



ENVIRONMENTAL ASSESSMENT  
**OSAGE NATION**  
PONCA CITY CASINO FEE-TO-TRUST PROJECT

**SEPTEMBER 2010**

LEAD AGENCY:

Bureau of Indian Affairs  
Eastern Oklahoma Regional Office  
3100 W. Peak Boulevard  
Muskogee, OK 74401  
(918) 781-4600



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# ***SECTION 1.0***

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## ***INTRODUCTION***

# SECTION 1.0

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## INTRODUCTION

### 1.1 BACKGROUND

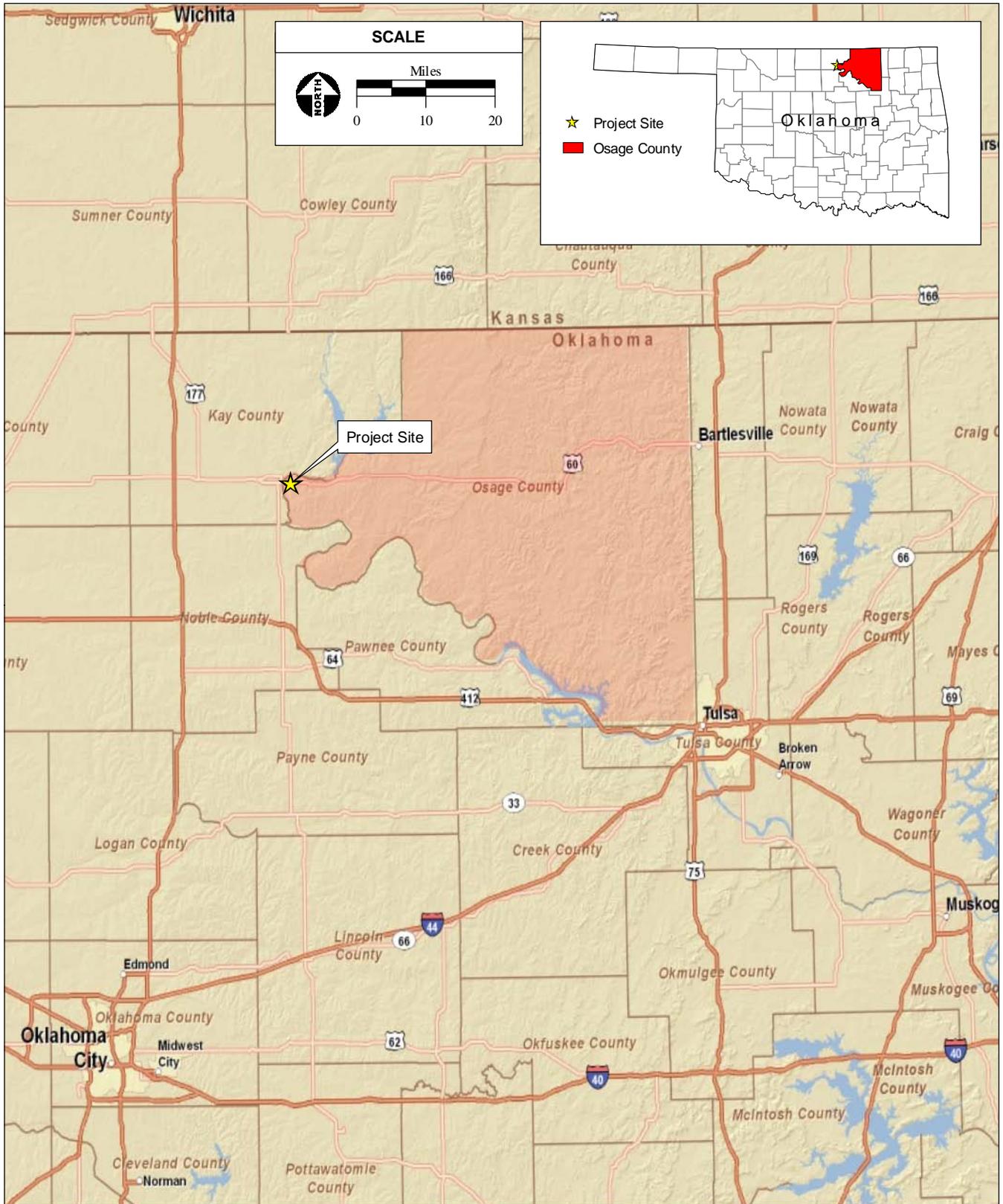
This Environmental Assessment (EA) has been prepared for the Bureau of Indian Affairs (BIA) to assess the environmental effects of taking approximately 15 acres into federal trust for the benefit of the Osage Nation (Nation) and the subsequent development of a new casino and hotel on the site (Proposed Action). The proposed casino facility would replace the Nation's existing gaming facility currently operating on the site. Pursuant to 25 C.F.R. Part 151, the BIA is the federal agency that is charged with reviewing and approving tribal applications to take land into federal trust status.

This EA has been completed in accordance with the National Environmental Policy Act (NEPA), 42 U.S.C. § 4321 *et seq.*; the Council on Environmental Quality's Guidelines for Implementing NEPA, 40 C.F.R. § 1500 *et seq.*; and the BIA's NEPA Handbook, 59 IAM 3-H. This EA provides a detailed description of the Proposed Action and an analysis of the potential consequences associated with the Proposed Action. This EA also includes a discussion and analysis of project alternatives, including a Reduced Intensity Alternative and No-Action Alternative.

### 1.2 LOCATION AND SETTING

The 15-acre site is located in the community of McCord within Osage County, Oklahoma, approximately 70 miles northwest of Tulsa. The site is located near the eastern boundary of the City of Ponca City, located in Kay County to the west. The site is situated at the northwest corner of the intersection of U.S. Highway 60 and City View Road (**Figures 1-1** and **1-2**). The project site is accessible from City View Road via two driveways which serve the existing gaming facility (**Figure 1-3**). The southern property boundary extends from City View Road west approximately 808 feet, adjacent to U.S. Highway 60. The western property boundary extends from U.S. Highway 60 north approximately 808 feet, adjacent to an undeveloped tract of land and the Church of Ponca City. The project site is within Section 36, Township 26 North, Range 2 East, Indian Meridian, in western Osage County, Oklahoma.

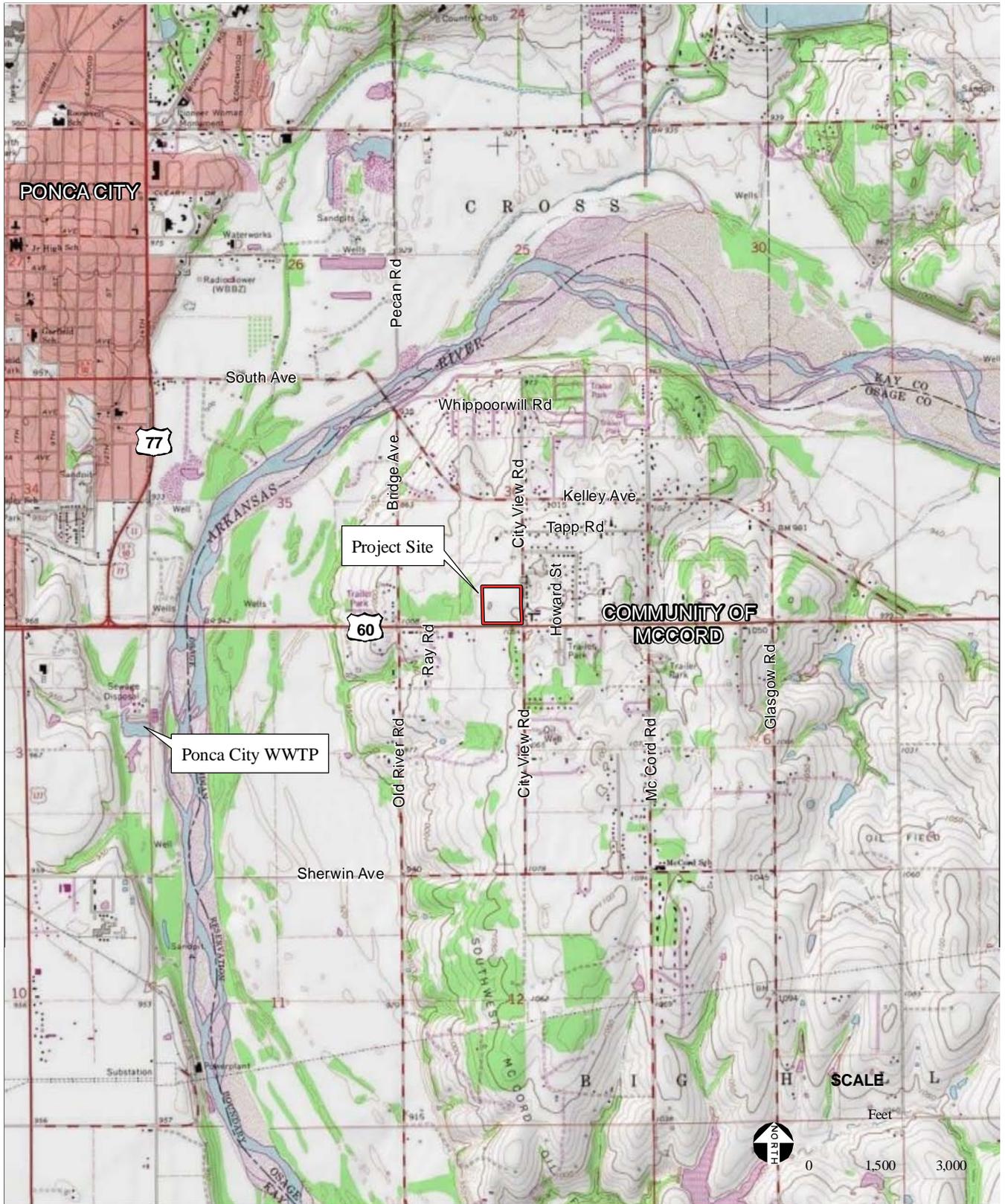
The project site is situated on relatively flat land which was used as pastureland from approximately 1938 to 2007. The project site consists of the approximately 10,200 square-foot (sf) Ponca City Osage Million Dollar Elm Casino and its associated facilities, bordered by non-native grassland. Structures located onsite include the existing Ponca City Osage Million Dollar Elm Casino, paved customer parking, employee parking covered with asphalt millings, a septic system, two trailers used for storage, an emergency generator, and a storm water detention basin. Adjacent properties are developed with land



SOURCE: ESRI Data, 2010; AES, 2010

Osage Nation Feasibility Study Trust Casino EA / 210533 ■

**Figure 1-1**  
Regional Location



SOURCE: "Ponca City, OK" USGS 7.5 Minute Topographic Quadrangle; Section 36, T26N, R2E, Indian Baseline & Meridian; AES, 2010

Osage Nation Feasibility Study Casino EA / 210533 ■

**Figure 1-2**  
Site and Vicinity



SOURCE: NAIP Aerial Photograph, 5/16/2008; AES 2010

si '210 ■

**Figure 1-3**  
Aerial Photograph

uses including commercial and rural-residential.

### 1.3 PURPOSE AND NEED FOR PROPOSED ACTION

The purpose of taking the property into trust on behalf of the Osage Nation is to provide for continued funding of the Osage Nation's programs supported by revenue distributions from the Nation's Ponca City Million Dollar Elm Casino and to increase the potential level of annual distributions and other benefits to the Nation from its Ponca City operation. Implementation of the Proposed Action would assist the Nation in meeting the following objectives:

- Maintain the revenue distributions to the Osage Nation provided by the Million Dollar Elm Casino in Ponca City, which are estimated to range from about \$2.8 to 3.0 million per year over the next five years if the gaming operation were to continue in its current structure and could increase by, perhaps, two-thirds or more under the Proposed Action.<sup>1</sup>
  - Current levels of revenue distributions from Osage's Ponca City Casino have improved the socioeconomic status of the Osage Nation by providing a revenue source that is used to: strengthen the tribal government; fund social, housing, governmental, administrative, educational, health, and welfare services that have improved the quality of life of Osages; provide capital for other economic development and investment opportunities; provide employment opportunities for Osages; make donations to charitable organizations and local educational institutions; and demonstrably improve tribal self-determination, economic self-sufficiency, and strong tribal government structures.
  - The projected stream of distributions, assuming continued operation of the existing Ponca City Casino, is approximately 8.9 percent of the \$33.5 million average in self-financing available annually for the Osage Nation's budget. This amount is roughly equivalent to the Nation's entire Culture and Heritage program of \$2.9 million per year or the combined total of \$2.85 million annual funding for the Nation's four day care centers, three Boys and Girls Clubs, Head Start program, three fitness centers, and crisis assistance program. It is also 44 percent of the \$6.8 million the Osage Nation expects to invest this year in its education program, which included college scholarships of \$3,500-\$4,000 for 690 Osage students just this past spring semester, and it is 40 percent of the \$7.5 million the Nation invested in Osage, LLC, the

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<sup>1</sup> Gaming under the Indian Gaming Regulatory Act (IGRA), 25 U.S.C. § 2701 *et seq.*, on three Osage Nation properties within the Osage Reservation may be at risk of closure if the decision in *Osage Nation v. Irby*, 597 F.3d 1117 (10th Cir. Mar. 5, 2010), which ruled that the Osage Reservation had been disestablished in 1906 despite a century of Supreme Court and other precedent to the contrary, is not overturned. One of those properties, the Million Dollar Elm Casino Ponca City, is the subject of this EA. The Nation's Ponca City Casino generated enough profits in 2009 to transfer approximately \$3.3 million to the Osage Nation treasury to be used for the purposes set out in IGRA.

- Nation's non-gaming investment vehicle that was created to diversify its economic base and increase Osage employment and commercial experience and training.
- Taking the property into trust on behalf of the Nation will assure that such distributions can continue and, potentially, increase substantially. Failing to take the property into trust would increase the risk of no longer having this revenue source for the Nation's programs.
  - Allow the Osage Nation Gaming Enterprise (ONGE) to erect a new, larger casino on the property with major added features and a hotel, which is projected to increase revenues available for distribution to the Nation's budget over a span of about five years by, perhaps, two-thirds. The availability of this additional money would allow the Nation's government to address some of the unmet needs of its members, further improve its government and, generally, help:
    - Further improve the socioeconomic status of the Nation by increasing the amount of revenue that would be used to: strengthen the tribal government; fund a variety of social, housing, governmental, administrative, educational, health, and welfare services to improve the quality of life of tribal members; and provide capital for other economic development and investment opportunities.
    - Provide additional employment opportunities to the tribal and non-tribal community.
    - Further enable the Nation to make donations to charitable organizations and governmental operations, including local educational institutions.
    - Further enable the Nation to fund local governmental agencies, programs, and services.
    - Further establish economic self-sufficiency to achieve tribal self-determination.

The Nation's need for an economic base represents one of the primary purposes behind the Indian Gaming Regulatory Act. IGRA states that Congress finds "a principal goal of Federal Indian policy is to promote tribal economic development, tribal self sufficiency, and strong tribal government . . ." 25 U.S.C. § 2701. IGRA also states that one of the purposes of the Act is "to provide a statutory basis for the operation of gaming by Indian tribes as a means of promoting tribal economic development, self-sufficiency, and strong tribal governments . . ." 25 U.S.C. § 2702. The Osage Nation's gaming activities, operated through the Osage Nation Gaming Enterprise, currently provide 93.4 percent - \$31.3 million out of \$33.5 million - of the Osage Nation's self-financing for its budget, of which its Ponca City casino provides an important part. The Nation currently self-finances about 61.4 percent of its total budget, relying on federal appropriations for the 38.6 percent balance. Prior to opening gaming operations, the Nation was almost totally dependent on federal appropriations. These tribal revenues have specifically been used to promote increased economic development of the Osage Nation, improve the general welfare of the members of the Nation, and improve the Nation's governance and administrative structures and capabilities. As one example of the use of these funds, college scholarship assistance per student has increased approximately 400 percent since 2005 and the number of scholarships awarded has more than doubled during that period.

To ensure that revenues raised from gaming are used to “promote tribal economic development, tribal self sufficiency, and strong tribal government,” Section 2710(b)(2)(A) of the IGRA limits the use of net gaming revenues to the following:

- Funding tribal government operations or programs.
- Providing for the general welfare of the Indian tribe and its members.
- Promoting tribal economic development.
- Making donations to charitable organizations.
- Funding operations of local government agencies.

Each of the objectives of the Proposed Action is consistent with the limited allowable uses for gaming revenues, as required by IGRA. The Nation applies its gaming distributions to these exact uses, and does not use them for per capita payments to individuals. The Nation self-funds its governmental structure (Office of the Chiefs, legislature and judicial branch), finances \$6.2 million of its \$6.5 million administrative budget, invests almost \$6.8 million per year in educational programs, self-funds an extensive cultural program (\$2.9 million/year) including providing Osage language training to preschoolers and courses at local high schools, and invests millions of dollars a year in additional programs including child, senior, and community services; health and wellness, economic development; housing, facilities management, and its own police department and prosecutor. The Osage Nation Gaming Enterprise also provides donations to local public schools and to charitable organizations. Approval of the Proposed Action will allow the Nation to better meet its unmet needs.

## **1.4 OVERVIEW OF THE ENVIRONMENTAL REVIEW PROCESS**

This EA was prepared to analyze and document the environmental consequences of replacing the existing gaming facility currently operating on the site with a new, expanded casino and hotel facility. Preparation of this EA included consultation with the BIA, the U.S. Fish and Wildlife Service (USFWS), the Osage Nation Environment and Natural Resources Department, and the Rural Water District 3. The BIA will use this EA to determine whether or not the Proposed Action would result in adverse effects to the environment. It will also be used to determine whether a Finding of No Significant Impact (FONSI), or an Environmental Impact Statement (EIS) is appropriate for the Proposed Action.

## **1.5 REGULATORY REQUIREMENTS AND APPROVALS**

The following direct or indirect federal approvals and actions may occur as a result of the Proposed Action:

- Transfer of the 15-acre site into Federal trust status for the Nation by the Secretary of the Interior.

- Compliance with the National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction Activity.
- Consultation with the State Historic Preservation Office (SHPO) under Section 106 of the National Historic Preservation Act (NHPA), if historic properties may be impacted by the project.
- Approval of encroachment permits for the proposed driveways.

# ***SECTION 2.0***

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## ***PROPOSED ACTION AND ALTERNATIVES***

# SECTION 2.0

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## PROPOSED ACTION AND ALTERNATIVES

The federal action being considered by the BIA, Department of the Interior, is whether to take the property into trust on behalf of the Osage Nation under 25 CFR § 151. That action, by itself, has no direct environmental effects. If the land is taken into trust, its status of Indian Lands eligible for gaming under Section 20(a)(1) or (2)(A)(i) of the IGRA would be clarified. The Osage Nation proposes to use the land to continue gaming operations there and, in addition, to expand the size of its gaming operation on the property. As a result, this EA focuses on the environmental consequences resulting from the uses the Osage Nation is reasonably likely to make of the property once it is taken into trust. These are constituted as the Proposed Action and project alternatives. This section also summarizes the potential environmental consequences associated with the Proposed Action and the potential benefits and/or detriments of the project alternatives, as compared to the Proposed Action. In addition to the Proposed Action, the project alternatives evaluated in this EA include a Reduced-Intensity Alternative (Alternative B) and the No-Action Alternative / No New Casino Alternative (Alternative C).

### **2.1 ALTERNATIVE A - PROPOSED ACTION – PREFERRED CASINO AND HOTEL ALTERNATIVE**

The Proposed Action consists of the following components: 1) transfer of the 15-acre project site into federal trust status for the benefit of the Nation; and 2) the subsequent development of a casino and hotel to replace the existing Ponca City Million Dollar Elm Casino currently operating on the site.

#### **2.1.1 LAND TRUST ACTION**

The Proposed Action consists of the fee simple conveyance of the 15-acre site into federal trust status for the benefit of the Nation. The land transfer would be in accordance with procedures set forth in Part 151 of Title 25 of the Code of Federal Regulations (25 CFR Part 151). The Nation and the federal government would exercise civil regulatory jurisdiction over the site once it is taken into trust.

#### **2.1.2 CASINO AND HOTEL DEVELOPMENT**

The Nation proposes to develop a new casino and hotel on the site after it is conveyed into federal trust status (Proposed Project). The proposed facilities would replace the existing Ponca City Million Dollar Elm Casino currently operating on the site. A conceptual site plan for the Proposed Project is shown in **Figure 2-1**, and an architectural rendering is provided in **Figure 2-2**. The conceptual design and facility size are based on the Osage Nation Gaming Enterprise's and architectural firm's interpretation of the

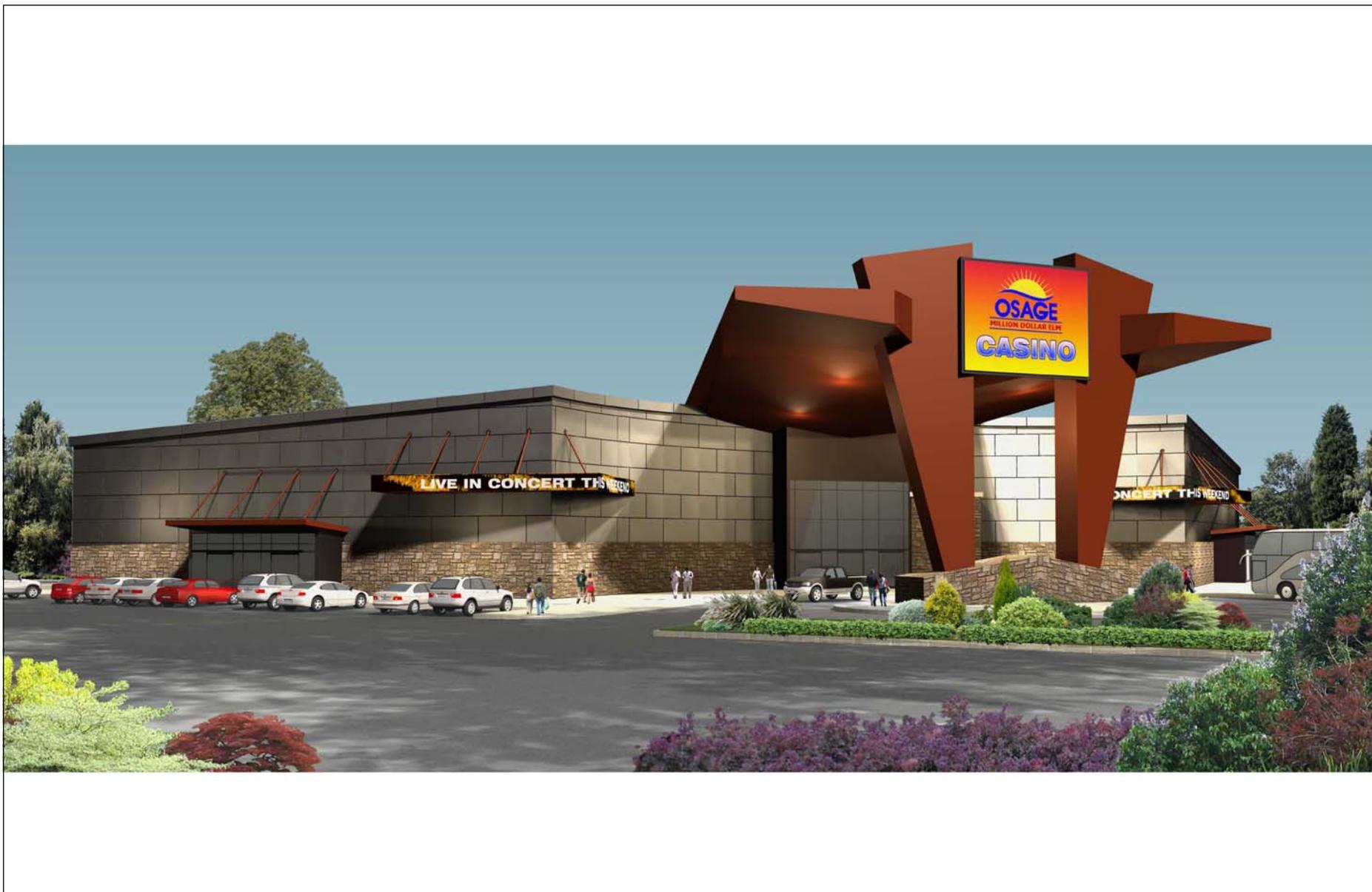


1 SITE PLAN  
 A-1.2 NOT TO SCALE

0 50' 100' 200'

<b>SCALE</b>	
	NOT TO SCALE

**Figure 2-1**  
 Proposed Project Site Plan



market as reflected in the December 2009 market assessment prepared for the Ponca City site by Gaming Market Advisors. The casino facility would include a gaming floor, casino support areas, a banquet/event area, a casual two-meal restaurant, a sports bar, and administration and security areas. The two-story hotel would consist of 75 guest rooms and hospitality and security areas. A breezeway connector would connect the casino to the hotel. A breakdown of project components is provided in **Table 2-1**.

**TABLE 2-1**  
PROPOSED GAMING AND HOTEL FACILITY COMPONENTS

COMPONENT	APPROXIMATE SQUARE FOOTAGE
<b>Casino</b>	<b>44,000</b>
Gaming Floor	17,000
Banquet/Event Area	10,000
Restaurant and Sports Bar	4,000
Kitchen	5,500
Back of House	6,000
Restrooms	1,500
<b>Hotel</b>	<b>50,000</b>
Guest Rooms	75 rooms
<b>Total:</b>	<b>94,000</b>
<b>Parking:</b>	<b>814 spaces</b>

Source: OPDG, 2010

The casino and hotel would be open 24 hours a day, 7 days a week. It is anticipated that the casino would have approximately 300 electronic gaming machines (EGMs) and 6 table games.

The casino would be located on the northwestern portion of the project site. The hotel would be located approximately 50 feet east of the casino. Approximately 814 surface-level parking spaces would be constructed to accommodate patrons and employees. A portion of this parking area would be designated for recreational vehicle (RV) parking. A decorative water feature would be constructed in the southeast corner of the site, adjacent to the intersection of U.S. 60 and City View Road. Decorative landscaping would be incorporated along adjacent roads and throughout the parking lot.

The existing casino would continue to operate during construction. Once the proposed casino is constructed the existing casino would be disassembled and removed.

### **CONSTRUCTION**

Construction of the casino and hotel would occur in two phases: the casino would be constructed during Phase 1 while the hotel would be constructed in Phase 2. Construction of the parking lot and landscaping would occur throughout both phases as necessary. Construction would be consistent with the State of Oklahoma building codes, including electrical, mechanical, plumbing, fire protection, and seismic

standards. The proposed facilities would conform to the requirements of the International Building Code (IBC). An indoor sprinkler system would be installed.

***WATER SUPPLY***

Water supply for the Proposed Project would be provided by the Osage County Rural Water District Number 3. An existing 1 inch diameter supply line extends to the site from an existing 8 inch diameter supply main that runs along City View Road. The 1-inch line that extends to the property may need to be expanded to supply the potable water demands of the Proposed Project. There is available capacity in the 8-inch water line to provide up to 500 gallons/minute or approximately 30,000 gallons/hour to serve the project. An appropriately sized water tank will be located near the casino and hotel to provide reserve capacity for fire suppression and peak demands at the proposed facilities.

