

Reclamation Manual

Directives and Standards

Subject:	Capital Investment and Repair Needs
Purpose:	The purpose of this Directive and Standard (D&S) is to establish Bureau of Reclamation (Reclamation) requirements and procedures for consistency in managing, collecting, and reporting capital investment and repair needs (CIRN) information. The benefits of this D&S are that the Federal investment and public interest in Reclamation-owned facilities will be protected and to provide transparency.
Authority:	Public Law 111-11, Title IX – Bureau of Reclamation Authorizations; The John D. Dingell, Jr. Conservation, Management, and Recreation Act, Public Law 116-9, Title VIII – Water and Power, Subtitle G – Bureau of Reclamation Transparency Act, Sections 8601-8603 (Reclamation Transparency Act); Office of Management and Budget (OMB) Circular A-11 <i>Supplement, Capital Programming Guide</i> ; OMB Memorandum M-20-03, <i>Implementation of Agency-wide Real Property Capital Planning</i>
Approving Official:	Director, Dam Safety and Infrastructure
Contact:	Asset Management Division (AMD), 86-67200

- 1. Introduction.** Reclamation has collected Major Rehabilitation and Replacement (MR&R) data since 2008. In 2015, the Infrastructure Investment Strategy was released and addressed the need for improved data collection, analysis, and reporting; categorization of potential investments according to relative importance and urgency; and collaboration with water and power customers. As a result, Reclamation’s MR&R SharePoint application was created in 2019 to combine MR&R information from various processes into a single repository to communicate Reclamation’s infrastructure needs to Congress, water and power customers, and other stakeholders. In 2021, the MR&R database began capturing additional Capital Investments (CI) and was renamed to Capital Investment and Repair Needs (CIRN). CIRN assists with identifying short-term and long-term needs while providing enhanced visibility of future needs at Reclamation facilities, regardless of funding source. CIRN activities leverage several sources of data which can be found in the annual update of the CIRN Guidance (formerly known as MR&R Guidance).
- 2. Applicability.** This D&S applies to all Reclamation personnel involved in identifying, planning, preparing, managing, reviewing, implementing, and reporting CIRN activities.
- 3. Availability.** CIRN is available October 1 through August 31 for personnel to manage and report activities. From September 1-30, CIRN will be closed for end of fiscal year reporting and updates. Users can export and interact with data from the dashboards available while CIRN is closed for updates.
- 4. Inventory.** CIRN utilizes the Federal Real Property Profile (FRPP) for its asset inventory. FRPP is a report from Financial Business Management System (FBMS), managed by the General Service Administration (GSA), designed to capture and report real property

Reclamation Manual

Directives and Standards

inventory and data. For assets not found in the FRPP, further guidance is available in the annual update of CIRN Guidance.

5. Major Categories.

A. **MR&R.** Activities include extraordinary maintenance (XM), deferred maintenance (DM), and Safety of Dams (SOD) modifications to facilities or assets. MR&R activities can include major repairs and rehabilitations, equipment and facility replacements, facility additions that are accomplished at every project over time, and/or modifications.

- (1) **XM.** Major non-recurring maintenance to Reclamation-owned or operated facilities, or facility components, that is intended to ensure the continued safe, dependable, and reliable delivery of authorized project benefits, and is greater than 10 percent of the contractor's or the operating entity's annual operations and maintenance (O&M) budget for the facility, or greater than \$100,000 for structures, or \$20,000 for buildings as determined by the Real Property Type in the FRPP.¹
- (2) **SOD.** Includes dam safety modification work under the Initiate Safety of Dams Corrective Action (ISCA) Program budgeted within the designated 30-year timeframe. This information is maintained by the Dam Safety Office (DSO), which is responsible for reporting all dam safety activities on the MR&R list.
- (3) **DM.** Consists of maintenance and repairs that were not performed when they should have been or were scheduled to be and which are put off or delayed for a future period (Statement of Federal Financial Accounting Standards Number 42).

B. **Other Capital Investments.** Congressionally authorized construction of a new asset that captures one of the subcategories below.

