

RECLAMATION

Managing Water in the West

Project Management Framework



U.S. Department of the Interior
Bureau of Reclamation
Technical Service Center

September 2012

Mission Statements

The U.S. Department of the Interior protects America's natural resources and heritage, honors our cultures and tribal communities, and supplies the energy to power our future.

The mission of the Bureau of Reclamation is to manage, develop, and protect water and related resources in an environmentally and economically sound manner in the interest of the American public.

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Abbreviations and Acronyms

AC	Actual Cost
ANSI	American National Standards Institute
BAC	Budget at Completion
CMP	Comprehensive Program Series
COG	Coordination and Oversight Group
CPI	Cost Performance Index
CV	Cost Variance
DCO	Deputy Commissioner, Operations
DOI	U.S. Department of the Interior
EAC	Estimate at Completion
ESAM	Electronic Service Agreement Module
EV	Earned Value
EVM	Earned Value Management
FAC-P/PM	Federal Acquisition Certification for Program and Project Managers
FAI	Federal Acquisition Institute
FY	Fiscal Year
IT	Information Technology
NEPA	National Environmental Policy Act
O&M	Operation and Maintenance
OMB	Office of Management and Budget
OMB 300	Office of Management and Budget Circular A-11, Part 7, Section 300
PM Framework	Project Management Framework
PMBOK [®]	<i>A Guide to the Project Management Body of Knowledge</i> , fourth edition, 2008
PMI	Project Management Institute
PMIT	Project Management Implementation Team
PMO	Project Management Office
PMP	Project Management Plan
PMT	Project Management Team
PRB	Project Review Board
PV	Planned Value
RAX	Replacements, Additions, and Extraordinary Maintenance
Reclamation	Bureau of Reclamation
SOP	Standing Operating Procedures
SPI	Schedule Performance Index
SV	Schedule Variance
TSC	Technical Service Center
U.S.C.	United States Code
WBS	Work Breakdown Structure

Executive Summary

Project performance and success can be significantly improved by applying project management knowledge, processes, skills, tools, and techniques. This is increasingly accepted across all industries. This integrated Project Management Framework (PM Framework) is intended to add value to the organization by outlining a body of knowledge, processes, skills, tools, and techniques that, when used, will improve the Bureau of Reclamation's (Reclamation) performance in conducting its work.

The PM Framework integrates existing Governmentwide and U.S. Department of the Interior (DOI) project management requirements and clarifies project management practices for those projects for which no specific mandates already apply. The PM Framework also establishes metrics that will enable Reclamation to measure how well it is administratively instituting project management and how well this practice is improving the agency's actual performance in accomplishing its workload.

While Reclamation is efficient in accomplishing projects, it can improve the way it manages its workload. Some portions of the organization are very successful in managing projects to reach completion on time and within budget and can provide "best practices" for other portions to overcome challenges.

To maximize the success of projects throughout the organization, Reclamation is committed to implementing effective project management at all levels and for all types of project work, including construction projects, Information Technology (IT) projects, and other projects. In certain cases, project management processes are already mandated by DOI or higher level governmental policy. This document does not supersede any of the mandated processes; rather, it provides guidance for, and specifically focuses on, providing scalable requirements for situations in which Reclamation retains discretion on the level and type of project management requirements.

The principles laid out in this PM Framework can be used for almost any kind of activity, including environmental efforts, water contracting or marketing actions, planning studies, or even short-term assignments dealing with specific resource management issues.

In 2007, the Office of Management and Budget (OMB) issued directives for Executive Branch agencies to establish a structured development program for program and project managers. Since then, DOI and OMB have refined and developed additional requirements that must be integrated into Reclamation's business practices. In 2009, Reclamation first issued policies and directives and standards for project management. In June 2011, Reclamation's Deputy Commissioner, Operations, directed the Coordination and Oversight Group (COG) to establish the Project Management Implementation Team as a subteam

of the COG and tasked the team with developing an integrated Project Management Framework with the objective to guide the consistent administration and practice of project management for all programs, projects, investments, and initiatives. This document is the culmination of that work.

Key guiding principles of this PM Framework include:

- The PM Framework must add value to the performance of the agency in conducting its work by clarifying project management practices for those projects where no specific mandates apply.
- The application of project management to individual activities must be scalable to the size, sensitivity, scope, and complexity of the project, while also using common means to execute, track, and report project status.
- Implementation of the PM Framework must balance the need for a fundamental level of consistency across the agency by providing flexibility to each directorate to implement and apply the project management principles that work best for its organization.

Terminology

In many professions and disciplines, terminology can have specific meanings or different meanings for the same terms. This applies also to project management and how it affects current language used in Reclamation. Many terms are used throughout Reclamation that relate to the discipline of project management. To ensure consistency, minimize confusion, and promote common understanding across Reclamation, critical terms have been identified in Section II, Terminology, and Section V, Glossary.

