

Chapter 6

Resource Management Plan

Introduction

Reclamation followed a formal planning process to complete this planning and environmental compliance document. On the basis of the issues identified, Reclamation analyzed possible management alternatives for the study area. As discussed briefly in chapter 4, Reclamation originally formulated a No Action Alternative and three action alternatives that described a change in management strategy. These alternatives were presented to the public for review and comment. After considering public comments and internal review by Reclamation, Alternative D was modified and selected as the preferred alternative. The modified Alternative D, Natural Resources Conservation/Protection with Limited Development, is the preferred alternative described in this chapter. (See **map 6.1, Final Resource Management Plan Map.**)

Plan Development

Reclamation has the primary stewardship responsibility to manage the lands under its jurisdiction in accordance with existing laws, regulations, and policies and guidelines. The goals and objectives and management actions outlined in this chapter must be met in an environmentally and economically sound manner. A primary step in the planning process was to identify goals and objectives and associated management actions needed to address identified issues and concerns that would not conflict with existing laws, regulations, and policies and guidelines. In addition, many of the goals and objectives and management actions were formulated in response to basic land management principles and concepts. Pursuant to NEPA requirements, potential effects of implementing certain combinations of management actions (i.e., “alternatives” or management plans) were analyzed; and the results disclosed. The basic challenge was to select those combinations of goals and objectives and management actions that were widely accepted by the public and agency personnel; could be implemented without serious conflicts, within the environmental resource limitations and within the planning life of the RMP; and were consistent with existing laws, regulations, and policies and guidelines.

The RMP assumes that Reclamation will follow existing and future Federal laws, regulations, and Executive orders when managing lands within the study area. **Attachment E** provides a partial list of applicable Federal laws, regulations, and Executive orders.

Management Actions to Implement the Resource Management Plan

Certain management actions were identified during the planning process that would facilitate the management of the 3,990 acres within the Coachella Canal Area study area boundary. The following information sets forth the management actions that Reclamation will implement within the 10-year planning life of this RMP. Specific management actions and the goals and objectives for each of the eight issue categories are provided in this chapter. Environmental commitments listed following this chapter also may be considered as management actions that would be accomplished when implementing the preferred alternative.

Goals and Objectives

As stated previously, Reclamation developed goals and objectives in direct response to the issues and concerns identified through the planning and NEPA compliance process. A *goal* is a general statement that describes the desired future condition that is expected to be achieved once the RMP is fully implemented. An *objective* is a brief statement that describes a broad-based strategy that can accomplish a goal.

Specific Management Actions

Each set of goals and objectives outlined in this chapter is accompanied by specific management actions that will facilitate completion of the objectives. The management actions are grouped to show their relationship to the identified issue categories and to the associated goals and objectives. In many instances, a particular management action that has been identified in one issue category cannot be implemented successfully without implementing a management action from another issue category (e.g., many of the land use management actions under the Land Use Issue Category cannot be implemented without implementing some of the management actions included in the Partnership Issue Category).

Attachment F is a summary table of the proposed elements and management actions contained in the preferred resource management plan.

Many of the actions may be specific, while other actions may be broad and intended to initiate other actions that are needed to achieve the desired future condition. Examples of other actions needed are to: (1) seek additional recreation managing partners, (2) cooperate with State, county, local entities, and other Federal entities to accomplish certain action items, (3) prepare a fire management plan, and (4) encourage existing and potential partners to provide interpretation and carrying capacity information.

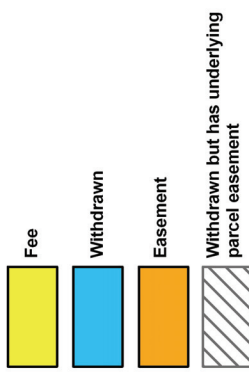
Coachella Canal Area Final Resource Management Plan Map

August 2006

LEGEND



Reclamation Land Classification



This map is for general reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable.

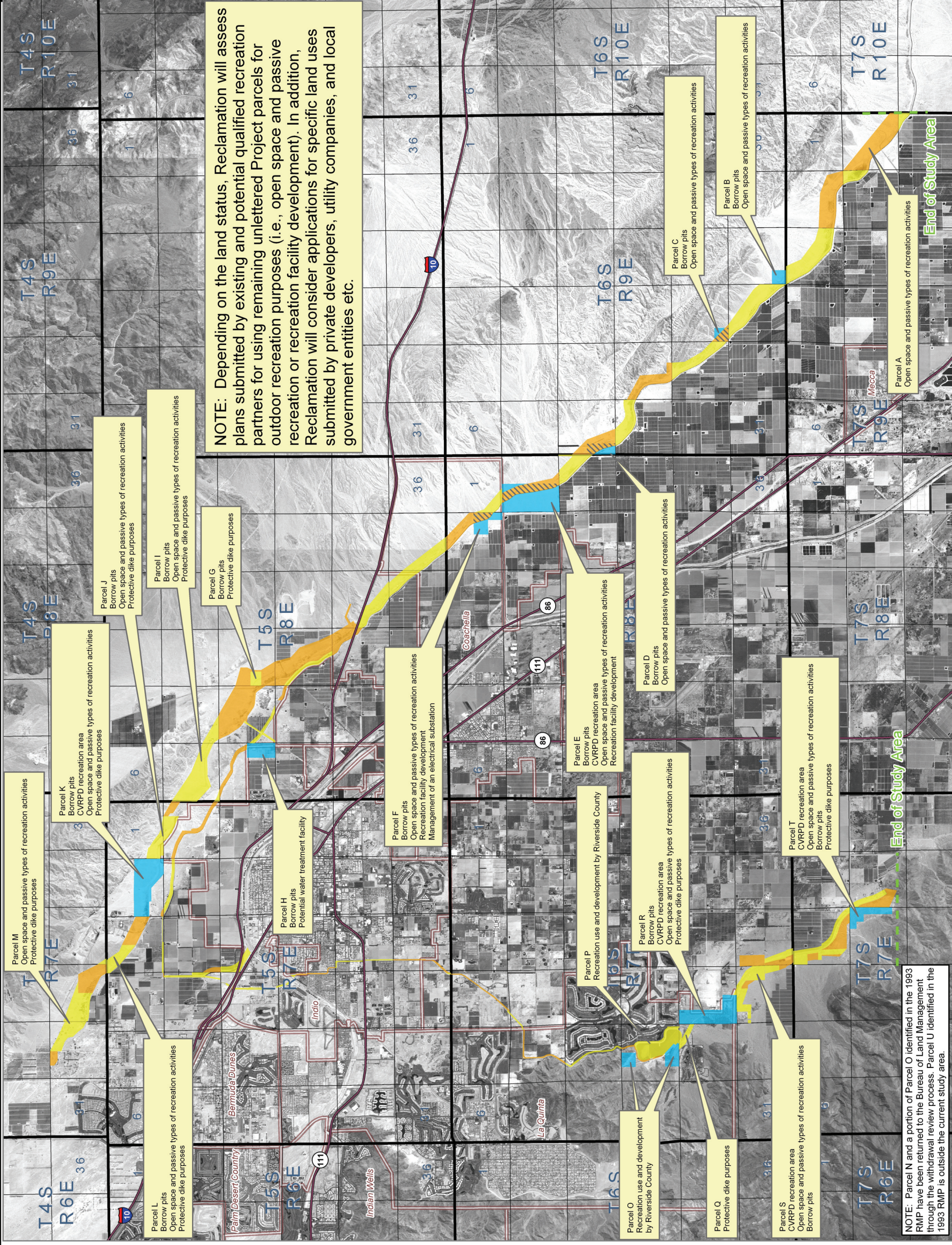
Map 6.1



0 1 2 3 Miles

RECLAMATION
Managing Water in the West

Produced by the Bureau of Reclamation
Remote Sensing and GIS Group
Denver Technical Service Center - Denver, CO



NOTE: Depending on the land status, Reclamation will assess plans submitted by existing and potential Project partners for using unlettered Project parcels for outdoor recreation purposes (i.e., open space and passive recreation or recreation facility development). In addition, Reclamation will consider applications for specific land uses submitted by private developers, utility companies, and local government entities etc.

NOTE: Parcel N and a portion of Parcel O identified in the 1993 RMP have been returned to the Bureau of Land Management through the withdrawal review process. Parcel U identified in the 1993 RMP is outside the current study area.

Implementation of the action(s) is ultimately the responsibility of Reclamation contingent upon appropriations from the Congress and other funding sources, if available. Some actions may be accomplished in cooperation with other entities or organizations.

The following section lists the goals, objectives, and management actions for each of the eight issue categories: general management, land use, partnership, Boulder Canyon Project Act, natural and cultural resources, recreation management, public information and education, and public health and safety.

