

RECLAMATION

Managing Water in the West

**Managing for Excellence
Action Item 12**

Team 12 Final Report — Managing Engineering and Other Technical Services in Collaboration with Customers



**U.S. Department of the Interior
Bureau of Reclamation**

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Mission Statements

The mission of the Department of the Interior is to protect and provide access to our Nation's natural and cultural heritage and honor our trust responsibilities to Indian Tribes and our commitments to island communities.

The mission of the Bureau of Reclamation is to manage, develop, and protect water and related resources in an environmentally and economically sound manner in the interest of the American public.

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Acronyms & Abbreviations

AO	area office
CCT	Customer Collaboration Team
COG	Coordination and Oversight Group
D&S	directive and standard
DCO	Deputy Commissioner, Operations
E&OTS	engineering and other technical services
M4E	Managing for Excellence
O&M	operations and maintenance
PO	program office (see definition below)
Reclamation	Bureau of Reclamation, U.S. Department of the Interior
RLT	Reclamation Leadership Team
RO	regional office
SOW	statement of work
TSC	Technical Service Center in Denver, Colorado

Definitions of Terms

- Construction work** Any work that requires engineering designs, technical drawings, specifications, cost estimating, and construction management.
- Customer** A water user or electric utility that has an active repayment, water service, or power service contract with Reclamation; an electric utility that has an active contract with a Federal power marketing agency for energy and/or capacity from a Reclamation-owned hydropower facility; or a non-Federal operating entity (e.g., a joint powers authority) that has assumed responsibility on behalf of multiple water users, via a contract with Reclamation, for operating and maintaining a Reclamation project or features thereof.
- Engineering and other technical services work** All work required for the planning, design, and management of construction work. Such work may include, but is not limited to, data collection and analysis; formulation of alternatives; value engineering studies;

engineering designs, drawings, and specifications; cost estimating; hydrologic, environmental, social, economic, and cultural analyses; the regulatory compliance and permitting which must be effected before construction can occur; construction management (i.e., procurement of construction services, construction contract administration, inspection, engineering support, and completion of final construction reports, including as-built drawings); and post-construction monitoring.

Program Office Any organizational unit that has been delegated the authority and allocated the budget necessary to operate and maintain projects and to conduct the programs for which it is responsible. Area offices, the Dam Safety Office in Denver, and certain offices within the regional offices are examples of “program offices.”

Reserved works Those facilities owned by Reclamation where Reclamation has retained responsibility for carrying out operation and maintenance activities.

Service provider An organizational unit within Reclamation, such as the Technical Service Center or a regional office, that provides engineering and other technical services to a program office only upon the request of that office, the costs of which services are paid for from the budget allocated to the program office.

Substantial change A modification in or addition to a project facility that involves changes in the original design intent, function, and/or operational parameters of the facility, or changes in project benefits.

Transferred works Those facilities owned by Reclamation where Reclamation has turned over all or partial responsibility for carrying out operation and maintenance activities to a customer pursuant to a contract with such customer.

Executive Summary

Background

Since 1994, Reclamation has had a decentralized organizational structure. Its five regions have been broadly delegated the responsibility and budgetary resources to operate and maintain Reclamation projects and to carry out the programs assigned to them, including the latitude to decide how to staff for, or otherwise obtain, engineering and other technical services. As a result, engineering and other technical service personnel have become widely dispersed across Reclamation.

While decentralized and empowered organizational arrangements have many advantages, they also bring significant challenges. For instance, they complicate the task of ensuring that Reclamation, as a whole, is maintaining its expertise and providing cost-effective engineering and other technical services. The desirable attributes of decentralization and delegation of authority must be balanced with appropriately disciplined, agency-wide workload planning, workload scheduling, and workflow processes for the efficient utilization and management of a dispersed technical workforce.

Central to Team 12's work was guidance from the Reclamation Leadership Team (RLT) that the current decentralized organizational structure will be preserved and that there will be no major organizational consolidation or relocation of existing personnel at this time. The RLT also concluded that improvements could be made in the business practices for managing engineering and other technical services and identified the objectives that those business practices need to meet. They include:

- Empowering the regions
- Providing cost-effective engineering and other technical services
- Providing transparency and accountability
- Predictability of workload
- Ability to assess core capability
- Ability to strategically determine workload to be outsourced

It is recognized that there is necessarily some tension between these objectives. Striking an appropriate balance between them is the task Team 12 undertook.

Team 12 recognizes that the relationship between customer collaboration and the recommended business model is a “chicken and egg” proposition. Both support each other. While either could be discussed first, our description here begins with collaboration.

Collaboration with Customers

To create a “culture of collaboration,” Team 12 recommends expanding existing processes by which Reclamation collaborates with its customers on decisions regarding how engineering and other technical services will be accomplished on all construction work and non-construction activities. To that end, Team 12 recommends that Reclamation:

1. Issue a new directive and standard in the *Reclamation Manual* for collaboration with customers regarding engineering and other technical services required for construction work on existing Reclamation facilities (excluding Safety of Dams modifications which are already addressed by existing policies), and
2. Develop new policies and new directives and standards that set forth an agency-wide business model for managing and obtaining the engineering and other technical services required for Reclamation to carry out its mission in a cost-effective manner, including customer collaboration.

These documents will enhance the collaborative efforts already in place and those in the process of revision.

The bottom line is a renewed commitment to collaboration along with the development of collaborative processes where gaps now exist. Through policy and directives and standards, managers will have not just the responsibility but also the tools to collaborate effectively with customers.

Business Model

The recommended business model is a conceptual framework consisting of seven components. When implemented, the new business model will help ensure that engineering and other technical services are provided or obtained in the most efficient and cost-effective way possible and that Reclamation’s core engineering and other technical capabilities are maintained.

Key to the operation of the model is the creation of a Coordination and Oversight Group (COG). It will improve coordination and communication, collect and analyze data on workload distribution and performance, monitor core capability, track staff utilization, recommend organizational adjustments, report on how well the objectives are being met, and make recommendations for improvements to the business practices.

Team 12 is sensitive to concerns that the COG not become an additional, costly bureaucratic layer. Care has been taken to define the role of the COG to collect the data necessary for accountable, transparent, and efficient management under

the direction of the Deputy Commissioner, Operations, without becoming a burdensome organization.

Briefly summarized, the components of the recommended business model are:

1. **Distribution of engineering and other technical service staffs** such that offices have only the workforce that they can fully utilize day in and day out in executing their delegated responsibilities.
2. **Fee-for-service** arrangements with written service agreements between program offices and the providers of engineering and other technical services. These agreements will follow a standard format and will generate data to achieve transparency and accountability.
3. **Advance planning and scheduling of future workload** by program offices so that service providers can project their work schedules, utilize personnel efficiently, and make better informed staffing decisions.
4. **Workload distribution** processes that define how decisions will be made regarding who in Reclamation will perform engineering and other technical services on any given job, or whether the needed work may be outsourced or performed by a customer.

Two alternative approaches to workload distribution were developed for consideration, with Alternative 2 being recommended:

Alternative 1 begins with a presumption that certain types of work would be distributed “automatically” to particular providers through a “Rule Set,” but with a waiver process for cases in which a program office prefers a different distribution. It is weighted toward achieving the objectives of having a predictable workload, maintaining core capability, and outsourcing strategically, but it conflicts somewhat with the objective to empower the regions. It also presents a challenge to ensure that organizations receiving pre-determined types of work remain cost effective and efficient.

Alternative 2 uses a “Guidance Document” to assist in workload distribution and allows the program office more latitude to decide where work should be distributed, requires that office to inform in-house service providers about any work to be outsourced, and establishes a process for those providers to appeal the program office’s decision. It is weighted more toward the objective to empower the regions and does not address predictable workload, core capability, and strategic outsourcing as directly as Alternative 1. On balance, however, it could provide the advantage of increasing the shared accountability for cost effectiveness and efficiency.

5. **Organization and staffing levels** will remain at the discretion of the Regional Directors and the Technical Service Center Director, and they will be responsible for collecting and reporting staff utilization data to the

COG, which will periodically review the data and make recommendations if appropriate.

6. **Cost and performance reporting** and analysis will be the responsibility of the COG.
7. **Accountability** for ensuring that the business practices incorporated in the recommended business model achieve their intended purposes will lie with the Deputy Commissioner, Operations.

Introduction

In 2004, the Department of the Interior asked the National Research Council (NRC) of the National Academy of Sciences to study the Bureau of Reclamation's organization, business practices, and capabilities in order to advise Reclamation and the department on the "appropriate organizational, management, and resource configurations to meet its construction, maintenance, and infrastructure requirements for its missions of the 21st century." The resulting NRC report¹ included 24 specific recommendations for Reclamation to consider in preparing for the decades ahead.

Reclamation's response to the NRC report was its *Managing for Excellence* (M4E) action plan (*Action Plan*),² which set forth a list of 41 specific "action items" intended to address concerns the NRC had raised. Item 12, within the "Engineering and Design Services" functional area, called on Reclamation to:

. . . complete a right-sizing process with regard to design, estimating, and construction management staff within the agency, including determination of the appropriate location and distribution of technical capability. A transition plan will then be developed and implemented to achieve the determined size, type, and location of staff resources.

The team charged with addressing action item 12 ("Team 12") began its deliberations in October 2006. At the outset of its work, Team 12 reviewed all available M4E documents that were pertinent to its assignment. These included both completed reports and interim materials, in particular the data and information developed by Teams 9, 10, and 11. Information regarding design and construction management services that had been developed previously by Reclamation was also reviewed and taken into account. All of these materials were provided to the public via posting on the M4E Internet web site (<http://www.usbr.gov/excellence/>).

