

Work Plan for the Upper Rio Grande Basin Water Operations Review

**Contract # DACA47-97-D-0009
Delivery Order #3**

**Prepared for:
U.S. Army Corps of Engineers
Albuquerque District
4101 Jefferson Plaza NE
CESPA-OD-W
Albuquerque, NM 87109-3435**

**Prepared by:
Science Applications International Corporation
2109 Air Park Road SE
Albuquerque, NM 87106**

REVISION SUMMARY

Draft Work Plan	6/1/98
Draft Work Plan	10/22/99
Work Plan	1/11/00
Final Work Plan	1/26/00
Corrections	3/1/00

TABLE OF CONTENTS

Section	Page
1.0 INTRODUCTION-----	1
1.1 PROJECT BACKGROUND-----	1
1.2 PURPOSE AND NEED FOR REVIEW OF WATER OPERATIONS -----	2
1.3 PURPOSE OF WORK PLAN-----	3
1.4 ORGANIZATION OF THIS WORK PLAN-----	3
2.0 PROJECT MANAGEMENT SYSTEMS-----	5
2.1 MANAGEMENT APPROACH-----	5
2.2 PLANNING -----	5
2.3 ORGANIZATION AND STAFFING -----	5
2.4 PERFORMANCE TRACKING AND REPORTING-----	5
3.0 ORGANIZATION AND RESPONSIBILITIES -----	7
3.1 WATER OPERATIONS REVIEW EIS ORGANIZATION-----	7
Figure 3-1. Review and Water Operations EIS Organization -----	7
4.0 WORK BREAKDOWN STRUCTURE AND MASTER SCHEDULE -----	8
4.1 WORK BREAKDOWN STRUCTURE (WBS)-----	8
4.2 MASTER SCHEDULE-----	8
5.0 TASK DESCRIPTIONS-----	10
WBS Element 1.0 Internal Scoping-----	10
WBS Element 2.0 Executive Committee -----	11
WBS Element 3.0 Steering Committee -----	12
WBS Element 4.0 Public Involvement -----	13
WBS Element 5.0 NOI and Formal Public Scoping-----	13
WBS Element 6.0 ID NEPA Team and Technical Team Development-----	14

WBS Element 7.0 Develop Alternatives -----	18
WBS Element 8.0 Implementation of Coordination and Consultation Protocol -----	19
WBS Element 9.0 Finalize Integrated Plan of Study -----	20
WBS Element 10.0 Data Assessment and Collection -----	20
WBS Element 11.0 Impact Assessment -----	22
WBS Element 12.0 Select Preferred Alternative-----	23
WBS Element 13.0 Write Draft EIS -----	23
WBS Element 14.0 Public Review of DEIS and Documentation -----	24
WBS Element 15.0 Final EIS -----	24
WBS Element 16.0 Record of Decision by Each Joint Lead Agency-----	25
WBS Element 17.0 Prepare Action Plan -----	25

Figures	Page
3-1 Water Operations Review EIS Organization.....	7
4-1 Overview of Master Schedule	9

Tables	Page
Table 5-1. Preliminary List of Organizations and Type of Consultation That May Be Required for the Review and Water Operations EIS.....	17
Table 5-2. Example of Potential Data Sources for the Review and Water Operations EIS.....	21

Appendices

- A Environmental Laws and Regulations
- B Master Schedule

ACRONYMS AND ABBREVIATIONS

BOR	Bureau of Reclamation
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
COE	U.S. Army Corps of Engineers
Corps	U.S. Army Corps of Engineers
DEIS	Draft Environmental Impact Statement
EIS	Environmental Impact Statement
ESA	Endangered Species Act
FEIS	Final Environmental Impact Statement
FR	Federal Register
FTE	Full Time Equivalent
ID	Interdisciplinary
JLA	Joint Lead Agencies
MOA	Memorandum of Agreement
NEPA	National Environmental Policy Act
NMISC	New Mexico Interstate Stream Commission
NOI	Notice of Intent
PIP	Public Involvement Plan
QAP	Quality Assurance Plan
Reclamation	Bureau of Reclamation
Review	Upper Rio Grande Basin Water Operations Review
ROD	Record of Decision
SHPO	State Historic Preservation Office
URGWOM	Upper Rio Grande Water Operations Model
U.S.C.	United States Code
WBS	Work Breakdown Structure

1.0 INTRODUCTION

1.1 PROJECT BACKGROUND

The Upper Rio Grande Basin Water Operations Review (Review) and Environmental Impact Statement (EIS) will be a comprehensive system-wide review of the water operations activities that are conducted under the existing authorities of the Joint Lead Agencies (JLA), the U.S. Army Corps of Engineers (COE), the Bureau of Reclamation (BOR), and the New Mexico Interstate Stream Commission (NMISC), in the Rio Grande basin above Fort Quitman, Texas. These operations consist primarily of the storage and release of water at reservoirs. To ensure compliance with the National Environmental Policy Act (NEPA), Council on Environmental Quality (CEQ) regulations (Title 40, Code of Federal Regulations [CFR], Parts 1500–1508) implementing NEPA, the COE NEPA regulations (33 CFR Part 230), BOR NEPA regulations (45 FR 47944 [7/17/80] as amended by 48 FR 17151 [4/21/83]), Department of Interior Manual 516 DM 1-7, and other applicable federal and state environmental legislation (see **Appendix A**), the JLA will prepare a programmatic Water Operations EIS that documents the Review process and informs the public about the resource conditions and effects of any proposed actions on the environment. This project is referred to as the Review and Water Operations EIS, collectively referred to as the project.

The Review will be the basis of, and integral to, the Water Operations EIS. The Water Operations EIS will be prepared by the parties in accordance with NEPA and will present alternatives for the exercise of discretionary authority of BOR, COE, and NMISC with respect to water operations at federally operated facilities in the upper Rio Grande Basin (Upper Rio Grande Basin Water Operations) and evaluate the environmental, economic, and social effects of these alternatives. The parties acknowledge and agree that collective federal discretionary actions taken with respect to Upper Rio Grande Basin Water Operations constitute a major federal action significantly affecting the quality of the human environment. BOR, COE, and NMISC are joint lead agencies in complying with analysis, documentation, and disclosure requirements of the NEPA process.

The project will consider the means available to exercise existing water operations authorities of BOR, COE, and NMISC with respect to Upper Rio Grande Water Operations to (1) meet agricultural, domestic, municipal, industrial, and environmental water needs, including water needs for the conservation of endangered and threatened species as required by law, consistent with the allocation of supplies and priority of water rights under state law; (2) meet downstream water delivery requirements mandated by the Rio Grande Compact and international treaty; (3) provide flood protection and sediment control; (4) assure safe dam operations; (5) support compliance with local, state, federal, and tribal water quality regulations; (6) increase system efficiency; and (7) support compliance of BOR and COE with NEPA for Upper Rio Grande Basin Water Operations and activities and support compliance of all signatories with the Endangered Species Act (ESA).

