Reclamation Manual
Directives and Standards

TEMPORARY RELEASE
(Expires 01/13/2023)

Subject: Small Surface Water and Groundwater Storage Projects Feasibility Study Review Process

Purpose: The purpose of this Temporary Reclamation Manual Release (TRMR) is to establish requirements and a review process for feasibility studies conducted under the Bureau of Reclamation’s Small Surface Water and Groundwater Storage Projects Program. The purpose of Reclamation’s review is to determine if a small surface water and/or groundwater storage feasibility study report meets the requirements of a small surface water and groundwater storage feasibility study as defined under section 40903 of Pub. L. 117-58. The benefits of this TRMR include providing sufficient information for the formulation of feasibility studies for small water storage and/or groundwater storage projects and clearly stating Reclamation’s review procedures.

Authority: Infrastructure Investment and Jobs Act Title IX – Western Water Infrastructure, section 40903 (Pub. L. 117-58).

Approving Official: Director, Policy and Programs

Contact: Reclamation Law Administration Division (84-55000)

1. **Introduction.** Section 40903 of Pub. L. 117-58 requires guidelines be provided with sufficient information for the formulation of feasibility studies for small surface water and groundwater storage projects. This D&S meets that requirement and describes the study and reporting requirements, responsibilities, and review processes for small surface water and groundwater storage feasibility studies conducted under Reclamation’s Small Surface Water and Groundwater Storage Program. Section 40903 of Pub. L. 117-58 authorizes the Secretary of the Interior (Secretary) to participate with appropriate non-Federal project sponsors in studies to determine the feasibility of small surface water and groundwater storage projects in the 17 Western States, Alaska, and Hawaii.

2. **Applicability.** This D&S applies to Reclamation employees involved in the review of feasibility studies for small surface water and groundwater storage projects.

   A. **Use of the Term Feasibility.** The term feasibility, as used throughout this document, applies only to small surface water and groundwater storage feasibility studies under the Section 40903 of Pub. L. 117-58. Reclamation Manual (RM) D&S, Water and Related Resources Feasibility Studies (CMP 09-02) separately describes Reclamation’s
responsibilities concerning traditional water resource feasibility studies, including water storage, groundwater storage, and conveyance projects under section 40902 of Pub. L. 117-58 and elsewhere.

B. This D&S does not apply to planning activities carried out under WaterSMART. Those activities are subject to program-specific content and review requirements, including the requirements set forth in RM D&Ss, Drought Response Program (WTR 10-01), Basin Studies (WTR 13-01), and Title XVI Water Reclamation and Reuse Program Feasibility Study Review Process (WTR 11-01), and WaterSMART Grants (WTR 12-01).


A. Flexibility Concerning Format. Reclamation will accept for review a small surface water and groundwater storage feasibility study report prepared for other purposes (e.g., as part of an application for state funding programs). However, when Reclamation reviews a report prepared for other purposes, the project sponsor must provide a crosswalk that identifies the sections and page numbers that clearly address each element described in Paragraph 3.B of this D&S. Failure to provide a crosswalk that clearly addresses each of the required elements will result in the small surface water and groundwater storage feasibility study not passing the initial review and/or resulting in Reclamation finding the report incomplete.

B. Small Surface Water and Groundwater Storage Feasibility Study Report Contents. To ensure that a small surface water and groundwater storage feasibility study report complies with Pub. L. 117-58, Federal laws, and to otherwise allow Reclamation to assess the feasibility of the proposed project, at a minimum, the following information shall be included in the small surface water and groundwater storage feasibility study report. Analyses included in the small surface water and groundwater storage feasibility study report shall be commensurate with the level of risk, cost, complexity, and scope of the proposed small surface water and groundwater storage project.

(1) Introductory Information. Provide the following introductory information:

(a) identification of the non-Federal project sponsor(s),
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(b) a description of the study area and an area/project map (including a
description of ground disturbance within the study area), and

(c) a definition of the study area in terms of both the site-specific project area
where the water storage will be needed and developed.

(2) Statement of Problems and Needs. Describe key water resource management
problems and needs for which small surface water and groundwater storage
project will provide a solution, including the following information. All
projections (including regarding climate) shall be reasonable and applicable for a
minimum of 20 years from when the project is expected to provide benefits.