The team identified the engineering and other technical services performed by Reclamation personnel and gathered information about where these personnel are located (organizationally and geographically). It also studied data regarding staff

¹ National Research Council, 2006, *Managing construction and infrastructure in the 21st century* Bureau of Reclamation. Washington, DC: The National Academies Press. 138 p. [Available on line at <http://www.usbr.gov/excellence/docs/11519.pdf>.]

² Bureau of Reclamation, 2006, *Managing for excellence — An action plan for the 21st century* Bureau of Reclamation. 19 p. [Available on line at <http://www.usbr.gov/excellence/docs/11519.pdf>.]

utilization, which are not uniformly available across Reclamation, and examined current workflow and workload distribution processes.

In light of the information and understanding gained from these investigations, and in recognition of the fact that the “right sizing” of Reclamation’s engineering and other technical services workforce is a continual process, the team concluded that the main issue it needed to address, regarding the management of engineering and other technical services and the maintenance of Reclamation’s core engineering and other technical capabilities, was Reclamation’s business practices. The main areas identified as needing improvement were:

- (i) Deciding how work will be performed (i.e., by Reclamation, via outsourcing, or by customers),
- (ii) Advance planning of the work Reclamation will do,
- (iii) Having processes for determining how work is to be distributed among the various organizational units in the agency that provide engineering and other technical services, and
- (iv) Tracking costs for individual tasks.

With guidance from the Reclamation Leadership Team (RLT), Team 12 developed four conceptual alternatives which addressed different ways in which Reclamation’s engineering and other technical services workforce could be organized. These ranged from the current decentralized organizational structure with only minor changes to an alternative that would entail a considerably more centralized structure. In addition, each alternative included initial ideas regarding potential improvements in workflow and workload management processes.

These conceptual organizational alternatives were provided to all Reclamation employees for review and comment in early May 2007 and were the subject of discussion at an internal Reclamation managers’ meeting. They were then presented and discussed at a public workshop in Denver on May 30–31.

After considering the input received on the conceptual alternatives, the RLT asked Team 12 to focus its efforts on improvements in workflow and workload management processes (i.e., business practices) within Reclamation’s existing decentralized organizational structure. The team did this and presented its initial proposal for a new business model in August 2007, in an internally distributed *Interim Report to Reclamation Managers and Employees*. This report was provided to all employees for comment and was the subject of an internal Reclamation managers’ meeting at the end of August. The RLT discussed the report and comments received and gave further guidance to the team for refining the initial proposal.

The team’s revised proposal, then, was presented in a paper that was discussed at a public workshop in Portland, Oregon, September 25–26, 2007. Based upon the 90 mostly external comments received through early October, the initial proposal was further developed and presented in a second paper which was, as requested

by the customers, the subject of a third public workshop in Albuquerque, New Mexico, on November 7, 2007. Both papers for these public workshops were also shared with all Reclamation employees and comments were invited.

Based upon the input received from customers at the September and November public workshops, the business model and the draft directive and standard being recommended by the team were revised and expanded. These changes were made specifically to address concerns that customers should have greater involvement in decisions regarding the provision of engineering and technical services, including processes for deciding when work might be done by customers (or private firms retained by them), rather than by Reclamation.

This report sets forth the team's final recommendations for collaboration with customers on such decisions and for a new business model for managing engineering and other technical services work.

Scope of Action Item 12

The task assigned to Team 12 as originally framed in the 2006 *Action Plan*, which is quoted on page 1, above, was focused on Reclamation's engineering and construction management workforce and anticipated the development of a transition plan to achieve a particular size and distribution of engineering resources. After work was initiated on this action item and preliminary analyses were performed, Team 12 and the RLT decided jointly to clarify or change the scope of the team's assignment in three regards. These are described in the following three subsections.

Scope of "Construction Work"

"Construction work" is any work that requires engineering designs, technical drawings, specifications, cost estimating, and construction management. As Team 12 proceeded with its assignment, it clarified that three categories of "construction work" were being included within the scope of its analysis.

First, such work includes "project construction" (i.e., the construction of new projects, divisions of projects, or project features). The hallmark of "project construction" is that the costs of such construction are capitalized and allocated to authorized project purposes, with irrigation, hydropower generation, and municipal and industrial water supply being reimbursable purposes that are repaid over time.

Second, the repair, replacement, rehabilitation, modernization, or modification of existing Reclamation-owned facilities also requires "construction work." When performed on existing facilities, it is referred to as "maintenance," not "project construction." By law, water and power users must pay the costs of maintaining existing facilities (to the extent such costs are allocable to reimbursable project purposes) in the year in which expenses are incurred (with few exceptions), even when extraordinary maintenance involves major "construction work."

The third type of "construction work" consists of safety-of-dams modifications. Such modifications are neither "project construction" nor "maintenance." Rather, they are treated differently, for repayment purposes, under the Reclamation Safety of Dams Act, as amended.

Scope of "Engineering and Other Technical Services"

The NRC report tended to focus on the engineering functions required for construction work. However, construction work (be it for project construction,

maintenance, or safety of dams modifications) requires more than design engineering, cost estimating, and construction management. Concept engineering; design data collection; surveying; seismic and hydrologic analyses; social, cultural, and economic analyses; and biological and other environmental analyses are also required for the planning, design, and regulatory permitting of construction work. Therefore, Team 12 addressed not only engineering services, but also the other technical services that support construction work. However, “engineering and other technical services” does not include the technical staff who perform routine project operations and maintenance (O&M), routine O&M being ongoing, repeated, day-to-day activities carried out by on-site staff that does not involve “construction work.”

In addition to needing engineering and other technical services for construction work, Reclamation also requires these services for a wide range of other activities (e.g., planning studies preceding project authorizations; land management activities; analyses of project operations and optimization; and environmental compliance required for project operations, repayment, and water service contracting). Accordingly, the RLT decided after the M4E action plan was written that Team 12 should examine the engineering and other technical expertise required to efficiently and cost-effectively perform both construction *and* non-construction work.

Finally, the NRC’s recommendations regarding engineering services focused largely on the staff and laboratory facilities of the Technical Service Center (TSC). However, as discussed below, Reclamation’s engineering and other technical services personnel are widely distributed among the TSC and the regional, area, and field offices. The issues Reclamation faces regarding the management of its engineering and other technical services extend to the entire agency. Thus, Team 12 considered such staff wherever they may be located, not just those in the TSC.

“Right-Sizing”—A Continual Process

Adjusting the size and the geographical and organizational distribution of Reclamation’s engineering and other technical services staff (i.e., “right sizing”) has been, and always will be, an ongoing process. Over time, staffing adjustments are necessary because of changes in available funding, project construction schedules, changes in technology, or because new projects are authorized by Congress. Opportunities for outsourcing work to private consulting firms, or for having customers perform certain work (e.g., on transferred facilities), also impact Reclamation’s internal staffing needs.

One result of this continual right-sizing, for instance, is that the number of engineers in Reclamation declined from about 2,400 in 1992 to around 1,200 as of 2006. Furthermore, Reclamation is currently contracting out to private firms

about 40 percent of its planning, design, and construction management work each year, consistent with Congressional directives.

Since “right sizing” is a continual, iterative process, Team 12’s final product is not, as called for in the 2006 *Action Plan*, a transition plan for achieving an engineering and other technical services workforce of a particular size. Rather, this final report sets forth recommendations for organizational arrangements and business practices and processes (i.e., a business model) that will enable Reclamation, in collaboration with its customers, to continually evaluate the staffing needed to maintain its core engineering and other technical service capabilities and to accomplish its mission efficiently, cost-effectively, and in a transparent and accountable manner. Except for some clarifications and minor modifications, the model described in this final report is identical to the model described in the paper provided for the public workshop held in November 2007.

Background Information

Team 12's work regarding current and recommended future business practices for managing engineering and other technical services has incorporated information and data from many sources. This information has been presented in the reports of other M4E teams; in the slides used at the February 2007 M4E public meeting and at the public workshops that addressed Team 12's work in May, September, and November 2007; and in the written materials provided for the three workshops. The materials referenced or presented at those meetings can be found at <http://www.usbr.gov/excellence/rightsizing/>.

This section briefly summarizes key information that sets the stage for the recommended business model described in the final section of this report.

Current Staffing and Organizational Arrangements

Prior to Reclamation's 1994–95 reorganization, engineering and other technical services staff were, to a large extent, centralized in two Assistant Commissioners' offices in Denver (Engineering and Research; and Resources Management). Generally speaking, agency policies then in place required the regions to use those centralized services, particularly engineering, for most of the design work and cost estimating needed for construction work, with construction management provided by the regions but overseen by the Assistant Commissioner for Engineering and Research. Furthermore, decisions as to whether to procure engineering and other technical services from private firms were largely made by these two Assistant Commissioners' offices, not the regions. Finally, except for routine, day-to-day project O&M, responsibility for the formulation and accomplishment of work largely resided with the regional offices, rather than the project field offices, subject to the requirement to use the Assistant Commissioners' offices for most engineering and other technical services.

With the reorganization, Reclamation adopted a decentralized structure, created 26 area offices that report to the five regional directors, and provided for (and expected) substantial delegation of authority from regional directors to area managers. Furthermore, the regional directors were given (with the notable exception of the dam safety program) broad responsibility for the management of all projects and programs in their respective regions. This includes responsibility for allocating budgetary resources and the latitude to decide how to get work done, including procuring the services of private consultants. Finally, the former two Assistant Commissioners' offices were merged into what became the TSC, and the TSC became a "fee-for-service" organization, rather than one whose services the regions had to use as a matter of agency policy.

As a result of this decentralization and the broad delegation of authority to the regions, Reclamation's engineering and other technical services staffs have become widely dispersed. Reclamation's engineering and other technical services workforce numbered, as of FY2007, roughly 1,900 positions, of which approximately 1,200 were engineering positions. Of this 1,900, only about 500 were located in the TSC. The remainder were distributed among field, area, and regional offices located throughout the 17 Western States.