BOR and COE operate reservoir and water conveyance facilities under a number of different authorities, contracts, and policies. NMISC is authorized to protect, conserve, and develop the waters of the state and monitors operations at reservoirs and water conveyance facilities for these purposes and to assure compliance with the Rio Grande Compact. The Review and related Water Operations EIS will define procedures and protocols for review, coordination, consultation, and public input in

water operations decisions. The decision-making process must be flexible and efficient to allow water managers to be responsive to ever-changing conditions but must also be designed to allow public review and input.

Subject to applicable compacts and decrees, the State of New Mexico administers water rights within the state. Nothing in this Work Plan, the Review, or the Water Operations EIS shall be construed to create water rights or require the State of New Mexico to grant water rights to any entity. Further, this Work Plan shall not be construed as a *de facto* negotiation of water rights or authority to create depletions that negatively impact water users or compact deliveries. The foregoing shall not limit or otherwise affect the existing authorities of BOR, COE, and NMISC that are the subject of the Review and the Water Operations EIS.

1.2 PURPOSE AND NEED FOR REVIEW OF WATER OPERATIONS

The proposed action is the adoption of an integrated plan for water operations at existing COE and BOR facilities in the Rio Grande basin above Fort Quitman, Texas.

Need: Under various existing legal authorities, and subject to allocation of supplies and priority of water rights under state law, the COE and BOR operate dams, reservoirs, and other facilities in the upper Rio Grande basin to:

- (1) store and deliver water for agricultural, domestic, municipal, industrial, and environmental uses;
- (2) assist the Interstate Stream Commission in meeting downstream water delivery obligations mandated by the Rio Grande Compact;
- (3) provide flood protection and sediment control; and
- (4) comply with existing law, contract obligations, and international treaty.

Purpose: The Upper Rio Grande Basin Water Operations Review will be the basis of, and integral to, preparation of the Water Operations EIS. The purpose of the Review and Water Operations EIS is to:

- (1) identify flexibilities in operation of federal reservoirs and facilities in the upper Rio Grande basin that are within existing authorities of COE, BOR, and NMISC and in compliance with state and federal law;
- (2) develop a better understanding of how these facilities could be operated more efficiently and effectively as an integrated system;
- (3) formulate a plan for future water operations at these facilities that is within the existing authorities of BOR, COE, and NMISC; complies with state, federal, and other applicable laws and regulations; and assures continued safe dam operations;
- (4) improve processes for making decisions about water operations through better interagency communications and coordination and through facilitation of public review and input; and

(5) support compliance of the COE, BOR, and NMISC with applicable law and regulations, including but not limited to the National Environmental Policy Act and the Endangered Species Act.

Scope: The Review and Water Operations EIS will address water operations at the following facilities with the noted exceptions and limitations. The term “water operations,” as used in this Work Plan, shall mean and refer to physical operation of the identified facilities.

- Flood control operations at Platoro Reservoir (the Review and Water Operations EIS will include only flood control operations at Platoro that are under COE authority)
- Closed Basin Division—San Luis Valley Project
- Heron Dam and Reservoir
- Abiquiu Dam and Reservoir
- Cochiti Dam and Reservoir
- Jemez Canyon Dam and Reservoir
- Low Flow Conveyance Channel
- Flood control operations at Elephant Butte Dam and Reservoir (because of current litigation, water supply operations at Elephant Butte will not be included in the Review or the Water Operations EIS)
- Flood control operations at Caballo Dam and Reservoir (because of current litigation, water supply operations at Caballo will not be included in the Review or the Water Operations EIS)

BOR and COE operate these facilities under federal authorities, state water rights permits, and various contracts. The Review and Water Operations EIS will be limited to actions that can be implemented within the existing authorities of the signatories in compliance with applicable international, federal, state, and tribal laws, regulations, and contracts, including without limitation the Rio Grande Compact. A summary of important pertinent authorities and legal constraints is provided for reference in Appendix A.

1.3 PURPOSE OF WORK PLAN

The purpose of this Work Plan is to outline the management, organization, tasks, deliverables, milestones, and schedule for completing the Review and Water Operations EIS and supporting activities. In addition, the Work Plan identifies responsibility assignments and resource requirements for each task.

1.4 ORGANIZATION OF THIS WORK PLAN

This Work Plan is organized into seven sections and two appendices. After this introduction, **Section 2.0** discusses project management, **Section 3.0** describes the project organization, and **Section 4.0** describes the Work Breakdown Structure (WBS) and the simplified Master Schedule. The detailed Master Schedule is provided as **Appendix B**. **Sections 5.0** and **6.0** are reserved for the Quality Assurance Plan (QAP) and Public Involvement Plan (PPP), respectively. **Section 7.0**, Task

Descriptions, specifies the activities to be conducted under each WBS element, the schedule for completion of each WBS element, resource requirements (in terms of personnel), and organizational responsibilities.

2.0 PROJECT MANAGEMENT SYSTEMS

2.1 MANAGEMENT APPROACH

The management approach for the project is designed to be a team approach among the JLA. This approach includes early identification of individuals in the agencies to participate on several of the EIS committees.

The management approach to the project is based on the central elements of planning, organization and staffing, and performance tracking and reporting. The goal of the management approach is to minimize cost and schedule risk in completing the Review and preparing the EIS. An essential key to the management of this task is a core interdisciplinary team responsible for the majority of the work and led by a JLA Management Team with a thorough understanding of EISs and project management. The Review and Water Operations EIS shall require the integration of key participants (i.e., COE, BOR, NMISC, and contractors). The task process requires a team approach for all participants in meeting the common goal of a timely Final Environmental Impact Statement (FEIS) and Record of Decision (ROD).

2.2 PLANNING

The WBS identifies 16 elements to prepare the EIS. This WBS is the basis for the preparation of the Master Project Schedule (which is discussed in **Section 4.0**). This schedule presents the work planning for the task and identifies associated deliverables and performance dates. Cost estimates can be prepared on the basis of the WBS and schedule to enable tracking and reporting of cost and schedule performance. Overall, the planning process will be documented thoroughly in this Work Plan that will be revised under WBS element 1.0 (see **Section 7.0**). This Work Plan will serve as the task baseline for cost, schedule, and technical performance.

2.3 ORGANIZATION AND STAFFING

The project organization is described in **Section 3.0** of this Work Plan. The organization shall have a Management Team that shall be assigned to the project as their primary work assignment. Staff resources shall be provided on an as-needed basis to maximize technical performance while minimizing labor costs. Management and Technical Teams shall be available to meet all requirements within schedule parameters. In addition, a Steering Committee will ensure that external stakeholder involvement is integrated throughout the preparation of the EIS.

2.4 PERFORMANCE TRACKING AND REPORTING

The project management system shall include a formal change control process. This change control process shall provide, if necessary, for the orderly approval or rejection of revisions to the task baseline. In order to manage change and maintain the integrity of the technical and cost/schedule, baselines shall be used as a basis to identify:

- Changes to the scope, budget, or schedule in the Work Plan
- Changes or transfers of funds between the Joint Lead Agencies to support contractor budgets

All proposed project baseline changes will be approved by the JLA prior to the implementation of the change.

EIS Managers shall measure the project technical, cost, and schedule performance through a Bimonthly Management Reporting system. Technical progress will be monitored through a quality assurance process of technical reviews for all project deliverables overseen by the manager. Cost and schedule performance will be monitored throughout the project.