***WASTEWATER TREATMENT AND DISPOSAL***

Wastewater treatment and disposal services for the Proposed Project would be provided by the Ponca City Wastewater Division, which operates a wastewater treatment plant with a capacity of 9 million gallons per day that discharges to the Arkansas River. The Nation entered into an Agreement for Sewer Service Outside Corporate Limits with Ponca City on August 24, 2009 (**Appendix A**). In accordance with the agreement, the Nation is in the process of designing wastewater facilities that will connect the Nation's existing casino on the 15-acre property to the City's sanitary sewer system. These facilities would be used to service the Proposed Project.

***GRADING AND DRAINAGE***

The Nation would comply with the National Pollutant Discharge Elimination System (NPDES) general permit and implement storm water discharge management controls that effectively reduce or prevent the discharge of pollutants into receiving waters during construction in accordance with the Clean Water Act. Concurrent with the NPDES permit, a Storm Water Pollution Prevention Plan (SWPPP) would be prepared prior to construction. The SWPPP would include best management practices to minimize stormwater effects to water quality during construction.

***ROADWAY ACCESS***

The Proposed Project would be accessible via two driveways off of U.S. 60 and two driveways off of City View Road. Patrons coming from U.S. 177 would turn east onto U.S. 60, and then turn left into the project site. Patrons traveling from Ponca City may cross the Arkansas River on Kelly Avenue, which turns into D0220 Road then Old Highway 60, turn south onto City View Road and turn right into the project site.

***HEALTH AND SAFETY STANDARDS***

Implementation of current design standards specified in the IBC would protect public health and safety. For security purposes, the Nation would provide nighttime lighting in parking lots.

The Osage Nation Gaming Commission would ensure that the proposed casino and hotel comply with all federal regulatory requirements, including those of the National Indian Gaming Commission (NIGC) as well as the U.S. Public Health Services Food Code.

***LAW ENFORCEMENT AND CRIME***

The Osage Nation Police Department would be the primary agency responsible for law enforcement associated with the Proposed Project. In case of additional law enforcement needs, the Osage Nation and the Osage County Sheriff's Department maintain a cross-deputization agreement, dated January 2006 (**Appendix B**).

***FIRE PROTECTION***

The McCord Volunteer Fire Department would be the primary fire responder to the Proposed Project (Ponca City, 2010). An adequately sized water tank would be located on site for fire suppression purposes. Building plans and specifications will contain fire suppression systems.

**2.1.3 PROTECTIVE MEASURES AND BEST MANAGEMENT PRACTICES**

Protective measures and Best Management Practices (BMPs) have been incorporated into the project design to eliminate or substantially reduce environmental impacts from the project. These measures are discussed below.

***LAND RESOURCES***

Implementation of the following BMPs will ensure that the Proposed Project has no adverse effect on land resources:

- A grading report will be prepared and submitted with the working design plans. All recommendations of the report will be adhered to.
- All site clearing, removal of all unsuitable soil, proper moisture conditioning, review of imported fill material, fill placement, observation of foundation excavations, and other site grading will be verified during construction to ensure compliance with standard engineering practices.
- All structures will meet IBC requirements.
- A site specific soil erosion control plan will be prepared and implemented during construction.

***WATER RESOURCES***

The SWPPP prepared for the project site may include, but not be limited to, the following BMPs:

- Major grading activities will be scheduled during the dry season.
- Erosion control blankets or jute netting will be placed in rough graded ditches and then hydroseeded.

- Fiber rolls and straw wattles will be installed around the down-slope perimeters of the construction site.
- Hay or straw mulch and tackifier will be used as temporary measure for stabilizing disturbed areas.
- Landscaping will be managed to minimize erosion and sedimentation according to the following practices:
  - Rock filter berms will be placed across roadways.
  - Sediment basins will be installed throughout the project site and will be removed during the final phase of construction.
  - Silt fencing will be placed down-slope of exposed soil areas and around temporary soil stockpiles.
  - Sacked rock filters will be placed around new curbs and drainage inlets around the project site until the soils are stabilized with permanent landscaping.
- Catch basins, junction boxes, culverts, and outfall structures/energy dissipaters will be used throughout the grading plan.
- Detention basins will be constructed to provide for sediment settling.
- Ingress/egress points to the project site will be stabilized and graded.
- Cleaning, fueling, maintenance and repair of construction vehicles and equipment will be performed off-site whenever possible.
- The Contractor will be contractually responsible for all maintenance, inspection, and repair to all erosion and sediment control measures throughout the construction period, and will ensure that all other protective devices are maintained and repaired in good and effective condition.

## ***AIR QUALITY***

### ***Construction***

The following BMPs will minimize the effects of construction on air quality:

- All active construction areas will be watered at least twice daily.
- All trucks hauling soil and other loose materials will be covered or will be required to maintain at least two feet of freeboard.
- All unpaved access roads, parking areas, and staging areas at construction sites will be paved, or will be subject to twice-daily applications of water or (nontoxic) soil stabilizers.
- All paved access roads, parking areas, and staging areas at construction sites will be swept daily (with water sweepers).

- Streets will be swept daily (with water sweepers) if visible soil material is carried onto adjacent public streets.
- Excavation and grading activity will be suspended when winds (instantaneous gusts) exceed 25 miles per hour.
- Onsite traffic will be restricted to reduce soil disturbance and the transport of material onto roadways.
- Dirt, gravel, and debris piles will be covered as needed to reduce dust and wind-blown debris.
- Emissions of volatile organic compounds (VOC), nitrogen oxides (NO<sub>x</sub>), sulfur oxides (SO<sub>x</sub>), and carbon monoxide (CO) will be controlled whenever reasonable and practicable by requiring all diesel-powered equipment be properly maintained and minimizing idling time to five minutes when construction equipment is not in use, unless per engine manufacturer's specifications or for safety reasons more time is required. Since these emissions will be generated primarily by construction equipment, machinery engines will be kept in good mechanical condition to minimize exhaust emissions.

### ***Operation***

The following measures will ensure that operation of the facility will have no adverse effect on air quality:

- Onsite pedestrian facility enhancements such as walkways, benches, proper lighting, and building access will be provided, which are physically separated from parking lot traffic.
- Adequate ingress and egress at entrances to the facility will be provided to minimize vehicle idling and traffic congestion.

### ***FIRE SAFETY***

The following BMPs will be implemented during project construction to ensure that there is no adverse effect to fire protection services:

- Construction equipment will contain spark arrestors, as provided by the manufacturer.
- Frequent watering will occur in and around areas where power tools or torches are used.

### ***VISUAL RESOURCES***

The following BMPs will be implemented to ensure that there will be no adverse effect of facility lighting on the surrounding environment:

- Placement of floodlights on buildings will be designed so as to not cast light off site.
- Shielding, such as with a horizontal shroud, will be used for all outdoor lighting so as to ensure it is downcast.

**NOISE**

The following BMPs will ensure that there will be no adverse noise effect from construction and operation activities:

- Construction activities within a half-mile of existing noise-sensitive uses will be limited to daytime hours (7:00 AM to 10:00 PM).
- All powered equipment will comply with applicable local, state, and federal regulations and all such equipment will be fitted with adequate mufflers according to the manufacturer's specifications to minimize construction noise effects.
- Heating Ventilating and Air Conditioning (HVAC) equipment will be shielded to reduce noise.
- To the extent feasible, pile driving, should it take place, will not occur prior to 9:00 AM or after 5:00 PM.

**HAZARDOUS MATERIALS**

The following BMP will ensure that no adverse effects will result from hazardous materials during construction:

- The Nation will include the following requirement in construction contract specifications for construction activities associated with the project site:

If contaminated soil and/or groundwater are encountered or if suspected contamination is encountered during project construction, work will be halted in the area, and the type and extent of the contamination will be determined. A qualified environmental professional, in consultation with appropriate regulatory agencies, will then assess and develop an appropriate method to remediate the contamination. If necessary, the Nation will implement a remediation plan in conjunction with continued project construction.

**2.2 ALTERNATIVE B – REDUCED-INTENSITY ALTERNATIVE**

The Reduced-Intensity Alternative (Alternative B) consists of the transfer of the 15-acre site into federal trust status for the benefit of the Nation and the subsequent development of a casino on the site. The components of Alternative B are identical to the Proposed Action with the exception that a hotel would not be developed. As described in **Section 2.1.2**, the 44,000 square-foot casino would include a gaming floor, casino support areas, a casual two-meal restaurant, a quick dining outlet, a sports bar, and administration and security areas. The casino would be open 24 hours a day, 7 days a week. It is anticipated that the casino would have approximately 300 EGMs and 6 table games. Project construction methods and BMPs would be identical to those described for the Proposed Action (Refer to **Section 2.1.3**). Water Supply, wastewater treatment and disposal, grading and drainage, roadway access, public health and safety standards, fire protection, and law enforcement under Alternative B would also be identical to the Proposed Action (Refer to **Section 2.1.2**).

## **2.3 ALTERNATIVE C - NO ACTION ALTERNATIVE / NO NEW CASINO ALTERNATIVE**

Under Alternative C, the project site either would or would not be placed in federal trust for the benefit of the Nation, but a new casino would not be built. The Nation is currently in litigation to determine the status of the Osage Reservation. Should the Osage Reservation be found to be extant, the existing 10,209-square-foot casino would continue to operate under existing conditions. This would also be the outcome if the land is taken into trust on behalf of the Osage Nation under 25 CFR Part 151 and the Nation concludes for whatever reason to not construct a new casino on the property. That would most likely occur if Osage Nation Gaming Enterprise (ONGE) concluded that market conditions had changed significantly, such as if another major new casino were constructed in the Ponca City area. Should the Osage Reservation be found to have been disestablished, and the site is not taken into trust, the site might be repurposed for a commercial use that would be consistent with the surrounding land uses. For the purposes of this EA alternative it is assumed that under any of these findings or actions no additional construction would occur on the site.

## **2.4 COMPARISON OF THE ALTERNATIVES**

### **2.4.1 ALTERNATIVE A - PROPOSED ACTION**

Among the project alternatives considered, the Proposed Action, which is fully evaluated in **Section 4.0**, would best meet the Nation's objectives and would provide the greatest socioeconomic benefit to the Nation and the Ponca City region.

### **2.4.2 ALTERNATIVE B - REDUCED-INTENSITY ALTERNATIVE**

Alternative B would result in similar effects to the environment as the Proposed Action but would provide the Nation and the community with less economic benefits than the Proposed Project. Potential effects associated with traffic, air, and noise would be reduced due to the loss of traffic generated by the hotel, which would not be constructed under Alternative B.

### **2.4.3 ALTERNATIVE C – NO ACTION ALTERNATIVE / NO NEW CASINO ALTERNATIVE**

Alternative C would leave the 15-acre site in its existing condition. Environmental effects associated with the construction of the Proposed Action would be avoided at the project site. However, under Alternative C the Nation would continue to utilize the existing improvements on the site for commercial purposes, resulting in operational environmental impacts similar to those of the Proposed Action.

Under Alternative C, the Nation would not achieve the same economic benefit as it would with development of the Proposed Action. Both the existing casino and potential retail establishment would generate less revenue than is anticipated from the Proposed Action.

Alternative C would be less preferable than the Proposed Action since it would not allow the Nation to fully utilize current Tribal land holdings in a manner that would most benefit the Tribal members.

# **SECTION 3.0**

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## ***DESCRIPTION OF AFFECTED ENVIRONMENT***

# SECTION 3.0

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## DESCRIPTION OF AFFECTED ENVIRONMENT

This section presents relevant information about existing resources and other values that may be affected by the Proposed Action. The following environmental issue areas are described: Land Resources, Water Resources, Air Quality, Biological Resources, Cultural Resources, Socioeconomic Conditions, Transportation Networks, Land Use, Public Services, Visual Resources, Noise, and Hazardous Materials.

### 3.1 LAND RESOURCES

#### 3.1.1 TOPOGRAPHY

The topography of the area surrounding the project site is relatively flat. The elevations on the 15-acre site slope gently to the northwest toward the Arkansas River and range between approximately 1052 and 1042 feet above mean sea level (amsl). A topographic map of the project site is provided in **Figure 1-2**.

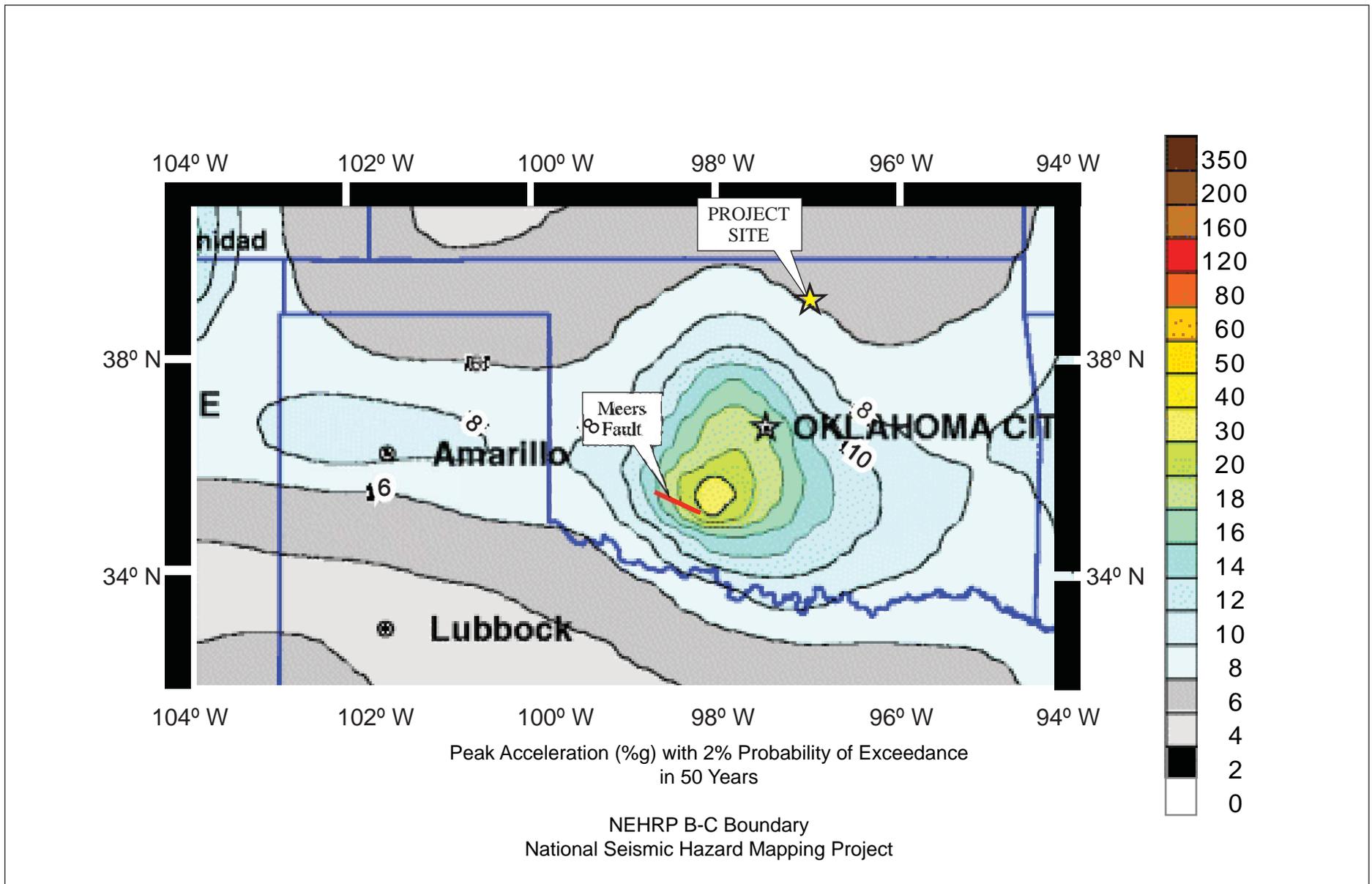
#### 3.1.2 GEOLOGY

Geomorphic regions are broad-scale subdivisions based on terrain, texture, rock type, and geologic structure and history. The United States Geological Survey's (USGS) three-tiered classification of the United States, by division, province, and section, provides a spatial organization for the great variety of physical features occurring in the United States. The project site falls within the Interior Plains major physiographic division, Central Lowland province, Osage Plains region (USGS, 2003).

#### *SEISMIC HAZARDS*

USGS has mapped the region by maximum peak acceleration based on historical groundshaking events and regional faulting. The project site is located within an area having a 2 percent chance of exceeding acceleration equal to 6 percent of the acceleration of gravity in a seismic event (USGS, 2008). The acceleration of gravity is approximately 9.81 meters per second per second. At this level of acceleration, some heavy furniture will move and there will be a few instances of fallen plaster or damaged chimneys (Bolt, 1988).

The USGS defines a fault as "active" if it has moved one or more times in the last 10,000 years (USGS, 2010b). There are no active faults located near the project site. The nearest fault to the project site is the southeastern section of the Meers Fault located approximately 151 miles southwest of the project site (**Figure 3-1**). The most recent activity on the southeastern section of the Meers Fault occurred during the Latest Quaternary period, or less than 15 thousand years ago. The northwestern portion of the Meers



**Figure 3-1**  
Seismic Hazard Map

Fault is located approximately 154 miles southwest of the project site and the most recent activity occurred during the Quaternary period, or less than 1.6 million years ago (USGS, 2009).

### 3.1.3 SOILS

The project site consists primarily of three soil map units: Daugherty loamy fine sand, covering approximately 88 percent of the site; Eufoula-Daugherty complex, covering approximately 5 percent of the site; and pits, covering approximately 6 percent of the site. A fourth map unit, Eufoula loamy fine sand, covers less than 0.1 percent of the site (NRCS, 2010a). The soil types on the project site are shown on **Figure 3-2** described in detail in **Table 3-1**.

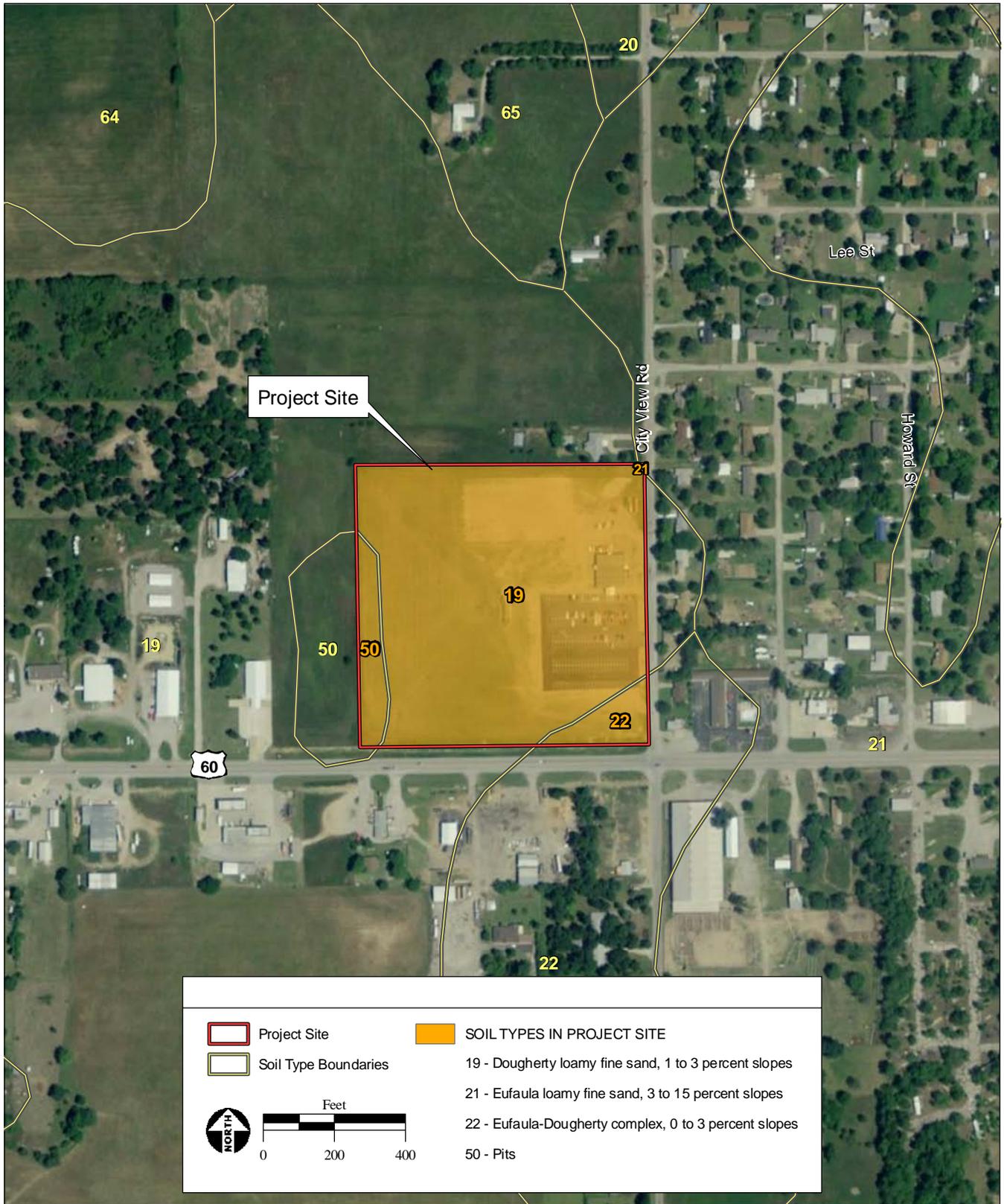
**TABLE 3-1**  
SOIL TYPES ON THE PROJECT SITE

Soil Type	Map Unit Symbol	Soil Description	Approximate % of site coverage
Daugherty loamy fine sand, 1 to 3 percent slopes	19	Very deep, well drained soils that formed from sandy and loamy alluvium and/or sandy Eolian deposits.	88%
Eufoula-Daugherty complex, 0 to 3 percent slopes	22	Very deep, somewhat excessfully drained, soils that formed from Eolian Sands.	5%
Pits	50	Soil that was formed from mine spoil or earthy fill. Characteristics of this soil type are variable.	6%
Eufaula loamy fine sand, 3 to 15 percent slopes	21	Very deep, somewhat excessively drained soils that formed from Eolian sands.	<0.1%

Source: NRCS, 2010a

All of the soils on the project site have been designated with a “slight” risk of erosion. A rating of “slight” indicates that erosion is unlikely under ordinary climatic conditions (NRCS, 2010a)

The soils on the project site, except for Eufaula loamy fine sand, are well suited for mechanical site preparation and are rated “not limited” for small commercial building development, meaning that they are moderately favorable to very favorable for the specified use. Small commercial buildings are defined by National Resources Conservation Service (NRCS) as structures that are less than three stories high and do not have basements. Both Daugherty loamy fine sand and Eufoula-Daugherty complex are well suited for roads while Eufoula loamy fine sand and Pits are moderately suited. The soils on the site have a moderate risk of corrosion of concrete. Daugherty loamy fine sand has a moderate risk of corrosion of steel, while the other soils have a low risk. The Pits soil type located on site does not have a risk of corrosion rating for concrete or steel (NRCS, 2010a).



SOURCE: Soil Survey Geographic (SSURGO) database for Osage County, Oklahoma, 2004-2008;  
 NAIP Aerial Photograph, 5/16/2008; AES 2010

Osage Nation Fe... Trust Casino EA / 210533 ■

**Figure 3-2**  
 Soil Types

The soils on the project site have been assigned a frequency class of “none” for flooding. Flooding and ponding on these soils is not probable; the percent chance in any year is near zero. The soils on the project site are within the “high” saturated hydraulic conductivity class. Saturated hydraulic conductivity refers to the ease with which pores in a saturated soil transmit water. The “high” rating denotes a soil that drains quickly (NRCS 2010a).

### 3.1.4 MINERAL RESOURCES

A variety of mineral resources is produced in Oklahoma, including clay, granite, sandstone, and lime (USGS, 2004). According to the USGS Mineral Resource Data System, there are several open and closed mines within two miles of the project site. The closest active mine is the Sober Bros Pits No. 2, 3, 4, and 5, located approximately one mile northwest of the project site. The Sober Bros Pits, like the other mines in the vicinity, operate surface type mines to obtain their primary commodities, sand and gravel for construction (USGS, 2010a). No mining operations, past or present, are recorded as being located at the project site.

There are several oil fields and gas refineries in the vicinity of the Community of McCord. No oil field or refineries are located on or near the project site.

## 3.2 WATER RESOURCES

The following section describes the existing surface water hydrology, flooding conditions, groundwater hydrology, and water quality of the project area. There is a manmade depression at the northern end of the property which serves as stormwater drainage. There are no other surface water features within or immediately adjacent to the site. No wetlands exist on the project site (**Section 3.4.4**).

### 3.2.1 SURFACE WATER

The Clean Water Act (33 USC §1251-1376), as amended by the Water Quality Act of 1987 (CWA), is the major federal legislation governing water quality. The objective of the CWA is “to restore and maintain the chemical, physical, and biological integrity of the Nation’s waters” (33 USC §1251). Section 303(d) of the CWA requires states to identify impaired off-reservation water bodies, rank these impaired bodies based on severity of contamination and uses for the waters, and develop water quality management strategies, usually in the form of Total Maximum Daily Loads (TMDLs) for the contaminant(s) of concern (ODEQ, 2008). The Oklahoma Department of Environmental Quality (ODEQ) maintains such a list, and has assigned the term “Category 5” to these waterbodies. In a Category 5 waterbody, one or more uses are impaired and a TMDL is assigned. A TMDL is the maximum amount of pollutant that a given waterbody can assimilate daily and still meet state water quality standards (ODEQ, 2008).

The entire state of Oklahoma is within USGS hydrologic unit number 11, which consists of the Arkansas, White, and Red Rivers before they drain into the Mississippi River (USGS, 1987). The project site is

located within the Arkansas River watershed, which drains 47,000 square miles of northeastern Oklahoma in the Arkansas River Valley (OGS, 1998). The Arkansas River is heavily altered by a series of dams and reservoirs that provide flood protection and maintain the navigability of the McClellan-Kerr Navigation System (OGS, 1998); the project site is downstream of Kaw Lake, a water supply and flood control dam built in 1976 by the Army Corps of Engineers (OWRB, 1995). The Arkansas River is less than a mile to the northwest of the project site, and delineates the approximate western boundary of Osage County. The Arkansas River and its tributaries in Osage County are not designated scenic rivers (GOS, 1998).

Surface water quality in eastern Oklahoma is in general suitable for public supply, but the Arkansas River tends to be high in mineral content due to the underlying geology (OWRB, 1995). Water quality of the Arkansas River watershed is also influenced by surrounding land uses, including agriculture and the oil and gas industry, leading to elevated levels of pesticides, organic compounds, and indicator bacteria such as *E. Coli* and fecal coliform (OWRB, 1995). ODEQ has included tributaries to the Arkansas River near the project site on the state's 303(d) list of impaired waterways (ODEQ, 2008). However, the River itself is the closest waterway to the project site, and the segment within Osage County (OWRB segment OK 621200 02 0010) is not listed (OWRB, 2010). The closest 303(d) listed waterway segment is Bois d'Arc Creek, which is across the Arkansas River in Ponca City and not hydraulically connected to the project site (OWRB, 2010).

