
CHAPTER IV ALTERNATIVES

Introduction	IV-1
Alternative Formulation	IV-1
Alternative Elements	IV-4
Alternatives Description	IV-7
Elements Eliminated from Further Consideration	IV-20



Chapter IV

Alternatives

INTRODUCTION

This chapter discusses the process the Bureau of Reclamation (Reclamation) used to formulate alternatives to the proposed Federal action, describes the alternatives in detail, and provides a summary comparison of the effects of the alternatives on resources and environmental factors within the study area (table IV-1, located at the end of this chapter).

As stated earlier, Reclamation management goals and objectives and associated management actions were formulated to respond to issues and concerns raised by the public, agency consultation and coordination, and review of its programs and policies. The proposed management actions are described in detail for each alternative. Chapter V contains an analysis of the effects of the alternatives on resources and environmental factors.

ALTERNATIVE FORMULATION

The Council on Environmental Quality's (CEQ) regulations implementing the National Environmental Policy Act (NEPA) require the consideration and evaluation of a range of reasonable alternatives to a proposed Federal action. The alternatives should meet the *purpose of* and *need for* the proposed action while avoiding or minimizing environmental impacts.

The NEPA *alternative formulation* process facilitates the *planning* process by providing a means by which Reclamation, with interested agencies and the public, can formulate alternative management plans in response to identified issues. The basic goal in formulating alternatives is to develop various combinations of land uses and resource management actions that respond to the issues identified during the planning process.

Reclamation developed planning criteria to help formulate and select combinations of land uses and management actions (alternatives) that could be reasonably implemented. Based on the following planning criteria, each action alternative would do the following:

- Meet the public need as expressed during the planning and NEPA compliance process (e.g., during open houses, public meetings, and in correspondence) and meet the goals and objectives formulated in response to the issues and concerns identified.
- Comply with applicable Federal, State, and local laws, regulations, and policies, while not interfering with authorized Reclamation project purposes.

- ~ Maintain Reclamation's capability to pump approximately 140,000 acre-feet of water a year from the Protective and Regulatory Pumping Unit (PRPU) to partially satisfy its 1944 Water Treaty requirements, as provided by Minute No. 242 of the International Boundary and Water Commission (IBWC 242 Minute). IBWC 242 Minute also limits groundwater pumping in the 5-mile zone to no more than 160,000 acre-feet per year.
- ~ Authorize land uses within the study area only if they are compatible with Reclamation project purposes and other authorized uses.
- ~ Provide for partnership opportunities and shared responsibilities with other entities that may have a vested interest in the management of the study area.
- ~ Balance user needs, environmental protection, and anticipated funding and personnel limits.
- ~ Sustain or enhance the study area's environmental resources.
- ~ Mitigate and compensate project impacts on flat-tailed horned lizard and its habitat both within and outside of the Yuma Desert Management Area.
- ~ Limit land use authorizations that would cause surface disturbance within the Yuma Desert Management Area.
- ~ Use the Planning Actions and Mitigation Measures provided in the 2003 Flat-Tailed Horned Lizard Rangewide Management Strategy (Rangewide Management Strategy) when managing the Yuma Desert Management Area within the study area.
- ~ Improve the resource condition within the 10-year life of the resource management plan (RMP).
- ~ Allow for construction of future authorized developments to comply with IBWC 242 Minute and Title I of the Colorado River Basin Salinity Control Act of 1974, as amended.

Using the planning criteria as a guide, Reclamation developed three action alternatives (i.e., alternatives that prescribe a change in resource management). In addition to the action alternatives, Reclamation also formulated a No Action Alternative, as required by the CEQ regulations implementing NEPA. The No Action Alternative describes the management of the study area if an RMP were not implemented.

A brief description of each alternative follows:

No Action Alternative (Alternative A)

Natural Resources Conservation/Protection Alternative (Alternative B)

Recreation, Community, and Commercial Development Alternative (Alternative C)

Natural Resources Conservation/Protection with Limited Recreation, Community, and Commercial Development Alternative (Alternative D) (preferred alternative)

Under **Alternative A** (No Action Alternative), Reclamation resource management policies and practices within the study area would not change. Management actions to implement programs and policies would occur on a case-by-case basis to meet Federal, State, and local laws and regulations. Reclamation's capability to meet its water delivery obligations to Mexico would be maintained. Land use authorizations, such as licenses, leases, and permits, would be issued on a case-by-case basis, as they are currently. The 2003 Rangewide Management Strategy would be followed when managing the Yuma Desert Management Area.

Under **Alternative B** (Natural Resources Conservation/Protection Alternative), Reclamation resource management policies and practices within the study area would change. Management actions would be implemented that would enhance and protect environmental and cultural resources within the study area. In particular, flat-tailed horned lizard habitat protection would be maximized, pursuant to the 2003 Rangewide Management Strategy. Reclamation's capability to meet its water delivery obligations to Mexico would be maintained. Existing second-party land uses would be scrutinized and eliminated when possible. Public access and recreational use within the study area would be limited to benefit natural and cultural resources. Recreational off-highway vehicle (OHV) use would be eliminated.

Under **Alternative C** (Recreation, Community, and Commercial Development Alternative), Reclamation resource management policies and practices within the study area would change. Public access and recreational use within the study area would be maximized. Opportunities for nature study, hiking, wildlife observation, camping and day use, and OHV use would be provided to the greatest extent possible, while Reclamation would ensure mitigation and compensation for project impacts on flat-tailed horned lizard and its habitat both within and outside of the Yuma Desert Management Area. Reclamation's capability to meet its water delivery obligations to Mexico would be maintained. Licenses, leases, permits, and other land use authorizations would be issued when compatible with public use of Reclamation lands. Areas deemed appropriate for community expansion, such as utility corridors, transportation routes, community open space, airport, landfills, sewage disposal sites, and recreation and leisure facilities, would be accommodated, as appropriate. Land exchanges/transfers within the study area would be encouraged.

