

Environmental Assessment for

City of Yuma

**Yuma, Arizona Welcome Center Parking Lot and Future
Welcome Center**

Prepared for:

**City of Yuma
Public Works Department
155 West 14th Street
Yuma, AZ 85364**

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NEI Project No. 008-0295

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ACRONYMS/ ABBREVIATIONS

AAQS	Ambient Air Quality Standards
ADEQ	Arizona Department of Environmental Quality
ANPL	Arizona Native Plant Law
AZGFD	Arizona Game and Fish Department
BLM	Bureau of Land Management
BMP	Best Management Practice
CEQ	Council of Environmental Quality
CFR	Code of Federal Regulation
COY	City of Yuma
HDMS	Heritage Data Management System
EA	Environmental Assessment
ESA	Endangered Species Act
EPA	Environmental Protection Agency
FPPA	Farmland Protection Policy Act
FONSI	Finding of No Significant Impact
ITA	Indian Trust Assets
MW	Monitoring Well
MODE	Main Outlet Drain Extension
NAAQS	National Ambient Air Quality Standards
NEAP	Natural Events Action Plan
NEPA	National Environmental Policy Act
PM ₁₀	Particulate Matter Less Than 10 Microns
POL	Petroleum, oil, or lubricant
RCRA	Resource Conservation and Recovery Act
SHPO	State Historic Preservation Office
SIP	State Implementation Plan
SWPPP	Stormwater Pollution Prevention Plan
USFWS	U.S. Fish and Wildlife Service
WSC	Wildlife of Special Concern
YGB	Yuma Groundwater Basin
YIP	Yuma Irrigation Project

TABLE OF CONTENTS

	LIST OF ACRONYMS/ABBREVIATIONS.....	3
1.0	PURPOSE AND NEED.....	4
1.1	Background.....	4
1.2	Purpose and Need for the Proposed Project.....	4
1.3	Purpose and Need for an Environmental Assessment.....	5
2.0	DESCRIPTION OF THE PROPOSED PROJECT AND ALTERNATIVES.....	6
2.1	Location.....	6
2.2	Alternative Considered in Detail.....	6
3.0	AFFECTED ENVIRONMENT/ENVIRONMENTAL CONSEQUENCES.....	8
3.1	Noise.....	9
3.2	Air Quality.....	11
3.3	Hazardous Materials/Waste and Solid Waste.....	14
3.4	Water Resources.....	16
3.5	Land Use/Ownership.....	20
3.6	Biological Resources.....	21
3.7	Cultural/Historic Resources.....	26
3.8	Geology and Soils.....	29
3.9	Indian Trusts Assests.....	30
3.10	Socioeconomics.....	30
3.11	Environmental Justice	32
3.12	Irreversible and Irretrievable Commitments of Resources.....	32
3.13	Cumulative Impacts.....	33
4.0	CONSULTATION AND COORDINATION.....	36
5.0	REFERENCES.....	37
6.0	LIST OF APPENDICES.....	40
	Appendix A - Species Accounts and Evaluations	
	Appendix B - Cultural Resource Inventory and Agency Correspondence	
	Appendix C - Profile of General Demographic Characteristics: 2007	

1.0 PURPOSE AND NEED

This Environmental Assessment (EA) has been prepared in accordance with the National Environmental Policy Act (NEPA), U.S. Bureau of Reclamation (Reclamation) guidelines, and Procedures for Considering Environmental Impacts, and implementing regulations issued by the Council on Environmental Quality (40 CFR parts 1500-1508). This EA has been prepared in accordance with these requirements and summarizes the environmental effects of implementation of the proposed Yuma, Arizona Welcome Center Parking Lot and Welcome Center Project (Proposed Project).

Each environmental factor was evaluated for compliance with NEPA standards. In accordance with 40 CFR 1501.6, information from cooperating agencies was incorporated into the EA. Cooperating agencies will assist in finding determinations and mitigation measures.

The EA describes the Proposed Project, alternatives, and the potential environmental impacts of the project. It also sets forth the consultation used in preparing this EA.

1.1 BACKGROUND

The City of Yuma (COY) proposes to construct a parking lot for the future Yuma, Arizona Welcome Center. Reclamation is the land owner and will be the lead Federal Agency under NEPA. Reclamation proposes to issue a license to the COY that will grant them the use of federal lands.

1.2 PURPOSE AND NEED FOR THE PROPOSED PROJECT

Purpose

The purpose of the Proposed Project is to make land improvements on federal property for the benefit of the local Yuma, Arizona community. Construction of a parking lot and related project components will support the Yuma Welcome Center facility by providing a designated parking area within close proximity to the city of Yuma's historic downtown area, which is also accessible to Interstate 8.

Need

The current Yuma, Arizona Welcome Center is located on the east side of Fourth Avenue between First Street and Third Street. This location is not suited to manage the traffic the Welcome Center receives annually. Visitors exiting Interstate 8 to gather information about Yuma and its resources are required to cross oncoming traffic on Fourth Avenue to access the Welcome Center. Traffic at times can be congested and difficult to cross in this area. The parking lot at the Welcome Center is small and cannot handle the influx

of visitors that the Welcome Center receives at peak periods in the winter. Overflow of visitors are required to park in adjacent business parking areas. The current Welcome Center parking lot is undersized and poorly equipped to manage the some 40,000 visitors it receives annually.

In 2002, the Yuma community strongly endorsed a conceptual plan for an Arizona Welcome Center Parking Lot and future Welcome Center on the Fourth Avenue corridor. The Welcome Center Parking Lot and future Welcome Center would be conveniently located just off Fourth Avenue and provide the parking spaces required to manage the influx of tourists during the peak of tourist season. It would also designate an area and accommodate traffic for the future Yuma, Arizona Welcome Center planned for the site. The future Yuma, Arizona Welcome Center will coordinate with many state and federal agencies to provide tourism information to visitors.

1.3 DECISIONS TO BE MADE

This EA will be forwarded through Reclamation for review to determine whether a Finding of No Significant Impact (FONSI) is appropriate. This decision is based on a determination that all potential impacts are either less than significant or can be reduced to less than significant levels through the implementation of mitigation measures. If any potential impacts are considered significant and cannot be avoided or reduced to less than significant levels, then the preparation and processing of an Environmental Impact Statement would be required or the project cancelled and not be implemented.

2.0 DESCRIPTION OF THE PROPOSED PROJECT AND ALTERNATIVES

2.1 LOCATION

The proposed project is located in Yuma, Arizona, northeast of the intersection at First Street and Fifth Avenue in Section 21; Township 8 South, Range 23 East, Gila and Salt River Baseline and Meridian.

The Proposed Project would be located on federal lands administered by Reclamation. The Proposed Project site is shown on Figure 1.

2.2 ALTERNATIVES CONSIDERED IN DETAIL

There were two alternatives considered in detail: Alternative A, No Action, and Alternative B, the Proposed Action.

2.2.1 Alternative A – No Action

NEPA guidelines require that an EA evaluate the “No Action” alternative in addition to the Proposed Project. The No Action alternative provides a basis for comparison of the environmental consequences of the Proposed Project. In this EA, the No Action alternative assumes that the two residential units will remain in place and the Yuma, Arizona Welcome Center Parking Lot and building pad would not be constructed. There would be no ground disturbance or resource impacts.

