

Environmental Commitments

AIR QUALITY

- Paving or surfacing primary and secondary roads and parking areas to prevent dust will help reduce airborne particulates throughout the study area. Additionally, requiring dust abatement measures during construction activities and revegetating disturbed areas, including areas disturbed by off-highway vehicle (OHV) use, will reduce airborne particulates.

SOILS

- Plant native vegetation to prevent soil erosion of disturbed areas caused by construction activities. Consider soil characteristics and suitability when planning developments

LAND USE

- All land use permits will contain specific stipulations to protect existing resources, decrease potential conflicts with adjacent landowners, and prevent land use conflicts within the study area. Additionally, any developments within the Yuma Desert Management Area will require special mitigation to avoid adverse effects or loss of unique desert habitat and mitigate for habitat losses and/or impacts to flat-tailed horned lizard habitat.

GROUNDWATER

- Careful monitoring of groundwater levels and groundwater quality will be needed to evaluate current impacts and to project or estimate future groundwater levels and quality. If projected groundwater levels or groundwater quality approach unacceptable limits, appropriate mitigation will be to find an alternate surface water supply to replace all, or at least a sufficient portion of, the pumped groundwater to prevent an unacceptable drop of groundwater levels or degradation of groundwater quality.

FLAT-TAILED HORNED LIZARD AND OTHER SPECIAL STATUS SPECIES

The following environmental commitments (from the mitigation section of the Flat-Tailed Horned Lizard Rangelwide Management Strategy [Rangelwide Management Strategy]) apply specifically to protection and recovery of the flat-tailed horned lizard, but they also benefit a wide range of Sonoran Desert plant and wildlife species. This includes consultation under the provisions of the Fish and Wildlife Coordination Act and the Endangered Species Act.

- ❖ To the extent possible, surface-disturbing projects shall be located outside of the Yuma Desert Management Area, and shall be timed to minimize mortality. If a project must be located within the Yuma Desert Management Area, effort shall be made to locate the project in a previously disturbed area or in an area where habitat quality is poor. A survey of the project site shall be conducted prior to construction in order to assist in locating the project.
- ❖ Prior to project initiation, an individual shall be designated as a field contact representative. This person shall have the authority to ensure compliance with protective measures for the flat-tailed horned lizard and will be the primary agency contact dealing with these measures. The field contact representative shall have the authority and responsibility to halt activities that are in violation of these terms and conditions.
- ❖ All project work areas shall be clearly flagged or similarly marked at the outer boundaries to define the limit of work activities. All construction and restoration workers shall restrict their activities and vehicles to areas that have been flagged to eliminate adverse impacts to the flat-tailed horned lizard and its habitat. All workers shall be instructed that their activities are restricted to flagged and cleared areas.
- ❖ Within flat-tailed horned lizard habitat, the area of disturbance of vegetation and soils shall be the minimum required for the project. If possible, a maximum disturbance allowable should be specified based on project specifics. Vegetation clearing and grading shall be minimized. Equipment and vehicles shall use existing surfaces or previously disturbed areas wherever possible. Disturbance of shrubs and surface soils due to stockpiling shall be minimized.
- ❖ Existing roads shall be used for travel and equipment storage wherever possible.
- ❖ Where possible, newly created access routes shall be restricted by constructing barricades, erecting fences with locked gates at road intersections and/or by posting signs. The project proponent shall maintain, including monitoring, all control structures and facilities for the life of the project and until habitat restoration is completed.
- ❖ A biological monitor, authorized by Arizona Game and Fish Department, shall be present in each area of active surface disturbance throughout the work day

from initial clearing through habitat restoration, except where the project is completely fenced and cleared of flat-tailed horned lizards by a qualified biologist authorized by Arizona Game and Fish Department. The monitor shall perform the following functions:

