

Appendix E Environmental Studies

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**APPENDIX E-1
Community Impact Assessment Memorandum**

COMMUNITY EFFECTS MEMORANDUM

Date: February 13, 2013

Subject: U.S. 69 Bridges over the Missouri River EA: Community Effects Memorandum

From: U.S. 69 Bridges over the Missouri River EA Study Team
JENNIFER BELL

1.0 INTRODUCTION

This technical memorandum describes the existing socioeconomic conditions within the U.S. 69 Bridges EA study area and larger project vicinity and discusses the potential community effects of the project. The project vicinity is defined as a one-mile radius from the existing bridges. Data for the community effects assessment was primarily obtained from the U.S. Census Bureau, 2007-2011 American Community Survey (ACS) 5-Year Estimates, 2010 Census, 2000 Census, and the Mid-America Regional Council (MARC) Long Range Forecasts. Supplemental data was obtained from Platte County, the City of Riverside, the Unified Government, the Fairfax Industrial District, and local and regional land use and development plans.

2.0 EXISTING SOCIOECONOMIC CONDITIONS

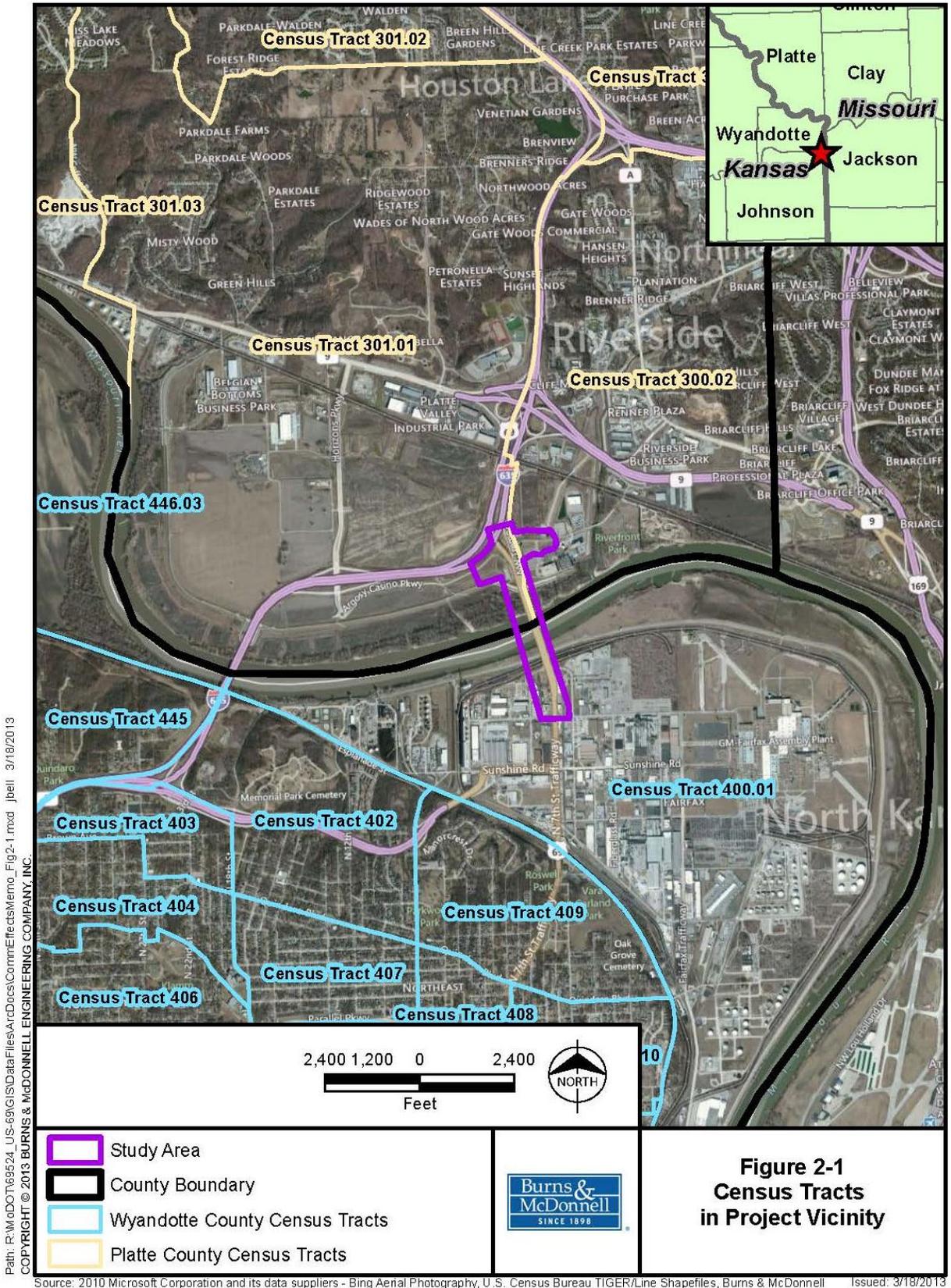
The U.S. 69 Bridges EA study area is located in an area that primarily contains industrial and commercial businesses with no residences. Residential populations within the greater project vicinity are located to the southwest in the Quindaro neighborhood of Kansas City, and within the City of Riverside to the north of Route 9. Demographic data for these residential populations within the greater project vicinity is presented below, including data on population, race and ethnicity, and employment and income. Data on businesses and jobs within the project vicinity is also presented. Public facilities and services within the project vicinity are identified, and bicycle and pedestrian transportation considerations are discussed.

2.1 Residential Population

Data from the U.S. Census Bureau 2000 Census, 2010 Census, 2007-2011 ACS 5-Year Estimates, and MARC population projections was obtained in order to characterize demographic trends in the project vicinity. Five census tracts are located within the project vicinity (Figure 2-1). Census Tract 400.01 in Wyandotte County does not currently have any residents; this tract is located at the southern end of the existing bridges and encompasses the Fairfax Industrial District.



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Source: 2010 Microsoft Corporation and its data suppliers - Bing Aerial Photography, U.S. Census Bureau TIGER/Line Shapefiles, Burns & McDonnell Issued: 3/18/2013

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2.1.1 Population Trends

Between 2000 and 2010, the population in Platte County as a whole increased by 21 percent, while the population in Wyandotte County decreased slightly (see Table 2-1). Population change in the project area census tracts over this same time period did not follow county patterns, with population decreasing in both census tracts located in Platte County and one of the census tracts located in Wyandotte County. Population increased in the other populated project area census tract located in Wyandotte County.

Over the next 30 years, the population in the project vicinity is projected to grow in the census tracts located north of the river in Platte County and decline in the census tracts located south of the river in Wyandotte County. The populations in both Platte and Wyandotte Counties as a whole are projected to increase over the next 30 years, with a higher rate of growth in Platte County.

Table 2-1: Population Change

	2000	2010	2020	2030	2040	Percent change 2000-2010	Percent change 2010-2040
Platte County	73,781	89,322	112,063	134,805	157,546	21.1%	76.4%
Census Tract 300.02	2,921	2,828	3,333	3,839	4,344	-3.2%	53.6%
Census Tract 301.01	3,236	3,194	3,663	4,132	4,602	-1.3%	44.1%
Wyandotte County	157,882	157,505	166,178	174,850	183,523	-0.2%	16.5%
Census Tract 400.01	1	0	0	0	0	-100.0%	0.0%
Census Tract 402	1,294	1,351	1,318	1,285	1,252	4.4%	-7.3%
Census Tract 409	1,513	1,292	1,251	1,209	1,168	-14.6%	-9.6%

Source: MARC, 2011; U.S. Census Bureau, 2000; U.S. Census Bureau, 2010

2.1.2 Race and Ethnicity

Table 2-2 includes data on race and ethnicity for the project area census tracts and counties, as well as the cities of Riverside and Kansas City. The data was obtained from the U.S. Census Bureau, 2007-2011 ACS 5-Year Estimates, which provides an estimate for the year 2011.

The majority of residents in Riverside and Platte County are white. However, Riverside has a greater percentage of minority residents compared to the county as a whole. The largest minority group in both Riverside and Platte County is African American. Of the two project area census tracts on the north side of the Missouri River within the City of Riverside, one (Census Tract 300.02) has a population with a similar racial make-up as the city with approximately the same percentage of minority residents. The other census tract (301.01) has a much smaller percentage of minority residents.

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Table 2-2: Race and Ethnicity

	Total Population	White	Black or African American	American Indian	Asian	Native Hawaiian or Pacific Islander	Some Other Race	Two or More Races	Hispanic	Total Minority ¹
Platte County, MO	88,301	87.8%	5.6%	0.4%	2.6%	0.3%	1.2%	2.0%	4.9%	15.2%
City of Riverside, MO	2,965	74.2%	13.3%	0.9%	3.1%	3.0%	0.6%	4.8%	4.8%	29.4%
Census Tract 300.02	2,776	73.0%	14.2%	1.1%	3.3%	3.2%	0.0%	5.2%	3.8%	30.4%
Census Tract 301.01	3,192	93.5%	0.8%	0.0%	1.5%	0.0%	2.3%	1.9%	3.6%	7.5%
Wyandotte County, KS	156,362	60.4%	25.9%	0.8%	2.6%	0.0%	7.7%	2.6%	25.5%	56.1%
Kansas City, KS	144,797	58.1%	27.6%	0.7%	2.8%	0.0%	8.3%	2.6%	27.1%	59.3%
Census Tract 400.01	0									
Census Tract 402	969	4.3%	78.3%	0.0%	0.7%	0.0%	9.5%	7.1%	12.4%	95.7%
Census Tract 409	1,472	25.0%	58.0%	0.0%	2.9%	0.0%	8.5%	5.6%	17.4%	83.9%

Note:

¹"Total Minority" is calculated by adding the populations for all non-white races and the population for white-Hispanic

Source: U.S. Census Bureau, 2011

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In Kansas City, Kansas, and Wyandotte County, the percentage of the population that is a minority is greater than 50 percent. African American and Hispanic residents are the largest minority groups in the city and county. The two project area census tracts on the south side of the Missouri River in Kansas City have a very high percentage of minority residents. These census tracts are generally located in the Quindaro neighborhood.

2.1.3 Employment and Income

Based on the U.S. Census Bureau's ACS 5-Year Estimates for 2007-2011, the percent of the civilian labor force that is unemployed within the project area census tracts ranges from 5.6 percent to 23.7 percent (Table 2-3). Compared to the City of Riverside, the unemployment rate in Census Tract 300.02 is approximately the same, while the rate in Census Tract 301.01 is lower. Census Tract 402 has a similar unemployment rate as Kansas City, while Census Tract 409 has a higher rate compared to the city.

Median household incomes in the project area census tracts vary, with a low of \$19,500 in Census Tract 409 and a high of \$82,743 in Census Tract 301.01 (Table 2-3). In general, incomes tend to be higher in the City of Riverside and Platte County compared to Kansas City and Wyandotte County. Poverty rates also vary greatly among the project area census tracts, with a high of 51.9 percent in Census Tract 409 and a low of 5.5 percent in Census Tract 301.01 (Table 2-3). Poverty rates are relatively similar in Kansas City, Riverside, and Wyandotte County, but lower in Platte County.

Table 2-3: Economic Indicators, 2011

	Civilian Labor Force	Percent Unemployed	Median Household Income	Percent of Population Below Poverty
Platte County, MO	49,512	6.0%	\$66,487	7.1%
City of Riverside, MO	1,776	11.7%	\$43,079	19.3%
Census Tract 300.02	1,637	11.6%	\$38,947	18.6%
Census Tract 301.01	1,720	5.6%	\$82,743	5.5%
Wyandotte County, KS	77,933	12.7%	\$39,812	21.9%
Kansas City, KS	71,722	13.2%	\$38,564	23.0%
Census Tract 402	489	12.3%	\$46,875	30.1%
Census Tract 409	583	23.7%	\$19,500	51.9%

Source: U.S. Census Bureau, 2011

2.2 Businesses and Jobs

The study area is located in an area dominated by industrial and commercial businesses. Following is a discussion of the businesses located in the project vicinity. Employment trends in the project vicinity, based on data from the MARC population projections, are also discussed.

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2.2.1 Business/Industry

The Fairfax Industrial District, which plays a major role in the region's economy, is located at the southern end of the existing bridges on the Kansas side of the Missouri River. The District is home to more than 135 businesses (including General Motors, Sunshine Biscuit, Owens Corning, Central Plains Steel, and CertainTeed) that manufacture and/or distribute a variety of products throughout Kansas City as well as the nation. Approximately 6,500 people are employed by businesses in the District (Fairfax Industrial Association, 2013).

In October 2011, the city of Riverside broke ground on the Riverside Horizons Development, including a 250-acre office and industrial center located just north of the U.S. 69 bridges and west of I-635. The Riverside Horizons Business Park, spearheaded by Briarcliff Horizons LLC, is projected to provide more than 2.5 million square feet of office and industrial innovations space and generate more than 5,900 jobs over the next 20 years.

Argosy Casino, which employs approximately 830 people, is located at the northern end of the existing bridges on the Missouri side of the River (Kansas City Business Journal, 2012).

2.2.2 Jobs/Employment

In 2010, there were approximately 12,428 total jobs within the project area census tracts (Table 2-4). A majority of these jobs were within Census Tract 400.01 in Wyandotte County, which encompasses the Fairfax Industrial District, and Census Tracts 300.02 and 301.01 in Platte County, north of the river. Census Tracts 402 and 409 in Wyandotte County had comparatively low numbers of jobs, as these tracts are primarily residential neighborhoods.

In Census Tract 300.02, which includes Argosy Casino, a majority of jobs are in retail or services industries (Table 2-4). In Census Tracts 301.01 and 400.01, a majority of jobs are in industry sectors other than retail or services, such as manufacturing, transportation, warehousing, and agriculture.

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Table 2-4: Employment by Sector, 2010

	Total Employment	Retail ¹	Services ²	Other ³
Platte County	39,253	28.8%	45.4%	25.9%
Census Tract 300.02	3,590	30.4%	51.3%	18.3%
Census Tract 301.01	1,761	17.1%	22.3%	60.6%
Wyandotte County	70,477	20.4%	44.7%	34.9%
Census Tract 400.01	6,964	7.6%	8.2%	84.2%
Census Tract 402	70	17.1%	82.9%	0.0%
Census Tract 409	43	32.6%	41.9%	25.6%

Notes:

¹Retail sector includes establishments engaged in selling merchandise for personal or household consumption, and rendering services incidental to the sale of such goods

²Services sector includes finance, insurance, real estate, personal and business services, and government

³Other sectors includes all sectors other than retail or service, such as manufacturing, transportation and warehousing, and agriculture

Source: MARC, 2011

2.3 Public Facilities and Services

Based on a desktop review of available data (Google Earth, MARC GIS data, and Unified Government GIS data), public facilities identified within the project vicinity include schools, churches, parks and recreational facilities, medical facilities, government facilities, and emergency services. A majority of the identified public facilities are located within the nearby residential neighborhoods and not within the immediate study area.

2.3.1 Schools

Three schools were identified within the one-mile project vicinity, including one in Riverside and two in Kansas City. Park Hill South High School, which is in the Park Hill School District, is located in Riverside, northwest of the intersection of I-635 and Route 9. Two secondary alternative education schools were identified in the project vicinity, including the Bridges/Wyandot Academy and the Fairfax Learning Center. Both are located between N. 9th Street and N. 10th Street along Lloyd Peterson Lane in Kansas City. The Bridges/Wyandot Academy is in the Kansas City, Kansas Public School District, and the Fairfax Learning Center is run independently by Greenbush.

2.3.2 Churches

Two churches are located within the project vicinity, both within the Quindaro neighborhood of Kansas City. These include the Grant Chapel AME Church and St. John Baptist Church.

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2.3.3 Parks and Recreation

The following parks, trails, and other recreational facilities were identified in the project vicinity.

E.H. Young Riverside Park – The E.H. Young Riverside Park is located in Riverside along the banks of the Missouri River, east of U.S. 69. The park is managed by the City of Riverside. Recreational amenities at the park include a paved walking trail, a riverwalk, picnic facilities, an amphitheater, a playground, a baseball field, and a sand volleyball pit (City of Riverside, n.d.).

Fairfax (Roswell) Park – Fairfax Park is located in Kansas City at Manorcrest Drive and U.S. 69. The park is managed by the Unified Government and includes a softball field and a basketball court (Unified Government, 2013).

Missouri Riverfront Trail – The Missouri Riverfront Trail is a 3.5-mile paved, multi-use trail located in Riverside along the Missouri River (City of Riverside, 2013). The trail runs along the top of the Riverside-Quindaro Bend Levee from E.H. Young Riverside Park to just east of the Riverside/Parkville city limit. The City of Riverside is responsible for trail maintenance and operation.

Parkwood Park – Parkwood Park, managed by the Unified Government, is located in Kansas City at Quindaro Boulevard and N. 10th Street. Park amenities include an outdoor swimming pool, playground equipment, tennis courts, a basketball court, and picnic facilities (Unified Government, 2013).

Renner Brenner Park – Renner Brenner Park is located in Riverside northeast of I-635 and Route 9. The park is managed by the City of Riverside and includes a skate park, gazebo, shelter house, and playground (City of Riverside, n.d.).

Riverside Community Center – The City of Riverside’s Community Center is located at N.W. High Drive and N.W. Vivion Road. The community center includes an outdoor swimming pool, gymnasium, stage, and meeting rooms (City of Riverside, n.d.).

2.3.4 Medical Facilities

One medical facility was identified within the project vicinity. The Riverside Nursing and Rehabilitation Center, located off of NW Vivion Road to the northeast of the I-635/Route 9 interchange, provides long term residential care and rehabilitation services for seniors.

2.3.5 Government Facilities

The City of Riverside municipal complex is located within the project vicinity, at the intersection of NW Vivion Road and NW High Drive. The complex includes Riverside City Hall, Police Department, Fire Department, and Municipal Court.

2.3.6 Emergency Services

The Riverside Police and Fire Departments provide police protection, fire protection, and emergency response services to the City of Riverside, including the portion of the study area north of the river. South of the river, the Kansas City, Kansas Police and Fire Departments provide emergency services.