An Oklahoma Water Resources Board (OWRB) surface water quality monitoring station (OKPB01-267) lies approximately 1.5 miles southwest of the project site, downstream on the Arkansas River (OWRB, 2010). Sampling conducted at this location in 2007 indicated water quality that generally meets Oklahoma water quality standards for beneficial uses (OWRB, 2009).

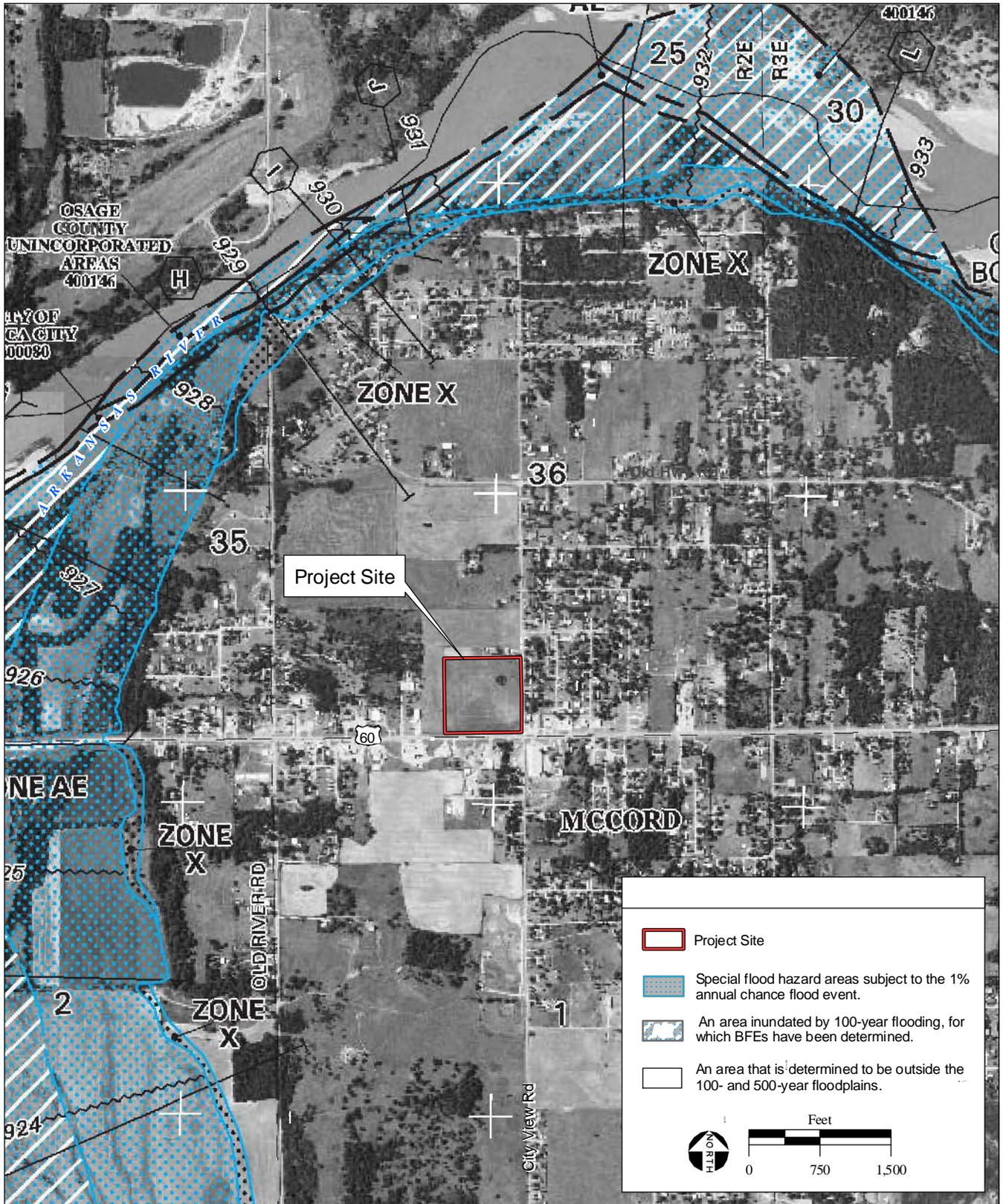
### 3.2.2 DRAINAGE AND FLOODING

There is an existing stormwater drainage detention basin located in the northern portion of the project site. Stormwater generally flows with the topography in sheet flow to a drainage swale on the northeast of the project site to the detention basin, which then drains off site to the east towards the Arkansas River.

The project site is not located within the Federal Emergency Management Agency's delimited 100- or 500-year flood zones. According to the Flood Insurance Rate Map Community Panel No. 40113C0400K, dated April 2, 2008, the land is classified as Zone X (**Figure 3-3**). The Zone X designation is applied to lands located outside of the 500-year floodplain (FEMA, 2008)

### 3.2.3 GROUNDWATER

Oklahoma contains rich groundwater resources, with approximately 320 million acre feet in storage within 23 distinct groundwater basins (OWRB, 1995). Osage County is underlain by two aquifer formations: the Vamoosa formation, a major bedrock aquifer, and the alluvial and terrace aquifer of the Arkansas River (OWRB, 1995). The project site is within the alluvial and terrace aquifer, which ranges



SOURCE: FEMA FIRM Data, 2008; AES 2010

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**Figure 3-3**  
FEMA Flood Zones

from one to six miles wide following the course of the river, and from 30 feet thick near Tulsa to near 55 feet thick downstream at Webber Falls (OWRB, 1995). Well yields from this formation are generous, between 100 and 500 gallons per minute (gpm) (OWRB, 1995). Groundwater quality in the alluvial and terrace deposits in Oklahoma is suitable for drinking water supplies, with a few exceptions. The water quality of the Arkansas River formation tends to be a hard to very hard sodium or calcium bicarbonate type that exceeds drinking water standards in some areas (OWRB, 1995). Human activity has also produced elevated nitrate levels in certain wells and well fields in the alluvial deposits of the Arkansas River (ODEQ, 2008).

There are no public water supply wells within one mile of the site (OWRB, 2010). Approximately 20 homes or businesses within one half mile of the site may obtain drinking water from private wells. The domestic wells range from 60 to 118 feet in depth and have an average depth of 92 feet, with an average depth to water of 69 feet (OWRB, 2010). The nearest of these is a domestic groundwater well located 100 feet from the western property line of the project site. Several monitoring wells were completed at the gas station 450 feet southwest of the project site adjacent to US 60 in 2003-2004 and 2010 for site assessment purposes, with depths from 34 to 40 feet. There are also two public supply wells that serve local businesses, and at least one geothermal or heat exchange well within one half mile of the project site.

### 3.3 AIR QUALITY

The Clean Air Act (CAA) (42 USC Chapter 85) is the major federal legislation for the protection of air quality. The CAA gives the Environmental Protection Agency (EPA) authority to regulate air quality by promulgating standards for air quality, administering air quality programs for the federal government, states, and tribes, and issuing permits to operate for major sources of air pollution.

#### 3.3.1 NATIONAL AMBIENT AIR QUALITY STANDARDS

EPA has set National Ambient Air Quality Standards (NAAQS) for six principal pollutants identified as criteria pollutants: carbon monoxide (CO), nitrogen dioxide (NO<sub>2</sub>), ozone (O<sub>3</sub>), lead (Pb), particulate matter (PM<sub>10</sub>), and sulfur dioxide (SO<sub>2</sub>) (**Table 3-2**). Under Title V of the CAA, new major sources of criteria air pollutants are required to obtain operating permits (commonly known as Title V permits) in order to emit air pollutants.

Areas that do not meet the NAAQS for one or more of the six criteria pollutants are classified by EPA as nonattainment areas. States that contain at least one area of nonattainment are required to develop a State Implementation Plan (SIP), which outlines policies and procedures designed to bring the state into compliance with the NAAQS. The State of Oklahoma contains no nonattainment areas (EPA, 2008). However, EPA published a new ozone air quality standard in 2008, lowering the federal NAAQS to 0.075 ppm. Oklahoma's attainment status is currently being reevaluated (ODEQ, 2009).

**TABLE 3-2**  
NATIONAL AMBIENT AIR QUALITY STANDARDS

<b>Pollutant</b>	<b>Averaging Time</b>	<b>Primary NAAQS</b>	<b>Secondary NAAQS</b>
Ozone (O <sub>3</sub> ) <sup>a</sup>	1 hour	0.12 ppm	0.12 ppm
	8 hour	0.075 ppm	0.075 ppm
Carbon Monoxide (CO)	1 hour	35 ppm	NA
	8 hour	9.0 ppm	NA
Nitrogen Dioxide (NO <sub>2</sub> )	Annual Mean	0.053 ppm	0.053 ppm
Sulfur Dioxide (SO <sub>2</sub> )	3 hour	NA	0.50 ppm
	24 hour	0.14 ppm	NA
	Annual Mean	0.03 ppm	NA
Respirable Particulate Matter (PM <sub>10</sub> )	24 hour	150 µg/m <sup>3</sup>	150 µg/m <sup>3</sup>
	Annual Mean	50 µg/m <sup>3</sup>	50 µg/m <sup>3</sup>
Fine Particulate Matter (PM <sub>2.5</sub> )	24 hour	65 µg/m <sup>3</sup>	65 µg/m <sup>3</sup>
	Annual Mean	15 µg/m <sup>3</sup>	15 µg/m <sup>3</sup>
Lead (Pb)	Quarterly Average	1.5 µg/m <sup>3</sup>	1.5 µg/m <sup>3</sup>

Note: a) Standard for existing ozone non-attainment area only  
Source: 40 CFR Part 50

### 3.3.2 FEDERAL GENERAL CONFORMITY

The General Conformity Rule was established in order to determine conformity of federal actions to SIPs (42 USC §7401). It mandates that federal agencies make a determination that federal actions conform to the applicable SIP before action is taken. A conformity determination is required for each criteria pollutant if project-related emissions will occur in a nonattainment or maintenance area. When a federal action occurs in a location designated as attainment or unclassified then a general conformity determination is not necessary.

The project site lies within the Tulsa Core Based Statistical Area, a region designated as an attainment area meeting the NAAQS for all criteria pollutants (ODEQ, 2009). EPA is currently evaluating Oklahoma's statistical areas to determine if any are in non-attainment for the new ozone standard (ODEQ, 2009). The deadline for designating these non-attainment areas has been extended to March 12, 2011 (EPA, 2010).

### 3.3.3 CLIMATE CHANGE

#### **FEDERAL**

Climate change is a global phenomenon attributable to the sum of all human activities and natural processes. A recent federal guidance on climate change is the EPA's Draft NEPA Guidance on

Consideration of the Effects of Climate Change and Greenhouse Gas Emissions, released on February 18, 2010. The Draft Guidance provides that a NEPA climate change analysis shall provide quantification and mitigation to reduce GHG emissions. The guidance also provides that 25,000 metric tons of GHG emissions per year may be a helpful guideline to assist lead agencies in making informed decisions on climate change impacts resulting from a project subject to NEPA. The guidance notes that the 25,000 metric tons is not a threshold for evaluating climate change on the project level. The CEQ issued the Draft Federal Greenhouse Gas Accounting and Reporting Guidance in July 2010, which provides methodologies for estimating GHG emissions for federal projects.

In 1997, the Council on Environmental Quality (CEQ) circulated an internal draft memorandum (CEQ, 1997a) on how global climate change should be treated for the purposes of the National Environmental Policy Act (NEPA). The CEQ draft memorandum advised federal lead agencies to consider how proposed actions subject to NEPA would affect sources and sinks of green house gases (GHGs). During the same year, CEQ released guidance on the assessment of cumulative effects in NEPA documents (CEQ, 1997b). Consistent with the CEQ draft memorandum, climate change impacts were offered as one example of a cumulative effect.

The following are recent federal regulatory actions related to climate change:

- On July 23, 2009, EPA published a rule which proposes to establish the criteria for including sources or sites in a Registry of Recoverable Waste Energy Sources (Registry), as required by the Energy Independence and Security Act of 2007. Waste energy can be used to produce clean electricity. The clean electricity produced by waste energy would reduce the need for non-renewable forms of electricity production; thus, reducing GHG emissions.
- On September 15, 2009, EPA and the Department of Transportation's National Highway Traffic Safety Administration (NHTSA) proposed a new national program that would reduce greenhouse gas emissions and improve fuel economy for all new cars and trucks sold in the United States. EPA proposed the first-ever national GHG emissions standards under the CAA, and NHTSA proposed an increase in the Corporate Average Fuel Economy (CAFE) standards under the Energy Policy and Conservation Act.
- In response to the FY2008 Consolidated Appropriations Act (H.R. 2764; Public Law 110-161), EPA has issued the Final Mandatory Reporting of GHG Rule. Signed by the Administrator on September 22, 2009, the rule requires in general that suppliers of fossil fuels and industrial GHGs, manufacturers of vehicles and engines outside of the light duty sector, and facilities that emit 25,000 metric tons or more of GHGs per year to submit annual reports to EPA. The rule is intended to collect accurate and timely emissions data to guide future policy decisions on climate change.
- On September 30, 2009, the EPA proposed new thresholds for GHG emissions that define when a CAA permit under the New Source Review and Title V operating permit programs would be required.

- Executive Order (EO) 13514, “Federal Leadership in Environmental, Energy, and Economic Performance,” was signed on October 5, 2009 and contains various sustainability and efficiency goals for federal agencies. Central to EO 13514 are new requirements for federal Agencies to establish GHG emissions reductions by 2020 relative to a 2008 baseline.
- On December 15, 2009, the EPA issued a finding that the changes in the climate caused by GHG emissions endanger the public health and welfare (74 Fed. Reg. 66496).

#### **STATE**

The State of Oklahoma does not have any published guidelines regarding climate change.

### **3.4 BIOLOGICAL RESOURCES**

This section describes the biological resources that occur within the project site. A biological survey was conducted on July 15, 2010, to characterize existing habitats on the project site. Lists of wildlife and vegetation observed within the project site are provided as **Appendix C**.

#### **3.4.1 REGULATORY ENVIRONMENT**

Biological resources on trust lands are regulated at the federal level. The U.S. Fish and Wildlife Service (USFWS) regulates federal listed threatened and endangered species and those species proposed for listing; the National Marine Fisheries Service (NMFS) regulates living marine resources (including anadromous fishes, e.g. salmon and steelhead); and the U.S. Army Corps of Engineers (USACE) regulates the fill of wetlands. State regulations would be not applicable once the land is held in trust.

The USFWS and the NMFS enforce the provisions as stipulated within the Federal Endangered Species Act of 1973 (hereafter, “FESA,” 16 USC § 1531 *et seq.*). Threatened and endangered species on the federal list (50 CFR § 17.11, §17.12) are protected from take, defined as direct or indirect harm, unless a Section 10 permit is granted or a Section 7 consultation and a Biological Opinion with incidental take provisions is rendered. Pursuant to the requirements of FESA and the National Environmental Policy Act (NEPA), an agency reviewing a proposed project within its jurisdiction must determine whether any federally listed species may be present on the project site and determine whether the proposed project will have a potentially significant impact upon such species. Under FESA, habitat loss is considered an impact to the species. In addition, the agency is required to determine whether the project is likely to jeopardize the continued existence of any species that is proposed for listing under FESA or to result in the destruction or adverse modification of critical habitat proposed to be designated for such species (16 USC § 1536[3], [4]). Therefore, project-related impacts to these species or their habitats would be considered significant and would require mitigation.

### 3.4.2 VEGETATION AND HABITAT

Dominant habitat types in the project site include: non-native annual grassland, ruderal/developed, manmade retention basin, and manmade drainage ditch. Dominant vegetation in each habitat type is discussed below. Habitat types are illustrated in **Figure 3-4**, and photographs of each habitat type are provided in **Figure 3-5**.

#### *Non-native Annual Grassland*

Non-native annual grassland occurs throughout the majority of the project site which is mowed regularly. Dominant vegetation observed in the non-native annual grassland includes: green bristlegrass (*Setaria viridis*), mat sandspur (*Cenchrus longispinus*), panic grass (*Panicum* sp.), winter vetch (*Vicia villosa*), yellow sweetclover (*Melilotus officinalis*), white sweetclover (*Melilotus alba*), and Johnsongrass (*Sorghum halepense*).

#### *Stockpile*

Two stockpiles occur within the central portion of the project site. Dominant vegetation observed on the stockpiles includes: Johnsongrass, hedgehog dogtail (*Cynosurus echinatus*), and conyza (*Conyza canadensis*).

#### *Ruderal/Developed*

Ruderal/developed areas occur throughout the eastern portion of the project site. These areas include buildings and associated infrastructure and paved and graded driveways and parking lots.

#### *Manmade Retention Basin*

A manmade retention basin occurs on the northeast portion of the project site. The manmade retention basin receives water from direct precipitation during rain events and from the manmade drainage ditch. Dominant vegetation observed within manmade retention basin includes: bitter wintercress (*Barbarea vulgaris*), prickly lettuce (*Lactuca serriola*), cottonwood (*Populus* sp.), and curly dock (*Rumex crispus*).

#### *Manmade Drainage Ditch*

A gravel lined manmade drainage ditch occurs on the northeast side of the project site. The manmade drainage ditch flows from the existing casino through a gravel access road and parking area northwest to the manmade retention basin. The manmade drainage ditch drains runoff that sheetflows from the surrounding developed areas and buildings on the project site. No vegetation was observed in the vicinity of the manmade drainage ditch.

### 3.4.3 SPECIAL-STATUS SPECIES

Special-status species are those plants and animals that, because of their recognized rarity or vulnerability to various causes of habitat loss or population decline, are recognized by federal, state, or other agencies. Some of these species receive specific protection that is defined by federal or state endangered species legislation. Others have been designated as sensitive by state resource agencies or organizations with





**PHOTO 1:** View southeast of grassland habitat and ruderal/developed areas including the stock piles and the existing buildings located within the southwest portion of the project site. Photograph taken from the northwest boundary of the project site on July 15, 2010.



**PHOTO 2:** View east of grassland habitat, manmade retention basin, and ruderal/developed areas including the graded parking lot and the existing buildings and associated infrastructure within the northeast portion of the project site. Photograph taken from the northwest boundary of the project site on July 15, 2010.



**PHOTO 3:** View southeast of the paved parking lot within the ruderal/developed area within the eastern portion of the project site. Photograph taken from the northwest boundary of the project site on July 15, 2010.



**PHOTO 4:** View southwestward of the two stock piles within the central portion of the project site. Photograph taken from the northeast side of the project site on July 15, 2010.



**PHOTO 5:** View northwestward of manmade retention basin within the northeastern portion of the project site. Photograph taken from the northeast side of the project site on July 15, 2010.



**PHOTO 6:** View southward of manmade drainage ditch within the northeastern portion of the project site. Photograph taken from the northeast side of the project site on July 15, 2010.

acknowledged expertise, or by local governmental agencies such as counties, cities, and special districts to meet local conservation objectives. These species are referred to collectively as special-status species in this report, following a convention that has been developed in practice but has no official sanction.

The Oklahoma Natural Heritage Inventory (ONHI) and the Osage County, Oklahoma U.S. Fish and Wildlife Service (USFWS) have identified four federally listed species as potentially occurring in Osage County, Oklahoma (**Appendix C**). **Table 3-3** provides a summary of the federally listed special-status species based on the ONHI and USFWS file data and provides a rationale as to whether the species has the potential to occur within the project site based on the presence of each species or its habitat during the biological survey. Special-status species that are addressed in this Environmental Assessment (EA) are described in detail below.

### ***Federal Listed Species***

#### **American Burying Beetle (*Nicrophorus americanus*; ABB)**

Federal Status: Endangered

ABB is known from eight states: on Block Island off the coast of Rhode Island, Nantucket and Peninslee Islands off the coast of Massachusetts, eastern Oklahoma, western Arkansas, Sand Hills in north-central Nebraska, Chautauqua Hills region of southeastern Kansas (Sikes and Raithe, 2002), northeastern Texas (Godwin, 2003), and South Dakota (Bedick et al., 1999). ABB is known in Oklahoma from Atoka, Bryan, Cherokee, Choctaw, Coal, Haskell, Hughes, Johnston, Latimer, Le Flore, McCurtain, Muskogee, Osage, Okfuskee, Pittsburg, Pushmataha, Rogers, Sequoyah, Tulsa, and Wagoner counties (USFWS, 2004).

ABB is found in various habitat types including oak-pine woodlands, open fields, oak-hickory forest, open grasslands, and edge habitat (USFWS, 2005). ABB prefers open grasslands and open understory oak hickory forests (USFWS, 1997). The ABB's nocturnal activity decreases or is absent when temperatures drop below 60. ABB nocturnal activity is delayed when temperatures are greater than 75°F (Bedick et al., 1999). ABBs locate a carcass and form a burial chamber. Eggs are laid in an escape tunnel adjacent to the carrion and one or both of the adult ABBs remain with the eggs and subsequent larvae until larval development is complete (Wilson and Fudge, 1984).

The non-native annual grassland harbors small mammal and other potential carrion populations, which is the preferred substrate for ABB to deposit their eggs; however, through informal consultation with the USFWS, it was determined that the project site does not provide suitable habitat for ABB due to the level of urban development surrounding the site (Dikeman, 2010). ABB was not observed during the July 15, 2010 biological survey. ABB does not have the potential to occur within the project site.

TABLE 3-3

## REGIONALLY OCCURRING FEDERALLY LISTED SPECIAL-STATUS SPECIES AND THEIR CRITICAL HABITAT

SCIENTIFIC NAME COMMON NAME	FEDERAL STATUS	DISTRIBUTION	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR ON-PROJECT SITE
<b><i>Invertebrates</i></b>				
American burying beetle <i>Nicrophorus americanus</i>	FE	Known in Oklahoma from Atoka, Bryan, Cherokee, Choctaw, Coal, Craig, Haskell, Hughes, Johnston, Latimer, Le Flore, Latimer, McIntosh, McCurtain, Muskogee, Okfuskee, Pittsburg, Pushmataha, Rogers, Sequoyah, Tulsa, and Wagoner counties (USFWS, 2005).	Found in various habitat types including oak-pine woodlands, open fields, oak-hickory forest, open grasslands, and edge habitat (USFWS, 2005). Prefer open grasslands and open understory oak hickory forests (USFWS, 1997). Identifiable at temperatures above 60°F.	No, The project site does not contain habitat for this species.
Neosho mucket mussel ( <i>Lampsilis rafinesqueana</i> )	FC	Known in Oklahoma within the Spring and Illinois rivers (Great Plains Nature Center, 2010).	Obligate riverine species preferring shallow clean flowing water in fine to medium gravel substrates (Kansas Department of Wildlife and Parks, 2004).	No. The project site does not contain habitat for this species.
<b><i>Birds</i></b>				
Interior least tern ( <i>Sterna antillarum athalassos</i> )	FE	Breeds inland along the Missouri, Mississippi, Colorado, Arkansas, Red, and Rio Grande River systems. Known to breed along inland river systems in the United States and winters along the Central American coast and the northern coast of South America from Venezuela to northeastern Brazil. In Oklahoma, only known to breed along the Red River (Texas/Oklahoma boundary) into Arkansas (Texas Parks and Wildlife Department, 2009).	Nests in bare or sparsely vegetated sand, shell, and gravel beaches, sandbars, islands, and salt flats associated with rivers and reservoirs. Prefers to forage in shallow water areas of lakes, ponds, and rivers (Texas Parks and Wildlife Department, 2009). Identifiable year round.	No. The project site does not contain habitat for this species.
Eskimo curlew ( <i>Numenius borealis</i> )	FE	Breeds in Canada and possibly in Alaska. Historically used to migrate in spring to Texas, Oklahoma, Missouri, Kansas, and Nebraska (Gill et al., 1998).	Nests in treeless, dwarf shrub, graminoid tundra complex in Canada. Historically settled on tallgrass and eastern mixed-grass prairies in the midwest (Samson and Knopf 1996). Identifiable from this species. April through May during migration.	No. The project site does not contain habitat for this species.
Whooping crane ( <i>Grus americana</i> )	FE	Only wild population nests in Wood Buffalo National Park in Northwest Territories, Canada, and adjacent areas of northeastern Alberta. Winters on the Texas coast of the Gulf of Mexico (Lewis, 1995).	Nests in shallow water wetlands that support cattail ( <i>Typha</i> ), tule ( <i>Scirpus</i> sp.), sedge ( <i>Carex aquatilis</i> ), and musk-grass ( <i>Chara</i> sp.). Forages in shallow fresh and brackish waters (to 20 centimeters), margins of wetlands, harvested grainfields, pastures, burned upland fields, or savannah (Lewis, 1995). Identifiable from September through March during migration.	No. The project site does not contain habitat and is outside of the known geographical range for this species.
Piping plover ( <i>Chardrius melodus</i> )	FT	Nests in the northern Great Plains along the Loup, Missouri, Niobrara, and Platte rivers in	Nests on sandy beaches along the ocean or lakes, on bare areas of islands or sandbars along rivers,	No. The project site does not

SCIENTIFIC NAME COMMON NAME	FEDERAL STATUS	DISTRIBUTION	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR ON- PROJECT SITE
		Nebraska May. Winters along the southern Atlantic and Gulf coasts, and in the Bahamas and West Indies (USFWS, 1992).	and on the pebbly mud of interior <a href="#">alkali</a> lakes and ponds (Birdlife International, 2006). Identifiable in Oklahoma during migration in the spring and fall (USFWS, 1992).	contain breeding habitat for this species.
FEDERAL STATUS CODES: FE: Endangered – in danger of extinction throughout all or a significant portion of its range. FT: Threatened. FC: Candidate				

### *Migratory Birds and Other Birds of Prey*

The Migratory Birds Treaty Act (MBTA) of 1918 (16 U.S.C. 703-711) protects migratory birds by making it unlawful to take, possess, buy, sell, purchase, or barter any migratory bird listed in 50 CFR 10 including feathers or other parts, nests, eggs, or products, except as allowed by implementing regulations (50 CFR 21). No birds were observed nesting during the July 15, 2010 biological survey of the project site. Migratory birds and other birds of prey have the potential to nest within the project site.

### **3.4.4 WETLANDS AND WATERS OF THE U.S.**

Waters of the U.S. are regulated by the U.S. Army Corp of Engineers (USACE) and the EPA. The term waters of the U.S. is defined in Section 404 of the CWA (33 CFR 328) as:

- All waters which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
- All interstate waters including interstate wetlands; and
- All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use or degradation of which could affect interstate or foreign commerce including any such waters.

Wetlands are defined as:

- Waters of the U.S. or isolated features that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions (Federal Register 1980,1982; Braddock and Huppman, 1995).

There are no wetland features identified on the USFWS National Wetland Inventory map (USFWS, 2010b). Wetland features mapped within the project site include the manmade retention basin and the manmade drainage ditch. These features were excavated wholly in and drain only uplands and do not

carry a relatively permanent flow of water. The manmade drainage ditch was constructed to transport runoff from the existing structures to the retention basin within the project site. The retention basin receives water from the manmade drainage ditch and through direct precipitation events and runoff from the adjacent uplands. Water ponds within the retention basin and subsequently evaporates or percolates into the ground. There is no hydrologic connection between the wetland features within the project site and potentially jurisdictional waters offsite.

The manmade retention basin is determined not to be a potentially jurisdictional feature. In accordance with RGL 07-01, the manmade drainage ditch is determined not to be a potentially jurisdictional feature. There are no potentially jurisdictional waters of the U.S. within the project site.