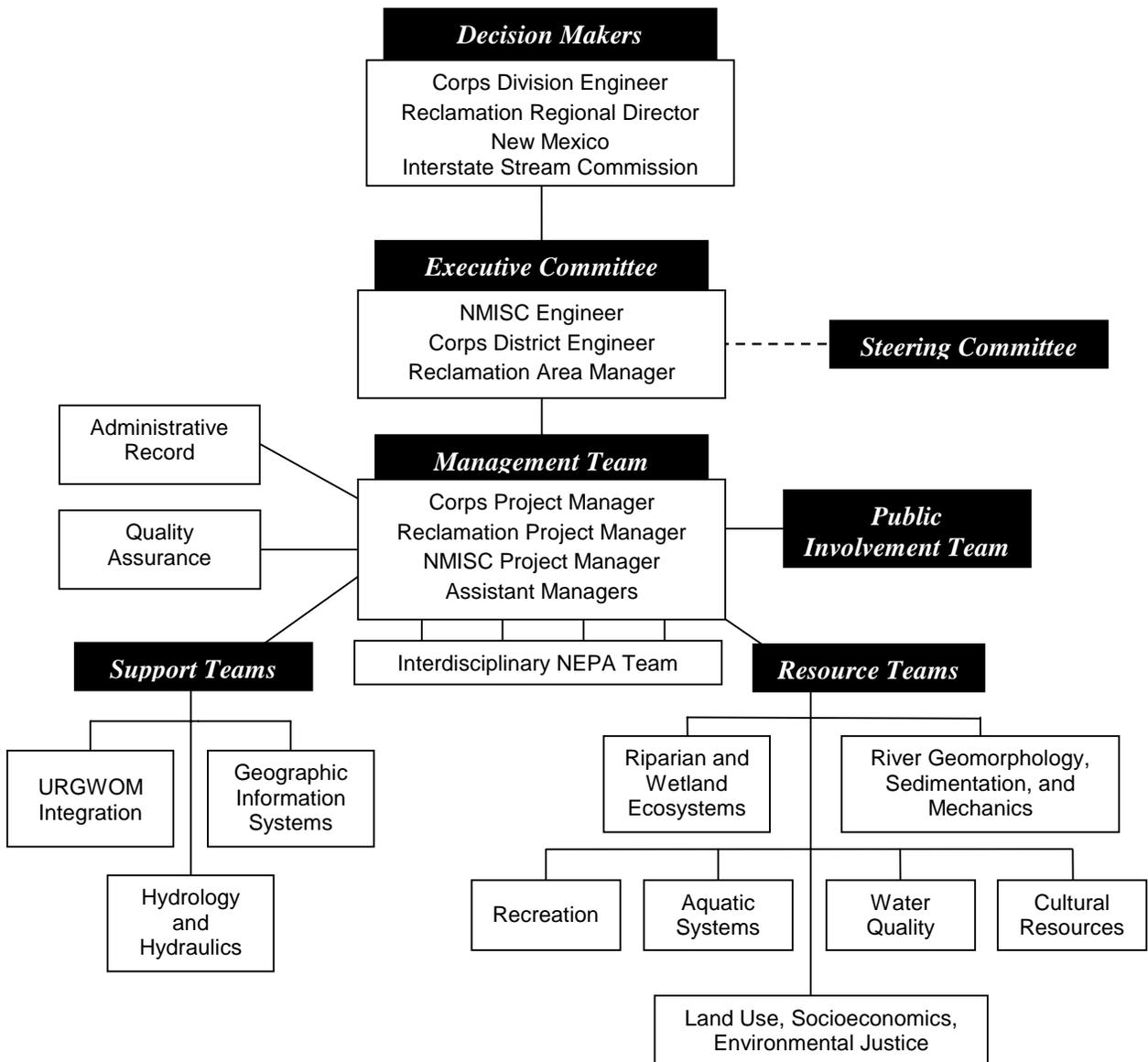
A Bimonthly Management Report will be generated every other month during the project. The Bimonthly Management Report will provide comprehensive technical, cost, schedule, progress assessment, and corrective action sections. These sections shall document project progress, trends, potential favorable or unfavorable conditions, and the effect of management corrective actions. These reports shall also contain cost and schedule status and variances and other related data for measuring the performance of the project against the technical and schedule baselines (established from the WBS and Master Schedule). Managers shall review the information used to prepare the Bimonthly Management Reports every other month. Review of the schedule, milestone, and budget status on a frequent basis will allow the managers to identify negative trends, understand the cause of the trends and then implement actions, identify schedule and milestone issues, and take immediate corrective actions to ensure that the project remains on track.

3.0 ORGANIZATION AND RESPONSIBILITIES

3.1 WATER OPERATIONS REVIEW EIS ORGANIZATION

The organization for the preparation of the Review and Water Operations EIS will include multiple agencies and stakeholders. The organizational structure is shown schematically in **Figure 3-1**. In accordance with NEPA regulations, an interdisciplinary team will be organized to conduct required technical work and prepare the EIS. Support to the JLA will be provided by other agencies and stakeholders through participation on a Steering Committee, Interdisciplinary (ID) NEPA Team, and Technical Teams. The roles and responsibilities of each team are described in detail in the Memorandum of Agreement (MOA) signed by the Joint Lead Agencies.

Figure 3-1. Review and Water Operations EIS Organization



4.0 WORK BREAKDOWN STRUCTURE AND MASTER SCHEDULE

4.1 WORK BREAKDOWN STRUCTURE (WBS)

The project WBS provides a straightforward, detailed structure composed of 17 primary elements. These elements are integrated into the Master Schedule. In this way, the WBS maps required activities and charts resources necessary for successful completion of the EIS. Descriptions of the WBS activities are provided in **Section 5.0**.