Under **Alternative D** (Natural Resources Conservation/Protection with Limited Recreation, Community, and Commercial Development) (preferred alternative), Reclamation resource management policies and practices within the study area would change. Land use authorizations would be issued in the western portion of the study area on a limited basis for recreation, community, and commercial developments while maintaining Reclamation's capability to meet its water delivery obligations to Mexico, protecting natural and cultural resources, and conserving flat-tailed horned lizard habitat, pursuant to the 2003 Rangewide Management Strategy. Land exchanges/ transfers within the study area would be considered on a limited basis either to protect or enhance the natural or cultural

resources in the eastern portion¹ of the study area or to accommodate limited recreation, community, or commercial developments in the western portion² of the study area.

ALTERNATIVE ELEMENTS

A Reclamation interdisciplinary team (team) developed alternative “elements” that would best respond to identified public and Reclamation issues and concerns. Each alternative is made up of a unique combination of elements, and each alternative would achieve a different desired future condition in the study area, if implemented.

Following is a list of elements common to all alternatives. After the list of common elements is a detailed description of each alternative. Each alternative is described according to the seven issue categories listed in chapter III. (Attachment E is a table that summarizes the elements of each alternative.) A list of alternative elements eliminated from further consideration is located at the end of this chapter.

Elements Common to All Alternatives

Elements common to all alternatives, including the No Action Alternative, include the following:

- ❖ Reclamation would continue to operate the lands within the study area for the primary purposes for which the PRPU was authorized.
- ❖ Reclamation would continue to manage lands according to Reclamation’s *Policies and Directives and Standards*; Federal laws, rules, regulations; Executive orders; and State and county laws, regulations, and ordinances.
- ❖ Adhere to the guidance provided in the 2003 Flat-Tailed Horned Lizard Management Strategy when managing the Yuma Desert Management Area within the study area. In particular, follow the “General Management Study,” page 30, and “Planning Actions,” page 34, in cooperation with other entities, if applicable.
- ❖ Use the Planning Actions and Mitigation Measures provided in the 2003 Flat-Tailed Horned Lizard Rangewide Management Strategy, when managing the Yuma Desert Management Area within the study area.

¹ The eastern portion of the study area generally refers to lands under the jurisdiction of Reclamation that are east of Avenue C. The Yuma Desert Management Area (flat-tailed horned lizard habitat area) encompasses most of the eastern portion of the study area.

² The western portion of the study area generally refers to lands under the jurisdiction of Reclamation that are west of Avenue C and east of Avenue H.

- ❖ Reclamation would conduct site-specific NEPA compliance for proposed land uses to ensure that surface and groundwater quality and other natural and cultural resources are protected. If proper clearances cannot be obtained or proper mitigation achieved, proposed land uses will not be granted.
- ❖ Reclamation would allow only those land uses that do not adversely affect Reclamation project features.
 - Reclamation would not allow uses that would adversely affect Indian trust assets unless proper mitigation measures were achieved and all environmental clearances were obtained.
 - Reclamation also would avoid Indian sacred sites and traditional cultural properties when issuing land use authorizations.
 - Reclamation would not allow uses that would adversely affect cultural resources unless proper mitigation measures were achieved and all environmental clearances were obtained.
 - Reclamation would not allow uses that would adversely affect threatened and endangered (T&E) or other special status species or critical habitat unless proper mitigation measures were achieved and all environmental clearances were obtained.
- ❖ Reclamation would not allow private, exclusive use of Reclamation lands within the study area.
- ❖ Reclamation would cooperate to provide a utility corridor along 23rd Street to Avenue E, primarily to service the port-of-entry.
- ❖ Reclamation would follow the updated 2001 Federal Fire Management Policy and the Secretary of the Interior's 2001 policy letter and develop a fire management plan.
- ❖ Reclamation would maintain capability to expand the Yuma Desalting Plant's sludge disposal site (A-22) and operate and maintain this site in accordance with Aquifer Protection Permit No. P100180, issued in 2003.
- ❖ Reclamation would maintain the ability to operate and maintain existing and future PRPU project facilities throughout the study area, including the Yuma Desert Management Area. Reclamation would complete proper mitigation when necessary.
- ❖ Reclamation would maintain the capability to pump approximately 140,000 acre-feet of water a year from the 5-mile zone to meet delivery obligations to Mexico, as provided by IBWC 242 Minute. IBWC 242 Minute also limits groundwater pumping in the 5-mile zone to no more than 160,000 acre-feet per year. This amount includes the installation of additional wells which have been planned under authorizing legislation but have not been installed.
- ❖ Reclamation would continue to regulate the quantity of water pumped from wells within the study area by enforcing stipulations contained in