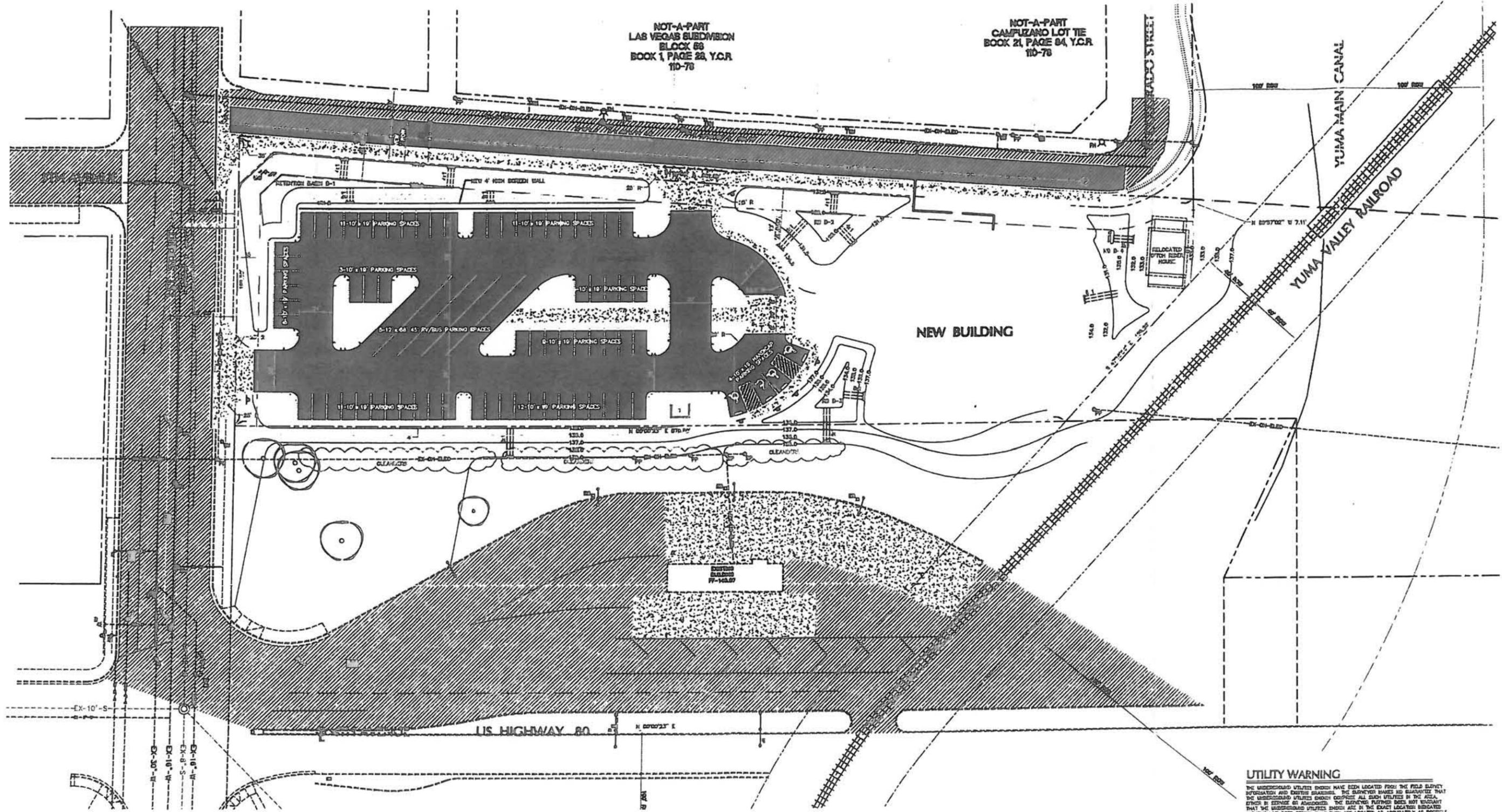
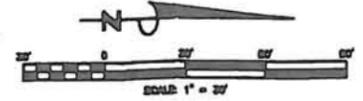
2.2.2 Alternative B – Proposed Action

The COY proposes to construct a parking lot for the future Yuma Arizona Welcome Center on lands owned by Reclamation. As the lead federal agency, Reclamation proposes to issue a license to the COY that will grant them the use of those federal lands. The Proposed Project includes the relocation of one residential unit to the north end of the project site, construction of a 16,000 square foot building pad for the future Yuma, Arizona Welcome Center, the construction of a 164,000 square foot parking lot comprised of 52,500 square feet of asphalt, 9,500 square feet of concrete with 5,000 square feet of 5 foot wide sidewalks and 2,000 square feet of 10 foot wide sidewalks, the installation of utilities, lighting, landscaping, retention basins, entrances into the parking lot from First Street and Fifth Avenue, and the re-pavement of Fifth Avenue from First Street to Colorado Street. Utilities for the Yuma, Arizona Welcome Center Parking Lot and Welcome Center will be provided by Arizona Public Service for electricity. The COY will provide water, sewage, and refuse collection services.

A preliminary drawing of the Proposed Yuma, Arizona Welcome Center Parking Lot is shown on Figure 2. No preliminary drawings for the Yuma, Arizona Welcome Center are available.



Figure 1
Site Map
Yuma, Arizona Welcome Center Parking Lot and
Future Yuma, Arizona Welcome Center



NOT-A-PART
LAS VEGAS SUBDIVISION
BLOCK 68
BOOK 1, PAGE 28, Y.C.R.
110-78

NOT-A-PART
CAMPUZANO LOT TIE
BOOK 21, PAGE 84, Y.C.R.
110-78

NEW BUILDING

US HIGHWAY 80

YUMA MAIN CANAL

YUMA VALLEY RAILROAD

RODOLFO STREET

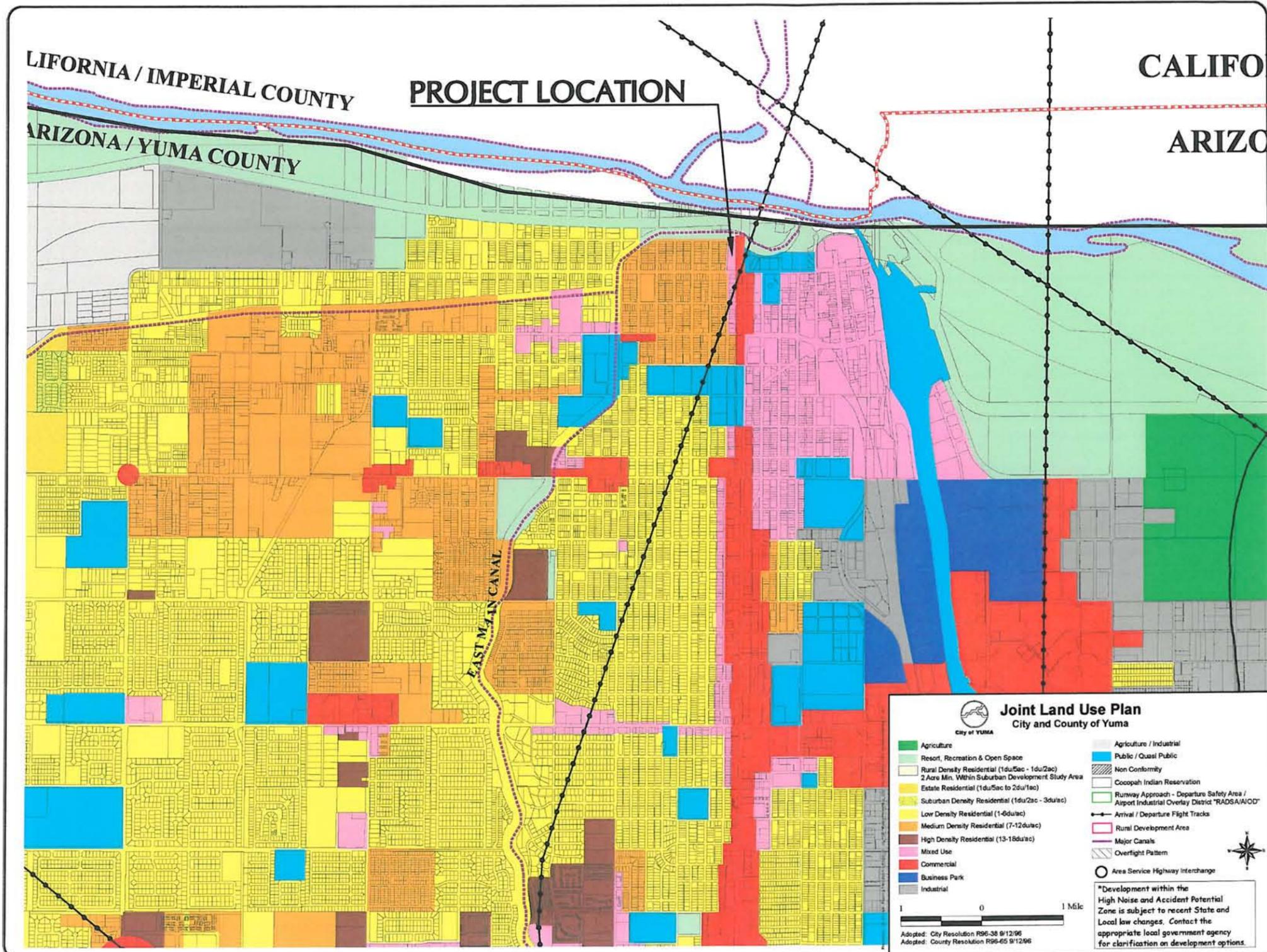
UTILITY WARNING

THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM THE FIELD SURVEY INFORMATION AND EXISTING RECORDS. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN KIND OR IN DEPTH. THE SURVEYOR MAKES NO WARRANTY THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATIONS INDICATED, ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.

D&R DAHL, ROBBINS & ASSOCIATES, INC.
 283-1100
 1-800-STAKE-IT
 1000 S. GARDEN AVENUE, SUITE 100, YUMA, AZ 85405

Yuma, Arizona
Welcome Center
Parking Lot

Figure 2



**PRELIMINARY PLAN
NOT FOR CONSTRUCTION**

Yuma Arizona Welcome Center Parking Lot EA

FIGURE 3

Nicklaus Engineering Inc.
1851 West 24th Street P.O. Box 6029
YUMA, ARIZONA 85364 (928)344-8374
Email: nel@nelaw.com

SCALE:	AS SHOWN
DATE:	OCTOBER 2008
DES. BY:	M.G.
DRAWN BY:	J.A.R.
SURVEYED BY:	M.G.
JOB. No.:	008-0295
FILE No.:	XX-XX-XX

SHEET	-
OF	-

THE USE OF THESE PLANS AND SPECIFICATIONS SHALL BE LIMITED TO THE ORIGINAL SITE AND WORK THEY WERE PREPARED AND PUBLISHED. REVISIONS OR MODIFICATIONS BY ANY METHOD, IN WHOLE OR IN PART, WITHOUT THE WRITTEN CONSENT OF THE ENGINEER, IS EXPRESSLY FORBIDDEN. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES.