- Develop and implement a worker education program. Wallet-cards summarizing this information shall be provided to all construction and maintenance personnel. The education program shall include the biology and status of the flat-tailed horned lizard; protection measures designed to reduce potential impacts; flag designated work areas; follow reporting procedures if flat-tailed horned lizards are encountered; and emphasize importance of exercising care when commuting to and from the project area to reduce mortality of flat-tailed horned lizards.
 - Ensure that all project-related activities comply with these measures. The biological monitor shall have the authority and responsibility to halt activities that are in violation of these terms and conditions.
 - Examine areas of active surface disturbance periodically (at least hourly when surface temperatures exceed 85 degrees Fahrenheit) for the presence of flat-tailed horned lizards. All hazardous sites such as open pipeline trenches, holes or other deep excavations shall be inspected for flat-tailed horned lizards prior to backfilling.
 - Work with the project supervisor to take necessary steps to avoid disturbance to flat-tailed horned lizards and their habitat. If avoiding disturbance to a flat-tailed horned lizard is not possible, or if a flat-tailed horned lizard is found trapped in an excavation, the affected lizard shall be captured by hand and relocated.
- ❖ Sites of permanent or long-term (more than 1 year) projects in the Yuma Desert Management Area where continuing activities are planned and where flat-tailed horned lizard mortality could occur, may be enclosed with flat-tailed horned lizard barrier fencing to prevent lizards from wandering onto the project site where they may be subject to collection, death or injury. Barrier fencing should be in accordance with the standards outlined in Appendix 7 of the Rangewide Management Strategy.
 - ❖ The project proponent shall develop a project-specific habitat restoration plan to be approved by Reclamation. The plan shall consider and include as appropriate the following methods: replacement of topsoil, seedbed preparation, fertilization, seeding of native species, noxious weed control and additional erosion control (see Habitat Rehabilitation, page 69 of the Rangewide Management Strategy). The objective of restoration is to return the disturbed areas to a condition that will perpetuate previous land use. Restoration shall include eliminating any hazards to flat-tailed horned lizards created by construction, such as holes and trenches in which lizards might become trapped. Disturbance of existing perennial shrubs during restoration shall be minimized, even if such shrubs have been crushed by construction activities.

- ❖ Construction of new paved roads shall include a lizard barrier fence on each side of the road that is exposed to occupied flat-tailed horned lizard habitat. Exceptions may occur in accordance with the following evaluation, to be applied separately to each side of the road. This prescription may also be applied to canals or other fragmenting projects.
- ❖ Side is made nonviable for flat-tailed horned lizards even if connected to the other site:
 - Compensate for the entirety of the fragmented parcel.
- ❖ Side is viable only if connected to the other site:
 - Compensate for entirety of fragmented parcel, or
 - Provide fencing and effective culverts or underpasses that will maintain connectivity.

Specifications for barrier fences is provided in Appendix 7 of the Rangewide Management Strategy. The flat-tailed horned lizard interagency coordinating committee will make the determination of flat-tailed horned lizard population viability based on the size, configuration and habitat condition of the isolated parcel, threats from adjacent lands and existing scientific evidence of edge effects on flat-tailed horned lizard.

Compensation

Pursuant to Title 43 Code of Federal Regulations and the Federal Land Policy and Management Act of 1976, actions that result in flat-tailed horned lizard habitat loss may be permitted. To mitigate such losses both within and outside MAs, compensation is charged if residual effects would occur after all reasonable on-site mitigation has been applied. Guidance for determining when compensation is required and determining compensation is in the Rangewide Management Strategy, pages 62 to 66.

Measures for Other Special Status Species

- ❖ Surveys for special status plants and animals that may potentially occur on the Yuma 5-mile zone, as listed in table V-1, shall be conducted in the proposed project area prior to authorizing any ground disturbing activities.
- ❖ Every effort shall be made to avoid disturbance to any special status species or habitat that may be located. Consultation with the U.S. Fish and Wildlife Service should be initiated.

RECREATION

- ~ Recreation facility development will complement the surrounding landscape as much as practical and will follow strict design and construction criteria, guidelines, and standards.

- ~ Carrying capacity limits and user demand will be properly determined before major facilities are developed.
- ~ Bilingual regulatory and informational signage will be posted throughout the study area to inform the public of the rules and regulations governing the use of the federally owned lands within the study area.
- ~ Visitor use will be monitored to identify potential user conflicts and corrective actions to be taken if conflicts are identified.