General Management Issue Category

As stated previously, general management issues and concerns focused on developing a 10-year management strategy that takes into consideration mandated Federal laws, rules, regulations, and Executive orders, Reclamation’s Policies and Directives and Standards as well as State and county laws, regulations, and ordinances. Meeting the goal and objectives established for this issue category will allow Reclamation to manage the study area lands pursuant to existing authorities and Reclamation programs.

General Management

Goal	Objectives
A management strategy that adheres to all legal requirements and appropriate land use principles and procedures and meets public needs and expectations.	<ol style="list-style-type: none"> 1. Develop a management strategy that takes into consideration all legal requirements, appropriate land use principles and procedures, and meets public needs and expectations. 2. Protect the Boulder Canyon Project Act authorized purposes. 3. Establish and use appropriate guidance, procedures, and legal requirements when managing resources and programs on lands within the study area. 4. Establish a strategy to ensure the goals and objectives of the RMP are fulfilled. 5. Cooperate with appropriate government entities to assist in the management of the study area.

Specific Management Actions – General Management

- ◆ Operate lands within the study area for Boulder Canyon Project Act congressionally authorized purposes.

Specific Management Actions – General Management (continued)

- ◆ Manage study area lands using Reclamation's Policies and Directives and Standards, as well as existing and future Federal laws, regulations, and Executive orders. Reclamation manuals are discussed later in this chapter.
 - ◆ Follow existing and future State, county laws, regulations, and ordinances.
 - ◆ Consider soil conditions and other limiting factors and adjacent land use when placing future facilities on lands within the study area.
 - ◆ Ensure that public use and facility developments are consistent with the goals and objectives of the RMP and other approved planning documents.
 - ◆ Ensure that land management decisions are made for the benefit of the Project and the general public.
 - ◆ Conduct periodic land management reviews and other monitoring efforts to ensure lands are managed pursuant to existing agreements and land use authorizations.
 - ◆ Conduct site-specific NEPA compliance and obtain all environmental clearances for proposed land uses to ensure surface water and ground water quality and other natural resources are protected.
 - ◆ Monitor the variety of authorized land uses to identify user conflicts and immediately investigate corrective measures to prevent further conflicts, if necessary.
 - ◆ Cooperate with CVRPD, Riverside County, and other potential qualified partners in expanding recreation opportunities to meet anticipated public need within the study area.
 - ◆ Implement the RMP management actions within the 10-year planning period.
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Land Use Issue Category

As stated previously, land use issues and concerns focused on developing a land use strategy that would attempt to accommodate the increased demands of local communities, private developers, and the public while protecting the natural and cultural resources and the Boulder Canyon Project Act congressionally authorized Project purposes. Meeting the goals and objectives established for this issue category will allow Reclamation to meet the needs of local communities within the resource limitations and prior legal and legislative requirements while protecting the natural and cultural resources and Project purposes.

Land Use

<i>Goal</i>	<i>Objectives</i>
An established land use strategy that protects Project purposes and resources and allows for continuance of existing authorizations and limited expansion.	<ol style="list-style-type: none"> 1. Consult with appropriate entities prior to permitting land use authorizations on lands within the study area. 2. Limit the numbers and types of land use authorizations to those that are compatible with area resources and Project purposes. 3. Honor existing commitments and eliminate incompatible uses. 4. Consistently follow established policy and procedures.

Specific Management Actions – Land Use

- ◆ Continue with the current level of noxious weed control within the study area.
- ◆ Follow appropriate procedures when issuing land use authorizations on Reclamation lands where easements have been acquired from an underlying fee owner.
- ◆ Follow the updated 2001 Federal Fire Management Policy and the Secretary of the Interior’s 2001 policy letter and develop a fire management plan for all Coachella Canal Area lands.

When issuing new land use authorizations, Reclamation will:

- ◆ Follow existing right-of-use authorization application requirements and procedures when processing land use proposals and requests.
- ◆ Consider applications for specific land uses submitted by potential recreation partners, private developers, and utility companies, etc.
- ◆ Allow only those land uses that do not adversely affect Reclamation and CVWD project features or the delivery of water to the Coachella Canal water users.
- ◆ Ensure that Reclamation actions are consistent with other planning efforts in the Coachella Valley including, but not limited to, the CVMSHCP/NCCP when compatible with project purposes and as required by applicable laws and regulations.
- ◆ Prohibit private, exclusive use of Reclamation lands within the study area pursuant to Reclamation’s Policies and Directives and Standards.
- ◆ Prohibit land uses that adversely affect Indian trust assets unless proper mitigation measures are achieved and all environmental clearances have been obtained.
- ◆ Avoid Indian sacred sites and traditional cultural properties.
- ◆ Prohibit land uses that adversely affect threatened and endangered or other special status species or critical habitat unless proper mitigation measures are achieved and all environmental clearances are obtained.
- ◆ Issue land use authorizations that allow for limited developments that do not adversely affect natural and cultural resources or Project purposes.

Specific Management Actions – Land Use (continued)

- ◆ Enter into agreements with non-Federal government entities for planning, developing, and managing additional recreation facilities and opportunities.

When continuing existing land use authorizations, Reclamation will:

- ◆ Honor the terms and conditions of the agreement with CVWD for the care, operation, maintenance, and replacement of the Coachella Canal and associated Project water delivery features. Agreement is in perpetuity.
- ◆ Honor the terms and conditions of the agreement with Riverside County for recreation management of the recreation complex at Lake Cahuilla. Agreement expires in 2026.
- ◆ Honor the terms and conditions of the agreement with CVRPD for management of three separate recreation sites within the study area. Agreement expires in 2026.
- ◆ Honor the terms and conditions of existing land use authorizations addressing, among other things, bridges, access roads, crossing agreements, fences, power and transmission lines, telephone lines, and water and power pipelines. Copies of existing agreements are on file with the Yuma Area Office in Yuma, Arizona.
- ◆ Phase out land uses that are not compatible with Project purposes.

Partnership Issue Category

As stated previously, partnership issues and concerns focused on the need to create sustainable partnerships with qualified non-Federal government entities and special interest groups to assist Reclamation in the management of the study area lands. Meeting the goals and objectives established for this issue category will assist Reclamation in securing managing partners to help manage the natural and cultural resources and public use in the study area.

Partnership

<i>Goal</i>	<i>Objectives</i>
<p>Encourage and support partnerships that assist in Reclamation’s management of the study area and in fulfilling the goals and objectives of the RMP.</p>	<ol style="list-style-type: none"> 1. Pursue and support partnerships to facilitate best management of the resources and that benefit the partners and the users of the study area. 2. Pursue and support partnerships to enhance recreation services and facilities compatible with Project purposes. 3. Expand efforts to seek trail partnerships to establish trails within the study area.

