium Ecosystem Assessment (MEA) organized benefits into four service categories that are reflected in DM9500-13:

(1) Provisioning services are tangible goods provided for direct human use and consumption, such as food, fiber, water, timber, or biomass.
(2) Regulating services maintain a world in which it is possible for people to live, providing critical benefits that buffer against environmental catastrophe – examples include flood and disease control, water filtration, climate stabilization, or crop pollination.
(3) Supporting services refer to the underlying processes maintaining conditions for life on Earth, including nutrient cycling, soil formation, and primary production.
(4) Cultural services make the world a place in which people want to live – recreational use, spiritual, aesthetic viewsheds, or Tribal values.

The list of potential ecosystem services from even the smallest watershed project will likely exceed the available resources for analysis. The list will need to be reduced to only those that are critical to the decision maker, the analysis, and the stakeholders. Once critical services are identified and metrics developed, proper measurement of marginal change in those services based on changes to ecosystem structure or function due to a Federal investment must be completed. This process will describe how the impacts to the planning area will affect the provision of services in question (degree and frequency over time). Changes in service provisioning should be compared to the Future without Federal Investment (FWOFI) commonly referred to as the National Environmental Policy Act (NEPA) no-action alternative. Specifically, the framework should measure how each alternative will affect the quantity and quality of the ecosystem and economic functions, processes, outputs, and resulting services.

Such considerations would ideally monetize ecosystem services when feasible using valuation methodologies; however, not all metrics can easily or feasibly be translated into monetary value, as is the case with many cultural or aesthetic values. In evaluating and comparing non-monetary and monetary ecosystem services delivered by a given investment, the use of social surveys, questionnaires, and consultations may be necessary to ascertain resource significance, or establish a proxy for characterizing tradeoffs. If the informational or resource capacity for monetary valuation is not feasible, critical ecosystem services should still be quantified and/or characterized to the extent possible.

The principles of a benefit-cost analysis (BCA) can be used to evaluate economic, social, and environmental ecosystem services that are quantified (monetized and non-monetized) and those that are describe qualitatively. BCA is the standard technique for evaluating the net national impacts (i.e., benefits minus costs) of a PR&G activity. Monetary beneficial and adverse effects are evaluated and measured in terms of changes in national income, thus accounting for offsetting gains and losses across different regions of the Nation. Beneficial effects in a BCA are net increases, after accounting for costs, in the value of the national output of goods and services resulting from an investment, and improvements in national economic efficiency.

Best available science and commensurate level of detail will dictate the extent of the ecosystem service flow analysis. The level and scale of an analysis will be commensurate with an activity's cost, impact, and other issues that inform decision making. The term "commensurate" is applied by the analyst and decision maker on a case-by-case basis, and the level of detail is considered "commensurate" when:

(a) The decision maker has the information determined is needed to make an informed decision;
(b) The analyst is not aware of additional information, available within time and budget constraints, that would significantly change the analysis (e.g., would have the potential to change the selection of a recommended alternative); and
(c) All relevant stakeholders are informed of the level of detail.

PR&G requires consideration of a set of alternatives, and allows for consolidation and removal of alternatives that fail to achieve the Federal Objective and Guiding Principles. Additional

alternatives may be removed after preliminary investigation identifies them as infeasible or inferior. In all cases, removed alternatives should be briefly discussed to indicate that they were considered, and the analysis should document the reason(s) why they were eliminated. The following set of alternatives are required in the initial consideration:

(1) FWOFI: No Action alternative should be included in the final analysis to serve as a baseline against which other alternatives are evaluated.
(2) Nonstructural Alternative: If there are nonstructural approaches to addressing the problems and opportunities, they must be fully considered and carried forward into the final array of solutions and given full and equal consideration in the decision making process.
(3) Locally Preferred Alternative: In cooperation with local interests that have oversight or implementation authorities and responsibilities, agencies may identify a "locally preferred" alternative. This alternative may emerge from the collaborative process and, if identified, must be fully considered and carried forward into the final array of solutions and given full and equal consideration in the decision-making process.
(4) Environmentally Preferable Alternative: If the PR&G analysis is done in conjunction with a NEPA analysis, and the NEPA analysis identifies an environmentally preferable alternative as part of an Environmental Impact Statement, that alternative must be included in the final PR&G analysis.
(5) Additional Alternatives: The required alternatives may not provide decision makers with the full array of decision options and tradeoffs. Other alternatives may be developed and presented in the final analysis to explore opportunities for addressing other Federal, State, local, and international concerns not fully addressed in the required plans.

It is unlikely that any single alternative will provide the greatest social, environmental, and economic benefits. Thus, the comparison of alternatives will require tradeoffs between these effects, as well as the degree to which the investment's goals are achieved. Tradeoffs and effects must be displayed in a transparent manner to help inform the public and the decision makers. The tradeoffs among and within economic, environmental, and social goals shall be explicitly identified across alternative plans. Tradeoffs are compared from the perspective of the specific circumstances of each analysis, including the study area, resources, and impacted populations, to form the basis for deciding which plan best addresses the Federal Objective and Guiding Principles.

The requirements for analyzing alternatives under PR&G differ from the requirements for analyzing alternatives under NEPA, although both authorities ask agencies to consider a reasonable range of alternatives. PR&G contains specific requirements for developing and analyzing alternatives, in contrast to the more general NEPA requirement that a lead agency consider a reasonable range of alternatives that may be narrower than those considered under PR&G (see 40 CFR 1502.14). Unique requirements of the PR&G include "full consideration and reporting on nonstructural alternatives or plans," and "an alternative plan, strategy, or action that is preferred by a local interest with oversight or implementation responsibilities." PR&G also requires a transparent comparison of the effects of alternatives for their contribution to the Federal Objective and each of the Guiding Principles using an ecosystem services approach and

including a discussion of tradeoffs in documentation provided in display and narrative form. While an ecosystem services approach may be used in NEPA analysis, it is not explicitly required. Where possible, the NEPA process should be integrated with PR&G to facilitate the production of a single decision document that fulfills the requirements of both processes.