- (1) **Environmental Compliance.** New construction activities undertaken to address environmental requirements under the National Environmental Policy Act, Endangered Species Act, or National Historic Preservation Act. These activities are typically tied to legislation describing the extent to which they are for the greater public benefit.
- (2) **Indian Water Rights Settlement (IWRS).** Congressionally authorized projects to address new construction with enacted IWRS among Tribes, governments, and other parties.
- (3) **Rural Water Supply (RW).** Congressionally authorized projects that meet the definition for RW Projects under section 102 of P.L. 109-451. These activities are

¹ The \$20,000 threshold for buildings does not apply to eligibility determinations under PEC 05-03, which are subject to separate, statutorily fixed thresholds.

Reclamation Manual

Directives and Standards

specific to the Rural Water New Construction Program and are intended to deliver potable water supplies to rural communities.

- (4) **New Construction.** Other Congressionally authorized construction of a new asset.

6. Categorization. CIRN's system for categorizing activities is based on a comparison between the benefit of the activity and the risk of not conducting the activity. All activities must have a categorization rating in CIRN before August 31st annually. Further guidance is provided in the annual CIRN Guidance.

A. **Risk.** Reclamation's assessment of risk (i.e., probability and consequences of failure) builds on established internal and external models: the risk-informed approaches used by Reclamation field offices to evaluate XM activities, the quantified risk analysis system used in the Dam Safety Program, and the risk assessment process used by the Power Resource Office (HydroAMP Index Ratings) with its customers to prioritize investments in hydropower facilities. The risk assessment score provides a qualitative risk indicator to reflect the conditions that warrant more immediate action or can be addressed later based on the probability of failure and potential consequences of failure.

B. **Benefit.** The benefits assessment evaluates both the investment rating (length of time it takes to recoup the investment) and the mission enhancement (additional outcome that completion of the activity will have on Reclamation's ability to carry out mission delivery) for each activity. Per Department of the Interior (DOI) Lifecycle Investment Planning Guidance, the scope of benefits emphasizes projects aligned with DOI and Reclamation missions, initiatives, and strategic goals.

7. Funding.

A. **Funding Horizon.** The reporting timeframe is limited to facility investments anticipated to commence within the year of budget execution and extending up to 30 fiscal years to ensure the continued capability to provide authorized Project benefits. Activities may begin before or end after this timeframe, but the reportable activity estimates are limited to this timeframe.

B. **Funding Sources.** All activities are included despite the source of funding (e.g., power financing, advanced water user funding, direct operating entity funding, or other Federal entity funding). Appropriations will be reported as Reclamation appropriations or non-Reclamation appropriations. Providing these funding sources and related combinations of sources is important to explain estimated costs and how activities will be funded.

For both transferred and reserved works facilities where there is cost sharing, cost estimates should be based on the total activity, regardless of the operating entities' financial capabilities to fund the work (or their share of the work), and should include

Reclamation Manual

Directives and Standards

the reimbursable and non-reimbursable amounts (based on current project O&M cost allocations or cost share agreement).

1. **Cost Estimates.** CIRN uses cost estimates to define the level at which the estimate was developed for each CIRN activity. The cost estimate levels must align with the levels found in [FAC 09-01, Cost Estimating](#).

C. Additional Considerations for MR&R Activities.

- (1) Activities with a total cost between \$1.0 million and \$10.0 million, reference:
 - (a) [CMP 06-01, Reclamation Value Program](#)
 - (b) [CMP 09-04, Planning for Major Rehabilitation and Replacement of Existing Activities](#) (as determined by the regional director)
- (2) Activities with a total cost greater than or equal to \$10.0 million, reference:
 - (a) [CMP 09-04, Planning for Major Rehabilitation and Replacement of Existing Activities](#)
 - (b) [FAC 10-01, Identifying Design, Cost Estimating, and Construction Projects for Which Independent Oversight Review is Required, and Performing Those Reviews](#)
 - (c) [CMP 06-01, Reclamation Value Program](#)

8. **Requirements.** CIRN activities are managed at the regional/local offices and aggregated in CIRN for reporting and analysis. The following requirements provide various reporting benchmarks and data quality checks for CIRN activities.