Since the manner in which engineering and other technical services became dispersed was largely determined on an ad hoc basis following the 1994–95 reorganization, the staffing for engineering and other technical services now varies markedly between regions and between offices within each region. In general, though not specifically defined in written policy or agency-wide business practices, the more specialized engineering expertise is located in the TSC, although there are notable exceptions. More routine engineering and other technical services work is performed by staff in the area offices. The regional offices are staffed, to varying degrees, for a variety of work between these two ends of the spectrum.

It is also important to note that the engineering and other technical services personnel located in the regional offices are, like those in the TSC, service providers which the area offices and other program offices (hereafter collectively referred to as program offices) are not required to use. They, like the TSC, render services for a fee and are "paid" by program offices from the budgets that those offices, not the service provider, have been delegated the authority to manage.

The Challenges of Decentralization

The decentralization effected by the 1994–95 reorganization, coupled with the substitution of broad policies and guidance for Reclamation's previously detailed and rather prescriptive business practices and *Reclamation Instructions*, has many desirable attributes. Chief among these is the "on the ground" delivery of services to Reclamation's customers, the ability to respond relatively quickly to customer needs, a high degree of flexibility and latitude for program offices in carrying out the responsibilities delegated to them by regional directors, and close contact between customers and empowered Reclamation managers.

However, such decentralization and flexibility of decision-making have also created certain challenges. As the NRC noted in its report, Reclamation's operations should remain decentralized, but they need to be "guided and restrained" by agency-wide policies and directives and standards which are implemented locally but consistently. The NRC also noted that some program offices have very small technical staffs and expressed concern about the effectiveness of such small staffs and whether their technical competencies can be maintained.

In addition to the NRC's observations, Team 12 notes that it simply is not cost-effective for each program office to maintain all of the engineering and other technical expertise it will need from time to time to execute the programs and projects for which it is responsible. This is because some kinds of expertise are required so rarely that a single program office, given the limited number of projects and programs for which it is responsible, cannot provide full-time work for specialists in these fields. Therefore, despite Reclamation's decentralized organizational structure and broad delegation of authority, program offices have to use engineering and other technical services from the regional offices, the TSC, private consulting firms, and customers to accomplish the project O&M and programs for which they are responsible.

In short, one of the major challenges of having a decentralized organization with a widely dispersed technical workforce is having business practices in place to ensure that Reclamation can maintain its expertise and provide cost-effective engineering and other technical services now and into the future. While we believe that program offices generally make good decisions from the perspective of their individual offices, those individual decisions, when added together and examined corporately, may not yield the best result for Reclamation as a whole.

Thus, the desirable attributes of decentralization and delegation of authority must be balanced with appropriately disciplined, agency-wide business practices for workload planning, workload scheduling, and workflow management which still allow reasonable latitude for program office decision-making. Otherwise, Reclamation cannot ensure that it is being cost-effective, maintaining the core engineering and other technical skills it needs, and making effective use of private firms and customers to perform some of the work.

Reclamation Leadership Team Guidance

After considering employee and customer comments on Team 12's initial conceptual organizational alternatives, the RLT affirmed that Reclamation's current decentralized organizational structure should be preserved. As a corollary, it also concluded that there should be no major organizational consolidation or relocation of existing engineering and other technical services personnel at this time, although selective adjustments may be in order in the future for certain activities that have both variable or declining workloads and frequent changes in the location of their work.

At the same time, the RLT concluded that Reclamation needs to improve its business practices and processes for deciding how and by whom engineering and other technical services work is performed and for collecting consistent data in this regard. Thus, Team 12 was directed to develop the new business model described in this final report.

Finally, the RLT affirmed that Reclamation must provide efficient and cost-effective engineering and other technical services, be transparent with regard to its costs and decision making in the performance of these services, and hold itself accountable for its performance and decisions. As a corollary, the RLT concluded that expanded opportunities for collaboration with customers are instrumental to achieving efficiency, transparency, and accountability. Accordingly, Team 12 was instructed to address collaboration with customers on decisions regarding how engineering and other technical services are performed. The next section of this report does so.

Collaboration with Customers

Based on the feedback at the May, September, and November 2007 public workshops, and directions given by the RLT, one of Team 12's main tasks has been to develop processes by which Reclamation will collaborate with its customers on decisions regarding: (1) how engineering and other technical services work will be performed (i.e., is it done by Reclamation staff, by the customer, or by an engineering consultant, and — if the latter — who selects the consultant?), and (2) the design standards to be employed for construction work. Since customers bear all or part of the costs of such work, they want to know, understandably, that Reclamation is providing, or obtaining from others, the most cost-effective services possible while at the same time maintaining its core expertise. They also want Reclamation's decisions in this regard to be transparent, with Reclamation being accountable for the decisions it makes about how engineering and other technical services will be performed.

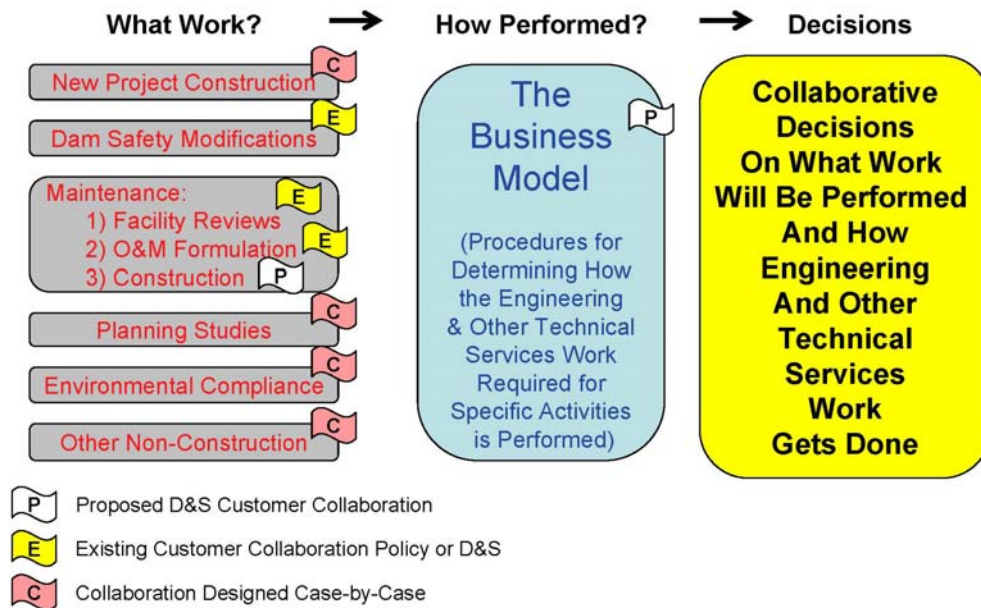
To this end, a new *Reclamation Manual* policy, developed as one of the products of Team 1, will be issued. It will provide an overarching statement of policy that calls for Reclamation to collaborate with its customers on any matter in which they have an interest (not just decisions regarding the performance of engineering and other technical services).

Collaboration Processes on Specific Kinds of Activities

In addition to this overarching, or umbrella, policy, *Reclamation Manual* directives and standards (D&S) will be issued under this policy to address collaboration on specific kinds of activities. Indeed, for several activities that require engineering and other technical services, Reclamation already has policies, or D&Ss, that address customer input and collaboration to varying degrees (e.g., dam safety, O&M program formulation, and review of maintenance programs). These are depicted in the following illustration with yellow "flags." However, for other activities, no policy or D&S is currently in place regarding collaboration with customers on decisions regarding design standards and the performance of engineering and other technical services. These are depicted with white and pink "flags."

The existing or recommended collaboration policy or D&S for each of the specific activities depicted in this illustration is briefly discussed below. Collaboration within the business model itself is discussed at the end of this section.

Collaboration Policies for Activities Requiring Engineering and Other Technical Services



Collaboration on New Project Construction

Under current policies, project proponents are typically required to provide front-end cost sharing (i.e., financing) for a portion of the capital construction costs of a new project. The specific circumstances vary based on site-specific situations, the amount of cost sharing and the parties involved, the particulars of the Congressional authorization for a project, and a variety of other factors. Because collaboration is best designed on a case-by-case basis for these varying situations, we do not anticipate developing a D&S specifically for collaboration on new project construction.

Collaboration on Dam Safety Modifications

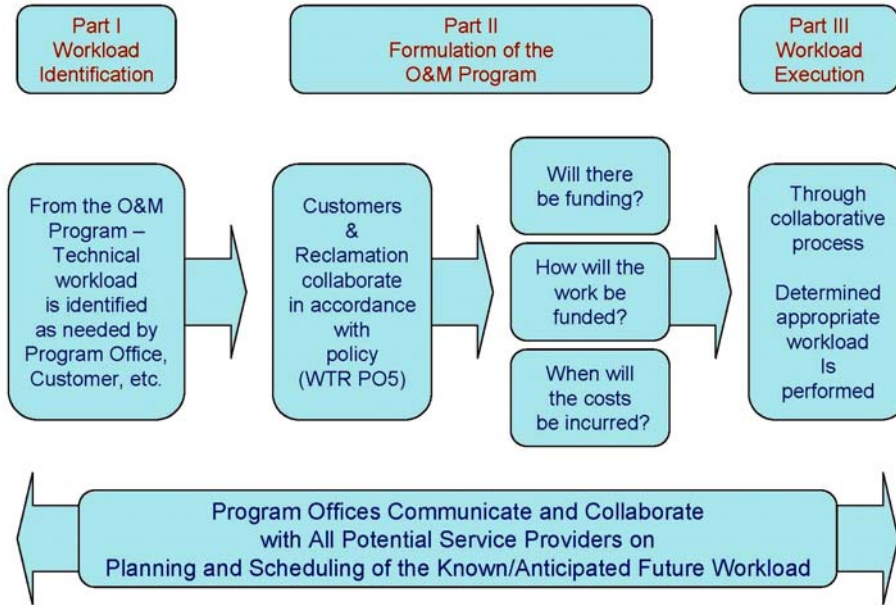
The existing directives and standards for *Decisions Related to Dam Safety Issues* (<http://www.usbr.gov/recman/fac/fac-p02.pdf>) identify when and how Reclamation is to communicate with customers (water and power contractors) on the topic of dam safety modifications.