- the land use authorization document (license, lease, or permit) that Reclamation may have granted to another party.
- ❖ Reclamation would use established Reclamation water accounting procedures to evaluate requests for water usage in the study area on a case-by-case basis.
 - ❖ Reclamation would continue to cooperate with the IBWC, U.S. Geological Survey, and private municipal and industrial and agricultural water users to account for water use within the 5-mile zone.
 - ❖ Reclamation would continue to maintain and monitor observation wells and install new ones, as needed.
 - ❖ Once proper NEPA compliance is completed and the project is authorized, Reclamation would process the application from the U.S. Border Patrol (Border Patrol) to increase the width of its protective zone from 90 to 150 feet.
 - ❖ Once proper environmental clearances are obtained, Reclamation would cooperate with the Arizona Department of Transportation, Federal Highway Administration, and other entities to construct the proposed SR195 within the study area, including a proposed major interchange.
 - ❖ Once proper environmental clearances are obtained, Reclamation would cooperate with appropriate entities to process needed permits to construct a major road from the proposed SR195 interchange north to Rolle Airfield.
 - ❖ Once proper environmental clearances are obtained, Reclamation would cooperate with appropriate entities in processing needed permits to construct a highway from San Luis east along 23rd Street to the proposed SR195 interchange.
 - ❖ Once proper environmental clearances are obtained, Reclamation would cooperate with appropriate entities in processing needed permits to construct a truck route from San Luis to the new commercial port-of-entry.
 - ❖ In cooperation with the Border Patrol and other entities, Reclamation would ensure that all new roads are fenced to prevent OHV use and to protect critical resources, such as horned lizard habitat and Reclamation project features and structures, and to protect public safety.
 - ❖ Reclamation would ensure that appropriate entities implement mitigation measures if road construction adversely affects existing or planned well sites or other facilities within the PRPU or the flat-tailed horned lizard or its habitat.
 - ❖ Reclamation would allow hunting to continue.
 - ❖ Reclamation would continue with Yuma County the terms and conditions of the 1986 lease agreement for Rolle Airfield.
 - ❖ Reclamation would cooperate with Yuma County when the elements of the Rolle Airfield airport master plan are initiated.

- ❖ Reclamation would continue its current cooperation with the Yuma Area Water Resources Management Group (YAWRMG) to manage Yuma area water resources.
- ❖ Reclamation would protect flat-tailed horned lizard and its associated habitat in accordance with the guidance contained in the 2003 Flat-Tailed Horned Lizard Rangelwide Management Strategy. Reclamation would adhere to flat-tailed horned lizard monitoring requirements, as well as documentation of habitat disturbance and loss.
- ❖ Adhere to the guidance provided in the 2003 Rangelwide Management Strategy when managing the Yuma Desert Management Area within the study area. In particular, use the Planning Actions and Mitigation Measures provided in the 2003 Rangelwide Management Strategy. Implement the RMP within its 10-year life, if possible.
- ❖ Reclamation would ensure mitigation and compensation for project impacts on flat-tailed horned lizard and its habitat both within and outside of the Yuma Desert Management Area.
- ❖ Reclamation would continue to fully comply with Section 106 of the National Historic Preservation Act for Federal undertakings. Reclamation would consult with the State Historic Preservation Officer (SHPO) and area Indian tribes to locate and identify any cultural resources within the study area before initiating any Federal undertaking.

ALTERNATIVES DESCRIPTION

This section describes each of the alternatives in detail. The descriptions do not include the elements common to all alternatives, which were discussed previously. Attachment E summarizes the elements of the alternatives in table format.

No Action (Alternative A)

Land Use

Under Alternative A, Reclamation would not develop a comprehensive land use strategy. As such, Reclamation would limit land use authorizations that would cause surface disturbance within the Yuma Desert Management Area; continue to follow existing land use authorization requirements and regulations; continue to issue land use authorizations on a case-by-case basis; and continue its current cooperation with adjacent landowners to ensure compatible land uses. Reclamation would not allow land transfers or exchanges.

In addition to the road construction activities described under “Partnerships,” Reclamation would allow new public road construction and improvements throughout the study area on a case-by-case basis and require appropriate mitigation. Reclamation would control noxious weeds as it does now.

Water Use

Reclamation would not initiate a comprehensive strategy to limit water use within the study area and would address the accounting of water imported into the study area on a case-by-case basis.

Partnerships

Under Alternative A, Reclamation would not seek additional public/private partnerships or volunteers. Reclamation would continue its current level of coordination with the Border Patrol, including its current level of cooperation on flat-tailed horned lizard management.

Reclamation would continue its current level of cooperation with the Bureau of Land Management (BLM) on actions in the study area requiring both agencies’ involvement.

Reclamation would continue its current level of cooperation with the Marine Corps Air Station (MCAS) on flat-tailed horned lizard management.

With the Arizona Game and Fish Department (AGFD), Reclamation would continue its current level of cooperation regarding wildlife and special status species management and OHV use, enforcement, and signing.

Reclamation would continue its current cooperation with Yuma County.

Reclamation would not establish a study area working group and, in general, would not enter into any cooperative efforts other than those previously listed.

Natural and Cultural Resources Management

Reclamation would continue its current level of effort to protect T&E and other special status species and its current level of effort to manage the flat-tailed horned lizard and implement appropriate mitigation measures but would not increase its efforts to enhance the Border Patrol’s awareness of flat-tailed horned lizard issues and protection measures.

Public Information and Education

Reclamation would continue its current level of public information and education and maintain the same type and number of signs within the study area.

Recreation Management

Reclamation would not establish social, physical, environmental, or facility carrying capacities; would not provide any camping facilities or opportunities, day use facilities or opportunities, or trails; and would allow the current level of OHV use to continue.

Health and Safety

Reclamation would install no additional fencing and would enforce existing rules and regulations as it does today. Additionally, Reclamation would not provide additional signage and would continue its current trash removal efforts.

Natural Resources Conservation/Protection (Alternative B)

General Management Actions

Under Alternative B, Reclamation would develop a comprehensive land use strategy to benefit natural resources throughout the study area.