Specific Management Actions – Partnership

- ◆ Cooperate with CVWD in the care, operation, and maintenance and replacement of the Coachella Canal protective works and water delivery system.
 - ◆ Cooperate with CVRPD in its efforts to fully develop and operate and maintain three recreation sites within the study area that Reclamation has leased to CVRPD.
 - ◆ Cooperate with Riverside County in its efforts to improve, operate, and maintain an existing recreation complex at Lake Cahuilla and to authorize expansion of needed facilities on Reclamation lands to meet recreation demand in the Coachella Valley.
 - ◆ Coordinate mosquito abatement activities within the study area with Coachella Valley Mosquito and Vector Control District.
 - ◆ Explore opportunities to work with qualified recreation partners to manage additional recreation activities within the study area. Refer to **figure 6.1** for a schematic showing the process that should be followed to secure a potential recreation partner in developing new recreation facilities and lands within the study area. The schematic also represents the process that should be followed in rehabilitating existing recreation facilities with existing partners.
 - ◆ Expand efforts to seek trail partnerships with local entities and local trail user interest groups to help identify alternatives and local needs and expectations in providing a limited number of non-motorized, multi-use trails within the study area.
 - ◆ Cooperate with BLM on issues of mutual concern and in identifying lands within the study area that may be returned to BLM for its management. Initiate efforts to cooperate with BLM on identifying legal access across Reclamation lands or interest in lands so that access to recreational trails and public use areas on BLM lands east of the study area are not hindered.
 - ◆ Cooperate with BLM on managing unauthorized OHV use on lands with common borders.
 - ◆ Consult with the Service pursuant to the ESA. Coordination with the Service on projects that may affect listed and sensitive species or their habitats will be initiated early in the process. Continue to work with the Service and other concerned entities on mutually agreed upon tamarisk removal and mesquite restoration projects.
 - ◆ Work with the local entities in the Coachella Valley such as the cities of Indio, La Quinta, Coachella, Thermal, and Mecca on matters of mutual concern.
 - ◆ Cooperate with the California Department of Fish and Game and the Service on special status species and habitat management within the study area. This includes coordination or the development of an inventory, monitoring, and protection plan for vegetation and wildlife habitat.
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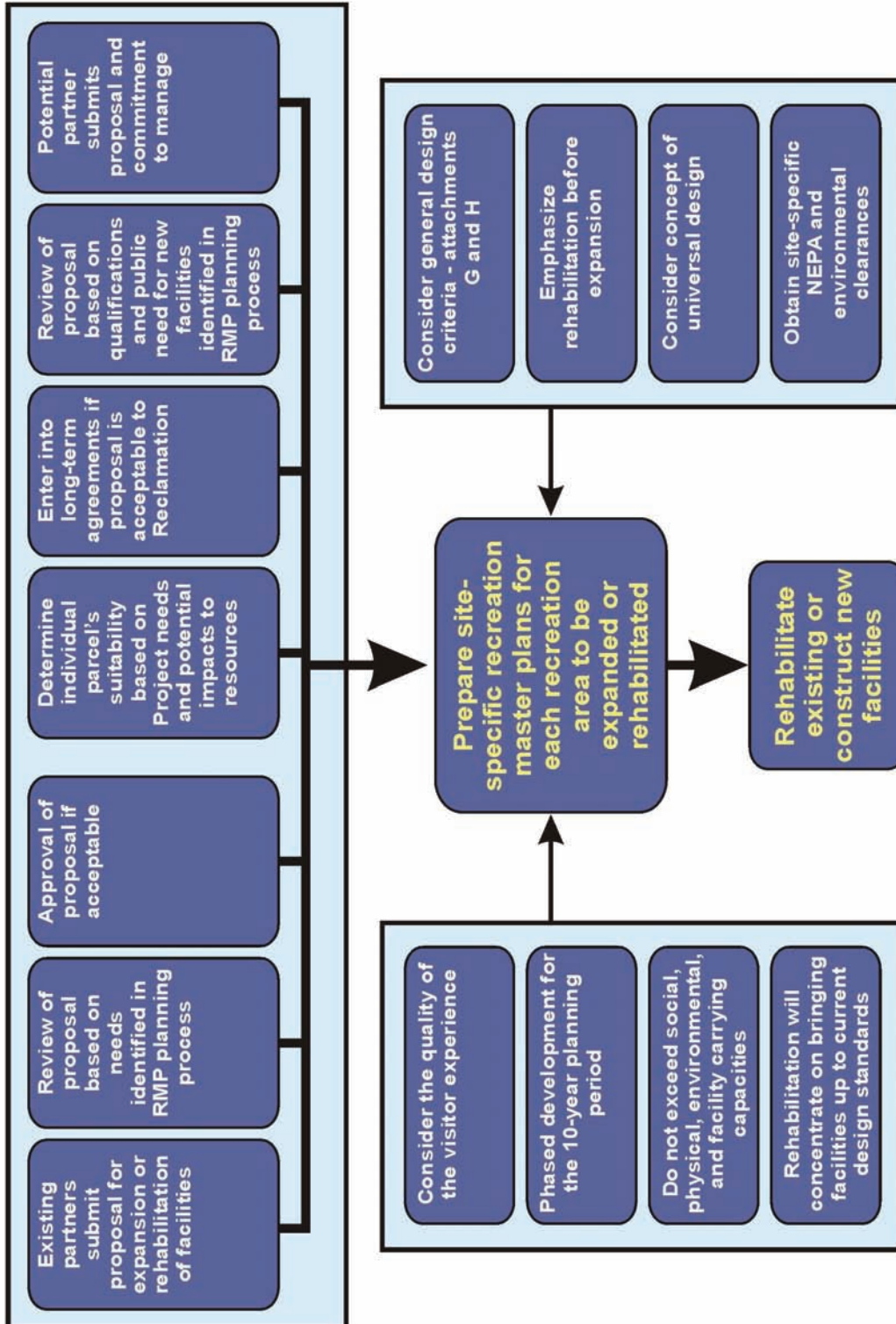


Figure 6.1 – Process to secure a potential recreation partner in developing new recreation facilities and lands within the study area and to authorize expansion or rehabilitation of existing facilities by existing partners.

Boulder Canyon Project Act Issue Category

As stated previously, Boulder Canyon Project Act issues and concerns focused on developing a land management strategy that would not interfere with CVWD’s ability to operate and maintain a Federal water project authorized by the Congress. Meeting the goal and objective established for this issue category will allow Reclamation and CVWD to cooperatively manage the study area for Project purposes and in an environmentally sound manner while at the same time accommodate the growing public and private demands being placed on Coachella Canal Area lands.

Boulder Canyon Project Act

Goal	Objective
Develop a strategy that allows for the protection of Project purposes while allowing land uses that meet public need.	1. Designate certain parcels within the study area for Project purposes as well as parcels for recreation and other purposes.

Specific Management Actions – Boulder Canyon Project Act

- ◆ CVWD will continue to operate the Coachella Canal Area for the primary purpose of delivering water for agricultural and other Project beneficiaries.
- ◆ CVWD will continue to cooperate with Reclamation in efforts to process land use requests that are compatible with, and do not adversely affect, Project purposes as well as natural and cultural resources within the study area.
- ◆ Reclamation and CVWD will retain parcels B, C, D, E, F, G, H, I, J, K, L, M, and R for potential borrow pits to be used for Project purposes.
- ◆ CVWD will use acceptable stabilization techniques for active borrow pits to ensure that offsite impacts are avoided.
- ◆ Reclamation will work with CVWD to reclaim unused or abandoned borrow pits after a reasonable period of non-use.
- ◆ Reclamation and CVWD will retain parcel H for a potential water treatment facility for the benefit of the Project and water conservation purposes.
- ◆ Reclamation and CVWD will retain parcels O and P to be used in conjunction with Lake Cahuilla (terminal reservoir for the Coachella Canal).
- ◆ CVWD will continue to use all canal access roads for the operation and maintenance of the Coachella Canal.
- ◆ CVWD will continue to use parcels G, I, J, K, L, M, Q, R, S, and T for protective dike purposes.
- ◆ Reclamation and CVWD will continue to retain parcel F for Imperial Irrigation District’s management of an electrical substation.
- ◆ Reclamation and CVWD would continue to retain a portion of parcel U for Project purposes. Refer to page 52, last bullet, for further explanation of parcel U.

Note: Refer to Recreation Issue Category Specific Actions for parcels to be used for recreation related activities.

Natural and Cultural Resources Issue Category

Natural and cultural resource management issues and concerns focused on protecting cultural resources and avoiding or mitigating cultural resource impacts and protecting and restoring high value desert vegetation and associated wildlife including habitat for special status plants and wildlife. High value habitat includes relatively undisturbed desert shrub and desert wash vegetation, aeolian sand fields, riparian cottonwood-willow oasis, and fan palm oasis. Meeting the goals and objectives established for this issue category will allow Reclamation to develop a strategy that effectively manages the natural and cultural resources within the study area.

Natural and Cultural Resources

Goal	Objectives
Protection and restoration of the unique desert habitats and associated special status species.	<ol style="list-style-type: none"> 1. Conduct site-specific NEPA and ESA compliance for all proposed land uses and developments. 2. Develop and implement management strategies to protect and restore habitats. 3. Establish buffer zones or other measures to avoid conflict with or damage to critical habits and special status species.
Goal	Objectives
Protect, avoid or mitigate the impacts to existing cultural resources.	<ol style="list-style-type: none"> 1. Conduct NEPA and other environmental compliance activities. 2. Consult with appropriate entities to ensure compliance with cultural resource laws, regulations, and Executive orders.

Specific Management Actions – Natural and Cultural Resources

To implement the goal and objectives for protecting and restoring unique desert habitats and associated special status species, **when required or when possible**, Reclamation will:

- ◆ Identify and work with Federal and non-Federal partners in developing and implementing management strategies to protect and restore habitats.
- ◆ Conduct NEPA and ESA compliance for all land use proposals which include commitments to avoid high quality habitat and mitigation of adverse affects.
- ◆ Conduct intensive inventories of habitat which includes mapping and habitat quality assessments in sand and desert shrub habitats.