Collaboration on Maintenance of Existing Facilities

The team noted little consistency, and varying degrees of success, in collaboration for the construction that takes place under the umbrella of extraordinary maintenance and replacements on existing projects — a significant portion of Reclamation's current engineering and other technical services workload. There

are three parts to Reclamation’s project maintenance workflow process, as depicted in the following chart.

Project Maintenance Workflow Process



Part I. – Workload Identification (Periodic Reviews of Facilities)

Workload is identified through various methods and processes. Reclamation performs various reviews of all its facilities at various time intervals based on the risks that are associated with the facilities. Many of these reviews are identified in the following *Reclamation Manual* directives and standards:

- FAC 01-04, *Review of Operation and Maintenance (RO&M) Program Examination of Associated Facilities (Facilities Other Than High- and Significant-Hazard Dams)* (<http://www.usbr.gov/recman/fac/fac01-04.html>)
- FAC 04-01, *Power Review of Operation and Maintenance (PRO&M) Program* (<http://www.usbr.gov/recman/fac/fac04-01.pdf>).

The manner in which Reclamation will collaborate with customers regarding participation on these reviews was an issue covered in M4E Team 18’s report³ and the Commissioner’s Decision Document for Action Item 18.⁴ This decision document stresses the need for customer involvement while allowing flexibility based on project-specific conditions. It also encourages all facility review teams

³ Bureau of Reclamation, December 2006, Action Item 18 — Processes or Measuring Tools for Major Repair Projects, 45 p. [<http://www.usbr.gov/excellence/Finals/18finalreport.pdf>]

⁴ Robert W. Johnson memo, January 5, 2007, posted on line at <http://www.usbr.gov/excellence/Finals/18finalrecommendations.pdf> .

to include at least one customer representative. The recommendations are to be included in revisions to *Reclamation Manual Directives and Standards* FAC 01-04, FAC 01-07, and FAC 04-01.

Part II. – Formulation of the O&M Program

Once workload has been identified as needed, regardless of how that determination is made, questions of planning, scheduling, and funding must be addressed. An existing Reclamation policy addresses collaboration with customers primarily on the funding aspects when the work falls under the broad category of O&M:

- WTR P05, *Working With Water and/or Power Contractors During Formulation of Operation and Maintenance (O&M) Program, and Providing Quality Service to Contractors During Current Year O&M Program Activities* (<http://www.usbr.gov/recman/wtr/wtr-p05.pdf>).

This existing policy describes how Reclamation is to collaborate with customers as the O&M workload moves from the identification stage into performance and funding. This policy was developed at the request of the Family Farm Alliance about 5 years ago.

Part III. – Workload Execution (of Maintenance-Related Construction)

The third stage of the O&M workflow process addresses how the workload will be executed. Execution involves determining design standards and how the necessary engineering and other technical services work will be performed.

Team 12 has developed, and recommends adoption of, a draft D&S for collaboration with customers on decisions regarding construction work at existing Reclamation facilities, based partly on comments received at the May public workshop and partly on the team's understanding of customers' concerns. This D&S provides the specifics for collaboration under the overarching policy described earlier, and it is included as an attachment.

The purpose of this draft D&S is to establish when and how Reclamation will collaborate with customers on this phase of the workflow process. It encompasses decisions regarding the scope of the workload and who will perform the workload, it facilitates open communication, and it clarifies reporting requirements to enhance the transparency of all decisions regarding such work.

Reclamation's decentralized organizational structure allows customers to interact with Reclamation decision makers in the field. As decisions are made in accordance with the business model, the program offices are responsible for communicating with the customers. Through this communication and collaboration, the customers' input is incorporated into the decisions inherent with the business model. As stated in the draft D&S, when customers do not agree

with the decisions of the program office's representative, the avenue of recourse would be to the regional director.

Collaboration on Non-Construction Activities

Customer involvement, interest, and cost-sharing in non-construction activities (e.g., planning studies and environmental compliance activities) vary significantly from activity to activity. This type of work requires specific types of collaboration based on the amount of customer involvement, interest, and cost sharing. The manner and extent of this collaboration will need to be developed and tailored specifically on a case-by-case basis.

Collaboration Within the Business Model

In addition to the above processes, existing or recommended, for collaboration with customers on the formulation and conduct of various kinds of activities, the new business model provides further opportunities for collaboration on individual decisions about how engineering and other technical services will be performed in the course of carrying out any given activity. These are explained in the next section of this report under the workload distribution component of the new business model.

The new business model also calls for the creation of a Coordination and Oversight Group (COG). Among the responsibilities of the COG (as described in more detail in the next section of this report) will be the collection and periodic analysis of data over time regarding workload distribution and performance, monitoring of core capability, staff utilization, and use of outsourcing. The purpose of collecting these data will be to ensure that Reclamation — consistently and agency-wide — is being cost-effective, is maintaining its core capabilities, and is right-sizing itself continually.

Reclamation believes that customers have as much interest in this agency-wide, internal oversight process as they do in individual activities that require the use of engineering and technical services. Therefore, Reclamation is prepared, subject to the limitations, if any, of the Federal Advisory Committee Act, to have a representative cross-section of its customers periodically meet with the COG (e.g., once or twice a year) to review the data collected and analyses prepared by the COG and collaborate in decisions regarding whether those analyses suggest that Reclamation should be adjusting its engineering and other technical services workforce, its use of outsourcing, and its general business practices.

The New Business Model

The recommended business model, described below, provides for agency-wide (i.e., “corporate”) processes and procedures for managing and obtaining the engineering and other technical services required for Reclamation to carry out its mission. The manner in which customers will be able to collaborate with Reclamation as the business model is applied in making decisions about how engineering and other technical services will be performed is shown in the workload distribution flowcharts which appear later in this section.

The new business model is a framework of component parts. The team believes that these parts, when implemented together, will provide the tools necessary to ensure that engineering and other technical services are provided, or obtained, in the most efficient and cost-effective way for both construction and non-construction work.

At this point, this is a conceptual framework. Each component will need to be further developed and set forth in new policies and new directives and standards in the *Reclamation Manual*. Team 12 recommends that an ad hoc implementation team initially be tasked to do this under the guidance of the Deputy Commissioner, Operations. Customer input, perspective, and collaboration will also be needed throughout the implementation process.

It should be noted that Team 12’s work necessarily interfaces with the work of some other M4E teams. For example, when and how Reclamation will employ formal project management (action items 20–23) clearly interfaces with the business practices discussed here for workload and workflow management. Thus, this recommended business model may need to be adjusted where it conflicts with recommendations from other teams, or those recommendations refined to match the requirements of the business model as it is implemented.

Objectives for Future Business Practices

As the business model was being developed by Team 12, the RLT identified key objectives that it believes any new business practices need to serve. It also recognized that there is necessarily some tension between these objectives; that is, achieving one objective may come at the expense of another.

For example, the objective of empowering the program offices — giving them broad discretion in how they accomplish the programs for which they are responsible — may conflict with the agency’s need to maintain core capabilities in engineering and other technical disciplines or with the objective of having

consistent, transparent decisions (which customers have said they want). Striking an appropriate balance between objectives is the task at hand. The business model recommended here attempts to do that.

The objectives identified by the RLT are set forth below. They are not listed in any particular order of priority or weighting.

Empowerment of the Regions. In general, Reclamation wants to preserve the existing delegation to the regions of responsibility and accountability for nearly all program accomplishment.

Cost-Effective Engineering and Other Technical Services. Customers have made it clear that they are sensitive to Reclamation's costs for providing engineering and other technical services, given that they must bear all or a portion of these costs. Thus, one of our objectives must be to provide cost-effective engineering and other technical services (i.e., the *best value* for the cost involved, not simply the lowest cost).

Transparency and Accountability. Reclamation's business practices must be transparent to our customers and ensure that Reclamation is accountable for performing construction work on schedule and within budget.

Predictability of Workload. In order for the regional offices and the TSC to effectively plan their staffing requirements and maintain Reclamation's core capability, program offices must provide them with reasonably predictable workloads (to the extent budget processes and the inevitable unexpected events permit).

Ability to Assess Core Capability. Reclamation must have the data and information needed to be able to assess whether it is maintaining the core engineering and other technical skills it needs to perform its mission.

Strategic Determination of the Workload to be Outsourced. In meeting Congressional mandates regarding outsourcing, Reclamation should purposefully select the types of work to be outsourced.

The Coordination and Oversight Group

Team 12 recommends that the Deputy Commissioner, Operations (DCO) be assigned the ultimate responsibility for ensuring that the practices encompassed by the recommended business model achieve their intended purposes, including a proper balance between objectives. In this undertaking, the DCO will be assisted and advised by a Coordination and Oversight Group (COG), which will:

- Improve coordination and communication between offices in Reclamation,

- Collect and analyze data on workload distribution and performance,
- Monitor core capability and flag potential threats to maintaining that capability,
- Monitor the outsourcing of engineering and other technical services work and collect documentation for such work,
- Track staff utilization and recommend organizational adjustments,
- Report to the DCO on how well the objectives are being met, and
- Make recommendations for improvements to business practices.