## 3.5 CULTURAL RESOURCES

### 3.5.1 CULTURAL RESOURCES INVESTIGATION

The project site was assessed by the Osage Nation Historic Preservation Office (ONHPO) to identify any potential effects to cultural resources. This review included the identification of potential historic, cultural, and religious properties, and presence of any archaeological resources. Several databases were searched to identify historic properties, archaeological sites, and previous surveys within the proposed project area before initiating fieldwork. These include the Bureau of Land Management General Land Office (GLO) online database, National Register online database, and ONHPO Cultural Resources Database for archaeological sites, surveys, historic properties, and Traditional Cultural Properties locations.

A site file search of Oklahoma SHPO records and at the ONHPO facility produced no previously recorded archaeological sites within the project area or APE. No National Register of Historic Places (NRHP) listed properties or properties determined eligible but not yet listed on the NRHP were identified during a search of the NRHP and Oklahoma State Historic Preservation Office (SHPO) Determination of Eligibility (DOE) listings. The 1872 and 1908 GLO maps for T26N, R2E do not show structures, roads, or trails in the project area. The 1936 General Highway and Transportation Map for Osage County does not indicate structures in the SE-SE-SW ¼ of Section 36. Multiple buildings are depicted outside of the project area along the US 60 corridor and the eastern half of Section 36. The closest known sites to the project include a small lithic scatter located 2,800 ft. to the northwest (34OS433) and a historic farmstead located 2,200 ft. to the southwest (34OS799). These sites lie outside of the project area and neither site will be affected by activities occurring within the project area.

The ONHPO (2010) conducted a Phase I cultural resources investigation of the 15-acre project site. The purpose of this evaluation is to fulfill cultural assessment requirements under NEPA and NHPA as a condition of the Nation's application to request fee simple land to be taken in Trust by the United States of America for the Osage Nation. The ONHPO conducted all fieldwork in accordance with the professional standards and guidelines set forth within the Secretary of the Interior's Standards and

Guidelines for Archaeological and Historic Preservation (Federal Register, 2004). A pedestrian survey was performed over the entire project area, excluding developed portions of the site on which the parking lot, Million Dollar Elm Casino, and lagoon are located (**Appendix D**). The survey was supplemented with 34 shovel tests that were dug on seven east-west oriented transect lines spaced 30 meters apart. Shovel probes were excavated at 30 meter intervals.

ONHPO did not identify any prehistoric or historic period archaeological sites or cultural materials during the survey, or any structures or properties listed or eligible for listing in the National Register of Historic Places. A copy of the cultural resources report, (ONHPO 0910-477OK-7) provided as confidential **Appendix D** of this EA, will be submitted to SHPO to initiate consultation pursuant to Section 106 of the NHPA.

## 3.6 SOCIOECONOMIC CONDITIONS

### 3.6.1 ECONOMY AND EMPLOYMENT

The project area is located in Osage County within the unincorporated community of McCord. According to the U.S. Census Bureau, the median household income (MHI) was \$39,479 in 1999, which represents the most recent data available for the community (U.S. Census Bureau, 2000). The nearest incorporated community, the City of Ponca City, is located within Kay County. According to the U.S. Census Bureau, the MHI in Ponca City was \$43,253 between 2006 and 2008, which represents the most recent data available for the City (U.S. Census Bureau, 2006-2008). In 2008, the MHI in Kay County was \$40,446 and the MHI in Osage County was \$42,330, compared to \$42,836 for the state of Oklahoma (USDA, 2010).

The average household size in Osage County from 2006-2008 was 2.52 people; and the average household size in Kay County from 2006-2008 was 2.44 people (U.S. Census Bureau, 2006-2008). Therefore, according to the U.S. Department of Health and Human Services, the poverty income threshold for the average household in either Osage or Kay County is approximately \$18,310 (U.S. Department of Health and Human Services, 2009). Overall, approximately 17.2 percent of individuals in Kay County and 11.8 percent of individuals in Osage County had an income below the poverty level, compared to approximately 16.2 percent in the state of Oklahoma (U.S. Census Bureau, 2006-2008).

In 2009, the unemployment rate for Osage County was 7.4 percent and was 7.5 percent in Kay County (USDA, 2010). The State's unemployment rate was 6.4 percent over the same year. The leading private employment sectors in Kay County are manufacturing, retail trade, and information; and the leading private employment sectors in Osage County are retail trade, information, and educational services (U.S. Census Bureau, 2007). Major employers in Ponca City are listed in **Table 3-4** below. The largest employer is ConocoPhillips, followed by Ponca City Public Schools and Tyson Foods (Ponca City, 2008).

**TABLE 3-4**  
TOP TEN MAJOR EMPLOYERS IN PONCA CITY

1. ConocoPhillips	6. Wal-Mart Supercenter
2. Ponca City Public Schools	7. Air Systems Components
3. Tyson Foods	8. City of Ponca City
4. Ponca City Medical Center	9. Albertson's
5. Smith International	10. Mertz

Source: Ponca City, 2008

### 3.6.2 DEMOGRAPHICS

In 2009, the population of Kay County was 46,110, and the population of Osage County was 45,051. Between 2000 and 2009, Osage County experienced an estimated population increase of 0.12 percent annually. Kay County experienced an estimated population decrease of 0.43 percent annually over the same period. The state of Oklahoma experienced an estimated population increase of .75 percent between 2000 and 2009 (U.S. Census Bureau, 2009).

The demographics of Ponca City's population compared with Kay County, Osage County, the state of Oklahoma, and the U.S. are presented in **Table 3-5**.

### 3.6.3 HOUSING

From 2006 to 2008, Oklahoma was estimated to have approximately 1,622,384 housing units, of which approximately 223,889 units, or 13.8 percent, were vacant. Over the same period, compared to the State of Oklahoma, Osage County had a slightly lower percentage of vacant units, while Kay County and Ponca City had a higher percentage of vacant units. As shown in **Table 3-6**, from 2006 to 2008 there were estimated to be an average of 20,081 housing units in Osage County, of which 13.7 percent were vacant (U.S. Census Bureau, 2006-2008). Kay County was estimated to have an average of 21,971 units, of which 16.5 percent were vacant. Ponca City had an average of 11,984 housing units, of which 14.4 percent were vacant.

**TABLE 3-5**  
DEMOGRAPHIC INFORMATION

	<b>Ponca City</b>	<b>Kay County</b>	<b>Osage County</b>	<b>Oklahoma</b>	<b>United States</b>
<b>Total Population (2009)</b>	24,780	46,110	45,051	3,687,050	307,006,550
<b>Age</b>					
Under 18 Years	26.7%	25.3%	22.5%	24.9%	24.5%
18 to 64 Years	58.5%	58.3%	64.1%	61.8%	62.9%
65 Years and Over	14.8%	16.4%	13.4%	13.3%	12.6%
<b>Race and Ethnicity</b>					
White alone	80.8%	82%	66.4%	75.4%	74.3%
Black / African-American alone	3.2%	1.8%	10.7%	7.3%	12.3%
American Indian / Alaska Native alone	8.3%	8.4%	13.2%	6.7%	0.8%
Asian alone	1.2%	0.8%	0.4%	1.6%	4.4%
Native Hawaiian and Other Pacific Islander alone	0.0%	0.0%	0.0%	0.1%	0.1%
Some other race alone	3.1%	2.8%	0.6%	2.6%	5.8%
Two or more races	3.5%	4.2%	8.6%	6.3%	2.2%
Hispanic or Latino (of any race)	6.4%	5.8%	2.6%	7.4%	15.1%
<b>Poverty</b>					
Family incomes below poverty level	14.1%	12.8%	9.8%	12.0%	9.6%
Individual incomes below poverty level	17.8%	17.2%	11.8%	16.2%	13.2%

Source: U.S. Census Bureau, 2006-2008 American Community Survey

**TABLE 3-6**  
REGIONAL HOUSING STOCK

Location	2000		2006-2008*	
	<b>Total Units</b>	<b>% Vacant</b>	<b>Total Units</b>	<b>% Vacant</b>
State of Oklahoma	1,514,400	11.4	1,622,384	13.8
Osage County	18,826	11.7	20,081	13.7
Kay County	21,804	12.1	21,971	16.5
Ponca City	11,871	10.4	11,984	14.4

Source: U.S. Census Bureau, 2006-2008.  
\*Average

### 3.6.4 TRIBAL DEMOGRAPHICS

**Table 3-7** below provides demographic information for Osage Nation from 2005, which represents the most current data available. As shown in **Table 3-6**, Osage Nation has a total enrollment of 19,929 members, of which, approximately 11,960 members live on or around the reservation and are included in the Tribal Service Population. Of the Tribal Service Population in 2005, approximately 3,097 members were under the age of 16, approximately 7,320 members were between the ages of 16 and 64, and approximately 1,543 members were age 65 or older. The labor force of Osage Nation consisted of approximately 6,913 members, of which 55 percent were unemployed and 21 percent were employed, but below the poverty level.

### 3.6.5 ENVIRONMENTAL JUSTICE

Executive Order 12898 was signed by President Clinton on February 11, 1994, requiring Federal agencies to identify and address “disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low income populations.” The BIA is required to include a review of Environmental Justice as a part of its NEPA review and analysis.

The Environmental Justice review determines if there is a minority or low-income population that may be disproportionately affected by the Proposed Action. If there is such a population, a determination is then made as to whether the effect is disproportionately high and adverse on this population. This is identified as the Environmental Justice population. Disproportionate effects are defined as those environmental effects that would fall more greatly on the populations protected by the Executive Order than on those not protected.

**TABLE 3-7**  
OSAGE NATION POPULATION AND LABOR FORCE ESTIMATES

	<b>Total</b>
Tribal Enrollment	19,929
Tribal Service Population	11,960
Under age 16	3,097
Age 16 through 64	7,320
Age 65 and over	1,543
Unavailable for work	1,950
Available for work	6,913
Employed	3,086
Employed but Below the Poverty Line	1,462
Unemployment rate	55%

Source: BIA, 2005

According to guidance from the CEQ (1997b) and the U.S. EPA (1998), agencies should consider the composition of the affected area, to determine whether minority populations, low-income populations, or Indian tribes are present in the area affected by a proposed action and, if so, whether there may be

disproportionately high and adverse environmental effects to those populations. Communities may be considered “minority” under the executive order if one of the following characteristics applies:

- The cumulative percentage of minorities is greater than 50 percent (primary method of analysis).
- The cumulative percentage of minorities is less than 50 percent, but the percentage of minorities is meaningfully greater than the minority population percentage in the general population or other appropriate unit of geographic analysis (secondary method of analysis).

According to the U.S. EPA, either the county or the state can be used when considering the scope of the “general population.” A definition of “meaningfully greater” is not given by the CEQ or the U.S. EPA, although the latter has noted that any affected area that has a percentage of minorities that is above the state’s percentage is a potential minority community and any affected area with a minority percentage double that of the state’s is a definite minority community under Executive Order 12898.

Communities may be considered “low-income” under the executive order if one of the following characteristics applies:

- The median household income is below the poverty line (primary method of analysis).
- Other indications are present that indicate a low-income community is present (secondary method of analysis).

In most cases, the primary method of analysis will suffice to determine whether a low-income community exists in the affected environment. However, when income may be just over the poverty line or where a low-income pocket within the tract appears likely, the secondary method of analysis may be warranted. Other indications of a low-income community under the secondary method of analysis include limited access to health care, overburdened or aged infrastructure, and dependence on subsistence living.

As discussed in **Section 3.6.1** above, the most recent MHI for both Kay and Osage counties is well above the poverty threshold. Additionally, as discussed in **Section 3.6.2**, the minority population is below 50 percent in both Kay and Osage counties. Though the primary method of analysis of regional demographics does not reflect existence of a minority or low-income community, to ensure a conservative analysis, the Osage Nation, as described in **Section 3.6.4**, is considered to be a significant minority and low-income community within the project area. Other than the Osage Nation, no other environmental justice communities have been identified.

## 3.7 TRANSPORTATION NETWORKS

Automobiles are the primary mode of travel for most trips in the vicinity of the project site. This section summarizes the existing transportation system in the project area, traffic volumes, and transit, bicycle, and pedestrian systems.

### 3.7.1 ROADWAY SYSTEM

**Table 3-8** provides information on the existing major streets in the area of the Proposed Action, including the street classification, number of lanes, and the posted speed limits.

**TABLE 3-8**  
EXISTING STREET SYSTEM

Street	Classification	No. of Lanes (2-dir)	Posted Speed Limit (mph)
U.S. Highway 60	E/W Principal Arterial	2	45
City View Road	N/S Local Road	2	--
Kelley Avenue	E/W Local Road	2	--

Source: TEC, 2010 (**Appendix E**).

U.S. Highway 60 (US-60), a two-lane roadway in a commercial/residential area is currently utilized by approximately 6,250 vehicles per day (vpd) east of State Route City View Road and 7,850 vpd west of of City View Road. City View Road, a two-lane roadway is currently utilized by approximately 1,400 vpd in the project area.

### 3.7.2 EXISTING INTERSECTION TRAFFIC VOLUMES

Traffic Engineering Consultants, Inc. (TEC) collected existing traffic volume data in the vicinity of the project site in July 2010. Forty-eight hour bidirectional tube counts were performed on US-60, City View Road, and Kelley Avenue. Additionally, AM and PM peak hour turning movement counts were collected at the two existing drives to the casino as well as the intersections of City View Road and US-60, and City View Road and Kelley Avenue. The traffic counts are summarized in the Traffic Impact Study (TIS) (**Appendix E**). This traffic data is the background traffic to which traffic generated by the Proposed Project will be added to determine project related traffic effects.

### 3.7.3 INTERSECTION LEVEL OF SERVICE

Using the lane configurations and volumes shown in the TIS, the intersections were analyzed for existing levels of service (LOS). **Table 3-9** shows the existing levels of service for the study intersections. Calculations are included in the TIA provided as **Appendix E**. As shown in **Table 3-9** no intersection in the study area currently operates at an unacceptable LOS.

**TABLE 3-9**  
EXISTING INTERSECTION LEVEL OF SERVICE

Intersection	Traffic Control	AM Peak Hour		PM Peak Hour	
		Delay	LOS	Delay	LOS
City View Road/US-60	Unsignalized	11.5	B	14.6	B
City View Road/Kelley Avenue	Unsignalized	9.3	A	9.8	A
City View Road/Existing Drive #1	Unsignalized	8.7	A	9.1	A
City View Road/ Existing Drive #2	Unsignalized	8.6	A	8.7	A

Source: TEC, 2010.

### **3.7.4 TRANSIT, BICYCLE, AND PEDESTRIAN SYSTEMS**

There are currently no bicycle paths or pedestrian walkways in the vicinity of the project site. HDC Transport provides shuttle service to and from the project site.

## **3.8 LAND USE**

The project site is located on the western border of Osage County within the community of McCord at the intersection of U.S. Highway 60 and City View Road. The project site is located approximately three miles southeast of the city-center of the City of Ponca City, located in nearby Kay County. Land use jurisdiction over the project site is currently exercised by the Osage Nation Tribal Council, the governing body of the Osage Nation. Trust lands are not subject to local and municipal land use plans/ordinances.

### **3.8.1 EXISTING LAND USES**

The project site consists of the approximately 10,200 square foot (sf) Ponca City Osage Million Dollar Elm Casino and its associated facilities, bordered by mowed non-native grassland. Structures located onsite include the existing Ponca City Osage Million Dollar Elm Casino, paved customer parking, graveled employee parking, a septic system, two trailers used for storage, an emergency generator, and an engineered storm water detention basin. Adjacent land uses include a single residence and agricultural land to the north, commercial developments to the west, U.S Highway 60 and commercial developments to the south, and City View Road and residential and commercial developments to the east. Nearby commercial developments include a motel, a gas station, a corral and auction house, small retail facilities, an adult entertainment venue, restaurants, and several churches.

### **3.8.2 AGRICULTURE**

According to the 2007 Census of Agriculture, there are over 1,400 farms in Osage County encompassing approximately 1.29 million acres of land (USDA, 2007). Principal crops include wheat for grain, soybeans, pecans, and corn for grain. The project site is situated on relatively flat land which was historically used as pastureland from approximately 1938 to 2007. The Daugherty loamy fine sand found on approximately 88 percent of the project site is classified as “prime farmland” by the NRCS while the remaining soils are classified as “not prime farmland” (NRCS, 2010a and 2010c)

The NRCS, an agency of the Department of Agriculture (DOA), fulfills the directives of the Soil and Water Conservation Act (16 USC § 2001-2009) by identifying significant areas of concern for the protection of resources. NRCS uses a land evaluation and site assessment (LESA) system to establish a Farmland Conversion Impact Rating (FCIR) score. The FCIR is completed on form AD-1006 (NRCS, 2010b). The FCIR form has two components; the land evaluation, which rates soil quality up to 100 points, and the site assessment, which measures other factors that affect the farm’s viability up to 160

points. The total FCIR score is used as an indicator for the project's sponsor to consider alternative sites if the potential adverse impacts on the farmland exceed the recommended allowable level. Sites receiving a combined score of less than 160 (out of 260 possible points) do not require further evaluation; alternative project locations should be considered for sites with a combined score greater than 160 points. An FCIR form was completed for the subject property (**Appendix F**). The project site received a score of 48 for the site assessment component of the evaluation; thus, it is not possible for the site to meet the FPPA protection threshold of 160 or greater and further evaluation is not required.

### 3.9 PUBLIC SERVICES

**Table 3-10** lists the public service providers in the area of the project site.

**TABLE 3-10**  
PUBLIC SERVICE PROVIDERS

Service	Agency/District
Law Enforcement	Osage County Sheriff Osage Nation Tribal Police Ponca City Police Dept
Emergency Response	Ponca City Fire Department
Fire Protection	McCord Volunteer Fire Department
Garbage Collection	Ponca City Solid Waste Collection Division
Sewage	Ponca City Wastewater Division
Water	Rural Water District Number 3
Source: AES, 2010	

#### 3.9.1 WATER SUPPLY

Rural Water District number 3 (RWD #3) provides potable water supply for the project site through an existing 1 inch supply line, which extends from an existing 8 inch supply main that runs along City View Road. RWD #3 serves over 2,000 people from purchased water from Ponca City. The existing casino has an average potable water demand of approximately 4,000 gallons per day. An onsite black water tank is used as water supply for the onsite fire suppression system.

#### 3.9.2 WASTEWATER SERVICE

Existing wastewater treatment on the project site is provided through on-site septic disposal. The Nation entered into an Agreement for Sewer Service Outside Corporate Limits with Ponca City for the project site on August 24, 2009 (**Appendix A**). In accordance with this agreement, the Nation is currently in the process of designing a sanitary sewer line from the project site to a designated connection point with the City's sanitary sewer system. Wastewater service will be provided by the Wastewater Division of the

Ponca City Environmental Services Department, which currently operates 177 miles of pipeline, 12 pump stations, and a wastewater treatment plant (WWTP) with a total capacity of 9 million gallons per day (mgd) (Ponca City, 2010). Currently, the Ponca City WWTP treats an average dry weather flow of 5 mgd of municipal wastewater that discharges to the Arkansas River (Ponca City, 2010).

### **3.9.3 SOLID WASTE SERVICE**

There are two landfills in Osage County, but the nearest landfill to the project site is the Ponca City landfill in neighboring Kay County (Ponca City, 2010). The landfill is located three miles southwest of the project site at 2501 W. Riverview Road in Ponca City (Ponca City, 2010). The landfill has an 80-year estimated lifespan at 150 tons per day of permitted capacity (Horinek, 2010). The landfill also accepts construction waste, either delivered and paid for by the ton, or collected in open-top construction roll-off bins and hauled by the City (Horinek, 2010). The Ponca City Solid Waste Division currently provides solid waste services to the existing casino on the project site (Horinek, 2010).

### **3.9.4 SCHOOLS**

The project site is within the boundaries of the McCord School District which provides elementary school services to the project area. McCord Elementary School, located approximately one mile to the southeast of the project site at 977 McCord Road, is the only school managed by the McCord School District (ODE, 2009). The school had 20 teachers employed in 2009 and 237 students enrolled in the 2009-2010 school year (ODE, 2009).

The Ponca City School District provides middle school and high school services to the project area. There are two middle schools in the Ponca City School District: East Middle School which provides grade eight education and West Middle School which provides grades six and seven education (ODE, 2009). There is one high school in Ponca City. Ponca City High School had 1566 enrolled students and 79 faculty members in the 2009-2010 school year (ODE, 2009).

### **3.9.5 RECREATION**

The project site is not currently used for recreational purposes. The nearest public parks are Willow Springs Park and Dixie Park located in Ponca City, approximately two miles from the project site. Both of these parks are managed by the Ponca City Parks and Recreation Department. The Ponca City Parks and Recreation Department also provides landscaping services to a number of other City facilities (Ponca City, 2010). The nearest state recreational facility is Lake Ponca Park, located on Lake Ponca. The park includes campgrounds and a nature center (Ponca City, 2010).

### **3.9.6 ELECTRICITY AND NATURAL GAS**

Electricity for the project site is provided by the Ponca City Utility Authority, a publicly owned utility. The new McCord substation was recently completed in 2009 (Ponca City, 2010). Ponca City obtains

electric power generated by the City's electric steam generation plant, as well as power purchased from the 25.6 megawatt Kaw Lake and Dam Hydropower Project.

Natural gas service in the project area is provided by the Oklahoma Natural Gas Company.

### **3.9.7 LAW ENFORCEMENT**

A cross-deputization agreement was signed in April 2005 between the BIA and the State of Oklahoma and its political subdivisions (e.g. Osage County and Ponca City) to provide enhanced law enforcement capabilities in Osage County (**Appendix B**). The agreement provides for the immediate response of law enforcement, from any jurisdiction, to observed violations of the law in and out of Indian Country.

The Ponca City Police Department is an accredited police department located in Ponca City, with 55 sworn officers and 34 civilian personnel (Ponca City, 2010). The Ponca City Police Department headquarters are located at 200 East Oklahoma Ave in Ponca City, three miles northeast of the project site (Ponca City, 2010).

The Osage County Sheriff's office (OCSO) is located over twenty-five miles east of the project site in Pawhuska, the County seat. The OCSO has 34 sworn officers and 27 civilian personnel (OCSO, 2010).

The Osage Nation Police Department (ONPD) is the law enforcement agency created under the Bureau of Indian Affairs (BIA) Office of Justice Services (OJS) charged with enforcing Tribal, Federal, and State law on the Osage Nation Reservation. The ONPD is staffed by 14 sworn officers and one non-sworn office staff member (Osage Nation, 2010).

### **3.9.8 FIRE PROTECTION**

The McCord Volunteer Fire Department is the primary fire responder to the unincorporated community of McCord, including the project site (Ponca City, 2010). The nearest fire station is the McCord Volunteer Fire Station located approximately 400 feet east of the project site, at 22 Howard St. Personal communication with the Ponca City Fire Department indicated that although the department provides emergency medical services to the project site, it is not the primary responder for fire related emergencies (P. Carlisle, 2010).

### **3.9.9 EMERGENCY MEDICAL SERVICES**

Emergency calls in the Ponca City Fire Department's service area, including some parts of Osage County near Ponca City, are routed through the Ponca City Communications Center (Ponca City, 2010). The Ponca City Fire Department provides Emergency Medical Services for Ponca City and the surrounding communities, including the Community of McCord (Ponca City, 2010).

The nearest hospital is the Ponca City Medical Center at 1900 North 14<sup>th</sup> Street in Ponca City, approximately five miles driving distance (10 minutes) away.

## **3.10 VISUAL RESOURCES**

### **3.10.1 AESTHETICS**

The eastern half of the project site contains two parking lots (one gravel and one paved), the existing casino structure, a septic system, two storage trailers, a retention basin, and a generator. The remainder of the project site consists of mowed non-native grassland. Residences are located to the east and north of the project site and commercial structures are located to the west and south of the project site. A description of land uses on and in the vicinity of the project site is provided in **Section 3.8**. The project site is clearly visible from U.S. Highway 60 to the south and City View Road to the east. There is currently no landscaping improvements on the site.

**Figure 3-6**, provides views of the existing casino located at the intersection of U.S. Highway 60 and City View Road. The current casino facility is housed in a pre-fabricated modular structure clad in white and grey siding.

### **3.10.2 LIGHTING**

Lighting associated with the existing casino facilities currently exists on the property and is located adjacent to the existing casino building. Additional sources of light in the immediate area include headlights from cars passing on U.S. Highway 60 and City View Road, and facilities of the commercial structures to the south and west. The residences adjacent to the north and east sides of the project area are potential sensitive receptors to light in the area.

## **3.11 NOISE**

This section includes a discussion of acoustical background and terminology, regulatory environment, and the existing noise and vibration conditions in the vicinity of the project site.

### **3.11.1 ACOUSTICAL BACKGROUND AND TERMINOLOGY**

Sound is defined as any pressure variation in air that the human ear can detect, and is technically described in terms of loudness (amplitude) and frequency (pitch). The standard unit of sound amplitude measurement is the decibel (dB). The decibel scale uses the hearing threshold (20 micropascals of pressure), as a point of reference, defined as 0 dB. Other sound pressures are then compared to the reference pressure, and the logarithm is taken to keep the numbers in a practical range. The decibel scale allows a million-fold increase in pressure to be expressed as 120 dB.



**PHOTO 1**

View of existing Casino facing northwest from City View Road.



**PHOTO 2**

View of existing Casino facing southwest from City View Road.

The perceived loudness of sounds is dependent upon many factors, including sound pressure level and frequency content. However, within the usual range of environmental noise levels, perception of loudness is relatively predictable, and can be approximated by weighing the frequency response of a sound level meter by means of the standardized A-weighting network. There is a strong correlation between A-weighted sound levels (expressed as dBA) and community response to noise. For this reason, the A-weighted sound level has become the standard tool of environmental noise assessment. All noise levels reported in this section are in terms of A-weighted levels in dB.

Community noise is commonly described in terms of the “ambient” noise level, which is defined as the all-encompassing noise level associated with a given noise environment. A common statistical tool to measure the ambient noise level is the average, or equivalent, sound level (Leq) over a given time period (usually one hour). The Leq is the foundation of the Day-Night Average Level noise descriptor, Ldn, and shows very good correlation with community response to noise.

**Table 3-11** contains definitions of acoustical terminology used in this section. **Table 3-12** shows examples of noise sources, which correspond to various sound levels. The Day-night Average Level (Ldn) is based upon the average noise level over a 24-hour day, with a +10 decibel weighing applied to noise occurring during nighttime (10:00 p.m. to 7:00 a.m.) hours. The nighttime penalty is based upon the assumption that people react to nighttime noise exposures as though they were louder than daytime exposures.

Because Ldn represents a 24-hour average, it tends to disguise short-term variations in the noise environment. Ldn-based noise standards are commonly used to assess noise effects associated with traffic, railroad, and aircraft noise sources.

### 3.11.2 REGULATORY ENVIRONMENT

Noise criteria used in this EA includes the Federal Highway Administration (FHWA) Noise Abatement Criteria for the assessment of noise consequences related to surface traffic. In addition, environmental consequences are also evaluated relative to the change in ambient noise conditions at existing noise-sensitive uses in the project vicinity which would result from the project. These criteria are discussed below.