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2.4 Bike and Pedestrian Systems

Pursuant to 23 CFR Part 652, an inventory and analysis of existing bicycle routes and pedestrian walkways was conducted within the study area. The existing bridges do not accommodate bicycle or pedestrian traffic very well, because of their narrowness or lack of shoulders. There is one existing bicycle and pedestrian trail within the study area, the Missouri Riverfront Trail located along the levee on the north side of the Missouri River. This trail connects to E.H. Young Riverfront Park, just east of Argosy Casino, and is a link in the developing regional trail system within the greater Kansas City metropolitan area. The *Trails KC Plan*, developed by the City of Kansas City, Missouri in January 2010, identifies a number of citywide trails and on-street trails that would connect this section of the Missouri Riverfront Trail with other sections of the same trail within downtown Kansas City, Missouri, North Kansas City, and Riverside.

On the south side of the river, the Unified Government has identified 7th Street, Sunshine Road, and Fairfax Trafficway as on-street bike routes in their *Sidewalk and Trail Master Plan*, completed in July 2012. The Unified Government's plan also provides for consideration of regional multipurpose trails along U.S. 69, on or in the vicinity of the Fairfax Levee, and along the Quindaro bluff.

3.0 COMMUNITY EFFECTS

The following section discusses potential social and economic impacts resulting from the alternatives.

3.1 Employment

The build alternative would provide direct economic benefits to the community by creating construction-related jobs and resulting in expenditures on construction materials for the project. The level of such economic impacts is dependent upon the extent that contractors utilize local labor and purchase construction materials locally. Businesses in the project vicinity and surrounding communities may see an increase in revenue from the sale of goods and services (e.g., food, fuel, lodging, and vehicle and equipment repairs) that support the workforce for the project.

The no-build alternative would result in no impacts to employment.

3.2 Economic Growth and Development

The build alternative would have no permanent, adverse impact on economic growth and development, nor would either alternative negatively impact the region's competitive position. A new bridge would provide mobility and accessibility to support the continued transport of goods and freight from the Fairfax Industrial District and southern Platte County to the surrounding region. The build alternatives would support continued economic vitality on both sides of the river by maintaining access and capacity to serve current and planned economic development.

The no-build alternative may have negative economic consequences. U.S. 69 plays a major role in supporting the regional distribution of products manufactured and stored in the Fairfax Industrial District. However, the transport of materials and products across the existing bridges is constrained by narrow travel lanes, the steepness of the roadways approaching the bridges, and the weight limit on the Fairfax Bridge, all of which can impact travel speeds and traffic flow. Under the no-build alternative, highway operations would not

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be improved, and the capacity to serve economic development on both sides of the river may be constrained.

3.3 Bike and Pedestrian Systems

The build alternative includes a dedicated and barrier-protected off-travelway bicycle/pedestrian facility along one side of the new bridge. The facility would provide a connection to the Missouri Riverfront Trail and to the on-street bike lanes proposed along U.S. 69/7th Street and Kindleberegger Road by Kansas City, Kansas. The build alternative would temporarily require closure of a section of the Missouri Riverfront Trail and its trailhead during construction. The closure would be coordinated through the city of Riverside. The section of the trail that passes under the existing bridges would be closed to accommodate construction activities and to ensure the safety of recreational users. No other parks or recreational facilities would be affected by the proposed project.

3.4 Right-of-Way Acquisition and Easements

No new, permanent right-of-way would be needed for either of the build alternatives. The project may require temporary easements for construction.

3.5 Public Facilities and Services

No impacts to the identified public facilities, including schools, churches, parks, the community center, nursing home, or Riverside municipal complex, are anticipated as a result of the project. As most of these public facilities serve the immediate neighborhood or municipality, it is unlikely that many people travel across the existing bridges to access these facilities. Therefore, temporary disruptions in travel patterns and travel time during construction would not be anticipated to affect access to public facilities. Given that there are two different school districts serving Riverside and Kansas City, school bus routes likely do not utilize the existing bridges and, thus, would not be affected by construction of the project.

A new bridge, with wider shoulders to help prevent disabled vehicles from blocking the traffic lanes, would enhance emergency services by improving travel efficiency and reliability at this river crossing. Although temporary disruptions in travel patterns and travel time may occur during construction, the long-term benefits of a new bridge should far outweigh short-term impacts. Overall, either build alternative would enhance emergency services by eliminating delays from traffic stoppages to accommodate oversized vehicles and decreasing closures due to maintenance. With the no build alternative, delays would continue and closures for maintenance would increase over time.

3.6 Community Cohesion

The new bridge would be constructed either be in the same location or adjacent to the existing bridges and would tie into the existing roadway systems on either side of the river. Therefore, no changes are anticipated to neighborhoods or community cohesion. Travel patterns and accessibility would be maintained on both sides of the river. The project could open up the possibility for the City of Riverside to extend Argosy Parkway to the west under the new bridge, thus improving connectivity and safety through this area.

3.7 Environmental Justice

Executive Order 12898, entitled *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, issued in 1994, directs federal agencies

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to take the appropriate and necessary steps to identify and address disproportionately high and adverse effects of federal projects on the health or environment of minority and low-income populations to the greatest extent practicable and permitted by law.

FHWA Order 6640.23A, issued June 14, 2012, defines a minority or low-income population as any readily identifiable group of minority or low-income persons who live in close geographic proximity. The FHWA Order defines "minority" as a person who is Black, Asian, American Indian or Alaska Native, Native Hawaiian or Other Pacific Islander, or Hispanic or Latino. The FHWA Order defines "low-income" as a person whose median household income is at or below the Department of Health and Human Services poverty guidelines.

Based on the data presented in Section 2.1.2 and 2.1.3, minority and low-income populations are located in the project vicinity, primarily in the Quindaro neighborhood to the southwest of the existing bridges. Census Tracts 402 and 409 in Wyandotte County have a very high percentage of minority residents (95.7 and 83.9 percent, respectively). Census Tract 409 also has a high percentage of residents living below poverty (51.9 percent).

While the greater project vicinity includes minority and low-income populations, the immediate study area is an industrial and commercial area with no residential populations. As such, no minority or low-income populations have been identified that would be adversely impacted or displaced by replacement of the bridges. Therefore, in accordance with the provisions of Executive Order 12898 and FHWA Order 6640.23A, no further environmental justice analysis is required.

4.0 REFERENCES

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APPENDIX E-2
Wetlands and Water Resources Technical Memorandum

WATER RESOURCES TECHNICAL MEMORANDUM

Date: March 14, 2013

Subject: Water Resources Technical Memorandum

From: U.S. 69 Bridges over the Missouri River EA Study Team
Jessi Veach and Craig Gump

Wetlands, Aquatic Resources, and Navigable Waterways

1.1 Regulatory Background

Executive Order 11990, dated May 24, 1977, requires federal agencies to avoid undertaking or providing assistance for new construction located in wetlands unless there are no practicable alternatives, and all practicable measures to minimize harm to wetlands have been implemented.

The United States Army Corps of Engineers (USACE) has authority to administer a permit program to regulate the discharge of dredged or fill material into waters of the United States and obstructions to navigation under Section 404 of the Clean Water Act (CWA) and Section 10 of the Rivers and Harbors Act. These federal statutes prohibit the discharge of dredge material or placement of fill into waters of the U.S. and the obstruction of navigation without a Department of the Army (DA) permit. In accordance with these laws, the USACE will review and evaluate project plans and issue permits as defined by 33 CFR Parts 320-321 and the Rivers and Harbors Act. The USACE, Kansas City District has jurisdiction over the water resources in the Study Area. USACE permits are issued contingent on water quality certification issued under Section 401 of the CWA by the Missouri Department of Natural Resources (MDNR). In accordance with a Memorandum of Agreement dated January 1994 with the USACE, the Natural Resources Conservation Service (NRCS) has regulatory authority over the delineation of farmed wetlands.

Other regulatory permits such as a United States Coast Guard (USCG) Section 9 Bridge Permit, a MDNR stormwater permit, and a Federal Emergency Management Agency (FEMA) floodplain development permit (and if in a floodway a "no-rise" certificate) are also required.



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1.2 Survey Methodology

In response to regulatory mandates, a preliminary inventory of water resources (streams, wetlands, and ponds) was conducted as part of the natural resource investigation within the U.S. 69 Bridges Study Area.

Prior to conducting field reviews of the Study Area, a desktop review of relevant documents/data was conducted to identify sensitive environmental resources within the Study Area. Rivers, streams, wetlands and ponds occurring within the Study Area were identified utilizing a variety of existing data sources including:

- National Wetlands Inventory (NWI) maps;
- United States Geological Service (USGS) National Hydrography Dataset (NHD);
- USGS 7.5 minute topographic quadrangle maps;
- Aerial photography (dated May 2012);
- Platte and Wyandotte County soil surveys;
- Platte and Wyandotte County NRCS hydric soils lists; and
- FEMA Flood Insurance Rate Maps.

Windshield surveys were performed within and near the Study Area along with a review of available mapping for use in the evaluation of the project alternatives. Rivers and streams were initially identified on USGS maps, and wetlands were initially identified using NWI maps. Subsequent field reconnaissance will be conducted to confirm mapped resources and identify additional resources for the Preferred Alternative.

Upon determination of the Preferred Alternative, a detailed field delineation of water resources will be performed within limits of the Study Area. Wetland delineations will be conducted using the protocol outlined in the USACE 1987 Wetland Delineation Manual and USACE Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (Version 2.0) (2010). Wetlands are defined as areas having positive evidence of three environmental parameters: hydric soils, wetland hydrology, and hydrophytic vegetation. When identified, wetland community classifications are recorded using the Cowardin classification system (Cowardin et al. 1979).

Surface water features (i.e., streams and ponds) are identified by the presence of a defined bed and bank, evidence of an ordinary high water mark (OHWM), and less than 50 percent vegetative cover within the bed. When water features are identified, information such as average OHWM, average bankfull depth, bank slope, substrate composition, source of water, dominant vegetation, other vegetation, percent overstory, and wildlife observed is recorded.

A Geographic Information Systems (GIS) program (ESRI ArcGIS©) was used to determine the length of stream lying within the Study Area, and the surface acreage within the OHWM that could potentially be impacted by each alternative. These were determined from topographic base maps, NHD data, and aerial photographs overlain with a digital file of the proposed alternatives. Stream data will be augmented by data collected with a global positioning system (GPS) unit during the field delineation.

The same procedure was used to determine the surface area of wetland and pond sites identified within the Study Area. The NWI maps were reviewed and showed designations of potential "vegetated wetlands" within the study area (see Figure 1-1). In addition, a review of the Platte and Wyandotte County NRCS soil survey reports and hydric soils lists indicated

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that some of the soil types within the survey area are designated as hydric.

1.3 Wetlands and Waters of the U.S

Water bodies subject to CWA jurisdiction are: navigable waters, Traditional Navigable Waters (TNW's); wetlands adjacent to TNW's; relatively permanent waters (RPW) which flow directly or indirectly into TNW's and typically flow year-round or have continuous flow at least seasonally; and wetlands that directly abut such relatively permanent tributaries. In addition, if a significant nexus with a TNW is determined, the following water bodies are also considered jurisdictional: non-relatively permanent waters (NON-RPW) that do not typically flow year-round or have continuous flow at least seasonally; wetlands adjacent to NON-RPW's; and wetlands adjacent to but that do not directly abut a relatively permanent non-navigable tributary. A significant nexus exists if the tributary, together with its adjacent wetlands, has more than an insubstantial or speculative effect on the chemical, physical, and/or biological integrity of a downstream TNW. When evaluating a significant nexus, one must consider the volume, duration, and frequency of the flow of water in the tributary and the proximity of the tributary to a TNW, plus the functions performed by the tributary and all of its adjacent wetlands (USACE 2008).

Upland swales and erosional features (e.g., gullies, small washes characterized by low volume, infrequent, and short duration flow) are generally not waters of the U.S. (WOUS) because they are not tributaries or they do not have a significant nexus to downstream TNW. In addition, ditches (including roadside ditches) excavated wholly in and draining only uplands and that do not carry a relatively permanent flow of water are generally not WOUS because they are not tributaries and/or they do not have a significant nexus to downstream TNW's (USACE 2008).

a. Rivers and Streams

The determination of the jurisdictional limit of a stream channel was based upon the presence of an OHWM. According to 33 CFR 328.3, the term "ordinary high water mark" means: "the line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of the soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas." In general, the OHWM for a stream is usually determined through an examination of the recent physical evidence of surface flow in the stream channel.

Desktop and windshield reviews resulted in the identification of one jurisdictional stream crossing within the Study Area (Note: An individual stream crossing may include both the northbound and southbound lanes of US-69). An inventory of the stream crossings located in the Study Area is presented in Table 1-1. Photographic documentation and pertinent information about the stream and the adjacent riparian area will be presented in the formal delineation and jurisdictional determination upon determination of the Preferred Alternative.

Table 1: Stream Inventory

Stream Crossing Number	Name	Stream Classification	Stream Length	OHWM Width (ft.)
1	Missouri River	Lower Perennial River (R2UBH)	700	850

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b. Wetlands

The USACE and the Environmental Protection Agency (EPA) jointly define wetlands as “those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.” Wetlands generally include swamps, marshes, bogs and similar areas (EPA , 40 CFR 239.2 and USACE, 33 CFR 328.3).

Wetland communities represent transitional areas between aquatic and terrestrial habitats. Wetlands generally occur within a variety of landscapes including forest, pasture, cropland, old field and urban/suburban settings. As a result, wetlands reflect aspects of both aquatic and terrestrial communities. Wetland habitats are generally highly productive and maintain relatively diverse floral and faunal assemblages. While wetlands have long been recognized as providing habitat for fish and wildlife, these areas are also recognized as performing a variety of functions that are valuable to society at large. Wetland functions include groundwater recharge, flood storage, sediment retention, erosion control, nutrient removal and retention, maintenance of plant and animal communities and enhancement of water quality. While wetland communities are, in part, determined by the composition of plant communities and certain soil characteristics, hydrology is recognized as the driving force behind wetland development. Within the Study Area the primary hydrologic element is the Missouri River and its associated floodplain.

The wetlands within the Study Area consist of palustrine wetlands. Palustrine wetlands are further divided based on hydrology, landscape position, and vegetation (Cowardin et al. 1979). Palustrine wetlands are classified according to dominant vegetation as palustrine emergent (PEM) wetlands, palustrine scrub-shrub (PSS), and palustrine forested wetlands (PFO). Only palustrine forested wetlands are indicated on the NWI map.

Vegetated wetlands with the Study Area are limited due to the upland urbanized landscape of much of the Study Area. A single NWI wetland is mapped within the Study Area. It is the palustrine forested wetland (PFO1A) located on the north side of the Missouri River between the river and the levee.

Data gathered from the NRCS soil survey maps (2012) was also used to determine the presence of hydric soils. Soil units mapped as partially hydric are located along the north side of the Missouri River and include:

- Haynie silt loam, clayey substratum, 0 to 2 percent slopes, occasionally flooded (13523)
- Waldron silty clay loam, 0 to 2 percent slopes, occasionally flooded (66006)
- Leta silty clay, 0 to 2 percent slopes, occasionally flooded (66007)

NWI mapped wetlands and other potential wetlands identified by windshield survey located within the Study Area are summarized in Table 1-2 and shown on Figure 1-1. Formal delineation and descriptions of potential jurisdictional wetlands will be presented in the Waters of the U.S. and Preliminary Jurisdictional Determination Report upon determination of the Preferred Alternative.

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Table 2: Wetland Descriptions

Wetland Number	Location & Description	NWI Map Classification	Wetland Type	Wetland Area within Study Area (acres)
1	NWI mapped forested area of 100 Year Floodplain north of and abutting the Missouri River	PF01A	PFO	8.33
2	Forested area within 100 Year Floodplain north of the north levee, west of U.S. 69, and south of Argosy Casino Parkway	N/A	PFO	0.64
3	Depressional herbaceous area just south of Harvester Rd and east of U.S. 69 in Wyandotte County	N/A	PEM	1.01

c. Ponds

There were no ponds identified within the limits of the Study Area.

1.4 Impacts

a. Streams

No-Build Alternative

The No-Build Alternative does not include any construction activities. Therefore, the No-Build Alternative would not affect any jurisdictional stream channels.

Build Alternatives

The build alternatives would each involve crossing the Missouri River with bridge structures extending beyond the OHWM of the river. Therefore, there would not likely be any substantial permanent linear stream impacts. However, impacts would be permanently incurred for construction of new piers/structures associated with each of the Build Alternatives. Therefore, the linear impact for the Missouri River is identified as "0" for each alternative shown in Table 1-3. Pier extents for each of the Build Alternatives would create approximately 0.29 surface acre impacts for the Missouri River. Missouri River surface area project extents for each alternative are identified in Figures 1-2 through 1-5. Temporary access impacts would occur with each new build alternative as well as with bridge demolition.

With Alternative 3 and all its options, both the southbound Fairfax Bridge and northbound Platte Purchase Bridge would be removed and a new, four-lane bridge would be built. There would be no substantial permanent linear impacts within the Missouri River; however, pier construction would displace approximately 0.29 acres of surface area within the OHWM of the river.

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b. Wetlands

No-Build Alternative

The No-Build Alternative does not include any construction activities. Therefore, the No-Build Alternative would not affect any potential jurisdictional wetlands.

Build Alternatives

Impact analysis to potential jurisdictional wetlands includes classification of wetland type based upon NWI mapping and windshield surveys and calculation of the extent of potential impacts. Each build alternative contains different impact amounts for Wetlands 1-3 as shown in Figures 2-4. Wetland impacts for each alternative are summarized in Table 1-3. Impact assessments are preliminary prior to formal field delineation. Formal delineation and descriptions of potential jurisdictional wetlands will be presented in the Waters of the U.S. and Preliminary Jurisdictional Determination Report upon determination of the Preferred Alternative. The USACE will make a final determination of jurisdictional wetlands prior to the Final EA.

Build Options 3A and 3B

Build Option 3A – Removal of both bridges and construction of a new four-lane bridge upstream with a realignment of Argosy Parkway would impact 4.73 acres of PFO Wetland # 1, 0.35 acre of PFO Wetland # 2, and 0.90 acre of PEM Wetland # 3. The 0.35 acre of impact to Wetland # 2 results from the realignment of Argosy Parkway.

