

Reclamation Manual

Directives and Standards

TEMPORARY RELEASE

(Expires 11/03/2023)

Subject:	Large-Scale Water Recycling Program Feasibility Study Review Process
Purpose:	The purpose of this Temporary Reclamation Manual Release (TRMR) is to establish the requirements and review process for feasibility studies for projects funded under the Large-Scale Water Recycling Program. Through this TRMR, Reclamation also meets the requirements of Section 40905 of Pub. L. 117-58 to establish guidance for feasibility studies for the Large-Scale Water Recycling Program.
Authority:	Infrastructure Investment and Jobs Act – Title IX Western Water Infrastructure, section 40905 (Pub. L. 117-58)
Approving Official:	Chief Engineer
Contact:	Water Resources and Planning Office (86-63000)

1. **Introduction.** Pub. L. 117-58 requires guidelines to be issued for the preparation of feasibility studies for the Large-Scale Water Recycling Program. Reclamation Manual (RM) Directive and Standard (D&S), *Title XVI Water Reclamation and Reuse Program and Desalination Construction Program Feasibility Study Review Process* ([WTR 11-01](#)), describes requirements and the review process for feasibility studies conducted under the Title XVI Water Reclamation and Reuse (Title XVI) Program and the Desalination Construction Program. This TRMR incorporates the requirements and procedures set forth in WTR 11-01 for Large-Scale Water Recycling feasibility studies and establishes additional requirements specific to Large-Scale Water Recycling feasibility studies due to the larger federal investment in those projects. Requirements established in this TRMR are consistent with the Department of the Interior’s *Agency Specific Procedures For Implementing the Council on Environmental Quality’s Principles, Requirements, and Guidelines for Water and Land Related Resources Implementation Studies* (707 DM 1).
2. **Applicability.** This TRMR applies to all Reclamation employees involved in the review of feasibility studies for the Large-Scale Water Recycling Program.
3. **Requirements for Feasibility Studies for the Large-Scale Water Recycling Program.**
 - A. All requirements for feasibility studies under WTR 11-01 are applicable to feasibility studies for the Large-Scale Water Recycling Program, except where noted in Paragraph 3.B, below.
 - B. In addition to the requirements set forth in WTR 11-01, Reclamation requires that non-Federal sponsors of Large-Scale Water Recycling projects also provide the following additional elements.

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- (1) **Description of Alternatives.** WTR 11-01 Paragraph 3.B.(4) requires a description of the proposed project and a comparison to alternatives that would satisfy the same water demand as the proposed project. Feasibility studies for Large-Scale Water Recycling projects must also include the following additional requirements:
 - (a) A description of a reasonable range of viable alternatives that would satisfy the same water demand as the proposed project, including other water supply sources and/or project types that are practicable, feasible, and meet the planning objectives.
 - (b) A description of the baseline condition without the proposed project or any of the alternatives.
 - (c) Alternative plans must clearly identify and evaluate the trade-offs among stakeholders and resources. The viability of an alternative will be determined through an evaluation of its acceptability, efficiency, effectiveness, and completeness. Alternative plans will be formulated based on most likely future conditions expected with and without implementation of a plan.
 - (d) Consideration of the impact of climate change in the trade-off analysis and the comparison of alternatives.
 - (e) In lieu of the cost information required in WTR 11-01 Paragraphs 3.B.(4) (c) and (d), Large-Scale Water Recycling Projects will be required to provide the cost information described in Paragraph 3.B.(2), below.
- (2) **Economic Analysis.** For projects considered under the Large-Scale Water Recycling Program, the non-Federal project sponsor must submit the following information for the economic analysis as part of the feasibility study report in lieu of the information described in WTR 11-01 Paragraph 3.B.(5).
 - (a) Description of the conditions that exist in the area and provide projections of the future with, and without, the project. Emphasis in the analysis must be given to the contributions that the plan could make toward meeting the future water demand in an efficient and economically sound manner.
 - (b) Identification of all project-related costs for the selected water reclamation or recycling project and the alternatives identified. Costs must be provided for all planning, design, and construction activities as well as operations and maintenance costs. Cost estimates must be presented in terms of pay items, quantities, unit prices, contract costs, non-contract costs, and escalation. Cost estimates for the final analyzed alternatives shall be at a sufficient design