The team has fashioned the COG to be an integral part of the business model without being a bureaucratic layer. Particulars regarding the role of the COG will depend in part on how the components of the model (described below) are ultimately detailed. Any overlapping responsibility with existing groups, such as Reclamation’s Design and Construction Coordination Team and the O&M Working Group, will need to be reconciled.

The COG will include a cross-section of representatives from technical service providers and program offices throughout Reclamation, all or most of whom will serve via temporary collateral-duty assignments. It is recognized, though, that this body will have significant workload, especially in the initiation phase, as much effort will be required to ensure consistent implementation of the business model throughout Reclamation’s decentralized organization.

Model Components

(1) Distribution of Engineering and Other Technical Services Staffs

Staffing for engineering and other technical services at all levels of the organization (field, area, and regional offices and the TSC) should be, in numbers and level of expertise, to no more than the low points (“valleys”) of the annual, long-term workload of each office, and to no more than can be cost-effectively performed. Note, however, that these “valleys” in workload may be affected by the manner in which work is distributed to the various organizational levels within Reclamation, outsourced, or performed by customers. (See section 4, “Workload Distribution,” below.)

Program offices should retain only such engineering and technical services staff, in numbers and expertise, as can be fully utilized in accomplishing the programs and projects for which each such office is responsible. This might require some adjustments in the current staffing of a few area offices over time. Peak (overflow) work and work that is beyond the technical capability of a program office will generally be performed by service providers located in the regional offices. In turn, a regional office should not have engineering and technical

services staff, in numbers and levels of expertise, beyond the base level needed to perform that region's workload.

The TSC should staff to provide the kinds of unique and high-level expertise that the individual regions cannot sustain full-time. The TSC should also staff to handle the overflow workload of the regional offices, but only to a level that long-term workload planning shows to be sustainable. This overflow work is a desirable and necessary component of maintaining expertise because it provides the learning opportunities entry-level staff must have in order to gain higher level expertise over time.

Like all other offices, the TSC generally will staff only to a level that can be sustained by the "valleys" of the projected workload they receive. In some cases, though, the need to maintain core capability may require the TSC to selectively staff for greater amounts of work than that provided by the valleys of projected workloads.

Engineering and other technical services workload that exceeds Reclamation's collective base staffing levels and/or capabilities will generally be completed through outsourcing, although in some cases customers who have the interest and the capability may choose to do such work themselves. Work performed through outsourcing will be tracked through standard project management and oversight practices.

(2) Fee-for-Service

The objectives to be cost-effective, transparent, and accountable will be addressed through establishing a consistent fee-for-service practice for engineering and other technical services across all Reclamation offices. The data that becomes available will greatly enhance our ability to report on how well we are meeting these objectives and to make adjustments as necessary.

The program offices and the service providers will both have a responsibility to ensure that fee-for-service is practiced in a manner that will produce meaningful results for all work, whether performed by Reclamation, private consultants, or customers. The TSC was designated as a fee-for-service operation when it was formed and has been using service agreements to "contract" its work since that time. The TSC has also implemented business practices that provide valuable data for workforce analysis. Use of fee-for-service as Team 12 recommends will enhance and extend that ability across all of Reclamation's service providers.

Fee-for-service as described here requires three basic components:

- Statements of work
- Service agreements
- Completion reports

To be of most benefit to Reclamation, fee-for-service arrangements will be required to the extent reasonably practical for all engineering and other technical services work performed by Reclamation, including work for others (e.g., dam safety work for other bureaus in the Department of the Interior and work for other Federal agencies). The size and scope of the project as well as the anticipated level of effort will directly affect the extent of documentation required. In emergency situations, the required documents may be prepared retroactively.

The COG will be responsible for recommending the policies and directives and standards for specific procedural requirements and developing standard forms, formats, and reporting requirements. Completion reports will be submitted to the COG for use in analyzing and reporting performance.

Statements of Work

A complete and detailed statement of work (SOW) is essential, regardless of whether the work is to be performed by Reclamation, contracted out to a private consultant, or performed by a customer. The program office will prepare the SOW in collaboration with service providers for elements of work outside the program office's area of expertise. A standard SOW form will be created and will include a section for recording all substantive changes that are made while the work is in progress.

Service Agreements

A service agreement will be the "contract" between a program office and a technical service provider (e.g., the TSC or a regional office, or even between organizational units within an area office in certain circumstances). To be fully effective, any changes to the work that affect the cost or schedule should be reflected in amendments to both the SOW and the service agreement. The format for service agreements will be standardized and issued by the COG. The TSC and some other individual offices are currently using a form of service agreement, and the COG could draw from those examples for current best practices.

Completion Report

The completion report will provide the summary data (estimated costs, estimated schedule, final costs, final schedule, and identified changes in scope) necessary to understand and transparently report achievements and costs. The data will also be used for purposes of accountability. The data requirement will apply to both in-house and non-Reclamation service providers. Program offices (with input from the service providing group) will prepare the completion report for submittal to the COG. It is likely that well prepared and maintained SOWs and service agreements (i.e., those that reflect agreed-upon changes after original preparation) could suffice as the report.

(3) Advance Planning and Scheduling Future Workload

Since most engineering and other technical services are not performed within the program office responsible for a particular job, those offices must plan and schedule the work they will require from service providers as far in advance as is reasonably possible. This planning is needed so that service providers can project their work schedules and utilize personnel efficiently. It is also needed so that these providers can anticipate long-term workload trends and appropriately “right-size” their staffs in light of those trends. Reclamation’s safety of dams program provides the best example of how advance planning and careful communication between a program office and multiple service providers (both in the TSC and in regional offices) produces efficient staff utilization, good accomplishment, and accountability and transparency.

Team 12 recognizes that emergencies and unforeseeable changes in conditions will generate additional unplanned workload. However, rigorous planning of the work that can be readily identified will allow Reclamation greater flexibility to cope with such exigencies.

Accordingly, this component of the recommended business model calls for an increased emphasis by program offices on the advance planning of their workloads and improved communication with service providers. Such planning is a necessary precursor of the statements of work and service agreements called for by the fee-for-services component of the business model. Where good planning and scheduling practices are already in place, better communication between program offices and service providers may be all that is needed. In other cases, more extensive changes are needed.

(4) Workload Distribution

In terms of the objectives listed above, Reclamation’s current practice for workload distribution emphasizes empowerment of the program offices, but results in low predictability of the workload, which makes it harder for Reclamation to maintain core capability, provide cost-effective technical services, and control the amount and type of work that is outsourced.

One of the most challenging aspects of maintaining technical support under the current dispersed decision authority is forecasting the future workload. Known future workload is a fundamental necessity for ensuring that our engineering and other technical services are the right size and in the right location. It is also critical for ensuring that we maintain core capability and expertise. An additional consideration that must be addressed in any workload distribution process is the objective to strategically determine the amounts and types of work that will be outsourced to meet Congressional mandates.

In its August 2007 *Interim Report to Reclamation Managers and Employees* (distributed only internally to Reclamation employees), Team 12 proposed a

workload distribution concept that would directly distribute work according to a set of rules, thereby reducing the latitude of program office decision authority. This concept has been carried forward and is offered as Alternative 1 below. A different approach to the directed distribution concept that would leave the program offices more authority over distribution decisions was developed and is presented below as Alternative 2.

These alternatives do not apply to work performed or contracted out by customers in accordance with O&M transfer agreements, as most transfer agreements give the customer the responsibility to decide who will perform such work. However, if the customer desires to have Reclamation perform some of that workload, the service providers would communicate internally and assure that work is performed appropriately using the business model.

In emergency situations, if lives or property are at risk, the preferred distribution procedure may be set aside, or performed expeditiously. Except for such rare circumstances, however, the workload distribution process is intended to apply to all engineering and other technical workload that is performed by Reclamation's technical service providers, including workload funded by sources outside of Reclamation.

The COG is important to the success of either alternative, although its role differs somewhat between them. Under either alternative, the COG would be a central mechanism for ensuring that Reclamation has the data and processes it needs to achieve the objectives of assessing core capability and strategically selecting work to be contracted out.

A key to the success of both alternatives is the document that describes the workload distribution starting point, the expected distribution of the technical workload, which is referred to as the "Rule Set" in Alternative 1 and as a "Guidance Document" in Alternative 2. Whichever alternative is chosen, this starting document will identify where workload should normally be distributed using accepted criteria (i.e., risk to public safety, core capability maintenance, technical complexity, staff utilization goals, etc.). It will allocate the anticipated specific kinds of engineering and other technical services work either to the TSC, to the regions, or to an outside contractor. The work allocated to the regions could be performed by regional office staff, by area office staff, or, potentially, by customers.

The team envisions that the first version of the "Rule Set" or "Guidance Document" would be drawn up during implementation of the business model by a representative cross section of the organization to ensure that our technical expertise is maintained. Most of the workload is presently distributed through unwritten rules, which this document will capture and codify where consistent with the business model. Once developed, the document will be modified and updated upon recommendation of the COG and acceptance of the DCO.

Although the workload distribution process may appear to be straightforward and linear on the flowcharts for the alternatives presented below, that has been done only for the sake of simplifying those illustrations. Under either alternative, the process would be iterative, with multiple opportunities for collaboration between the program office, the customer, and the technical service providers.

For instance, early on in the process, a customer might ask the program office for permission to perform or contract out some technical task that is beyond the scope of that customer's transfer agreement. The program office may then consult the Rule Set or Guidance Document to determine whether that the requested work is of a type that is appropriate for such customer involvement. Even if the result is affirmative, though, this determination might subsequently change if, for instance, the customer finds that the technical resource counted upon for the performance of this work is no longer available. In this case the specific workload might well end up at the TSC through the overflow process. Similarly, there may be circumstances where customers do not have interest in performing the work initially, only to become interested when it is determined that Reclamation will not be able to perform the work as originally scheduled due to circumstances such as emergency work.