Specific Management Actions – Natural and Cultural Resources (continued)

- ◆ Conduct presence/absence surveys for special status species in sand and desert shrub habitats.
- ◆ Conduct long-term monitoring of habitat conditions and special status species in sand and desert shrub habitats.
- ◆ Protect high value habitats with such measures as signs, interpretation, fencing, OHV restrictions, road closures, and enforcement of dumping.
- ◆ Develop a restoration plan which includes measures to control invasive plants, establish stands of native plants, repair OHV damage, clean up illegal dump sites, and conduct monitoring to determine restoration success.
- ◆ Implement measures to protect Peninsular bighorn sheep. Identify key habitat and disturbance buffers. Restrict all developments in key habitats and allow only passive recreation use¹ in adjacent buffer habitat. Implement seasonal closures and fencing, if necessary, and install interpretive signs. Formulate stipulations (poisonous plant restrictions) for land exchanges and recreational developments near key habitat.
- ◆ In cooperation with golf course developers and CVWD, as recommended by the Service, explore the need to install fencing to mitigate potential drownings of Peninsular bighorn sheep.
- ◆ In cooperation with the Service and other involved entities and when implementing the management actions identified in chapter 6 of the RMP/EA, different study area parcels will be evaluated for their value as corridors and linkages for sensitive species.

To implement the goal and objectives for protecting, avoiding, or mitigating cultural resource and Indian trust assets impacts, Reclamation will:

- ◆ Consult with the California State Preservation Office under section 106/110 of the National Historic Preservation Act.
- ◆ Conduct opportunistic inspections of cultural resource sites and locales as personnel and time are available.
- ◆ Complete site-specific cultural resource investigations of RMP development and restoration efforts when compatible with current Project needs and purposes.
- ◆ Provide cultural resource surveys to other entities, including CDPR, for their information and use.
- ◆ On a case-by-case basis or as required as part of a mitigation requirement, implement interpretation at sites for public interest and education.
- ◆ Consult with area Indian tribes and BIA concerning Indian trust assets, Indian sacred sites, and traditional cultural properties.

¹ Passive recreation is defined as recreational opportunities that occur in a natural setting that require minimal development or facilities. The importance of the environment or setting for the activities is greater than in developed recreation settings. Examples of passive recreation activities include walking, bicycling, horseback riding, bird watching, and photography.

Specific Management Actions – Natural and Cultural Resources (continued)

- ◆ Reclamation will coordinate with BIA and Indian tribes in future environmental compliance activities in a manner that protects Indian trust assets and avoids adverse impacts when possible. When adverse impacts cannot be avoided, Reclamation will provide appropriate mitigation or compensation
 - ◆ Reclamation will coordinate with BIA and Indian tribes in future environmental compliance activities in a manner that protects Indian trust assets and avoids adverse impacts when possible. When adverse impacts cannot be avoided, Reclamation will provide appropriate mitigation or compensation.
 - ◆ When actions would affect a Register-eligible site or when planning actions could result in significant new impacts to Coachella Canal Area lands, consult with appropriate Indian tribes to determine if they have cultural resource concerns or are aware of traditional cultural properties.
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Recreation Management Issue Category

As stated previously, recreation management issues and concerns focused on managing unauthorized OHV use; providing non-motorized, multi-use trails; providing recreation access across Reclamation lands to adjacent lands; and providing recreation facilities and opportunities to meet the growing outdoor recreation demand in the Coachella Valley. Meeting the goals and objectives established for this issue category will allow limited recreation development within the study area, eliminate unauthorized OHV use, and provide access to adjacent public lands for recreation and other beneficial uses.

Recreation Management

<i>Goal</i>	<i>Objectives</i>
<p>A limited number of quality recreation facilities and opportunities and appropriate access to adjacent public lands.</p>	<ol style="list-style-type: none"> 1. Work with existing partners and potential partners in maintaining existing facilities and expansion of new opportunities. 2. Prepare appropriate planning documents detailing level of development. 3. Establish appropriate capacity information prior to development. 4. Provide interpretive information related to the study area. 5. Designate parcels within the study area that can be used for recreational purposes.

Specific Management Actions – Recreation Management

- ◆ Reclamation’s recreation managing partners will provide appropriate information related to social, physical, environmental, or facility capacities for proposed developments.
- ◆ Existing and potential recreation partners will prepare and submit appropriate recreation planning documents to Reclamation and obtain appropriate environmental clearances prior to any facility development. Again, see **figure 6.1** for the process to follow in developing, replacing, or rehabilitating recreation facilities within the study area.
- ◆ Encourage existing and potential recreation partners to provide interpretation of the natural resources, wildlife, and Project purposes to better inform and educate the public.
- ◆ Reclamation and its partners will provide an appropriate level of interpretation as required to fulfill mitigation measures associated with Project and recreation facility development.
- ◆ As stated in the Partnership Issue Category, Reclamation will authorize expansion of recreation facilities and opportunities in cooperation with existing and qualified partners.
- ◆ When planning for recreation development, follow up-to-date design standards and criteria. **Attachment G** provides criteria for facility development.
- ◆ As stated in the Partnership Issue Category, cooperate with BLM on identifying legal public access across Reclamation lands to BLM lands east of the study area.

Reclamation and CVWD will retain and make the following parcels of land within the study area available for recreation purposes:

- ◆ Parcels E, K, R and portions of S and T will be made available to CVRPD for management of its three separate recreation areas pursuant to an existing lease agreement between Reclamation and CVRPD that expires in 2026.
- ◆ Parcels A, B, C, D, E, F, I, J, K, L, and M will continue to be made available for open space¹ and passive types of recreation activities.
- ◆ Parcels E and F may be used for recreation facility development after review of potential impacts to resources and Project purposes and subject to site-specific NEPA compliance.
- ◆ Parcels O and P will continue to be made available for recreation use and development by Riverside County pursuant to an existing lease agreement between Reclamation and Riverside County that expires 2021.
- ◆ Depending on the land status, Reclamation will assess plans submitted by existing and potential qualified recreation partners for using remaining Project lands for outdoor recreation purposes (i.e., open space and passive recreation or recreation facility development). See **figure 6.1** for the process in accessing the suitability for using lands within the study area for recreational purposes.

¹ Open space is defined as a parcel of land that has public value because the land offers important opportunities for recreation. Open space may also have value as a visual amenity to the landscape or backdrop of an outdoor natural setting.

Specific Management Actions – Recreation Management (continued)

To address unauthorized OHV use within the study area Reclamation will:

- ◆ Eliminate OHV use within the study area except for emergency situations (i.e., search and rescue and fire suppression vehicles). Reclamation lands are closed to OHV use unless officially opened through a public involvement and planning process.
- ◆ As funding becomes available, Reclamation will close and rehabilitate unauthorized OHV roads and trails as well as other degraded use areas.
- ◆ Restrict vehicle use to existing public roads.
- ◆ In cooperation with other entities, install needed fencing and barriers and proper signage to prevent future OHV use.

In developing trails on study area lands, Reclamation will:

- ◆ Cooperate with a single non-Federal government entity or multiple entities in authorizing a limited number of non-motorized trails using strict development criteria to ensure that trails and trail users do not adversely affect natural and cultural resources, wildlife, critical habitat, or CVWD project features or purposes.
 - ◆ Cooperate with the Service to ensure that trails are sited in a manner that continues to avoid and minimize effects to Peninsular bighorn sheep.
 - ◆ Design portions of trails to accommodate a variety of trail users, such a hikers, bicyclist, joggers, and equestrians.
 - ◆ Ensure trail development follows appropriate design standards, including the Americans with Disabilities Act guidelines and standards. Refer to **attachment H** for a list of possible trail development criteria that should be followed when developing trails on study area lands.
 - ◆ When recreation developments take place on Reclamation lands, Reclamation will ensure that project coordinators take into account how much water will be required to create and maintain the facility and how to account for this water.
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Public Information and Education Issue Category

As stated previously, public information and education issues and concerns focused on providing a variety of information about the study area; providing appropriate signing detailing the rules and regulations for the use of Reclamation lands; and providing a limited variety of interpretative opportunities for the recreating public. Meeting the goal and objective established for this issue category will allow Reclamation to sufficiently inform the public of the rules and regulations within the study area and inform and educate the public about the natural resources and Project features within the study area.

Public Information and Education

<i>Goal</i>	<i>Objective</i>
A sufficient level of information to enable the visiting public to have a safe and enjoyable recreational experience.	1. Work with existing and potential partners in providing environmental interpretation and education services to the public.

Specific Management Actions – Public Information and Education

- ◆ Encourage existing and future partners to use a variety of media to communicate with the public, including printed materials, maps, photographs, brochures, Web sites, and news media (e.g., television, radio, newspapers).
- ◆ Encourage partners to provide additional programs for public enjoyment (e.g., wildlife observation and interpretative programs).
- ◆ Encourage existing and qualified potential recreation partners to provide an appropriate level of interpretation services to inform and educate the public about the unique natural and cultural resources and Project features and purposes of Boulder Canyon Project Act.