CULTURAL RESOURCES

Reclamation will do the following:

- ~ In consultation with the State Historic Preservation Officer and area Indian tribes—and based on the Class I survey—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 plan will serve to support requests 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 State Historic Preservation Officer.
- ~ 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 easements on or across Reclamation-owned lands, review the proposal for potential effects on cultural resources and ensure that the entity receiving the easement complies with all applicable cultural resource laws for any activities within the boundaries of the easement.

Specific mitigation cannot be identified until the intensive surveys are completed to determine if cultural resources are present that are eligible for the *Federal Register*. The following mitigation strategies presume that one or more archeological sites or traditional cultural properties will be determined eligible for the *Federal Register* and will be affected by the proposed action. The exact nature of mitigation will be determined in consultation with the State Historic Preservation Officer and others, as appropriate, and documented in a memorandum of agreement with the consulting and interested parties.

- ~ Periodically monitor *Federal Register*-eligible or unevaluated sites to assess impacts and the need for investigative or protection 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.
- ~ Further consult with area tribes about appropriate actions to protect endangered traditional cultural properties 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.

INDIAN SACRED SITES

Executive Order 13007 does not authorize agencies to mitigate for the impact of their actions on Indian sacred sites. However, it does direct agencies to avoid adverse impacts when possible. If consultations determine that adverse impacts will occur from implementation of the proposed action, then Reclamation will seek means to avoid these adverse impacts.

INDIAN TRUST ASSETS

If consultations determine that adverse impacts will occur from implementation of the proposed action, Reclamation will seek means to avoid these impacts. If adverse impacts cannot be avoided, then Reclamation will provide appropriate mitigation or compensation.

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Glossary

5-mile zone: The 5-mile-wide, 13-mile-long strip of land about 10 miles south of Yuma, Arizona, in the extreme southwestern part of the State.

5-mile zone study area: Those lands within the 5-mile zone that are east of Avenue E and under the jurisdiction of Reclamation.

acre-foot: Amount of water needed to cover 1 acre with 1 foot of water.

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.

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.

Aquifer: Underground water-bearing geologic formation or structure.

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 generalized hunting and gathering lifestyle and seasonal movement to take advantage of a variety of resources.

Artifact: A human-made object.

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

Cone of influence (cone of depression): The depression, roughly conical in shape, produced in the water table by the pumping of water from a well.

Cooperative Agreement: Formal document that states the obligations of Reclamation to one or more other parties.

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 (BPA) to protect transmission systems, substations, facilities, property, and personnel. The BPA administers the Bureau of 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.

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

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

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

Erosion: Surface displacement of soil caused by weathering, dissolution, abrasion, or other transporting.

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

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.

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.

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

Groundwater mound: A portion of an unconfined aquifer with a water table elevated above that of the surrounding aquifer. It is often the result of a relatively high rate of recharge (for example, from infiltrating irrigation water) to the aquifer at the location of the mound.

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.

Protective and Regulatory Pumping Unit (PRPU): The well field authorized by Section 103(a) of Public Law 93-320.

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.

Right-of-way: A vested property right given to another entity for the use of a specified piece of land for specific purposes.

Sacred site: 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.

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

Total dissolved solids (TDS): A quantitative measure of the residual mineral dissolved in water that remains after the evaporation of a solution. Usually expressed in milligrams per liter or parts per million. Total amount of dissolved material, organic and inorganic, contained in water.

Unconfined aquifer: An aquifer with continuous layers of materials of relatively high permeability extending from the land surface to the base of the aquifer. The upper surface of an unconfined aquifer is the water table.

Well field: Area containing one or more wells that produces usable amounts of water.

Xeriscape: Landscaping that does not require a lot of water.

Yuma Desert Management Area: 16,000 acres within the 5-mile zone study area that Reclamation manages for the flat-tailed horned lizard and as described in the 2003 Flat-Tailed Horned Lizard Management Strategy.