3.0 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

To comply with Council of Environmental Quality (CEQ) requirements for analytical and concise environmental documents (40 CFR 1502.2), resources identified as potentially affected by the Proposed Project or as a special concern are described in this section. Environmental resources could be affected during implementation of the Proposed Project. The effect, or impact, is defined as any change or alteration, produced directly or indirectly by the Proposed Project, to the pre-existing condition of the environment.

This EA evaluated the resource elements below in relation to the Proposed Project to determine the potential for both adverse and beneficial effects. Only the elements of the environment that could be affected by the Proposed Project would be discussed in detail.

Resources Not Evaluated:

- Farmlands, Prime/Unique
- Wild & Scenic Rivers
- Wetlands/Riparian Zones

Farmlands, Prime/Unique

The project area meets the definition of “land committed to other uses” as per the Farmland Protection Policy Act (FPPA) because as the land is designated “Urbanized Area” according to U.S. Census Bureau maps. Lands meeting this definition are not subject to the FPPA. The land identified for this Proposed Project is not defined as prime or unique farmland.

Wild & Scenic Rivers

A wild, scenic or recreational river area eligible to be included in the system is a free-flowing stream and the related adjacent land area that possesses one or more of the values referred to in the Act. Every wild, scenic or recreational river in its free-flowing condition, or upon restoration to this condition, shall be considered eligible for inclusion in the national wild and scenic rivers system. The Colorado River is located north of the Proposed Project site. The Colorado River is not listed as a Wild & Scenic River. There are no Wild & Scenic Rivers near the Proposed Project.

Wetlands/Riparian Zones

Wetlands are areas on which water covers the soil or if water is present either at or near the surface of that soil. Water can also be present within the root zone, all year or just during various periods of time of the year. The Yuma East Wetlands is located east of the Proposed Project and Yuma West Wetlands is located west of the Proposed Project. The Proposed Project will have no affect on wetlands. Wetlands are not present in the project area.

Resources Evaluated:

- Noise
- Air Quality
- Hazardous and Solid Waste
- Water Resources
- Land Use/Ownership
- Biological Resources
- Cultural/Historic Resources
- Geology and Soils
- Indian Trusts Assets
- Socioeconomics
- Environmental Justice

3.1 NOISE

3.1.1 Affected Environment

Noise is usually defined as sound that is undesirable because it interferes with speech communication and hearing, is intense enough to damage hearing, or is otherwise annoying (unwanted noise). The response of individuals to similar noise events is diverse and influenced by many factors, including the type of noise, the perceived importance of the noise and its appropriateness in the setting, the time of day and the type of activity during which the noise occurs, and the sensitivity of the individual.

Sound is a physical phenomenon consisting of minute vibrations that travel through a medium, such as air, and are sensed by the human ear. Sound is generally characterized by several variables, including frequency and amplitude. Frequency describes the sound's pitch and is measured in Hertz (Hz), while amplitude describes the sound's loudness and is measured in decibels (dB).

The method commonly used to quantify environmental sounds consists of evaluating all frequencies of a sound according to a weighting system that reflects that human hearing is less sensitive at low frequencies and extremely high frequencies than at the mid-range frequencies. This is called "A" weighting, and the dB level measured is called the A - weighted sound level (dBA). In practice, the level of a noise source is conveniently measured using a sound level meter that includes a filter corresponding to the dBA curve. Unless specifically noted, the use of A weighting is always assumed with respect to environmental sound and community noise even if the notation is dB instead of dBA.

The amplitude of sound is measured using a logarithmic scale with units of dB. A sound level of 0 dBA is approximately the threshold of human hearing and is barely audible under extremely quiet listening conditions. This threshold is the reference level against which the amplitude of other sounds is compared. Normal speech has a sound level of approximately 60 dBA.

Sound levels above about 120 dBA begin to be felt inside the human ear as discomfort and eventually pain at still higher levels.

Although a dBA reading may adequately indicate the level of environmental noise at any instant in time, community noise levels vary continuously. Most ambient environmental noise includes a mixture of noise from nearby and distant sources that creates an ebb and flow of sound, including some identifiable sources plus a relatively steady background noise in which no particular source is identifiable. A single descriptor called the equivalent sound level (L_{eq}) is used to describe sound that is constant or changing in level. L_{eq} is the energy-mean dBA during a measured time interval. It is the "equivalent" constant sound level that would have to be produced by a given constant source to equal the acoustic energy contained in the fluctuating sound level measured during the interval. In addition to the energy-average level, it is often desirable to know the acoustic range of the noise source being measured. This is accomplished through the maximum L_{eq} (L_{max}) and minimum L_{eq} (L_{min}) indicators that represent the root-mean-square (RMS) maximum and minimum noise levels measured during the monitoring interval. The L_{min} value obtained for a particular monitoring location is often called the acoustic floor for that location.

Federal, state and local agencies regulate environmental and occupational, as well as other aspects of noise. Federal and state agencies generally set noise standards for mobile sources, while regulation of stationary sources is left to local agencies. Local regulation of noise involves implementation of General Plan policies and noise ordinance standards, which are general principles intended to guide and influence development plans. Noise ordinances set forth specific standards and procedures for addressing particular noise sources and activities. OSHA sets and enforces noise standards for worker safety.

Occupational exposure to noise is regulated by OSHA. The standard stipulates that protection against the effects of noise exposure shall be provided when sound levels exceed 90 dBA over an 8 - hour exposure period. Protection shall consist of feasible administrative or engineering controls. If such controls fail to reduce sound levels to within acceptable levels, personal protective equipment shall be provided and used to reduce exposure of the employee. Additionally, a Hearing Conservation Program must be instituted by the employers whenever employee noise exposure equals or exceeds the Action Level of an 8 - hour time-weighted average (TWA) sound level of 85 dBA. The Hearing Conservation Program requirements consist of periodic area and personal noise monitoring, performance and evaluation of audiograms, provision of hearing protection, annual employee training, and record keeping.

The Proposed Project is situated in the eastern portion of a residential area. Ambient noise in the area is marginal with the majority of the noise associated with localized vehicle traffic along First Street which borders the Proposed Project site to the south and Fifth Avenue which borders the site to the west.

The property located to the immediate east of the Proposed Project site is a weigh station operated by the Arizona Department of Transportation which borders Fourth Avenue, a main artery in Yuma.

3.1.2 Environmental Consequence/Impacts

Noise levels resulting from the Proposed Project would be almost entirely due to construction-related activities, which would result in a temporary increase in noise levels during daytime hours. The construction-related activities may cause localized impacts to people in the immediate vicinity of the project. Noise levels associated with construction activities may range from approximately from 75 to 85 A-weighted decibels within 50 feet of the activity. Noise impacts to residents are expected to occur only during daylight hours and are expected to be minor. Measures would be implemented to mitigate noise impacts to residents near the project area during construction activities. Noise levels would be reduced to low or none during nighttime hours.

3.1.3 Best Management Practices

The following Best Management Practice (BMPs) are recommended to mitigate any potential effects to noise from the Proposed Project:

- Adhere to the COY Noise Limitation Standards since construction will be within 300 feet of residential dwellings within the COY boundary.
- Minimize equipment idling.
- Mufflers or other noise-suppression technology will be used to reduce the noise level.
- Construction activities will be limited to daylight hours only.

3.1.4 No Action Alternative

Under the No Action Alternative noise levels would remain the same.

3.2 AIR QUALITY

3.2.1 Affected Environment

The Environmental Protection Agency (EPA), the Arizona Department of Environmental Quality (ADEQ), and local air pollution control districts determine the air quality attainment status of designated areas by comparing local air quality measurements from the state or local ambient air monitoring stations with the National and State Ambient Air Quality Standards (NAAQS). Those areas that meet NAAQS are classified as "attainment" areas; areas that do not meet the standards are classified as "nonattainment" areas. Areas that have insufficient air quality data may be identified as unclassifiable

areas. These attainment designations are determined on a pollutant-by-pollutant basis. Yuma County is currently classified as nonattainment for the PM₁₀ NAAQS. Yuma is an attainment area for the remaining criteria pollutants.

State Implementation Plan

The State Implementation Plan (SIP) is the cumulative record of all air pollution strategies, [state statutes](#), [state rules](#), and local ordinances implemented under Title I of the [Clean Air Act](#) by governmental agencies within Arizona. Revisions to Arizona's SIP must be submitted to the EPA by the director of ADEQ on behalf of the governor. Once approved by EPA as published in the [Federal Register](#) the provisions contained in the SIP revision become enforceable by the federal government as well as by the appropriate governmental entities of Arizona. The cumulative and complete record of SIP revisions that have been approved by EPA and federally enforceable in Arizona is called the "applicable Arizona SIP."