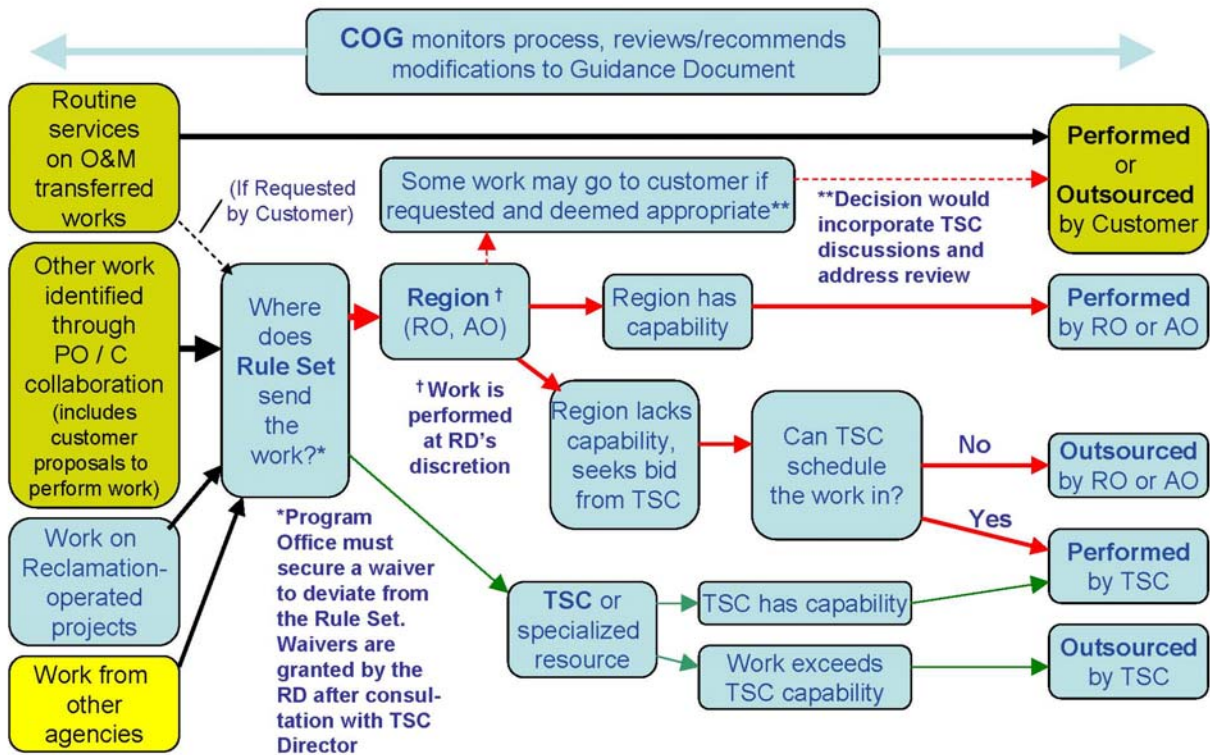
Workload Distribution — Alternative 1

Under this alternative, workload distribution would be a formal process similar to the process already followed informally by the Dam Safety Program. Its main features include:

- A presumption that certain types of work will be distributed “directly” to particular technical service providers, as described in the “Rule Set,”
- A requirement to make overflow work available internally prior to outsourcing,
- A waiver process for getting an exemption from the direct distribution and/or overflow requirements,
- A planning process that requires collaboration with technical service providers, and
- A COG that will (1) monitor the effectiveness of the workload distribution process at accomplishing work efficiently, keeping staff fully utilized, and maintaining core capability; (2) recommend changes in the distribution process; and (3) recommend staffing adjustments to address underutilization.

The following diagram graphically depicts the major decision points in Alternative 1. Note that customers will be able to collaborate at each such decision point, even though these opportunities are not depicted graphically here.

Alternative 1 - Workflow Decision Flowchart



As shown by the green line on the flowchart, the Rule Set designates some types of engineering and other technical service work for direct distribution to the TSC. This is, however, anticipated to be only a relatively minor component of the TSC workload. The largest part of the TSC’s workload is expected to be initially directed to the regional or area office, finding its way to the TSC through the “overflow” process (red line on the chart).

Overflow workload (work beyond a responsible program office’s capability) would be subject to internal “first right of refusal” prior to contracting out (as described in the second bullet above and as shown in the flow chart). Only workload in excess of Reclamation’s collective base level staffing capabilities would be done through outsourcing or by customers. When requested by one of their program offices, and after consultation with the Director of the TSC, Regional Directors would have the authority to waive the overflow “first right of refusal” requirement.

Using the performance and utilization data collected, the COG would monitor the effectiveness of the workload distribution guidance at maintaining core capability and staff utilization. Any changes to the Rule Set would be determined by the DCO after considering the recommendations of the COG.

This alternative is weighted toward achieving the objective of predictable workload, building on the recognized success of the Dam Safety Program. It also applies well to the objectives of maintaining core capability and outsourcing strategically. However, it conflicts somewhat with the objective to empower the regions. It also presents a definite management challenge to ensure that the organizations receiving distributed workload through the Rule Set remain cost-effective and efficient.

Workload Distribution — Alternative 2

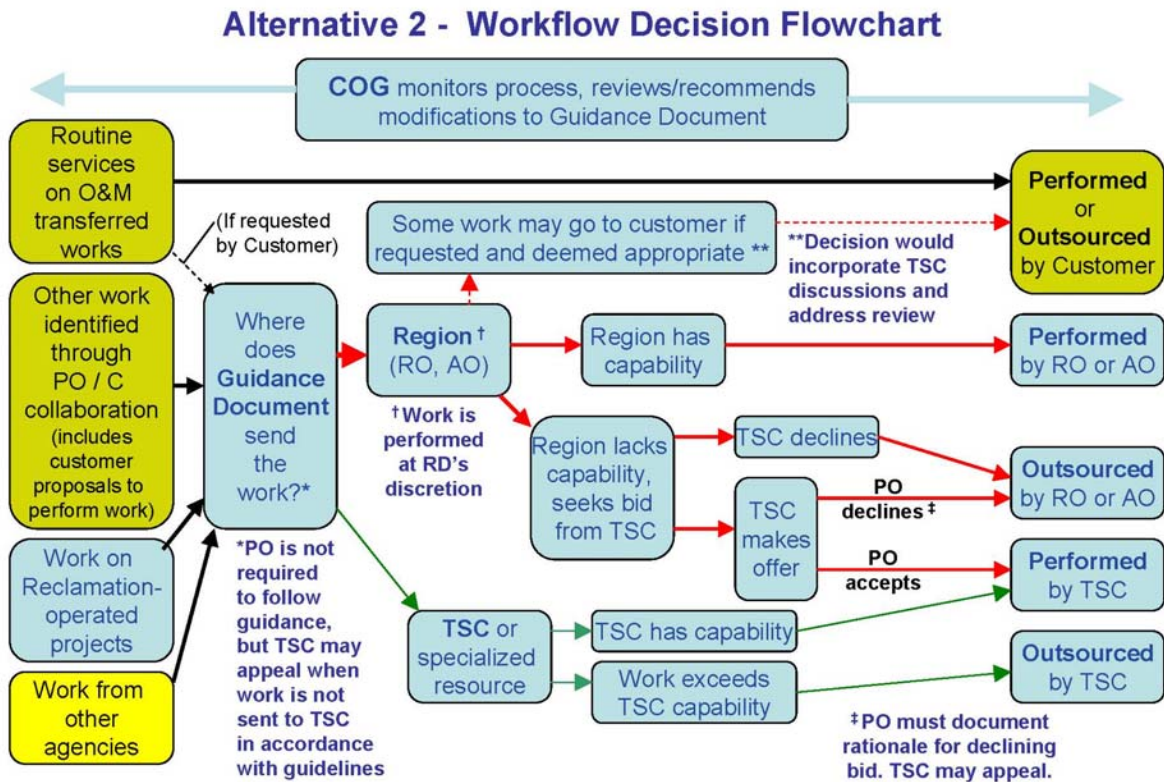
This alternative would leave workload distribution decisions largely as they currently exist but would incorporate certain elements of Alternative 1 as tools for better informing those decisions. The main features are:

- The authority for program offices to decide where work is distributed, bearing in mind their responsibility to meet corporate objectives.
- A “Guidance Document” similar to the “Rule Set” of Alternative 1 and a similar overflow workload distribution process, which the program offices would use as a discretionary framework for the distribution of work to service providers.
- A process that a program office may follow in determining the preferred service provider:
 - Direct outsourcing of workload by the program office will be permitted, but if such outsourcing runs contrary to the Guidance Document or the overflow workload distribution process, the program office must first solicit proposals for the workload from Reclamation service providers.
 - Region-specific procedures will dictate protocol for outsourcing work that the Guidance Document would have directed to a service provider in a region.
 - For work that the Guidance Document would have directed to the TSC, the program office must solicit a proposal from the TSC before outsourcing.
 - Direct distribution to the region (area office or regional office) of workload that the Guidance Document would have directed to the TSC will also be permitted, but not without first soliciting a proposal from the TSC.
 - If the program office chooses to outsource work that the TSC is willing and able to perform, then:
 - The program office will document the reason(s) for its decision not to use the TSC and provide that documentation to the COG and the TSC service provider
 - The TSC service providers denied work may protest the decision of the program office to the COG
 - The COG will have the discretion to request the DCO to override the program office’s decision

- Upon receiving an override request, the DCO will consult with the involved regional director, with the Director of the TSC (if applicable), and with the affected customer (if applicable). The DCO then may either uphold or override the decision.

It is anticipated that the above scenarios will only occur on rare occasions when the program office and the TSC are unable to resolve differences of opinion on where the work should be performed. Under Alternative 2, when the program office makes decisions contrary to the Guidance Document it is expected that thorough communication between the program office and the affected offices occurs as part of that decision process.