Build Option 3B1 – Removal of both bridges and construction of a new four-lane bridge along the existing alignment would impact 3.76 acre of PFO Wetland # 1 and 0.56 acre of PEM Wetland # 3.

Build Option 3B2 – Removal of both bridges and construction of a new four-lane bridge along the existing alignment with a realignment of Argosy Parkway would impact 4.73 acres of PFO Wetland # 1, 0.35 acre of PFO Wetland # 2, and 0.90 acre of PEM Wetland # 3. The 0.35 acre of impact to Wetland # 2 results from the realignment of Argosy Parkway.

Table 3: Preliminary Wetland and Waters of the U.S. Impacts

	Streams			Wetlands (by type)	
	Type	Length (L.F.)	Surface Area (acres)	PFO (acres)	PEM (acres)
No-Build Alternative	Perennial	0	0	0	0
Alt 3 - Build Option 3A	Perennial	0	0.29	5.08*	0.90
Alt 3 - Build Option 3B1	Perennial	0	0.29	3.76	.56
Alt 3 - Build Option 3B2	Perennial	0	0.29	5.08*	0.90

*0.35 acre of the impact total results from the realignment of Argosy Parkway

With regard to impacts to potential jurisdictional WOUS, the No-Build Alternative would result in the least amount of permanent impacts to potential jurisdictional waters. Of the Build Alternatives, Alternative 3B1 would likely result in the fewest impacts to potential jurisdictional WOUS and would therefore be the preferred alternative.

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c. Mitigation

The recommended mitigation action for all Section 404 Permits is avoidance. However, if total avoidance is not practicable for the Preferred Alternative, then compensatory mitigation may be required. During the Section 404 Permit process, MODOT will coordinate directly with the USACE, the EPA, and the MDNR to coordinate appropriate mitigation for any unavoidable impacts to jurisdictional WOUS.

Compensatory mitigation involves actions taken to offset unavoidable adverse impacts to wetlands, streams and other aquatic resources authorized by CWA section 404 permits and other DA permits. Compensatory mitigation can be carried out through restoration of a former aquatic resource, enhancement of an existing aquatic resource, creation of a new aquatic resource, or preservation of an existing aquatic resource. There are three mechanisms for providing compensatory mitigation: permittee-responsible compensatory mitigation, mitigation banks and in-lieu fee mitigation. In permittee-responsible mitigation, the permittee retains responsibility for ensuring that required compensation activities are completed and successful. Mitigation banks and in-lieu fee programs both involve off-site mitigation activities generally carried out by a third party, a mitigation bank sponsor, or in-lieu fee program sponsor. When a permittee's compensatory mitigation requirements are satisfied by a mitigation bank or in-lieu fee program, responsibility for satisfying compensatory mitigation requirements is passed from the permittee to the mitigation bank or in-lieu fee sponsor (USACE 33 CFR Parts 325 and 332).

2.1 Floodplains and Floodways

The National Flood Insurance Program (NFIP) was created in the National Flood Insurance Act (42 U.S.C. 4001-4129 and 44 CFR 59-77) of 1968 to provide previously unavailable flood insurance protection to property owners in flood-prone areas. As part of the NFIP the federal government makes flood insurance available to communities if they adopt a floodplain management ordinance to reduce flood risks to new construction in special flood hazard areas. The Mitigation Division within the Federal Emergency Management Agency (FEMA) manages the NFIP and oversees the mapping components of the program. In accordance with the FEMA mapping guidelines and specifications many communities have performed flood insurance studies (FIS) and produced Flood Insurance Rate Maps (FIRM) which delineate special flood hazard areas including floodplains and floodways.

FEMA and Federal Highway Administration (FHWA) guidelines (23 CFR 650) identify the base (100-year) flood as the flood having a one-percent probability of being equaled or exceeded in any given year. The base floodplain is the area of 100-year flood hazard within a county or community. The regulatory floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 100-year flood discharge can be conveyed without increasing the base flood elevation more than a specified amount. FEMA has mandated that projects can cause no rise in the regulatory floodway and no more than a one-foot cumulative rise for all projects where the base (100-year) flood elevation is given.

In the state of Missouri, the State Emergency Management Agency (SEMA) issues a floodplain development permit for any project located within a special flood hazard area. This permit requires a "No-Rise" certification. A "No-Rise" Certification is signed and sealed by an engineer licensed to practice in Missouri that a project will cause no rise in the regulatory floodway of a given flooding source. The project will not create any increase to the 100-year elevations on said flooding source at published cross-sections in the Flood

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Insurance Study for a given community and will not create any increase to the 100-year flood elevations at unpublished cross-sections in the vicinity of the proposed development.

In the state of Kansas, the Water Resources Division of the State Board of Agriculture (KDA) supports local governing bodies for floodplain management. Each agency has the regulatory authority to issue their own floodplain development permit which, like Missouri, requires a “No-Rise” Certification for construction within a flood hazard area.

As part of this study FIRMs were acquired for the Study Area. The Missouri River in the Study Area borders Platte County in Missouri and Wyandotte County in Kansas. On the Wyandotte County side the stream is mapped as Zone AE which means that the effective 100-year floodplain as well as the floodway are delineated for this side of the river. On the Platte County side of the river the river is mapped as Zone A, which means that only the 100-year floodplain is delineated. The flood maps associated with the Study Area are located in Figure 2-1. Base Flood Elevations (BFE) shown on the FIRM for Wyandotte County indicates a water surface elevation of 756 feet for the 100-year flood elevation. There are no SEMA flood buyout properties in the Study Area.

Executive Order 11988 – Floodplain Management, and DOT Order 5650.2 – Floodplain Management and Protection state that “Federal agencies are directed to avoid conducting, allowing, or supporting actions on the base floodplain unless the agency finds that the base floodplain is the only practicable alternative location.” The DOT Order states that any preferred alternative involving encroachment into the floodplain shall include documentation of the “only practicable alternative finding”. This documentation shall include a description of why the proposed alternative must be located in the floodplain, including all the alternatives and why the others are not practicable, and the statement must indicate that the action conforms to applicable state and/or local floodplain protection standards (as explained above).

The No-Build Alternative would have no impact on existing, or future floodplain/floodway as it does not alter the structures currently in those special hazard areas.

The Build Alternatives will have minimal impact on the existing floodplain and floodways as they would replace the existing bridges. The following table summarizes each option and quantifies their impacts to the base floodplain and floodway. The linear foot quantity summarizes the length of bridge that spans the floodplains, while the acreage measurement quantifies the area of the piers that will be located directly in the floodplains.

Table 4: 100-Year Floodplain and Floodway Encroachments

Alternatives	100-Year Floodplain Crossing (linear feet)	100-Year Floodplain (acres)	Floodway (acres)	Floodway Crossing (linear feet)
No Build	5700	0.18	0.07	1980
Alternative 3 – Build Option 3A	3300	0.28	0.14	990
Alternative 3 – Build Option 3B1	3000	0.28	0.14	990
Alternative 3 –Build Option 3B2	3300	0.28	0.14	990

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With all three of the Build Alternatives there will be an additional 0.10 acres of encroachment into the 100-year floodplain and an additional 0.07 acres of encroachment into the floodway due to the size and location of the proposed piers.

During construction the size and duration of temporary obstructions within the floodplains and floodway can be minimized by effective construction sequencing and construction methodology.

3.1 Water Quality

Surface Water

In the vicinity of the U.S. 69 Bridges the Missouri River is in the Missouri-Nishnabotha River Basin (HUC Unit # 10240011) and the Independence-Sugar Creek Subbasin. The Missouri River's use classification in this area is P, which is defined as "Streams that maintain permanent flow during drought conditions." (Missouri's Water Quality Standards - 10 CSR 20-7.031).

Authority for Missouri of the Missouri Clean Water Law (10 CSR 20-7) is the responsibility of the Department of Natural Resources' (MDNR) Water Protection Program. In order to legally discharge pollutants in Missouri, a National Pollutant Discharge Elimination System (NPDES) permit is required from MDNR, which sets limits on the amounts of pollutants allowable for point source discharge locations. For nonpoint source discharges such as construction sites or industrial runoff, a stormwater discharge permit is issued.

Section 303(d) of the federal Clean Water Act requires each state to identify waters not meeting water quality standards and for which adequate water pollution controls have not been required. Water quality standards protect such beneficial uses of water as whole body contact (such as swimming), maintaining fish and other aquatic life, and providing drinking water for people, livestock and wildlife. The 303(d) List helps state and federal agencies keep track of impaired waters not addressed by normal water pollution control programs.

The following table shows the EPA approved 2012, 303(d) listing of the Missouri River in the Study Area:

Table 5: 2012 EPA Approved 303(d) Listing for Study Area

Year	WBID	Water Body Name	Class	MDNR Proposed Impairment Size	MDNR Water Body Size	Size Units	Pollutant	Source	Impaired Uses	Other (Unimpaired) Uses	County Upstream/ Downstream
2010	226.0	Missouri R.	P	179.0	179	Mi.	Escherichia coli (W)	Source Unknown	SCR, WBC B	AQL, DWS, IND, IRR, LWW, WBC B, GEN	Atchison/ Jackson

As previously mentioned, the Missouri River is listed on the EPA 2012 Approved 303(d) and is considered impaired in the Study Area. The pollutant of concern in this stretch of the Missouri River is Escherichia coli (W). The portion of the Missouri River that is classified as impaired extends from Atchison County to the north, to the confluence with the Kansas River just south of the Study Area.

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The 303(d) list indicates that the beneficial uses for the Missouri River in the vicinity of the Study Area include: Whole Body Contact Recreation, Secondary Contact Recreation, Aquatic Life Protection, Drinking Water Supply, Industrial Uses, Irrigation, and Livestock and Wildlife Watering. The uses that are impaired are Secondary Contact Recreation and Whole Body Contact Recreation.

Bridge demolition projects generally require Clean Water Act Section 404 permits and 401 certifications from the U.S. Army Corps of Engineers (USACE) and the MDNR respectively. In addition, a Section 10 of the Harbors and Rivers Act of 1899 permit from the U.S. Coast Guard (USCG) may be required to demolish a bridge in navigable waters. These permits are required for any impacts to stream and/or wetlands. Depending on the amount of impact, mitigation for impacts may be required.

Groundwater

The Study Area is located within an Alluvial Aquifer. This is an unconfined aquifer located along the Missouri River. Predominant landuse within the area of the aquifer include industrial and agricultural uses. Generally groundwater flows toward the Missouri River which drains the alluvial aquifer. The USGS reports that vertical hydraulic conductivity in the Missouri River Alluvial Aquifer ranges from 0.002 to 0.152 meters per hour. Areas of vertical hydraulic conductivity between 0.023 and 0.043 meters per hour are most common. The geology in the floodplain area consists of Quaternary age alluvial deposits consisting of clay, silt, sand, gravel, cobbles, and boulders. These deposits lie atop shale, limestone and sandstone bedrock and form the alluvial aquifer.

Many towns including Kansas City (KS), St. Joseph, Independence, Columbia, and St. Charles, depend on alluvial aquifers for drinking water supply. However, there are no public water supply wells in the Study Area that could be affected during construction.

Impacts to Water Quality

Potential water quality impacts from the no-build alternative would be associated with operating (bridge runoff) and maintaining the existing bridge. The build alternatives' potential impacts to water quality would be associated with constructing, operating, and maintaining a new U.S. 69 bridge over the Missouri River.

Bridge construction at the river's edge makes it possible for soil to wash into the Missouri River. Over time, increased amounts of soil washed into the river can damage the river ecosystem by lowering oxygen levels and covering food sources and fish spawning areas. Soil and rock washed away around bridge piers can change the river bottom, affecting those species that use the bottom for food or habitat. Because construction projects disturb large areas of land, thus increasing the possibility of erosion, they have potential to cause environmental harm. The Clean Water Act (CWA) requires construction sites to put controls in place to prevent pollution from being discharged with stormwater into nearby waterways.

Without on-site pollution controls, sediment-laden runoff from construction sites could flow directly to the nearest waterway and degrade water quality. In addition, stormwater could pick up other pollutants such as concrete washout, paint, used oil, pesticides, solvents, or other debris and the polluted runoff could harm or kill fish and wildlife, degrade aquatic habitat, and affect drinking water quality.

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The Missouri Department of Natural Resources (MDNR) regulates the control of runoff from land disturbance and issues a permit for the work to MoDOT, although the contractor is responsible for complying with the permit conditions. To protect water quality and reduce impacts during and after construction, MoDOT will comply with MDNR's stormwater regulations (found at 10 CSR 20-6.010), which are intended to prevent soil from leaving the construction site. These regulations require erosion control measures to be put in place when land clearing begins on the project. In accordance with the National Pollutant Discharge Elimination System (NPDES) requirements of the CWA, MoDOT operates under the provisions of Missouri State Operating Permit No. MO-R 100xxx, effective May 31, 2012, a general permit issued for road construction projects statewide. This permit requires using erosion control measures and limits the amount of pollutants that can leave a job site.

MoDOT will implement its Pollution Prevention Plan to prevent or minimize adverse impacts to streams, water courses, lakes, ponds, or other water impoundments within and adjacent to the project area. This MDNR-approved plan is a component of MoDOT's five-year MDNR-issued stormwater permit and was designed to reduce suspended solids, turbidity, and downstream sedimentation that may degrade water quality and adversely impact aquatic life. The plan provides for temporary erosion and sediment control measures that will be included within construction contract specifications.

Erosion and sediment controls may include a combination of ditch checks, silt fence, berms, sediment basins, temporary and permanent seeding, slope drains, etc. MoDOT's best management practices for selecting and using these various measures relate to the topography and the type of work being done. Best management practices are generally applied when land disturbance activities include construction of ditches, slopes, and bridge slopes.

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APPENDIX E-3
Biological Resources and Threatened and Endangered Species Memorandum

**BIOLOGICAL RESOURCES AND THREATENED AND ENDANGERED SPECIES
MEMORANDUM**

Date: July 10, 2013
Subject: Biological Resources and Threatened and Endangered Species
From: U.S. 69 Bridges over the Missouri River EA Study Team
Bryan Gasper

The proposed Project is located within the Missouri Alluvial Plain Ecoregion (Chapman et. al 2002¹). This ecoregion includes low gradient streams leading to the Missouri River: loess soils along with mollisols, Kenyon, Flood, and Cycle soils, agricultural lands, forested areas of various successional age structure, and development. Historically the terrestrial areas included northern floodplain forest, oak forests, mixed hardwood forests, and wet prairies. Most of this ecoregion has been converted to cropland agriculture as a result of the productive soils leading to fragmented terrestrial habitats. The biological resources in the area considered within the U.S. 69 Bridge EA includes the previously disturbed areas located where bridge options adjoin the existing infrastructure, riverine or riparian habitat along the Missouri River, and the Missouri River.

1.1 Terrestrial and Aquatic Habitats

Much of the land adjacent to the proposed Project is previously disturbed, currently managed green open space, or industrial development. A total of approximately 109 acres is proposed to be disturbed for the Project. The current terrestrial and aquatic environment is partially a product of the current usage of the area, including the existing infrastructure. No unique or rare habitats have been documented from the Project area. A Burns & McDonnell environmental scientist conducted a windshield-level qualitative evaluation of the Project area in January 2013 to evaluate the dominant habitat types, plant species, extent of the riparian area, and observations of habitat usage by wildlife species.

The dominant vegetation in the Project area is managed sod-forming grasses such as fescue (*Festuca* spp.) and brome (*Brome* spp.). It can be assumed that numerous annual weed species are also present during the growing season in the open areas and woodlands. Woody species include eastern cottonwood (*Populus deltoides*), sycamore (*Plantanus occidentalis*), American elm (*Ulmus americana*), common hackberry (*Celtis occidentalis*), and black willow (*Salix nigra*), among others. Tree sizes ranged mostly from an approximated 2 inches in diameter at breast height (dbh) to individuals over 20 inches dbh. There were also individual larger representatives and a few snags in the riparian area. A tree species inventory categorizing the size classes has not been completed for this Project. Poison ivy (*Toxicodendron radicans*), Virginia creeper (*Parthenocissus quinquefolia*), and greenbrier species (*Smilax* spp.) were present in the understory and shrubby layers.

¹ Chapman, S.S., Omernik, J.M., Griffith, G.E., Schroeder, W.A., Nigh, T.A., and Wilton, T.F., 2002, Ecoregions of Iowa and Missouri (color poster with map, descriptive text, summary tables, and photographs): Reston, Virginia, U.S. Geological Survey (map scale 1:1,800,000).



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The Project area is within an industrial area along the Missouri River. As such, terrestrial wildlife is not relatively abundant with the exception of the potential for seasonal migrations and habitat usage by birds. During the period of observation, resident or over-wintering avian species were present including American crow (*Corvus brachyrhynchos*), American robin (*Turdus migratorius*), black-capped chickadee (*Poecile atricapillus*), European starling (*Sturnus vulgaris*), northern cardinal (*Cardinalis cardinalis*), gull species (*Larus* spp.), rock dove (*Columba livia*), white-breasted nuthatch (*Sitta carolinensis*), and red-tailed hawk (*Buteo jamaicensis*). Various waterfowl and other migratory avian species may use the waterway or riparian area seasonally. Mammal species including white-tailed deer (*Odocoileus virginianus*), raccoon (*Procyon lotor*), fox squirrel (*Sciurus niger*), opossum (*Didelphis virginiana*), little brown bat (*Myotis lucifugus*), and various species of mice, voles, moles, and shrews are expected to occupy the proposed Project site. These species are typically tolerant of human disturbances and opportunistic, capable of adapting and occupying the margins of developments.