The first Arizona SIP submittal was in 1972. Because there have been so many changes to federal, state and local air quality programs in the last 30 years, there is not a single definitive document that contains all of the SIP requirements.

In addition to ADEQ, there are local air planning organizations that share in the responsibility of completing SIP requirements. The Maricopa Association of Governments and the Pima Association of Governments are metropolitan planning organizations that have been delegated the responsibility to complete SIP revisions for their respective county areas.

The Yuma PM₁₀ SIP that was submitted to the EPA on November 15, 1991 is in the process of being withdrawn by ADEQ. A revision to the PM₁₀ SIP was submitted to EPA on July 12, 1994, and was determined by EPA to be complete but was never approved. ADEQ is also withdrawing this plan. ADEQ began working with stakeholders in the Yuma area in July 2001 to develop a maintenance plan based on data that showed no exceedances of the [NAAQS](#) for PM₁₀. On August 18, 2002, however, the Yuma area experienced a violation of the 24-hour NAAQS due to high winds associated with a large thunderstorm. The high wind event data met all the technical criteria to be considered a natural event. Consequently, work on the Yuma Maintenance Plan was temporarily suspended because EPA policy required the development of a Natural Events Action Plan (NEAP) to prevent the area from being downgraded to a serious nonattainment area. The NEAP was developed by the Yuma area stakeholders and ADEQ, and submitted to EPA in February 2004. A [NEAP Implementation Report](#) was submitted to EPA on August 17, 2005.

ADEQ submitted a maintenance plan for the Yuma area to the EPA on August 14, 2006, which, upon EPA's approval, will re-designate the area to

attainment for PM₁₀. The NEAP and maintenance plan will be re-evaluated every 5 years.

3.2.2 Environmental Consequences/Impacts

Construction of the Proposed Project would require the use of heavy machinery to prepare the site for asphalt and concrete applications. The use of this equipment would require the burning of fossil fuels such as gasoline and diesel fuel. The result of incomplete combustion of these fuels releases pollutants into the air. The by-products are suspended particulate matter, sulphur dioxide, oxides of nitrogen, carbon monoxide, volatile organic compounds, and lead in the form of dust, fumes, mist, and smoke which are known to cause harm to air quality. The burning of such fuels would temporarily increase the concentration of these air pollutants in the Proposed Project area. These effects would only be during the grading process, asphalt and concrete preparation phases and are expected to be short in duration.

Construction of the Proposed Project would temporarily increase dust caused by clearing and grading of the project site. This grading may temporarily create a source of blowing dust on the cleared land. These effects would only be during the grading process and are expected to be short in duration.

3.2.3 Best Management Practices

The following BMPs are recommended to mitigate impacts to air quality:

- Construction equipment and vehicles used during construction will be properly maintained to minimize emissions and equipment idling will be limited.
- Project personnel will employ dust and particulate control measures as prescribed by the Storm Water Pollution Prevention Plan (SWPPP).
- A project sign with a phone number for citizens to report dust complaints will be displayed at the project site.

3.2.4 No Action Alternative

Under the No Action Alternative air quality in the area would not change from its present readings.

3.3 HAZARDOUS MATERIALS/WASTE AND SOLID WASTE

3.3.1 Affected Environment

Hazardous Materials

EPA regulation of hazardous chemicals is limited. Most regulation of these materials is by Occupational Safety and Health Administration. These regulations address:

- Storage and handling of flammable liquids (29 CFR 1910.106)
- Storage of compressed gases (29 CFR 1910). This standard incorporates by reference, Compressed Gas Association Pamphlets C-6 1968 and C-8 1962.
- Communicating chemical hazards to employees under the Laboratory Standard (29 CFR 1910.1450) and the Hazard Communication Standard (29 CFR 1910.1200).
- Most state, tribal or local jurisdictions address hazardous material storage through the use of building codes which can incorporate Building Officials and Code Administrator, National Fire Protection Codes (e.g., NFPA 10, 30, 45 and 101), and Uniform Building Code.
- In addition to OSHA and building code requirements, hazardous material requirements are also promulgated by the Department of Transportation (49 CFR 171-179 and 14 CFR 103).

Hazardous Waste

The Resource Conservation and Recovery Act (RCRA) gave the Environmental Protection Agency the authority to control hazardous waste. This includes the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA also set forth a framework for the management of non-hazardous wastes.

Order 1050.19 states that an Environmental Due Diligence Audit should be conducted to evaluate subject properties for potential hazardous substances contamination.

Proposed Project site. The site has documented groundwater contamination resulting from a release of fuel from an underground storage tank (Nicklaus 2008).

Solid Waste

Resource Conservation and Recovery Act (RCRA) Subtitle D is the statute that focuses state and local governments as the primary planning, regulating, and implementing entities for the management of non-hazardous solid waste, or municipal refuse. EPA provides these state and local agencies with information, guidance, policy and regulations through workshops and publications to help states and the regulated community make better decisions in dealing with waste issues, to reap the environmental and economic benefits of source reduction and recycling of solid wastes, and to require upgrading or closure of all environmentally unsound disposal units.

Non-hazardous solid waste/municipal refuse is typically comprised of biodegradable waste (e.g., food and kitchen waste, green waste, paper); recyclable material (e.g., paper, glass, bottles, cans, metals, certain plastics); inert waste (e.g., construction and demolition waste, dirt, rocks, debris); and composite wastes (e.g., waste clothing, waste plastics such as toys).

Construction of the proposed parking lot and future Yuma, Arizona Welcome Center would generate small quantities of hazardous materials/waste and solid waste. The following list identifies hazardous materials/waste and solid waste that may be found on the construction site.

Potential Hazardous Materials/Wastes

- Gasoline
- Diesel Fuel
- Engine Oil
- Hydraulic Fluid
- Transmission Fluid
- Solvents
- Sealants
- Greases
- Battery Acid
- Engine Coolant

Solid Waste

- Concrete
- Asphalt
- Wood
- Rebar

The potential for soil contamination is reduced by requiring prompt removal of petroleum and other hazardous materials.

3.3.2 Environmental Consequences/Impacts

If previously unidentified or suspect hazardous materials are encountered during construction, work would stop at that location and the COY would be contacted. Such locations would be investigated and proper action implemented prior to continuation. There is a limited potential for contamination from incidental petroleum, oil, or lubricant (POL) spills from construction equipment. Spills are not expected and would be easily preventable through implementation of a site-specific spill contingency plan; however, if one did occur it likely would be minimal and would be addressed immediately.

3.3.4 Best Management Practices

The following BMPs are recommended to mitigate any potential effects of hazardous or solid wastes within the project site:

- A site-specific spill contingency plan will include training and reporting guidelines for employees in the use of the required equipment, in addition to proper handling and storage of potentially hazardous materials or POLs.
- If previously unidentified or suspect hazardous materials are encountered during construction, work will stop immediately and the COY will be contacted.
- Construction equipment shall only be fueled in area/areas designated in the SWPPP.
- Any vehicle or piece of equipment not working as prescribed by the manufacturer shall be promptly removed from the construction site to prevent the possibility of site contamination.

3.3.5 No Action Alternative

Under the No Action Alternative the Proposed Project site would not be subject to hazardous material/waste and solid waste associated with construction equipment.

3.4 WATER RESOURCES

3.4.1 Affected Environment

Surface Water

The Proposed Project site contains no surface water. The East Main Canal and the Colorado River are the closest sources of surface water. The East

Main Canal and the Colorado River are located directly north of the Proposed Project site.

The water for the East Main Canal is diverted from the All-American Canal to the forebay of the Siphon Drop Power plant on the Yuma Main Canal, then is distributed over the Valley Division and a portion of the Reservation Division. Some Reservation Division lands are served directly from turnouts on the All-American Canal above Siphon Drop. The Yuma Main Canal crosses underneath the Colorado River near Yuma in an inverted siphon to supply the West Main, Central, and East Main Canals of the Valley Division, which flow south and irrigate land to the Mexican border.

The Colorado River is the primary river of the American Southwest, draining somewhere in the vicinity of 242,000 square miles of land, from the states of Wyoming, Colorado, Utah, New Mexico, Arizona, Nevada and California. The Green River is the primary tributary of the Colorado River, and until 1921 the Colorado River did not technically begin until the Grand and Green Rivers joined together in Utah. In that year the Grand River was renamed as the Colorado River, at the request of the State of Colorado.

The Colorado River has a multitude of dams strategically position along the river to prevent flooding, allow usage of the river water, and to control river flow from steep gradient descents. However, below the Black Canyon the river lessens in gradient and in its lower course flows in a broad sedimentary valley's distinct estuarine plain upriver from Yuma, where it is joined by the Gila River. The channel through much of this region is bedded in a dike-like embankment lying above the floodplain over which the escaping water spills in time of flood. This dike cuts off the flow of the river to the remarkable low area in southern California known as the Salton Sink, Coachella Valley, or Imperial Valley. The Salton Sink is located below sea level; therefore, the descent from the river near Yuma is very much greater than the descent from Yuma to the gulf.