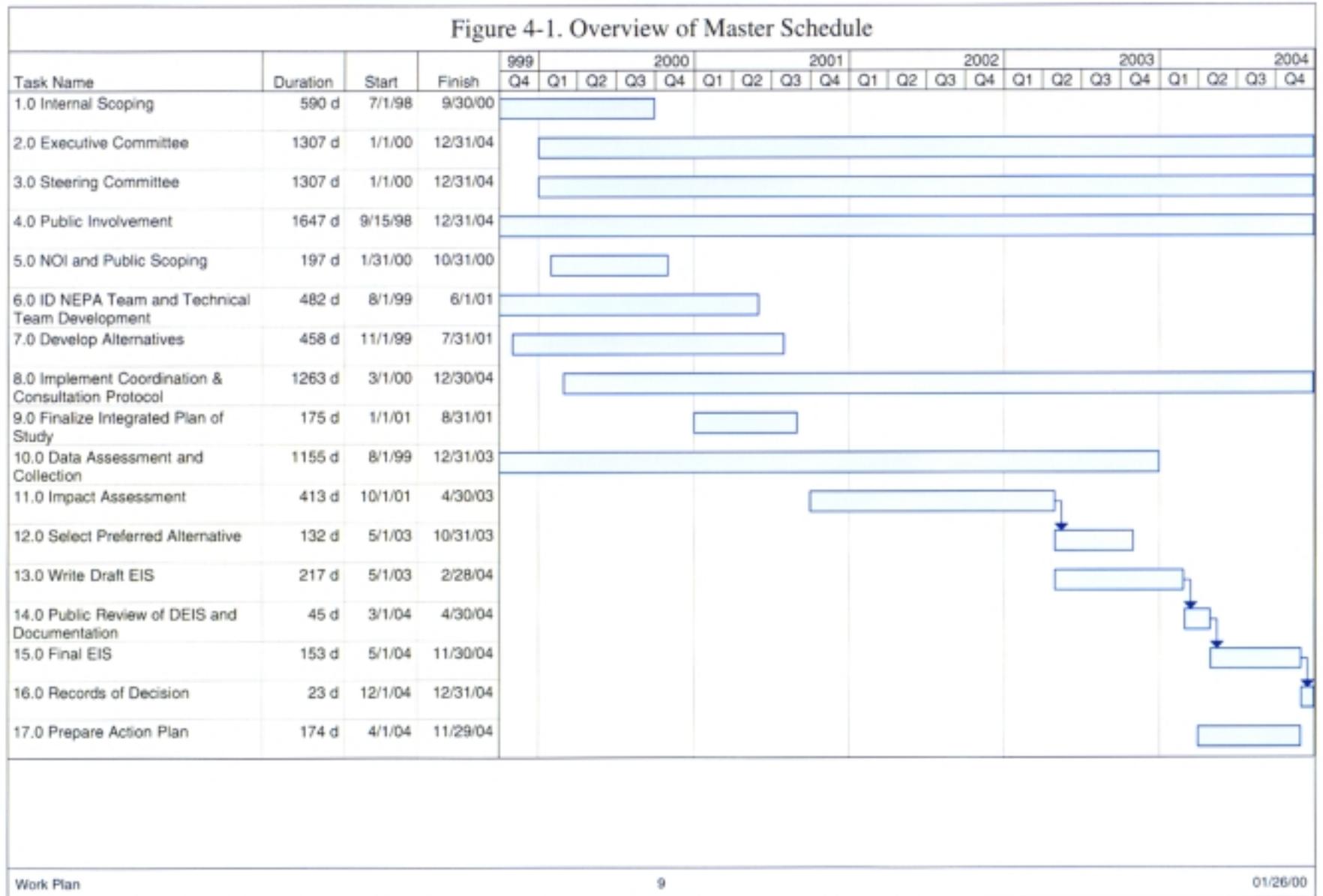
The WBS allows the Management Team to break down the first level tasks into discrete subtasks or activities that need to be accomplished. These subtasks comprise the second, third, and fourth levels of the WBS. Each WBS element (task or subtask) is a discrete measurable activity with a defined product. The WBS identifies the amount of time required for each task, allocates resources, and delineates interdependencies between tasks and subtasks. Therefore, the WBS is the framework that was used to build the Master Schedule and identify staff and other resource requirements. The WBS is the basis for communicating, documenting, and tracking tasks, roles, responsibilities, schedules, deliverables, level of effort, and cost and provides the means for the EIS team to capture costs/schedules and provide the overall integration of the project.

4.2 MASTER SCHEDULE

The Master Schedule is based on the WBS and the Water Operations Review schedule. An overview version of the Master Schedule is shown in **Figure 4-1**, while the detailed Master Schedule is provided in **Appendix B**. This Master Schedule clearly delineates activities and duration of each WBS element. This allows clear identification and tracking of schedule progress and costs. In addition, the Master Schedule integrates the major activities supporting the preparation of the EIS. This schedule integration ensures that relationships and interdependencies among activities are identified. Therefore, potential technical, cost, and schedule risks can be identified, and immediate management actions can be taken to avoid or offset the impacts.

The Master Schedule (**Appendix B**) includes the lower levels of the WBS substructure that identify essential activities, time lines, resource requirements, and interdependencies among activities. The major milestones are identified and are linked to the WBS activities. Interim milestones and deliverables are identified that will be needed to meet the major milestones and deliverables schedule.

Figure 4-1. Overview of Master Schedule



5.0 TASK DESCRIPTIONS

The following section describes the tasks that would be completed for each WBS element identified in Section 4.0 of this Work Plan. In addition, the schedule, resource requirements, and assignment of responsibilities are identified. Taken in whole, this section represents the technical approach.

WBS Element 1.0 Internal Scoping

Task Description

The purpose of internal scoping is for the JLA to clearly identify and develop the information, processes, and organization needed to successfully complete EIS scoping and to begin the EIS preparation process. A memorandum of agreement will be developed to define roles and responsibilities of the JLAs.

WBS 1.1 Conduct Internal Scoping. The information needed to be developed includes data needed to ensure NEPA compliance and data needed to clearly understand the proposed project. The two primary NEPA elements that will require careful consideration and management approval are the “purpose and need” statement and the list of the decisions that the EIS may need to support. The three project elements that need to be preliminarily developed include (1) identification of the institutional constraints, (2) identification of the discretionary operational constraints, and (3) development of the preliminary proposed action and alternatives including the no-action alternative.

Schedule

This task will be initiated on July 1, 1998, and be completed on January 31, 2000.

Resource Requirements

This activity will require approximately 0.9 Full Time Equivalent (FTE) for the duration of the task. This FTE may include the Management Team, water operations experts, NEPA specialist, and public affairs specialist.

WBS 1.2 Finalize Work Plan. The Work Plan shall be revised as needed to reflect any changes in approach or issues. The Work Plan shall identify planning, staffing, communicating, managing risk and uncertainty, and positive control. The Work Plan links milestones, deliverables, schedule, budget, personnel requirements, and management approach.

This Work Plan shall be reviewed with focus on schedule, deliverables, resource requirements, and technical approach. The Work Plan shall be managed as a controlled document and shall serve as the framework for the preparation of the EIS.

Schedule

This task will be initiated on October 1, 1999, and be completed on January 14, 2000.

Resource Requirements

This activity will require approximately 0.1 FTE for the duration of the task. It will be conducted primarily by the Management Team.

WBS 1.3 Cooperating Agency Agreements. Develop, complete, and sign agreements with cooperating agencies.

Schedule

This task will be initiated on January 1, 2000, and be completed on September 30, 2000.

Resource Requirements

This activity will require approximately 0.1 FTE for the duration of the task. The work will be conducted primarily by the Management Team.

WBS 1.4 Develop Quality Assurance Plan (QAP). Prepare a plan that outlines procedures for determining technical quality assurance of work and data, document control and tracking, and establishment and maintenance of the EIS Administrative Record, a system established to collect and handle all records used to prepare the EIS.

Schedule

This task will be initiated on January 1, 2000, and be completed on September 30, 2000.

Resource Requirements

This activity will require approximately 0.1 FTE for the duration of the task. The work will be conducted primarily by the Management Team.

WBS Element 2.0 Executive Committee

Task Description

WBS 2.1 Establish Executive Committee. This committee consists of the District Engineer, Albuquerque District, U.S. Army Corps of Engineers; the Area Manager, Albuquerque Area Office, Bureau of Reclamation; and the Interstate Stream Engineer, New Mexico Interstate Stream Commission. An initial organizational meeting of the Executive Committee will be held in February 2000. The Management Team will prepare a briefing for the Executive Committee on the organization and plan for accomplishing the project.

