

Reclamation Manual
 Design Data Collection Guidelines
 Chapter 2 – Appraisal Investigations

1. General. Based on Reclamation Manual Sections CMP 05-02, *Directives and Standards – Feasibility Studies*, and CMP 05-06, *Draft Directive and Standards - Characteristics and Control of Reclamation Reports Used for Planning, Design, and Construction Activities*, appraisal studies are brief, preliminary investigations that:

- Include a preliminary assessment of alternatives, a recommendation to either proceed to feasibility investigation or terminate the study, and a presentation of a draft plan of study for the feasibility study, if this is the recommendation.
- Primarily and typically use existing data and information for determining current and projected needs.
- Identify at least one potential solution that requires Federal involvement or identify an array of options that have been screened and evaluated to substantiate potential Federal involvement.

Various terms are used for appraisal-level studies: scoping, reconnaissance, and needs assessments. Cost estimates used in these documents will generally be minimal in detail and conceptual in nature and will be based on a preliminary general design and layout which, in turn, will rely on the best data that is readily available:

- A. **Scoping Documents.** Developed to document preliminary discussions within Bureau of Reclamation (Reclamation) and with other interested parties in identifying a specific issue or issues. Rarely will this document contain cost estimate information of any kind other than referencing a cost estimate that was developed in a previous planning effort and is relevant to the current scoping activity.
- B. **Reconnaissance Reports.** Developed and produced to document a preliminary look at given Problems, Needs, and Opportunities (PN&O). These are used when a reconnaissance level effort is either requested by an outside entity or considered a necessary effort in the decisionmaking process. These reports will include the following minimum content and format: statement of purpose, description and characterization of the identified PN&O, and relevant preliminary data. These reconnaissance level efforts will not document alternative solutions for the subject PN&O other than those already developed. Cost estimates are infrequently developed for this level of effort.
- C. **Appraisal Reports.** Characterize the subject PN&O. This includes both the quantification and qualification of the PN&O, using available data. The data

gathered and analyzed to produce the characterization will include, but is not limited to: economic, social, environmental, hydrological, engineering, legal, and political.

- (1) **Federal Interest:** Determination of Federal role in addressing/resolving the PN&O or reasons why there is not a Federal role.
- (2) **Conceptual Level Alternative(s):** Description of at least one viable conceptual alternative addressing/resolving the PN&O or reasons why there are none.

D. **Needs Assessment Report.** This type of report is equivalent to an appraisal report, but is primarily focused on tribal-related PN&O and varies in format and content on a case-by-case basis.

Appraisal designs (and estimates) are prepared in the region with participation by other offices to the extent determined appropriate by the Regional Director. When power features are involved, the appraisal designs of these features shall be coordinated by the Regional Offices, with the Technical Service Center offices involved in planning of power operation and maintenance.

The most economical methods of obtaining the design data must be emphasized, consistent with a reasonable degree of accuracy and the objective of the investigation.

2. **Dam Site and Structure Review.** A dam site and structure review team shall review each dam site to be included in the Appraisal Report. The team will be composed of appropriate regional personnel, an earth dam's designer, a concrete dam's designer, and a geologist. Concurrence with regard to the report will be obtained from the Regional Director and the Director of the Technical Service Center.
3. **Scope of Design Data Collection.** Design data collection should make use of readily available material. The following is a list of potential design data or information items that may be required for an appraisal design:
 - A. A description of the purpose and goals of the project.
 - B. References to and copies of previous studies as applicable.
 - C. Description of local conditions.
 - D. Description of existing facilities including the future intention of stakeholders.
 - E. Environmental considerations.
 - F. Criteria for design of alternatives that will fulfill project requirements including:
 - (1) Water levels, flow requirements, reservoir storage requirements.

- (2) Input from outside agencies and stakeholders (design requirements, operational requirements, and construction requirements).
- (3) Review requirements (intermediate and final products) by Reclamation offices and outside agencies.
- G. Photographs of existing area and facilities including aerial photographs. Historical photographs may also be required.
- H. Drawings showing location, design, and layout of facilities:
 - (1) General map including key map.
 - (2) Topographic maps or strip topography depending on the project features.
- I. Existing right-of-way and requirements for additional right-of-way.
- J. Availability of materials for construction from borrow areas (impervious materials, sand and gravel, and riprap).
- K. Data for design study/analysis requirements such as: hydrologic studies, geologic investigations, seismic studies, operating studies, water quality studies, and water demand studies.
- L. Operation and maintenance requirements.
- M. Availability of utilities: potable water, electricity, sewage.
- N. Data to allow a suitable cost estimate.

4. Appraisal Design Cost Estimate:

- A. From Reclamation Manual Section FAC 08-01, *Directives and Standards – (Draft - Cost Estimating)*, “These estimates may be prepared from cost graphs, simple sketches, or rough general designs which use the available site specific data.”
- B. Recommendations on use of available cost and quantity estimating tools such as cost curves from the *Cost Estimating Handbook*.