#### *Federal Noise Abatement Criteria*

The FHWA establishes Noise Abatement Criteria (NAC) for various land uses which have been categorized based upon activity. Land uses are categorized on the basis of their sensitivity to noise, as indicated in **Table 3-13**. This table provides standards which may be considered applicable to the project site and surrounding land uses. The Project Site would fall under Activity Category C, because the land has been previously developed with a casino, while the nearest sensitive receptors, residences and a church, would fall under Activity Category B.

**TABLE 3-11**  
ACOUSTICAL TERMINOLOGY

<b>Terms</b>	<b>Definitions</b>
Decibel, dB	A unit describing the amplitude of sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure, which is 20 micropascals (20 micronewtons per square meter)
Frequency, Hz	The number of complete pressure fluctuations per second above and below atmospheric pressure.
A-Weighted Sound Level, dBA	Sound pressure level in decibels as measured on a sound level meter using the A-weighting filter network, which de-emphasizes very low and very high frequency components of the sound in a manner similar to the frequency response of the human ear and correlates well with subjective reactions to noise.
L01, L10, L50, L90	The A-weighted noise levels that are exceeded 1%, 10%, 50%, and 90% (respectively of the time during the measurement period.
Equivalent Noise Level, Leq	The average A-weighted noise level during the measurement period.
Community Noise Equivalent Level, CNEL	The average A-weighted noise level during a 24-hour day, obtained after adding 5 decibels to measurements taken in the evening (7 to 10 pm) and 10 decibels to measurements taken between 10 pm and 7am.
Day/Night Noise Level, Ldn	The average A-weighted noise level during a 24-hour day, obtained after addition of 10 decibels to levels measured in the night between 10:00 pm and 7:00 am.
Lmax, Lmin	The maximum and minimum A-weighted noise level during the measurement period.
Ambient Noise Level	The composite of noise from all sources near and far. The normal or existing level of environmental noise at a given location.
Intrusive	That noise which intrudes over and above the existing ambient noise at a given location. The relative intrusiveness of a sound depends upon its amplitude, duration, frequency, and time of occurrence and tonal or informational content as well as the prevailing ambient noise level.

Source: Noise Primer, 2010.

**TABLE 3-12**  
TYPICAL A-WEIGHTED SOUND LEVELS

Common Outdoor Activities	Noise Level (dBA)	Common indoor Activities
	110	Rock band
Jet flyover at 1,000 feet		
	100	
Gas lawnmower at 3 feet		
	90	
Diesel truck at 50 feet at 50 mph		Food blender at 3 feet
	80	Garbage disposal at 3 feet
Noisy urban area, daytime		
Gas lawnmower at 100 feet	70	vacuum cleaner at 10 feet
Commercial area		Normal speech at 3 feet
Heavy Traffic at 300 feet	60	
Rural daytime		Large business office
Quiet urban daytime	50	Dishwasher in next room
Quiet urban nighttime	40	Theater, large conference room (background)
Quiet suburban nighttime		
	30	Library
		Bedroom at night, concert hall (background)
Quiet rural nighttime		
	20	
		Broadcast/recording studio
	10	
	0	

Source: Federal Highway Administration, 2009.

**TABLE 3-13**  
FEDERAL NOISE ABATEMENT CRITERIA (HOURLY– DBA SOUNDLEVEL)

Activity Category	Leq (h), dBA	Activity Category Description
A	57 (Exterior)	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B	67 (Exterior)	Picnic areas, recreation areas, playgrounds, active sports areas, parks, residences, motels, hotels, schools, churches, libraries, and hospitals.
C	72 (Exterior)	Developed lands, properties, or activities not included in Categories A or B above.
D	N/A	Undeveloped lands not meeting the requirements of Category A and with no sensitive noise receptors within the area.
E	52 (Interior)	Residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals, and auditoriums.

N/A = Not applicable  
Source: Federal Highway Administration, 2009.

### 3.11.3 EXISTING NOISE SOURCES AND AMBIENT NOISE LEVELS

Existing noise generated in the vicinity of the project site primarily comes from traffic on adjacent roadways, including US Highway 60 and City View Road which border the project site on the south and east, respectively. Other noise sources in the area are generated from local parking lot activity (existing casino, nearby commercial uses, and church). The project site is located in a residential and commercial area; therefore, it is assumed for this analysis that the ambient noise level is a conservative 60 dBA.

#### *Sensitive Receptors*

Some land uses are considered more sensitive to noise than others due the types of activities typical to the land use. Residences, motels and hotels, schools, libraries, churches, hospitals, nursing homes, auditoriums, and other outdoor recreation areas are generally more sensitive to noise than commercial and industrial land uses.

The nearest residence to the proposed casino site is located approximately 220 feet to the north. A residence and a church are located between approximately 400 to 500 feet to the southeast of the proposed casino site. The residences to the west are located approximately 400 feet from the proposed casino site (**Figure 1-3**). The nearest school is McCord Elementary School approximately two miles southeast of the project site. There are no hospitals within the immediate vicinity of the site.

## 3.12 HAZARDOUS MATERIALS

At the federal level, the principal agency regulating the generation, transport and disposal of hazardous substances is the EPA, under the authority of the Resource Conservation and Recovery Act (RCRA) and the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). Applicable federal regulations are contained primarily in the Code of Federal Regulations (CFR) Titles 29, 40, and 49.

According to the EPA, a “hazardous waste is a waste with properties that make it dangerous or potentially harmful to human health or the environment” (EPA, 2010). EPA’s definition of a hazardous material encompasses any item or chemical that can cause harm to people, plants, or animals when released by spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping or disposing into the environment. 40 CFR §355 contains a list of over 350 hazardous and extremely hazardous substances. ‘

### 3.12.1 EXISTING CONDITIONS

Site visits were conducted to determine if any recognized environmental conditions (RECs) exist on the site. An REC is the presence of any hazardous substance or petroleum product that indicates a release, past release, or the material threat of future release, including those hazardous substances and petroleum products which are permitted by law (ASTM, 2005).

The casino building is in good order and there is no evidence indicating the deterioration of possible existing asbestos containing materials or lead based paint was found on the project site. There are no hazardous materials or petroleum products being used or stored on site, nor identified in connection with any observed use on site.

#### *Phase I Environmental Site Assessment*

A Phase I Environmental Site Assessment (ESA) of the property was conducted in September 2010. The assessment was performed utilizing information from environmental database records, historic aerial photographs, site reconnaissance, and interviews with present and past owners and state and local agencies. The ESA found no evidence of RECs on the site (EEC, 2010).

Environmental database review for the presence of hazardous material contamination in the vicinity of the project site was accomplished using the services of a computerized search firm, Environmental Data Resources, Inc. (EDR). EDR uses a geographical information system to plot locations of past and current hazardous materials involvement (EEC, 2010). The records review revealed that the project site and properties within a ½ mile radius were not listed on any of the databases in the search.

# ***SECTION 4.0***

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## ***ENVIRONMENTAL CONSEQUENCES***

# SECTION 4.0

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## ENVIRONMENTAL CONSEQUENCES

In this section, environmental consequences of the Proposed Project (Alternative A), the Reduced-Intensity Alternative (Alternative B), and the No Action Alternative / No New Casino Alternative (Alternative C) are described, including cumulative impacts and indirect effects, for each issue area presented in **Section 3.0**.

### 4.1 LAND RESOURCES

#### 4.1.1 ALTERNATIVE A - PROPOSED PROJECT

##### *TOPOGRAPHY*

The Proposed Project would result in changes to the existing site topography. These changes would include removing the soil piles in the center of the site, excavating the southeast corner for the fountain/pond, and grading the project site for a casino and hotel on the northwest portion of the site and for approximately 814 parking spaces throughout the remainder of the site (see **Figure 2-1**).

The soil piles in the center of the site were placed there after the creation of drainage for the existing casino. Removing these piles will restore the site to its original topography. Much of the rest of the site is relatively flat, with occasional slight slopes. Changes to topography resulting from leveling portions of the site would be minimal. The grading plan would be in compliance with standard engineering practices. No adverse effect to topography would occur.

##### *GEOLOGY/SOILS*

Soil manipulation would include excavation and mixing, as well as the addition of compacted fill and road surface pavement over existing soils. The entire site will either be paved or landscaped, as shown in **Figure 2-1**. Because of previous disturbance on the site and its relatively flat topography, it is anticipated that excavation and fill would be minimal.

The majority of the project site contains soil types considered to be well suited for the construction of commercial type buildings and roads. Implementation of the Protective Measures and Best Management Practices (BMPs) listed in **Section 2.1.3**, would ensure that the Proposed Project would have no adverse effects on land resources. Some of the soils on the site have a moderate risk of corrosion of concrete and steel. Implementation of the mitigation measure presented in **Section 5.1** would ensure significant adverse effects would not occur.

Construction of the proposed casino, hotel, and parking areas would be on soils classified as loamy fine sands and pits, which have been previously disturbed through agricultural use and the construction of the existing casino and parking lot. The clearing of vegetation from the project area prior to grading and construction would expose soils to erosion by both water and wind. This would have the potential to adversely affect surrounding land uses and water bodies. Industry-standard BMPs would be implemented in order to control erosion and prevent sediment loading to local waters during construction (see **Section 2.1.3**). No significant adverse effects to soils as a result of the Proposed Project would occur.

#### ***SEISMIC HAZARDS***

The project site is not located on any known active fault trace, thus the risk of fault rupture is low. The nearest fault is located approximately 154 miles from the project site. As discussed in **Section 2.1.2**, the proposed facilities would conform to the requirements of the Uniform Building Code Seismic Zone 1 requirements. Therefore, no adverse effects due to geologic or seismic conditions onsite would occur.

#### ***MINERAL RESOURCES***

Construction of the project facilities would not result in the loss of mineral resources. Therefore, no adverse effects to mineral resources would occur as a result of the Proposed Project.

### **4.1.2 ALTERNATIVE B - REDUCED-INTENSITY ALTERNATIVE**

#### ***TOPOGRAPHY***

Alternative B would result in changes to the existing site topography. These changes would be the same as identified in **Section 4.1.1** for the Proposed Project. As discussed in **Section 4.1.1**, changes to topography resulting from leveling portions of the site would be minimal. No adverse effect would occur.

#### ***GEOLOGY/SOILS***

The same amount of soil manipulation would be required for this alternative as for the Proposed Project; therefore, the effect would be minimal.

As discussed under **Section 4.1.1**, above, the Protective Measures and BMPs listed in **Section 2.1.3** would ensure that Alternative B would have no adverse effects on land resources. As discussed in **Section 3.1**, some of the soils on the site have a moderate risk of corrosion of concrete and steel. This could potentially have an adverse effect. Implementation of the mitigation measure presented in **Section 5.1**, would address this issue.

As with the Proposed Project, the clearing of vegetation from the project area would expose soils to erosion by both water and wind. This would have the potential to adversely affect surrounding land uses and water bodies. BMPs listed in **Section 2.1.3** and mitigation listed in **Section 5.2** would address this issue. No significant adverse effects to soils as a result of the Proposed Project would occur.

### ***SEISMIC HAZARDS***

The project site is not located on any known active fault trace. As with the Proposed Project, the proposed facilities would conform to the requirements of the Uniform Building Code Seismic Zone 1 requirements. No adverse effects due to geologic or seismic conditions onsite would occur.

### ***MINERAL RESOURCES***

Construction of the project facilities would not result in the loss of mineral resources. Therefore, no adverse effects to mineral resources would occur as a result of the Proposed Project.

#### **4.1.3 ALTERNATIVE C – NO ACTION ALTERNATIVE / NO NEW CASINO ALTERNATIVE**

Under Alternative C, the existing casino would remain in operation or the site would be repurposed as a commercial facility. Because a facility has already been constructed, Alternative C would have no adverse effects related to land resources.

## **4.2 WATER RESOURCES**

### **4.2.1 ALTERNATIVE A - PROPOSED PROJECT**

#### ***SURFACE WATER***

##### ***Water Supply***

Water supply for potable water demands of Alternative A would be provided by the Osage County Rural Water District #3, which supplies the existing casino facility on the site with purchased water from Ponca City. Using estimated wastewater demand rates established at similar facilities, the Proposed Project would result in a peak potable water supply demand of approximately 50,000 gallons per day (gpd), which is an approximately 46,000 gpd increase from the existing casino (refer to **Section 4.9.1**). An appropriately sized water tank will be located near the casino and hotel to provide reserve capacity for fire suppression systems and peak demands at the proposed facilities. As the Rural Water District #3 has indicated that there is available capacity in the system to serve the Proposed Project, no adverse effect to surface water supply would occur.

##### ***Stormwater***

Construction of the casino and hotel would result in a greater area of impervious surfaces than currently exists on the project site, potentially increasing stormwater runoff flow rates. The natural topography provides drainage by sheet flow across the site to the detention basin located in the northwestern portion of the site. Stormwater runoff collected from the southern portion of the site drains into the roadside ditch along US 60, where it eventually flows to the Arkansas River. As discussed in **Section 2.1.2**, an appropriately sized decorative pond would be constructed at the southwest corner of the site, and would

serve as the stormwater detention basin for the proposed new facilities (see **Figure 2-1**). The detention basin would be designed to accommodate runoff from the increase in impervious surfaces, including parking lots and access roads, and to ensure that off-site stormwater flows would not exceed pre-project levels by storing stormwater onsite and releasing it at a controlled rate. No adverse effect due to stormwater runoff would occur.

### ***Flooding***

Impacts to the floodplain or floodplain management could occur if construction of the casino and associated buildings were to place people or structures in a floodplain, or change flood elevations. The site is not within a 100- or 500-year FEMA designated flood zone. The site is located in Zone X, which is defined as the area outside of the 100- and 500 year flooding potential, therefore construction and operation of the casino would not alter the floodplain boundaries or flooding elevations. No adverse effect associated with flooding or floodplain management would occur as a result of the Proposed Project.

### ***Surface Water Quality***

Impacts to surface water quality could result from the increase in pollutants in stormwater runoff as a result of the Proposed Project. During construction activities, pollutants can be introduced into stormwater from a variety of construction activities, including grading and excavation which may increase sediment loading, and vehicle operations and maintenance which may release petroleum or hazardous chemicals in case of an accidental release. Regulated construction activities in excess of one acre are required to apply for coverage under the National Pollutant Discharge Elimination System (NPDES) general permit for Construction Activities. The provisions of this permit include preparation of a Stormwater Pollution Prevention Plan (SWPPP) which contains a selection of BMPs that will be implemented to effectively reduce or prevent the discharge of pollutants into receiving waters during construction activities. As such, stormwater runoff would be controlled or monitored according to applicable federal regulations. A list of BMPs that would be implemented during construction of Alternative A is presented in **Section 2.1.3**. No significant adverse effects to surface water quality from construction of Alternative A would occur.

Wastewater generated by the casino and hotel would be treated by the Ponca City WWTP, which discharges treated effluent into the Arkansas River. The existing septic system on the project site would be removed, and replaced with a connection to the City's wastewater collection system. Approximately 37,000 gpd of wastewater would be generated as a result of the Proposed Project. Refer to **Section 4.9.1** for a discussion of effects to public services providers, including wastewater treatment. In order to discharge to the Arkansas River, the Ponca City WWTP must comply with the Clean Water Act and the conditions of the WWTP NPDES discharge permit. This permit is regulated by the Oklahoma Department of Environmental Quality and sets requirements for effluent water quality. No adverse effects to water quality would occur as a result of wastewater treatment and disposal from the Proposed Project.

### ***Groundwater***

Water supply for the proposed casino and hotel will be provided through the Osage County Rural Water District #3 purchased surface water supplies. Therefore, groundwater levels in the project area would not be affected by the increase in potable water demand as a result of the Proposed Project.

There is the potential for slightly increased levels of various pollutants (i.e., oils and sediment resulting from vehicular traffic and parking in the parking lot) in stormwater runoff as a result of the Proposed Project. This runoff should not affect groundwater quality since the majority of these pollutants would be filtered in the stormwater retention pond. The removal of the septic system will further reduce the migration of potential contaminants into groundwater resources. Therefore the Proposed Project would not result in adverse effects to groundwater resources.

## **4.2.2 ALTERNATIVE B - REDUCED-INTENSITY ALTERNATIVE**

### ***SURFACE WATER***

#### ***Water Supply***

Water supply for potable water demands of Alternative B would be provided by the Osage County Rural Water District #3, as with the Proposed Project. Using estimated wastewater demand rates established at similar facilities, Alternative B would result in a peak potable water demand of approximately 37,000 gpd, which is an approximately 33,000 gpd increase from the existing casino (refer to **Section 4.9.2**). An appropriately sized water tank will be located near the casino to provide reserve capacity for the fire suppression systems. As the Rural Water District #3 has the capacity to serve the proposed facilities, no adverse effect to surface water supply would occur under Alternative B.

#### ***Stormwater***

Construction of the casino would result in a greater area of impervious surfaces than currently exists on the project site, potentially increasing stormwater runoff rates. As discussed for the Proposed Project, an appropriately sized decorative pond would be constructed at the southwest corner of the site, and would serve as a stormwater detention basin for the new facilities (see **Figure 2-2**). The detention basin would be designed to accommodate runoff from the increase in impervious surfaces, including parking lots and access roads, and to ensure that off-site stormwater flows would not exceed pre-project levels by storing stormwater onsite and releasing it at a controlled rate. No adverse effect due to stormwater runoff would occur.

#### ***Flooding***

As with the Proposed Project, Alternative B site is not in the 100- or 500-year FEMA designated flood zones. The site is located in Zone X, which is defined as an area outside of the 100- and 500 year flooding potential, therefore construction and operation of the casino would not alter the floodplain boundaries or flooding elevations. No adverse effect associated with flooding floodplain management would occur as a result of Alternative B.

### ***Surface Water Quality***

Impacts to surface water quality could result from the increase in pollutants in stormwater runoff as a result of the operation of the casino. During construction activities, pollutants can be introduced into stormwater from a variety of construction activities, including grading and excavation which may increase sediment loading, and vehicle operations and maintenance which may release petroleum or hazardous chemicals in case of an accidental release. Regulated construction activities in excess of one acre are required to apply for coverage under the NPDES general permit for Construction Activities. The provisions of this permit include a preparation of a SWPPP which contains a selection of BMPs that will be implemented to effectively reduce or prevent the discharge of pollutants into receiving waters during construction activities. As such, stormwater runoff would be controlled or monitored according to applicable federal regulations. A list of BMPs that would be implemented during construction of Alternative B is presented in **Section 2.1.3**.

As with Alternative A, wastewater generated by Alternative B would be treated by the Ponca City WWTP and discharged into the Arkansas River. The existing septic system would be removed, and replaced with a connection to the City's wastewater collection system. Approximately 27,000 gpd of wastewater would be generated as a result of Alternative B. Refer to **Section 4.9.1** for a discussion of effects to public services, including wastewater treatment providers. As with Alternative A, the WWTP must discharge in accordance with the NPDES discharge permit. This permit is regulated by the Oklahoma Department of Environmental Quality and sets requirements for effluent water quality. No adverse effects to surface water quality would occur as a result of wastewater treatment and disposal from Alternative B.

### ***Groundwater***

As with Alternative A, the casino proposed under Alternative B would obtain its water supply through the Osage County Rural Water District #3 purchased surface water supplies. Therefore, groundwater levels in the area would not be affected by the increase in potable water demand as a result of Alternative B. There is the potential for slightly increased levels of various pollutants (i.e., oils and sediment resulting from vehicular traffic and parking in the parking lot) in stormwater runoff as a result of the Proposed Project. This runoff should not affect groundwater quality since the majority of these pollutants would be filtered in the stormwater retention pond. The removal of the septic system will further reduce the migration of potential contaminants into groundwater resources. Therefore, Alternative B would not result in adverse effects to groundwater resources.

### **4.2.3 ALTERNATIVE C - NO ACTION ALTERNATIVE / NO NEW CASINO ALTERNATIVE**

Under Alternative C, the project site would not be developed with a new gaming facility or hotel. The site is owned by Osage Nation and could potentially be developed for retail commercial land use, or

existing casino operations could continue. Because no changes to existing conditions on the site would occur, Alternative C would have no affect on water resources.

## 4.3 AIR QUALITY

### 4.3.1 ALTERNATIVE A - PROPOSED PROJECT

Once the federal government acquires the property in trust for the Nation, the project site would not be subject to local regulatory authority for air quality; the federal government would directly administer Clean Air Act (CAA) mandated programs on the Tribal land in instances where the Nation is not administering provisions of these programs.

#### *CONSTRUCTION-RELATED EMISSIONS*

Emissions generated by construction activities primarily consist of dust from equipment operation, vegetation removal, earthmoving activities, transportation on unpaved roads, wind erosion of stockpiled materials, and demolition/renovation activities. To a lesser extent, there are also emissions from fueled equipment and workers' vehicles. A residential property adjacent to the northern boundary of the site constitutes a sensitive receptor of air quality impacts.

The State of Oklahoma does not require permitting of fugitive dust sources from construction activities. Precautionary fugitive dust measures are required by the Oklahoma Air Rules only in non-attainment areas for particulate matter (Oklahoma Air Quality Council, 2010).

The project site is located in the State of Oklahoma, which is currently designated attainment for all criteria pollutants established by the U.S. Environmental Protection Agency (EPA) (see **Section 3.3**). There are no applicable state implementation plans (SIP) for the State of Oklahoma; therefore, construction of the Proposed Project would have minimal direct adverse effects on air quality. **Table 4-1** provides an estimation of the construction emissions resulting from the Proposed Project. Construction emissions were estimated using the EPA approved URBEMIS 9.2.4 air quality program. Site specific, program default, and similar land use input values were used. URBEMIS output files are provided in **Appendix G**. BMPs listed in **Section 2.1.3** would further reduce emissions. No significant adverse effects associated with air quality would result from construction of the Proposed Project.

**TABLE 4-1**  
PROPOSED PROJECT - CONSTRUCTION EMISSIONS

Year	ROG	NOx	SOx	PM <sub>10</sub>	PM <sub>2.5</sub>	CO
	tons per year					
2010	0.10	0.83	0.00	0.58	0.15	0.45
2011	0.93	1.23	0.00	0.26	0.07	1.11
<b>Total Emissions</b>	<b>1.03</b>	<b>2.06</b>	<b>0.00</b>	<b>0.84</b>	<b>0.22</b>	<b>1.56</b>

Source: URBEMIS, 2007; AES, 2010.

### OPERATIONAL EMISSIONS

Criteria emission sources during operation of the Proposed Project include gas-fired kitchen equipment, heating, ventilating, and air conditioning (HVAC) equipment, and mobile emissions from patron, employee, and delivery vehicles.

The Proposed Project would emit ozone precursors [nitrogen oxides (NO<sub>x</sub>) and reactive organic gases (ROG)], particulate matter (10 and 2.5 micron in size), sulfur oxides (SO<sub>x</sub>), and carbon monoxide (CO). **Table 4-2** provides an estimation of the Proposed Project's operational emissions. Operational emissions were estimated using the EPA approved URBEMIS 9.2.4 air quality program. The Proposed Project's emissions were estimated by subtracting the existing casino square footage from the Proposed Project's square footage to determine the increase in casino square footage. The increase in casino square footage was inputted into the URBEMIS program, which multiplies that number by a land use specific trip generation rate to determine the projects average daily trips (ADT). The Proposed Project's ADT was determined to be 1,333 (refer to **Appendix G**). The ADT was then multiplied by the average default trip length and vehicle specific emission factors to determine mobile source emissions from the increase in casino square footage resulting from the Proposed Project. Area source emissions are calculated on the increase in casino square footage. URBEMIS output files are provided in **Appendix G**. BMPs listed in **Section 2.1.3** would minimize any adverse effects. There are no applicable state implementation plans (SIP); therefore, operation of the Proposed Project would not result in adverse effects on air quality.

**TABLE 4-2**  
INCREASE IN OPERATIONAL EMISSIONS OVER EXISTING CASINO

Source	ROG	NO <sub>x</sub>	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>	CO
	tons per year					
Area	0.13	0.16	0.00	0.00	0.00	0.69
Mobile	2.35	4.11	0.03	4.67	0.94	26.81
<b>Total Emissions</b>	<b>2.48</b>	<b>4.27</b>	<b>0.03</b>	<b>4.67</b>	<b>0.94</b>	<b>24.50</b>

Source: URBEMIS, 2007; AES, 2010.

### CLIMATE CHANGE ANALYSIS

Climate change is expected to result in global impacts, such as more erratic weather patterns, more frequent droughts, and rising sea level. Climate change is also expected to cause regional and local impacts, such as a reduction in the snow pack in the mountain regions, increased drought periods, reduced water tables, increased seawater intrusion, and a reduction or reconfiguration of the coast lines (Climate Change, 2007).

Development of Proposed Project would result in an increase in greenhouse gas (GHG) emissions related to mobile sources (trips generated), area sources (components of the Proposed Project that directly emit GHGs), and indirect sources related to electricity, wastewater processing, and water transport.

### ***Methodology***

Two recent federal court decisions (*Massachusetts v. Environmental Protection Agency*, U.S., 1275 S.Ct. 1438, 1462 [2007] and *Center for Biological Diversity v. National Highway Safety Administration*, 508 F.3d 508 [9<sup>th</sup> Cir. 2007]), CEQ draft Guidance, and slowly increasing scientific consensus have resulted in general guidance regarding appropriate GHG analysis (**Section 3.3**).

The CEQ issued the Draft NEPA Guidance on Consideration of Effects of Climate Change and Greenhouse Gas Emissions (NEPA Guidance) on February 18, 2010 and their Draft Federal Greenhouse Gas Accounting and Reporting Guidance in July 2010 (GHG Guidance). The NEPA Guidance requires that a project's GHG emissions be quantified and mitigated, and an analysis conducted, particularly if the project is projected to directly emit greater than 25,000 metric tons (MT) per year of carbon dioxide (CO<sub>2</sub>). Although it is not projected that the Proposed Project would directly emit greater than 25,000 MT per year of CO<sub>2</sub>, a full climate change analysis is included below. The GHG Guidance provides methodologies for estimating GHG emissions for federal projects.

In accordance with CEQ's NEPA and GHG Guidance, project-related GHG emissions were quantified and an analysis was conducted, which focuses on the project's contribution to global climate change. Oklahoma does not have specific GHG guidance or GHG reduction methods; therefore, EPA's 25,000 metric tons per year major source reporting standard will be used to determine the Proposed Project's contribution to global climate change.

### ***Carbon Dioxide Equivalent***

Carbon dioxide equivalent (CO<sub>2</sub>e) is a method by which GHGs other than CO<sub>2</sub> are converted to a CO<sub>2</sub>-like emission value based on a heat-capturing ratio. As shown in **Table 4-3**, CO<sub>2</sub> is used as the base and is given a value of one. CH<sub>4</sub> has the ability to capture 21 times more heat than CO<sub>2</sub>; therefore, CH<sub>4</sub> is given a CO<sub>2</sub>e value of 21. Emissions are multiplied by the CO<sub>2</sub>e value to achieve one GHG emission value. By providing common measurement, CO<sub>2</sub>e provides a means for presenting the relative overall effectiveness of emission reduction measures for various GHGs in reducing project contributions to global climate change.