Reclamation would implement the RMP within its 10-year life, if possible and would ensure that decisions will be made for the benefit of the project and the general public.

Reclamation also would ensure that public use and any facility development are consistent with the goals and objectives of the RMP and other approved management planning documents. Reclamation would conduct periodic land management reviews and other monitoring efforts to ensure that the lands are being managed pursuant to existing agreements and land use authorizations.

Reclamation would monitor the variety of land uses to identify user conflicts and investigate corrective measures to prevent further conflicts, if necessary.

Land Use

Under Alternative B, Reclamation would carefully review any proposed land exchanges or land use authorizations that would occur within existing or proposed Reclamation well or facility location to ensure that any exchanges or transfers would not affect Reclamation's project purposes. Before finalizing any future land uses within the study area, Reclamation would identify future water needs and solutions to address water quantity and quality requirements to sustain such uses.

Reclamation would continue to follow existing land use authorization requirements and regulations. To maintain water quality and quantity and project purposes, land use proposals would be evaluated on a case-by-case basis.

Reclamation would not issue land use authorizations within the Yuma Desert Management Area and would issue land use authorizations in the western portion of the study area only when absolutely necessary.

Reclamation would increase its cooperation with adjacent landowners to ensure compatible land uses and minimal adverse effects on water quality.

In addition to the utility corridor along 23rd Street to Avenue E to service the port-of-entry, Reclamation would designate additional utility corridors along the proposed truck route, and along the proposed roads from the proposed SR195 interchange north to Rolle Airport and east to the minimum security prison. All future utilities would be confined to designated corridors within the study area.

Reclamation would use Geographic Information System mapping as a planning tool when issuing land use authorizations.

Under Alternative B, Reclamation would continue existing land use authorizations, but eliminate outgrants when possible.

Reclamation would support legislation for land exchanges/transfers on an acre-to-acre basis with no net acreage loss to the PRPU. Land transfers/exchanges would benefit natural or cultural resources. As is standard, Reclamation would retain any known water and/or mineral rights for the lands exchanged/transferred out of Federal ownership.

Necessary and appropriate clauses would be included in conveyance documents for use of Federal lands that could be exchanged or conveyed to private partners to ensure that potential uses do not impede Reclamation's ability to manage the study area for Reclamation and other Federal purposes.

If the city of San Luis were to purchase the Hillander "C" tract, Reclamation would consider exchanging certain Federal lands in the western portion of the study area to the city for Hillander "C" lands. No agriculture use would be allowed on Reclamation lands to protect water quality. Therefore, the Hillander "C" tract would be taken out of production and restored to as natural a condition as possible. Reclamation also would investigate possibility of exchanging lands in the western portion of the study area for Hillander "C" lands owned by private individuals.

Federal lands exchanged to public or private parties could be used for those purposes outlined in the San Luis General Plan, provided all conveyance stipulations and conditions were agreeable to all parties.

No lands within the Yuma Desert Management Area would be exchanged or transferred out of Federal ownership pursuant to the Rangewide Management Strategy. Reclamation would ensure that potential uses of exchanged lands do not impede Reclamation's management of the study area for Reclamation and other Federal purposes and would ensure lands received into Federal ownership are contiguous to the study area.

Reclamation would not allow any new public road construction or improvements other than those under "Partnerships" but would allow existing primary roads to be maintained, recognizing that this may be necessary to prevent proliferation of parallel routes.

Reclamation would initiate a comprehensive weed control program to effectively eliminate and prevent the spread of noxious weeds. No pesticide treatments would be applied within the Yuma Desert Management Area. However, use of specifically targeted hand-applied herbicides (such as for salt cedar eradication projects) would be allowed. Within the Yuma Desert Management Area, Reclamation would rehabilitate damaged and degraded habitat, including closed routes and other small areas of past intense activity.

In addition to following the updated 2001 Federal Fire Management Policy and the Secretary of the Interior's 2001 policy letter and to developing a fire management plan, Reclamation would suppress fires in the Yuma Desert Management Area using a mix of the following methods: (1) aerial attack with fire retardants, (2) crews using hand tools to create fire breaks, (3) mobile attack engines limited to public roads, designated open routes, and routes authorized for limited use. Reclamation would not allow earth moving equipment (such as bulldozers) except in critical situations to protect life, property, or resources. Post-suppression mitigation would include rehabilitation of fire breaks and other ground disturbances using hand tools.

Management of the Yuma Desalting Plant sludge disposal site would be the same as under the No Action Alternative, plus Reclamation would avoid adverse effects to water quality or loss of unique desert habitat and mitigate when expanding the site.

Water Use

To maintain water quality and Reclamation project purposes, Reclamation would evaluate land use proposals on a case-by-case basis.

Any use of groundwater granted in a land use authorization document issued by Reclamation in the study area would be subject to reduction or termination if Reclamation needs the water to meet its delivery obligations to Mexico. If groundwater pumping in the study area reaches or approaches 160,000 acre-feet per year, Reclamation would require a land use applicant to obtain water from outside the 5-mile zone.

In general, Reclamation would avoid groundwater contamination or degradation within the PRPU and would allow only water-conserving landscaping.

Partnerships

Under Alternative B, Reclamation would seek public/private partnerships and volunteers to support management of the study area.

If areas are closed to public use, Reclamation would enter into a cooperative agreement(s) with appropriate entities to enforce such closure(s) (i.e., area(s) designated as closed to protect the public safety or to protect project features, such as laterals, canals, well sites, sludge ponds, or to protect natural resources.