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level to conduct the comparisons required in subsection (d). Cost estimates shall include:

- (i) Pay Items – Abbreviated descriptions of work for which payments or charges to accounts are made. Pay items represent a logical and practical breakdown of the proposed work into separate and distinct classes of work.
 - (ii) Quantities – The quantities for pay items shall be presented by a number and a unit of measure such as pounds, cubic yard, or another unit that most appropriately represents the measurement for the particular pay item.
 - (iii) Unit Prices – Current unit prices shall be used in all estimates and identified.
 - (iv) Contract Cost – The contract cost represents the estimated cost of the contract at time of bid or award and will include allowances for design contingencies and for procurement strategies, but not construction contingencies.
 - (v) Non-Contract Cost – Costs associated with work or services provided in support of the project, these may include project management, investigations and data collection, construction management, environmental compliance, and archeological considerations.
 - (vi) Escalation – For projects that are to be developed over an extended period of time, or at some distant time in the future, estimates may account for escalation that may occur.
- (c) Identification, quantification, and monetization of benefits, both direct use benefits and indirect use benefits, for the selected project and the alternatives identified. Benefits may include, but are not limited to, benefits related to water supply, recreational benefits, ecosystem benefits, water quality, energy efficiency, public health and other social benefits, and/or avoided costs.
- (d) A comparison of the benefits and costs associated with the selected water reclamation or recycling project and the alternatives identified. The results of this comparison should be discounted to net present value. The alternative plan that reasonably maximizes net public benefits will be identified.
- (i) This comparison must result in a benefit cost ratio that is provided for the selected project and the alternatives.

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- (ii) Discussion about the extent to which the selected project maximizes benefits must be included.
 - (e) Some water reclamation, recycling or desalination project benefits will be difficult to quantify; for example, a drought tolerant water supply, reduced water importation, and other social or environmental benefits. These benefits shall be documented and described qualitatively as completely as possible. Any qualitative benefits will be considered as part of the justification for a water reclamation, recycling or desalination project in conjunction with the comparison of project costs described above.
 - (f) A summary, in one table, of the net present value of monetized benefits and costs, and the listing and ranking of the benefits described qualitatively.
- (3) **Independent Peer Review.** For projects considered under the Large-Scale Water Recycling Program, the following information is required:
- (a) Description of all independent peer review and/or quality assurance/quality control conducted on the analyses presented in the study and the scope and charge to the reviewers.
 - (b) Identification of the number of technical reviewers and the technical expertise and affiliation of the independent reviewers.
 - (c) Provide a comment disposition summary describing issues raised during peer review and/or quality assurance/quality control and how they were addressed.
4. **Process and Responsibilities for the Review of Feasibility Studies for the Large-Scale Water Recycling Program.**
- A. All procedures applicable to the review of feasibility studies under WTR 11-01 are applicable to Large-Scale Water Recycling feasibility studies submitted to Reclamation for review.
 - B. If necessary, the review team will request additional information from a project sponsor beyond the requirements established by Paragraph 3 of this TRMR to ensure the analysis is fully supported.
 - C. Prior to construction funding, Reclamation will inform the project sponsor of required submissions necessary to support additional Reclamation reviews, including submission of design drawings and cost estimates at the feasibility-level, 30%, 60%, and 100% design milestones; information related to environmental compliance; and

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information for the finding of financial capability (RM D&S, *Title XVI Financial Capability Determination Process* ([WTR 11-02](#))).

5. Definitions.

- A. Large-Scale Water Recycling Project: Projects eligible for the Large-Scale Water Recycling Program that reclaim or reuse wastewater or impaired ground or surface waters and have a total project cost of \$500,000,000 or more.
- B. Completeness: the extent to which an alternative provides and accounts for all features, investments, and/or other actions necessary to realize the planned effects, including any necessary actions by others. It does not necessarily mean that alternative actions need to be large in scope or scale.
- C. Effectiveness: the extent to which an alternative alleviates the specified problems and achieves the specified opportunities.
- D. Efficiency: the extent to which an alternative alleviates the specified problems and realizes the specified opportunities at the least cost
- E. Acceptability: the viability and appropriateness of an alternative from the perspective of the Nation's general public and consistency with existing Federal laws, authorities, and public policies. It does not include local or regional preferences for particular solutions or political expediency.

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.

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Filed by: _____

Date: _____