### ***Emission Estimates***

EPA approved URBEMIS 9.2.4 air quality program and NONROAD, 2005 emissions factors were used to estimate indirect and direct project-related GHG emissions. CH<sub>4</sub> and N<sub>2</sub>O emissions from mobile sources were estimated using emission factors from the Climate Registry General Protocol version 1.1, May 2008 (Protocol), and converted to CO<sub>2</sub>e. Indirect emissions, which include electricity use, water conveyance, and wastewater treatment, were estimated using emissions factors from the Local Government Operations Protocols (LGOP, 2008). Construction of the Proposed Project would emit 8 metric tons (MT) of CO<sub>2</sub>e (refer to **Appendix G**). Construction emissions were amortized over 30 years and added to area emissions to determine total direct GHG emissions. **Table 4-4** shows estimated direct

and indirect GHG emissions resulting from Proposed Project at 174 and 2594 MT of CO<sub>2</sub>e per year, respectively.

**TABLE 4-3**  
GREENHOUSE GAS CO<sub>2</sub> EQUIVALENT

Gas	CO <sub>2</sub> e Value
CO <sub>2</sub>	1
CH <sub>4</sub>	21
N <sub>2</sub> O	310
HFCs/PFCs <sup>1</sup>	6,500
SF <sub>6</sub> <sup>1</sup>	23,900

NOTES: CO<sub>2</sub>e =Carbon dioxide equivalent

<sup>1</sup> High-global warming potential pollutants

CH<sub>4</sub> = methane, N<sub>2</sub>O = nitrous oxide

HFCs/PFCs =

hydroflourocarbons/perflourocarbons

SF<sub>6</sub> = sulfur hexaflouride

Source: IPCC, 2007; AES, 2009.

**TABLE 4-4**  
PROPOSED PROJECT RELATED GHG EMISSIONS

Proposed Project	GHGs	CO <sub>2</sub> e Emissions (ST)	Conversion Factor (ST/MT)	GHG Emissions in CO <sub>2</sub> e (MT)
<b>Direct</b>				
Amortized Construction	CO <sub>2</sub>	9	0.91	8
Area	CO <sub>2</sub>	182	0.91	166
<b>Subtotal</b>				<b>174</b>
<b>Indirect</b>				
Mobile	CO <sub>2</sub>	2,770	0.91	2,521
Mobile	CH <sub>4</sub> /N <sub>2</sub> O	30	0.91	27
Electricity Usage	CO <sub>2</sub>			30.39
Electricity Usage	CH <sub>4</sub> /N <sub>2</sub> O			0.27
Water Conveyance	CO <sub>2</sub> e			5.47
Water Conveyance	CH <sub>4</sub> /N <sub>2</sub> O			0.05
Wastewater Treatment	CO <sub>2</sub> e			9.43
Wastewater Treatment	CH <sub>4</sub> /N <sub>2</sub> O			0.08
<b>Subtotal</b>				<b>2,594</b>
<b>Total Project-Related GHG Emissions</b>				<b>2,768</b>

ST = short tons; MT = metric tons; CO<sub>2</sub>e = carbon dioxide equivalent

Source: URBEMIS, 2007; NonRoad, 2005, Protocol, 2008, and LGOP, 2008.

Direct and indirect CO<sub>2</sub>e emissions would be well below the CEQ major source standard of 25,000 tons per year. The federal government has enacted measures that would reduce emissions from mobile sources, which as shown in **Table 4-4** are the largest emissions source of project-related GHG emissions. With the implementation of mitigation measures in **Section 5.3**, coupled with federal mobile source reduction measures, the project would not have a significant adverse cumulative effect associated with climate change.

### **4.3.2 ALTERNATIVE B - REDUCED-INTENSITY ALTERNATIVE**

#### *CONSTRUCTION AND OPERATIONAL EMISSIONS*

As previously discussed, the project site is located in the State of Oklahoma, which is currently designated in attainment for all criteria pollutants established by the EPA (see **Section 3.3**); thus, there is no applicable SIP. Therefore, construction and operation of the Reduced-Intensity Alternative would have minimal adverse effects on air quality. Construction and operational emissions of Alternative B would be less than those of the Proposed Project (refer to **Table 4-1**) due to the hotel component not being constructed. BMPs listed in **Section 2.1.3** would reduce the minimal direct adverse effects on air quality. Significant adverse effects to air quality would not occur.

#### *CLIMATE CHANGE*

The impact to global climate change would be less for Alternative B than the Proposed Project because construction of the hotel and vehicle trips to and from the hotel would not occur. Therefore, Alternative B would have GHG emissions less than 25,000 metric tons per year, which would result in a less than significant adverse cumulative effect associated with global climate change.

### **4.3.3 ALTERNATIVE C - NO ACTION ALTERNATIVE / NO NEW CASINO ALTERNATIVE**

Under Alternative C, the project site would not be developed with a new gaming facility or hotel. The site is owned by the Osage Nation and could potentially be developed for some other type of business in the future. For the purposes of this EA, it is assumed that no changes to land uses on the site would occur and the existing casino would remain in operation. Because the facility has already been constructed and no change to existing use would occur, Alternative C would have no adverse effects related to air quality.

## **4.4 BIOLOGICAL RESOURCES**

### **4.4.1 ALTERNATIVE A - PROPOSED PROJECT**

#### *SENSITIVE COMMUNITIES*

There are no unique or sensitive ecosystems or biological communities present within the project site. The project site is primarily comprised of developed areas and nonnative grassland. The remainder of the project site is comprised of manmade features including the stockpiles, the retention basin, and the

manmade ditch. The project site contains no natural communities that may be adversely affected during project site development.

#### *SPECIAL-STATUS SPECIES*

For the purposes of this assessment, special status has been defined to include those species that are listed as endangered or threatened under the federal Endangered Species Act (FESA), or formally proposed for, or candidates for, listing. Potential adverse effects to special-status species would be considered significant and require mitigation.

#### *Federal Listed Plants*

The project site does not provide habitat for any federally-listed plants. Thus, the Proposed Project would have no effect on federally-listed plants.

#### *Federal Listed Wildlife*

The project site does not provide habitat for any federally-listed wildlife. Thus, the Proposed Project would have no effect on federally-listed wildlife.

#### *Federal Protected Migratory Birds*

Construction of the Proposed Project has the potential to disturb nest sites for federal protected migratory birds and other birds of prey. There is a low potential for nesting birds to occur within the non-native grassland areas of the site due to regular mowing and vegetation management activities, however nesting could occur within the existing developed areas on the site including buildings and utilities poles. Potential disruption of nesting migratory birds and other birds of prey during construction could result in nest abandonment or mortality. Likewise, increased human activity and traffic, elevated noise levels, and operation of machinery could also adversely affect birds if their nests or roosts are located within the vicinity of development areas. With implementation of the mitigation measures identified in **Section 5.4**, the Proposed Project would not result in significant adverse effects to migratory bird species and other birds of prey.

#### *WETLANDS AND WATERS OF THE U.S.*

As discussed in **Section 3.4**, there are no potentially jurisdictional wetlands within the project site. No adverse effects to wetlands and/or waters of the U.S. would occur.

### **4.4.2 ALTERNATIVE B - REDUCED-INTENSITY ALTERNATIVE**

#### *SENSITIVE COMMUNITIES*

As discussed in **Section 4.4.1**, there are no unique or sensitive ecosystems or biological communities present at the project site. Thus, Alternative B would have no effect on sensitive communities.

***SPECIAL-STATUS SPECIES******Federal Listed Plants***

The project site does not provide habitat for any federally-listed plants. Thus, Alternative B would have no effect on federally-listed plants.

***Federal Listed Wildlife***

The project site does not provide habitat for any federally-listed wildlife. Thus, Alternative B would have no effect on federally-listed wildlife.

***Federal Protected Migratory Birds***

Construction of Alternative B has the potential to disturb nest sites for federal protected migratory birds and other birds of prey. With implementation of the mitigation measures identified in **Section 5.4**, Alternative B would not result in significant adverse effect to migratory bird species and other birds of prey.

***WETLANDS AND WATERS OF THE U.S.***

As discussed in **Section 3.4**, there are currently no wetlands on or adjacent to the project site. No adverse effects would occur.

#### **4.4.3 ALTERNATIVE C - NO ACTION ALTERNATIVE / NO NEW CASINO ALTERNATIVE**

Under Alternative C, the existing casino would remain in operation and no changes to land uses would occur. Because the facility has already been constructed and no change to existing use would occur, Alternative C would have no adverse effects related to biological resources.

## **4.5 CULTURAL RESOURCES**

### **4.5.1 ALTERNATIVE A - PROPOSED PROJECT**

As discussed in **Section 3.5**, there are no historic properties or known archaeological sites or cultural materials within the Proposed Project's area of potential effect. No known historic, cultural, religious, or archaeological resources would be affected by the Proposed Project. There is always a possibility that previously unknown archaeological or paleontological resources would be encountered during construction. With implementation of the mitigation measure presented in **Section 5.5**, as well as BMPs regarding unanticipated discovery of archaeological materials listed in **Section 2.1.3**, no adverse effects to previously known cultural resources would occur.

#### 4.5.2 ALTERNATIVE B - REDUCED-INTENSITY ALTERNATIVE

As discussed in **Section 3.5**, there are no historic properties or known archaeological sites or cultural materials within the Proposed Project's area of potential effect. No known historic, cultural, religious, or archaeological resources would be affected by the Proposed Project. There is always a possibility that previously unknown archaeological or paleontological resources would be encountered during construction. With implementation of the mitigation measure presented in **Section 5.5**, as well as BMPs regarding unanticipated discovery of archaeological materials listed in **Section 2.1.3**, no adverse effects to previously known cultural resources would occur.

#### 4.5.3 ALTERNATIVE C - NO ACTION ALTERNATIVE / NO NEW CASINO ALTERNATIVE

Under Alternative C, the project site would not be developed with a new gaming facility or hotel. The site is owned by the Osage Nation and could potentially be developed for some other type of business in the future. For the purposes of this EA, it is assumed that no changes to land uses on the site would occur and the existing casino would remain in operation. Because the facility has already been constructed and no change to existing use would occur, Alternative C would have no adverse effects related to cultural resources.

### 4.6 SOCIOECONOMIC CONDITIONS

#### 4.6.1 ALTERNATIVE A - PROPOSED PROJECT

The Osage Nation Ponca City Million Dollar Elm Casino is currently operating on the project site. The Proposed Project would not constitute a significant change in the environment, and would not adversely affect the community character.

##### *ECONOMY AND EMPLOYMENT*

Currently, approximately 55 people are employed at the existing Osage Nation Ponca City Million Dollar Elm Casino. As described in the Economic Impact and Growth Inducing Study included as **Appendix H**, the Proposed Project would result in a variety of benefits to the regional economy, including: increased overall economic output, employment opportunities, and tax revenues. Construction and operation of the Proposed Project would generate substantial temporary and ongoing employment opportunities and wages that would be primarily filled by the available labor force in the City of Ponca City (Ponca City), and Kay and Osage counties.

A total of approximately 150 new employment opportunities throughout Kay and Osage counties would be generated during the construction phase of the Proposed Project. Operation of the Proposed Project would generate a total of approximately 83 new employment opportunities, including approximately 68 direct employment opportunities (**Appendix H**). Direct employment opportunities include new positions anticipated to be offered at the proposed casino and hotel itself, as well as new jobs created at regional

businesses proximate to the project site (i.e., gas stations, etc.). New employment opportunities generated during the operation phase of the Proposed Project would be offered in addition to the 55 positions currently being offered at the existing gaming facility. Employment opportunities generated at the proposed casino and hotel would include entry-level, mid-level, and management positions. Examples of employment opportunities typically offered by tribal casino and resort facilities are listed in **Table 4-5**. Average salaries offered are expected to be consistent with those of other tribal gaming facilities and competitive in the local labor market.

**TABLE 4-5**  
TYPICAL TRIBAL CASINO EMPLOYMENT OPPORTUNITIES

Casino slot operations	Hotel management	Food & beverage operations	Financial services
Table games	Hotel facilities	Restaurant services	Support services
Entertainment operations	Hotel marketing	Culinary services	Security services
Casino credit	Housekeeping services	Human resources	Surveillance
Casino administration	Hotel administration	Casino services	Hotel services

Source: AES, 2010.

Potential effects due to the loss of state and federal tax revenues resulting from the operation as a sovereign nation on trust land would be offset by increased local, state and federal tax revenues resulting from construction and operation of the Proposed Project. The anticipated increase in employment opportunities throughout Kay and Osage counties would result in employment and wages for persons previously unemployed, which would increase the ability of the population to provide themselves with health and safety services and would contribute to the alleviation of poverty among lower income households. However, a significant impact to the local unemployment rate would not be anticipated to occur. Overall, the Proposed Project would result in beneficial impacts to the regional economy. For a detailed discussion regarding the economic impacts anticipated to be generated by the construction and operation of the Proposed Project, please refer to **Appendix H**.

Given the projected unemployment rate, and the dynamics of the local labor market, the region is anticipated to be able to easily accommodate the increased demand for labor during the operation of the Proposed Project. This would result in employment and wages for persons previously unemployed, increasing the ability of the population to provide themselves with health and safety services and contributing to the alleviation of poverty among lower income households.

Additionally, the operation of the Proposed Project would result in a variety of fiscal impacts to federal, state, and local governments. There is a common misconception that Native American gaming facilities do not generate fiscal benefits beyond tribal governments. Tribes, as sovereign governments, do not pay corporate income taxes on revenue or property taxes on tribal land; tribal members that both live and work on a Reservation do not pay state income taxes; and state and/or local sales/excise taxes are levied

on purchases by tribal members on reservations. However, taxes typically are paid in other circumstances, including: purchases made by non-tribal members, income taxes paid by non-tribal members or members that live off of the Reservation, and the indirect and induced activity generated during operation. As such, federal, state, and local governments typically experience substantial fiscal benefits from tribal business operations, including casinos.

The project site is located on Osage County tax parcel 40242-36-26-2. According to the Osage County Assessor's Office, the total 2010 annual property tax for the parcel was \$4,421. The Proposed Project would result in the entire area of the parcel at the project site to be transferred into trust status for the Nation. Therefore, the entire taxable value of the parcel, or approximately \$4,421 in annual property tax, would be lost. Effects due to the loss of state and federal tax revenues as a result of transferring the land into trust would be offset by increased local, state and federal tax revenues resulting from construction and operation of the Proposed Project. Additionally, in 2009, the Osage Nation paid \$224,519 in gaming compact fees to the State of Oklahoma. The largest share of the gaming compact fees is collected into the State's education fund; a portion is dedicated to a fund for the operation of problem gambling treatment programs. As estimated in the market assessment prepared by Gaming Market Advisors, gaming compact fees would be anticipated to increase by approximately \$150,000 to \$160,000 in the first year of the Proposed Project's operation. Therefore, with the anticipated increase in taxes resulting from the operation of Alternative A along with the anticipated increase in payments made to the state under the gaming compact, a significant adverse impact to taxes as a result of the loss in property tax revenues would not be anticipated to occur.

Overall, the Proposed Project would result in beneficial impacts to employment and the regional economy. For a detailed discussion regarding the economic impacts anticipated to be generated by the construction and operation of the Proposed Project, please refer to **Appendix H**.

### ***HOUSING***

Based on the information presented in **Section 3.6**, in 2012, the Osage County housing market is projected to have 21,105 total units and 3,187 vacant units; the Kay County housing market is projected to have 22,081 total units and 4,339 vacant units; and the Ponca City housing market is projected to have 12,044 total units and 2,078 vacant units (**Table 4-6**). Indirect and induced employment opportunities would be dispersed among a variety of different businesses in Kay and Osage counties. Since these opportunities would be located at a variety of locations throughout the area, it is expected that employees would be located in the vicinity of these locations, and would not require relocation.

Due to the relatively small number of new employees, the Proposed Project would have a limited potential to impact regional housing stock (**Appendix H**). Based on regional housing stock projections, and current trends in regional housing market data, it is anticipated that more than enough vacant homes would be available to accommodate any potential increase in population due to impacts to the regional labor market under the Proposed Project. Therefore, the Proposed Project is not expected to stimulate

regional housing development. A significant adverse impact to the housing market would not occur. Potential indirect effects resulting from growth inducement are discussed further in **Section 4.13**.

**TABLE 4-6**  
PROJECTED 2012 REGIONAL HOUSING MARKET

<b>Osage County</b>	
Total Units	21,105
Occupied Units	17,918
Vacant Units	3,187
% Vacant	15.1%
<b>Kay County</b>	
Total Units	22,081
Occupied Units	17,742
Vacant Units	4,339
% Vacant	19.6%
<b>City of Ponca City</b>	
Total Units	12,044
Occupied Units	9,966
Vacant Units	2,078
% Vacant	17.25

Source: U.S. Census Bureau, 2006-2008; AES, 2010.

#### ***PATHOLOGICAL AND PROBLEM GAMBLING***

Gambling, in one form or another, is now legal in every state except Hawaii and Utah. According to a study done by the National Gambling Impact Study Commission (NGISC), approximately 86 percent of Americans report having gambled at least once during their lifetimes and 63 percent of Americans report having gambled at least once during the previous year (NGISC, 1999). This estimate is based on participation in all forms of gambling, including: lotteries, poker, Internet gambling, betting, and casino gambling.

As described in **Table 4-7** there are behaviors of casino customers that can be broken down into five categories. Gaming customers are motivated to visit a casino for a variety of reasons, and some of those reasons may be viewed as criteria that define one as a problem gambler.

The American Psychiatric Association (APA) describes pathological gambling as an impulse control disorder characterized by “persistent and recurrent maladaptive gambling behavior that disrupts personal, family, or vocational pursuits. The gambling pattern may be regular or episodic, and the course of the disorder is typically chronic” (NGISC, 1999). The APA has established ten criteria for diagnosis of a pathological and problem gambler, which include: preoccupation, tolerance, withdrawal, escape, chasing, lying, loss of control, illegal acts, risked significant relationship, and financial bailout. At-risk gaming

behaviors typically meet one or two of these criteria; problem gamblers typically meet three to four of these criteria; and pathological gamblers typically meet at least five of these criteria. Collectively, both pathological and problem gambling are referred to as “problem gambling.”

**TABLE 4-7**  
FIVE BEHAVIORS OF CASINO CUSTOMERS

Behavior Type	Characteristics
Recognition Seekers	Small share of total players. Have high expectation of recognition from the property they patronize. The reward to the casino is an intensely loyal and frequent visitor.
Escapists	Seeks a getaway that does not resemble their everyday routine. Prefer to remain anonymous. Require minimal maintenance in the form of personal attention and complimentary services from the casino.
Reward Seekers	Driven by casino's play rewards program or promotions that compensate them for their play. Gamer will play at the casino with the best deal.
Socializers	Visit a casino to be around others. Once they identify with a particular property they become very loyal with high levels of visitation.
Professionals	Pay very close attention to the types of games a casino offers. Generate large coin handle and accumulate voluminous amounts of slot club points. Loyalty goes to the casino where they can make the most money.

Source: AES, 2010.

An NGISC study reported on three studies, two completed in 1997 and one completed in 1998 that estimate the percentage of American adults classified as pathological gamblers ranged from 1.2 to 1.6 percent (NGISC, 1999). The NGISC noted that pathological gambling often occurs in conjunction with other behavioral problems, including substance abuse, mood disorders, and personality disorders. Even if it were possible to isolate the effects of problem gambling on people who suffer from co-morbidity, it is difficult to then isolate the effects of casino gambling from other forms of gambling. As discussed, casino gambling is only one form of gambling. In fact, the most prevalent forms of gambling are those found in most neighborhoods: scratch lottery cards, lotto, and video lottery terminals.

Residents of Ponca City and Kay and Osage counties have been exposed to many forms of gambling, including the existing operation of the Osage Nation Million Dollar Elm Casino at the Project site. An expansion of the existing casino in Osage County under the Proposed Project is not expected to substantially increase the prevalence of problem gamblers. Thus, the Proposed Project would not result in significant adverse effects associated with problem gambling. Regardless, as stated in the Economy and Employment section above, a portion of the gaming compact payments made from the Tribe to the State would continue to be dedicated to a fund to support the operation of problem gambling treatment programs. Therefore, these payments made by the Tribe would further reduce less than significant impacts to problem gambling. No further mitigation measures are warranted.

### **CRIME**

There is a general belief that the introduction of legalized gambling into a community increases crime. However, this argument is based more on anecdotal evidence rather than empirical evidence. Casinos, by

their nature, increase the volume of people entering a given area. Whenever large volumes of people are introduced into an area, the volume of crime would also be expected to increase. This is true of any large-scale development. Taken as a whole, literature on the relationship between casino gambling and crime rates suggests that communities with casinos are as safe as communities without casinos. The National Opinion Research Center (NORC, 1999) found that insufficient data exists to quantify or determine the relationship between casino gambling within a community and crime rates.

The Proposed Project would result in an increased number of patrons and employees traveling/commuting into the community on a daily basis. As a result, under the Proposed Project, criminal incidents may increase in the project area, particularly at the project site, as with any other development of this size. However, increased tax revenues resulting from the Proposed Project would fund expansion of law enforcement services required to accommodate planned growth. Thus, the Proposed Project would not result in significant adverse effects associated with crime.

#### ***ENVIRONMENTAL JUSTICE FOR MINORITY AND LOW INCOME POPULATIONS***

As discussed in **Section 3.6**, the Osage Nation is the only identified environmental justice community in the vicinity of the Proposed Project. The Proposed Project would provide several benefits for the Osage Nation, including continued funding for education, health care, and housing programs. This would be considered a beneficial impact.

### **4.6.2 ALTERNATIVE B - REDUCED-INTENSITY ALTERNATIVE**

#### ***ECONOMY AND EMPLOYMENT***

As stated under the Proposed Project, approximately 55 people are currently employed at the existing Osage Nation Ponca City Million Dollar Elm Casino. Construction and operation of the Alternative B would generate substantial economic output to a variety of regional businesses. Additionally, as discussed under the Proposed Project, Alternative B would generate substantial fiscal impacts to state, county, and local governments.

A total of approximately 113 new employment opportunities throughout Kay and Osage counties would be generated during the construction phase of Alternative B. Operation of Alternative B would generate a total of approximately 57 new employment opportunities, including approximately 46 direct employment opportunities (**Appendix H**). Direct employment opportunities include new positions anticipated to be offered at the project site itself, as well as new jobs created at regional businesses proximate to the project site (i.e., gas stations, etc.). New employment opportunities generated during the operation phase of Alternative B would be offered in addition to the 55 positions currently being offered at the existing gaming facility. As stated under the Proposed Project, employment opportunities generated at the project site would include entry-level, mid-level, and management positions (**Table 4-5**). Average salaries offered are expected to be consistent with those of other tribal gaming facilities and competitive in the local labor market.

Potential effects due to the loss of state and federal tax revenues resulting from the operation as a sovereign nation on trust land would be offset by increased local, state and federal tax revenues resulting from construction and operation of Alternative B. Alternative B would result in an increase in employment opportunities throughout Kay and Osage counties (**Appendix H**). This would result in employment and wages for persons previously unemployed, increasing the ability of the population to provide themselves with health and safety services and contributing to the alleviation of poverty among lower income households. However, a significant impact to the local unemployment rate would not be anticipated to occur. Overall, Alternative B would result in beneficial impacts to the regional economy. For a detailed discussion regarding the economic impacts anticipated to be generated by the construction and operation of Alternative B, please refer to **Appendix H**.

### ***HOUSING***

The 2012 regional housing market would fulfill the demands for housing under Alternative B. This impact would be comparable, but to a slightly lesser extent than the Proposed Project. A significant adverse impact to the housing market would not occur. Potential indirect effects resulting from growth inducement are discussed further in **Section 4.13**.

### ***SOCIAL IMPACTS***

Social impacts including pathological and problem gambling and crime from Alternative B would be comparable but to a lesser extent than the Proposed Project, since Alternative B is reduced in size and scope. Adverse social impacts would not occur.

### ***ENVIRONMENTAL JUSTICE FOR MINORITY AND LOW INCOME POPULATIONS***

As discussed in **Section 3.6**, the Osage Nation is the only identified environmental justice community in the vicinity of the Project site. Alternative B would provide several benefits for the Osage Nation, but to a lesser extent than the Proposed Project. This would be considered a beneficial impact.

## **4.6.3 ALTERNATIVE C - NO ACTION ALTERNATIVE / NO NEW CASINO ALTERNATIVE**

Under Alternative C, an expansion of the existing gaming facility would not occur. For the purposes of this EA, it is assumed that no further development on the project site would occur. Therefore, Alternative C would not result in adverse effects related to socioeconomic conditions.

## 4.7 TRANSPORTATION NETWORKS

### 4.7.1 ALTERNATIVE A - PROPOSED PROJECT

The project site is located northwest of the intersection of U.S. Highway 60 (US 60) and City View Road. Access to the site would be provided by the two existing driveways on City View Road and two proposed driveways on US 60. A traffic impact study (TIS) has been prepared to evaluate potential impacts to the area intersections that may result from development of the Proposed Project (TEC, 2010; **Appendix E**).

#### *METHODOLOGY*

The TIS analyzed bi-directional traffic during the weekday am and pm peak traffic hours. Traffic counts were conducted to determine existing traffic volumes (refer to **Section 3.7**). An annual growth rate of one percent per year was used to determine projected traffic volumes in the cumulative year 2030 (TEC, 2010). Traffic generated by the existing casino was subtracted from the base data before new traffic generated by the project was added. The traffic analysis was conducted using Synchro 7.0, software package for analyzing, modeling, optimizing traffic signal timings, and capacity analysis of signalized and unsignalized intersection in accordance with the methodology of the latest edition of the Highway Capacity Manual.

#### *TRIP GENERATION*

Trip generation relates land uses to the number of persons or vehicles entering or exiting the project site and the rates of inbound/outbound directional splits. Typically trip generation estimates for a project are based on *Trip Generation, 8th Edition*, published by the Institute of Transportation Engineers (ITE, 2008). However, the trip generation rates provided therein for the casino land use are based on casinos in South Dakota, which all measure less than 2,500 square feet. Other ITE sources with casino-related information provide information on Las Vegas area casinos, as well as riverboats and casinos in other urbanized areas. These sources are not sufficiently comparable to the Proposed Project.

The proposed expanded casino is approximately 4.31 times larger than the existing casino operating on the site; therefore, traffic volumes generated by the existing casino (determined through traffic counts at the two existing driveways to the facility) were multiplied by 4.31 to estimate the traffic that would be generated by the new casino (TEC, 2010; **Appendix E**). Trips generated by the hotel were determined using trip generation rates provided in the *Trip Generation, 8th Edition*, published by the Institute of Transportation Engineers (ITE, 2008). **Table 4-8** shows the trips generated, and directional split for the casino and hotel.

#### *TRIP DISTRIBUTION*

Estimated traffic generated by the Proposed Project was distributed among the surrounding street system based on the existing traffic patterns in the area. The directional distribution of traffic generated by the Proposed Project is expected to be:

- 45% from US 60 west of the project site
- 30% from Kelley Avenue west of the project site
- 20% from US 60 east of the project site
- 03% from Kelley Avenue east of the project site
- 02% from City View Road south of the project site

**TABLE 4-8**  
PEAK HOUR TRIP GENERATION RATES

Land Use	Sqft/Rooms	Weekday trips		AM/PM Directional Distribution		AM Peak Hour Traffic Volumes		PM Peak Hour Traffic Volumes	
		AM	PM	In	Out	In	Out	In	Out
Casino	44,000	40	345	0.67/0.51	0.33/0.49	27	13	177	168
Hotel	75	29	44	0.61/0.53	0.39/0.47	18	11	23	21
<b>Total</b>		<b>62</b>	<b>336</b>			<b>45</b>	<b>24</b>	<b>200</b>	<b>189</b>

Source: TEC, 2010.