When cooperating with other entities on proposed land uses within the study area, Reclamation would ensure that proper NEPA compliance and other environmental clearances are completed before the land use is authorized.

Reclamation would cooperate with concerned parties to establish a working group to help identify potential options to resolving general study area issues and to implement the specific RMP management actions. In general, when cooperating with other entities, Reclamation would consider its own authorized project needs and access.

Reclamation would enter into an agreement with the Border Patrol that outlines each agency's roles and responsibilities within the study area. Existing and future drag roads and surveillance towers would be identified, and Reclamation should approve locations of future drag roads and towers within the study area. So as not to interfere with the Border Patrol's mission, Reclamation would coordinate with the Border Patrol on the limited construction of fences within the study area. To protect Reclamation facilities and flat-tailed horned lizard habitat, in cooperation with the Border Patrol, Reclamation would establish reasonable and necessary standards and guidelines for Border Patrol OHV use. Reclamation would consider allowing OHV use within the study area, when necessary, to fulfill the Border Patrol's primary mission. Reclamation would provide education materials to enhance the Border Patrol's awareness of flat-tailed horned lizard issues and protection measures.

Under Alternative B, Reclamation would increase its efforts with BLM to redefine each agency's responsibilities within the study area, pursuant to the existing agreement and *Departmental Manual 613*.

Reclamation would cooperate with the MCAS to limit recreation use in the Yuma Desert Management Area within the study area and along the western boundary of the Barry M. Goldwater Range.

Under Alternative B, Reclamation would require appropriate mitigation for lost habitat and increased risk of vehicle collision with flat-tailed horned lizards associated with the proposed SR195.

Reclamation would enter into agreements with AGFD to protect wildlife habitat; to develop public education programs; and to develop and implement inventory, monitoring, and protection plans for other special status species.

Hunting access and enforcement would be the responsibility of AGFD through an agreement with Reclamation. Reclamation also would enter into an agreement with AGFD to enforce OHV closures.

Reclamation would review the Yuma County planning and zoning commission's comprehensive plan and assist with its goal to "discourage the conversion of farmland to residential." Additionally, Reclamation would establish a study area working group to help resolve issues.

Natural and Cultural Resources Management

Reclamation would define and implement management actions to minimize loss or degradation of flat-tailed horned lizard habitat and implement various protective measures within the Yuma Desert Management Area.

As discussed under “Partnerships,” Reclamation would increase its efforts to better protect T&E and other special status species in cooperation with other entities and, as necessary, provide fencing to protect flat-tailed horned lizard habitat, unique desert habitat, and T&E and other special status species.

Under Alternative B, Reclamation would, in consultation with the SHPO and area Indian tribes and, based on the Class I survey, develop a research design for conducting Class II or III surveys to determine areas of high or low potential for cultural resources, including traditional cultural properties, within the study area. Reclamation then would 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 would make every effort to avoid significant cultural resources.

Public Information and Education

Reclamation would educate visitors and other agencies involved in managing the study area about the appropriate use of Reclamation lands and facilities and provide interpretive maps, brochures, pamphlets, and expanded internet information services to the public. Reclamation would prepare and make available public information and education about the Yuma Desert Management Area, including the purposes of the flat-tailed horned lizard management areas and pertinent regulations. Interpretation and public information would emphasize appreciation and protection of the natural and cultural resources. Printed and internet materials would be bilingual, as needed.

Reclamation would inventory signing needs and post appropriate bilingual signs that provide rules and regulations for the appropriate use of Reclamation lands and resources. Reclamation also would post bilingual interpretive signs emphasizing appreciation of the natural environment and promoting conservation and preservation in areas with interesting natural or cultural values. In addition, Reclamation would post bilingual OHV closure and refuse pickup and transfer site signs in appropriate areas. Bilingual signs near the international boundary would indicate the location of the boundary between the two countries and that a person is entering the United States.

Recreation Management

Reclamation would not establish carrying capacities within the study area and would not provide any camping facilities or opportunities, day use facilities or opportunities, or trails under Alternative B.

Hunting would continue at current levels, except Reclamation would limit hunting in designated areas in cooperation with AGFD and other entities, when necessary. (Also see “Partnerships.”) Reclamation would eliminate OHV use, except for emergency situations and Border Patrol purposes. All OHV trails/roads would be closed, and rehabilitation measures would be implemented. The public would be restricted to existing public roads, and Reclamation would post bilingual signs prohibiting OHV use, as appropriate, and would prepare a travel management plan detailing the OHV trails/roads to be closed. Reclamation would work with AGFD to enforce OHV closures. In cooperation with other entities, Reclamation would install needed fencing to prevent unauthorized OHV use. (Also see “Partnerships.”)

Health and Safety

Under Alternative B, Reclamation would install proper fencing to protect public health and safety and Reclamation project features and structures and, as necessary, to protect flat-tailed horned lizard habitat.

Reclamation would enforce rules and regulations to discourage unauthorized use within the boundary of the study area and promote proactive law enforcement activities. Specifically, Reclamation would increase its efforts to enforce existing rules and regulations to discourage random shooting and OHV use to reduce or eliminate wildlife harassment and habitat loss and would promote the Crime Witness Protection Program.

Reclamation would post bilingual warning signs to protect visitors.

Reclamation would remove abandoned vehicles, washers, dryers, refrigerators, and other trash from illegal dump sites within the study area and initiate efforts, including enforcement of existing laws, to keep the study area free of trash.

Recreation, Community, and Commercial Development (Alternative C)

General Management Actions

The comprehensive land use strategy for the study area would be the same as under Alternative B, *except* that under Alternative C, the strategy would maximize recreation, community, or commercial development within the study area.

