

Reclamation Manual

Directives and Standards

- Subject:** Reclamation Information Technology (IT) Investment Management Framework
- Purpose:** The purpose of this Directive and Standard (D&S) is to provide a framework that establishes a Bureau of Reclamation-wide capital planning and investment control (CPIC) process. The benefit of this D&S and framework will be the effective and efficient identification, selection, control, and evaluation of IT investment options that support mission and business needs, in compliance with statutory and regulatory requirements and Department of the Interior policy.
- Authority:** National Defense Authorization Act for Fiscal Year 2015 (January 3, 2014), Division A, Title VIII, Subtitle D-*Federal Information Technology Acquisition Reform*, Sections 831-837 (Pub. L. 113-291); Clinger-Cohen Act - Information Technology Management Reform Act of 1996 and National Defense Authorization Act for Fiscal Year 1996 (Pub. L. 104-106); Office of Management and Budget (OMB) Circular A-11, *Preparation, Submission and Execution of the Budget*; OMB Circular A-130, *Management of Federal Information Resources*; Office of the Secretary Order 3309- *Information Technology Management Functions and Establishment of Funding Authorities*; Departmental Manual, (Part 375 Chapter 7, and Part 376 Chapter 4); and the Department's Information Technology Capital Planning and Investment Control Guide
- Approving Official:** Associate Chief Information Officer (ACIO), Information Resources Office (IRO), 84-21000
- Contact:** Planning and Compliance Division, 84-21200
-

- 1. Introduction.** The Clinger-Cohen Act of 1996 was enacted to reform government IT investment processes and to establish a comprehensive framework for planning, budgeting, procuring, and managing IT through well-defined performance and results-based investment management practices. It further required agencies to have a well-disciplined and integrated capital programming process to monitor IT investments and improve project outcomes over time. This includes processes for selecting, controlling, and evaluating IT investments; enterprise architecture (EA) management; and IT workforce management. More recently, the Federal Information Technology Acquisition Reform Act reinforced the Clinger-Cohen Act principles, strengthened the authority of agency chief information officers (CIOs) and emphasized the need for the IT, business mission programs, human resources, acquisitions, and budget/finance communities to work across organizational lines to optimize IT's benefits to the agency. To support this legislation, OMB established various circulars and instructions to focus agency efforts on improving their IT investment management practices. OMB Circulars A-130 and A-11 require agencies to establish a disciplined

Reclamation Manual

Directives and Standards

CPIC process for IT portfolio analysis; investment and risk management; performance-based acquisition management; and the cost-effective life-cycle management of IT resources. The Department also established policies and directives to further ensure compliance with legislation and OMB requirements aimed at improving IT investment management practices, including guidance for a CPIC process. This D&S describes Reclamation's CPIC process and IT investment management requirements with regard to these requirements.

2. **Applicability.** This D&S applies to all Reclamation personnel involved in the management of Reclamation IT investments. This D&S applies to all IT assets, and associated resources, owned and/or administered by Reclamation, including specialized systems (e.g., Industrial Control Systems (i.e., ICS), Geographic Information Systems (i.e., GIS), etc.).
3. **Definitions.**
 - A. **Capital Planning and Investment Control or CPIC.** CPIC is a structured, integrated approach to manage the IT portfolio and investments; ensure that IT investments align with the missions of an organization; support business needs while minimizing the risks and maximizing returns on IT investments throughout the life-cycle of all IT investment projects; and report on the performance and health of IT investments to appropriate oversight boards and/or organizations, including the Congress, OMB, and the Department. In short, the CPIC process supports the ongoing identification, selection, control, and evaluation of IT portfolio and investment options and decisions.
 - B. **CPIC Phases.** The Department's CPIC process includes five phases: pre-select; select; control; evaluate; and steady-state. Each phase is designed to provide a disciplined approach for CPIC.
 - C. **Information Technology or IT.** The equipment, interconnected systems or subsystems, services, personnel, and other resources used in the automatic acquisition, storage, manipulation, management, movement, control, display, switching, interchange, transmission, or reception of data or communication of information by an organization. The term includes computers, networks, ancillary equipment, software, firmware, services (including support services), and related resources.
 - D. **Integrated Project Team (IPT).** A multi-disciplinary team led by an IT investment manager responsible and accountable for the planning, budgeting, procurement, and life-cycle management of the IT investment to achieve cost, schedule, and performance goals. Team skills generally include but are not limited to: budgetary, financial, capital planning, procurement, contracting, value management, program expertise, and staff resource management skills.