- A. **Annual MR&R Certification.** At the beginning of each calendar year, the Director of Dam Safety and Infrastructure, through the Deputy Commissioner of Operations, will send out the annual CIRN Guidance and a memo requesting regions to certify their end of fiscal year MR&R totals to the regional directors. Regions will coordinate with appropriate transferred work operators to update MR&R activities in the CIRN application before August 31st each year. SOD activities will be updated by DSO. Regional directors will provide certification of end of fiscal year MR&R totals and distribute to the Director, Dam Safety and Infrastructure, Attention: Asset Management Division, 86-67220 (asset-mgt-div@usbr.gov) by September 15th. To consolidate reporting efforts, the fourth quarter DM certification for reserved works (reference paragraph 8.F) can be submitted in the same memo as the annual MR&R certification. Summarized MR&R data and fourth quarter DM for reserved works totals can be found in the CIRN Dashboard to support the memo.

Reclamation Manual

Directives and Standards

- B. Asset Management Report to Congress.** The Reclamation Transparency Act requires Reclamation to provide Congress with a detailed assessment of MR&R long-term capital and repair needs, categorization of repair needs, and regular reporting of information related to Reclamation's investments in infrastructure. The Asset Management Report to Congress must include an itemized list of MR&R information, guidance that describes the applicability of a risk categorization system, and budget-level cost estimates as reported in annual funding requests for individual activities. A sensitivity analysis should be completed on all activities found in CIRN to redact any potential controlled unclassified information. Reclamation personnel should coordinate with appropriate transferred works operators to verify the sensitivity of current MR&R activities. The report is submitted to Congress on a biennial basis. On even numbered fiscal years, AMD will work with the regional MR&R coordinators for a significant review and approval of certified MR&R data from the regional director's annual MR&R certification mentioned in paragraph 8.A to populate this report and Appendix.
- C. Aging Infrastructure Account (AIA).** The passage of the Bipartisan Infrastructure Law (P.L. 117-58 dated November 15, 2021) appropriated \$3.2 billion into the AIA to be used for XM activities (both transferred and reserved works). To apply for AIA funds, the AIA application must have a CIRNID that corresponds with an existing CIRN XM activity. XM activities anticipated to apply for AIA funds should review and update in CIRN in accordance with the AIA application cycle and reference [PEC 05-03, *Extended Repayment of Extraordinary Maintenance Costs*](#) for further information.
- D. Capital Planning and Investment Control (CPIC).** Reclamation is required under OMB Circular A-11 to have a well-defined CPIC process for managing non-IT capital assets. Reclamation's CPIC program draws from DOI's Lifecycle Investment Planning Guidance, DOI's Capital Planning and Investment Control for Construction and Leased Space, and OMB's Capital Programming Guide. Project managers with CIRN activities requesting appropriated funding in the first year of the Five-Year Plan (FYP) for Design and Construction are required to submit business cases to AMD, 86-67220 (asset-mgt-div@usbr.gov) by August 15 annually for DOI and OMB submission. CIRN activities that require business cases have an estimated cost greater than or equal to \$20 million (including multi-phase activities that total more than \$20 million for all phases combined) or projects that meet the project classification found in Section 3.A.4 of [CMP 07-01, *Project Management*](#). For Reclamation, a Project Management Plan can be used in lieu of a business case and satisfies the requirement documented in CMP 07-01 section 3.A.4.
- E. Lifecycle Investment Plan.** The Lifecycle Investment Plan identifies deliberate investments across multiple activities over an asset's life. The following are component deliverables of this plan required by DOI.
- (1) **DOI Scoring Methodology Guidance.** The annual CIRN Guidance serves as Reclamation's approved scoring methodology and describes how Reclamation

Reclamation Manual

Directives and Standards

uses categorization ratings to prioritize CIRN activities. AMD is responsible for annual guidance updates and distribution as mentioned in paragraph 8.A.