Administration

Having an administrative and governance structure within each directorate is critical for establishing an organizational framework that incorporates project management principles into its operations. Each directorate is responsible for establishing policies, procedures, and organizational structures that promote the application of project management. Within this context, this PM Framework provides the flexibility necessary for directorates/offices to implement project management principles to meet their unique business needs. The PM Framework establishes guidelines for defining and managing projects categorized as Basic, Standard, Complex, and Complex with OMB 300 and recommends the type of training and certification requirements aligned with each category. The Complex with OMB 300 category applies the higher level DOI and OMB requirements to

projects subject to Circular A-11 and DOI policy, while the other three categories provide a framework for Reclamation directors to exercise the discretion left to them.

Project Management Processes

To understand the value of project management, it is necessary to understand the fundamental nature of a project; the core characteristics of project management processes; how success is evaluated; the roles, responsibilities, and activities of a project manager and the expertise required; and the context in which projects are performed.

The PM Framework references a certification known as Federal Acquisition Certification for Program and Project Managers (FAC-P/PM). This is a set of common, essential competencies developed by the Federal Acquisition Institute (FAI) for the program and project management community. While the FAI has established the training, experience, and competencies required for certification, it does not provide detailed project management process guidance.

To define project management processes, the PM Framework integrates the concepts set forth by the Project Management Institute in its publication, *A Guide to the Project Management Body of Knowledge*, fourth edition, 2008, along with the requirements set forth in Governmentwide, DOI, and Reclamation policies.

The project management processes are organized into five process groups: initiating, planning, executing, monitoring and controlling, and closing:

- **Initiating** defines and authorizes the project and defines how the overall project will be managed from start to finish.
- **Planning** defines and refines objectives and develops the Project Management Plan (PMP), which is the course of action required to attain the project's objectives and scope.
- **Executing** integrates people and other resources to carry out the PMP activities for the project.
- **Monitoring and controlling** regularly measures and monitors progress to identify variances from the baseline PMP so that corrective action can be taken, when necessary, to meet project objectives.
- **Closing** formalizes acceptance of the product, service, or result; brings the project, or a project phase to an orderly end; and transitions to operations or to the next project phase.

These processes are used throughout the life cycle of a project.

Project Management Process Guidelines

The five groups of processes include a very broad range of individual processes. It is important for practitioners within Reclamation to understand the individual processes that must be adapted and applied to suit each individual project. Smaller, simpler projects may require the use of less formal processes, whereas larger and more complex projects typically require more structured processes. In short, although project management follows standard practices and guidelines, it is scalable and adaptable to each particular project.

Project Life Cycle

The project life cycle for a Reclamation project may include multiple phases or subprojects within the context of a single overall project. Project phases in a complete project life cycle are not the same as project management process groups. In fact, the process groups may need to be repeated for each phase.

The end of each phase is marked by a milestone. There are a multitude of phases and milestones currently in use throughout Reclamation, depending on the organization and the type of project. Despite the differences, all projects will follow the agency project life cycle, which consists of four broadly defined project phases:

1. Starting the Project:

Example Activities: Developing the project charter, authorizing memo or email, obtaining output from another project, formulating service agreements, etc.

Example Outputs: Project charter developed, including designation of project manager, identification of project category (Basic, Standard, Complex, or Complex with OMB 300), and preliminary project cost estimate.

Example Milestones: Review of project charter, decisions, preliminary costs. Go/no-go decision made to proceed to next phase of project.

2. Organizing and Preparing:

Example Activities: Preparing the PMP, appraisal study, feasibility study, planning study, value planning study, etc.

Example Outputs: Signed PMP, environmental and other required processes and permits, appraisal design, feasibility design, final design, and significant acquisitions/procurement events.

Example Milestones: Milestone review of outputs, authorization of recommendations, and approval to move to next phase.

3. Carrying Out the Work:

Example Activities: Executing work orders, design, acquisition, delivery, construction, etc.

Example Outputs: Product or system, results, and documentation that work is complete.

Example Milestones: Review of deliverables and artifacts, and construction or delivery results. Authority to proceed to deployment, operations, or operation and maintenance (O&M).

4. Closing the Project:

Example Activities: Review and approval of deliverables, developing delivery memo and other final reports, commissioning, transfer of facilities, as-built drawings, Standing Operating Procedures, O&M manuals, contract closeout, and COG closeout report.

Example Outputs: Closeout report completed, lessons learned, and team closure.

Example Milestones: Post Implementation Review, Termination/Change Review, Decommissioning, or Succession Review.

The wide range of phase activities, outputs, and milestones that are developed for any particular type of project throughout Reclamation falls within these overarching high-level phases. A given activity may fall into a different phase, depending on the type of project. For example, for a design and construction project, the environmental approvals and permits may be part of the “Organizing and Preparing” phase, where for a strictly environmental project, they would fall into “Carrying out the Work.” The five groups of project management processes (as previously defined) are applied during each phase to efficiently guide the accomplishment of any particular project.

Metrics

The PM Framework establishes standardized metrics to measure progress toward establishing a project management program Reclamationwide, beginning in fiscal year (FY) 2013. Two types of metrics will be collected: one set will measure Reclamation’s progress toward implementing a project management program; the other set will measure the effectiveness of that program. The COG will collect data on the performance metrics, which will be included in the COG FY reports.