Land Use

Land use authorizations would be the same as under Alternative B, *except* that under Alternative C, land use authorizations could be issued throughout the study area—including the Yuma Desert Management Area—but only if appropriate mitigation for the flat-tailed horned lizard could be achieved. Also, unlike Alternative B, Reclamation would not eliminate outgrants when possible.

Land transfers and exchanges would be the same as under Alternative B, *except* that under Alternative C, land transfers/exchanges between Reclamation and private owners

and city/county entities outside the Yuma Desert Management Area would be allowed to benefit maximum public recreation, community, or commercial development.

Under Alternative C, recreation, community, or commercial development would be concentrated in the western portion of the study area. Development would be allowed elsewhere in the study area only if appropriate mitigation for the flat-tailed horned lizard could be achieved. Soil conditions and other environmental conditions or limitations would be considered when developing facilities.

In addition to the construction of primary roads discussed under “Partnerships,” Reclamation would allow new primary public road construction, improvements, and maintenance throughout the study area to provide access to recreation, community, and commercial developments. Secondary road construction would be allowed to provide access to campgrounds, day use areas, and trailheads, if these facilities are constructed. Reclamation would require appropriate mitigation for any new secondary road construction and other developments.

Noxious weed and fire management would be the same as under Alternative B, and provisions for expanding Reclamation’s Yuma Desalting Plant sludge disposal site would be the same as under Alternative B.

Water Use

Water use would be the same as under Alternative B.

Partnerships

Partnerships and coordination with other entities would be the same under Alternative C as under Alternative B, *except* the recreation managing partner, in cooperation with AGFD and other concerned entities, would monitor developed public use areas to determine if limited hunting closures should be initiated to protect visitors. (State laws already prohibit shooting within ¼ mile of occupied facilities.) Additionally, under Alternative C, Reclamation would partner with AGFD to enhance habitat for game species, such as doves, and cooperatively establish and enforce an OHV plan. Also, in cooperation with other entities, Reclamation would agree to establish a nature center in the western portion of the study area to interpret the unique Sonoran Desert and to educate the public on the responsibilities of different government entities.

Natural and Cultural Resources Management

Natural and cultural resources management would be the same as under Alternative B.

Public Information

Public information and education would be the same as under Alternative B.

Under Alternative C, Reclamation would prepare a comprehensive sign plan for the study area, including establishing an area theme, inventory, installation, and operation and maintenance plan. Reclamation would inventory signing needs and post bilingual signs with rules and regulations regarding use of Reclamation lands and resources. Reclamation would post bilingual directional, informational, and warning signs designating OHV use areas and regulations and refuse pickup and transfer sites. Other aspects of signing would be the same as under Alternative B.

Recreation Management

Under Alternative C, Reclamation would establish carrying capacities in the study area to determine appropriate location, type, and number of public use facilities to maximize natural resources protection. Reclamation would use GIS mapping to help identify physical and environmental carrying capacities and existing data to establish social capacities.

Under Alternative C, campgrounds would be constructed outside the Yuma Desert Management Area (i.e., in the western portion of the study area); however, if appropriate mitigation measures can be achieved, developments in the eastern portion of the study area would be considered.

Overnight campgrounds and support facilities, such as potable water, restrooms, picnic tables, shade structures, showers, and limited utility hookups, would be provided, based on public demand. Occupancy would be limited to 14 days.

In addition, recreational vehicle campgrounds would be provided to accommodate visitors for extended periods of time, not to exceed 6 months. Support facilities for these types of campgrounds could include restrooms, showers, trailer dump stations, laundry facilities, sewers, electricity, and water hookups.

Pursuant to Reclamation laws and policy, Reclamation would seek a non-Federal government entity to plan, develop, operate, and maintain these recreation facilities and to manage public use within the study area. If a non-Federal government entity cannot be obtained to manage recreation facilities and the public uses within the study area, Reclamation would investigate the feasibility of securing a commercial business to construct and operate campgrounds and support facilities. In either case, campgrounds and support facilities would be constructed in consultation with the Border Patrol to ensure that its roles and responsibilities are not impeded. Facilities would follow appropriate design standards and blend into the surrounding landscape.

To protect public safety and Reclamation investments, Reclamation would not allow recreation developments or public use on or adjacent to existing or proposed Reclamation project features, such as canals, laterals, wells, or sludge ponds.

Before constructing any public use facilities, such as campgrounds or trails, Reclamation would prepare site-specific master plans and obtain appropriate environmental clearances. The types and number of facilities would be based on public need, site evaluations, and input from appropriate entities and user groups.

Alternative C would maximize day use facilities that support recreation throughout the study area, such as hiking, wildlife observation, and nature study, based on public demand. Reclamation would consider urban recreation opportunities, such as golfing, tennis, baseball, and biking, and a nature center in the western portion of the study area.

With a managing partner, and if appropriate mitigation measures can be achieved, nonmotorized, multi-use trails would be provided. The trails would be limited to foot traffic, equestrians, nonmotorized bicycles, and wheelchair users (motorized and nonmotorized) and would provide hiking, photography, wildlife observation, interpretation, and nature study opportunities. The trails would be located primarily in the western portion of the study area. However, limited trail development would be allowed in the eastern portion of the study area if appropriate flat-tailed horned lizard mitigation measures could be achieved.

All trails would be paved or hardened to provide easy access for all users. To minimize adverse effects, a comprehensive trail plan would be developed that would detail, among other things, site locations, lengths, materials, signing needs, and costs. Trail development would follow appropriate design standards.

Hunting would be the same as under Alternative B.