Reclamation Manual

Directives and Standards

- E. **Investment Review Board (IRB).** The IRB Advisory Council (IRBAC), who serves as the IRB, is responsible and accountable for assisting the ACIO in managing and monitoring Reclamation's IT investment process, including the pre-selection, selection, control, evaluation, and steady-state phases of the CPIC process. The Reclamation IRB also is responsible for providing Reclamation's IRO with recommendations on the IT investment portfolio, IT management practices, and IT strategies that best support mission and business processes and functions.
- F. **IT Business Case.** An IT business case serves as the document that supplies the data necessary for compliance with Reclamation, Department, and OMB IT investment management requirements. The business case provides a high-level description of the investment, subcomponents, and projects as well as funding requirements, performance goals and measures, project management capabilities, project risks, acquisition strategies, EA alignments, and security requirements for the IT investment.
- G. **IT Investment.** An expenditure of IT resources to address mission delivery and management support. An IT investment may include a project or projects for the development, modernization, enhancement, or maintenance of a single IT asset or group of IT assets with related functionality and the subsequent operation of those assets in a production environment. All IT investments should have a defined life cycle with start and end dates, with the end date representing the end of the currently estimated useful life of the investment, consistent with the investment's most current alternatives analysis if applicable.
- H. **IT Portfolio.** The IT portfolio summarizes Federal agency IT spending on all IT investments, and is provided to OMB annually as part of the budgeting process. The IT portfolio contains all elements of the IT portfolio as explained in OMB Circular A-11.
- I. **IT System.** A discrete set of information resources organized for the collection, processing, maintenance, transmission, and dissemination of information, in accordance with defined procedures, whether automated or manual.
- J. **Life Cycle Costs.** The overall estimated cost for a particular program alternative, initiative, or system over the time period corresponding to its life. This includes direct and indirect costs, any periodic or continuing costs for operation and maintenance, and eventual retirement or replacement costs, as deemed appropriate.
- K. **Major IT Investment (Acquisitions, Projects, Applications, or Systems).** In the capital planning context, refers to IT acquisitions, projects, applications, or systems that require special management attention because they:
- (1) have significant importance to the mission or function of the agency, a component of the agency, or another organization;
 - (2) have significant program or policy implications;

Reclamation Manual

Directives and Standards

- (3) have high executive visibility;
- (4) are defined as major by the agency's capital planning and investment control process;
- (5) have or are projected to have high life-cycle costs (more than \$35 million in total life cycle costs);
- (6) have high development, operating or maintenance costs (more than \$5 million annually);
- (7) are of a high security status;
- (8) provide or are expected to provide high-returns;
- (9) play a significant role in the administration of agency programs, finances, property, or other investments relative to the budget; and/or
- (10) are classified as financial systems, with costs of \$500,000 or more per year.

L. **Non-Major IT Investment.** In the capital planning context, refers to IT investments that do not meet the definition of a major IT investment. All non-major IT investments must be reported individually on the IT portfolio provided to OMB as part of the IT CPIC management and budgeting process.

M. **Project.** A temporary endeavor undertaken to accomplish a unique product or service with a defined start and end point and specific objectives that, when attained, signify completion. Projects can be undertaken for the development, modernization, enhancement, disposal, or maintenance of an IT asset. Projects are composed of activities. When reporting projects in a business case, to the maximum extent practicable, investment managers should detail the characteristics of "increments" under modular contracting as described in the Clinger-Cohen Act of 1996 and the characteristics of "useful segments," as described in OMB Circular A-130.

N. **Project Management.** Project management is the application of knowledge, skills, tools, and techniques to meet life cycle and project requirements. This includes such knowledge areas and project activities as project planning, scope management, cost management, schedule management, performance management, quality management, human resource management, procurement (acquisition) management, and risk and organizational management.