The Missouri River in the area of the Project is managed by the U.S. Army Corps of Engineers within the Lower Missouri River and channelized for navigation and flood control. There are no backwaters, tributaries, or other smaller or slower waterbodies adjoining the Missouri River within the Project area. High current velocities, sediment loads, and relatively little fluctuation in the river level, except during flood events, is common for this reach of the Missouri River. Species common to the Missouri River in this region include common carp (*Cyprinus carpio*), silver carp (*Hypophthalmichthys molitrix*), river carpsucker (*Carpoides carpio*), bigmouth buffalo (*Ictiobus cyprinellus*), gizzard shad (*Dorosoma cepedianum*), emerald shiner (*Notropis atherinoides*), longnose gar (*Lepisosteus osseus*), green sunfish (*Lepomis cyanellus*), and flathead catfish (*Pylodictis olivaris*), among others (Pflieger 1997²). The in-water support structures for the existing bridges may provide some diversity of habitat in the Missouri River and, therefore, may be suitable for seasonal habitat for some fish species. The Project would replace or modify the piers and provide similar habitat to the existing.

The Project area includes existing bridges and the associated support structure including the piers, approaches, and intersections. There are limited wildlife and aquatic resources present in the Project area. Common wildlife species and fishes are likely to frequent the area. Densities of some wildlife species may be periodically or seasonally high such as rock doves. Displacement of species that are common to the area as well as adaptable by their life history strategies may occur as a result of the Project. The construction of the Project would require the removal of approximately 14 acres of forest habitat. However, the removal of this forest habitat would not result in a large reduction of overall forest habitat and would be the expansion of an existing open area. Therefore, impacts to wildlife are anticipated to be minimal and temporary. All construction activities for the Project, including in-water construction for new piers or modifications to existing structures, would be undertaken implementing the best management practices (BMPs) for construction, thereby minimizing construction impacts in the Missouri River. Fish habitat currently present would be modified or created to provide similar habitat with the construction of the new bridge. Noise and human activity during construction would result in the displacement of some wildlife or fish; however this location is an existing bridge with significant ambient

² Pflieger, W.L. 1997. The Fishes of Missouri. The Conservation Commission of Missouri. Jefferson City, Missouri. 372 pages.

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noise present. Construction and operation of the Project is not expected to result in considerable difference than what is present with the current bridge configuration including maintenance, de-icing activities, and potential contaminants released from vehicles using the bridge.

Protected Species Potentially Occurring Within the Study Area

Common Name	Scientific Name	Federal Listing	State Listing	
			MO	KS
Mammals				
Indiana bat	<i>Myotis sodalis</i>	E	E	NL
Birds				
Bald eagle	<i>Helianthus leucocephalus</i>	NL	SOC	NL
King rail	<i>Rallus elegans</i>	NL	E	NL
Fish				
Pallid sturgeon	<i>Scaphirhynchus albus</i>	E	E	E
Chestnut lamprey	<i>Ichthyomyzon castaneus</i>	NL	NL	T
Flathead chub	<i>Platygobio storeriana</i>	NL	E	T
Sicklefin chub	<i>Macrhybopsis meeki</i>	C	NL	E
Silver chub	<i>Macrhybopsis storeriana</i>	NL	NL	E
Silverband shiner	<i>Notropis shumardi</i>	NL	NL	T
Sturgeon chub	<i>Macrhybopsis gelida</i>	C	NL	T
Western silvery minnow	<i>Hybognathus argyritis</i>	NL	NL	T

C = Candidate E = Endangered T = Threatened NL = Not Listed SOC = Species of Concern

SOURCE: USFWS, MDC, and KDWP July 2013

1.2 Threatened and Endangered Species and Species of Concern

The USFWS has indicated that the habitat capable of supporting pallid sturgeon (*Scaphirhynchus albus*), listed as endangered under the ESA, may be present in the vicinity of the proposed project.^{3,4} Pallid sturgeon are a long-lived fish species that prefers large, silty rivers with diverse bottom habitat, depths, and velocities such as those created by braided streams, wing walls, and sand bars. The section of the Missouri River crossed by the study area generally includes river bottom habitat that is uniform and deep in the areas with consistent velocity.⁵ The river bottom around the existing bridge piers has been reinforced during maintenance activities to attempt to prevent significant scouring. Based on recently published data⁶; consultation with researchers studying sturgeon in the Missouri River with

³ USFWS. 2013. IPaC – Information, Planning, and Conservation System. <http://ecos.fws.gov/ipac/>

⁴ USFWS, 2013. USFWS Environmental Conservation Online System: Platte County, Missouri. http://ecos.fws.gov/tess_public/countySearch!speciesByCountyReport.action?fips=29165

⁵ Reuter, J.M., Jacobson, R.B., Elliot C.M., Johnson, H.E., III, and DeLonay, A.J. 2008. Hydraulic and substrate maps of reaches used by sturgeons (genus *Scaphirhynchus*) in the Lower Missouri River, 2005-07: U.S. Geological Survey Data Series 386, 442 p.

⁶ Ibid.

U.S. 69 Bridges Over the Missouri River EIS

MDC, USFWS, and the USGS⁷; and a query of the available MDC data⁸, sturgeon have been located in the Missouri River in the Kansas City area, but they have not selected habitat around the existing bridge infrastructure in the study area.

The Indiana bat (*Myotis sodalis*), listed as endangered under the ESA and by the MDC, may be present in the vicinity of the proposed project during the summer. Maternity colonies of Indiana bats have not been documented in the study area and the study area is not within the home range of a maternity colony, based on the currently available information. Indiana bats may use riparian areas along the Missouri River for summer roosting and foraging. Summer roosting areas require trees with a dbh greater than 5 inches (12.7 centimeters), have exfoliating bark, cracks, crevices, or other hollows, in addition to wetlands, interspersed non-forested habitat, and field edges. The nearest documented occurrence of Indiana bats is at least 70 miles from the project.⁹

Bald eagles are no longer listed as protected under the ESA; however, they are protected under the Bald and Golden Eagle Protection Act (BGEPA) (16 USC 668) and the Migratory Bird Treaty Act (MBTA) (16 USC 703). Bald eagles often prefer mature trees near large water bodies for foraging, roosting, and nesting. There are no known active, alternate, or inactive bald eagle nests within or near the study area. As part of the January 2013 windshield evaluation of the study area, no bald eagles or bald eagle nests were observed. The project vicinity is not a winter feeding and sheltering congregation area for wintering bald eagles. The study area is not currently a nesting location for this species.

Most bird species in the United States are also protected by the MBTA. The MBTA prohibits the taking, killing, possession, transportation, and importation of migratory birds, their eggs, parts, and nests. It is possible that barn swallows (*Hirundo rustica*), other swallow species, or similar species use the current bridges for nesting during the nesting season. The general restricted nesting season, applicable to barn swallows, is April 1 to July 31; however, birds could be nesting before or after this period as a result of individual variations and weather triggers on migration and nesting. Precautions would be implemented prior to initiating construction or demolition activities to determine if any nests are present.

⁷ Travnichek, V., Niswonger, D., and Delonay, A. 2013. Communication with Vince Travnichek (MDC), Darby Niswonger (MDC), and Aaron Delonay (USGS) regarding the Pallid Sturgeon Population Assessment Project in the Missouri and Kansas Rivers, 2005-2012 by Bryan Gasper (Burns & McDonnell).

⁸ MDC. 2013. Missouri Department of Conservation Heritage Database Inquiry by MoDOT July 2013.

⁹ Ibid.



U.S. Fish and Wildlife Service

Natural Resources of Concern

This resource list is to be used for planning purposes only — it is not an official species list.

Endangered Species Act species list information for your project is available online and listed below for the following FWS Field Offices:

KANSAS ECOLOGICAL SERVICES FIELD OFFICE
2609 ANDERSON AVENUE
MANHATTAN, KS 66502
(785) 539-3474

Endangered Species Act species list information for your project is NOT available online for the following FWS Field Offices:

COLUMBIA ECOLOGICAL SERVICES FIELD OFFICE
101 PARK DEVILLE
SUITE A
COLUMBIA, MO 65203
(573) 234-2132

Project Name:

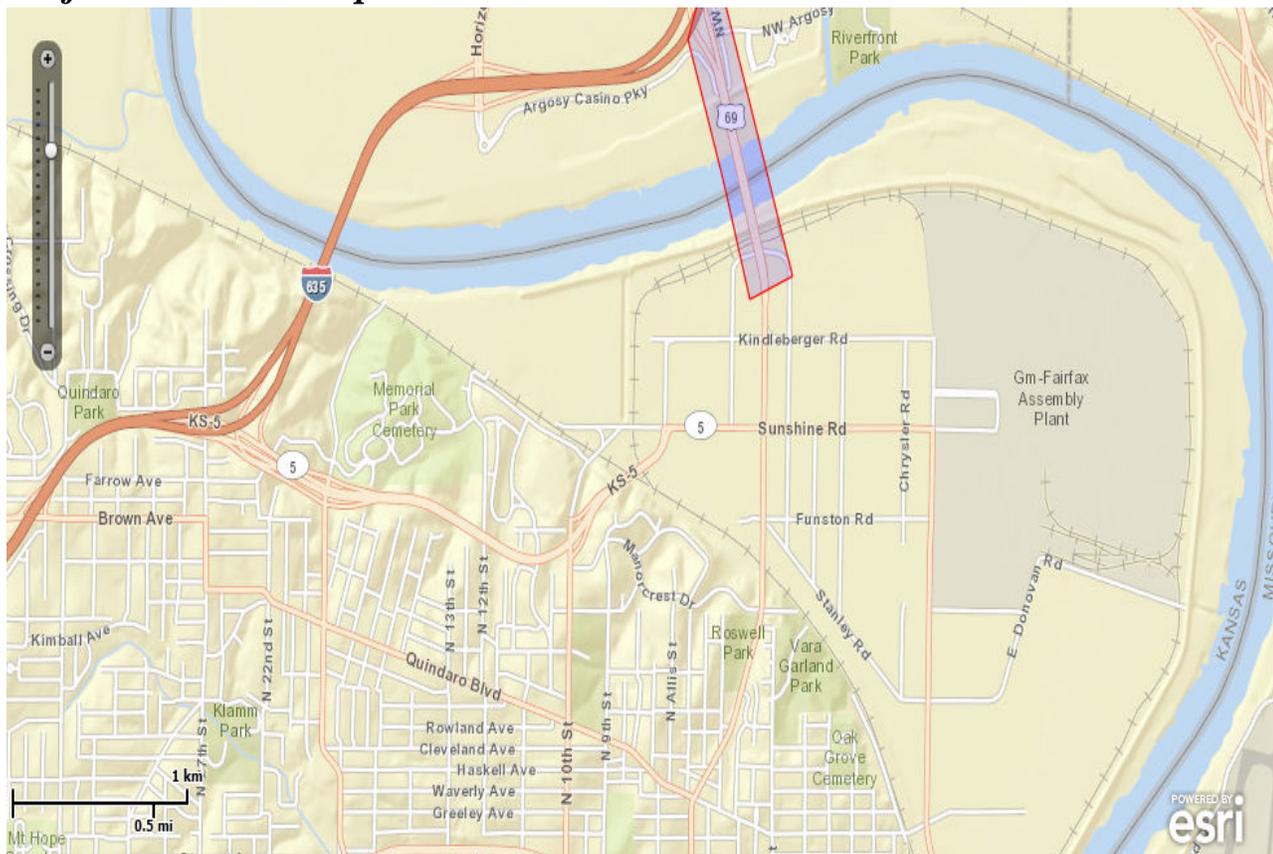
MODOT



U.S. Fish and Wildlife Service

Natural Resources of Concern

Project Location Map:



Project Counties:

Wyandotte, KS | Platte, MO

Geographic coordinates (Open Geospatial Consortium Well-Known Text, NAD83):

MULTIPOLYGON (((-94.6270192 39.1621619, -94.6257274 39.1650202, -94.62444 39.1633531, -94.6200626 39.1526446, -94.622895 39.1517128, -94.6246974 39.1565715, -94.6270192 39.1621619)))

Project Type:

Bridge Construction / Maintenance



Natural Resources of Concern

Endangered Species Act Species List ([USFWS Endangered Species Program](#))

There are a total of 1 threatened, endangered, or candidate species, and/or designated critical habitat on your species list. Species on this list are the species that may be affected by your project and could include species that exist in another geographic area. For example, certain fishes may appear on the species list because a project could cause downstream effects on the species. Please contact the designated FWS office if you have questions.

Species that may be affected by your project:

Fishes	Status	Species Profile	Contact
Pallid sturgeon (<i>Scaphirhynchus albus</i>) Population: Entire	Endangered	species info	Kansas Ecological Services Field Office

FWS National Wildlife Refuges ([USFWS National Wildlife Refuges Program](#))

There are no refuges found within the vicinity of your project.

FWS Migratory Birds ([USFWS Migratory Bird Program](#))

Most species of birds, including eagles and other raptors, are protected under the Migratory Bird Treaty Act (16 U.S.C. 703). Bald eagles and golden eagles receive additional protection under the [Bald and Golden Eagle Protection Act](#) (16 U.S.C. 668). The Service's [Birds of Conservation Concern \(2008\)](#) report identifies species, subspecies, and populations of all migratory nongame birds that, without additional conservation actions, are likely to become listed under the Endangered Species Act as amended (16 U.S.C 1531 et seq.).

NWI Wetlands ([USFWS National Wetlands Inventory](#))

The U.S. Fish and Wildlife Service is the principal Federal agency that provides information on the extent and status of wetlands in the U.S., via the National Wetlands Inventory Program (NWI). In addition to impacts to wetlands within your immediate project area, wetlands outside of your project area may need to be considered in any evaluation of project impacts, due to the hydrologic nature of wetlands (for example, project activities may affect local hydrology within, and outside of, your immediate project area). It may be helpful to refer to the USFWS National Wetland Inventory website. The designated FWS office can also assist you. Impacts to wetlands and other aquatic habitats from your project may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal Statutes. Project Proponents should discuss the relationship of these



U.S. Fish and Wildlife Service

Natural Resources of Concern

requirements to their project with the Regulatory Program of the appropriate [U.S. Army Corps of Engineers District](#).

Gasper, Bryan R.

From: Gasper, Bryan R.
Sent: Thursday, February 28, 2013 9:11 AM
To: Cannon-Mackey, Shari
Subject: FW: Pallid sturgeon - KC MO River

FYI. Ironically getting a response today. I will revise the language accordingly.

Bryan Gasper

Sr. Env. Scientist/Wildlife Biologist
Direct: 816-349-6770
Mobile: 816-351-5885

From: Darby Niswonger [<mailto:Darby.Niswonger@mdc.mo.gov>]
Sent: Thursday, February 28, 2013 9:08 AM
To: Gasper, Bryan R.
Cc: Vince Travnichek; Kyle Winders; Kasey Whiteman
Subject: RE: Pallid sturgeon - KC MO River

Bryan,

I work for Vince on the Pallid Sturgeon Population Assessment project, running from around Rulo, NE to Brunswick, MO (RM 500-250), and also the Kansas River up to Lawrence (RM 52). Honestly, we try to stay away from bridges as much as possible when we are sampling due to bad experiences getting our nets caught in metal, concrete slabs, and all the other junk that is in the water around bridges. However, we have a 'pilings' habitat code we use if when we do sample around pilings, which may include bridge pilings or old dike pilings. We have not captured any pallid sturgeon in one of these sets, but have captured shovelnose sturgeon around pilings. This is not surprising given the large number of shovelnose sturgeon that are in the river; they are essentially everywhere we drop our nets.

I looked at catches of shovelnose sturgeon in the KC region, and the closest capture was in the Kansas River. These were at the bridges at river mile 7 (I-635) and 9.2 (Kansas Avenue). These were captured in June and October.

Vince indicated that he would forward you message on to Aaron Delonay, who uses telemetry to track pallid sturgeon. He should have a better idea on their use of bridge pilings.