Specific Management Actions – Public Information and Education (continued)

- ◆ Inventory signing needs within the study area and, as needed, post bilingual signs with rules and regulations regarding the use of Reclamation lands.
- ◆ As needed, post bilingual OHV closure signs at areas that have been closed to unauthorized OHV users.

Public Health and Safety Issue Category

As stated previously, public health and safety issues and concerns focused on providing an appropriate level of enforcement of the rules, regulations, and land restrictions and removing trash from the study area and preventing this unauthorized use in the future. Meeting the goal and objective established for this issue category will provide a safe and healthy environment for visitors within the study area.

Public Health and Safety

<i>Goal</i>	<i>Objective</i>
A safe and healthy environment for visitors.	1. Increase efforts to inform the public of rules and regulations and be proactive in efforts to protect the health and safety of the public.

Specific Management Actions – Public Health and Safety

- ◆ Increase efforts to enforce rules and regulations to discourage unauthorized use within the study area and promote proactive law enforcement activities.
 - ◆ Cooperate with Coachella Valley Mosquito and Vector Control District in its effort to reduce or eliminate conditions conducive for mosquito breeding.
 - ◆ Continue with the Crime Witness Protection Program.
 - ◆ Increase efforts to remove existing trash from the study area and increase efforts to keep Coachella Canal Area lands free of trash through signing and strict enforcement.
 - ◆ Continue to ensure that visitor health and safety is the main focus during any facility development.
 - ◆ As needed, post bilingual warning signs.
 - ◆ Install proper fencing to protect the health and safety of the public and Project features and structures.
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Plan Implementation

Implementation of the RMP is primarily the responsibility of Reclamation. Approval and acceptance of the RMP/EA by involved agencies include a commitment by Reclamation, and other entities where appropriate, to seek financial, program, and staffing resources necessary to implement the proposed management actions. Because funding is uncertain, implementation of specific actions will require close coordination between Reclamation and the many other parties (stakeholders) interested in the management and use of Coachella Canal Area lands.

Other factors that may influence the implementation of a particular action are based on whether the action: (1) is procedural or technical, such as preparing agreements or developing specific plans; (2) addresses public health and safety concerns; (3) is in compliance with existing laws and regulations; (4) is required to prevent resource damage or protect wildlife or habitats; or (5) requires large capital investments, such as trail or facility development.

Guidance and Standards

To initiate and implement Reclamation's recreation and land management programs, specific guidance or standards will be followed. The guidance and standards are in the form of Federal laws and regulations, Executive orders, CFRs, existing agreements, State and local laws and regulations, best management practices, or other directives. In many instances, the Policies and Directives and Standards will be in the *Reclamation Manual* for a specific

program. Reclamation will follow all Federal laws, regulations, and Executive orders, some of which are mentioned in chapter 1 and attachment E.

Reclamation also will follow the guidance provided in its published manuals, the most important of which are the following Policies and Directives and Standards related to:

- Pest Management/Resource Protection (Integrated Pest Management), ENV 01-01
- Underground Storage Tank Management, ENV 02-011
- Pollution Prevention - Hazardous and Solid Waste Minimization, ENV 02-041
- Management of Shooting Ranges on Reclamation Lands, ENV 02-071
- Implementation of the Cost Sharing Authorities for Recreation and Fish and Wildlife Enhancement, LND 01-011
- Cultural Resources Management, LND 02-011
- Land Withdrawals, Withdrawal Reviews, and Withdrawal Revocations, LND 03-011
- Concessions Management by Non-Federal Partners, LND 04-021
- Real Estate Appraisal, LND 05-011
- Land Acquisition, LND 06-011
- Land Use Authorizations, LND 08-011
- Land Disposal, LND 08-02
- Real Property Management Records, LND 09-10

For more detailed information, access Reclamation manuals at <http://www.usbr.gov/recman/>.

Monitoring

To track the success of implementing management actions, monitoring activities will be initiated by Reclamation or in cooperation with other entities (i.e., how to evaluate, observe, enforce, comply, or document that a management action is achieved). Monitoring will occur on a regular basis and will be conducted by qualified personnel.

Following is a partial list of possible reviews and monitoring efforts that may help Reclamation track the success of implementing certain management actions:

- Real Property Utilization Reviews
- Recreation Compliance Reviews
- Withdrawal Reviews
- Hazardous Waste Management Reviews
- Land Use Authorization Reviews
- Review of Pest Management/Resource Protection Plans
- Water Quality Monitoring
- Ground Water Level Monitoring
- Facility Condition Assessments
- Accessibility Reviews
- Review/Monitoring of Underground Storage Tanks

In addition to the above-mentioned monitoring activities, which Reclamation routinely conducts on its lands and which will help in identifying the success of implementing a particular management action, Reclamation should consider the following:

- Ensuring that the public use and facility development are consistent with the goals and objectives of an approved planning document.
- Closing areas for public safety and security purposes, as a result of monitoring efforts. However, it is Reclamation's goal to properly monitor public use of its lands to prevent such closures from happening.
- Ensuring that Project features are protected by restricting public use as a result of monitoring efforts.
- Conducting periodic land management reviews and other monitoring efforts to ensure that the lands are being managed pursuant to existing agreements and land use authorizations.
- Monitoring the variety of land uses to identify user conflicts and investigate corrective measures to prevent further conflicts from occurring.

Reclamation will use a combination of the above-mentioned monitoring efforts and considerations in cooperation with involved entities to track the success of management initiatives.

Amendments and Modifications to the RMP

Reclamation may revise or amend the RMP within the established 10-year planning period. During the implementation or monitoring phases of the RMP, Reclamation, other agencies, or the public may identify problems, deficiencies, or additional issues that should be addressed. Changes in the social, economic, physical, or environmental conditions may also necessitate changes to the RMP.

Minor changes in data or material that do not conflict with the established goals and objectives would be documented by Reclamation and would not require further public involvement and NEPA compliance. Changes that would modify one or more of the prescribed decisions and require major changes to the established goals and objectives would be documented by an amendment to the RMP and may require further public involvement and NEPA compliance. Reclamation will determine the level of public involvement and NEPA compliance.

The RMP is expected to be re-evaluated at the end of the 10-year planning period to determine whether or not the RMP should be revised. The planning and NEPA process used to complete this RMP/EA will be used to prepare an updated RMP/EA if one is needed.

Environmental Commitments

The following environmental commitments will be implemented to offset potential effects to the resources within the Coachella Canal Area that could occur when the preferred alternative management actions are implemented. The environmental commitments can also be considered as management actions that will occur over the 10-year planning life of the RMP.

Surface Water and Ground Water

Prior to implementing a proposed project, proponent will prepare and have a storm water pollution prevention plan onsite to prevent and/or minimize a spill or storm event impacting the project vicinity.

Land Use

All new land use authorizations/crossing agreements will need to comply with NEPA, Endangered Species Act (ESA), and National Historic Preservation Act of 1966, as amended, requirements.

When other entities prepare environmental documents for Coachella Canal Area lands, Reclamation will ensure that such environmental documents are reviewed by Reclamation and that they are in compliance with appropriate NEPA guidelines.

In cooperation with the Service and other involved entities and when implementing the management actions identified under the specific management actions for natural and cultural resources in chapter 6, evaluate different study area parcels for their value as corridors and linkages for sensitive species.

Special Status Species

No intensive surveys have been conducted for the special status species listed in table 5.4. However, during the reconnaissance-level inventory in April 2004, Reclamation biologists identified habitat within RMP lands that has potential to be suitable habitat for several species. The following lists general mitigation measures that will apply to projects that affect vegetation, wildlife, and special status species. In addition, management actions that protect and restore habitat are summarized.

- Prior to all proposed projects, site-specific NEPA and ESA compliance will be conducted. Should potential habitat for special status species be identified in the affected environment, surveys will be conducted to ascertain presence/absence of special status species and to determine habitat quality, and detailed protective measures will be developed and implemented. At that time, assessment of the quality and quantity of the affected vegetation and general wildlife community will be determined.
- To the extent possible, surface-disturbing projects will be located outside of high-valued/occupied habitat and occupied habitat of special status species and be timed to avoid mortality. Prior to construction, a protection plan will be developed specific to the vegetation, wildlife, and special status species within or adjacent to the project area.
- Project work areas in and near habitat for special status species will be clearly marked to avoid impacts, and a biological monitor will coordinate with construction personnel to ensure that all protective measures are implemented.
- Project proponents will develop a habitat restoration plan that includes collecting and replacing topsoil; preparing seedbeds, seeding with native plant species, weed control, erosion control, and regularly monitoring the effectiveness of such measures.
- Existing roads and previously disturbed areas will be used for travel and equipment storage to the maximum extent possible.
- If adverse effects remain after the project proponent has implemented onsite mitigation measures, compensation will be made for residual effects.
- Any recreational site development will require public information on the value of special status species and habitat as well as restrictions against collecting, harassing, and harming. Trail development will avoid direct impacts to occupied habitat.