Recreational OHV use would be allowed in certain areas in the western portion of the study area (i.e., outside the Yuma Desert Management Area), and an OHV plan would be established following the guidelines contained in 43 CFR 420 and existing Executive orders. Public use would be restricted to designated public roads and designated OHV trails/roads. In cooperation with other entities, Reclamation would install needed fencing to prevent unauthorized OHV use. Reclamation would prepare a travel management plan detailing OHV roads/trails to be closed and then close and rehabilitate those roads. Within the Yuma Desert Management Area, Reclamation would rehabilitate damaged and degraded habitat, including closed routes and other small areas of past intense activity. Methods may include, but are not limited to, ripping or scarifying compacted soils, recontouring the surface, pitting or imprinting the surface, seeding with native plants, planting seedlings, irrigating, and barricading.

Health and Safety

Fencing, enforcement of existing rules and regulations, posting of bilingual rules and regulations and warning signs, and trash removal would be the same as under Alternative B. In addition, under Alternative C, when recreation facilities are constructed, Reclamation would ensure that visitor health and safety is the primary concern and respond to and correct unsafe conditions immediately.

***Natural Resources Conservation/Protection with Limited Recreation,
Community, and Commercial Development (Alternative D)
(Preferred Alternative)***

General Management Actions

General management actions under Alternative D would be the same as under Alternative B, *except* that the comprehensive land use strategy under Alternative D would provide for limited recreation, community, and commercial development in addition to natural resources conservation and protection.

Land Use

Under Alternative D, land use authorizations would be the same as under Alternative B, *except* that Reclamation could issue land use authorizations in the western portion of the study area to benefit limited recreation, community, or commercial development. Land use authorizations would be issued in the Yuma Desert Management Area only for public health, safety, and security purposes. Those that would cause land disturbance would be limited. Short-term compatible uses of Reclamation lands would be preferred. Long-term uses would be allowed only with strict conditions/stipulations. Reclamation would ensure balance among wildlife resources, recreational opportunities, and authorized activities when issuing land use authorizations. Also, unlike Alternative B, Reclamation would not eliminate outgrants when possible.

Land use transfers would be the same under Alternative D as under Alternative B, *except* that Reclamation would allow land transfers/exchanges between Reclamation and private owners and city/county entities outside the Yuma Desert Management Area to benefit (1) limited recreation, community, and commercial opportunities (2) flat-tailed horned lizard habitat, or (3) natural or cultural resources.

Under Alternative D, Reclamation would concentrate all limited recreation, community, and commercial development in the western portion of the study area; protect and enhance the eastern portion of the study area (Yuma Desert Management Area). Reclamation would consider soil conditions and other environmental conditions or limitations when developing facilities. No new primary public road construction would be allowed other than discussed under “Partnerships,” although Reclamation would allow existing primary roads to be maintained. Reclamation would allow secondary road construction in the western portion of the study area to provide access to campgrounds, day use areas, and trailheads, if these facilities are constructed. Reclamation would require appropriate mitigation for any new secondary road construction and other developments.

Fire and noxious weed management would be the same as under Alternative B, as would expansion of the Yuma Desalting Plant sludge disposal site.

Water Use

Water use would be the same as under Alternative B.

Partnerships

Partnerships and coordination with other entities would be the same as under Alternative B, *except* that (1) partnership with AGDF to enhance habitat for game species (2) and monitoring with AGFD and other concerned entities of any developed public use areas to determine if limited hunting closure(s) should be initiated would be the same as under Alternative C.

Natural and Cultural Resources Management

Natural and cultural resources management would be the same as under Alternative B.

Public Information

Public information and education and signing and interpretation would be the same as under Alternative B.

Recreation Management

Establishing carrying capacity demand would be the same as under Alternative C. Under Alternative D, limited overnight campgrounds would be provided in the western portion of the study area, based on public demand. Limited support facilities, such as potable water, restrooms, trash receptacles, and shade structures, also would be provided. Occupancy would be limited to 14 days, or to a length of stay that Reclamation determines is appropriate. No overnight campgrounds would be located within the Yuma Desert Management Area, and no extended stay recreational vehicle campgrounds would be constructed. All other aspects of campground development would be the same as under Alternative C.

Day use facilities that support recreation opportunities would be provided in the western portion of the study area on a limited basis.

With a managing partner and with appropriate mitigation, Reclamation would provide a limited number of nonmotorized, multi-use trails only in the western portion of the study area. Portions of certain trails would be paved or hardened to provide access to persons with disabilities. Trail development would follow appropriate design standards.

Hunting and OHV use would be the same as under Alternative B.

Health and Safety

Fencing, enforcement of existing rules and regulations, posting of rules and regulations and warning signs, and trash removal would be the same as under Alternative B. As under Alternative C, Reclamation would ensure that visitor health and safety is the primary concern and respond to and correct unsafe conditions immediately.

ELEMENTS ELIMINATED FROM FURTHER CONSIDERATION

Reclamation considered several elements but eliminated them from further consideration for the following reasons.