The lower course of the river, which forms the border between Baja California and Sonora, is essentially a trickle or a dry stream today due to use of the river as Imperial Valley's irrigation source. Prior to the mid 20th century, the Colorado River Delta provided a rich estuarine marshland that is now essentially desiccated, but nonetheless is an important ecological resource (Wikipedia 2008).

The Main Outlet Drain Extension is (MODE) located north of the Proposed Project site. The primary feature of the MODE is to convey the drainage flows from the Wellton-Mohawk Main Conveyance Channel to the Bypass Drain below Morelos Dam.

Groundwater

When rain falls to the ground, the water does not stop moving. Some of it flows along the surface in streams or lakes, some of it is used by plants,

some evaporates and returns to the atmosphere, and some sinks into the ground.

Groundwater is water that is found underground in cracks and spaces in soil, sand and rocks. The area where water fills these spaces is called the saturated zone. The top of this zone is called the water table and it may be only a foot below the ground's surface or it may be hundreds of feet down.

Groundwater can be found almost everywhere. The water table may be deep or shallow; and may rise or fall depending on many factors. Groundwater is stored in – and moves slowly through – layers of soil, sand and rocks called aquifers. The speed at which groundwater flows depends on the size of the spaces in the soil or rock and how well the spaces are connected.

Topography

According to the USGS Topographic Map, the site is located at an elevation of approximately 135' above sea level (Nicklaus 2008).

Groundwater Elevation

According to the Bureau of Reclamation's Groundwater Elevation Map from November 2007, the groundwater elevation for the site is approximately 114' above sea level (Nicklaus 2008).

Groundwater Flow

According to the Bureau of Reclamation's Groundwater Elevation Map from November, 2007 the general direction of groundwater flow is to the west-northwest in this area (Nicklaus 2008).

Groundwater Conditions

In the early 1990's, five Monitoring Wells (MW) were installed on the Proposed Project site to monitor groundwater contamination from a Leaking Underground Storage Tank located at the Chevron Service Station at 100 South 4th Avenue. This service station is located southeast of the Proposed Project site and contains an open Leaking Underground Storage Tank case file issued by ADEQ. This site is located less than 150 feet hydraulically upgradient (upstream) of the Proposed Project site. The Chevron Service Station has documented groundwater contamination resulting from a release of fuel from an underground storage tank (Nicklaus 2008).

According to Arizona Department of Water Resources, three of the five MW's have been abandoned in accordance with Arizona Revised Statute 45-594 and Arizona Administrative Code R12-15-816 since the remediation has been completed in this area. The two remaining MWs are identified as 55-530620 installed by B.L. Weber Group Inc. and installed to a depth of 45 feet below

ground surface. The information on the second well is not available. These MWs are located in the southwest quadrant of the project site and still remain open. These wells provide direct access to groundwater therefore should be monitored regularly as long as they remain active. Once the wells are no longer required they should be abandoned in accordance with Arizona Revised Statute 45-594 and Arizona Administrative Code R12-15-816 to prevent accidental contamination of the groundwater. BOR has initiated the process to have the two MWs transferred to their jurisdiction. BOR currently samples these wells on a regular basis to monitor the groundwater in the area to ensure groundwater contamination has not occurred.

The two MW on site will not be impacted by the construction of the Yuma, Arizona Welcome Center Parking Lot and future Welcome Center.

Water Quality

In 1995, the ADEQ conducted a baseline study to assess the groundwater quality of the Yuma Groundwater Basin (YGB). The study found that YGB groundwater had no dominant water chemistry and is chemically similar to Colorado River water (ADEQ 1998). Groundwater quality differences were a function of length of time an area had been irrigated, depth to groundwater, and the source of irrigation water. The laboratory results revealed no detection of pesticides. This data suggests that regional groundwater quality conditions in the YGB generally support drinking water use, but residents may prefer to use treated water for some domestic purposes (ADEQ 1998).

A Phase I Environmental Assessment conducted on the Proposed Project site by Nicklaus Engineering, Inc., revealed ground water contamination at the Chevron Service Station located at 100 South 4th Avenue. This service station is located southeast of the Proposed Project site and contains an open Leaking Underground Storage Tank case file issued by ADEQ. This site is located less than 150 feet hydraulically upgradient (upstream) of the Proposed Project site. The site has documented groundwater contamination resulting from a release of fuel from an underground storage tank (Nicklaus 2008).

3.4.2 Environmental Consequences/Impact

Impacts to water resources from the Proposed Project are not anticipated to occur on or off site. No changes to drainage patterns are expected. Spills from construction activity which may infiltrate the soil, although unlikely, could degrade groundwater quality. If such a spill should occur, the impacts are anticipated to be temporary and minimal, because all spills would be attended to immediately.

The two MWs on site would not be impacted by the construction of the Yuma, Arizona Welcome Center Parking Lot and future Welcome Center. The MWs will be located in the retention basin scheduled to be constructed in the southwest corner of the Proposed Project. The well casings of both wells

would be modified, if necessary, to allow the well casing to protrude above the highest elevation of the retention basin to prevent surface water from entering the wells in the event of a rain. The wells would be locked to prevent unauthorized access to the groundwater.

3.4.3 Best Management Practices

The following BMPs are recommended to mitigate any potential effects to water quality from the project:

- Haul oils or chemicals to an approved site for disposal to address the prevention of oil products from entering into groundwater.
- A Stormwater Pollution Prevention Plan (SWPPP) will be generated by the contractor that conforms to the Arizona Construction General Permit. This document shall include but not be limited to the Notice of Intent, Permit Authorization, General Permit, Notice of Termination, all records of inspections and activities which are created during the course of the project, and other documents as may be included by reference to the SWPPP.
- The General Contractor and all subcontractors involved with this construction activity that disturbs site soil or who implement the pollutant control measure identified in the Stormwater Pollution Prevention Plan must comply with the requirements of the Arizona Pollutant Discharge Elimination System, the National Pollutant Discharge Elimination Systems General Permit, and any local governing agency having jurisdiction concerning erosion and sedimentation control.
- A SWPPP will be generated by the contractor and approved by the BOR and the COY prior to any ground disturbance.

3.4.4 No Action Alternative

Under the No Action Alternative the Proposed Project site would not experience the possibility of groundwater becoming contaminated from construction activities.

3.5 LAND USE/OWNERSHIP

3.5.1 Affected Environment

The study area for the land-use inventory is an area approximately 1 mile from all sides of the proposed Yuma, Arizona Welcome Center Parking Lot and future Welcome Center.

In general, the proposed location for the construction of the Yuma, Arizona Welcome Center Parking Lot and future Welcome Center is located primarily in a residential part of town in Yuma Arizona. Primary land uses within the study area include agriculture, residential, retail, and transportation. The East Main Canal flows close to the northern section of the proposed Yuma, Arizona Welcome Center Parking Lot and Welcome Center. Existing land use designations are shown on Figure 3.

In general, the surrounding area is comprised of:

- Single family residences
- Multi-family apartments
- Retail business
- Public use areas
- Public and quasi-public use areas
- Retail business areas
- Light Industrial area

The study area includes federal lands withdrawn for and administered by Reclamation, as well as lands under jurisdiction of Bureau of Indian Affairs, and Arizona State Trust. Residential areas are located in the study area and are typically single and multi-family dwellings.

3.5.2 Environmental Consequences/Impacts

The Yuma, Arizona Welcome Center Parking Lot and future Welcome Center would be on the east side of Fifth Avenue where no residential units will be located. Once the Proposed Project is completed, the property would be released to the COY. The COY would be responsible for maintaining the property.

3.5.3 No Action Alternative

Under the No Action Alternative the Proposed Project site would not be converted to the Yuma, Arizona Welcome Center parking Lot and future Welcome Center. The land would continue to be used for residential dwellings and raising livestock.

3.6 BIOLOGICAL RESOURCES

3.6.1 Affected Environment

Order 1050.1E under Section 8 contains the Statute and Regulations and Guidance for fish, wildlife, and plants. In the process of conducting the EA, coordination will be initiated with the appropriate agencies. Fish and Wildlife Coordination Act requires that agencies consult with the State Wildlife agencies and the Department of the Interior (FWS) concerning the

conservation of Wildlife resources where the water of any stream or water body is proposed to be controlled or modified by a Federal agency or any public or private agency operating under Federal permit.

A site visit to the Proposed Project area was conducted on October 20, 2008. The Proposed Project is located in Yuma Arizona at the intersection of First Street and Fifth Avenue. Assessor's Parcel Number 110-78-063, located in Township 8S, Range 23E, Section 21 is designated as Lot 1, and is located on the south side of the East Main Canal.