General natural resource management mitigation include:

- Protect high value vegetation communities and general wildlife habitat with signs, interpretation, fencing, OHV restrictions, road closures, and enforcement of dumping.
- Develop a restoration plan that includes measures to control invasive plants, establish stands of native plants, repair OHV damage, clean up illegal dump sites, and conduct monitoring to determine restoration success.

- Identify key habitat and disturbance buffers to protect Peninsular bighorn. Restrict all developments in key habitats and allow only passive recreation use in adjacent buffer habitat. Implement seasonal closures if necessary and install interpretive signs. Formulate stipulations (poisonous plant restrictions) for land exchanges and recreational developments near key habitat.
- Develop an invasive plant management plan that includes inventory, determination of control feasibility, integrated control of target species in selected areas, facilitation of research of experimental control methods, and long-term monitoring.
- Protect and restore riparian oasis, by fencing, cleanup of dump sites, surface water improvements (quantity and quality), cottonwood/willow plantings, and salt cedar control.
- Protect and restore mesquite hummocks by fencing, cleanup of dump sites, surface mesquite plantings, and control of noxious weeds.

Recreation

Recreation facility development will complement the surrounding landscape as much as practical and follow strict design and construction criteria, guidelines, and standards. Carrying capacity limits and user demand will be properly determined before major facility developments occur. Regulatory and informational signage will be posted throughout the area, informing the public of the rules and regulations governing the use of the federally owned lands within the study area.

Transportation

Under all alternatives, easements, rights-of-way, or other instruments to authorize transportation routes will contain specific stipulations to protect existing resources, decrease potential conflicts with adjacent landowners, and prevent land use conflicts within the study area.

Air Quality

Potential adverse air quality impacts will be associated with construction of recreation facilities and trails and the use of borrow pits. However, because the RMP is at the programmatic level, specific details of these activities are not appropriate; thus, associated emissions cannot be analyzed. Prior to implementation of any of these activities, site specific environmental compliance

will be completed. Pollutant emissions will be calculated using an appropriate model. Compliance with Federal, State, regional, and local air quality regulations will be required. Measures to reduce or minimize construction air quality effects will be required and included in all construction plans and specifications. Mitigation measures to reduce the amount of dust will likely include using surfactants and other chemical stabilizers, wheel washers for construction equipment, watering down of all construction areas, limiting truck traffic to non-peak hours, etc. Use of these and similar measures will likely reduce particulate matter impacts to less than significant levels.

Cultural Resources

Reclamation, working alone or in partnership with State and/or local government agencies or private entities, will continue to comply with section 106 of NHPA for Federal undertakings, and Reclamation will consult with the SHPO and area Indian tribes, as required by 36 CFR 800, as revised, to locate and identify any cultural resources within the study area's parcels before initiating any Federal undertaking.

Reclamation will do the following:

- In consultation with the SHPO and area Indian tribes—and on the basis of class I survey information—develop a research design for conducting class II or III surveys (1) to determine areas of high or low potential for cultural resources, including traditional cultural properties, (2) to determine sources of impacts, and (3) to define additional investigation or protective actions appropriate for each site. The research design will serve to support request for funding to implement necessary actions.
- Conduct intensive surveys of areas with high potential for cultural resources and/or any areas scheduled for ground-disturbing or potentially ground-disturbing activities to locate cultural resources. During ground-disturbing activities, Reclamation will make every effort to avoid significant cultural resources.
- During construction, if cultural resources are discovered, ensure that work in the immediate areas ceases until a qualified archeologist evaluates the site, takes appropriate measures, and consults with the SHPO.
- Ensure that any project-specific agreements regarding cultural resources are included as specifications in construction contracts and inform construction contractors about the presence of cultural resources within or near the project area and about their protection under Federal and State laws.

- When granting right-of-use authorizations on or across Reclamation-owned lands, review the proposal for potential effects on cultural resources and ensure the entity receiving the right-of-use authorization complies with all applicable cultural resource laws for any activities within the boundaries of the right-of-use authorization.
- When other entities prepare cultural resource surveys, or reports on Coachella Canal Area lands, Reclamation will ensure that it has an opportunity to review the survey and reports before they are finalized to ensure they are in compliance with the requirements of section 106 of the National Historic Preservation Act.
- Specific mitigation cannot be identified until the intensive surveys are completed, to determine if NRHP-eligible cultural resources are present. The following mitigation strategies presume that one or more cultural properties will be determined eligible for the NRHP and will be affected by the proposed action. The exact nature of mitigation will be determined in consultation with the SHPO and others, as appropriate, and documented in a memorandum of agreement with the consulting and interested parties.
- Periodically monitor NRHP-eligible or unevaluated sites to assess impacts and the need for investigative or protective action.
- Place protective materials over portions of sites affected by erosion or trail construction or use to prevent additional disturbance.
- Recover site data through systematic surface collection or excavation and provide resulting reports to the professional community and interested public.
- Consult further with area Indian tribes about appropriate actions to protect endangered traditional cultural property sites and implement those actions where reasonable and feasible.
- Incorporate information about cultural resources into brochures and other educational materials created for use in the study area.

List of Preparers and Contributors

Technical Service Center

Name	Qualifications (Expertise, Professional Discipline, Experience)	Contribution
Patty Alexander	B.A. English Literature (in process) Technical Editor; 21 years professional experience in editing and designing environmental compliance documents	Report design, desktop publishing, technical editing
Jim Bailey	B.A. History, Metropolitan State College of Denver; M.A. History, University of Northern Colorado; Ph.D. History, Arizona State University Historian/Cultural Resources Manager; 15 years professional experience in archival and published historical research, analysis, writing, editing, and publication; 5 years professional experience in historic preservation and cultural resources management, 30 years experience in photography	Cultural and historic resources analysis
Susan Black	B.A. Economics, St. Martin's University Social Science Analyst; 22 years professional experience in water resources planning, NEPA compliance, social analysis, and public involvement.	Public involvement, Indian trust assets, and environmental justice analyses
Charles Borda	B.A. and M.A. Economics, University of Colorado Economist; 25 years professional experience in conducting economic, financial, and regional impact analyses	Regional economy analysis
Dianne Clark	B.S. Journalism, University of Colorado Technical Writer-Editor; 18 years professional experience in managing and editing environmental compliance documents	Document management and editing

Coachella Canal Area
Resource Management Plan/
Environmental Assessment

Name	Qualifications (Expertise, Professional Discipline, Experience)	Contribution
Chad DeVore	B.S. Wildland Recreation, University of Idaho Outdoor Recreation Specialist; 29 years professional experience in outdoor recreation management, planning, and facilities design	Land use, recreation, transportation, air quality, and visual quality analyses
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Annette Turney (retired)	B.S. New Mexico Tech Environmental Engineer; 15 years professional experience in water quality analyses	Surface water and groundwater analyses
Darrell Welch	B.A. Resource Development with emphasis in Resource Management and Planning, Michigan State University Outdoor Recreation Planner; 25 years professional experience in outdoor recreation and land resource management planning	Study management and multi-disciplinary team leader
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Kurt Wille	B.A Geography, University of Wisconsin-Eau Claire; M.A. Geography, Western Illinois University GIS Analyst/Programmer; 12 years experience in geographic information systems based programming and development.	Mapping

Yuma Area Office

Name	Qualifications (Expertise, Professional Discipline, Experience)	Contribution
Jim Cherry	B.S. Agricultural Engineering, Michigan State University Area Manager; 33 years professional experience on four continents in the fields of Water Delivery and Water Resource Planning.	Project oversight
Peggy Haren	B.A. Business Management, George Fox University Group Manager Water and Lands Contracts; 22 years experience in land and water resource management with the U.S. Forest Service and Bureau of Reclamation.	Project management
Cynthia Hoeft	B.S. Business Administration - Management, Northern Arizona University Director, Resource Management Office; 23 years professional experience with 14 years in information technology and 9 years in resource management	Project oversight
Don Young	B.S Civil Engineering, University of Nebraska Assistant Area Manager; 32 years professional experience in water operations, safety of dams, and project management	Project oversight

Distribution List

All locations are in the State of California, unless otherwise indicated.