Figure 6 in the TIA shows the traffic volumes and distribution for the Proposed Project.

### ***INTERSECTION CAPACITY***

The capacity analysis provides a measure of the amount of traffic that a given intersection can accommodate, while maintaining prescribed operational qualities. The definition of operational criteria is accomplished using levels of service (LOS). This is a qualitative measure that describes operational conditions in terms of such factors as speed and travel time, freedom to maneuver, traffic interruptions, comfort and convenience, and safety. Six LOS are defined for each type of facility for which analysis procedures are available. They are given letter designations, from A to F, with LOS A representing the best operating conditions and LOS F representing the worst operating conditions.

The LOS criteria for unsignalized intersections are shown in **Table 4-9**. The Federal Highway Administration, *Highway Capacity Manual*, 2003 considers LOS of D or better acceptable (TEC, 2010).

### ***STUDY INTERSECTIONS***

The capacity analyses were conducted for the AM and PM peak hour for the following intersections:

- City View Road/US 60
- City View Road/Kelley Avenue
- US 60/Proposed Drive #1 (refer to figure 7 of the TIS)
- US 60/Proposed Drive #2 (refer to figure 7 of the TIS)
- City View Road/Proposed Drive #3 (refer to figure 7 of the TIS)
- City View Road/Proposed Drive #4 (refer to figure 7 of the TIS)

**TABLE 4-9**  
INTERSECTION LOS CRITERIA

Level of Service	Control Delay per Vehicle
	(s/veh)
	<b>Unsignalized</b>
A	0-10
B	> 10-15
C	> 15-25
D	> 25-35
E	> 35-50
F	> 50

<sup>1</sup> s/veh = seconds per vehicle  
Source: TEC, 2010.

**Table 4-10** provides a summary of the LOS at each study intersection under 2010 adjusted baseline conditions with the addition of project related traffic. The adjusted baseline condition includes the existing traffic volumes minus traffic generated by the existing casino. Traffic generated by the existing casino was determined via traffic counts at the facility's driveways.

As shown in **Table 4-10** none of the study intersections would operate at or below the threshold of LOS D with the addition of traffic generated by the Proposed Project. Therefore the Proposed Project would not result in a significant adverse effect on transportation in the vicinity of the project site. Optional mitigation is provided in **Section 5.7** to improve safety and enhance traffic flow at local intersection and roadways.

**TABLE 4-10**  
INTERSECTION LOS – 2010 ADJUSTED BASELINE PLUS PROPOSED PROJECT

Study Intersection	Type of Traffic Control	PM Peak Hour				
		Critical Movement			Intersection	
		Movement	Delay (s/veh)	LOS	Delay (s/veh)	LOS
City View Road/US 60	Unsignalized	NB	11.5	B	15.0	B
City View Road/Kelley Avenue	Unsignalized	NB	9.3	A	10.4	B
US 60/Proposed Drive #1	Unsignalized	SB	10.0	B	12.0	B
US 60/Proposed Drive #2	Unsignalized	SB	9.9	A	11.4	B
City View Road /Proposed Drive #3	Unsignalized	EB	8.7	A	9.5	A
City View Road /Proposed Drive #4	Unsignalized	EB	8.8	A	9.5	A

<sup>1</sup> s/veh = seconds per vehicle  
Source: TEC, 2010.

## 4.7.2 ALTERNATIVE B - REDUCED-INTENSITY ALTERNATIVE

### METHODOLOGY

The methodology for Alternative B is the same as the analysis of the Proposed Project (refer to **Section 4.7.1**).

### TRIP GENERATION AND TRIP DISTRIBUTION

The trip generation rates and distribution for Alternative B are the same as those applied to the Proposed Project (refer to **Section 4.7.1**). The traffic generated by Alternative B would be less than the Proposed Project as a hotel would not be developed.

### STUDY INTERSECTIONS

Intersection LOS under 2010 adjusted baseline conditions plus the addition of traffic generated by Alternative B is provided in **Table 4-11**.

As show in **Table 4-11**, none of the study intersections after the implementation of Alternative B would operate at or below the threshold of LOS D. Therefore, Alternative B would not have a significant adverse effect on transportation in the vicinity of the project site. However, optional mitigation is provided in **Section 5.7** to improve safety and enhance traffic flow at local intersection and roadways.

**TABLE 4-11**  
INTERSECTION LOS – 2010 ADJUSTED BASELINE PLUS REDUCED-INTENSITY ALTERNATIVE

Study Intersection	Type of Traffic Control	PM Peak Hour				
		Critical Movement			Intersection	
		Movement	Delay (s/veh)	LOS	Delay (s/veh)	LOS
City View Road/US 60	Unsignalized	NB	11.5	B	14.9	B
City View Road/Kelley Avenue	Unsignalized	NB	9.2	A	10.3	B
US 60/Proposed Drive #1	Unsignalized	SB	10.0	B	12.2	B
US 60/Proposed Drive #2	Unsignalized	SB	10.0	B	11.3	B
City View Road /Proposed Drive #3	Unsignalized	EB	8.6	A	9.5	A
City View Road /Proposed Drive #4	Unsignalized	EB	8.7	A	9.5	A

<sup>1</sup> s/veh = seconds per vehicle

Source: TEC, 2010.

### **4.7.3 ALTERNATIVE C - NO ACTION ALTERNATIVE / NO NEW CASINO ALTERNATIVE**

Under Alternative C, the existing casino at the intersection of US 60 and City View Road would remain in operation. Because the facility has already been constructed and no change to existing use would occur, Alternative C would have no adverse effects related to transportation.

## **4.8 LAND USE**

### **4.8.1 ALTERNATIVE A - PROPOSED PROJECT**

#### *LAND USE COMPATIBILITY*

As discussed in **Section 3.8**, the current land use at the project site is the Ponca City Osage Million Dollar Elm Casino and its associated facilities. Surrounding land uses include commercial, agricultural, and residential.

Under the Proposed Project there will be no change in land use on the site as the proposed casino would replace the existing casino currently located in the eastern portion of the site. The new casino and hotel will be constructed in the northwest corner of the project site, further away from the residences along the eastern border of the site; thereby reducing the potential for land use conflicts with nearby sensitive receptors. Areas along the southern and eastern boundaries of the site would be landscaped, improving the project site. No adverse effects associated with land use conflicts would occur.

#### *AGRICULTURE*

As discussed in **Section 3.8**, the project site received a score of 48 for the site assessment component of the Farmland Conversion Impact Rating (FCIR); thus, it is not possible for the site to meet the FPPA protection threshold of 160 or greater and further evaluation is not needed. Additionally, the Proposed Project would not result in conflicts or conversion of surrounding agricultural land uses. No adverse effects to agricultural resources would occur.

### **4.8.2 ALTERNATIVE B - REDUCED-INTENSITY ALTERNATIVE**

#### *SITE ATTRIBUTES*

As discussed in **Section 3.8**, the current land use at the project site is the Ponca City Osage Million Dollar Elm Casino and its associated facilities. Surrounding land uses include commercial, agricultural, and residential.

As with the Proposed Project, there will be no change in land use under Alternative B, as the existing casino will be removed and a new casino will be constructed in the northwest corner of the project site. Relocating the casino away from the residences along the eastern border of the site would reduce the

potential for land use conflicts. Areas along the southern and eastern boundaries would be landscaped, improving the project site. No adverse effects associated with land use compatibility would occur.

#### ***AGRICULTURE***

As discussed in **Section 3.8**, the project site received a score of 48 for the site assessment component of the Farmland Conversion Impact Rating (FCIR); thus, it is not possible for the site to meet the FPPA protection threshold of 160 or greater and further evaluation is not needed. Additionally, Alternative B would not result in a change to the current surrounding land use. No adverse effects to agricultural resources would occur.

### **4.8.3 ALTERNATIVE C - NO ACTION ALTERNATIVE / NO NEW CASINO ALTERNATIVE**

Under Alternative C, a replacement casino and hotel would not be constructed on the site. The site is owned by Osage Nation and could potentially be repurposed for some other type of business in the future. For the purposes of this EA, it is assumed that either the existing casino would remain in operation or the site would be repurposed as a commercial facility. Alternative C would have no adverse effects related to land use.

## **4.9 PUBLIC SERVICES**

### **4.9.1 ALTERNATIVE A - PROPOSED PROJECT**

#### ***WATER SUPPLY***

Potable water supply for the Proposed Project would be provided by Rural Water District #3, which currently serves the existing casino facility on the site via an existing eight-inch main and one inch service line. The Proposed Project would result in a peak potable water supply demand of approximately 50,000 gallons per day (gpd) (refer to **Table 4-12**), which is an approximately 46,000 gpd increase from the existing casino. An existing 1 inch diameter supply line extends to the site from an existing 8 inch diameter supply main that runs along City View Road. There is available capacity in the 8-inch water main to provide up to 500 gallons/minute or approximately 30,000 gallons/hour to serve the project, which is more than sufficient to meet estimated demands. An appropriately sized water tank will be located near the casino and hotel to provide reserve capacity for the fire suppression system and peak demands at the proposed facilities. The 1-inch line that extends to the property from the water main located within City View Road may need to be expanded to supply the potable water demands of the Proposed Project. The Nation will coordinate the expansion with Rural Water District #3. No significant adverse effect to municipal water supply services would occur.

**WASTEWATER SERVICE**

As discussed in **Section 3.9.2**, the Nation is currently in the process of designing a sanitary sewer line to service the site in accordance with the Agreement for Sewer Service Outside Corporate Limits with Ponca City executed on August 24, 2009 (**Appendix A**). Under this agreement, Ponca City agreed to provide wastewater treatment and collection services to the project site. Wastewater generated by the Proposed Project would be treated at the Ponca City Wastewater Treatment Plant (WWTP), which is operated by the Wastewater Division of the Ponca City Environmental Services Department. The WWTP currently treats an average of 5 million gallons per day (mgd), and has a peak flow capacity of 9 mgd. The WWTP discharges treated wastewater to the Arkansas River. The casino and hotel would generate an average of approximately 37,000 gpd on average (**Table 4-12**), which represents 0.7 percent of the available capacity at the WWTP, and would not affect the WWTP performance during peak events. No adverse effect to municipal wastewater treatment services would occur.

**TABLE 4-12**  
PROPOSED PROJECT – POTABLE WATER / WASTEWATER DEMAND ESTIMATES

Area Description	Size (sf/rooms)	WW Generation Rate <sup>1</sup>	Wastewater Generated (gpd)
<b>Casino</b>			
Gaming Floor	17,000 sf	0.61 gpd/sf	10,370
Banquet/Event	10,000 sf	0.75 gpd/sf	7,500
Sports Bar	4,000 sf	0.73 gpd/sf	2,920
Kitchen	5,500 sf	1.2 gpd/sf	6,600
BOH	6,000 sf	0.000725 gpd/sf	4.35
<b>Hotel</b>	75 rooms	130 gpd/room	9,750
<b>Average WW Generated</b>			37,144.35
Peak WW Generated		1.5 gpd peak/ average gpd	55,716.52
Potable Water Demand		1.33 gpd/gpd ww	49,525.80
Notes: <sup>1</sup> Based on similar facilities. Source: AES, 2010			

**SOLID WASTE SERVICE**

Solid waste services are already provided to the existing casino by the Ponca City Solid Waste Division (Horinek, 2010). The Ponca City Landfill is an 80-acre Subtitle-D permitted municipal solid waste facility with up to 80-years of capacity at an average rate of 150 tons per day of solid waste (Horinek, 2010). The current cell is 2-years old and has approximately 2-3 million cubic yards of permitted air space remaining. The Ponca City Landfill is able to request up to two additional height extensions, which would increase the total capacity of the landfill.

The Ponca City Landfill also accepts construction waste, either by direct haul or through a City-provided open top roll-off bin. Construction of the Proposed Project would generate minimal construction waste because the existing casino will not be demolished. Construction waste would be limited to excess construction materials, municipal garbage generated by the work force, and any fill requiring disposal. Ponca City is able to provide 20 to 30 yard roll-off bins within a twenty mile radius. No adverse effects to solid waste services from construction of the Proposed Project would occur.

Based on similar facilities, the operation of the Proposed Project would generate an estimated 0.34 additional tons of solid waste per day, approximately 0.22 percent of the Ponca City Landfill's maximum permitted daily disposal. Personal communication with Ponca City solid waste service manager David Horinek indicated the landfill had sufficient capacity to serve commercial development in the project area (Horinek, 2010). No adverse effects to solid waste services from operation of the Proposed Project would occur.

### ***SCHOOLS***

As indicated in **Section 3.9**, the nearest public school is located approximately one mile away from the project site. Ponca City School District educational facilities are located approximately four miles away. The Proposed Project is not expected to adversely affect public or private schools from an increase in traffic volumes, noise, or crime.

As stated in the Economic Impact and Growth Inducing Study (**Appendix H**; AES, 2010), operation of the Proposed Project would create approximately 68 new jobs. These new employees would not create a significant demand on schools in the area, as most of the new employees would already be living in the Community of McCord, Ponca City, or the surrounding region. No adverse effects to public school services would occur.

### ***RECREATION***

The project site is not currently used for any recreational purpose other than gaming. The development of the Proposed Project would not represent a change in recreational use, nor would the expansion cause an adverse effect to any public recreational activities in the immediate vicinity. No adverse effects to public recreation would occur.

### ***ELECTRICITY AND NATURAL GAS***

Ponca City Utility Authority currently supplies electricity to the existing gaming facility on the project site. The Proposed Project would represent a small net increase in electricity usage due to the larger facilities over the existing casino. No adverse effects would occur.

The Nation would coordinate with Oklahoma Natural Gas to provide natural gas to the Proposed Project. Natural gas utilities for the area are adequate for the Proposed Project and no adverse effects are anticipated.

#### ***LAW ENFORCEMENT***

The increase in patrons and employees resulting from the Proposed Project may increase the need for law enforcement in the area. As discussed in **Section 3.9.7**, the Osage Nation Police Department (ONPD), Ponca City Police Department, and Osage County Sheriff maintain a cross-deputization agreement (**Appendix B**) to provide enhanced law enforcement in Osage County. Increased revenue for the Osage Nation would improve the ONPD's ability to respond to law enforcement needs and allow for the employment of on-site security personnel. As discussed in the Economic Impact and Growth Inducing Study (**Appendix H**), increased federal, state, and local tax revenue would do the same for other law enforcement agencies serving the proposed casino and hotel. No adverse effects related to law enforcement services would occur.

#### ***FIRE PROTECTION***

Equipment and vehicles used during construction activities may create sparks, which could ignite vegetation on the project site. The use of power tools and acetylene torches may also increase the risk of fire during construction. BMPs listed in **Section 2.1.3** would ensure that construction of the Proposed Project would not create a substantial fire hazard.

The McCord Volunteer Fire Department is the primary fire responder to the existing casino. Structural fire protection would be provided through voluntary compliance with International Fire Code (IFC) requirements for commercial structures, including requirements for water storage, sprinkler systems, and fire extinguishers. It is not expected that the Proposed Project would require fire department services with a greater frequency than the existing casino. No adverse effect associated with fire protection services would occur.

#### ***EMERGENCY MEDICAL SERVICES***

Ponca City Fire Department, with headquarters located approximately four miles from the project site, provides primary Emergency Medical Services (EMS) for the existing casino, and would continue to provide primary EMS for the Proposed Project. Due to the increase in employees and patrons, the Proposed Project is expected to have a minimal increase the demand of EMS at the project site. In the event that an increase in demand for EMS is realized, the increase in tax revenue for Ponca City as a result of the Proposed Project (see **Section 4.6.1**) is expected to allow the City to continue serving the project site. No additional personnel or equipment would be needed.

## 4.9.2 ALTERNATIVE B - REDUCED-INTENSITY ALTERNATIVE

### WATER SUPPLY

Potable water for Alternative B would be provided by Rural Water District #3, which currently serves the existing casino facility via an existing main and one inch service line. Alternative B would result in a peak potable water demand of approximately 37,000 gpd (refer to **Table 4-13**), which is an approximately 33,000 gpd increase from the existing casino. As with the Proposed Project, an appropriately sized water tank would provide reserve capacity for the fire suppression systems and an expansion of the existing one-inch service line may be necessary to accommodate the new demand. The Nation will coordinate the expansion with Rural Water District #3. No adverse effect to municipal water supply would occur.

**TABLE 4-13**  
ALTERNATIVE B – POTABLE WATER / WASTEWATER DEMAND ESTIMATES

Area Description	Size (sf/rooms)	WW Generation Rate <sup>1</sup>	Wastewater Generated (gpd)
<b>Casino</b>			
Gaming Floor	17,000 sf	0.61 gpd/sf	10,370
Banquet/Event	10,000 sf	0.75 gpd/sf	7,500
Sports Bar	4,000 sf	0.73 gpd/sf	2,920
Kitchen	5,500 sf	1.2 gpd/sf	6,600
BOH	6,000 sf	0.000725 gpd/sf	4.35
<b>Average WW Generated</b>			27,394
Peak WW Generated		1.5 gpd peak/average gpd	41,091.
Potable Water Demand		1.33 gpd/gpd ww	36,525
Notes: <sup>1</sup> Based on similar facilities. Source: AES, 2010			

### WASTEWATER SERVICE

As discussed in **Section 3.9.2**, the Nation is currently in the process of designing a sanitary sewer line to service the site in accordance with the Agreement for Sewer Service Outside Corporate Limits entered into with Ponca City on August 24, 2009 (**Appendix A**). Under this agreement Ponca City agreed to provide sewage services to the project site. As with the Proposed Project, wastewater generated by Alternative B would be treated at the Ponca City WWTP. Operation of Alternative B would generate approximately 27,000 gpd of wastewater on average (**Table 4-13**), which represents 0.7% of the WWTP available capacity, and would not affect the WWTP performance during peak events. No adverse effect to municipal wastewater treatment services would occur.

### ***SOLID WASTE SERVICE***

Since the hotel would not be constructed under this alternative, Alternative B would generate less construction waste than the Proposed Project. No adverse effect to solid waste services from construction would occur.

Based on similar facilities, the operation of the Proposed Project would generate an estimated 0.26 additional tons of solid waste per day, approximately 0.17 percent of the Ponca City Landfill's maximum permitted daily disposal. Personal communication with Ponca City solid waste service manager David Horinek indicated the landfill had sufficient capacity to serve commercial development in the project area (Horinek, 2010). No adverse effect to solid waste services from operation would occur.

### ***SCHOOLS***

As with the Proposed Project, Alternative B is not expected to adversely affect public or private schools from an increase in traffic volumes, noise, or crime.

As stated in the Economic Impact and Growth Inducing Study (**Appendix H**; AES, 2010) Alternative B would create approximately 46 new jobs. These new employees would not create a significant demand on schools in the area as most of the employees from the operation of the casino would already be living in the Community of McCord, Ponca City, or the surrounding region. School enrollment would therefore not increase. No adverse effects to public school services would occur.

### ***RECREATION***

The project site is not currently used for any recreational purpose other than gaming. The development of Alternative B would not represent a change in recreational use, nor would the expansion cause an adverse effect to any public recreational activities in the immediate vicinity. No adverse affect to public recreation would occur.

### ***ELECTRICITY AND NATURAL GAS***

Ponca City Utility Authority currently supplies electricity to the existing casino on the project site. Alternative B would represent a small net increase in electricity usage due to the larger facilities over the existing casino. No adverse effects would occur.

The Nation would coordinate with Oklahoma Natural Gas to provide natural gas to Alternative B. Natural gas utilities for the area are adequate for Alternative B and no adverse effects are anticipated.

### ***LAW ENFORCEMENT***

As with the Proposed Project, the increase in patrons and employees resulting from Alternative B may increase the need for law enforcement in the area. The ONPD, Ponca City Police Department, and Osage

County Sherriff maintain a cross-deputization agreement (**Appendix B**), which ensures enhanced law enforcement response in Osage County. No adverse effects related to law enforcement services would occur.

### ***FIRE PROTECTION***

Equipment and vehicles used during construction activities may create sparks, which could ignite vegetation on the project site. The use of power tools and acetylene torches may also increase the risk of fire during construction. BMPs listed in **Section 2.1.3** would ensure that construction of Alternative B would not create a substantial fire hazard.

As with the Proposed Project, structural fire protection would be provided through voluntary compliance with IFC requirements for commercial structures, including requirements for water storage, sprinkler systems, and fire extinguishers. It is not expected that Alternative B would require fire department services with a greater frequency than the existing casino. No adverse effect to the personnel or equipment of the McCord Fire Department would occur.

### ***EMERGENCY MEDICAL SERVICES***

Ponca City Fire Department, with headquarters located approximately four miles from the project site would continue to provide primary EMS for Alternative B. As with the Proposed Project, Alternative B is expected to have a minimal increase in the demand for EMS at the project site. In the event that an increase in demand for EMS is realized, the increase in tax revenue for Ponca City as a result of Alternative B (see **Section 4.6.2**) is expected to allow the City to continue serving the project site. No additional personnel or equipment would be needed.

## **4.9.3 ALTERNATIVE C - NO ACTION ALTERNATIVE / NO NEW CASINO ALTERNATIVE**

Under Alternative C, it is assumed that either the existing casino would remain in operation or the site would be repurposed as a commercial facility. Because a facility has already been constructed, Alternative C would have no adverse effects related to public services.

## **4.10 VISUAL RESOURCES**

### **4.10.1 ALTERNATIVE A - PROPOSED PROJECT**

#### ***AESTHETICS***

**Figure 3-4**, photos 1 and 2 provide views of the existing casino located at US 60 and City View Road. The Proposed Project would replace the existing casino facility on the site through the construction of a new casino and hotel. The new facilities have been designed to be more aesthetically pleasing than the

existing gaming facility, which is a modular-type structure. **Figure 2-2** in **Section 2.0** provides an architectural rendering of the new casino that would be developed under the Proposed Project.

The newly constructed casino would be visible from the residences to the east and north. However, the structure would be set back further from the road than where the existing gaming facility is located and a row of trees will be installed on the eastern boundary of the project site. The proposed location of the Casino and placement of vegetation will reduce the visibility of the project from US 60 and from City View Road. Because the project site is currently used for commercial purposes and the surrounding area is partially commercial, the Proposed Project would not constitute a significant adverse effect associated with aesthetics.

### **LIGHTING**

The installation of additional pole lights in the parking lot of the casino would introduce a new source of light to the area. On-site lighting would be provided for aesthetic and security purposes at the facility and throughout the parking lot. The use of lighting in the parking areas would be limited to dusk, nighttime, and foggy conditions. Residents to the east and north of the parcel are sensitive receptors to light; however, pole lights already exist adjacent to these areas. A row of trees and a fountain are proposed for the eastern boundary of the project site, which would minimize light trespass and glare to these residences. The additional lighting would constitute an increase over the existing ambient light levels on the project site. However, with the incorporation of BMPs listed in **Section 2.1.3**, no adverse effects associated with lighting would occur.

## **4.10.2 ALTERNATIVE B - REDUCED-INTENSITY ALTERNATIVE**

### **AESTHETICS**

**Figure 3-4**, Photos 1 and 2 provide views of the existing casino located at US 60 and City View Road. Alternative B would be similar to the Proposed Project without the addition of a hotel. Under Alternative B, the proposed Casino would be more aesthetically pleasing than the existing structure. An architectural rendering of the proposed casino is provided in **Figure 2-2** of **Section 2.0**. The view of the casino from the residences adjacent to the eastern boundary of the project site would be screened by a row of trees along the property boundary. Because surrounding uses include commercial facilities to the south, and because the project site is currently used for commercial purposes, Alternative B would not constitute an adverse effect on visual resources.

### **LIGHTING**

Installation of additional pole lights would introduce a new source of light to the area. On-site lighting would be provided for aesthetic and security purposes at the facilities and throughout the parking lot. Lighting in the parking areas would be limited to dusk, nighttime, and fog. Residences located to the east and north of the project site are sensitive receptors to the light. The row of trees and fountain proposed for the eastern property boundary would minimize light trespass and glare to these residences.

Alternative B would result in an increase over the existing ambient light levels on the project site. However, with the incorporation of BMPs listed in **Section 2.1.3** no adverse effects associated with lighting would occur.

#### **4.10.3 ALTERNATIVE C - NO ACTION ALTERNATIVE / NO NEW CASINO ALTERNATIVE**

Under Alternative C, the project site would be not developed for a gaming facility or hotel. The existing casino at the intersection of US 60 and City View Road would remain in operation. Because the facility has already been constructed and no change to existing visual setting would occur, Alternative C would have no adverse effects related to visual resources.

### **4.11 NOISE**

#### **4.11.1 ALTERNATIVE A - PROPOSED PROJECT**

Noise-sensitive receptors are land uses associated with indoor and outdoor activities that may be subject to stress or significant interference from noise, including educational and residential areas. There are scattered rural residences located east and west of the project site. The nearest sensitive noise receptor to the proposed casino is a residence located approximately 220 feet to the east. It should be noted that the current casino operates approximately 175 feet from sensitive noise receptors located east of the project site.

#### *CONSTRUCTION NOISE*

Activities associated with construction within the project site would result in temporary periods of elevated noise levels, typically generating maximum noise levels ranging from 78 - 89 dB at a distance of 50 feet, as indicated in **Table 4-14**.

**TABLE 4-14**  
TYPICAL CONSTRUCTION NOISE LEVELS

<b>Construction Phase</b>	<b>Noise Level at 50 feet (dBA)</b>
Ground Clearing	84
Excavation	89
Foundations	78
Erection	85
Finishing	89

Source; Federal Highway Administration, 2006.

Construction noise levels at and near the project site would fluctuate depending on the particular type, number, and duration of uses of various pieces of construction equipment. Construction-related material haul trips have the potential to raise ambient noise levels along haul routes, depending on the number of haul trips made and types of vehicles used. During construction approximately 104 worker trips per day would occur. It is conservatively estimated that 4 material hauling trips would occur during construction.

Because trucks are louder than passenger cars, a passenger car equivalence (PCE) multiplier of 10 cars per truck was used. Therefore, the total equivalent passenger car trips per day would be 144. The existing traffic volume on U.S. 60 and City View Road is 2,328 and 1,373 vehicles per day, respectively (refer to **Appendix E**); therefore, construction trips would be substantially less than existing traffic volumes and would not result in an audible increase in the existing ambient noise level (FHWA, 2009).

Stationary point sources of noise attenuate (lessen) at a rate of 0 to 10 dBA per doubling of distance from the source, depending on environmental conditions (i.e., atmospheric conditions, topography and type of ground surfaces, noise barriers, etc.). An attenuation factor of 6.0 dBA per doubling of distance is appropriate given the topography and lack of ground cover on and in the vicinity of the project site. The maximum construction noise at the project site would be 89 dBA at 50 feet. Using an attenuation factor of 6.0 dBA, the noise level at the nearest sensitive noise receptor, a residence, would be 76.0 dBA. The maximum noise level at the nearest sensitive noise receptor would be 9 dBA greater than the Federal Noise Abatement Criteria of 67 dBA (**Table 3-13**). Construction noise BMPs provided in **Section 2.0** would reduce noise from construction activities and would limit construction to daytime hours to ensure compliance with the federal Noise Abatement Criteria of 67 dBA during nighttime hours to prevent sleep disturbance. Therefore, because construction noise would be short-term and temporary, and because BMPs are expected to reduce construction noise levels to the extent feasible, there would not be a significant adverse effect due to construction noise.