- (2) **Individual Project Data Sheet (PDS).** A single CIRN activity represents an individual PDS. Regions are no longer required to submit PDSs to AMD but should enter them directly as an activity in CIRN. All new activities should be added in CIRN in accordance with paragraph 8.A updates.
 - (3) **Summary PDS (Five-Year Plan).** The FYP summarizes contents of an individual PDS across a five-year span and serves as the primary budget justification for Reclamation's capital investments. Investments found in the FYP are reviewed annually by Reclamation's Investment Review Board, which is the Budget Review Committee (BRC). The FYP is the foundation for the CPIC process and must align with funding levels in budget requests to DOI, OMB, and Congress (President's budget). AMD has developed a FYP dashboard that is updated annually after September 15. The FYP dashboard captures edits made by designated regional project managers during the annual certification process mentioned in section 8.A. Regional project managers are responsible for coordinating with their respective regional budget offices to review the FYP and update CIRN as needed by the end of each December to ensure accurate reporting as part of the annual BRC process. AMD will refresh the FYP dashboard on the first workday in January each year to capture any edits or updates to CIRN made by regional staff. Collaboration between the regional project managers and the regional budget offices is important to ensure accurate reporting in the annual BRC notebook submission. The FYP outlook should support DOI's and the President's priorities and the budget being requested.
 - (4) **Lifecycle Requirements Exhibit.** This table showcases Reclamation's investments across multiple categories that align with DOI's investment categories. These include Operations, Maintenance, and Repair (OM&R); Modernization and Renewal; and Divestiture. AMD will extract data from CIRN annually in accordance with paragraph 8.A updates and will align with DOI investment categories for reporting.
- F. **Deferred Maintenance Reporting.** Per [FAC 01-09, Reporting Deferred Maintenance and Repairs \(DM\) of the Bureau of Reclamation's Reserved Works Assets](#), reserved works DM activities are extracted from CIRN to populate the Required Supplementary Information section of DOI's Agency Financial Report as required by DOI Policy [DOI-AAAP-0031](#). DM should be updated in CIRN in accordance with the FAC 01-09 reporting schedule.
- G. **Facility Reliability Ratings (FRR).** A component of the FRR scores for high hazard potential dams generated from using an MR&R cost ratio (five-year MR&R needs divided by 2% of the dam's current replacement value as reported in the latest FRPP, or five-year MR&R needs divided by the annual O&M cost). When calculating MR&R

Reclamation Manual

Directives and Standards

needs, only include the estimated total costs for MR&R activities associated with a high hazard potential dam; the MR&R needs do not include MR&R activities associated with hydropower facilities or associated facilities (e.g., pumping plants, power plants, fish passage facilities, recreation facilities). Activities associated with a high hazard potential dam should be reviewed and updated during the annual MR&R certification mentioned in paragraph 8.A to ensure accuracy when calculating FRR scores.

- H. **Repair Needs.** An MR&R activity's estimated total cost is required for all reserved and transferred works facilities (as currently listed in the FRPP) correlating to their asset name and Real Property Unique Identifier (RPUID). The estimated total cost will be summarized and reported as the repair needs for each RPUID to the FRPP, which is used to calculate the Facility Condition Index. AMD will use certified MR&R data from the regional director's annual MR&R certification mentioned in paragraph 8.A to report repair needs to FRPP by September 20.
9. **Definitions.** The following definitions will be used to input, manage, and report CIRN activities in this D&S.
- A. **Asset.** Buildings, structures, linear assets, and non-stewardship land (used for administrative purposes).
 - B. **Business Case.** Per CPIC for Construction and Leased Space guidance, a business case is a structured proposal for business improvement that functions as a decision package for organizational decision-makers.
 - C. **Capital Improvement.** A non-recurring expenditure or any expenditure for physical improvements. This includes costs for acquisition of existing buildings, land, or interests in land; construction of new buildings or other structures, including additions and major alterations; construction of streets and highways or utility lines; and acquisition of fixed equipment.
 - D. **Capital Investment.** The direction of resources towards a capital improvement, alteration, recapitalization, modernization, or new construction.
 - E. **Capital Planning.** A decision-making process for ensuring that investments integrate strategic planning, budgeting, procurement, and management of the asset (IT, construction, etc.) in support of agency missions and business needs.
 - F. **Consequence of Failure.** In the event of a failure, the consequence of damage to property and/or public safety is defined as Catastrophic, Critical, Significant, or Minor. A crosswalk for XM Non-Power, XM Power, and Dam Safety can be found in the annual CIRN Guidance.
 - (1) **Catastrophic.** Includes life loss, high economic damages resulting from asset failure, and/or property damage.