Schedule

This task begins January 1, 2000, and ends February 15, 2000.

Resource Requirements

This task will require approximately 3 days of effort by the Management Team and 1.5 days of effort by Executive Committee members, or 0.1 FTE for the 6-week duration of the task.

WBS 2.2 Conduct Executive Committee Meetings. The Executive Committee will meet at least three times a year for the duration of the project. The Management Team will plan each meeting and prepare status and progress reports for the executive committee.

Schedule

This task begins February 16, 2000, and ends December 31, 2004.

Resource requirements

This task will require approximately 0.1 FTE for the duration of the project. This FTE will include effort by the Management Team for planning, preparation, and meeting attendance, and by the Executive Committee members for meeting attendance.

WBS Element 3.0 Steering Committee

Task Descriptions

Under this activity, the Steering Committee will be involved in providing input to the EIS preparation and public participation processes and review draft documents and materials. The Steering Committee will interact primarily with JLA management, the Management Team.

WBS 3.1 Establish and Organize Steering Committee. This activity will include selecting potential members for the Steering Committee, requesting their participation, and holding an initial steering committee meeting.

Schedule

This task will be initiated on January 1, 2000, and be completed by June 30, 2000.

Resource Requirements

This activity will require approximately 0.1 FTE for the duration of the task. This FTE will include the Executive Committee, Management Team, and a facilitator.

WBS 3.2 Conduct Steering Committee Meetings. Steering Committee meetings will be held twice a year. The Executive Committee will conduct the Steering Committee meetings. The Management Team will prepare presentations on project status and progress for the Steering Committee.

Schedule

This task will be initiated on June 1, 2000, and be completed when the project is completed. The initial steering committee meeting will be held in June 2000.

Resource Requirements

This activity will require less than 0.1 FTE for the duration of the task. This FTE will include the Executive Committee, Management Team, and a facilitator.

WBS Element 4.0 Public Involvement

Task Descriptions

The objectives of public involvement are (1) to disseminate information about the proposal to interested personnel and people who may be affected by it, (2) to provide opportunities for interested and affected members of the public to have input in the analyses and decision-making process, (3) to ensure that public input is effectively conveyed to the members of the project team, (4) to foster common public understanding of how the river/reservoir system operates, and (5) to foster public acceptance of the proposal.

WBS 4.1 Complete Public Involvement and Implementation Plans. A Public Involvement Plan has been prepared and a Public Involvement Implementation Plan will be completed that will work out the specific details of the Public Involvement Program.

Schedule

The Public Involvement Plan (PIP) and Public Implementation Plan will be initiated September 15, 1998, and be completed by April 30, 2000.

Resource Requirements

This activity will require approximately 0.2 FTE for the duration of the task. This FTE will include public affairs specialists and the Management Team.

WBS 4.2 Implementation of Public Involvement Plan. Public involvement activities will be conducted throughout the project, as outlined in the MOA and the PIP. This includes such activities as a market survey; preparation and use of media kits, fact sheets, press releases, and newsletters; development and use of a web page; production of a video; and attendance at meetings of interested organizations to discuss the project.

Schedule

Public involvement activities will begin on January 1, 2000, and continue to the end of the project, December 31, 2004.

Resource Requirements

This activity will require approximately 0.4 FTE for the duration of the project, in addition to approximately \$150,000 for contractors.

WBS Element 5.0 NOI and Formal Public Scoping

Task Descriptions

WBS 5.1 Publish Notice of Intent (NOI). The NOI will be prepared, reviewed, revised, and approved under this activity. Once approved by the JLA, the NOI will be published in the *Federal Register* following publication guidelines. A news release will accompany the publication of the NOI.

Schedule

The NOI will be published January 31, 2000.

Resource Requirements

Preparation and publication of the NOI will require one day of effort by a member of the Management Team.

WBS 5.2 Plan and Conduct Scoping Meetings. As detailed in the Public Implementation Plan, eight scoping meetings will be conducted in the basin to determine the issues that are of concern to the public and to obtain input on potential alternatives to study in the EIS. The public meetings will be held in Alamosa, Española, Taos, Santa Fe, Albuquerque, Socorro, Las Cruces, and El Paso. Scoping will be conducted by the Management Team with support from public affairs specialists, a facilitator, and a recorder.

Schedule

This task will begin on June 1, 2000, and continue through September 30, 2000.

Resource Requirements

This task will require 0.7 FTE for the duration of the task.

WBS 5.3 Prepare Scoping Summary. The Scoping Summary will be prepared once all eight meetings have been completed. The summary will include information presented at the scoping meetings and identify the issues and concerns raised by commentors. Comments will be broadly categorized to provide readers with an overview of the written and verbal comments received. The Scoping Summary will include the JLA's plans to address the categorized comments.

Schedule

This task will be initiated on October 1, 2000, and be completed on October 31, 2000.

Resource Requirements

The Management Team will prepare the scoping summary. This activity will require approximately 0.4 FTE for the duration of the task

WBS Element 6.0 ID NEPA Team and Technical Team Development

Task Descriptions

WBS 6.1 Establish the Interdisciplinary (ID) NEPA Team. The Management Team will be responsible for organizing the NEPA team and will identify the members of the core interdisciplinary team. Specific roles and responsibilities of each member of the ID NEPA team will be determined and any working procedures or agreements will be drafted, reviewed, and approved. The ID NEPA Team will be responsible for coordinating data collection, developing action alternatives, and evaluating the alternatives. The ID team will be responsible for producing the EIS in accordance with NEPA and implementing regulations. Formulation and evaluation of alternatives will be interdisciplinary and responsive to issues identified during internal and formal scoping.

Schedule

This task begins on August 1, 1999, and will be completed by July 31, 2000.

Resource Requirements

This task requires approximately 0.1 FTE for the duration of the task.

WBS 6.2 Establish the Technical Teams. The Management Team and the ID NEPA team will establish Technical Teams needed to complete data evaluation and impact analyses. These Technical Teams will be responsible for preparing plans of study, identifying and compiling data, developing analysis methods, and conducting data analyses needed to complete the project. In addition, team members will assist in preparing sections of the EIS and supporting appendices.

Schedule

This task will be initiated on August 1, 1999, and be completed on September 30, 2000.

Resource Requirements

This activity will require approximately 0.2 FTE for the duration of the task. This FTE will include the Management Team, ID NEPA Team, and Technical Team members.

WBS 6.3 Develop Technical Team Plans of Study. The Technical Teams will prepare plans of study. Plans of study will list the issues, resources, and indicators to be used to analyze different water operations alternatives. The plans of study will identify existing data and additional data needs and will describe methods that will be used to analyze and evaluate impacts of alternatives. Plans of study will include estimates of resources required to complete the analysis and to write reports and relevant sections of the EIS. Plans of study will also be used to inform new Technical Team members of the goals and methods of the Technical Team. They will also address the need for information from other Technical Teams.

