



# US Army Corps of Engineers

Institute for Water Resources

BUILDING STRONG®

## Environmental Services (2012)

**Status:**            **Project Manager:**

In Progress        [Janet Cushing](#)

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**Purpose:**            The Corps has been under increased pressure by Congress and others to illustrate the value of Ecosystem Restoration projects. Habitat Units and similar ecosystem-based metrics are used to describe the value of these projects, but these units are poorly understood by the public and often do not serve to convey the full benefits that humans derive from fully-functioning ecosystems. This project addresses the need to more fully account for environmental benefits in Corps project planning by investigating the utility of an Ecosystem Goods and Services (EGS) framework. **PURPOSE:** Investigate the utility of and develop practical guidelines for considering and analyzing Ecosystem Goods and Services (EGS) in planning and alternatives evaluation of Corps projects by District Planners. • Improve our understanding and ability to incorporate consideration of EGS in Corps planning, including a knowledge of the policies and practices used by other federal agencies • Use the expertise of Corps Planners and academics working in the EGS field to develop a framework for considering EGS in Corps projects • Provide Districts with tools and methodologies to advance Corps capabilities to capture the full range of relevant benefits and losses resulting from Corps projects

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**Objective:**        1) Principles & Best Practices: Identify general principles and best current practices in evaluation and quantification of ecosystem goods and services. Work done in the EEIRP (Evaluation of Environmental Investments Research Program), EVE (Economic Value of the Environment), EMRRP (Ecosystem Management and Restoration Research Program) and other relevant research programs will be mined for relevant questions, techniques and connections. 2) Policy Review and Analysis: Review USACE and Federal planning and policy guidance to identify issues that may arise in the application of an ecosystem service-based approach to water resource development planning and management. 3) Data, Analytical Tools, and Models: Identify and assess data sources, models and other analytical tools needed to support assessments of ecosystem goods and services. 4) Interagency Collaboration: Several other government and nongovernment agencies, academia and the private sector are engaged in research and development, policy deliberations, and case studies related to ecosystem goods and services. We will pursue coordination and collaborative efforts with other agencies and organizations to the extent practicable including informal interactions, formal meetings and workshops, and other means as deemed appropriate. 5) Analytical Framework & Guidelines: An initial analytical frame work will be formulated followed by interim and final technical guidelines that will support integration of ecosystem goods and services in Corps project planning in various mission areas. Topics to be addressed include decision analysis, risk and uncertainty; forecasting future conditions; monitoring and adaptive management; and critical

response thresholds. 6) Case Studies: Identify and evaluate several case studies where ecosystem service concepts have been or are being applied, and document in a synthesis summary report.

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**Benefits:** By investigating the potential use of EGS in the Corps planning process, several capabilities to the Corps may be improved. The approach may: 1) allow for better accounting of a full range of benefits & losses in restoration planning; 2) lead to improved decision making based on a more holistic suite of ecological and socioeconomic considerations; 3) improve the Corps' ability to communicate the benefits of projects to the public and decision-makers; and 4) allow a more standard approach to the application of EGS throughout the Corps.

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**Progress:**

- FY11: We created an initial draft of the Principles and Best Practices Technical Report and circulated it for internal comments. We developed the PDT and contracted with the University of Maryland to assist with the Framework and Guidelines development.
- FY12: We have collected comments on the Principles and Best Practices report, and solicited comments on the workplan as a whole. We also put together and held the first workshop in support of the Framework/Guidelines Development, which was attended by Corps personnel, other federal agency representatives and academics. We have draft annotated outlines completed for the Policy Review and Analysis and Data, Analytical Tools and Models reports, both of which have been presented to the PDT as a whole. Regarding Interagency Collaboration, Initial contacts have been made with EPA, NOAA, FWS, USGS, NatCap and TNC. Representatives from several of these organizations also attended the workshop.

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