The following diagram depicts the major decision points in Alternative 2. Note that customers will be able to collaborate at each such decision point, even though these opportunities are not depicted graphically here.

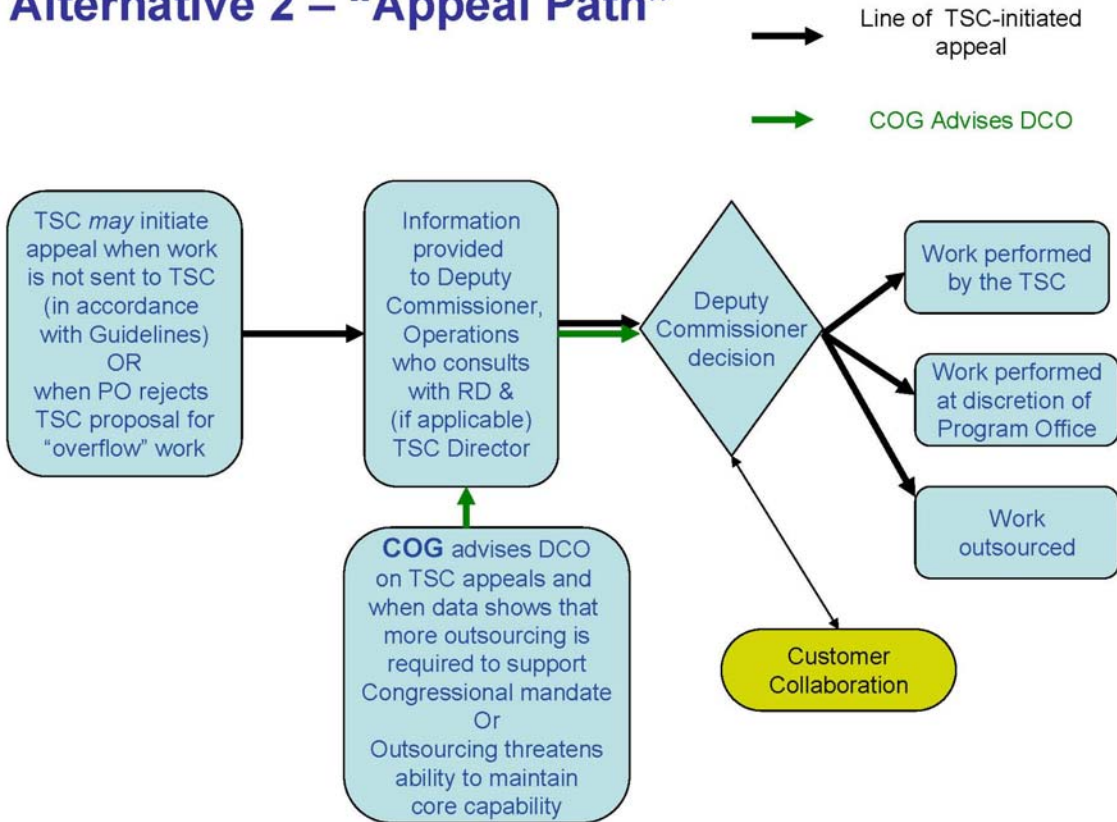


Here again, as in Alternative 1, the initial engineering and other technical service work directed to the TSC (green line on the chart) is only a minor component of the workload.

Unlike Alternative 1, the region is not obliged to send overflow work to the TSC, though it must give TSC an opportunity to “bid” on the work and, should it

choose to decline that bid, it must document its rationale for that decision. If the TSC is not satisfied with the region’s decision, it has the right to appeal. The following depicts the decision points of the appeal path.

Alternative 2 – “Appeal Path”



With the Guidance Document available for reference, program offices will be better informed about how their independent decisions affect Reclamation as a whole. This alternative may result in a more active role for the COG depending on the number of appealed program office decisions.

This alternative is weighted more toward the objective to empower the regions, but does not as directly address predictable workload, core capability, and strategic outsourcing. On balance, however, it could provide the advantage of increasing the shared accountability for cost effectiveness and efficiency.

Regardless of which alternative may be selected there would be a premium on thoughtful preparation of the Rule Set or Guidance Document and a commitment to processes that bring a more purposeful, Reclamation-wide perspective to workload distribution.

The alternatives were developed with an understanding that the Rule Set or Guidance document would be fully vetted with both the internal and external customers and that waivers or appeals would be the exception rather than the rule.

(5) Organization and Staffing Levels

The specific organization and staffing levels of the engineering and other technical services in the regions and the TSC will continue to be at the discretion of the directors. Each office that provides engineering or other technical services will be responsible to collect and report staff utilization data.

There are currently situations in which resources are shared between regions to enhance their efficient utilization. This does not refer to consolidated Reclamation-wide services, such as the TSC, but rather to services shared by as few as two regions, which may be described as “semi-consolidated organizations.” These informal arrangements — such as those currently used for underwater inspections and geotechnical drilling — are excellent examples of best practices. The recommended business model will have them continue where circumstances are appropriate. Their continued utility will be enhanced by a formal agreement that clarifies how priorities, roles, and responsibilities are to be shared. This is required at a minimum to identify responsibility for reporting to the COG.

The COG will consolidate information on staff utilization and will periodically report on the subject to the DCO. It may also recommend staffing and/or organization changes to the DCO.

(6) Cost and Performance Reporting

The COG will be responsible for preparing and submitting periodic reports to the DCO summarizing and analyzing cost and performance data for engineering and other technical services. These reports will be made available to customers and stakeholders. The analysis and report will be tailored to specifically address the business objectives.

(7) Accountability

The DCO will be responsible for ensuring that the business practices incorporated in the recommended business model achieve their intended purposes. The COG will collect and analyze data from engineering and other technical service providers and will make this information available, both internally and externally, via annual reports. Ultimately, the availability of the COG’s data will enable the DCO to establish standards against which future performance can be measured and will also provide the means to be transparent in these decisions.

Attachment — Draft *Reclamation Manual* Directive and Standard

Subject: Collaboration with Customers Regarding Engineering and Other Technical Services Required for Construction Work on Existing Reclamation Facilities (Excluding Safety of Dam Modifications)

Purpose: The purpose of this Directive and Standard (D&S) is to establish Reclamation-wide requirements for collaborating with customers on decisions regarding the scope and performance of engineering and other technical services required for construction work (excluding safety of dam modifications) on existing Reclamation owned facilities in order to ensure coordination and communication with customers and the transparency of Reclamation’s decisions regarding such work.

Authority: Reclamation Act of 1902 and all acts amendatory thereof and supplementary thereto.

Approving Official: Deputy Commissioner – Operations

Contact: Director, Technical Resources, 86–60000

1. Introduction.

- A. For some Reclamation owned facilities, responsibility for the operation, maintenance, and repair of the facilities has been assumed by a customer pursuant to contracts with Reclamation. In these instances, the customer is responsible for providing or obtaining whatever engineering and other technical services are required in order to perform any construction work which is needed to maintain and repair the “transferred works.” If requested, Reclamation will provide engineering and other technical expertise to assist the customer, with the costs of such assistance being borne by the customer to the extent they are allocable to reimbursable project purposes.
- B. If a customer proposes to make a “substantial change” in any transferred work, the contract between Reclamation and the customer usually requires that such change must be approved by Reclamation. In these instances, Reclamation has usually, but not always, performed the engineering and other technical services required for the construction of a substantial change as a condition of its approval, with the costs of such services being borne by a customer to the extent such costs are allocable to reimbursable project purposes.

- C. For facilities which are still operated and maintained by Reclamation, as opposed to a customer, the engineering and other technical services required for any construction work on such facilities (referred to as “reserved works”) have typically been performed by Reclamation, with the costs of such services being borne by customers to the extent such costs are allocable to reimbursable project purposes.
- D. For the situations described in B. and C., Reclamation’s customers have a direct interest in what engineering and technical services are required, how those services are performed, and what the cost of those services will be. Reclamation therefore needs to work in partnership with its customers to ensure the delivery of high quality engineering and other technical services in an efficient and cost effective manner. The collaboration process provided for by this D&S will afford customers the opportunity to be involved in decisions about the performance of such services and will also provide a process for determining if opportunities exist for customers, rather than Reclamation, to themselves perform, or contract with others to perform, such services in certain instances.

2. **Definitions.**

- A. **Authorized Reclamation Official.** The Reclamation official to whom a regional or other director has delegated authority and responsibility for the accomplishment of construction work at a given Reclamation owned facility, or such other Reclamation official to whom authority and responsibility has been re-delegated.
- B. **Construction Work.** Any work that requires engineering designs, technical drawings, specifications, cost estimating, and construction management.
- C. **Customer.** A water user or electric utility which has an active repayment, water service, or power service contract with Reclamation; an electric utility which has an active contract with a Federal power marketing agency for energy and/or capacity from a Reclamation owned hydropower facility; or a non-Federal operating entity (e.g., a joint powers authority) which has assumed responsibility on behalf of multiple water users, via a contract with Reclamation, for operating and maintaining a Reclamation project or features thereof.
- D. **Customer Association.** An informal group, or formally organized association, organization, or entity, which is composed of customers and which has been designated by its membership to represent them in dealings with Reclamation or a federal power marketing agency, but which does not have a repayment, water service, power, or project operation and maintenance contract with Reclamation.
- E. **Engineering and Other Technical Services Work.** All work required for the planning, design, and management of construction work. Such work may include, but is not limited to, data collection and analysis; formulation of alternatives; value engineering studies; engineering designs, drawings, and specifications; cost estimating; hydrologic, environmental, social, economic, and cultural analyses; the regulatory compliance and permitting which must be affected before construction can occur; construction

management (i.e., procurement of construction services, construction contract administration, inspection, engineering support, and completion of final construction reports, including as-built drawings); and post-construction monitoring.