Climate

The Yuma Desert is very dry, usually receiving less than 100 millimeter (mm) of rainfall per year (Phillips and Comus 2000). Temperatures are high in the summer, with a maximum near 120 degrees Fahrenheit. Winter maximum temperatures average in the upper 60 degrees Fahrenheit range. Daily variations of 30 to 50 degrees are common due to the low cloudiness and lack of vegetation cover to hold the heat. Low relative humidity accompanies the high summer temperatures, with daytime relative humidity readings frequently between 5 to 10 percent. Precipitation occurs primarily in the winter months (from October to June). Because of the high temperatures and low precipitation, the Lower Colorado River Valley Subdivision is the driest of the Sonoran desert subdivision (Phillips and Comus 2000).

Vegetation

The Proposed Project is located in the Lower Colorado River Valley Subdivision of Sonoran desertscrub. The area is vacant of most typical native vegetation such as creosote bush (*Larrea tridentate*), white bursage (*Ambrosia dumosa*), big galleta grass (*Pleuraphis rigida*), mesquite (*Prosopis* sp.), sweetbush (*Bebbia juncea*), smoke tree (*Psoralea argemone*) etc.

The Proposed Project is located in a residential area northeast of the intersection at First Street and Fifth Avenue. The primary ground cover is Bermuda grass (*Cynodon dactylon*). Plants documented during the site visit are listed in Table 1.

**TABLE 1
PLANTS DOCUMENTED DURING SITE VISIT**

Family	Common Name	Scientific Name
Nyctaginaceae	Blue palo Verde	<i>Parkinsonia florida</i>
Moraceae	White Mulberry	<i>Morus alba</i>
Apocynaceae	Oleander	<i>Nerium oleander</i>
Poaceae	Bermuda grass	<i>Cynodon dactylon</i>
Myrtaceae	Eucalyptus	<i>Eucalyptus camaldulensis</i>
Oleaceae	Velvet ash	<i>Fraxinus velutina</i>
Vitaceae	Canyon grape	<i>Vitis arizonica</i>
Moraceae	Benjamin's Fig	<i>Ficus benjamina</i>
Fabaceae	Velvet mesquite	<i>Prosopis velutina</i>
Cactaceae	Prickly pear cactus	<i>Opuntia chlorotica</i>
Agavaceae	Blue agave	<i>Agavae tequilana</i>

Wildlife

The vertebrate fauna of the Proposed Project area include some species that are highly adapted to life in the hot, arid conditions. The Kangaroo Rats and Pocket Mice, for example, are able to complete their life cycle without free water, obtaining all of their requirements through metabolic processes. Behavioral adaptations such as a totally nocturnal activity pattern also contribute to their ability to survive.

The Western Burrowing Owl inhabits open areas in deserts, grasslands, and agricultural and range lands. They use well-drained areas with gentle slopes and sparse vegetation and may occupy areas near human habitation, such as golf courses and airports (Dechant et al. 1999; Ehrlich et al, 1988; Terres 1980). Burrowing Owls often select burrows where surrounding vegetation is kept short by grazing, dry conditions, or burning (Dechant et al. 1999; Hjertaas et al. 1995). In Arizona, Burrowing Owls prefer grasslands, creosote bush/bursage desert scrub communities, and agricultural lands (de Vos 1998).

Suitable habitat for the Burrowing Owl is present in the project area. The project area currently contains two residential units, a garage, grazing area, and horses. Given the size of the project area and the limited range of the horses within the project area, Western burrowing owls have potential to occur at or near the project site.

Mammals and Reptiles

Mammals and reptiles throughout the study area are sparse. White-footed Mice (*Peromyscu spp.*) and Pocket Mice (*Perognathus spp.*) are likely to be present in limited numbers in the project area along with the Gopher Snake (*Pituophis catenifer*).

Birds

Given the habitat type in the Proposed Project area, bird species diversity in the project area is low. Characteristic terrestrial species include Albert's Towhee (*Pipilo aberti*), Western Kingbird (*Tyrannus verticalis*), Common Yellowthroat (*Geothlypis trichas*), Hooded Oriole (*Icterus cucullatus*), Gila Woodpecker (*Melanerpes uropygialis*), Gambel's Quail (*Callipepla gambelii*), and Gnatcatcher (*Polioptila melanura*)

Fish

No fish are present in the Proposed Project area.

Federally Listed and Special Status Species

Special status species are those wildlife and plant species, which because of loss of habitat and/or decline in their numbers, have been listed by the federal and/or state government as species of concern. The U.S. Fish and Wildlife Service (USFWS) maintains a list of threatened and endangered species, as well as species that are candidates for such listings under guidelines of the Endangered Species Act of 1973 (ESA), as amended. The U.S. Forest Service (Forest Service) maintains its own list of Forest Service Sensitive Species. The Arizona Game and Fish Department (AZGFD) monitors Wildlife Species of Special Concern in Arizona (WSC), and the Arizona Department of Agriculture (ADA) provides protection for native plant species under the Arizona Native Plant Law (ANPL).

The Arizona Office of the USFWS requests that information on threatened or endangered species for specific projects be obtained from their Internet website. The list of federally protected species for Yuma County was obtained from the USFWS website and was reviewed in preparing this EA. Information obtained from the AZGFD includes records from their Heritage Data Management System (HDMS) within 3 miles of the project limits. The HDMS also includes listings for ESA, Forest Service, BLM, WSC, and ANPL species. The HDMS also includes the former federal species of concern, under the ESA category, which are now being monitored by the AZGFD for the USFWS. Since there is always potential for sensitive species to be present for which there are no known records, the full HDMS list for Yuma County was also reviewed. Federally listed threatened, endangered, and other sensitive species of animals and plants that were thought to have some potential for occurring within the project study area are listed in Table 2. The table includes a column listing the probability for each species occurring within the project study area. Background information, habitat suitability analyses, and potential impacts and effects of the Proposed Project on the species listed in Table 2 are located in Appendix A.

Former federal species of concern have no federal protection, but were species under an earlier classification that are currently being monitored by the AZGFD for the USFWS.

**TABLE 2
FEDERALLY LISTED SPECIES**

Scientific Name	Common Name	Federal Status	Potential to Occur	Rationale
<i>Haliaeetus leucocephalus</i>	Bald Eagle	Endangered	None	No Habitat
<i>Antilocapra americana sonoriense</i>	Sonoran Pronghorn	Endangered	None	Outside of current range
<i>Xyrauchen texanus</i>	Razorback Sucker	Endangered	None	Outside of current range
<i>Empidonax traillii extimus</i>	Southwestern Willow Flycatcher	Endangered	Low	No Habitat
<i>Rallus longirostris yumanensis</i>	Yuma Clapper Rail	Endangered	None	No Habitat
<i>Coccyzus americanus</i>	Yellow-billed Cuckoo	Candidate	None	No Habitat
<i>Pelecanus occidentalis californicus</i>	California Brown Pelican	Endangered	None	No Habitat

3.6.2 Environmental Consequences/Impacts

Vegetation

The Proposed Project would have no impact on native vegetation in the surrounding area. The project site is currently occupied by two residential units, a garage, grazing area, and horses. The project site is bordered by two paved roads, Fifth Street to the west and First Street to the south. The East Main Canal borders the project site to the north. Vegetation in the project site is heavily traveled and no native vegetation was observed during the site visit.

Wildlife

The Proposed Project would have no effect on state or federally listed species since there are state or federally listed species in the project area. The Proposed Project would have no effect on Migratory birds since they will avoid the project site until construction is complete. The project site is currently occupied by two residential units, a garage, grazing area, and horses. Clearing of the proposed project area will have minimum effect on existing wildlife.

3.6.3 Best Management Practices

The following BMPs are recommended to mitigate impacts to biological resources:

- A qualified biological monitor would be on call to identify the presence of the Burrowing Owl identification and signs. If Burrowing Owls are

found within the work area, the monitor will mark burrows for avoidance during project construction and arrange for the relocation of the Burrowing Owls.

3.6.4 No Action Alternative

Under the No Action Alternative the Proposed Project site would not be constructed and the biological setting would remain unaltered. Wildlife currently inhabiting the site would continue to flourish and not be displaced by the construction of the Proposed Project.

3.7 CULTURAL RESOURCES/HISTORIC RESOURCES

3.7.1 Affected Environment

The National Historic Preservation Act (NHPA) of 1966, as amended, establishes the Advisory Council on Historic Preservation (ACHP) and the National Register of Historic Places (NRHP) within the National Park Service (NPS). Section 110 governs Federal agencies responsibilities to preserve and use historic buildings; designate an agency Federal Preservation Officer (FPO); identify, evaluate, and nominate eligible properties under the control or jurisdiction of the agency to the National Register. The Archaeological and Historic Preservation Act of 1974 provides for the preservation of historic American site, buildings, objects, and antiquities of national significance by providing for the survey, recovery, and preservation of historical and archaeological data which might other wise be destroyed or irreparably lost due to a Federal, Federally licensed, or Federally funded action.