Reclamation Manual

Directives and Standards

- (2) **Critical.** The asset is inoperable, there have been life or injury impacts, and there is an inability to meet legal obligations.
 - (3) **Significant.** Measurable impact on asset long-term sustainability to deliver project benefits.
 - (4) **Minor.** Minimal or no threat to asset operation, reliability, or project benefits.
- G. **Emergency Actions.** Actions that Reclamation determines are necessary to minimize the risk of imminent harm to public health or safety or property.
- H. **Investment Rating.** The investment rating demonstrates the length of time it takes to recoup the investment by accomplishing the activity (e.g., operational efficiency gains, increased revenue generation, or a reduction or savings in O&M cost). A formal cost analysis should be used when available. A Major rating must be based on a formal cost analysis, and a Moderate rating should have some sort of estimate to support it. However, since such an analysis may not be available for each activity, the best reasonable estimate available, considering the judgment of those (staff/management) most knowledgeable, should be used.
- (1) **Major.** Results in increased revenue generation or reduction in O&M costs equal to the activity's estimated cost within seven years.
 - (2) **Moderate.** Results in increased revenue generation or reduction in O&M costs equal to the activity's estimated cost within 7 to 15 years.
 - (3) **Low.** Will not result in increased revenue generation or reduction in O&M costs equal to the activity's estimated cost within 15 years.
- I. **Mission Enhancement.** Reflects any additional outcome (e.g., benefit, capability, capacity) that completion of the activity will have on Reclamation's ability to carry out mission delivery (i.e., delivery of water and generation of power in an economically and environmentally sound manner in the interest of the American public). These mission enhancements are outcomes above and beyond the activity's original intent to meet Reclamation's mission of delivering water and power. Per DOI Lifecycle Investment Planning Guidance, the scope of benefits emphasizes projects aligned with DOI and Reclamation missions, initiatives, and strategic goals. "This element measures the degree to which the project (not the asset) contributes to mission and strategic goals. Projects may incorporate modernization and renewal activities that are driven by factors other than condition (e.g., renewable energy installation, housing modernization, or electric vehicle charging infrastructure)."
- (1) **Major.** Demonstrates significant contribution to two or more mission-related goals and objectives.

Reclamation Manual

Directives and Standards

(2) **Moderate.** Demonstrates moderate contribution to one mission-related goal and objective.

(3) **Low.** Maintains status quo or does not provide enhancement to mission delivery.

J. **MR&R Activity.** Includes XM activities, DM, and SOD modifications.

K. **OM&R.** These activities encompass actions necessary to achieve continued structural integrity and operational reliability in delivering authorized Project benefits. Additionally, as stated in Reclamation's Report to the Congress, Annual Costs of Bureau of Reclamation Project Operation and Maintenance for Fiscal Years 1993-97, dated September 1998, "the most visible maintenance tasks are the major repairs and rehabilitations, equipment and facility replacements, and facility additions that are accomplished at every project over time." As such, the maintenance includes replacements. Similarly, for contract administration purposes within Reclamation, replacements have always been part of maintenance responsibilities and costs.

L. **Probability of Failure.** The probability that a component will no longer perform its intended function and result in mission failure. A crosswalk for XM Non-Power, XM Power, and Dam Safety can be found in the annual CIRN guidance.

(1) **High.** High expectation of imminent component failure based on identified conditions.

(2) **Likely.** Probable failure of component based on condition if no action is taken.

(3) **Occasional.** Possible failure of component or worsening conditions in time.

(4) **Rarely.** Worsening conditions possible, but unlikely for component failure to occur.

M. **Rehabilitation.** Describes the process of renovating a facility or system where performance is failing to meet the original criteria and needs of the project.

N. **Reserved Works.** Any building, structure, facility, or equipment where responsibility for carrying out O&M activities and ownership is retained by Reclamation.

O. **Transferred Works.** Reclamation-owned facilities for which the responsibility to manage and perform O&M has been transferred by contract or agreement to a non-Federal operating entity.

10. Review Period. The originating office will review this release every four years.