- F. **Reserved Works.** Those facilities owned by Reclamation where Reclamation has retained responsibility for carrying out operation and maintenance activities.
- G. **Substantial Change.** A modification in or addition to a project facility which involves changes in the original design intent, function, and/or operational parameters of the facility, or changes in project benefits.
- H. **Transferred Works.** Those facilities owned by Reclamation where Reclamation has turned over all or partial responsibility for carrying out operation and maintenance activities to a customer pursuant to a contract with such customer.

3. Scope.

- A. This D&S addresses collaboration with customers on the engineering and other technical services required for: (i) all construction work at and on reserved works; and (ii) construction work at and on transferred works which will result in a substantial change to the facilities involved (and which is, therefore, subject to Reclamation's approval because it is beyond the scope of the maintenance and repairs which a customer is authorized to perform pursuant to a contract for transferred works).
 - (1) This D&S applies to such construction work regardless of the funding source for the work so long as one or more customers will bear at least some portion of the cost of the construction work (via contributed funds, advances from a customer in the year in which costs are incurred, or repayment over time).
 - (2) Any arrangements for collaboration with customers on Reclamation's decisions regarding the engineering and other technical services required for construction work which exist as of the effective date of this D&S shall remain in place and not be affected unless the involved customer(s) desires to avail themselves of the processes established by this D&S.
- B. Collaboration with customers regarding the formulation of the overall annual operation and maintenance program and budget for a Reclamation project is covered by Policy WTR P05 (September 15, 2003, as revised May 24, 2005). [**NOTE** – this Policy could be converted to a D&S under the proposed new umbrella policy on collaboration with customers.]
- C. Collaboration with customers regarding safety of dam modifications is covered by Directive and Standard FAC 06-01 (February 20, 2004).

4. **Notification to Customers.** Any time Reclamation anticipates that it will need to undertake construction work at or on existing Reclamation owned facilities, the costs of which will be borne in whole or part by one or more customers, the authorized Reclamation official will notify, in writing, affected customers or the non-Federal operating entity or customer association which represents such affected customers (in lieu of notice to each individual customer), and, if applicable, the appropriate federal power marketing administration. This notification will be coordinated with, and may be given as a part of, the collaboration process for operation and maintenance program formulation and budgeting provided for by *Reclamation Manual* Policy WTR P05 [or cite as a D&S if this policy is converted to a D&S].

5. **Customer Collaboration Teams.**

A. When the costs of construction work will be borne in whole or part by one or more customers, the affected customer(s) or their customer association may request the appropriate authorized Reclamation official to form a Customer Collaboration Team (CCT). The purpose of a CCT will be for Reclamation and its customers to work together to collaboratively address and decide the budget for and scope of the required engineering and other technical services, whether Reclamation will itself perform the necessary engineering and other technical work or procure services from private firms, the schedule for the performance of such services, and design issues regarding construction work.

(1) A CCT will track the progress of engineering and other technical services, and of construction work, and determine if and when adjustments in scope, budgets, schedules, and/or priorities are needed.

(2) Reclamation will review originally proposed schedules and budgets for construction work with customers after the President's budget for Congressional appropriations, or after the budget from other funding sources, is made public so that the CCT can discuss whether changes in previously planned work may be required.

B. In addition to the purposes set forth in the preceding paragraph, if a customer or customer association proposes that it, rather than Reclamation, perform or procure the necessary engineering and other technical services, then the CCT will also collaboratively address whether the customer will be permitted to provide or procure such services and, if so, how the work will be done. All proposals from a customer or customer association must meet the minimum conditions set forth in section 7 below.

C. When so requested, a CCT will promptly be formed by the authorized Reclamation official. Customers may request that a CCT be formed on an ad hoc, one time basis to deal with one individual construction job, or on a permanent basis (e.g., to address, on a continuous basis, extraordinary maintenance, repairs, and replacements at a reserved work).

- D. A CCT will consist of the authorized Reclamation official and one representative for each customer or, when more than ten customers are involved, for each customer association which desires to be involved. When power facilities are involved, one representative of the appropriate power marketing administration will be invited to be a member of the CCT.
- (1) All members of a CCT should have the authority to make decisions on behalf of their respective agencies or organizations, subject to the limits of their applicable laws and policies.
 - (2) Members of a CCT will be expected to interact with other parts of their respective organizations for assistance.
 - (3) All members of a CCT should have adequate expertise, in conjunction with the support of their respective technical staffs, to ensure the soundness of technical decisions.
- E. The authorized Reclamation official will chair each CCT and will be responsible for calling meetings of a CCT in a timely manner with appropriate notice to all members of a CCT. When agreed upon, a CCT may form such sub-teams or other work groups as it deems desirable for an effective collaboration process.
- F. When Reclamation is itself performing or has procured the required engineering and other technical services, the Reclamation chair of a CCT will provide periodic written reports on the progress of construction work at least semi-annually, or more frequently if agreed to by the CCT. When a CCT has agreed that a customer will perform certain construction work, then that customer will be responsible for providing such periodic written reports. Reporting will include cost information, status of work completed, work remaining, factors affecting the schedule and/or the cost of the project, and such other information as agreed to by a CCT. In addition to such periodic reporting, Reclamation or, as applicable the customer performing the required engineering and other technical services, will promptly notify all CCT members of any significant changes in the scope, estimated or actual costs, or schedule.
6. **Decision Making Processes.** Every effort will be made by the members of a CCT to reach agreement on any matter being addressed by the CCT.
- A. The authorized Reclamation official will be obligated to comply with all applicable statutes, regulations, administrative orders, or court rulings; all of Reclamation's engineering and design criteria and standards; all *Reclamation Manual* policies, and directives and standards; and any other guidance that applies to Reclamation's business practices regarding workflow distribution and workload management for engineering and other technical services. The authorized Reclamation official will consider customer views when Reclamation's legal authorities, policies, directives and standards, and/or business practices give the official the discretion to determine how work will be performed or to request permission to deviate from such policies, directives and

standards, or business practices.

- B. If the members of a CCT reach agreement on a matter before them, then Reclamation shall proceed to implement the agreed upon course of action if it does not violate any applicable statutes, regulations, administrative orders, or court rulings.
 - C. If the customers or customer associations on a CCT cannot reach agreement with Reclamation on a matter before the CCT, or if the customers or customer associations cannot reach agreement among themselves, then the decision of the authorized Reclamation official, which shall be committed to writing and provided to all members of the CCT in a timely manner, shall be final.
 - D. Any customer member of a CCT may appeal the decision of the authorized Reclamation official to the appropriate Regional Director. Such appeals must be made in writing within 30 calendar days of receipt of the final written decision by Reclamation's member of a CCT. An appeal must state: (1) the specific decision being appealed, (2) the reasons for and an explanation of the basis for the objection to the decision, and (3) recommendations for proposed remedy(s). The Regional Director will consider all information provided by the customer. The Regional Director will render a final decision in writing within 30 calendar days from receipt of the appeal unless the customer making the appeal agrees to a longer time period.
7. **Engineering and Other Technical Services Work Performed by Customers.** If a customer desires to perform the engineering and other technical services required for certain construction work, then the following minimum conditions must be met before Reclamation will agree to have any such services performed or procured by the customer.
- A. **Professional Registration.** The customer must agree in writing that those performing engineering work for it will meet Reclamation's guidelines for professional registration.
 - B. **Professional Responsibility.** The customer must enter into a legally enforceable agreement with Reclamation pursuant to which it agrees to hold the United States harmless from, and to indemnify it for, any and all claims against it which arise from errors and omissions in the engineering designs, drawings, and specifications completed by or on behalf of the customer or in the construction management and/or construction techniques employed by or on the behalf of the customer.
 - C. **Design Criteria and Standards.** The customer must agree that the necessary engineering designs, drawings, and specifications will be completed in accordance with Reclamation's design criteria and/or standards or seek deviations from these criteria and/or standards in accordance with *Reclamation Manual Policy* [or D&S] ____.

Note — M4E Team 16 addressed matters regarding Reclamation’s engineering design criteria and standards. Among the things to be implemented in order to carry out that team’s recommendations are new or revised policies and/or D&Ss regarding the setting of such criteria and standards and the waiver process for considering deviations from those criteria. It is anticipated that this D&S regarding customer collaboration will cross reference the policies and/or D&Ss that will come from implementing Team 16’s recommendations.

While these other policies and/or D&Ss are still in the process of being developed, they will generally provide that Reclamation will consider customer requests to deviate from Reclamation’s design criteria and standards only if a customer or customer association is willing to first enter into a legally enforceable agreement with Reclamation whereby the customer: (i) accepts responsibility for repairing, replacing, or re-constructing, at its sole expense, any equipment, feature, or facility that does not perform properly or fails, (ii) accepts all liability for damages to its patrons, the United States, or third parties which result from the failure or inadequate operation of any equipment, feature, or facility designed by or for the customer, and (iii) agrees to hold the United States harmless from, and indemnify it for, any and all claims against it which result from such failures or inadequate operation.

During implementation of Team 12’s and 16’s recommendations, Reclamation will work with the Solicitor’s Office to determine if there are any legal or statutory authority issues which need to be resolved before these requirements can be effectuated.

- D. **Construction Management Requirements.** The CCT must agree on the construction management requirements for the work to be undertaken and document this agreement in writing. Such requirements shall address how quality assurance and quality control work will be performed and who will be responsible for it.
- E. **Reclamation Review and Oversight Requirements.** The CCT must agree in writing on the level of engineering review and construction management oversight which Reclamation will perform, and document this agreement in writing. Such requirements shall address the required intervals throughout the design, specifications, and construction process at which engineering reviews shall be performed; the extent of each review; and the Reclamation office which will perform each review.