(a) Description of the problem and need for a small surface water and
groundwater storage project.

(b) Description of current and projected water supplies, including water rights,
potential sources of additional water other than the proposed small surface
water and groundwater storage project, and plans for new facilities other than
the proposed project, if any.

(c) Description of current and projected water demands, including a description
of the current and projected water supply and demand imbalances.

(d) Description of any water quality concerns for the current and projected water
supply.

(3) Small Surface Water and Groundwater Storage Opportunities. The small
surface water and groundwater storage feasibility study report must address the
opportunities for small surface water and groundwater storage in the study area
and identify the sources of water that could be stored, including the following
information.

(a) Description of all beneficial uses for surface and groundwater storage or
categories of potential uses, including, but not limited to, water supply
reliability, ecosystem benefits, groundwater management enhancements, and
water quality improvements.

(b) An assessment of stakeholder support for the project.
(c) Description of the water market available to utilize stored water, including:

(i) identification of existing and potential users, expected use, peak use, onsite conversion costs if necessary, and desire to use stored water, including letters of intent if available,

(ii) descriptions of any consultation with potential water customers, including letters of intent, if applicable, and

(d) descriptions of the market assessment procedures used. Discussion of considerations (e.g., physical, public acceptance) which will prevent implementing a small surface water and groundwater storage project. The small surface water and groundwater storage feasibility study report must identify methods or community incentives to stimulate small surface water and groundwater storage demand and methods to eliminate obstacles which will inhibit the use of small surface water and groundwater storage, including pricing.

(e) Identification of all the water agencies that have jurisdiction in the potential service area or over the sources of surface water and/or groundwater.

(f) Description and location of potential sources of water to be stored, including a discussion of how the project meets the water supply needs of a specific geographic area, region, or watershed.

(g) Description of current and projected surface and groundwater storage projects other than the proposed small surface water and groundwater storage project, including projected costs, if any.

(4) **Description of Alternatives.** The following information is required:

(a) Statement of the specific planning objectives that all alternatives, including the small surface water and groundwater storage project are designed to address.

(b) Formulation of alternative plans for addressing the identified problems, needs, and opportunities. Alternative plans shall include:
(i) A description of the proposed small surface water and groundwater storage project including detailed project cost estimate; annual operation, maintenance, and replacement cost estimate; and life cycle costs shall be provided with feasibility-level detail consistent with RM D&S, Cost Estimating (FAC 09-01) to permit a more in-depth evaluation of the project, including non-contract costs. In this regard, the cost estimates shall clearly identify expenditures for major structures and facilities, as well as other types of construction and non-contract expenses and shall be based on calculated quantities and unit prices.

(ii) A description of other water supply alternatives, including those non-structural in nature, considered to accomplish the objectives to be addressed by the proposed small surface water and groundwater storage project, including benefits to be gained by each alternative, total project cost, life cycle cost, and corresponding cost of the project water produced expressed in dollars per acre-foot.

(c) Description of the non-Federal funding condition. The reasonably foreseeable future actions that the non-Federal project sponsor would take if Federal funding were not provided for the proposed small surface water and groundwater storage project, including estimated costs.

(d) The small surface water and groundwater storage feasibility study report shall also present estimated costs in terms of dollars per acre-foot of capacity, to facilitate comparison of alternatives described in Paragraph 4.B.(5) below. The small surface water and groundwater storage feasibility study report must identify references, design data, and assumptions.

(5) Economic Analysis. A small surface water and groundwater storage feasibility study report must include an economic analysis of the proposed small surface water and groundwater storage project relative to other water supply alternatives that the non-Federal project sponsor could implement in lieu of a small surface water and groundwater storage project. This assessment needs to identify the economic benefits that implementation would realize, relative to costs. The study lead must submit the following information for the economic analysis in a small surface water and groundwater storage feasibility study report.
(a) The economic analysis included in the small surface water and groundwater storage feasibility study report shall describe the conditions that exist in the area and provide future projections with, and without, the project. The analysis must emphasize the contributions that the plan could make toward alleviation of economic problems and the meeting of future water demands, such as enhanced water supply reliability for State, Indian Tribes, and local governments (including subdivisions of those entities), increased water management flexibility and reduced impacts on environmental resources from projects operated by Federal and State agencies, ecosystem benefits, and water quality improvements.