Take care,

Darby Niswonger
Resource Staff Scientist
Missouri Department of Conservation
Missouri River Field Station
15302 LIV 2386
Chillicothe MO 64601
Office 660.646.3140 ext 248
Cell 816.390.5434



Western Ecology Division

You are here: [EPA Home](#) [Western Ecology Division \(WED\)](#) [About WED](#) [Models, Software, Data Sets](#) [Ecoregions](#)

Ecoregions of Iowa and Missouri

[Introductory text](#)

[Literature cited](#)

[Authors](#)

Downloads

(NOTE: maps and GIS files may differ. To make sure you are using the most current ecoregion data, download shapefiles of ecoregions)

GIS data (shapefiles, metadata and symbology):

Iowa

[Iowa Level III Shapefile \(264 kb\)](#)

[Iowa Level III Metadata and Iowa Level III Symbology](#)

[Iowa Level IV Shapefile \(951 kb\)](#)

[Iowa Level IV Metadata and Iowa Level IV Symbology](#)

Missouri

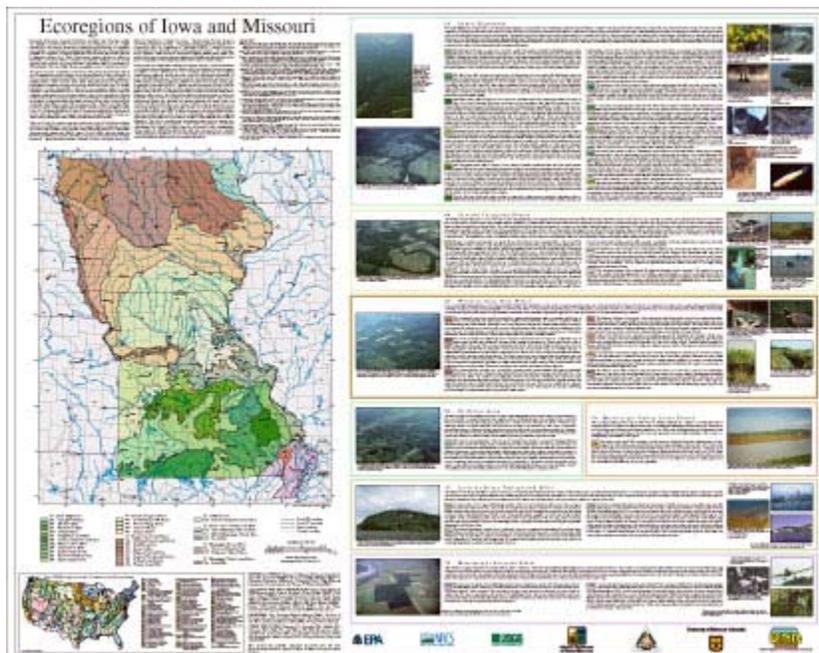
[Missouri Level III Shapefile \(549 kb\)](#)

[Missouri Level III Metadata and Missouri Level III Symbology](#)

[Missouri Level IV Shapefile \(898 kb\)](#)

[Missouri Level IV Metadata and Missouri Level IV Symbology](#)

[Instructions for applying symbology to ecoregions](#)



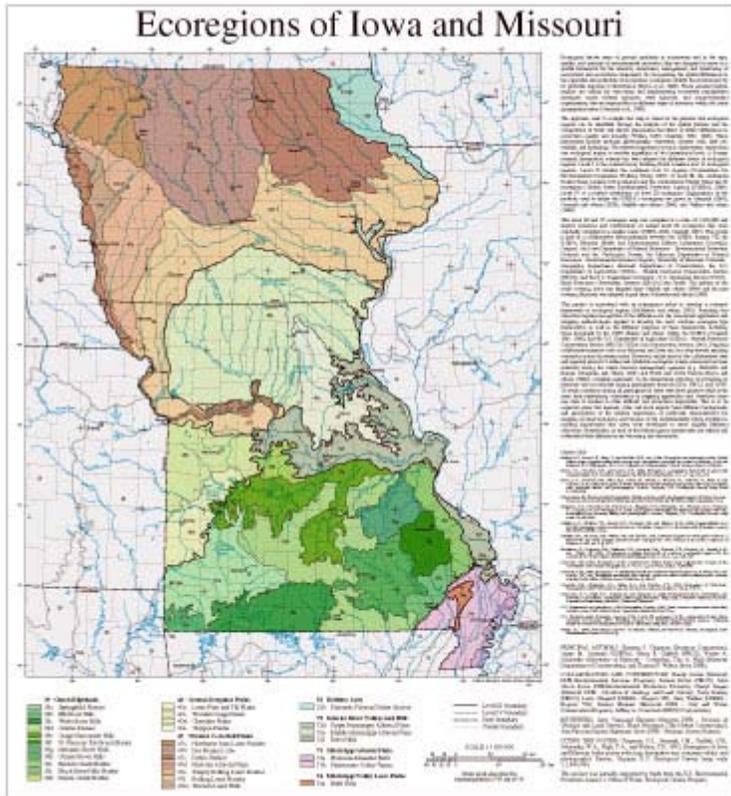
Map-- [available in PDF format:](#)

[Level IV Ecoregions of Iowa and Missouri-- poster **front** side 46" X 36" \(5.9 mb\)](#)

Summary Table: Characteristics of Ecoregions of Iowa and Missouri

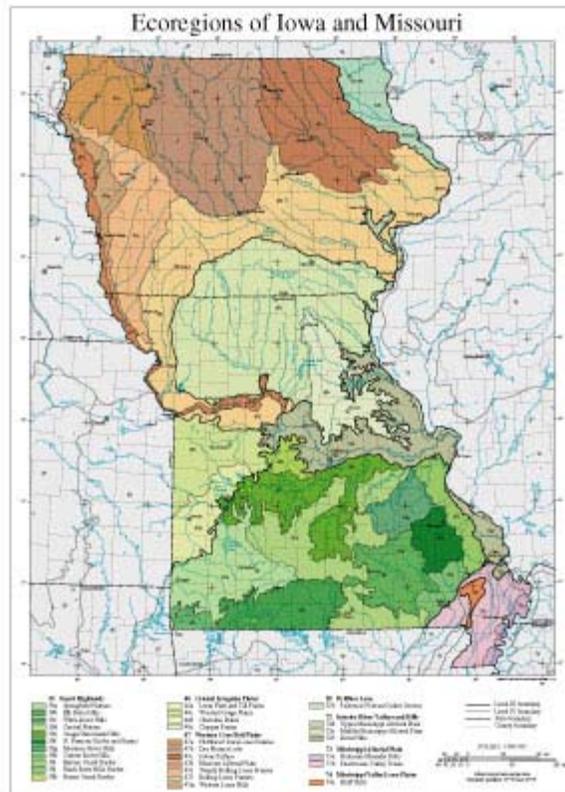
Map--

Level IV Ecoregions of Iowa and Missouri-- poster **back** side 46" X 36" (1.6 mb)



Map--

Level III and IV Ecoregions of Iowa and Missouri--24" X 27" (1.4 mb)



Map--

Level III and IV
Ecoregions of Iowa and
Missouri--page size
(1.1 mb)

Ecoregions denote areas of general similarity in ecosystems and in the type, quality, and quantity of environmental resources; they are designed to serve as a spatial framework for the research, assessment, management, and monitoring of ecosystems and ecosystem components. Ecoregions are directly applicable to the immediate needs of state agencies, including the development of biological criteria and water quality standards, and the establishment of management goals for nonpoint-source pollution. They are also relevant to integrated ecosystem management, an ultimate goal of most federal and state resource management agencies.

The approach used to compile this map is based on the premise that ecological regions can be identified through the analysis of the patterns of biotic and abiotic phenomena that reflect differences in ecosystem quality and integrity (Wiken, 1986; Omernik, 1987, 1995). These phenomena include geology, physiography, vegetation, climate, soils, land use, wildlife, and hydrology. The relative importance of each characteristic varies from one ecological region to another regardless of the hierarchical level. A Roman numeral hierarchical scheme has been adopted for different levels of ecological regions. Level I and level II divide the North American continent into 15 and 52 regions, respectively (Commission for Environmental Cooperation Working Group 1997). At level III, the continental United States contains 104 regions (United States Environmental Protection Agency [US EPA], 2000). However, depending on the objectives of a particular project, ecoregions may be aggregated within levels of the hierarchy for data analysis and interpretation. Explanations of the methods used to define the US EPA's ecoregions are given in Omernik (1995), Griffith and others (1994), and Gallant and others (1989).

This level III and IV ecoregion map was compiled at a 1:250,000-scale; it depicts revisions and subdivisions of earlier level III ecoregions that were originally compiled at a smaller scale (US EPA, 2000; Omernik, 1987). This poster is the product of a collaborative effort primarily between the US EPA Region VII, the US EPA National Health and Environmental Effects Research Laboratory (Corvallis, Oregon), the Missouri Department of Environmental Quality

(NDEQ), the Missouri Game and Parks Commission (NGPC), the Iowa Biological Survey (KBS), the Iowa Geological Survey (KGS), the Iowa Department of Health and Environment, Division of Environment (KDHE), Iowa Department of Wildlife and Parks (KDWP), the United States Department of Agriculture - Natural Resources Conservation Service (NRCS) (formerly the Soil Conservation Service), and the United States Department of the Interior - U.S. Geological Survey (USGS) - Earth Resources Observation Systems (EROS) Data Center.

This project is associated with an interagency effort to develop a common framework of ecological regions. Reaching that objective requires recognition of the differences in the conceptual approaches and mapping methodologies that have been used to develop the most commonly used existing ecoregion-type frameworks, including those developed by the USFS (United States Forest Service) (Bailey and others, 1994), the US EPA (Omernik, 1987, 1995), and the NRCS (United States Department of Agriculture - Soil Conservation Service, 1981). As each of these frameworks is further developed, the differences between them lessen. Regional collaborative projects such as this one in Missouri and Iowa, where agreement can be reached among multiple resource management agencies, is a step in the direction of attaining commonality and consistency in ecoregion frameworks for the entire nation.

Literature Cited:

Bailey, R.G., Avers, P.E., King, T., and McNab, W.H., eds., 1994, Ecoregions and subregions of the United States (map) (supplementary table of map unit descriptions compiled and edited by McNab, W.H. and Bailey, R.G.): Washington, D.C., U.S. Department of Agriculture - Forest Service, scale 1:7,500,000.

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Gallant, A.L., Whittier, T.R., Larsen, D.P., Omernik, J.M., and Hughes, R.M., 1989, Regionalization as a tool for managing environmental resources: Corvallis, Oregon, U.S. Environmental Protection Agency EPA/600/3-89/060, 152 p.

Griffith, G.E, Omernik, J.M., Wilton, T.F., and Pierson, S.M., 1994, Ecoregions and subregions of Iowa - a framework for water quality assessment and management: The Journal of the Iowa Academy of Science, v. 101, no. 1, p. 5-13.

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U.S. Department of Agriculture - Soil Conservation Service, 1981, Land resource regions and major land resource areas of the United States: Agriculture Handbook 296, 156 p.

U.S. Environmental Protection Agency, 2000, Level III ecoregions of the continental United States (revision of Omernik, 1987): Corvallis, Oregon, U.S. Environmental Protection Agency - National Health and Environmental Effects Research Laboratory Map M-1, various scales.

Wiken, E, 1986, Terrestrial ecozones of Canada: Ottawa, Environment Canada, Ecological Land Classification Series no. 19, 26 p.
http://www.epa.gov/wed/pages/ecoregions/moia_eco.htm
Last updated on Thursday, May 24, 2012

PRINCIPAL AUTHORS: Shannen S. Chapman (Dynamac Corporation), James M. Omernik (USEPA), Glenn E. Griffith (NRCS), Walter A. Schroeder (University of Missouri - Columbia), Tim A. Nigh (Missouri Department of Conservation), and Thomas F. Wilton (Iowa DNR).

COLLABORATORS AND CONTRIBUTORS: Randy Sarver (Missouri DNR-Environmental Services Program), Dennis Potter (NRCS), John Olson (Iowa DNR-Environmental Protection Division), Cheryl Seeger (Missouri DNR - Division of Geology and Land Survey), Terry Barney (NRCS), Larry Shepard (USEPA - Region VII), Gary Welker (USEPA -Region VII), Dennis Meinert (Missouri DNR - Soil and Water Conservation Program), Jeffrey A. Comstock (INDUS Corporation)

REVIEWERS Jerry Vineyard (Retired, Missouri DNR - Division of Geology and Land Survey), Blane Heumann (The Nature Conservancy), Jean Prior and James Giglierano (Iowa DNR - Geologic Survey Bureau).

This project was partially supported by funds from the U.S. Environmental Protection Agency's Office of Water, Biological Criteria Program.

CITING THIS POSTER: Chapman, S.S., Omernik, J.M., Griffith, G.E., Schroeder, W.A., Nigh, T.A., and Wilton, T.F., 2002, Ecoregions of Iowa and Missouri (color poster with map, descriptive text, summary tables, and photographs): Reston, Virginia, U.S. Geological Survey (map scale 1:1,800,000).

 **Please note:** In order to ensure cross platform compatibility (MAC v.s PC) and to provide you with downloadable and printable versions of the maps, the maps themselves are available for download in .pdf (portable document format) format. In order to be able to view and/or print the documents, you will need Adobe Acrobat Reader, a free download that can be found at <http://www.adobe.com/products/acrobat/readstep2.html> 



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July 5, 2013

Heather Whitlaw
Field Supervisor
U.S. Fish and Wildlife Service, Kansas Field Office
2609 Anderson Avenue
Manhattan, Kansas 66502

Dear Ms. Heather Whitlaw:

Subject: U.S. 69 Bridges over the Missouri River EA
Platte County, Missouri and Wyandotte County, Kansas
MoDOT Job No. J4P2279B
Inquiry Review Request for Protected Species and Habitats

On January 16, 2013, the Federal Highway Administration (FHWA), in cooperation with the Missouri Department of Transportation (MoDOT) and the Kansas Department of Transportation (KDOT), notified your agency of their intent to prepare an Environmental Assessment (EA) for replacement of the Fairfax and/or Platte Purchase Bridges on U.S. 69 spanning the Missouri River between Platte County, Missouri and Wyandotte County, Kansas (Project) (U.S. 69 Bridges EA). This crossing of the Missouri River between Platte County, Missouri and Wyandotte County, Kansas has been in place since 1935. It serves as an important link in the regional transportation network connecting developing businesses in Riverside, Missouri with industries in the Fairfax Industrial District in Kansas City, Kansas. It provides mobility and accessibility for the movement of goods and people that continue to support economic vitality in both states.

The purpose of this letter is to provide additional information regarding the location of the Project, as well as to request a review for impact assessment by the U.S. Fish and Wildlife Service (USFWS) under the Endangered Species Act (ESA) (16 U.S.C. 1531 *et seq.*), Bald and Golden Eagle Protection Act (BGEPA) (16 U.S.C. 668), and the Migratory Bird Treaty Act (MBTA) (16 U.S.C. 703).

Project Background

As a result of the structural condition of both bridges and the limitations their physical condition poses on serving current and forecast traffic demand, long-term maintenance and rehabilitation of either bridge is not considered feasible nor a reasonable expenditure of public money in order to keep the crossing operational. Therefore, in order to maintain the long-term viability of this river crossing, both bridges would be removed and replaced with a new four-lane bridge constructed to current design standards. The new bridge would include an off-travelway, barrier-separated bicycle/pedestrian facility providing connectivity to existing trail systems on both sides of the river. The study area, as depicted in Figure 1-1, extends from Kindleberger Road in Wyandotte County, Kansas north to I-635 in Platte County, Missouri.

Current land use within and adjacent to the study area consists of industrial and commercial development. The Fairfax Industrial District is located south of the river and Argosy Casino and the Riverside Horizons Development are located north of the river. Fairfax is zoned heavy industrial (M-3). Permitted uses in the M-3 zoning district include manufacturing, warehousing, repair services, storage yards, and other types of heavy industrial land uses. The area north of the river and in the city of Riverside is zoned General Planned Development – Industrial District (GP-I). The “GP” zoning district is intended to be a holding

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district until the property has been rezoned to a different district. The “I” zoning district is intended to accommodate basic manufacturing industries and related industrial activities. The study area also includes land adjacent to and on both side of the Missouri River that is maintained as flood control structures by the Riverside-Quindaro Bend Levee District along the north riverbank and the Fairfax Levee District along the south riverbank. The northern portion of the study area also includes existing right-of-way for I-635.

At least nine petroleum and communications companies operate utility lines that are attached to the existing bridges. These lines carry a variety of fuels, products, and cable/fiber optics that serve local, regional, and nationwide customers. The majority of these utility lines are located underground as they approach the levee and then are carried up and over the river along the bottom of each bridge. The utilities are allowed to attach to the bridges under permits issued by MoDOT. In addition to the pipelines, there are three pipeline regulating stations in close proximity to the existing bridges on both sides of the river. These regulating stations are connected to the utility lines located on both bridges.

Water Quality

Bridge construction-related impacts to water quality would be primarily the result of storm water runoff. Water quality impacts resulting from construction of the new bridge and removal of the existing bridges would be relatively short-term due to the nature of the construction process. Bridge construction at the river’s edge makes it possible for soil to wash into the Missouri River. Over time, increased amounts of sediment can damage the river ecosystem by lowering oxygen levels and covering food sources and fish spawning areas. Soil and rock washed away around bridge piers can change the river bottom, affecting those species that use the bottom for food or habitat. Without on-site pollution controls, sediment-laden runoff from construction sites could flow directly to the river and degrade water quality. In addition, storm water could pick up other pollutants such as concrete washout, paint, used oil, pesticides, solvents, or other debris potentially harming or killing fish and wildlife, degrading aquatic habitat, and affecting drinking water quality.

To protect water quality and reduce impacts during and after completion, construction of the new bridge shall be completed in conformance with Missouri State Operating Permit (MOR100) and Kansas Stormwater Runoff from Construction Activities General Permit. MoDOT will require the contractor to implement Best Management Practices (BMPs) to prevent erosion and provide sediment and storm water management during construction. These measures are described in Section 3.15. In accordance with the requirements of the NPDES program, the contractor will be required to develop a project-specific Storm Water Pollution Prevention Plan (SWPPP) to describe the BMPs to be implemented during construction. The SWPPP would include Missouri Department of Natural Resources- and Kansas Department of Health and Environment-approved components to reduce suspended solids, turbidity, and downstream sedimentation that may degrade water quality and adversely impact aquatic life. All of the build options would increase storm water runoff after construction as the area of impermeable pavement. There would be no change in the methods or compounds used to deice bridge and roadway surfaces in the study area once the project is completed. Use of these chemicals takes place primarily during wet seasons when the precipitation acts to reduce their concentration. No groundwater contamination is anticipated as a result of construction activities. Accidental spills of fuels or hazardous chemicals could occur during construction. The contractor will be required to minimize the potential for spills and accidental releases

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through development and implementation of spill prevention plans and responding quickly to spills when they occur.

Wetlands

Section 404 of the Clean Water Act authorizes the USACE to regulate impacts to wetlands and waters of the U.S. through a permitting process. Waters of the U.S. is an inclusive term that covers streams, rivers, wetlands, and other aquatic sites that are under the USACE's jurisdiction. If permanent impacts to wetlands are greater than one-tenth of an acre, mitigation is generally required as a part of Section 404 permit.

National Wetland Inventory mapped wetlands and other potential wetlands identified by windshield survey located within the study area are summarized in Table 1-1. MoDOT will complete field delineations and obtain jurisdictional determinations through coordination with the USACE Kansas City District prior to initiating final design. This information will be used to obtain a Section 404 Permit for the construction of the project.

Table 1-1: Wetland Inventory

Wetland Number	Location and Description	NWI Map Classification	Wetland Type	Approximate Wetland Area (ac) (within study area)
W-1	NWI-mapped forested area of 100 Year Floodplain north of and abutting the Missouri River Forested area within 100 Year Floodplain north of the	PF01A	PFO	8.33
W-2	Riverside-Quindaro Levee, west of U.S. 69, and south of Argosy Casino Parkway Depression dominated by grassy vegetation just south of	N/A	PFO	0.64
W-3	Harvester Road and east of U.S. 69 in Wyandotte County	N/A	PEM	1.01

SOURCE: URS Corporation, 2013

Protected Species

The ESA attempts to ensure that proposed activities do not jeopardize the continued existence of any threatened or endangered species or result in the destruction or adverse modification of species habitat. As provided in the ESA, the Fish and Wildlife Coordination Act, as amended, also applies to projects that affect water resources. The U.S. Fish and Wildlife Service (USFWS) administers both of these acts.