The plans shall identify the following points:

- Region of Influence
- Key technical assumptions
- Attributes used to assess impacts
- Level of data analysis in terms of precision and accuracy (e.g., qualitative versus quantitative)
- Analysis methods including models and calculations to be used

Plans of Study shall identify relationships and potential interactions among resources. This identification will ensure that the data needed from one analysis is available in a form suitable for other analyses to the maximum practical extent. Development of the plans will be coordinated through the ID NEPA Team. The plans shall then be submitted to the Management Team and JLA management for review and approval.

Schedule

This task begins August 1, 1999, and will be completed by December 31, 2000.

Resource Requirements

This task requires 1.0 FTE for the task duration. FTEs required are Technical Team leaders, Technical Team members, and Management Team.

WBS 6.4 Develop Coordination and Consultation Protocol. The Project Managers will develop a process for managing coordination of project activities and analyses with other agencies and organizations (**Table 5-1**). The protocol will reflect the relationship of the Water Operations Review to the many other ongoing projects in the basin. The Management Team will also develop a plan for completing required formal interagency consultations such as Section 7 consultation with the U.S. Fish and Wildlife Service and consultations with State Historic Preservation Office (SHPO). The plan will be reviewed by the ID NEPA Team and the Steering Committee and will be submitted to the Executive Committee for final approval. During scoping meetings, stakeholders will be asked to identify projects that could be included in this coordination effort.

Schedule

This task begins on November 1, 2000, and will be completed by February 28, 2001.

Resource Requirements

This task requires 0.5 FTE for the task duration. FTEs required are the Management Team, ID NEPA Team, and Technical Team members.

Table 5-1. Preliminary List of Organizations and Type of Consultation That May Be Required for the Review and Water Operations EIS

Organization	Consultation
Tribal Governments	Government to Government Consultation; NEPA
International Boundary and Water Commission (U.S. Section)	Water Treaty Obligations, Flood Control; NEPA
Rio Grande Compact Commission	Informal; NEPA
Colorado Division of Water Resources	Informal; NEPA
New Mexico Interstate Stream Commission	Rio Grande Compact Obligations
Texas Natural Resources Conservation Commission	Informal; NEPA, Clean Water Act
U.S. Fish and Wildlife Service	Endangered Species Act; Migratory Bird Treaty Act; Bald and Golden Eagle Protection Act; Fish and Wildlife Coordination Act; Wetland Protection Executive Order
U.S. Forest Service	Informal; NEPA
Bureau of Land Management	Informal; NEPA; Wild and Scenic Rivers
Bureau of Indian Affairs	Informal; NEPA
National Park Service	Informal; NEPA
Department of the Interior	Consolidated Department of the Interior Review of EIS
U.S. Army Corps of Engineers	Clean Water Act (Wetlands Protection)
Natural Resources Conservation Service	Farmland Protection
State of New Mexico Agencies (SHPO, New Mexico Game and Fish Department, New Mexico Environment Department)	Section 106 of National Historic Preservation Act, Endangered Species Protection, Clean Water Act
State of Texas Agencies (SHPO, Texas Parks and Wildlife Department)	Section 106 of National Historic Preservation Act, Endangered Species Protection, Clean Water Act
State of Colorado Agencies (SHPO, DOW)	Section 106 of National Historic Preservation act, Endangered Species Protection, Clean Water Act
County Governments and Agencies	Water Rights; NEPA
City Governments and Agencies	NEPA, Water Rights
Private Land Owners	Water Rights; NEPA
Irrigation Districts and Acequias	Water Rights; Water Use

WBS 6.5 Develop Integrated Plan of Study. The Technical Teams’ plans of study will be submitted to the Management Team for compilation and integration. Criteria for screening alternatives will be identified and described in the integrated plan of study. The Management Team will produce a draft integrated plan of study for the project. The integrated plan will resolve inconsistencies between and among the Technical Teams’ individual plans and balance resources with needs. The Management

Team's draft integrated plan of study will be reviewed by the ID NEPA team and the Executive Committee prior to release of the plan for public review and comment.

Schedule

This task begins January 1, 2001, and ends February 28, 2001.

Resource Requirements

This task requires 2.5 FTEs for the task duration. FTEs required are the Management Team, Assistant Project Manager, ID NEPA Team, and Technical Team members.

WBS 6.6 Develop Alternatives Screening Criteria. Criteria for screening alternatives to be evaluated in the EIS will be developed by the ID NEPA Team and reviewed by the Steering Committee. The screening criteria will be incorporated in the final integrated plan of study (Task 9.1). Screening criteria for the key resources will be combined to form an integrated output that can be used to rapidly compare benefits and disadvantages of alternatives to support decisions.

Schedule

This task will begin on January 1, 2001, and end on June 1, 2001.

Resource Requirements

This task requires 0.5 FTE for its duration. Personnel required are the Management Team, the ID NEPA Team and a subcommittee of this team, a facilitator, and a recorder.

WBS Element 7.0 Develop Alternatives

Task Descriptions

WBS 7.1-7.2 Characterize the Affected Environment and No-Action Alternative. The affected environment is described in Chapter 3 of the EIS. This task is to identify and describe relevant characteristics of the environment affected by water operations. Analysis of a no-action alternative is also required by NEPA. The description of the no-action alternative is contained in Chapter 2 of the EIS. This task includes writing a preliminary draft of Chapter 3 and the part of Chapter 2 that describes the no-action alternative.

Schedule

This task begins on November 1, 1999, and ends May 31, 2001. Outlines of the affected environment and no-action alternative are needed by April 30, 2000, for preparation of public involvement materials for the scoping meetings.

Resource Requirements

This task requires 0.9 FTE for the task duration. FTEs required include Technical Team leaders and Technical Team members.

WBS 7.3 Formulate Action Alternatives. Information gathered during the scoping process will be used to formulate and screen a range of action alternatives using the process and criteria described

in the integrated plan of study. A preliminary draft of Chapter 2 describing the alternatives will be written.

Schedule

This task will be initiated on October 1, 2000, and be completed by July 31, 2001.

Resource Requirements

This activity will require approximately 3.0 FTEs for the duration of the task. These FTEs will include the Management Team and the Interdisciplinary NEPA Team. In addition, support from selected Technical Team members (e.g., water operations and NEPA specialist) and the Executive Committee would be needed.

WBS Element 8.0 Implementation of Coordination and Consultation Protocol

Task Descriptions

These tasks implement the protocol developed in Task 6.4.

WBS 8.1 Coordination With Other Agencies and Organizations. Agency coordination will be initiated by the Management Team as early in the EIS process as possible to identify the relationship of the Water Operations Review to other basin projects. This includes day-to-day coordination with cooperating agencies, pueblos, tribes, and other stakeholder organizations by the Management Team, ensuring adequate communication and information exchange.

Schedule

This task will begin on March 1, 2000, and will continue throughout the project.

Resource Requirements

This activity will require approximately 0.5 FTE for the duration of the project and will be conducted by the Management Team.