(b) A cost comparison of alternatives that would satisfy the same demand as the proposed small surface water and groundwater storage project. Alternatives used for comparison must be likely and realistic, and developed with the same standards, with respect to interest rates (see latest published Water Resources Planning rate), price level, and period of analysis (consistent with the anticipated useful life of the investment).

(c) The benefits of the project measured consistent with the methods described in Paragraph 7.B of 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). If demonstrating the cost of the alternative most likely to be implemented in the absence of the project as a measure of benefit, it is assumed that the two alternatives would provide comparable levels of service. The small surface water and groundwater storage feasibility study report must provide this comparison, if applicable.

(d) Benefits shall be documented and described quantitatively wherever possible. If they cannot be quantified, benefits must be qualitatively described as completely as possible. These qualitative benefits can be considered as part of the justification for a small surface water and groundwater storage project in conjunction with the comparison of project costs described above.

(e) For more complex and/or higher risk small surface water and groundwater storage projects, benefits estimation should include the collection of primary economic data to the extent possible.
(6) **Selection of the Proposed Small Surface Water and Groundwater Storage Project.**

(a) The small surface water and groundwater storage feasibility study report must provide a justification of why the proposed small surface water and groundwater storage project is the selected alternative in terms of meeting objectives, demands, needs, benefits, and other criteria important to the decision.

(7) **Risk and Uncertainty.** Long-range planning efforts rely on assumptions about supply and demand, and the selection of an alternative depends on expected future conditions. Small surface and groundwater storage feasibility studies will account for the uncertainty of future conditions by incorporating risk and uncertainty analysis into the formulation, evaluation, and comparison of alternatives.

(8) **Environmental Consideration and Potential Effects.** The review of a small surface water and groundwater storage feasibility study report does not require National Environmental Policy Act (NEPA) compliance. The Department of the Interior categorical exclusion 1.11, “Activities which are educational, informational, advisory, or consultative to other agencies, public and private entities, visitors, individuals or the general public” applies to Reclamation’s consultative review, and preparation of the small surface water and groundwater storage feasibility study reports. Reclamation will not own, operate, or maintain the proposed small surface water and groundwater storage project, nor is Reclamation using the small surface water and groundwater storage feasibility study report to request authorization for construction from Congress.

(a) If Reclamation later provides funds for construction, a Reclamation NEPA/compliance practitioner must complete all appropriate NEPA, ESA, NHPA and other environmental and cultural compliance prior to any ground disturbing activities beginning for the project to be eligible.

(b) The small surface water and groundwater storage feasibility study report must include sufficient information on the small surface water and groundwater storage project to allow Reclamation to assess the potential measures and costs that will be necessary to comply with NEPA and any
other applicable Federal law. Accordingly, the following information is required.

(i) Discussion whether, and to what extent, the proposed small surface water and groundwater storage project will have potentially significant (per 40 CFR 1501.3) impacts including but not limited to on endangered or threatened species, public health or safety, natural resources, regulated waters of the United States, Environmental Justice, Indian Sacred Sites, Indian Trust Assets, climate change, or cultural resources.

(ii) Discussion whether, and to what extent, the project will have potentially significant environmental effects, or will involve unique or undefined environmental risks.

(iii) Description of the status of required Federal, state, tribal, and/or local environmental compliance measures, and outreach or pertinent communication with affected stakeholders for the proposed small surface water and groundwater storage project, including copies of any documents that have been prepared, or results of any relevant studies or outreach/communication.

(iv) Any other information available to the study lead that would assist with assessing the measures that will be necessary to comply with NEPA, and other applicable Federal, state, and/or local environmental laws including the Endangered Species Act, the National Historic Preservation Act, and the Clean Water Act.

(v) Discussion of how the proposed small surface water and groundwater storage project will affect water supply and water quality from the perspective of a regional, watershed, aquifer, or river basin condition.