Much of the land within and adjacent to the study area is designated as transportation right-of-way, managed as open space for flood control purposes, or developed for industrial and commercial use. The presence and condition of existing terrestrial and aquatic habitats are a product of the current uses in the area. No unique or rare habitats have been documented within or adjacent to the study area. MoDOT conducted a windshield-level qualitative evaluation of the study area in January 2013 to identify the dominant habitat types, plant species, extent of the riparian area, and observations of habitat usage by

Heather Whitlaw
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wildlife species. Species observed during the windshield review are listed in Appendix F. Vegetation in the study area is dominated by managed grasses within public rights-of-way and wooded riparian areas along the Missouri River. Managed grassy areas are dominated by fescue (*Festuca* spp.) and brome (*Brome* spp.). There are numerous annual weed species are also present during the growing season in the open areas and woodlands. Because of the developed nature of the study area, terrestrial wildlife is not relatively abundant with the exception of seasonal migratory bird species. Various waterfowl and other migratory species may use the river and riparian habitats on a seasonal basis. Most common wildlife species are typically tolerant of human activity and disturbance and are capable of adapting and occupying developed areas.

There are no backwaters, tributaries, or other smaller or slower flowing waters adjoining or flowing into the Missouri River within or adjacent to the study area. High flow velocities, sediment loads, and relatively little fluctuation in the river level, except during flood and drought events, are common for this reach of the Missouri River. Debris and river bottom contour changes around the existing bridge piers may provide suitable seasonal habitat for a number of fish species.

The USFWS has indicated that the habitat capable of supporting pallid sturgeon (*Scaphirhynchus albus*), listed as endangered under the ESA, may be present in the vicinity of the proposed project^{1,2}. Pallid sturgeon are a long-lived fish species that prefers large, silty rivers with diverse bottom habitat, depths, and velocities such as those created by braided streams, wing walls, and sand bars. The section of the Missouri River crossed by the study area generally includes river bottom habitat that is uniform and deep in the areas with consistent velocity³. The river bottom around the existing bridge piers has been reinforced during maintenance activities to attempt to prevent significant scouring. The closest known location of a sturgeon during current research studies was a shovelnose sturgeon (*Scaphirhynchus platyrhynchus*) near river mile 362 on May 4, 2005³. Currently available resources and consultation with the Missouri Department of Conservation (MDC) indicated that no pallid sturgeons have been located during sampling and study efforts targeted for pallid sturgeon or shovelnose sturgeon in the vicinity of the existing bridge piers⁴.

The Indiana bat (*Myotis sodalis*) listed as endangered under the ESA and by the MDC, may be present in the vicinity of the proposed project during the summer. Maternity colonies of Indiana bats have not been documented in the study area and the study area is not within the home range of a maternity colony, based on the currently available information. Indiana bats may use riparian areas along the Missouri River for summer roosting and foraging. Summer roosting areas require trees with a diameter at breast height (dbh) greater than 5 inches (12.7 centimeters), have exfoliating bark, cracks, crevices, or other hollows, in

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addition to wetlands, interspersed non-forested habitat, and field edges⁵. The nearest documented occurrence of Indiana bats is at least 70 miles from the project⁶.

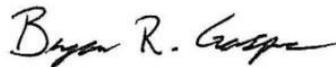
Bald eagles are no longer listed as protected under the ESA; however, they are protected under the BGEPA and the MBTA. Bald eagles often prefer mature trees near large water bodies for foraging, roosting, and nesting. There are no known active, alternate, or inactive bald eagle nests within or near the study area. As part of the January 2013 windshield evaluation of the study area, no bald eagles or bald eagle nests were observed. The project vicinity is not a winter feeding and sheltering congregation area for wintering bald eagles. The study area is not currently a nesting location for this species.

Most bird species in the United States are also protected by the MBTA. The MBTA prohibits the taking, killing, possession, transportation, and importation of migratory birds, their eggs, parts, and nests. It is possible that barn swallows (*Hirundo rustica*), other swallow species, or similar species use the current bridges for nesting during the nesting season. The general restricted nesting season for migratory birds is April 1 to July 31; however, birds could be nesting before or after this period as a result of individual variations and weather triggers on migration and nesting. Surveys of the trusses and supporting structures would be conducted prior to initiating construction or demolition activities to determine if any nests are present.

The Project requests a review for impact assessment by the USFWS under the ESA, BGEPA, and MBTA. A similar letter has been submitted to the USFWS-Missouri Ecological Services Office, MDC, and Kansas Department of Wildlife, Parks and Tourism (KDWP). You will be invited to review the EA at the time it is released for public review, which we anticipate will occur during 2013.

We look forward to your continued involvement in the project. If you have any questions or concerns regarding the declassification or the project in general, please contact Allan Zafft at Allan.Zafft@modot.mo.gov or (816) 607-2258.

Sincerely,



Bryan R. Gasper
Senior Environmental Scientist/Wildlife Biologist
Burns & McDonnell Engineering Company, Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-349-6770
bgasper@burnsmcd.com

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⁶ MDC. 2013. Missouri Department of Conservation Heritage Database Inquiry by Bree McMurray. 25 May 2013.

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July 5, 2013
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Copies: Kevin Ward, FHWA
Richard Moore,
Allan Zafft, MoDOT
Amy Salveter, USFWS-MO
Alan Leary, MDC
Field Supervisor, KDWPT



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Kansas Ecological Services Office
2609 Anderson Avenue
Manhattan, Kansas 66503-6172



August 21, 2013

Bryan R. Gaspar
Burns & McDonnell Engineering Co. Inc.
9400 Ward Parkway
Kansas City, MO 64114

RE: US 69 Bridge over Missouri River

Dear Mr. Gaspar;

This responds to your July 9, 2013 letter providing updated information relative to the proposed replacement of the U.S. Highway 69 bridges over the Missouri River between Platte County, Missouri and Wyandotte County, Kansas. As part of the NEPA evaluation process, you are requesting comment from the Fish and Wildlife Service pursuant to the Endangered Species Act, Bald and Golden Eagle Protection Act, and Migratory Bird Treaty Act. The following information is provided for your consideration.

You have indicated that very little suitable habitat for the endangered pallid sturgeon occurs at this point on the Missouri River. While that is likely true, river conditions are quite variable and habitat is created and/or lost with changes in river stage and elevation. This uncertainty, coupled with potential water quality effects of both construction and ongoing maintenance of the new bridges, leads us to conclude that this species should still be considered for possible impacts in your assessment.

No bald eagle nesting is currently known to occur at this location on the river, but eagles use areas of suitable tall trees along much of the river's length. If no large trees will be affected, there is little opportunity to impact this species. Takings of other species of protected migratory birds should be avoided as long as no active nests are removed or disturbed, as indicated in your letter.

Please refer back to recommendations made in our December 13, 2012 letter to Mr. Allen Zafft of the Missouri Department of Transportation (copy enclosed). This list contains the primary issues the Service believes should be addressed in a NEPA assessment.

Sincerely,

Heather Whitlaw
Field Supervisor

enclosure

cc: KDWPT, Pratt, KS (Ecological Services)



July 5, 2013

Amy Salveter
Field Supervisor
U.S. Fish and Wildlife Service, Missouri Field Office
101 Park DeVillie Drive, Suite A
Columbia, Missouri 65203

Dear Ms. Amy Salveter:

Subject: U.S. 69 Bridges over the Missouri River EA
Platte County, Missouri and Wyandotte County, Kansas
MoDOT Job No. J4P2279B
Inquiry Review Request for Protected Species and Habitats

On January 16, 2013, the Federal Highway Administration (FHWA), in cooperation with the Missouri Department of Transportation (MoDOT) and the Kansas Department of Transportation (KDOT), notified your agency of their intent to prepare an Environmental Assessment (EA) for replacement of the Fairfax and/or Platte Purchase Bridges on U.S. 69 spanning the Missouri River between Platte County, Missouri and Wyandotte County, Kansas (Project) (U.S. 69 Bridges EA). This crossing of the Missouri River between Platte County, Missouri and Wyandotte County, Kansas has been in place since 1935. It serves as an important link in the regional transportation network connecting developing businesses in Riverside, Missouri with industries in the Fairfax Industrial District in Kansas City, Kansas. It provides mobility and accessibility for the movement of goods and people that continue to support economic vitality in both states.

The purpose of this letter is to provide additional information regarding the location of the Project, as well as to request a review for impact assessment by the U.S. Fish and Wildlife Service (USFWS) under the Endangered Species Act (ESA) (16 U.S.C. 1531 *et seq.*), Bald and Golden Eagle Protection Act (BGEPA) (16 U.S.C. 668), and the Migratory Bird Treaty Act (MBTA) (16 U.S.C. 703).

Project Background

As a result of the structural condition of both bridges and the limitations their physical condition poses on serving current and forecast traffic demand, long-term maintenance and rehabilitation of either bridge is not considered feasible nor a reasonable expenditure of public money in order to keep the crossing operational. Therefore, in order to maintain the long-term viability of this river crossing, both bridges would be removed and replaced with a new four-lane bridge constructed to current design standards. The new bridge would include an off-travelway, barrier-separated bicycle/pedestrian facility providing connectivity to existing trail systems on both sides of the river. The study area, as depicted in Figure 1-1, extends from Kindleberger Road in Wyandotte County, Kansas north to I-635 in Platte County, Missouri.

Current land use within and adjacent to the study area consists of industrial and commercial development. The Fairfax Industrial District is located south of the river and Argosy Casino and the Riverside Horizons Development are located north of the river. Fairfax is zoned heavy industrial (M-3). Permitted uses in the M-3 zoning district include manufacturing, warehousing, repair services, storage yards, and other types of heavy industrial land uses. The area north of the river and in the city of Riverside is zoned General Planned Development – Industrial District (GP-I). The “GP” zoning district is intended to be a holding

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district until the property has been rezoned to a different district. The “I” zoning district is intended to accommodate basic manufacturing industries and related industrial activities. The study area also includes land adjacent to and on both side of the Missouri River that is maintained as flood control structures by the Riverside-Quindaro Bend Levee District along the north riverbank and the Fairfax Levee District along the south riverbank. The northern portion of the study area also includes existing right-of-way for I-635.

At least nine petroleum and communications companies operate utility lines that are attached to the existing bridges. These lines carry a variety of fuels, products, and cable/fiber optics that serve local, regional, and nationwide customers. The majority of these utility lines are located underground as they approach the levee and then are carried up and over the river along the bottom of each bridge. The utilities are allowed to attach to the bridges under permits issued by MoDOT. In addition to the pipelines, there are three pipeline regulating stations in close proximity to the existing bridges on both sides of the river. These regulating stations are connected to the utility lines located on both bridges.

Water Quality

Bridge construction-related impacts to water quality would be primarily the result of storm water runoff. Water quality impacts resulting from construction of the new bridge and removal of the existing bridges would be relatively short-term due to the nature of the construction process. Bridge construction at the river’s edge makes it possible for soil to wash into the Missouri River. Over time, increased amounts of sediment can damage the river ecosystem by lowering oxygen levels and covering food sources and fish spawning areas. Soil and rock washed away around bridge piers can change the river bottom, affecting those species that use the bottom for food or habitat. Without on-site pollution controls, sediment-laden runoff from construction sites could flow directly to the river and degrade water quality. In addition, storm water could pick up other pollutants such as concrete washout, paint, used oil, pesticides, solvents, or other debris potentially harming or killing fish and wildlife, degrading aquatic habitat, and affecting drinking water quality.

To protect water quality and reduce impacts during and after completion, construction of the new bridge shall be completed in conformance with Missouri State Operating Permit (MOR100) and Kansas Stormwater Runoff from Construction Activities General Permit. MoDOT will require the contractor to implement Best Management Practices (BMPs) to prevent erosion and provide sediment and storm water management during construction. These measures are described in Section 3.15. In accordance with the requirements of the NPDES program, the contractor will be required to develop a project-specific Storm Water Pollution Prevention Plan (SWPPP) to describe the BMPs to be implemented during construction. The SWPPP would include Missouri Department of Natural Resources- and Kansas Department of Health and Environment-approved components to reduce suspended solids, turbidity, and downstream sedimentation that may degrade water quality and adversely impact aquatic life. All of the build options would increase storm water runoff after construction as the area of impermeable pavement. There would be no change in the methods or compounds used to deice bridge and roadway surfaces in the study area once the project is completed. Use of these chemicals takes place primarily during wet seasons when the precipitation acts to reduce their concentration. No groundwater contamination is anticipated as a result of construction activities. Accidental spills of fuels or hazardous chemicals could occur during construction. The contractor will be required to minimize the potential for spills and accidental releases

Ms. Amy Salveter
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through development and implementation of spill prevention plans and responding quickly to spills when they occur.

Wetlands

Section 404 of the Clean Water Act authorizes the USACE to regulate impacts to wetlands and waters of the U.S. through a permitting process. Waters of the U.S. is an inclusive term that covers streams, rivers, wetlands, and other aquatic sites that are under the USACE's jurisdiction. If permanent impacts to wetlands are greater than one-tenth of an acre, mitigation is generally required as a part of Section 404 permit.

National Wetland Inventory mapped wetlands and other potential wetlands identified by windshield survey located within the study area are summarized in Table 1-1. MoDOT will complete field delineations and obtain jurisdictional determinations through coordination with the USACE Kansas City District prior to initiating final design. This information will be used to obtain a Section 404 Permit for the construction of the project.

Table 1-1: Wetland Inventory

Wetland Number	Location and Description	NWI Map Classification	Wetland Type	Approximate Wetland Area (ac) (within study area)
W-1	NWI-mapped forested area of 100 Year Floodplain north of and abutting the Missouri River	PF01A	PFO	8.33
W-2	Forested area within 100 Year Floodplain north of the Riverside-Quindaro Levee, west of U.S. 69, and south of Argosy Casino Parkway	N/A	PFO	0.64
W-3	Depression dominated by grassy vegetation just south of Harvester Road and east of U.S. 69 in Wyandotte County	N/A	PEM	1.01

SOURCE: URS Corporation, 2013

Protected Species

The ESA attempts to ensure that proposed activities do not jeopardize the continued existence of any threatened or endangered species or result in the destruction or adverse modification of species habitat. As provided in the ESA, the Fish and Wildlife Coordination Act, as amended, also applies to projects that affect water resources. The U.S. Fish and Wildlife Service (USFWS) administers both of these acts.

Much of the land within and adjacent to the study area is designated as transportation right-of-way, managed as open space for flood control purposes, or developed for industrial and commercial use. The presence and condition of existing terrestrial and aquatic habitats are a product of the current uses in the area. No unique or rare habitats have been documented within or adjacent to the study area. MoDOT conducted a windshield-level qualitative evaluation of the study area in January 2013 to identify the dominant habitat types, plant species, extent of the riparian area, and observations of habitat usage by

Ms. Amy Salveter
July 5, 2013
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The USFWS has indicated that the habitat capable of supporting pallid sturgeon (*Scaphirhynchus albus*), listed as endangered under the ESA, may be present in the vicinity of the proposed project^{1,2}. Pallid sturgeon are a long-lived fish species that prefers large, silty rivers with diverse bottom habitat, depths, and velocities such as those created by braided streams, wing walls, and sand bars. The section of the Missouri River crossed by the study area generally includes river bottom habitat that is uniform and deep in the areas with consistent velocity³. The river bottom around the existing bridge piers has been reinforced during maintenance activities to attempt to prevent significant scouring. The closest known location of a sturgeon during current research studies was a shovelnose sturgeon (*Scaphirhynchus platyrhynchus*) near river mile 362 on May 4, 2005³. Currently available resources and consultation with the Missouri Department of Conservation (MDC) indicated that no pallid sturgeons have been located during sampling and study efforts targeted for pallid sturgeon or shovelnose sturgeon in the vicinity of the existing bridge piers⁴.

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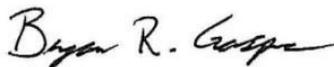
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July 5, 2013
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Copies: Kevin Ward, FHWA
Richard Moore,
Allan Zafft, MoDOT
Heather Whitlaw, USFWS-KS
Alan Leary, MDC
Field Supervisor, KDWPT



July 5, 2013

Alan Leary
Missouri Department of Conservation
2901 W Truman Boulevard
Jefferson City, Missouri 65109

Dear Mr. Alan Leary:

Subject: U.S. 69 Bridges over the Missouri River EA
Platte County, Missouri and Wyandotte County, Kansas
MoDOT Job No. J4P2279B
Inquiry Review Request for Protected Species and Habitats

On January 16, 2013, the Federal Highway Administration (FHWA), in cooperation with the Missouri Department of Transportation (MoDOT) and the Kansas Department of Transportation (KDOT), notified your agency of their intent to prepare an Environmental Assessment (EA) for replacement of the Fairfax and/or Platte Purchase Bridges on U.S. 69 spanning the Missouri River between Platte County, Missouri and Wyandotte County, Kansas (Project) (U.S. 69 Bridges EA). This crossing of the Missouri River between Platte County, Missouri and Wyandotte County, Kansas has been in place since 1935. It serves as an important link in the regional transportation network connecting developing businesses in Riverside, Missouri with industries in the Fairfax Industrial District in Kansas City, Kansas. It provides mobility and accessibility for the movement of goods and people that continue to support economic vitality in both states.

The purpose of this letter is to provide additional information regarding the location of the Project, as well as to request a review for impact assessment by the Missouri Department of Conservation (MDC) under the Missouri Endangered Species Law, Chapter 252, RSMo, and 3 CSR 10.

Project Background

As a result of the structural condition of both bridges and the limitations their physical condition poses on serving current and forecast traffic demand, long-term maintenance and rehabilitation of either bridge is not considered feasible nor a reasonable expenditure of public money in order to keep the crossing operational. Therefore, in order to maintain the long-term viability of this river crossing, both bridges would be removed and replaced with a new four-lane bridge constructed to current design standards. The new bridge would include an off-travelway, barrier-separated bicycle/pedestrian facility providing connectivity to existing trail systems on both sides of the river. The study area, as depicted in Figure 1-1, extends from Kindleberger Road in Wyandotte County, Kansas north to I-635 in Platte County, Missouri.