WBS 8.2 Consultation to Meet Requirements of NEPA. Implementation of the consultation protocol will ensure that consultation guidelines and NEPA requirements are met. This includes government-to-government consultations among the JLA, the tribes and pueblos, the U.S. Fish and Wildlife Service, and the SHPO to meet the requirements of the Endangered Species Act, the Fish and Wildlife Coordination Act, and the National Historic Preservation Act. The consultations will be initiated once the Management Team has an adequate description of the proposed action and the range of reasonable alternatives. In many cases, the interactions shall be an extension of ongoing consultations and dialogues established from implementation of Task 8.1 and through the Steering Committee.

Schedule

This task will be initiated on March 1, 2001, and be completed by June 15, 2004.

Resource Requirements

This activity will require approximately 0.5 FTE for the duration of the task. This FTE will include the Management Team and selected technical specialists. In addition, limited participation from the Executive Committee may be needed.

WBS Element 9.0 Finalize Integrated Plan of Study

Task Description

WBS 9.1 Finalize Plan of Study. Following review and comment, a final integrated plan of study will be written. During this activity, the methods that will be used to screen and compare alternatives will be decided and agreed upon.

Schedule

This task will be initiated on March 1, 2001, and be completed on August 31, 2001.

Resource Requirements

This activity will require approximately 1.3 FTEs for the duration of the task. These FTEs will include the ID NEPA Team and Technical Teams. Support would also be provided by the Management Team. In addition, \$100,000 will be needed for contractor support to complete this task.

WBS Element 10.0 Data Assessment and Collection

Task Descriptions

WBS 10.1 Compile Existing Data. Existing data shall be collected and evaluated for adequacy and completeness. Federal, state, county, tribal, and local data sources will be contacted to acquire baseline information about the topics of the EIS. Specialists for each discipline area will assist in identifying and obtaining existing information from organizations and individuals (**Table 5-2**). The existing information will be reviewed for adequacy and completeness. EIS personnel will visit the involved sites and coordinate with federal, regional, state, and local agencies that have data applicable to the environmental analyses being performed. Adequacy and completeness of all existing data shall be measured by:

- Identifying if data are available for the entire area that may be affected by the action.
- Comparing data among the different sources to determine if data are consistent.
- Identifying if the attributes used in existing data sources are appropriate to evaluate the type, magnitude, and intensity of impacts that may result from water operations. All data (e.g., reports, telephone contacts, meetings) shall be catalogued into the Administrative Record (see **WBS Element 1.4**)

Table 5-2. Example of Potential Data Sources for the Review and Water Operations EIS

Agency/Source	Subject Area	Examples of Data Type
Tribal Governments	Water rights, land use, land use planning, archaeological, cultural, and tribal resources	Interviews and reports
Rio Grande Compact Commission	Water rights and water use	Interviews and reports
Colorado Division of Water Resources	Water rights and water use	Interviews and reports
New Mexico Interstate Water Commission	Water rights and water use	Interviews and reports
Texas Natural Resources Conservation Commission	Water rights and water use	Interviews and reports
New Mexico-Texas Water Commission	Water rights and water use	Interviews and reports
New Mexico Water Resources Research Institute	Water resources	Interviews and reports
International Boundary and Water Commission (U.S. Section)	Water rights, water use, treaty obligations, flood control	Interviews and reports
Local Governments and Agencies	Land use planning, land use, utilities, and socioeconomics	Reports, telephone contacts
U.S. Census Bureau	Socioeconomics	Reports, Tiger Files, telephone contacts
Public Utilities	Electric and water	Reports, forecasts, telephone contacts
New Mexico Environment Department	Water resources	Reports, telephone contacts
New Mexico SHPO	Cultural, archaeological, and historic resources	Reports, telephone contacts, letters
New Mexico Game and Fish Department	Biological resources and recreation	Reports, telephone contacts, Web site
New Mexico Forestry	Biological and mineral resources	Reports, telephone contacts, letters
U.S. Fish and Wildlife Service	Biological and water resources	Reports, telephone contacts, letters
U.S. Forest Service	Natural, cultural, visual, mineral resources and land use, socioeconomics	Reports, telephone contacts, letters
Bureau of Land Management	Natural, cultural, visual, mineral resources and land use, socioeconomics	Reports, telephone contacts, letters
Bureau of Indian Affairs	Land use, socioeconomics, and water, cultural, and natural resources	Reports, telephone contacts, letters
Natural Resources Conservation Service	Soil, biological resources	Reports, telephone contacts, letters
U.S. Army Corps of Engineers	Water operations, flood control, biological resources	Reports, telephone contacts, letters
U.S. Geological Survey	Water resources	Reports, telephone contacts, letters
Bureau of Reclamation	Water resource management	Reports, telephone contacts, letters
Universities	Land use, socioeconomics, natural resources	Reports, telephone contacts
Natural Heritage Program	Biological resources	Reports, telephone contacts, letters
Irrigation Districts and Acequias	Water resources, water rights, land use	Reports, telephone contacts, letters

The findings from the data adequacy assessment will be reviewed by the Interdisciplinary NEPA Team, Management Team, and Steering Committee to ensure that the reviews are adequate to meet technical and CEQ requirements. The results shall be included in the draft Technical Team plans of study (see **WBS Element 6.3**).

Schedule

This task will be initiated on August 1, 1999, and completed on December 31, 2000.

Resource Requirements

This activity will require approximately 0.4 FTE for the duration of the task. This FTE will primarily include the Interdisciplinary NEPA Team and Technical Team members. In addition, there will be approximately \$150,000 in contract costs for completing this task.

WBS 10.2 Collect New Data. A limited amount of new data will be collected and compiled. New data needs will be described in the integrated plan of study (see **WBS Element 6.5**).

Schedule

This task begins on August 1, 1999, and continues through December 31, 2003.

Resource Requirements

This task will require approximately 0.4 FTE for the duration of the task plus approximately \$750,000 in contract costs. FTEs required will be primarily Technical Team members.

WBS Element 11.0 Impact Assessment

Task Description

The Technical Teams shall implement the approved plans of study and evaluate the impacts of the proposed action and alternatives including the no-action alternative. The analysis will be led by senior experts in each specific discipline area.

The analyses shall implement the final integrated plans of study developed under **WBS Element 6.5** and rely on data compiled and collected under **WBS Element 10.0**. As the analyses are conducted, additional issues may arise or approaches may not be as successful as estimated during development of the plans of study, which would require an iterative process through the ID NEPA Team to finalize. The output of the impact analyses will include tables, figures, text summaries, model printouts, and calculations to provide supporting information for a draft Chapter 4 of the EIS. These outputs will be shared among the analysis specialists to ensure that resource and issue areas can accurately and consistently estimate impacts on an interdisciplinary basis.

Schedule

This task will be initiated on October 1, 2001, and be completed on April 30, 2003.

Resource Requirements

This activity will require approximately 1 FTE for the duration of the task. This FTE will primarily include the Interdisciplinary NEPA Team and Technical Team members. The Management Team will be heavily committed to this task in a management and overall project integration capacity.

WBS Element 12.0 Select Preferred Alternative

Task Description

A comparative impact evaluation of the alternatives will be conducted. The ID NEPA Team would recommend a preferred alternative to the Executive Committee, which may make a recommendation to the decision makers. Final selection of the preferred alternative shall be made by the decision makers. If consensus cannot be reached by the ID NEPA Team by June 1, 2003, the decision makers will select the preferred alternative based on the completed internal draft EIS.