(vi) Discussion of the extent to which the public was involved in the small surface water and groundwater storage feasibility study and a summary of comments received, if any.

(vii) Description of the potential effects the project will have on historic properties as defined in the National Historic Preservation Act. Discussion must include potential mitigation measures, the potential for
adaptive reuse of facilities, an analysis of historic preservation costs, and the potential for heritage education, if necessary.

(8) **Legal and Institutional Requirements.** The small surface water and groundwater storage feasibility study shall identify any legal or institutional requirements, or barriers to implementing the proposed project.

(a) Analysis of any water rights issues potentially resulting from implementation of the proposed small surface water and groundwater storage project. All proposed small surface water and groundwater storage projects must comply with state water law.

(b) Discussion of legal and institutional requirements (e.g., contractual water supply obligations, Indian trust responsibilities, water rights settlements, regional water quality control board requirements), state, and/or local requirements with the potential to affect implementation of the project.

(c) Discussion of the need for multi-jurisdictional or interagency agreements, any coordination undertaken, and any planned coordination activities.

(d) Discussion of permitting procedures required for the implementation of small surface water and groundwater storage projects in the study area, and any measures that the non-Federal project sponsor can implement that could speed the permitting process.

(e) Discussion of any unresolved issues associated with implementing the proposed small surface water and groundwater storage project, how and when such issues will be resolved, and how the project would be affected if such issues are not resolved.

(9) **Sufficient Non-Federal Funding.** At the small surface water and groundwater storage feasibility study stage, Reclamation must receive enough information to determine that sufficient non-Federal funding is available to cover the non-Federal share of project costs if the project moves to construction, as well as all necessary project operation, maintenance and replacement (OM&R) costs. A financial capability analysis consistent with RM D&S, *Title XVI Financial Capability Determination Process* (WTR 11-02) must be completed. Accordingly, Reclamation requires the following supporting information to be
included in the small surface water and groundwater storage feasibility study report.

(a) Proposed schedule for project implementation.

(b) Discussion of the willingness of the non-Federal project sponsor to pay for its share of construction costs and the full OM&R costs.

(c) A plan for funding the proposed small surface water and groundwater storage project’s construction, OM&R costs, including an analysis of how the non-Federal project sponsor will pay construction and annual OM&R costs.

(d) Description of all Federal and non-Federal sources of funding and any restrictions on such sources (e.g., minimum or maximum cost-share limitations). For small surface water and groundwater storage projects, the Federal cost share is limited to 25 percent of total project costs, or $30,000,000, whichever is less.

4. **Process and Responsibilities for the Review of Small Surface Water and Groundwater Storage Feasibility Study Reports.**

A. **Review Process.** The following is a description of the small surface water and groundwater storage feasibility study report review process. Appendix A provides a flow chart of the process. The small surface water and groundwater storage feasibility study report must copy the Small Surface Water and Groundwater Storage Program Manager (84-55000) on all correspondence developed during this process. The Small Surface Water and Groundwater Storage Program Manager must monitor the ongoing reviews and provide periodic status updates on the reviews to the Director, Policy and Programs.

(1) **Review Initiation.** The study lead will submit one electronic copy of the small surface water and groundwater storage feasibility study report to the appropriate Reclamation regional or area office. Upon receipt of the small surface water and groundwater storage feasibility study report, the receiving office will consult with the regional director to determine the appropriate reviewing office. The regional director must identify the reviewing office. The reviewing office must facilitate the review of the small surface water and groundwater storage feasibility study report by announcing when the review will take place, establishing a schedule, coordinating meetings, providing electronic copies of the report and other
documents to the other team members, and communicating with the study lead. The reviewing office will examine the report to identify any missing significant items. This review is intended to be a quick check (without thoroughly reading the report) for determining whether the minimum requirements in Paragraph 3.B. Small Surface Water and Groundwater Storage Feasibility Study Report Contents of this D&S are included. If a crosswalk is provided, the reviewing office will ensure that the document identifies the sections and page numbers that clearly address each element described in Paragraph 3.B. The reviewing office must complete this review initiation within 15 calendar days of receipt of the small surface water and groundwater storage feasibility study report.