4. **Responsibilities.**

A. **ACIO.** The ACIO is responsible for:

- (1) administering the IT capital planning program in Reclamation; and

Reclamation Manual

Directives and Standards

- (2) integrating the IT CPIC process with the IT management program, which includes IT strategic planning, IT security, EA, telecommunications, IT portfolio management, records and/or information management, and IT performance management.
- B. Director, Program and Budget.** The Director, Program and Budget is Reclamation's Capital Planning Executive and is responsible for the overall capital asset budgeting process including IT and construction.
- C. IRBAC.** The IRBAC is responsible for:
- (1) providing advice and support to the ACIO in fulfilling his or her responsibilities including reviewing and approving IT investments in accordance with OMB and Departmental guidance and in support of Reclamation's mission and business needs;
 - (2) monitoring the IT investment portfolio including all IT investments and related project performance;
 - (3) evaluating and comparing costs, schedules, and risks based upon established criteria; and
 - (4) establishing recommendations on individual IT investments and corrective actions for underperforming IT projects, investments, services, or the IT portfolio.
- D. Investment Managers.** Investment managers are responsible for:
- (1) managing major or non-major IT investments including the coordination of IT operations, maintenance, services, and related project activities or tasks to achieve established performance goals, and ensuring stakeholder and user involvement and satisfaction;
 - (2) as part of project activities or tasks, developing and updating of business case documentation and related investment/project management artifacts through an IPT comprised of appropriate contracting personnel, budgeting staff, program specialists, and EA personnel;
 - (3) as required, coordinating across multiple regions and directorates if the investment has several regions and directorates participating in the investment;
 - (4) ensuring that the business cases and related artifacts comply with Department and Reclamation EA requirements and using the IRO resources to ensure compliance and alignment with existing and future architecture, security, and/or modernization plans; and

Reclamation Manual

Directives and Standards

(5) ensuring all approved IT investments are included in Reclamation's IT portfolio.

E. **Business Owners/Functional Sponsors.** Business owners/functional sponsors are responsible for:

- (1) supporting the design, development, acquisition, operation, security, and maintenance of IT systems and investments supporting business processes or functions; and
- (2) effectively managing supporting resources (funding and personnel) essential to the development, operation, security, investment management, and maintenance of IT systems and investments.

F. **Executive Owners.** Executive Owners (i.e., regional directors, Denver and Washington directors, or respective deputy directors) are responsible for:

- (1) accounting for and ensuring IT system and investment resources are designed, acquired, developed, operated, and managed in accordance with the IT management program policies, directives and standards, and guidelines and in support of Reclamation mission; and
- (2) keeping the IRO adequately informed of management issues, security matters, accreditation issues, investment decisions, life-cycle and acquisition decisions, performance issues, and accomplishments for IT systems and investments.

5. CPIC Phases and Procedures.

A. **Pre-Selection.** OMB requires compliance with the requirements of the CPIC process to obtain approval for IT investments including development or maintenance projects through the budgeting process. The full cost of and risks associated with each IT investment, through the entire life-cycle of the investment, must be analyzed before funding is requested or approved for each fiscal year. A thorough analysis must be provided for all viable alternatives, including consideration of outsourcing to other agencies or the private sector. This information must be documented in a preliminary business case for a new IT investment. The preliminary business case also must be reviewed and approved by a business owner/functional sponsor and executive owner. Final review and approval of the major IT investment business cases resides with the Department CIO (Secretarial Order 3340, Paragraph 1, page 2). Final review and approval of the non-major IT investment business cases resides with the ACIO. (Secretarial Order 3340, Paragraph d.3, page 6).

B. **Selection.** To make sound strategic decisions about IT investments and ensure ongoing IT investments are in line with Reclamation mission and business objectives, capital asset plans and other project management documents will be reviewed by the ACIO. This includes any new and/or significant IT development, modernization, or

Reclamation Manual

Directives and Standards

enhancement investments for existing IT systems and services. The review will include an assessment of the risks, costs, technical options, technical complexity, and expected and actual benefits of the IT investment as part of a screening and ranking process or the IT CPIC process. The ACIO will prioritize IT investments as deemed appropriate, coordinate with appropriate Reclamation leadership and budgeting teams as required, and forward IT investment (major and non-major) recommendations to the Department and OMB as part of the annual budget submission process via IT investment business cases and the IT portfolio.