Distribution List

CONGRESSIONAL DELEGATION

U.S. Senators

John Kyl
John McCain

U.S. Representative

Raul Grijalva, Arizona District 7

ARIZONA STATE LEGISLATURE

Senator Robert Cannell, District 24
Representative Amanda Aquirre, District 24
Representative James R. Carruthers, District 24

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

INDIAN TRIBES

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

Ak-Chin Indian Community, Maricopa
Campo Band of Mission Indians, Campo, California
Chemehuevi Tribal Council, Lake Havasu, California
Cocopah Indian Community, Somerton
Colorado River Indian Tribes, Parker
Fort McDowell Mohave-Apache Community, Fountain Hills
Fort Mojave Indian Tribe, Needles, California
Fort Yuma Quechan Tribe, Yuma
Gila River Indian Community, Sacaton
Hopi Indian Tribe, Kykotsmovi
Hualapai Indian Tribe, Peach Springs
Pueblo of Zuni, Zuni, New Mexico
Salt River Pima-Maricopa Indian Community, Scottsdale
San Carlos Apache Tribe, San Carlos

Tohono O=Odham Nation, Sells
Viejas Tribal Council, Alpine, California
Yavapai Prescott Indian Tribe, Prescott

FEDERAL, STATE, AND LOCAL AGENCIES

Federal

Department of Agriculture

Natural Resource Conservation Service, Phoenix, Yuma

Department of the Interior

Bureau of Indian Affairs, Yuma

Bureau of Land Management, Yuma

Fish and Wildlife Service, Phoenix

Geological Survey, Tucson, Yuma

Drug Enforcement Administration, Yuma

Department of Homeland Security

Immigration and Naturalization Service, Laguna Niguel, California

Border Patrol, Yuma,

Marine Corps

Marine Corps Air Station, Yuma

Treasury Department

Customs Service, Tucson,

San Luis Port-of-Entry, San Luis

State of Arizona

Department of Corrections, Phoenix, Yuma

Department of Environmental Quality, Phoenix

Department of Game and Fish, Yuma

Department of Transportation, Phoenix, Yuma

Department of Water Resources, Phoenix

State of California

Colorado River Board, Glendale, California

State of Nevada

Colorado River Commission, Las Vegas, Nevada

Yuma County

Board of Supervisors, Yuma

Department of Development Services, Yuma

Department of Public Works, Yuma

Planning and Zoning Commission, Yuma

City of San Luis

City Administrator

Economic Development Commission

Public Works Department

Police Department

City of Somerton

Administrator

City of Yuma

Department of Community Development

Department of Economic Development

Department of Parks and Recreation

Department of Public Works

Office of the City Administrator

Libraries

San Luis Branch Library, San Luis

Somerton Branch Library, Somerton

Yuma Library, Yuma

Interested Organizations and Individuals

Arizona Public Service Company, Yuma

Barkley Family Liquidating Trust, Yuma

Border Ranches LLC, Yuma

Citizens Title and Trust, Yuma

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Cuming Farms Inc., Yuma

Duran, Robert C. and Barbara, Somerton,
George, Terri, Yuma
Griffin Family Ltd. Partnership, Somerton
Griffin Ranches Inc., Somerton
Harrison, William and Leslie, Yuma,
Hawk, Michal Marie and Tim, San Diego, California
Hillander "C" Irrigation District, Yuma
Hughes, Earl and Ima, Gadsden
Hughes, Kelly E. and Sharon C., Gadsden
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Loo, David, New York, New York
McDonald, Herbert and Lois, Somerton
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Natural Resource Conservation Districts, Yuma
Peach, John J., Yuma
Power Engineers, Boise, Idaho
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Rodriguez, Pedro, San Luis
Sam Group Investment Co., Yuma
San Luis Port LLC, Yuma
Schafer, Robert, Yuma
Seven Star Ltd. Corp., Yuma
Simpkins, Jennifer, Phoenix
United States International Boundary and Water Commission, Yuma, and El Paso, Texas
Vasquez, Pedro M., Yuma
Von Verde Ltd., Yuma
Von Verde Ltd Partnership, Yuma
Von Verde Packing House Ltd., Yuma
Mrs. West, Yuma
Yuma County Water Users' Association, Yuma
Yuma Mesa Irrigation and Drainage District, Yuma
Yuma Metropolitan Planning Organization, Yuma
Yuma Natural Resource Conservation District, Yuma