Yuma Irrigation Project (YIP) Headquarters

Assessor's Parcel Number 110-78-063, located in Township 16S, Range 22E, Section 35 is designated as Lot 1, and is located on the north and south sides of the East Main Canal.

The project area is a parcel of Reclamation land that was once part of the Yuma Irrigation Project (YIP) Headquarters (Site AZ X:6:12). With exception of Lot 1, which remains in federal ownership, the former headquarters has been subsumed by the Yuma Crossing National Historic Landmark and is listed in the National Register of Historic Places based on its early military history (period of significance, 1800-1899). Reclamation's history at this site was not taken into consideration at the time.

Following the formation of the YIP, the COY grew quickly and Reclamation's Yuma Project Headquarters was soon surrounded by an extensive residential neighborhood. However, during Reclamation's early occupation of the Depots grounds, there was little or no housing available to YIP employees. In 1903, tent houses were set up and four houses were built on the small block of government land that borders North Fifth Avenue and First Street, south of

the East Main Canal. The actual date of construction is unknown. Since construction of the four houses, two of the four houses have either been demolished or moved to a separate location. Only two of the four original houses remain on the property.

In April, 2003, the YIP, its individually eligible districts, features, and contributing elements in Arizona, was determined to be eligible for the NRHP by the Arizona State Historic Preservation Office (SHPO). Reclamation's YIP Headquarters is one of the eligible districts. Certain buildings and features, such as the ditchriders' houses, were left unevaluated during the original Historic Yuma Irrigation Project Inventory in 1992. As a result the houses were not recorded until February 2003 (AZ:X:6:45). Based on various archival sources, the house at 185 North Fifth Avenue is viewed as a contributing element of the eligible YIP Headquarters District. The house at 165 North Fifth Avenue is not considered to be a contributing element based on its dilapidated condition, excessive alterations, and strong implications that it was moved to the YIP property from another location. The Cultural Resources Inventory can be viewed in Appendix B.

Quechan Tribal History

Quechan tradition describes their creation, along with that of other lower Colorado River tribes, by their culture hero, Kukumat. After Kukumat died, his son Kumastamxo took the people to the sacred mountain Avikwame, near the present city of Needles, California. There he gave them bows and arrows and taught them how to cure illness and then sent them down from the mountain in various directions. The ancestors of the Quechan settled along the Colorado River to the south of the Mohave. Little archaeological evidence of the Quechan's past has survived the Colorado's flooding. The Quechan and some of the other lower Colorado tribes may have begun as rather small patrilineal bands that gradually grew into larger "tribal" groupings. What caused the formation of these tribes is not altogether clear; the interrelated factors probably included population increase from a generally reliable and abundant riverbottom horticulture; competition with neighboring riverine groups for control of lucrative trade routes between the Pacific Coast and cultures to the east of the Colorado (including, for a time, the great Hohokam Culture between about A.D. 1050 and 1200); and increasingly strong social bonds between small groups living next to one another along the river's banks.

In 1540 a Spanish expedition under Hernando de Alarcón was the first group of Europeans to reach Quechan territory. For the next three and a half centuries the Quechans were in intermittent contact with various Spanish, Mexican, and American expeditions intent on developing the land route between southern California and the interior to the east of the Colorado River. The Quechan controlled the best crossing point along the lower Colorado, just to the south of where it is joined by the Gila. During this time, too, warfare was endemic between the Quechan and other tribes living along the Colorado and Gila rivers. No permanent white settlements were attempted at the crossing until 1779, when Spanish settlers and soldiers arrived. In 1781, after

two years of Spanish depredations, the Quechans attacked them, killing some and driving the others away. The tribe retained control of the area until the early 1850s, when the U.S. Army defeated them and established Fort Yuma at the crossing. Just across the river from the fort a small white American town soon sprang up to cash in on the increasing overland traffic between California and the East, and to the north and south along the Colorado itself. A reservation was set aside for the Quechan on the west (California) side of the river in 1884.

No artifacts have been retrieved from the Proposed Project site. No present or future archeological excavation are planned for this location.

3.7.2 Environmental Consequences/Impacts

The Proposed Project requires the relocation of the ditchriders' house located at 185 North Fifth Avenue to the northern section of the project site. Prior to the relocation of the ditchriders' house the following shall be considered to mitigate adverse affects of relocating the house:

- Consultation and assessment by a historic architect as well as some level of Historic American Building Survey recording is recommended.
- Extensive planning shall occur to ensure the house is relocated in-tact.
- During the relocation of the house, extreme care shall be taken to preserve the integrity of the structure to ensure the structure maintains its historic value.
- If previously unidentified archaeological or historic resources are discovered during the relocation of the house, work shall stop and immediately notify the Reclamation Environmental Program Manager at 928-343-8268 and Regional Archaeologist. All reasonable steps will be taken to secure the preservation of those features.
- Archaeological sensitivity training shall be required for all contractor employees conducting ground disturbing activities.
- The Quechan Tribe will be provided a schedule for construction and will be notified immediately of any resources located subsurface. The City of Yuma will request a Tribal Monitor may be present during any ground disturbing activities.

3.7.3 No Action Alternative

Under the No Action Alternative the Proposed Project site would remain a residential setting. The residential unit located at 185 North Fifth Avenue viewed as a contributing element of the eligible YIP Headquarters District would not be renovated and preserved as part of the historical Yuma

Crossing National Historic Landmark and is listed in the National Register of Historic Places.

3.8 GEOLOGY AND SOILS

3.8.1 Affected Environment

The geology of the study area consists primarily of alluvial deposits of silt, and gravel due to depositional activities of the Colorado River.

The soil classification within the project area is identified as Indio Silt Loam. This deep, well drained, nearly level soil is on flood plains and alluvial fans. It formed in mixed alluvium. Elevation is 75 to 600 feet. The average annual precipitation ranges from 2 to 4 inches, the average annual air temperature ranges from 72 to 76 degrees F, and the average freeze-free period ranges from 250 to 325 days.

Typically, the surface layer is light brown silt loam about 6 inches thick. The underlying material to a depth of 60 inches or more is stratified, light brown very fine sandy loam silt. In some places the surface layer is very fine loam. Included with this soil in mapping are small areas of Glenbar silty clay loam, and Ripley silt loam.

Permeability of this Indio Soil is moderate. Potential rooting depth is 64 inches or more. Available water capacity is high. Surface runoff is medium, and the hazard of water erosion is slight.

The Yuma Region has the greatest risk of earthquake-induced ground shaking within the State of Arizona (Yuma Plan 2002). The threat of ground shaking is due to the proximity of the southernmost portion of the San Andreas Fault system that runs through California.

3.8.2 Environmental Consequences/Impacts

The Proposed Project may have short-term direct and indirect effects on local soil composition. Construction activity would temporarily increase the risk of soil erosion at the project site. However, soils exposed during construction would be subject to aeolian and alluvial erosional action. This impact would be reduced through the use of erosion control measures during construction.

3.8.3 Best Management Practices

The following BMPs are recommended to mitigate any potential effects to local soils from the Project:

- Soils, when replaced, should be compacted tightly to prevent any access erosion.

- A SWPPP shall be in place prior to any earth moving event and shall be adhered to closely for the duration of construction activities, and until the soil is stabilized.

3.8.4 No Action Alternative

Under the No Action Alternative the Proposed Project site would remain a residential setting. The residential units located on the site would remain. The soil would not be subject to the construction impacts.

3.9 INDIAN TRUSTS ASSETS

3.9.1 Affected Environment

It is Reclamation policy to protect Indian Trust Assets (ITAs), whenever possible, from adverse impacts caused by its programs and activities. ITAs are legal asset interests held in trust by the federal government for Indian Tribes or individual Indians. Types of actions that could affect ITAs include interference with the exercise of a water right, degradation of water quality where water right, impacts fish and wildlife where there is a hunting or fishing right, and noise near a land asset where it adversely affects use of the reserved land.

3.9.2 Environmental Consequences/Impacts

There will be no environmental consequences or impacts to Indian Trusts assets. No ITAs have been identified within the Proposed Project area.

3.9.3 No Action Alternative

Under the No Action Alternative the Proposed Project site would remain a residential setting. Under this alternative, no Indian Trusts Assets would be affected.

3.10 SOCIOECONOMICS

3.10.1 Affected Environment

This section describes the demographic and economic characteristics found in the study area and potential changes that could result from the Proposed Project. The primary socioeconomic affect associated with the construction of the parking lot include potential impacts to the project area, particular after the completion of construction.

Yuma County encompasses 5,514 square miles and acts as a crossroads for international and interstate trade in the Southwest. Yuma County has a population of 187,555. The racial composition consists of 71.6 percent white, 2.0 percent African American, 1.6 percent Native American, 1.1 percent Asian, and 21.5 other. "Other" is intended to capture responses from people who consider themselves of more than one race, such as Mulatto, Creole, and Mestizo. Half of Yuma County residents (55.9 percent) consider themselves to be of Hispanic heritage (Census Bureau 2007 American Community Survey). Hispanic heritage can be defined as persons of any race who trace their roots to Spain, Mexico, and the Spanish-speaking nations of Central America, South America, and the Caribbean.