- ❖ *How could any planned or potential diversions of the Colorado River water affect Indian tribes and their allocation of water?*
 - The Colorado River and its surface water diversions are outside the scope of this RMP/environmental assessment (EA). The RMP/EA addresses only those lands within the study area and the protection of Reclamation's capability to pump groundwater.
- ❖ *The State of Arizona, Department of Corrections, minimum security prison complex currently houses 2,211 inmates, 600 correctional personnel, and 130 staff. In addition to our daily water usage (city of San Luis), it is possible that we could increase our population by as much as 35 percent. It is very important that we continue to have unrestricted use of our present water supply in order to meet current usage requirements and future needs. If this Federal action could have any adverse effect on the city of San Luis' capability to meet the needs of this complex, it is imperative that we be engaged in discussions.*
 - The RMP/EA does not attempt to quantify the city of San Luis' existing or future water supply needs. However, the RMP/EA will address the establishment of utility corridors that will enable the city of San Luis to provide the infrastructure to deliver its water from one location to another.
- ❖ *Provide for normal drainage pumping and tail water from the East and West Canals in calculations.*
 - The East and West Canals are not within the study area; therefore, this RMP/EA does not address their operation and maintenance.

**Table IV-1.—Study Area RMP/EA
Summary Effects of Alternatives on Resources**

Alternative	Air Quality	Noise	Soils	Land Use	Transportation	Groundwater	Vegetation and Wildlife	Special Status Species	Recreation and Visual Quality	Economics	Cultural Resources	Indian Sacred Sites	Indian Trust Assets	Environmental Justice
No Action (Alternative A)	Existing conditions would continue.	Unrestricted OHV use, new developments, and increased vehicle use of new roads could lead to increased noise levels.	New developments could increase wind erosion of soils.	Potential for conflicting land uses; social, physical, environmental, or facility carrying capacities could be exceeded; potential adverse effect on natural and cultural resources and on Reclamation's ability to protect PRPU project purposes.	Continuing adverse effects from uncontrolled OHV use. Public demand for access would be met.	If new developments rely on groundwater, potential reduction of groundwater availability. Continuing effect of irrigated agriculture on groundwater quality.	Continuing adverse effects from habitat loss and degradation.	Direct injuries, mortalities, habitat loss, and degradation would continue unabated.	Public demand for developed and urban recreation facilities and opportunities would go unmet. Visual quality could be expected to degrade.	New development would continue to foster economic growth.	Existing conditions would continue.	Unauthorized public use would still have potential to adversely affect sites.	No effect.	Existing conditions would continue.
Natural Resources Conservation/Protection (Alternative B)	Maximum benefits because of increased vegetative cover and less development, leading to fewer airborne particulates.	Reduced noise levels because recreational OHV use would be eliminated and less development would be allowed.	Same as Alternative A, except that eliminating OHV use would decrease wind erosion of soil in denuded areas.	Least benefit to nearby communities; greatest benefit to natural and cultural resources.	Public demand for access would be minimally met.	Similar effects on groundwater availability as Alternative A; potential benefit to groundwater quality.	Maximum benefits because of improved habitat protection and restoration.	Factors causing mortalities and injuries would be reduced because of habitat protection and enhancement measures.	Public demand for developed, dispersed, and urban recreation facilities and opportunities and OHV use would go unmet. Many recreationists would be displaced. Would best protect visual quality.	Possible adverse effects on the agricultural sector of the economy.	Eliminating recreational OHV use and conducting intensive surveys for cultural resources would benefit cultural resources.	Eliminating recreational OHV use would reduce potential adverse effects.	Same as Alternative A.	Possible adverse effects on minority farm workers. Water stations would benefit illegal immigrants and others.
Recreation, Community, and Commercial Development (Alternative C)	Greatest potential adverse effects on air quality because of unsurfaced roads and parking areas and increased industrial and vehicular emissions.	Greatest adverse effects on noise levels because of development of new facilities and increased vehicle use of new and existing roads and OHV areas.	Same as Alternative A, plus increased protection would be needed to prevent soil erosion during construction of facilities.	Greatest benefit to nearby communities; least benefit to natural and cultural resources.	Public demand and need for access would be fully met.	Potential reduction of groundwater availability; potential benefit to groundwater quality.	Adverse effects because of accelerated habitat loss and degradation.	Significant increase in factors causing mortalities and injuries as well as habitat loss and degradation.	Public demand for all types of recreation facilities and opportunities, including urban recreation and open space, would be most fully met. Some recreationists would be displaced. Greatest adverse effect on visual quality.	Possible adverse effects on the agricultural sector of the economy, but possibly offset by gains to commercial and recreation services sectors.	Although regulated, OHV use could still adversely affect cultural resources; adverse effects could be offset by intensive surveys and OHV use plan.	OHV use could still adversely affect sites; adverse effects could be offset by OVH use plan.	Same as Alternative A.	Same as Alternative B, plus potential for short-term employment for minority or low-income individuals.
Natural Resources Conservation/Protection with Limited Recreation, Community, and Commercial Development (Alternative D) (Preferred Alternative)	Greater adverse effect than Alternative B but a less adverse effect than Alternative C.	Greater adverse effects than Alternative B but less than Alternative C because of less development, fewer roads, and elimination of recreational OHV use.	Same as Alternative C, except eliminating OHV use would decrease wind erosion of soil in denuded areas.	Greater benefit to nearby communities than Alternative B; less benefit than Alternative C. Greater benefit to natural and cultural resources than Alternative C.	Public demand and need for access would be met.	Effects on groundwater availability would be less than under Alternative C; same effects as Alternatives B and C on groundwater quality.	Substantial improvement in habitat protection and enhancement.	Substantial reduction in factors causing mortalities and injuries, as well as habitat loss and degradation.	Public demand for most types of recreation facilities and opportunities, including urban recreation and open space, would be partially met. Some recreationists would be displaced. Less adverse effect on visual quality than Alternative C.	Similar to Alternative C, except net gains in the commercial and recreation services sectors of the economy may be less.	Same as Alternative B.	Same as Alternative B.	Same as Alternative A.	Same as Alternative C.