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W-3	Depression dominated by grassy vegetation just south of Harvester Road and east of U.S. 69 in Wyandotte County	N/A	PEM	1.01

SOURCE: URS Corporation, 2013

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Alan Leary
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along the Missouri River. Managed grassy areas are dominated by fescue (*Festuca* spp.) and brome (*Brome* spp.). There are numerous annual weed species are also present during the growing season in the open areas and woodlands. Because of the developed nature of the study area, terrestrial wildlife is not relatively abundant with the exception of seasonal migratory bird species. Various waterfowl and other migratory species may use the river and riparian habitats on a seasonal basis. Most common wildlife species are typically tolerant of human activity and disturbance and are capable of adapting and occupying developed areas.

There are no backwaters, tributaries, or other smaller or slower flowing waters adjoining or flowing into the Missouri River within or adjacent to the study area. High flow velocities, sediment loads, and relatively little fluctuation in the river level, except during flood and drought events, are common for this reach of the Missouri River. Debris and river bottom contour changes around the existing bridge piers may provide suitable seasonal habitat for a number of fish species.

The USFWS has indicated that the habitat capable of supporting pallid sturgeon (*Scaphirhynchus albus*), listed as endangered under the ESA, may be present in the vicinity of the proposed project^{1,2}. Pallid sturgeon are a long-lived fish species that prefers large, silty rivers with diverse bottom habitat, depths, and velocities such as those created by braided streams, wing walls, and sand bars. The section of the Missouri River crossed by the study area generally includes river bottom habitat that is uniform and deep in the areas with consistent velocity³. The river bottom around the existing bridge piers has been reinforced during maintenance activities to attempt to prevent significant scouring. The closest known location of a sturgeon during current research studies was a shovelnose sturgeon (*Scaphirhynchus platyrhynchus*) near river mile 362 on May 4, 2005³. Currently available resources and consultation with MDC indicated that no pallid sturgeons have been located during sampling and study efforts targeted for pallid sturgeon or shovelnose sturgeon in the vicinity of the existing bridge piers⁴.

The Indiana bat (*Myotis sodalis*) listed as endangered under the ESA and by the MDC, may be present in the vicinity of the proposed project during the summer. Maternity colonies of Indiana bats have not been documented in the study area and the study area is not within the home range of a maternity colony, based on the currently available information. Indiana bats may use riparian areas along the Missouri River for summer roosting and foraging. Summer roosting areas require trees with a diameter at breast height (dbh) greater than 5 inches (12.7 centimeters), have exfoliating bark, cracks, crevices, or other hollows, in

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Alan Leary
July 5, 2013
Page 5

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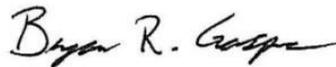
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Most bird species in the United States are also protected by the MBTA. The MBTA prohibits the taking, killing, possession, transportation, and importation of migratory birds, their eggs, parts, and nests. It is possible that barn swallows (*Hirundo rustica*), other swallow species, or similar species use the current bridges for nesting during the nesting season. The general restricted nesting season for migratory birds is April 1 to July 31; however, birds could be nesting before or after this period as a result of individual variations and weather triggers on migration and nesting. Surveys of the trusses and supporting structures would be conducted prior to initiating construction or demolition activities to determine if any nests are present.

The Project requests a review for impact assessment by the MDC under the Missouri Endangered Species Law, Chapter 252, RSMo, and 3 CSR 10. A similar letter has been submitted to the USFWS-Missouri Ecological Services Office, USFWS-Kansas Ecological Services Office, and KDWPT. You will be invited to review the EA at the time it is released for public review, which we anticipate will occur during 2013.

We look forward to your continued involvement in the project. If you have any questions or concerns regarding the declassification or the project in general, please contact Allan Zafft at Allan.Zafft@modot.mo.gov or (816) 607-2258.

Sincerely,



Bryan R. Gasper
Senior Environmental Scientist/Wildlife Biologist
Burns & McDonnell Engineering Company, Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-349-6770
bgasper@burnsmcd.com

⁵ USFWS. 2013. 2013 Revised Range-Wide Indiana Bat Summer Survey Guidelines: May 2013. 40 p.

⁶ MDC. 2013. Missouri Department of Conservation Heritage Database Inquiry by Bree McMurray. 25 May 2013.

Alan Leary
July 5, 2013
Page 6

Copies: Kevin Ward, FHWA
Richard Moore,
Allan Zafft, MoDOT
Amy Salveter, USFWS-MO
Heather Whitlaw, USFWS-KS
Field Supervisor, KDWPT

Cannon-Mackey, Shari

From: Gasper, Bryan R.
Sent: Monday, July 22, 2013 11:15 AM
To: Cannon-Mackey, Shari
Subject: Fwd: U.S. 69 bridges over the Missouri River EA
Attachments: BMP's for work in Streams.pdf; ATT00001.htm

Sent from my iPhone.

Begin forwarded message:

From: Alan Leary <Alan.Leary@mdc.mo.gov>
Date: July 22, 2013, 11:14:28 AM CDT
To: "Gasper, Bryan R." <bgasper@burnsmcd.com>
Cc: ""allan.zafft@modot.mo.gov"" <allan.zafft@modot.mo.gov>, ""Matthew.Burcham@modot.mo.gov"" <Matthew.Burcham@modot.mo.gov>, ""Bree.McMurray@modot.mo.gov"" <Bree.McMurray@modot.mo.gov>, Alan Leary <Alan.Leary@mdc.mo.gov>
Subject: U.S. 69 bridges over the Missouri River EA

Mr. Gasper,

I received your request for comments on the proposed project on the U.S. 69 bridges over the Missouri River in Platte County, MO and Wyandotte County, KS.

The Missouri Department of Conservation (Department) is the agency responsible for fish, forest and wildlife resources in Missouri. As such, we actively participate in project review when projects might affect those resources. Our comments and recommendations are for your consideration and are offered to reduce impacts to the fish, forest and wildlife resources in the project area.

In the letter you sent to me requesting the Department's review of the project you addressed the potential for pallid sturgeon, Indiana bats, bald eagles, and other migratory birds to occur in the project area. The project proponents should consult with the U.S. Fish and Wildlife Service to determine what measures should be implemented to avoid impacts to these species. Besides these species there a number of other state endangered and state species of concern that have been observed within 2 miles of the study area. These include; flathead chub, western silvery minnow, plains minnow, and the sturgeon chub and should be considered during development of the project.

In addition, the Department requests that the contractor implement measures to prevent the spread of invasive exotic species. We also request that the contractor implement Management Recommendations for Construction Projects Affecting Missouri Streams and Rivers (attached).

Please let me know if you have questions regarding these comments or need additional information.

Sincerely,

Alan W. Leary

Alan Leary, CWB
Policy Coordinator
Missouri Department of Conservation
573-522-4115 ext. 3346



Introduction

The streams and rivers of Missouri support a wide and diverse community of wildlife that includes many species of mammals, birds, fishes, mussels, crayfish, and insects. The continued diversity and health of this community is dependent upon how well Missourians manage and protect this resource. While water quality is essential, maintaining a diverse array of habitat features also is essential for aquatic wildlife to persist. Since implementation of the Clean Water Act, point source pollution has been greatly reduced, but polluted and sediment-laden runoff (non-point source) from rural and urban development is still a serious problem.

There are management practices that can be implemented to prevent degradation of our streams and rivers. By adapting these best management practices we can prevent the loss of species diversity and maintain the quality of our lives as well. Preventative measures may require extra effort initially, but they provide long-term dividends by eliminating costly damage resulting from poor management practices.

Access and Staging Area

Management Recommendations

Staging areas are those short- or long-term sites within a construction or development area where most equipment and materials are stored. These areas often are accessed frequently; and when fuel and oil are stored here, the potential for runoff and erosion in these areas may be high.

- Erosion and sediment controls should be installed and maintained to prevent discharge from the site.
- Staging areas for crew, equipment, and materials should be established well away from streams and rivers or highly erodible soils.
- Stationary fuel and oil storage containers should remain within a staging area or another confined area to avoid accidental spills into the stream systems.
- Excess concrete and wash water from trucks and other concrete mixing equipment should be disposed of where this material cannot enter the stream systems.
- If temporary roadways must be built, ensure that roadways are of low gradient with sufficient roadbed and storm water runoff drains and outlets. Containment basins, silt fences, filter strips, etc. should be included for retention of storm water runoff for reducing sediment introduction into natural waterways.

→ Avoid stream crossings. If unavoidable, temporary crossings should be used. Temporary crossings should not restrict or interrupt natural stream flow. If temporary in-channel fill is necessary, culverts of sufficient size should be employed to avoid water impoundment and allow for fish passage.

Riparian Corridor Management Recommendations

The riparian corridor is the vegetation adjacent to a stream or river. This area is critical to the health and quality of the aquatic environment because of its ability to slow and reduce sediment and chemical runoff into the stream or river channel. A riparian corridor with a minimum width of 100 feet from the edge of the stream or river should be maintained along both sides of streams and rivers.

- Limit clearing of vegetation, including both standing and downed timber, to that which is absolutely necessary for construction purposes.
- Heavy equipment use within the riparian corridor should be restricted to minimize vegetation destruction and compaction of soils. Flagging or fencing areas that are not to be disturbed is helpful in alerting construction personnel.
- General application of pesticides, herbicides, or fertilizers within the riparian corridor should be prohibited to avoid water contamination due to overspray or runoff. Fertilizer use or spot application of pesticides and herbicides is acceptable if appropriate non-restricted chemicals are used.
- Riparian areas located down slope of construction zones should be physically screened with sediment controls, such as silt fences or filter strips. Sediment controls should be monitored after rain and maintained for the duration of the project.
- All riparian corridors disturbed by the project should be revegetated immediately following or concurrent with project implementation. Appropriate native bottomland or riparian trees, shrubs, and grasses should be planted to ensure long-term stability in areas where the soil erosion threat is not critical. Annual non-native grasses such as rye or wheat may be planted in conjunction with native species to provide short-term erosion control. Areas judged to be subject to immediate soil loss due to steep slopes or other factors causing critical erosion conditions may be planted with non-native mixtures to assure rapid establishment and erosion control.

→ Post-construction evaluation of vegetation establishment should be conducted at one month intervals for at least three months after completion of the project. Any recommended sediment controls should be inspected at these times. If determined beneficial to soil stability and not adversely impacting site function and/or aesthetics, recommended sediment controls should remain permanent.

→ All temporary erosion and sediment controls should be removed (unless removal would cause further disturbance) and properly disposed of within 30 days after final site stabilization is achieved or after temporary practices are no longer needed.

Bank and Channel Management Recommendations

The structure of a bank is an important feature of a stream or river. It defines and provides stability for the channel.

→ Bank stability will vary depending on height, slope, and soil conditions. Project engineers and hydrologists should thoroughly investigate the physical properties and hydrologic record of the proposed site before construction begins.

→ Limit clearing of vegetation, including both standing and downed timber, to that which is absolutely necessary for construction purposes.

→ Projects in which bank alteration is necessary should employ, to the highest degree possible, erosion prevention measures before actual excavation activities begin. These preventative measures should be monitored regularly and maintained for the duration of the project.

→ Use of riprap for stream bank stabilization should be limited to those areas that could experience substantial erosion before adequate vegetation becomes established. The material for the rock blanket should consist of durable stone or broken concrete that is well graded. It is preferable that 40-60 percent of the material be as large as the thickness of the blanket, with enough smaller pieces of various sizes to fill the larger voids. It should not contain more than 10 percent of earth, sand, shale, and non-durable rock. Bank stabilization materials should allow for continuous passage of fish and other aquatic species.

→ No permanent fill materials, other than design-approved structures and related bank stabilization materials, should be placed in the stream channel. Avoid channelization. Excavated materials should not be stored or stockpiled below the high bank.

→ Work should be conducted during low flow periods when possible.

→ Care should be taken to keep machinery out of the waterway as much as possible.

→ Do not alter or remove natural stream features, such as riffles and pools.

→ Large woody debris is an important habitat component of a stream and should not be removed unless absolutely necessary for construction and maintenance purposes.

Information Contacts

For further information regarding regulations for development near streams and rivers, contact:

Missouri Department of Conservation
Policy Coordination Section
P.O. Box 180
2901 W. Truman Blvd.
Jefferson City, MO 65102-0180
Telephone: 573/751-4115

Missouri Department of Natural Resources
Division of Environmental Quality
P.O. Box 176
Jefferson City, MO 65102-0176
Telephone: 573/526-3315

U.S. Army Corps of Engineers
Regulatory Branch
700 Federal Building
Kansas City, MO 64106-2896
Telephone: 816/983-3990

U.S. Environmental Protection Agency
Water, Wetlands, and Pesticides Division
901 North 5th Street
Kansas City, KS 66101
Telephone: 913/551-7307

U.S. Fish and Wildlife Service
Ecological Services Field Office
608 E. Cherry Street, Room 200
Columbia, MO 65201
Telephone: 573/876-1911

Disclaimer

These Best Management Practices were prepared by the Missouri Department of Conservation with assistance from other state agencies, contractors, and others to provide guidance to those people who wish to voluntarily act to protect wildlife and habitat. Compliance with Best Management Practices is not required by the Missouri wildlife and forestry law nor by any regulation of the Missouri Conservation Commission. Other federal, state or local laws may affect construction practices.



July 5, 2013

Field Supervisor
Kansas Department of Wildlife, Parks and Tourism
512 SE 25th Avenue
Pratt, Kansas 67124

Dear Mr/Ms. Field Supervisor:

Subject: U.S. 69 Bridges over the Missouri River EA
Platte County, Missouri and Wyandotte County, Kansas
MoDOT Job No. J4P2279B
Inquiry Review Request for Protected Species and Habitats

On January 16, 2013, the Federal Highway Administration (FHWA), in cooperation with the Missouri Department of Transportation (MoDOT) and the Kansas Department of Transportation (KDOT), notified your agency of their intent to prepare an Environmental Assessment (EA) for replacement of the Fairfax and/or Platte Purchase Bridges on U.S. 69 spanning the Missouri River between Platte County, Missouri and Wyandotte County, Kansas (Project) (U.S. 69 Bridges EA). This crossing of the Missouri River between Platte County, Missouri and Wyandotte County, Kansas has been in place since 1935. It serves as an important link in the regional transportation network connecting developing businesses in Riverside, Missouri with industries in the Fairfax Industrial District in Kansas City, Kansas. It provides mobility and accessibility for the movement of goods and people that continue to support economic vitality in both states.

The purpose of this letter is to provide additional information regarding the location of the Project, as well as to request a review for impact assessment by the Kansas Department of Wildlife, Parks and Tourism (KDWPT) under the Kansas Nongame and Endangered Species Conservation Act of 1975.

Project Background

As a result of the structural condition of both bridges and the limitations their physical condition poses on serving current and forecast traffic demand, long-term maintenance and rehabilitation of either bridge is not considered feasible nor a reasonable expenditure of public money in order to keep the crossing operational. Therefore, in order to maintain the long-term viability of this river crossing, both bridges would be removed and replaced with a new four-lane bridge constructed to current design standards. The new bridge would include an off-travelway, barrier-separated bicycle/pedestrian facility providing connectivity to existing trail systems on both sides of the river. The study area, as depicted in Figure 1-1, extends from Kindleberger Road in Wyandotte County, Kansas north to I-635 in Platte County, Missouri.

Current land use within and adjacent to the study area consists of industrial and commercial development. The Fairfax Industrial District is located south of the river and Argosy Casino and the Riverside Horizons Development are located north of the river. Fairfax is zoned heavy industrial (M-3). Permitted uses in the M-3 zoning district include manufacturing, warehousing, repair services, storage yards, and other types of heavy industrial land uses. The area north of the river and in the city of Riverside is zoned General Planned Development – Industrial District (GP-I). The “GP” zoning district is intended to be a holding district until the property has been rezoned to a different district. The “I” zoning district is intended to accommodate basic manufacturing industries and related industrial activities. The study area also

Field Supervisor
July 5, 2013
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includes land adjacent to and on both side of the Missouri River that is maintained as flood control structures by the Riverside-Quindaro Bend Levee District along the north riverbank and the Fairfax Levee District along the south riverbank. The northern portion of the study area also includes existing right-of-way for I-635.

At least nine petroleum and communications companies operate utility lines that are attached to the existing bridges. These lines carry a variety of fuels, products, and cable/fiber optics that serve local, regional, and nationwide customers. The majority of these utility lines are located underground as they approach the levee and then are carried up and over the river along the bottom of each bridge. The utilities are allowed to attach to the bridges under permits issued by MoDOT. In addition to the pipelines, there are three pipeline regulating stations in close proximity to the existing bridges on both sides of the river. These regulating stations are connected to the utility lines located on both bridges.

Water Quality

Bridge construction-related impacts to water quality would be primarily the result of storm water runoff. Water quality impacts resulting from construction of the new bridge and removal of the existing bridges would be relatively short-term due to the nature of the construction process. Bridge construction at the river's edge makes it possible for soil to wash into the Missouri River. Over time, increased amounts of sediment can damage the river ecosystem by lowering oxygen levels and covering food sources and fish spawning areas. Soil and rock washed away around bridge piers can change the river bottom, affecting those species that use the bottom for food or habitat. Without on-site pollution controls, sediment-laden runoff from construction sites could flow directly to the river and degrade water quality. In addition, storm water could pick up other pollutants such as concrete washout, paint, used oil, pesticides, solvents, or other debris potentially harming or killing fish and wildlife, degrading aquatic habitat, and affecting drinking water quality.

To protect water quality and reduce impacts during and after completion, construction of the new bridge shall be completed in conformance with Missouri State Operating Permit (MOR100) and Kansas Stormwater Runoff from Construction Activities General Permit. MoDOT will require the contractor to implement Best Management Practices (BMPs) to prevent erosion and provide sediment and storm water management during construction. These measures are described in Section 3.15. In accordance with the requirements of the NPDES program, the contractor will be required to develop a project-specific Storm Water Pollution Prevention Plan (SWPPP) to describe the BMPs to be implemented during construction. The SWPPP would include Missouri Department of Natural Resources- and Kansas Department of Health and Environment-approved components to reduce suspended solids, turbidity, and downstream sedimentation that may degrade water quality and adversely impact aquatic life. All of the build options would increase storm water runoff after construction as the area of impermeable pavement. There would be no change in the methods or compounds used to deice bridge and roadway surfaces in the study area once the project is completed. Use of these chemicals takes place primarily during wet seasons when the precipitation acts to reduce their concentration. No groundwater contamination is anticipated as a result of construction activities. Accidental spills of fuels or hazardous chemicals could occur during construction. The contractor will be required to minimize the potential for spills and accidental releases through development and implementation of spill prevention plans and responding quickly to spills when they occur.