(a) If the small surface water and groundwater storage feasibility study report is incomplete, the reviewing office will notify the study lead, in writing, of the items that need to be addressed prior to resubmitting the report.

(b) If the small surface water and groundwater storage feasibility study report appears to contain all the required information and the study lead submitted the report electronically, the reviewing office will notify, in writing, the study lead that the review process will begin. If the study lead submitted a hard copy of the study, the review process will begin when two additional hard copies of the small surface water and groundwater storage feasibility study report are received.

(2) Establishment of the Review Team. The regional director will work jointly with the Director, Policy & Programs to select the review team members. The review team shall consist of a minimum of three members and be established within 15 calendar days of initiating the review process.

(3) Review of the Small Surface Water and Groundwater Storage Feasibility Study Report. The review team must examine the small surface water and groundwater storage feasibility study report to determine if the report is compliant section 40903 of Pub. L. 117-58, if the resulting report contains all information required in Paragraph 3.B Small Surface Water and Groundwater Storage Feasibility Study Report Contents of this D&S, and adequately describes a technically and financially feasible project. The review team will strive toward consensus. If an impasse is reached, the regional director and the Director, Policy & Programs will jointly determine how to move forward.
(a) If the report is found to contain insufficient information, the review team shall request additional information from the study lead through the reviewing office in one request. If necessary, the reviewing office shall coordinate a meeting with the study lead to discuss the additional information. The topics requiring clarification will be described in detail. The written request for additional information or clarification shall occur within 90 calendar days of the establishment of the review team.

(b) The review team will examine additional information to answer all questions and resolve any inconsistencies. Within 45 calendar days of receipt of the additional information, the reviewing office will inform the study lead whether the initial request for additional information is fulfilled, or if further clarification is necessary. If further clarification is necessary, the review team will provide examples of what is required and will offer to meet with the study lead. If, after two requests, the review team cannot obtain the additional information, the review team will notify the regional director and the Director, Policy & Programs, and will recommend that Reclamation: (i) continue to request information, (ii) find that the report contains insufficient information, or (iii) recommend the study lead withdraw the report which will terminate the review process.

(4) *Timeframe.* The review of a small surface water and groundwater storage feasibility study report shall take no longer than 180 calendar days from the initiation of formal review process, excluding the periods when Reclamation is waiting for additional information from the study lead, and when additional information is requested more than twice.

B. **Findings and Notification of the Study Lead.** The review team will prepare a memorandum to document their process and findings, and to document concurrence of the regional director and the Director, Policy & Programs. The memorandum shall have a signature line for the regional director and the Director, Policy & Programs. The review team must recommend to the regional director one of the following findings that the feasibility study report: (i) meets the requirements of a feasibility study, as required under section 40903 of Pub. L. 117-58 and defined in this D&S, (ii) does not meet the requirements of a feasibility study as defined under section 40903 of Pub. L. 117-58, or (iii) is incomplete. The regional director must review the review team’s findings, choose whether to concur with the findings, and forward the findings to the Director, Policy & Programs. The Director, Policy & Programs must consider the recommended
findings from the regional director and determine whether a proposed small surface water and groundwater storage project meets the requirements of a feasibility study as defined in this D&S. One of the three findings listed below will be selected and documented in the memorandum. The reviewing office will notify the study lead of the findings.

1) **Finding - Meets Requirements.** If the review team finds that the proposed small surface water and groundwater storage project meets the established requirements and the regional director concurs, the regional director will recommend that the Director, Policy & Programs find the proposed small surface water and groundwater storage project meets the requirements of a feasibility study as defined under section 40903 of Pub. L. 117-58. Upon receipt of the signed memorandum, the responsible reviewing office will notify, in writing, the study lead of Reclamation’s findings. The reviewing office will ensure that the non-Federal project sponsor is notified of activities that must be completed prior to receiving construction funding, and that Reclamation’s official position on project authority and funding will be articulated at a later time.