Within Yuma County, the BLM accounts for approximately 15 percent of land ownership; DOD, approximately 40 percent; Indian reservations, less than 0.5 percent; the State of Arizona, approximately 6 percent; private, approximately 11 percent; Reclamation, approximately 1 percent; and other federal lands, approximately 28 percent (Yuma County Department of Developmental Services 2006).

Yuma County has a labor force of 75,980 persons. Major industries include agriculture, military, government, manufacturing, and public utilities (ADOC 2007). Median household income for the county in 2006 was \$37,457, less than the United States median of \$48,451 (Census Bureau 2007 American Community Survey).

The COY contains over 110 square miles. The COY has a population of 96,120. The racial composition consists of 67.6 percent white, 3.4 percent African American, 1.0 percent Native American, and 2.2 percent Asian and 23.5 other. Residents of Hispanic heritage account for 53.4 percent of all residents in the COY (Census Bureau 2007 American Community Survey).

The COY has a labor force of 43,616 persons. Major industries include agriculture, tourism, military, and light industry (ADOC 2007). Median household income for the city in 2006 was \$39,885, less than the United States median of \$48,451 (Census Bureau 2007 American Community Survey). The Profile of General Demographic Characteristics can be viewed in Appendix 3.

3.10.2 Environmental Consequences/Impacts

In general, the effects of the parking lot on existing social structures and economic activities are relatively small. Impacts related to construction are typically minimal, due to the small size and short-term workforce.

The Proposed Project will have a beneficial impact to the local community by providing a designated area located in close proximity to Interstate 8. Area businesses should see an increase in revenue with the influx of tourists and visitors to the area.

3.10.3 No Action Alternative

Under the No Action Alternative the Proposed Project would not be constructed. This alternative will have no effect on socioeconomics in the area.

3.11 ENVIRONMENTAL JUSTICE

3.11.1 Affected Environment

Executive Order 12898 requires each federal agency to achieve environmental justice as part of its mission, by identifying and addressing disproportionately high adverse human health or environmental effects (including social and economic effects) of its programs and activities on minority and low-income populations.

3.11.2 Environmental Consequences/Impacts

The Proposed Project will have a beneficial impact to the local community by providing a designated area in close proximity to Interstate 8 to attract visitors and tourists to Yuma. Because the project is small in scope, it would have no negative impact on low-income or minority populations and American Indian tribes in the study area or the region at large.

3.11.3 No Action Alternative

Under the No Action Alternative the Proposed Project would not change the conditions of low-income or minority populations and American Indian tribes.

3.12 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES

3.12.1 Affected Environment

NEPA guidelines (40 CFR 1502.16) required the discussion of any irreversible or irretrievable environmental changes that would be involved with the Proposed Action.

Irreversible commitments are decisions affecting renewable resources such as soils, wetlands, and wildlife habitat. Such decisions are considered irreversible because their implementation would affect a resource deterioration to the point that renewal could occur only over a long period of time or at great expense, or because they would cause the resources to be destroyed or removed.

Irretrievable commitment describes loss of production or use of resources as a result of a decision. It represents opportunities foregone for the period that a resource cannot be used. Irretrievable refers to the permanent loss of a resource, including production, harvest, or use of natural resources. For example, production loss of agriculture lands can be irretrievable, while the action itself may not be irreversible.

3.12.2 Environmental Consequences/Impacts

The Proposed Project would require the consumption of fossil fuels and materials such as asphalt, during the construction, which is an irretrievable resource. The commitment of these resources would be relatively small, short-term, and focused toward a specific goal.

3.12.3 No Action Alternative

Under the No Action Alternative the Proposed Project construction would not occur; therefore, fossil fuels and materials such as asphalt would not be consumed.

3.13 CUMULATIVE IMPACTS

Cumulative impacts may result from individually minor but collectively significant actions that occur within the same temporal study area and surrounding communities.

The Proposed Project will have a positive impact to the project area and surrounding community. Upon completion of this project there will be an area prepared for the construction of the future Yuma, Arizona Welcome Center that will attract visitors. Soon after the completion of the parking lot, the COY plans to build the welcome center on the site reserved for the future Yuma, Arizona Welcome Center. The establishment of this facility will have a moderate impact to the local community in the immediate area. The influx of tourists in the area will increase moderately because of the welcome center; however, access to the welcome center will be from a pre-existing exit off Interstate 8 located on the north end of town.

The Yuma, Arizona Welcome Center Parking Lot and future Welcome Center will act as a beacon for tourists to Yuma. This facility will provide information and direction to tourists allowing the city to show off their resources to tourists. The parking lot and Welcome Center is a vital link to the past and future tourism attractions in Yuma. The facility will provide the link between Yuma West Wetlands, Yuma East Wetlands, the Yuma Riverfront Development projects, and Gateway Park.

The COY intends to showcase inside the future Yuma, Arizona Welcome Center, the "City of Yuma" Aeronca airplane used on October 10, 1949 by Mr. Woody Jongeward and Mr. Bob Woodhouse to set a new world

endurance record by staying aloft 1,124 hours and 17 minutes (almost 47 days). They had flown non-stop a total distance of 89,920 miles, equivalent to 3-1/2 times around the equator.

Wetlands Overview

Harnessing the Colorado River through dams and canals has promoted growth, reduced flooding, generated electric power, and fostered tremendous agricultural production, all to the entire nation's benefit. The result, however, has also diminished the river's ecosystems. To address environmental issues, including the ESA, regional planning efforts have been undertaken.

The Yuma community has sought to improve a five-mile stretch of the Colorado River. Bounded by levees for flood control, choked by non-native vegetation, a haven for illegal activity and the homeless, and starved of an adequate water supply, this 1400 acre area became a "forgotten land": a parched patch of river bottom where once cottonwoods and willows grew, where the Quechan Indian tribal members once hunted and fished, and where hundreds of birds nested.

Salt cedar, cane and other non-native vegetation degrade habitat, increase fire hazards and become a haven for undesirable activity. The overgrowth is cleared and native trees, such as cottonwoods and willows, are planted and irrigated. Within five years, the newly planted trees are providing shade and beautiful surroundings where nature can be enjoyed. Hiking and bird watching are favorite recreations.

Yuma West Wetlands

The first phase of the 110-acre natural preserve at the West Wetlands was dedicated in December 2002, with ongoing creation of equestrian areas, walking paths, a lake, bird sanctuaries, tree farms, hummingbird and butterfly gardens, and revegetation.

Yuma East Wetlands

The East Wetlands, a 1,400-acre preserve area, received a \$500,000.00 grant from the BOR to aid in the revegetation of the East Wetlands to replace non-native vegetation with native cottonwood and willow trees, among other projects.

Yuma Riverfront Development Projects

The Riverfront Master Development Agreement approved by the COY Council on November 17, 2004 set in motion an \$80 million dollar private investment plan for Yuma's downtown riverfront. The riverfront will be developed in two stages:

First Stage

- A 150-room business conference center, built, operated, and maintained by the private developer.
- 18,000 sq. ft. business conference center, built, operated, and maintained by the private developer.
- 39,000 sq. ft. of retail and second floor office space at the corner of 1st Street and Main Street.
- 40-80 for-sale residential units with Fitness Center and Pool, overlooking the Yuma Main Canal and Yuma Crossing State Historic Park

Later Stages

- A 50,000 sq. ft. new Federal Courthouse
- A 32, 000 sq. ft. two-level office building overlooking the Yuma Main Canal and Yuma Crossing State Historic Park.
- A 60-room "Boutique" hotel and 5,200 sq. ft. restaurant at 4th Avenue and 1st Street.

Gateway Park

Gateway Park and beach area located between the Ocean-to-Ocean Bridge and the end of Madison Avenue has continued to grow in popularity. In early years, hundreds of people enjoyed the shade and cool of the Colorado River each weekend, despite the lack of adequate parking, restrooms, picnic ramadas, lighting, and handicapped access. A greatly expanded "Gateway Park", extending all the way to the Ocean to Ocean Bridge was needed to meet the growing needs of the community. This need set into motion the design to improve access, lighting, and parking at the riverside. The improved access will be achieved by extending Gila Street all the way to the river. Restrooms and picnic ramadas will be built, along with a new beach.

Grant funds from the State of Arizona, along with City road funds and other federal and state grants have made the expansion of this park possible. Gateway Park has been designed to tell the story of the Yuma Crossing in its many forms: from the traditional crossing by the Quechan Indian tribe, to 49ers seeking California gold and today's crossing of the Yuma Syphon and Interstate 8. National Park Service funds will be used to tell our history for the benefit of our children as well as tourists.

Gateway Park will be the central link between the Riverfront District along the Colorado River and downtown Yuma's four other historic districts. It includes a three-story interpretive tower, multiple interpretive displays throughout the park, barrier free access to the river, multi-use trails, picnic ramadas, and a defined beach area.