- C. **Control.** The Department requires business cases for all proposed or approved IT investments or projects. The business cases must clearly identify responsible team members and managers as well as baseline cost and performance metrics. Any potential or ongoing performance issues or problems associated with an IT investment must be reported to business owners/functional sponsors, executive owners, and the ACIO. Investment managers will be responsible for updating the ACIO and Department CIO on cost, schedule, and performance metrics associated with major IT investments and identifying any variances based on earned value data and/or operational analyses. IT investment managers also are responsible for developing corrective action plans to address potential or ongoing problems related to the IT investment and obtaining proper governance approval for corrective measures and continuing with the IT investment.
- D. **Evaluate.** As part of the evaluation process, IT investment business owners and executive owners/directors are responsible for assessing the status of IT investments. Both major and non-major IT investments will be evaluated on at least an annual basis by the ACIO and Department CIO as part of Reclamation's overall IT portfolio management process to determine whether such investments adequately support Reclamation mission and/or business objectives, duplicate existing investments or IT investments, including services, and sufficiently contribute or enhance technical and functional capabilities and/or other efficiencies within the organization. The ACIO will review all IT investments as part of this process and may recommend continuing, delaying, or terminating/rejecting IT projects based on cost, schedule, or performance results and variances. The Department's IRB and CIO will further review, validate, and approve major IT investments as part of the Department-wide IT CPIC process and budgeting cycle.
- E. **Steady-State.** OMB requires that all major IT investments in steady-state must be reviewed at least annually to document the continued effectiveness in supporting mission requirements. Operational analysis for major and non-major steady-state investments will be updated on an annual basis by business/functional sponsors, executive owners, and investment managers. Investment managers are responsible for providing this information to the ACIO for review. Any potential or ongoing problems and corrective actions associated with steady-state IT investments, as well as any significant system changes will be reported to the ACIO and Department CIO. They

Reclamation Manual

Directives and Standards

may recommend changes in and the termination of costly or ineffective steady-state investments and reject significant changes to IT investments in steady-state upon review.

- F. **Project Management.** IT investments or capital assets must be managed throughout all phases of the project life-cycle. The IT investment manager (with support of the Integrated Project Team) is responsible for developing the business case for the IT investment or proposal, completing required investment management documents and plans, developing cost/benefit analyses on IT alternatives or options, and ensuring the accomplishment of IT investment milestones and performance objectives as defined in project documents, plans, and the approved business case. Investment documents, plans, and the business case must clearly define the costs, risks, schedules, and performance goals of the IT investment.
- G. **Reporting Requirements.** The CPIC process requires the completion of capital asset plans or business cases for major and non-major IT investments. Business cases must be developed using the format and instructions established by OMB and Departmental guidance. Business cases also must clearly delineate executive ownership and project management responsibilities to ensure the achievement of project milestones and performance objectives for the IT investment.
- H. **IT Portfolio.** Reclamation's IT portfolio will be maintained to readily identify all IT investments and supporting components. The IT portfolio is important because it documents IT investments within the portfolio and supports the alignment of IT investments with mission and business goals and objectives. Reclamation's IT portfolio is maintained within eCPIC (the Department's electronic capital planning and investment control system) and provides for the ongoing integration of the following: budget formulation, budget execution, Federal EA, Department EA, Reclamation EA, capital planning and investment control initiatives, IT security, and IT project management.

RECLAMATION MANUAL TRANSMITTAL SHEET

Effective Date: _____

Release No. _____

Ensure all employees needing this information are provided a copy of this release.

Reclamation Manual Release Number and Subject

Summary of Changes

NOTE: This Reclamation Manual release applies to all Reclamation employees. When an exclusive bargaining unit exists, changes to this release may be subject to the provisions of collective bargaining agreements.

Filing instructions

Remove Sheets

Insert Sheets

All Reclamation Manual releases are available at <http://www.usbr.gov/recman/>

Filed by: _____

Date: _____