2) **Finding - Does Not Meet Requirements.** If the review team finds that the proposed small surface water and groundwater storage project does not meet the established requirements and the regional director concurs, the regional director will recommend that the Director, Policy & Programs finds the proposed project does not meet the requirements of a feasibility study as defined under section 40903 of Pub. L. 117-58. Upon receipt of the signed memorandum, the responsible reviewing office will notify the study lead, in writing, explaining why the proposed small surface water and groundwater storage project does not meet the requirements.

3) **Finding - Small surface water and groundwater storage Feasibility Study Report Incomplete.** If the review team determines that the small surface water and groundwater storage feasibility study report contains insufficient information and the regional director concurs, the regional director will recommend that the Director, Policy & Programs find the feasibility study report incomplete. Upon receipt of the signed memorandum, written notification will be provided by the reviewing office to the study lead that the feasibility study report was found incomplete. A clear description of what additional information is required will also be provided. When a report is resubmitted for review, the process will start anew at the review initiation stage.
(4) **Timeframe.** Making the final finding, coordinating with the regional director and Director, Policy and Programs, developing the documentation memorandum, and sending written notification to the study lead shall occur within 60 calendar days of the completion of the review process. The review team shall submit findings to Congress upon completion of the review process.

C. **Funding of Reviews.** The reviewing office will request funding for the review from the Policy & Programs Directorate. The review of feasibility study reports will be subject to the availability of appropriations from Congress. Reclamation will also receive funding from the non-Federal project sponsor to perform the review process through a Contributed Funds Agreement developed in accordance with the Sundry Civil Appropriations Act of 1922 (Pub. L. 66-389; 43 USC 395).

5. **Definitions.**

A. **Feasible.** The term feasible as used throughout this document applies only to the Small Surface Water and Groundwater Storage Program. Pub. L. 117-58 provides specific requirements for a feasible small surface water and groundwater storage project. Those requirements are categorized in this D&S into: (1) statement of problems and needs, (2) small surface water and groundwater storage opportunities, (3) description of alternatives, (4) economic analysis, (5) selection of proposed small surface water and groundwater storage project, (6) environmental considerations, (7) legal and institutional requirements, and (8) sufficient non-Federal funding. Reclamation’s review is limited to ensuring that the requirements of section 40903 of Pub. L. 117-58 and this D&S are met.

B. **Non-Federal Project Sponsor.** Non-Federal project sponsors will include a state, regional, or local authority; Indian tribe or tribal organization; or other entities such as a water district or water association within the 17 Western States, Alaska, or Hawaii.

C. **Proposed Small Surface or Groundwater Storage Project.** The proposed small surface or groundwater storage project is the preferred alternative that the study lead and the non-Federal project sponsor believe best meets the identified objectives.

D. **Review Team.** The Policy & Programs Director and responsible regional director jointly establish and select members for the review team. The review team consists of at least three individuals, with one representing the Policy & Programs Director, one representing the reviewing office, and the third as agreed by both directors.
E. **Reviewing Office.** The reviewing office is identified by the responsible regional director and will facilitate the review of the small surface water and groundwater storage feasibility study report.

F. **Study Lead.** The study lead is the person or organization that prepares the small surface water and groundwater storage feasibility report on behalf of the non-Federal project sponsor.

G. **Small Surface Water and Groundwater Storage Feasibility Report.** A small surface water and groundwater storage feasibility study report is a report including any supporting documentation, which is prepared to document the results of a small surface water and groundwater storage feasibility study conducted to assess proposed small surface water and groundwater storage projects. Small surface water and groundwater storage projects have specific requirements for the content identified in Pub. L. 117-58.

H. **Small Surface Water and Groundwater Storage Project.** A small surface water and groundwater storage project is a project (including the necessary facilities and features) that has water storage capacity of not less than 2,000 acre-feet and not more than 30,000 acre-feet; and increases surface water or groundwater storage, or conveys water, directly or indirectly, to or from surface water or groundwater storage. Small surface water and groundwater storage projects are, primarily, locally sponsored projects with limited Reclamation participation. Specifically, the non-Federal sponsor owns the project facilities and features, and is responsible for construction, operation, maintenance, and replacement. The Federal cost share for small surface water and groundwater storage projects is limited by law to not more than 25 percent of the total cost of planning, design, and construction and to not exceed $30 million.