Schedule

This task will be initiated on May 1, 2003, and completed by October 31, 2003.

Resource Requirements

This activity will require approximately 0.8 FTE for the duration of the task. This FTE will primarily include the Interdisciplinary NEPA Team and the Management Team. Technical team members will also provide specific subtask support. The Executive Committee will also provide limited overview and Steering Committee input.

WBS Element 13.0 Write Draft EIS

Task Descriptions

WBS 13.1 Prepare Internal Review Draft EIS. The Internal Review Draft EIS (DEIS) will be written by the ID NEPA Team and the Management Team and reviewed by the JLA and cooperating agencies. Comments will be used to revise the document for the Public Review Draft.

Schedule

This task will begin on May 1, 2003, and be completed by August 31, 2003.

Resource Requirements

This activity will require approximately 2.1 FTEs for the duration of the task. These FTEs will primarily include the Interdisciplinary NEPA Team and the Management Team. Technical team members will also provide specific subtask support. The Executive Committee will also provide limited overview and Steering Committee input.

WBS 13.2 Prepare Public Review Draft EIS. The Interdisciplinary NEPA Team, Management Team, and a technical writer shall prepare the Public Review DEIS by integrating the previously drafted sections.

Schedule

This task will be initiated on September 1, 2003, and be completed on February 28, 2004.

Resource Requirements

This activity will require approximately 1 FTE for the duration of the task. This FTE will primarily include the Interdisciplinary NEPA Team, the Management Team, and a technical writer. The Executive Committee will provide limited overview and Steering Committee input.

WBS Element 14.0 Public Review of DEIS and Documentation

Task Description

A Notice of Availability will be published to inform the public of the DEIS and the schedule for public hearings. The eight public hearings, held in the same locations as the scoping meetings, shall be held to solicit written and oral comments on the DEIS. The document distribution list shall be based on the computer database mailing list that will be updated throughout the project. The draft distribution list shall be reviewed and approved prior to distribution of the FEIS. Public comments will be recorded.

Schedule

This task will be initiated on February 28, 2004, and be completed on April 30, 2004.

Resource Requirements

This activity will require approximately 4.1 FTEs for the duration of the task. These FTEs will primarily include senior and junior public affairs specialists, the Management Team, and the ID NEPA Team. Specific Technical Team members will also provide support. The Executive Committee will also provide input generated through discussions with the Steering Committee.

WBS Element 15.0 Final EIS

Task Description

Following the public comment period, the comments received will be addressed and the EIS will be finalized.

Schedule

This task will be initiated on May 1, 2004, and be completed on November 30, 2004.

Resource Requirements

This activity will require approximately 5.2 FTEs for the duration of the task. These FTEs will primarily include the Management Team, public affairs specialists, the ID NEPA Team, and the Technical Teams.

WBS Element 16.0 Record of Decision by Each Joint Lead Agency

Task Description

The JLA shall each prepare separate RODs. The RODs shall clearly identify the decision(s) of the respective agencies. The RODs shall identify the purpose and need for the agency action, the alternatives evaluated, the preferred alternative, and the environmentally preferred alternative. The ROD shall discuss the issues considered, potentially significant impacts, and environmental commitments. In addition, the RODs shall identify other sources of information used by the decision makers to prepare the RODs.

Schedule

This task will be initiated on December 1, 2004, and be completed on December 31, 2004.

Resource Requirements

This activity will require approximately 0.5 FTE for the duration of the task. This FTE will primarily include the Management Team, and the Interdisciplinary NEPA Team. Senior JLA managers will be involved in the review and approval process.

WBS Element 17.0 Prepare Action Plan

Task Description

During the completion of impact analyses and preparation of the EIS, environmental commitments may be identified or recommended for consideration by the technical specialists. In addition, other commitments may be identified during agency consultations, public involvement activities, and during Technical Team, ID NEPA Team, and Steering Committee meetings. These potential commitments will be compiled for Executive Committee consideration to be included in the EIS and/or as part of the Action Plan. If the Executive Committee determines that an Action Plan is needed, then a draft Action Plan will be prepared. The draft Action Plan will include a description of the commitments, anticipated benefit or outcome of each commitment, responsible organization, funding, and schedule for implementation and completion of the commitments. Once the draft is reviewed and modified, the plan will be approved by the Executive Committee and the decision makers.

Schedule

This task will be initiated on April 1, 2004, and be completed on November 30, 2004.

Resource Requirements

This activity will require approximately 0.2 FTE for the duration of the task. This FTE will primarily include the Management Team and the river/reservoir operations specialists with approval by the Executive Committee.

Appendix A

Environmental Laws and Regulations

National Environmental Policy Act (NEPA).

Council on Environmental Quality (CEQ) regulations (Title 40, Code of Federal Regulations [CFR], Parts 1500B1508) implementing NEPA.

U.S. Army Corps of Engineers NEPA regulations (33 CFR Part 230).

Bureau of Reclamation NEPA regulations (45 FR 47944 [7/17/80] as amended by 48 FR 17151 [4/21/83]).

Bureau of Reclamation NEPA Handbook.

Department of Interior Manual 516 DM 1B7.

Flood Control Acts.

Rivers and Harbors Act of 1899 (United States Code [U.S.C.] 401 et seq.).

Clean Water Act of 1972 (33 U.S.C. 1251 et seq.).

Clean Air Act (42 U.S.C. 7401 et seq.).

Fish and Wildlife Coordination Act of 1958 (16 U.S.C. 661 et seq.).

Endangered Species Act of 1973 (16 U.S.C. 1532 et seq.).

Historic Sites, Buildings, and Antiquities Act (16 U.S.C. 461 et seq.).

Archaeological and Historic Preservation Act (16 U.S.C. 469 et seq.).

Executive Order 11593, Protection and Enhancement of the Cultural Environment, 1971.

Archaeological Resources Protection Act of 1979 (16 U.S.C. 470 et seq.).

American Indian Religious Freedom Act of 1978 (42 U.S.C. 1996).

Native American Graves and Protection and Repatriation Act of 1990 (25 U.S.C. 3001 et seq.).

Religious Freedom Restoration Act of 1993 (P.L. 13-141).

Antiquities Act of 1906.

Executive Order 11991, Protection and Enhancement of Environmental Quality, 1977.

Executive Order 11988, Floodplain Management, 1977.

Executive Order 11990, Protection of Wetlands, 1977.

Executive Order 12114, Environmental Effects Abroad of Major Federal Actions, 1979.

Executive Order 12088, Federal Compliance with Pollution Control Standards, 1978.

Executive Order 12898, Federal Actions to Address Environmental Justice in Minority and Low-Income Populations, 1994.

CEQ—Incorporating Biodiversity Considerations into Environmental Impact Analysis Under NEPA, 1993.

CEQ—Considering Cumulative Effects Under the NEPA, 1997.

EPA guidance—Habitat Evaluation: Guidance for the Review of Environmental Impact Assessment Documents, 1993.

Appendix B
Master Schedule

SEE LARGE-FORMAT DETAILED MASTER SCHEDULE