Wetlands

Section 404 of the Clean Water Act authorizes the USACE to regulate impacts to wetlands and waters of the U.S. through a permitting process. Waters of the U.S. is an inclusive term that covers streams, rivers, wetlands, and other aquatic sites that are under the USACE’s jurisdiction. If permanent impacts to wetlands are greater than one-tenth of an acre, mitigation is generally required as a part of Section 404 permit.

National Wetland Inventory mapped wetlands and other potential wetlands identified by windshield survey located within the study area are summarized in Table 1-1. MoDOT will complete field delineations and obtain jurisdictional determinations through coordination with the USACE Kansas City District prior to initiating final design. This information will be used to obtain a Section 404 Permit for the construction of the project.

Table 1-1: Wetland Inventory

Wetland Number	Location and Description	NWI Map Classification	Wetland Type	Approximate Wetland Area (ac) (within study area)
W-1	NWI-mapped forested area of 100 Year Floodplain north of and abutting the Missouri River	PF01A	PFO	8.33
W-2	Forested area within 100 Year Floodplain north of the Riverside-Quindaro Levee, west of U.S. 69, and south of Argosy Casino Parkway	N/A	PFO	0.64
W-3	Depression dominated by grassy vegetation just south of Harvester Road and east of U.S. 69 in Wyandotte County	N/A	PEM	1.01

SOURCE: URS Corporation, 2013

Protected Species

The ESA attempts to ensure that proposed activities do not jeopardize the continued existence of any threatened or endangered species or result in the destruction or adverse modification of species habitat. As provided in the ESA, the Fish and Wildlife Coordination Act, as amended, also applies to projects that affect water resources. The U.S. Fish and Wildlife Service (USFWS) administers both of these acts.

Much of the land within and adjacent to the study area is designated as transportation right-of-way, managed as open space for flood control purposes, or developed for industrial and commercial use. The presence and condition of existing terrestrial and aquatic habitats are a product of the current uses in the area. No unique or rare habitats have been documented within or adjacent to the study area. MoDOT conducted a windshield-level qualitative evaluation of the study area in January 2013 to identify the dominant habitat types, plant species, extent of the riparian area, and observations of habitat usage by wildlife species. Species observed during the windshield review are listed in Appendix F. Vegetation in

Field Supervisor
July 5, 2013
Page 4

the study area is dominated by managed grasses within public rights-of-way and wooded riparian areas along the Missouri River. Managed grassy areas are dominated by fescue (*Festuca* spp.) and brome (*Brome* spp.). There are numerous annual weed species are also present during the growing season in the open areas and woodlands. Because of the developed nature of the study area, terrestrial wildlife is not relatively abundant with the exception of seasonal migratory bird species. Various waterfowl and other migratory species may use the river and riparian habitats on a seasonal basis. Most common wildlife species are typically tolerant of human activity and disturbance and are capable of adapting and occupying developed areas.

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Field Supervisor
July 5, 2013
Page 5

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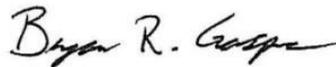
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The Project requests a review for impact assessment by the KDWPT under the Kansas Nongame and Endangered Species Conservation Act of 1975. A similar letter has been submitted to the USFWS-Missouri Ecological Services Office, USFWS-Kansas Ecological Services Office, and MDC. You will be invited to review the EA at the time it is released for public review, which we anticipate will occur during 2013.

We look forward to your continued involvement in the project. If you have any questions or concerns regarding the declassification or the project in general, please contact Allan Zafft at Allan.Zafft@modot.mo.gov or (816) 607-2258.

Sincerely,



Bryan R. Gasper
Senior Environmental Scientist/Wildlife Biologist
Burns & McDonnell Engineering Company, Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-349-6770
bgasper@burnsmcd.com

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Field Supervisor
July 5, 2013
Page 6

Copies: Kevin Ward, FHWA
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Heather Whitlaw, USFWS-KS
Alan Leary, MDC

APPENDIX E-4
Hazardous Materials Technical Memorandum

HAZARDOUS MATERIALS TECHNICAL MEMORANDUM

Date: March 14, 2013

Subject: Hazardous Materials Technical Memorandum

From: U.S. 69 Bridges over the Missouri River EA Study Team
David Kocour

A review of historical aerial photographs and topographic maps, a field reconnaissance, and a database search of potential hazardous waste sites was performed to evaluate the likelihood of soil and/or groundwater contamination within the Study Area. The purpose of the evaluation was to identify sites that may require remediation that would result in additional costs and time for completion of the selected alternative. The scope of this evaluation was limited to a database search for recorded site information, review of historical aerial photographs/topographic maps, followed by a "windshield" field reconnaissance survey of selected potential hazardous waste sites. An electronic database was used that queried federal and state agency databases. This evaluation did not include a complete site assessment per ASTM Standard E 1527-00, nor does it constitute a hazardous waste remedial investigation.

The Kansas portion of the study area is located in a section of Kansas City that has a long history of industrial use. Many of these industries are of environmental concern due to documented environmental contamination and/or the length of time they have been engaged in activities that may have used hazardous materials and/or produced hazardous wastes during a time period when there was little or no regulation of such materials/wastes. In addition, the hydrogeologic regime of the study area and surrounding area is dynamic. Changes in direction of groundwater flow, quality, and composition is common. Because of the dynamic nature of hydrogeologic regime, spills and leaks of potentially hazardous materials from off-site sources have the potential to contaminate groundwater resources underlying the study area. Historically the Missouri portion of the Study Area was undeveloped because it was in an area prone to flooding. However since the construction of a levee system, development has started to occur in this area. Given this recent history of development there is less likelihood of the potential for historical contamination issues.

1.1 Survey Methodology

There is no single comprehensive source of information available that identifies all known or potential sources of environmental contamination within the Study Area. Therefore, to identify and evaluate sites that may potentially contain hazardous materials, petroleum products, or other sources of contamination, a federal and state government database search was conducted by Environmental Data Resources, Inc. (EDR), dated October 29, 2012. The database search included over 60 different environmental databases including sites identified or evaluated as federal or state Superfund sites; facilities that generate, store, treat or dispose of hazardous wastes; solid waste landfills; facilities that have active, closed, or leaking aboveground storage tanks (ASTs) or underground storage tanks (USTs); sites actively undergoing cleanup; spills involving potentially hazardous materials; and a number of other activities that might be an indicator of a hazardous condition.



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In addition to the government database search, historical aerial photographs and topographic maps were also obtained from EDR and reviewed for evidence of activity or features that might suggest the potential for waste disposal. Historical aerial photographs from the years 1947, 1963, 1969, 1970, 1975, 1983, 1986, 1991, 1995, 2002, 2005, 2006, 2007, and 2008 were reviewed. Historical U.S. Geological Survey topographic maps from the years 1894, 1943, 1940, 1948, 1951, and 1997 were also reviewed.

An electronic copy of all information obtained from EDR has been provided with this document as an attachment due to the file size and amount of information.

A field reconnaissance was conducted in addition to the government database search, historical aerial photograph review and historical topographic map review. The field reconnaissance was limited to a "windshield" survey for potential sites of concern that may not have been listed in the database report, plus verification of selected site locations judged to have moderate to high potential for environmental contamination. Properties were not accessed and no interviews were conducted with owners or operators during the field reconnaissance.

1.2 Potential Sites

The results of the database search, historical reviews, and field reconnaissance were prioritized as to the likelihood of soil and/or groundwater contamination present on or in the Study Area. The priority assigned was either "None-to-Low", "Low-to-Moderate", or "Moderate-to-High," in accordance with the following definitions:

- **"None-to-Low"** – After a review of available database information, there is no indication that the proposed project would impact the site. It is possible that potential contaminants could have been generated or handled on the site, however, all information indicates potential impact to a proposed alternative would be minimal. These sites include things such as Resource Conservation and Recovery Act (RCRA) small quantity generators or UST sites for which releases of hazardous constituents have not been documented.
- **"Low-to-Moderate"** – These sites include any former or current operations identified as large quantity hazardous waste generators. Also included in the category are locations where releases of hazardous materials or petroleum products have been reported, and remediation has been completed. These sites include leaking UST sites that have been listed in the database as closed following completion of remediation.
- **"Moderate-to-High"** – A review of available information indicates that known soil and/or groundwater contamination is present and that the site is either undergoing remediation or continued groundwater monitoring. Additional sites may include unmappable sites in close proximity of the Study Area listed in the database search. Further assessment would be required if a "Moderate-to-High" priority site is affected by the selected alternative to determine the actual presence and/or levels of contamination, the contaminated medium and the need for mitigation/remediation. Actual physical assessment would not begin until the final selected alternative is defined.

A total of three sites were identified during the government database search as being within the Study Area. These sites consist of the following:

- **Grief Brothers Corp., 3341 North 7th Street Trafficway, Kansas City, KS.**
This site is registered in one of the U.S. Environmental Protection Agency's (USEPA's)

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databases that tracks information on facilities that generate, transport, store, treat and/or dispose of hazardous waste. The facility is registered as one that does not currently generate hazardous waste, but generated small quantities in the past with no reported violations. There is no indication that this site has had an impact upon the Study Area and thus poses "none-to-low" potential for contamination.

- **Shostak Iron & Metal Co., 700 Kindleberger Road, Kansas City, KS.**
This site is also registered in one of the USEPA's databases that tracks information on facilities that generate, transport, store, treat and/or dispose of hazardous waste. The facility is registered as one that does not currently generate hazardous waste with no reported violations. However, based upon the type of operations conducted at this site, review of historical aerial photographs, and the field reconnaissance this site poses a "moderate-to-high" potential for the presence of potential contamination. The primary concern for potential contamination at this site would include surface soil metals concentrations.
- **Fairfax Levee, Missouri River Levee East of Fairfax Bridge, Kansas City, KS.**
This site is registered in the Kansas Solid and Hazardous Waste database and Kansas Spills database. The site was reported to include approximately five acres with drums covering a small portion of the site area. The site is owned by the Fairfax Drainage District, but had been leased to Bennett-Rogers Pipe Coating, Inc. for several years. Bennett-Rogers contended that the drums were on-site when their lease became effective in 1957. The State of Kansas suspected the possibility of soil contamination from drum leakage, fire danger from flammable material, and possible contamination to the alluvial aquifer. Subsequently a cleanup was completed and soil sampling afterwards did not reveal any hazardous substances above the "standards" in July of 1986. There is no indication that this site has had an impact upon the Study Area and thus poses "none-to-low" potential for contamination.
- **Union Pacific Railroad Rail Yard, 7th Street & Missouri River, Kansas City, KS**
A portion of the Kansas side of the Study Area is occupied by a railyard. The railyard is worthy of noting due to the potential for unreported spills and/or chemicals present on the site due to railroad operations (e.g., greases and oils, creosote, herbicides, etc.). These features pose a "moderate-to-high" potential for the presence of potential contamination.
- **Magellan Pipeline, 7th Street & Missouri River, Kansas City, KS/Riverside, MO.**
Coordination with utility companies, including Magellan Pipeline, throughout this study identified the presence of several major petroleum pipelines within the Study Area. Two active, and one inactive, petroleum pipelines are present on the Platte Purchase Bridge and go underground at either end of the bridge. In addition to the lines on the bridge, there are also three petroleum pipelines running within and parallel to the Fairfax levee. The petroleum pipelines are worthy of noting due to potential leaks and subsurface petroleum contamination. One of the petroleum pipelines has leaked in the past, approximately one mile to the south. Another incident occurred in 2012 when petroleum leaked from one of the pipelines on the existing bridge into the Missouri River. These features pose a "moderate-to-high" potential for the presence of potential contamination.
- **Doepke-Fairfax, 7th Street & Missouri River, Kansas City, KS.**
This site is registered in one of the USEPA's databases that track sites that have been investigated under the CERCLIS "Superfund" program. The site had several alias names

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including: Fairfax Industrial Area Dump, 7th and Dike Dump Site, Fairfax Drainage District, South Bank-Missouri River, Deopke Disposal Service, Doepke Dump, and Doepke Disposal Site – Fairfax. The site was discovered in 1979 with a preliminary assessment of the site done by the USEPA in 1980. Based on the preliminary assessment the USEPA determined no further action was needed. This decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be a potential National Priorities List "Superfund" site. Additional information received from the USEPA indicates that this site was located downstream of the Study Area near the Fairfax Airfield. Based upon the confirmed location of this site there is no indication that this site has had an impact upon the Study Area and thus poses "none-to-low" potential for contamination.

A total of at least 17 sites were identified during the government database search as having a "Moderate-to-High" potential for contamination in the vicinity of the study area. These sites primarily consist of industrial or ancillary facilities and are located further away from the Study Area. However, as previously mentioned the hydrogeologic regime of the study area and surrounding area is dynamic. Changes in direction of groundwater flow, quality, and composition is common. Because of the dynamic nature of hydrogeologic regime, spills and leaks of potentially hazardous materials from off-site sources have the potential to contaminate groundwater resources underlying the Study Area.

The potential impact of the various alternatives on these sites is discussed in Section 1.13.3. The other sites ranked as "Low-to-Moderate" and "None-to-Low" are not likely to have an impact upon the selection of one alternative over another. Therefore, no further consideration will be given to sites ranked as "Low-to-Moderate" and "None-to-Low" in this EA.

1.3 Impacts

a. No-Build Alternative

The No-Build Alternative does not include any construction activities. Therefore, the No-Build Alternative would not affect potential hazardous waste sites.

b. Build Alternatives

Hazardous waste sites located within the Study Area were inventoried and reviewed based on the results of a search of federal and state environmental databases, review of historical aerial photographs/topographic maps, and field reconnaissance. The inventory discussed in Section 1.13.2 includes a ranking of the sites to determine those with a "None-to-Low", a "Low-to-Moderate", or a "Moderate-to-High" potential for impact. This discussion provides an assessment of the "Moderate-to-High" ranked sites for the Study Area. The "Moderate-to-High" ranked sites and their potential for impacts are listed in Table 1-1.

Among the Build Alternatives, there are three sites ranked "Moderate-to-High" whose past or present use indicates a potential for hazardous waste contamination of soils and possibly groundwater. Minor variation of alignments during final design could avoid some of these sites however many of them could require further investigation to evaluate potential contamination of soils or groundwater. In addition, the possibility exists that additional sites with contamination may be encountered during actual construction, particularly given the large number and long history of industrial facilities in and near the Kansas side of the

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Study Area. In the event contamination is encountered, MoDOT would develop an appropriate course of action and coordinate with KDOT, Kansas Department of Health and Environment (KDHE), and/or Missouri Department of Natural Resources (MDNR).

Table 1-1: “Moderate-to-High” Rank Potential Hazardous Waste Sites

Site ID	Site Location	Federal/ State Program List	Comments	Potential for Impact
Shostak Iron and Metal Co.	700 Kindleberger Road, Kansas City, KS	RCRA-NonGen FINDS	High potential for metals contamination of surface soils.	May be impacted by Alternative 3A
Union Pacific Railyard	South side of Fairfax Levee, Kansas City, KS	None	Potential for unreported spills and/or chemicals present on the site due to railroad operations (e.g., greases and oils, creosote, herbicides, etc.)	May be impacted by any of the Build Alternatives
Magellan Petroleum Pipeline	South of, on and north of Platte Purchase Bridge, Kansas City, KS/Riverside, MO	KS SHWS	Potential leaks and subsurface petroleum contamination.	May be impacted by any of the Build Alternatives

With regard to “Moderate-to-High” potential hazardous waste sites, Alternatives 2B and 3B would be slightly preferred over Alternatives 2A and 3A because they would not impact the Shostak Iron and Metal Co. site.

1.4 Mitigation

The preferred mitigation measures for these sites would be avoidance. However, in the event that these sites could not be avoided and contamination was proven to be present, MoDOT or KDOT would negotiate cleanup responsibility with the current owner. Negotiations with the current owner and any investigative or remedial activities would be coordinated with the MDNR’s Hazardous Waste Management Program or KDHE’s Bureau of Waste and would comply with all EPA requirements. If any hazardous waste sites are encountered during the construction process, they would be dealt with in accordance with appropriate state and federal regulations.

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1.5 References

- D.L. Becker, Lockheed Engineering and Sciences Company, Las Vegas, Nevada. Aerial Photographic Analysis of the Doepke Disposal-Fairfax Site, Kansas City, Kansas, August, 1991.
- The EDR Radius Map Report with GeoCheck, 2012. Environmental Data Resources, Inc. US 69 Missouri Bridges EIS, US 69, Kansas City, KS 66115, October 29, 2012, Inquiry No. 3443328.2s
- The EDR Historical Topographic Map Report, 2012. Environmental Data Resources, Inc. US 69 Missouri Bridges EIS, US 69, Kansas City, KS 66115, October 30, 2012, Inquiry No. 3443328.4
- The EDR City Directory Abstract, 2012. Environmental Data Resources, Inc. US 69 Missouri Bridges EIS, US 69, Kansas City, KS 66115, October 30, 2012, Inquiry No. 3443328.6
- The EDR Aerial Photo Decade Package, 2012. Environmental Data Resources, Inc. US 69 Missouri Bridges EIS, US 69, Kansas City, KS 66115, October 30, 2012, Inquiry No. 3443328.5
- EDR Site Report, 2013. Environmental Data Resources, Inc. Doepke-Fairfax, 7th Street and Missouri River, Kansas City, KS 66115, February 11, 2013.
- EDR Site Report, 2013. Environmental Data Resources, Inc. Home State Bank, 601 Kindelberger Road, Kansas City, KS 66115, February 11, 2013.
- Bacchus, Fred. Unified Government. Personal communication regarding the location, nature or extent of the Doepke-Fairfax site identified as being at 7th Street and the Missouri River. February 13, 2013.

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