Congressional Delegation

U.S. Senators

Barbara Boxer
Dianne Feinstein

U.S. Representative

Mary Bono
Jerry Lewis

California State Legislature

Senator Jim Battin
Senator Denise Moreno Ducheny
Assemblyman John J. Benoit
Assemblywoman Bonnie Garcia

Indian Tribes

Ak-Chin Indian Community, Maricopa, Arizona
Agua Caliente Band of Mission Indians, Palm Springs
Augustine Band of Mission Indians, Coachella
Cabazon Tribal Business Committee, Indio
Cahuilla Band of Mission Indians, Anza
Colorado River Indian Tribes, Parker, Arizona
Hualapai Indian Tribe, Peach Springs
Morongo Band of Mission Indians, Banning
Pechanga Band of Luiseño Indians, Temecula
Ramona Band of Mission Indians, Anza
Santa Rosa Band of Mission Indians, Anza, Hemet
Soboba Band of Luiseño Indians, San Jacinto
Torres-Martinez Desert Cahuilla Indians, Thermal
Twenty-Nine Palms Band of Mission Indians, Coachella

Federal, State, and Local Agencies

Federal

Department of Agriculture

Natural Resources Conservation Service, Indio, Riverside

Department of Defense

U.S. Army Corps of Engineers, Los Angeles, California; Phoenix, Arizona

U.S. Marine Corps Air Ground Combat Center, Twentynine Palms

U.S. Marine Corps Air Station, Yuma, Arizona

Department of Energy

Western Area Power Administration, Folsom, California; Phoenix, Arizona

Department of the Interior

Bureau of Land Management, El Centro, North Palm Springs

Coachella Valley National Wildlife Refuge, Calipatria

Fish and Wildlife Service, Carlsbad, Sacramento

Office of the Field Solicitor, Palm Springs

Geological Survey, Sacramento

Office of Surface Mining, Albuquerque, New Mexico

Bureau of Indian Affairs, Palm Springs, Riverside

Environmental Protection Agency

Region 9, San Francisco

Southern California Field Office, Los Angeles

Federal Aviation Administration

Western-Pacific Region Airports Division, Los Angeles

State of Arizona

State Parks

State Historic Preservation Office, Phoenix, Arizona

State of California

Coachella Valley Mountains Conservancy

Palm Desert

Department of Conservation

Sacramento

Department of Fish and Game

Bermuda Dunes, Sacramento, San Diego

Department of Parks and Recreation
Borrego Springs, Sacramento
Office of Historic Preservation, Sacramento

Department of Transportation
Division of Aeronautics, Sacramento
Division of Transportation Planning, Sacramento
District 8, San Bernardino
District 11, San Diego

Department of Water Resources
Division of Planning and Local Assistance, Sacramento
Southern District, Glendale

Environmental Protection Agency
Colorado River Basin Water Quality Control Board, Palm Desert

Highway Patrol
Riverside, Sacramento

Lands Commission
Sacramento

Mojave Desert Air Quality Management District, Victorville

Native American Heritage Commission, Sacramento

Public Utilities Commission
Los Angeles, San Francisco

South Coast Air Quality Management District, Diamond Bar

Imperial County

Planning Department, El Centro
Fish and Game Department, El Centro
Air Pollution Control District, El Centro

Riverside County

4th District, Palm Desert
Airport Land Use Commission, Riverside
Board of Supervisors, Riverside
Planning Department, Indio, Riverside
Public Information Office, Riverside

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Regional Park and Open-Space District, Riverside
Transportation and Land Management Agency, Riverside
Transportation Department, Indio

City of Blythe

Planning Department

City of Cathedral City

City of Coachella

Department of Community Development
Department of Public Works

City of Desert Hot Springs

Community Development Department

City of Indian Wells

City of Indio

Community Development Department
Community Development Services/Building and Safety

City of La Quinta

Public Works Department

City of Palm Desert

Community Development Department

City of Palm Springs

Department of Planning and Building

City of Rancho Mirage

Libraries

Brawley Public Library, Brawley
Cathedral City Public Library, Cathedral City
Coachella Branch Library, Coachella Valley
Desert Hot Springs Public Library, Desert Hot Springs
Indio Public Library, Indio
La Quinta Public Library, La Quinta
Lake Tamarisk Branch Library, Desert Center
Mecca-North Shore Branch Library, Mecca
Palm Springs City Library, Palm Springs
Palo Verde Valley Library District, Blythe
Rancho Mirage Public Library, Rancho Mirage
Riverside County Library, Palm Desert
Riverside Central Library, Riverside
Thousand Palms Library, Thousand Palms

Interested Organizations and Individuals

Amec Earth & Environmental, Riverside
Audubon California, Sacramento
California Native Plant Society, Sacramento
Center for Biological Diversity, Tucson, Arizona
Coachella Valley Association of Governments, Palm Desert
Coachella Valley Community Trails Alliance
Coachella Valley Hiking Club, Palm Springs
Coachella Valley Mosquito and Vector Control District, Indio
Coachella Valley Radio Control Club, Palm Desert
Coachella Valley Recreation and Park District, Indio
Coachella Valley Water District, Coachella, Thermal
Coachella Valley Wild Bird Center, Indio
Desert Protective Council Inc., San Diego
Desert Radio Control Club Inc., La Quinta
Desert Survivors, Oakland
Desert Tortoise Preserve Committee Inc., Riverside
Desert Trails Hiking Club, La Quinta
Desert Water Agency, Palm Springs
Donowho, David, Blythe
Imperial Valley Association of Governments, El Centro
Imperial Valley College Desert Museum, Ocotillo
John Corella and Associates, La Quinta
Kitahara, Russell, Thermal
Lueders, Gary, Palm Springs
Metropolitan Water District, Los Angeles
Mission Springs Water District, Desert Hot Springs

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MSA Consulting, Rancho Mirage
National Environmental Strategies, Washington, DC
O'Dowd, Patrick, La Quinta
Palo Verde Irrigation District, Blythe
Public Employees for Environmental Responsibility, Sebastopol
Riverside County Farm Bureau, Moreno Valley
San Bernardino Valley Audubon Society, San Bernardino
San Diego County Water Authority, San Diego
Shea Homes, La Quinta
The Keith Companies, Palm Desert
The Living Desert Zoo and Gardens, Palm Desert
The Nature Conservancy, San Francisco
Thermal Chamber of Commerce, Thermal
Twentynine Palms Chamber of Commerce, Twentynine Palms
Windermere Commercial, Indian Wells

Glossary

A

acre-foot: The volume of water which would cover an area of 1 acre to a depth of 1 foot; equal to 43,500 cubic feet or 325,851 gallons.

affected environment: Existing biological, physical, social, and economic conditions of an area subject to change, both directly and indirectly, as the result of a proposed human action. Also, the chapter in an environmental impact statement describing current environmental conditions.

air quality: Measure of the health-related and visual characteristics of the air, often derived from quantitative measurements of the concentrations of specific injurious or contaminating substances.

alternatives: Courses of action which may meet the objectives of a proposal at varying levels of accomplishment. Alternatives include no action, the most likely future conditions without the project or action.

archaic: In American archeology, a cultural stage following the earliest known human occupation in the New World (about 5,500 B.C. to A.D. 100). This stage was characterized by a hunting and gathering lifestyle and seasonal movement to take advantage of a variety of resources.

archeology: Study of human cultures through the recovery and analysis of their material relics.

artifact: A human-made object.

B

blow sand: A natural sand process where strong winds lift the sand and transports it.

C

candidate species: Plant or animal species that are not yet officially listed but which are undergoing a status review as published in the *Federal Register* by the U.S. Fish and Wildlife Service, are candidates for possible addition to the list of threatened and endangered species.

climate: Average conditions of the weather over a number of years.

cooperative agreement: Formal document that states the obligations of Reclamation to one or more other parties. A cooperative agreement provides the authority for Reclamation to issue funding to the other party(ies) listed in the agreement. The legal instrument used to reflect a relationship between the Federal Government and a State, local, or tribal government or other recipient whenever the principal purpose of the relationship is the transfer of money, property, services, or anything of value to a recipient to accomplish a public purpose of support or stimulation authorized by Federal law; and substantial involvement is anticipated between the Federal Government, and the State, local, or tribal government, or other recipient during performance of the contemplated activity.

corridor: Narrow strip of land reserved for location of transmission lines, pipelines, and service roads.

Council on Environmental Quality (CEQ): Establishes regulations for implementing the procedural provisions of the National Environmental Policy Act.