#### VIBRATION

Construction activities would consist of using earthmoving equipment shown in **Table 4-15**, which can produce detectable or damaging levels of vibration at nearby sensitive land uses, primarily depending on the distance between the source and the nearby sensitive land use.

**TABLE 4-15**  
REFERENCE AND PREDICTED PPV FROM CONSTRUCTION

Equipment	Reference PPV at 50 feet	Predicted PPV at 500 feet
	Inches per Second	Inches per Second
Large bulldozer	0.089	0.004
Excavator	0.089	0.004
Compactor	0.170	0.01
Scaper	0.089	0.004
Loaded trucks	0.076	0.003
Small bulldozer	0.003	0.0001

Note: PPV was predicted using the equation  $PPV_{predicted} = PPV_{ref} * (D_{ref}/D_{source})^{1.4}$ .

Source: Federal Highway Administration, 2006.

Generally, physical damage is only an issue when construction requires the use of equipment with high vibration levels (i.e., compactors, large dozers, etc) and occurs within 25 to 100 feet of an existing

structure. **Table 4-15** provides estimated construction vibration levels at this distance. The predicted Peak Particle Velocity (PPV) levels are far below the significance threshold of 0.5 PPV for structures and 0.1 PPV for annoyance of people (FHWA, 2006). This would not be a significant adverse effect.

### ***OPERATIONAL NOISE***

The Proposed Project would result in an increase of onsite operational noise, primarily traffic and parking-related activities in parking lots, use of fans for heating, ventilation and air conditioning (HVAC), and truck loading and unloading. These activities are currently on-going on the site due to operation of the existing casino. Due to the expanded size of the proposed casino and hotel, these activities are expected to marginally increase, as discussed below.

### ***Traffic***

The level of traffic noise depends on three things: 1) the volume of the traffic, 2) the speed of the traffic, and 3) the number of trucks in the flow of the traffic. It is not anticipated that speed in the vicinity of the Project Site or the mix of trucks in the traffic would change during the operational phase; however, with the implementation of the project the traffic volumes would increase.

The primary source of noise in the area is generated by traffic on US 60 and City View Road. US 60 and City View Road existing traffic volumes are 2,328 and 1,373 vehicles per day, respectively (refer to **Appendix E**). The Proposed Project would add approximately 1,333 additional vehicles per day to the existing volume of traffic on US 60 and City View Road (refer to discussion of average trips per day in **Section 4.3**). This would not double the volume of existing traffic on these roadways; therefore, project-related traffic would increase ambient noise levels by less than 3 dBA Ldn (FHWA, 2006). Given the residential and commercial nature of the area surrounding the project site and the surrounding topography, the existing ambient noise level is estimated to be 60 dBA. Therefore, an increase of less than 3 dBA would result in an ambient noise level of 63 dBA. The ambient noise level would be less than the Federal Noise Abatement Criteria of 67 dBA for nearby sensitive land uses (refer to **Table 3-13**). Therefore, a less than significant adverse effect associated with increases in traffic noise over existing operations would occur.

### ***VIBRATION AND OTHER NOISE SOURCES***

Noise due to traffic in parking lots is limited by low speeds, and as a result, is not expected to represent a significant source of noise. Human activity in parking lots can produce noise including talking, yelling, and opening and closing of car doors and trunk lids. Such activities can occur any time of the day, but frequently occur in the daytime and evening. It is typical for a passing car in a parking lot to produce a maximum noise level of 60 dB to 65 dB at a distance of 50 feet, which is comparable to the level of a raised voice. It should be noted that the proposed parking lot is the same distance from sensitive noise receptors, located east of the project site, as the existing parking lot.

The casino would be equipped with HVAC units that would most likely be mounted on the roof. HVAC equipment would have noise shielding and other industry standard noise abatement measures installed. Due to the location of proposed HVAC equipment and incorporation of standard noise abatement measures, noise from HVAC equipment would not be audible at the project site boundaries. Loading areas for food and other supplies are potential noise sources due primarily to the noise produced by passing trucks. Although the trucks are moving at low speeds, the engine noise could be audible at nearby locations. Loading docks would be located adjacent to the casino building, approximately 400 feet from the nearest residence. Maximum noise levels due to truck movements at the loading docks would be in the range of 48 to 53 dBA, without accounting for the absorption provided by the casino building.

Commercial and hotel uses do not include sources of perceptible vibration. Therefore, because the Proposed Project would not result in vibration and noise levels at nearby sensitive receptors above the federal noise abatement criteria, no significant adverse effects would occur.

#### **4.11.2 ALTERNATIVE B - REDUCED-INTENSITY ALTERNATIVE**

Alternative B would result in operational noise less than that of the Proposed Project because the increase in traffic volumes would be less (refer to **Appendix E**). Also, construction duration and activities would be reduced, because Alternative B would not include construction or operation of the hotel component. Therefore, implementation of Alternative B would not result in significant adverse effects to the ambient noise environment.

#### **4.11.3 ALTERNATIVE C - NO ACTION ALTERNATIVE / NO NEW CASINO ALTERNATIVE**

Under Alternative C no additional construction or increase in the current traffic would occur on the site; therefore, no increase in the ambient noise environment would occur.

### **4.12 HAZARDOUS MATERIALS**

#### **4.12.1 ALTERNATIVE A - PROPOSED PROJECT**

There is no known hazardous materials contamination on the project site, and there are no known adjacent sites with hazardous materials involvement that could affect the planned uses of the project site. Therefore, implementation of Proposed Project would not cause the environment or public to be affected by known hazardous materials. Refer to **Section 3.12** for existing conditions as it pertains to hazardous materials on or near the project site.

The potential exists for previously unidentified soil and/or groundwater contamination to be encountered during site preparation and construction activities at the project site. BMPs listed in **Section 2.1.3** have been developed to address this potential effect. The most likely possible incidents involving hazardous

materials would involve the incidental release of fuels, oil, and grease from construction equipment, and during handling and transfer from one container to another. Typical construction management practices limit the incidence of such accidental releases. In addition, the Clean Water Act (CWA) requires that stormwater management BMPs be implemented during construction pursuant to a Stormwater Pollution Prevention Plan (SWPPP). The SWPPP would further ensure that incidental hazardous materials releases would not migrate off-site during a storm event. No adverse effects associated with hazardous materials would occur due to the construction of the Proposed Project.

During operation of the Proposed Project, small quantities of cleaning materials, solvents, pesticides, herbicides, and paints would be stored and used throughout the facilities of the Proposed Project. These materials are common to most commercial operations and do not pose any unusual or substantial impact to public health and safety, even if stored or used improperly, due to the relatively small quantities involved. No adverse effects associated with hazardous materials would occur due to the operation of the Proposed Project.

#### **4.12.2 ALTERNATIVE B - REDUCED-INTENSITY ALTERNATIVE**

As discussed above, implementation of Alternative B would not cause the environment or public to be affected by known hazardous materials. The potential exists for previously unidentified soil and/or groundwater contamination to be encountered during site preparation and construction activities at the project site. BMPs listed in **Section 2.1.3** have been developed to address this potential effect. In addition, the SWPPP would further ensure that incidental hazardous materials releases would not migrate off-site during a storm event. No adverse effects associated with hazardous materials would occur due to the construction of Alternative B.

During operation of Alternative B, small quantities of cleaning materials, solvents, pesticides, herbicides, and paints would be stored and used throughout the facilities of Alternative B. These materials are common to most commercial operations and do not pose any unusual or substantial impact to public health and safety, even if stored or used improperly, due to the relatively small quantities involved. No adverse effects associated with hazardous materials would occur due to the operation of Alternative B.

#### **4.12.3 ALTERNATIVE C - NO ACTION ALTERNATIVE / NO NEW CASINO ALTERNATIVE**

Under Alternative C, the existing casino may remain in operation. Because the facility has already been constructed, and any new facilities would be subject to federal, state, and local controls regarding hazardous materials, Alternative C would not result in adverse effects associated with hazardous materials.

## 4.13 CUMULATIVE IMPACTS AND INDIRECT EFFECTS

### 4.13.1 CUMULATIVE IMPACTS

Cumulative impacts are defined by the Council on Environmental Quality (CEQ) as the effects “on the environment which result from the incremental effect of the action when added to other past, present, and reasonably foreseeable future actions” (40 CRF Sec. 1508.7). As discussed in **Section 2.1.2**, the Nation entered into an Agreement for Sewer Service Outside Corporate limits with Ponca City (**Appendix A**). In accordance with the agreement, the Nation is in the process of designing wastewater facilities that will connect the Nation’s 15-acre property to the City’s sanitary sewer system. These facilities will be constructed before operation of the proposed casino begins. The cumulative impact analysis considered the construction of the wastewater facilities and assumed a one percent annual growth rate until 2030. Cumulative impacts for each environmental issue area are discussed below for the Proposed Project, Alternative B, and Alternative C.

#### *LAND RESOURCES*

The principal effects to land resources associated with any future development in the vicinity of the project site would be localized topographical changes and soil attrition. Local permitting requirements for construction would address any regional geotechnical, seismic, or mining hazards. It is anticipated that approved developments would follow appropriate permitting procedures; therefore, implementation of the Proposed Project or Alternative B would not result in cumulatively considerable adverse effects to land resources.

#### *WATER RESOURCES*

Projects that may be constructed in the vicinity of the project site are required to comply with the Clean Water Act as it relates to stormwater and point-source discharges. Compliance with EPA stormwater pollution prevention requirements, adhering to BMPs similar to those listed in **Section 2.1.3**, would prevent off-site development, in combination with development associated with the Proposed Project or Alternative B, from causing cumulatively considerable adverse stormwater-related effects.

Similarly, cumulatively considerable adverse effects attributable to wastewater are not anticipated, because the Ponca City WWTP will continue to be responsible for ensuring that wastewater effluent complies with the provisions of their NPDES discharge permit.

#### *AIR QUALITY*

Because the entire State of Oklahoma is in attainment for all criteria pollutants established by the EPA, and because any future development in the vicinity of the project site would be subject to state and federal regulations, no cumulatively considerable adverse effects to air quality are anticipated. Cumulative efforts associated with climate change are discussed in **Section 4.3**.

### ***BIOLOGICAL RESOURCES***

The project site does not provide habitat for any federally-listed plants or wildlife nor does the project site contain any unique or sensitive ecosystems or biological communities or potential waters of the U.S. Therefore, implementation of the Proposed Project or Alternative B would not result in cumulatively considerable adverse effects to biological resources.

### ***CULTURAL RESOURCES***

Protection measures for potential impacts to unknown cultural resources have been included in **Section 5.5**, and similar measures would be required for any development in the vicinity of the project site. No cumulatively considerable adverse effects to cultural resources would occur as a result of the Proposed Project or Alternative B.

### ***SOCIOECONOMIC CONDITIONS***

Cumulative socioeconomic effects could occur in the project area as the result of developments that affect the lifestyle and economic well being of residents. When considered with other growth in Osage County through 2030, there may be cumulative socioeconomic effects including impacts to the local labor market, housing availability, schools, problem gambling, and impacts to local government. These effects would occur as the region's economic and demographic characteristics change, as the population grows, and as specific industries expand or contract. Both the Proposed Project and Alternative B would result in beneficial impacts to economic output, tax revenues, and employment, as well as various beneficial impacts to Osage Nation. Further, planning documents for the region will continue to designate land uses for businesses, industry, and housing, as well as plan public services which would anticipate and accommodate growth in the region. Therefore, no significant cumulative socioeconomic effects would result.

### ***TRANSPORTATION NETWORKS***

This section describes future traffic conditions in the year 2030 in the project area.

#### ***Year 2030 Traffic Volumes***

An annual growth rate of one percent per year was applied to the 2010 baseline traffic data to obtain the traffic projections for 2030 (TEC, 2010). Figure 4 of the TIA shows traffic volumes under 2030 adjusted baseline conditions without implementation of the Proposed Project. Figure 9 of the TIA shows traffic volumes for 2030 adjusted baseline conditions with implementation of the Proposed Project.

#### ***Year 2030 Intersection Capacity***

**Table 4-16** provides a summary of the LOS at each study intersection under cumulative year 2030 conditions with implementation of the Proposed Project.

As shown in **Table 4-16**, the study intersections would operate above the threshold of LOS D in the cumulative year 2030 with the implementation of the Proposed Project. Therefore the Proposed Project in the cumulative year 2030 would not have a significant adverse effect on transportation in the vicinity of the project site. Optional mitigation is provided in **Section 5.7** to improve safety and enhance traffic flow at local intersection and roadways.

### **LAND USE**

If taken into federal trust, the project site would not be subject to State or local land use jurisdiction. Development on the site would not disrupt neighboring land uses or prohibit access to neighboring parcels. As such, the project would not result in changes to local land use patterns. Any changes to area land use patterns would be attributable to city/county policies only. No cumulatively considerable adverse land use effect would occur.

**TABLE 4-16**  
INTERSECTION LOS -ADJUSTED 2030 CUMULATIVE BASELINE PLUS PROPOSED PROJECT

Study Intersection	Type of Traffic Control	PM Peak Hour				
		Critical Movement			Intersection	
		Movement	Delay (s/veh)	LOS	Delay (s/veh)	LOS
City View Road/US 60	Unsignalized	NB	12.4	B	17.4	C
City View Road/Kelley Avenue	Unsignalized	NB	9.4	A	10.8	B
US 60/Proposed Drive #1	Unsignalized	SB	10.4	B	12.9	B
US 60/Proposed Drive #2	Unsignalized	SB	10.3	B	12.1	B
City View Road /Proposed Drive #3	Unsignalized	EB	8.7	A	9.6	A
City View Road /Proposed Drive #4	Unsignalized	EB	8.8	A	9.6	A

<sup>1</sup> s/veh = seconds per vehicle  
Source: TEC, 2010.

### **PUBLIC SERVICES**

#### **Water Supply**

Water use from planned development in combination with the Proposed Project would cause cumulative impacts if it triggers the need for new facilities or water supply sources. However, there is available capacity in the water supply system and little cumulative development planned for the Community of McCord area that could impact water supplies. Implementation of the Proposed Project or Alternative B would have no cumulatively considerable adverse effect on water supply.

***Wastewater Service***

Currently the wastewater plant serving the City has a peak capacity of 9 mgd, and currently treats 5 mgd. Cumulative effects to wastewater treatment may occur if new facilities are required to serve cumulative development even if the Proposed Project or Alternative B would not represent a substantial net increase in wastewater generation. There are no reasonably foreseeable developments in the community of McCord area. Since any new development approved in the future would be required to obtain similar guarantees of service as the Proposed Project and Alternative B, the Proposed Project and Alternative B would not have a cumulatively considerable adverse effect on wastewater service.

***Solid Waste Service***

Weekly garbage collection service for the Proposed Project or Alternative B would be collected by Ponca City waste division (see **Section 3.9.3**) and hauled to the Ponca City Sanitary Landfill. Although there are no foreseeable approved developments in the region, the Landfill manager indicated that additional services were available for commercial developments, and the landfill would be able to accept additional waste without substantially shortening the lifespan of the facility (D. Horinek, 2010). No cumulatively considerable adverse effect to solid waste service would occur.

***Schools***

Implementation of the Proposed Project or Alternative B would not increase enrollment or otherwise adversely affect public or private schools. Since there is no major foreseeable cumulative development in the McCord area, no cumulatively considerable adverse effect would occur.

***Recreation***

Development of the Proposed Project or Alternative B would not adversely affect any recreational activities. The nearest public recreation areas are managed by Ponca City and any development that may impact those recreation areas would fall under the City's jurisdiction. No cumulatively considerable adverse effect would occur.

***Electricity and Natural Gas***

There are no approved developments in the vicinity that would demand electricity and natural gas in excess of current capacity provided by Ponca City and Oklahoma Natural Gas. Individual projects would be responsible for paying development, connection, or user fees to the utility if necessary, to receive electrical or natural gas services, and the utilities would be compensated for any capital improvements through user rates. Implementation of the Proposed Project or Alternative B would not result in cumulatively considerable adverse effects to energy providers.

***Law Enforcement***

There are three law enforcement agencies capable of providing services to the Proposed Project and Alternative B, with existing mutual aid. Increased demand for law enforcement services resulting from

cumulative developments may require additional facilities, equipment, or employees. However, since there are no significant development projects planned in the area, no cumulatively considerable adverse effect would occur.

### ***Fire Protection***

The McCord Fire Department is responsible for the community fire protection services. Cumulative developments may impact the department if the increased demands require additional facilities, equipment, or the establishment of a professional fire department. It is not expected that the Proposed Project or Alternative B would require fire department services with a substantially greater frequency than the existing facility. Since there are no other planned development projects in the area, no cumulatively considerable adverse effect would occur.

### ***Emergency Medical Services***

Ponca City Fire Department would be the primary EMS serving the Proposed Project or Alternative B. Cumulative effects may occur if the increase in demand would necessitate the building of new facilities or hiring new staff to provide services. Since there are no significant foreseeable cumulative development projects in the McCord or Ponca City areas, there would be no cumulatively considerable adverse effects.

### ***VISUAL RESOURCES***

Through local jurisdictional approval it is assumed that cumulative development would be consistent with local land use regulations, including associated design guidelines. The project site is not located in a designated scenic corridor or an area of high aesthetic value. With the implementation of BMPs regarding lighting outlined in **Section 2.1.3**, implementation of the Proposed Project or Alternative B would result in no cumulatively considerable adverse effects to visual resources.

### ***NOISE***

Approved projects in the vicinity of the project site would be required to comply with any applicable noise regulations during construction and operation. Traffic volumes related to the Proposed Project would not increase in the cumulative year 2030; however, the increase in the local population at an estimated one percent annual growth rate would increase traffic volumes on local roadways. Cumulative traffic noise is not expected to exceed accepted noise thresholds. Therefore, with the implementation of BMPs outlined in **Section 2.1.3**, the Proposed Project or Alternative B would have no cumulatively considerable adverse effect to the ambient noise environment.

### ***HAZARDOUS MATERIALS***

Approved projects in the vicinity of the project site would be required to comply with applicable federal and state regulations concerning hazardous materials management. With the implementation of BMPs outlined in **Section 2.1.3**, no cumulatively considerable adverse effects related to hazardous materials would occur as a result of the Proposed Project.

### 4.13.2 **INDIRECT EFFECTS**

According to CEQ regulations, indirect effects are removed in time or in distance from a project, but are caused by the project and are reasonably foreseeable. These include growth-inducing effects, as well as changes in land use, population density, and related effects on natural systems (40 CRF Sec. 1508.8).

Implementation of the Proposed Project or Alternative B would not require any roadway improvements or utility construction other than what would occur under existing conditions, with the exception of upgrades to the existing one-inch water supply line discussed in **Section 2.0**. The new water supply line would be located within the road right-of-way, and would be subject to review and approval by the Rural Water District #3. Because the water line upgrade would be installed in roadbeds and disturbed areas within the project site, sensitive environmental resources would not be affected. A significant number of new employees would not move to the community from out of the area; as such, no new housing, schools, or other facilities would be constructed as a result of development on the project site. There would be no change in off-site land use and no change in population density in the vicinity of the project site. No significant adverse indirect effects, including growth-inducing effects, relevant to any environmental issue area would occur.

# ***SECTION 5.0***

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## ***MITIGATION MEASURES***

# SECTION 5.0

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## MITIGATION MEASURES

Mitigation consists of “avoiding the impact altogether by not taking a certain action or parts of an action; minimizing impacts by limiting the degree or magnitude of the action and its implementation, rectifying the impact by repairing, rehabilitating, or restoring the affected environment, reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action, compensating for the impact by replacing or providing substitute resources or environments” (40 CFR 1508.20).

Mitigation measures to be implemented during construction and operation of the Proposed Project are summarized below.

### 5.1 LAND RESOURCES

Implementation of the following mitigation measure would ensure that the Proposed Project has no adverse effects regarding land resources:

- All subsurface facilities shall be designed in accordance with the National Association of Corrosion Engineers (NACE) standards for special coatings and/or cathodic protection systems using specific soils data.

### 5.2 WATER RESOURCES

BMPs incorporated into the project description would minimize the project’s effects on water resources. No mitigation is warranted.

### 5.3 AIR QUALITY

#### *PROJECT EMISSIONS*

BMPs incorporated into the project description would minimize the project’s effects on air quality. No mitigation is warranted.

#### *CLIMATE CHANGE*

The following mitigation measures would reduce construction and operational GHG emissions resulting from the Proposed Project and/or Alternative B:

- The albedo rating of rooftop materials shall be at least 30. Use of low rated albedo roof would reduce energy use; thus, reducing indirect GHG emissions
- Environmentally preferable materials shall be used to the extent practical for construction of facilities. The Nation shall meet or exceed Green Building Council Standards for new and retrofit construction. Buildings shall be constructed and designed to meet the intent of Leadership in Energy and Environmental Design (LEED) or equivalent certification standards, except with respect to indoor smoking allowed in certain restricted areas. Use of environmentally preferable building materials would reduce indirect energy use and result in a reduction of indirect GHG emissions.
- Advanced lighting design shall be incorporated, including daylighting, where feasible. Advanced lighting design and day lighting would reduce project-related GHG emissions by reducing electrical energy usage.
- Energy efficient lighting shall be used, which would reduce indirect GHG emissions. Where available, Energy Star equipment and appliances shall be used throughout the development. Using Energy Star equipment and appliances would reduce energy usage, thus reducing GHG emissions.
- Low-flow appliances shall be used where feasible and shall utilize both potable and non-potable water to the extent practicable. Use of these measures would reduce water conveyance; thus, reducing indirect GHG emissions.
- The use of alternative-fueled (e.g., biodiesel and electric) construction and maintenance vehicles/equipment shall be maximized. Implementation of this measure would reduce vehicle emissions, therefore reducing mobile emissions.
- Local building materials shall be purchased whenever feasible. Implementation of this measure would reduce vehicle miles traveled, therefore reducing mobile emissions.
- Storage areas for recyclables and green waste shall be provided during construction and operation of the project. Implementation of this measure would reduce vehicle trips, therefore reducing mobile emissions.

## 5.4 **BIOLOGICAL RESOURCES**

Implementation of the following mitigation measure would ensure that the Proposed Project and Alternative B would avoid or minimize potential adverse effects to migratory birds and other birds of prey protected under the Migratory Bird Treaty Act (MBTA):

- If construction begins during the nesting season for birds of prey and migratory birds (between February 1 and October 1), a preconstruction bird survey for nesting sites will be conducted within the project site no more than 14 days prior to commencement with construction activities. The qualified biologist will document and submit the results of the preconstruction survey in a letter to the Tribe within 30 days following the survey. If no active nests or roosts are identified during the preconstruction survey, then no further mitigation is required.

- If any active nests are identified during the preconstruction survey within the project site, a buffer zone will be established around the nests. A qualified biologist will monitor nests weekly during construction to evaluate potential nesting disturbance by construction activities. The biologist will delimit the buffer zone with construction tape or pin flags within 100 feet of the active nest and maintain the buffer zone until the end of the breeding season or until the young have fledged. Guidance from the USFWS will be requested if establishing a 100-foot buffer zone is impractical if the nestlings within the active nest appear disturbed.

## 5.5 CULTURAL RESOURCES

Any inadvertent discovery of archaeological resources shall be subject to Section 106 of the National Historic Preservation Act as amended (36 CFR 800), the Native American Graves Protection and Repatriation Act (NAGPRA)(25 USC 3001 et seq.), and the Archaeological Resources Protection Act of 1979 (16 U.S.C. 470aa-mm). Specifically, procedures for post review discoveries without prior planning pursuant to 36 CFR 800.13 shall be followed. The purpose of the following mitigation measures is to minimize the potential adverse effect of construction activities to previously unknown archaeological or paleontological resources in the case of inadvertent discovery:

- All work within 50 feet of the potential archaeological find shall be halted until a professional archaeologist, or paleontologist if the find is of a paleontological nature, can assess the significance of the find.
- If any archaeological find is determined to be significant by the archaeologist, or paleontologist as appropriate, then representatives of the Tribe shall meet with the archaeologist, or paleontologist, to determine the appropriate course of action, including the development of a Treatment Plan, if necessary.
- All significant cultural or paleontological materials recovered shall be subject to scientific analysis, professional curation, and a report prepared by the professional archaeologist, or paleontologist, according to current professional standards.
- If human remains are discovered during ground-disturbing activities on Tribal lands, pursuant to NAGPRA, the Tribal Official and BIA representative shall be contacted immediately. No further disturbance shall occur until the Tribal Official and BIA representative have made the necessary findings as to the origin and disposition. If the remains are determined to be of Native American origin, the BIA representative shall notify a Most Likely Descendant (MLD). The MLD is responsible for recommending the appropriate disposition of the remains and any grave goods.

## 5.6 SOCIOECONOMIC CONDITIONS

No mitigation is warranted.

## **5.7 TRANSPORTATION NETWORKS**

Because no potentially significant adverse effects associated with traffic and circulation were identified, traffic mitigation is not required; however, to the extent feasible, the following optional mitigation shall be implemented by the Tribe to improve safety and enhance traffic flow at access intersections and adjacent roadways:

- It is recommended that the Nation seek to have US 60 widened to three lanes across most of the remaining site frontage so eastbound left turn lanes can be provided at proposed drive #1 and #2.
- It is recommended that the Nation provide two lanes for the proposed drives approaching US 60 rather than a single lane. This would allow for dedicated left and right turn lanes exiting the site and would significantly reduce the delay of the exiting right turn vehicles.

## **5.8 LAND USE**

No mitigation is warranted.

## **5.9 PUBLIC SERVICES**

BMPs incorporated into the project description would minimize the project's effects on public services. No mitigation is warranted.

## **5.10 VISUAL RESOURCES**

BMPs incorporated into the project description would minimize the project's effects on visual resources. No mitigation is warranted.

## **5.11 NOISE**

BMPs incorporated into the project description would minimize the project's noise-related effects during the construction period. No mitigation is warranted.

## **5.12 HAZARDOUS MATERIALS**

BMPs incorporated into the project description would minimize the project's hazardous materials-related effects. No mitigation is warranted.

## **SECTION 6.0**

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### ***CONSULTATION, COORDINATION, AND LIST OF PREPARERS***

# SECTION 6.0

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## CONSULTATION, COORDINATION AND LIST OF PREPARERS

This section lists persons and agencies consulted during the preparation of this Environmental Assessment (EA). Persons consulted for this EA that are associated with an agency or organization are listed underneath their agency or organization. A list of preparers of the EA is also provided below.

### 6.1 AGENCIES AND INDIVIDUALS CONSULTED

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Jonna Polk, Chief, Division of Environmental, Safety, and Cultural Resources

**United States Fish and Wildlife Service**

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**Osage Nation Historic Preservation Office**

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**Osage Million Dollar Elm Casino**

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**City of Ponca City**

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**Ponca City Fire Department**

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Rich Bliss, President

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# ***SECTION 7.0***

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## ***BIBLIOGRAPHY***

# SECTION 7.0

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