Crime Witness Protection Program: A program originally created by the Bonneville Power Administration to protect transmission systems, substations, facilities, property, and personnel. The Bonneville Power Administration administers Reclamation's program through an agreement signed in October 1998. The program offers cash awards up to \$1,000 for information leading to the arrest and conviction of persons committing crimes. Signs posted at facilities direct informants to call a toll-free number to report suspicious or criminal activity.

critical habitat: Defined in section 3(5)(A) of the Endangered Species Act of 1973, as amended as:

(1) The specific areas within the geographical area occupied by the species at the time it is listed, on which are found those physical and biological features essential to the conservation of the listed species and which may require special management considerations for protection; and

(2) Specific areas outside the geographical area occupied by a species at the time it is listed upon a determination by the Secretary of the Interior that such areas are essential for the conservation of the species. These areas have been legally designated via *Federal Register* notices.

cubic foot per second (cfs): As a rate of streamflow, a cubic foot of water passing a reference section in 1 second of time; 1 cfs = 2 acre-feet per day; 651,702 gallons per day. A measure of a moving volume of water (1 cfs = 0.0283 cubic meter per second);

cultural resource(s): Any building, site, district, structure, or object significant in history, architecture, archeology, culture, or science.

cumulative impact: The incremental additive impacts of the proposed project and other projects in the area of influence. Cumulative impacts are reasonably foreseeable in the future.

D

desired future condition: The future condition of the study area that results from achieving the goals and objectives identified in the Resource Management Plan.

E

economic benefits: Economic benefits attempt to measure changes in societal or national welfare based on net value concepts, including consumer surplus and producer profitability.

ecosystem: Complex system composed of a community of animals and plants as well as the chemical and physical environment.

employment: Total of hourly wage, salary, and self-employed jobs (part-time and full-time), measured in terms of jobs, not full-time equivalents

endangered species: A species or subspecies whose survival is in danger of extinction throughout all or a significant portion of its range.

environment: All biological, chemical, social, and physical factors to which organisms are exposed. The surroundings that affect the growth and development of an organism.

environmental analysis: Systematic process for consideration of environment factors in land management actions.

environmental assessment (EA): A National Environmental Policy Act compliance document used to determine if an action would have a significant effect on the human environment. If not, a finding of no significant impact is written. If so, an environmental impact statement is written.

environmental impact statement (EIS): A NEPA compliance document used to evaluate a range of alternatives when solving the problem would have a significant effect on the human environment. The EIS is more than a document; it is a formal analysis process which mandates public comment periods. An EIS covers purpose and need, alternatives, existing conditions, environmental consequences, and consultation and coordination.

environmental justice: Executive Order 12898 defines Federal agency responsibilities with respect to environmental justice. Federal agencies are expected to identify and address disproportionate high and adverse human health or environmental effects of its programs, policies, and activities on minority and low-income populations.

erosion: Refers to soil and the wearing away of the land surface by water, wind, ice, or other physical processes.

Executive order: A written directive of the President of the United States.

F

facilities: Manmade structures, such as dams, spillways, and outlet works.

finding of no significant impact (FONSI): A National Environmental Policy Act compliance document which affirms that an environmental assessment found that alternatives were evaluated and a proposed action would have no significant impact on the human environment.

G

geographic information system: A digital geographic database used to analyze and store data.

geology: The science that deals with the physical history of the earth, the rocks of which it is comprised, and the physical changes which the earth has undergone or is undergoing.

goal: A brief statement describing the end result of implementing a management action or series of actions. A goal can also be considered a desired future condition which the Bureau of Reclamation wishes to achieve within the management area.

groundwater: Generally, all subsurface water as distinct from surface water; specifically, that part of the subsurface water in the saturated zone where the water is under pressure greater than atmospheric.

groundwater recharge: The flow to ground water storage from precipitation, infiltration from streams, and other sources of water.

H

habitat: The area or type of environment in which a plant or animal normally lives or occurs.

historic properties: Any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the *National Register of Historic Places* maintained by the Secretary of the Interior. This term includes artifacts, records, and remains that are related to and located within such properties. The term includes properties of traditional religious and cultural importance to an Indian tribe and that meet the *National Register of Historic Places* criteria.

I

incidental take: The taking of an endangered species or a threatened species incidental to the agency action.

Indian tribe: An Indian tribe, band, nation, or other organized group or community, which is recognized as eligible for the special programs and services provided by the United States to Indians because of their status as Indians.

invertebrate: An animal lacking a spinal column.

irrigation district: A cooperative, self-governing public corporation set up as a subdivision of the State government, with definite geographic boundaries, organized and having taxing power to obtain and distribute water for irrigation of lands within the district; created under the authority of a State legislature with the consent of a designated fraction of the landowners or citizens.

L

life history: Life cycles through which organisms pass, with emphasis on reproduction and survival mechanisms.

M

mitigation (measures): Action taken to avoid, reduce the severity of, or eliminate an adverse impact. Mitigation can include one or more of the following:

- (1) Avoiding impacts
- (2) Minimizing impacts by limiting the degree or magnitude of an action
- (3) Rectifying impacts by restoration, rehabilitation, or repair of the affected environment
- (4) Reducing or eliminating impacts over time

- (5) Compensating for the impact by replacing or providing substitute resources or environments to offset the loss

N

National Register of Historic Places (Register): A federally maintained register of districts, sites, buildings, structures, architecture, archeology, and culture.

No Action Alternative: The most likely future conditions without the project or action.

O

objective: A brief statement or series of statements that briefly describe an action that will achieve a specific goal identified in a Resource Management Plan.

open space: A parcel of land that has public value because the land offers important opportunities for recreation. Open space may also have value as a visual amenity to the landscape or backdrop of an outdoor natural setting.

P

passive recreation: Recreational opportunities that occur in a natural setting that require minimal development or facilities. The importance of the environment or setting for the activities is greater than in developed recreation settings.

perchlorate: Perchlorate is a naturally occurring and manmade chemical. Most of the perchlorate manufactured in the United States is used as the primary ingredient of solid rocket propellant. In recent years, there has been increasing interest in perchlorate levels in soil, ground water, drinking water, and irrigation water. At high doses, perchlorate can interfere with iodide uptake into the thyroid gland.

perennial: Refers to plants that have a life cycle that lasts for more than 2 years.

PM₁₀: Refers to small suspended particulate matter, 10 microns or less in diameter, which can enter the lungs. These small particles can be directly emitted into the atmosphere as a byproduct of fuel combustion; through abrasion, such as wear on tires or brake linings; or through wind erosion of soils. PM₁₀ emissions can also be formed in the atmosphere through chemical reactions.

precipitation: Liquid or solid water particles that fall from the atmosphere and reach the Earth's surface. It includes drizzle, rain, snow, snow pellets, snow grains, ice crystals, ice pellets, and hail.

predation: The consumption of one organism (the prey) by another (predator).

prime farmland: Land that has the best combination of physical and chemical characteristics for producing food, feed, fiber, forage, oilseed, and other agricultural crops with minimum inputs of fuel, fertilizer, pesticides, and labor, and without intolerable soil erosion, as determined by the Secretary of Agriculture.

public involvement: Process of obtaining citizen input into each stage of development of planning documents. Required as a major input into any environmental impact statement.

Q

qualitative: Having to do with quality or qualities. Descriptive of kind, type, or direction as opposed to size, magnitude, or degree.

quantitative: Having to do with quantity, capable of being measured. Descriptive of size, magnitude, or degree.

S

sacred site: See Executive Order 13007. Any specific, discrete, narrowly delineated location on Federal land that is identified by an Indian tribe or Indian individual determined to be an appropriately authoritative representative of an Indian religion, as sacred by virtue of its established religious significance to, or ceremonial use by, an Indian religion; provided that the tribe or appropriately authoritative representative of an Indian religion has informed the agency of the existence of such a site.

saline: Bodies of water with excessive or high salt concentrations.

salinity: A measure of the quantity of the total dissolved solids or salts in water.

significance: Council of Environmental Quality Guidance, 43 CFR section 1508.27, explains that significantly requires considerations of the context of the action (society as a whole, the affected region, affected interests, and locality) and intensity (the severity of impact).

site: In archeology, any location of past human activity.

spawn: To lay eggs, especially in reference to fish.

special status species: Rare animal and plant species that have been identified by Federal or State agencies as needing protective measures. Special status species as defined and used in this document, include the following:

- Plant and animal species listed as Federal threatened or endangered under provisions of the Endangered Species Act of 1973, as amended.
- Plant and animal species proposed for listing as Federal threatened or endangered under the ESA with the proposed listing published in the *Federal Register*.
- Species designated as sensitive or species of concern by State and/or Federal management

T

threatened species: Any species which could become endangered in the near future.

topographic: Measuring and displaying on maps of physical surface features such as rivers, mountains, or roads.

traditional cultural property: A site or resource that is eligible for inclusion in the *National Register of Historic Places* because of its association with cultural practices or beliefs of a living community.

V

vertebrate: An animal having a segmented backbone or vertebral column. Includes mammals, birds, fish, amphibians, and reptiles.

W

water table: The depth below which the ground is saturated with water.

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