

Draft Environmental Assessment
St. John's Regional Medical Center
Temporary Medical Facilities
Joplin, Jasper County Missouri
FEMA-1980-DR-MO
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FEMA

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Acronyms and Abbreviations

AMSL	Above Mean Sea Level
BMP	Best Management Practices
CFR	Code of Federal Regulations
DEA	Draft Environmental Assessment
DHS	U.S. Department of Homeland Security
EA	Environmental Assessment
EDR	Environmental Data Resources, Inc.
FEMA	Federal Emergency Management Agency
FINDS	Facility Index System
FIRM	Flood Insurance Rate Map
FONSI	Finding of No Significant Impact
GIS	Geographic Information System
LUST	Leaking Underground Storage Tank
MDC	Missouri Department of Conservation
MDNR	Missouri Department of Natural Resources
NEPA	National Environmental Policy Act of 1969
NHPA	National Historic Preservation Act
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resource Conservation Service
NRHP	National Register of Historic Places
NWI	National Wetland Inventory
RCRA	Resource Conservation and Recovery Act
SHPO	State Historic Preservation Office
SQG	Small-Quantity Generator
SWHS	State Hazardous Waste Site
TCP	Traditional Cultural Properties
UFAS	Uniform Federal Accessibility Standards
USFS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey

A. Project Name: St. John's Regional Medical Center Temporary Medical Facilities

B. Environmental Assessment

This Draft Environmental Assessment (DEA) documents the results of a study of the proposed action's potential environmental impacts and has been prepared in compliance with the National Environmental Policy Act (NEPA) of 1969; the President's Council on Environmental Quality regulations implementing NEPA (Title 40 of the Code of Federal Regulations [CFR], Part 1500 1508 [49 CFR 1500-15008]); and the Department of Homeland Security's Federal Emergency Management Agency (FEMA) regulations implementing NEPA (44 CFR 10.9). Based on the evaluation described herein, FEMA has concluded that the Proposed Action would not have significant adverse environmental consequences.

C. Purpose and Need

FEMA and the Corps are working with partners at the local and state levels and with other Federal agencies to coordinate the response to the devastating tornado that struck Joplin, Jasper County, Missouri on May 22, 2011. The tornado was a massive EF5 multiple vortex tornado with winds over 200 mph (peaking at 225 to 250 mph). According to the local branch of the American Red Cross, about 25% of Joplin was destroyed. The Missouri Emergency Management Agency reported more than 990 injured. As of June 27, the death toll from the tornado was 157. In addition to the tornado deaths, a policeman was struck by lightning and killed while assisting with recovery and cleanup efforts the day after the storm.

On May 23, 2011, the federal disaster declaration EMA-1980-DR-MO, which was signed by President Obama on May 9, 2011, was extended to authorize FEMA to provide federal assistance to the Joplin Tornado Recovery. St. John's Regional Medical Center ("St. John's"), a 367-bed facility serving Joplin and the regional area, was devastated beyond repair by the tornado. One-hundred and eighty three patients were evacuated from the hospital. Five patients were killed along with one visitor who was at the hospital when the tornado struck. Shortly after the tornado, a temporary, 60-bed field hospital was erected using temporary fabric shelters, allowing the hospital to provide some emergency and other medical services to the community. However, an urgent need exists to expedite the construction of temporary medical facilities to provide the necessary level of medical and health care services to the people of Joplin and the surrounding area.

FEMA is authorized to provide disaster assistance funds in accordance with the Robert T. Stafford Disaster Relief and Emergency Assistance Act, 42 USC 5121-5206, as amended (Stafford Act, Public Law 93-288). Assistance authorized by the statute is available to individuals, families, state and local governments, and certain nonprofit organizations. The purpose of this project is to assist St. John's in constructing temporary medical facilities so health professionals can continue to provide vital medical and health related services and

facilities to the residents of Joplin and the surrounding region and to relieve the burden that the loss of the hospital has placed on the remaining medical facilities in the region.

D. Project Alternatives

NEPA requires the investigation and evaluation of reasonable project alternatives as part of the project environmental review process. Two alternatives are addressed in this DEA: the No Action Alternative 1, where FEMA would not fund the construction of temporary medical facilities and Alternative 2, the Proposed Action, where FEMA would fund the construction of St. John's Regional Medical Center temporary medical facilities in Joplin, Jasper County, Missouri.

Alternative 1 – No Action Alternative

Under the No Action Alternative, FEMA would not fund the Proposed Action. The tornado damaged St. John's Regional Medical Center ("St. John's") beyond repair. Although a second facility, the 193-bed Freeman Hospital, serves local and regional residents, the loss of 367 hospital beds at St. John's has stressed the remaining medical facilities and health care systems, as well as medical professionals and staff, both in Joplin and in surrounding communities such as Carthage and Springfield, Missouri. The no-action alternative would result in the continued stress on health care systems as well as medical professionals and staffing. Citizens from the Joplin and regional area would not receive the same level of routine, specialized, or emergency health care services. In addition there would be an economic stress on the area from the loss of employment opportunities at the facility. All of this would result in further health, economic and personal hardships for residents of the area, and would further strain the city and county's social and economic infrastructure.

Alternative 2 - Temporary Medical Facilities on the 31-Acre Site (Proposed Action)

In considering the "range of reasonable alternatives," the hospital considered their immediate options, including use of the existing, damaged, facilities. In the aftermath of the destruction, it was necessary the hospital set up a field hospital on an outlying portion of the facility, opposite S. Pitcher Avenue. Consideration was given to using more of the facility, however, due to the potential for biohazards, the widespread damage, and the need for demolition access to the existing hospital site and associated infrastructure, and the need to use the existing parking lots for vehicles, this alternative was dismissed. Because the region lost a 367-bed facility with a full range of services, timing became a crucial factor. The Proposed Action provides a more complete temporary medical facility for people within the local and regional communities. Under this alternative the temporary medical facilities would be located in the same general area as the existing field hospital and the damaged St. John's. The temporary medical facilities proposed site ("site") is 31 acres in size and would provide ample room for the facilities necessary to provide an increased level of medical services and health care to people and families within the local and regional communities, until a permanent hospital replacement is completed.

E. Project Location

This site is bordered on the north by the existing temporary facilities described above, on the south by 32nd Street, to the west by Old 32nd Street/South Picher Avenue, and to the east by Jackson Avenue. It is generally due east, across Old 32nd St/South Picher Avenue (also known as St. John's Boulevard) from the remaining St. John's infrastructure (Attachment 1, Figure 1, Vicinity Map). The proposed located in Section 26, Township 27 north, Range 33 west, Jasper County, Missouri, Joplin West Quad. (Latitude 37.032276 N and Longitude 94. 313722W).

F. Site Description

The site lies at elevations from approximately 970 feet to 1,030 feet AMSL and consists of an existing cleared and graded area of approximately 6.04 acres and approximately 24.96 acres of forest . Approximately 25% of the cleared area is topped with gravel. The site is owned by Mercy Health Ministries, which oversees the St. John's network of healthcare facilities. The forested area consists of a variety of hardwood species and is dominated by oak trees which generally range in sizes up to 3-foot in diameter. Approximately 10 to 20% of the larger trees were damaged by the tornado and were either snapped along the trunk or toppled with the roots intact. A power line traverses the property at the south end of the review area. A stream and mapped flood plain exist outside of the southeast portion of the site (Attachment 2, Figure 2, Joplin Missouri-Proposed Temporary Hospital Site).

G. Project Description

The Proposed Action would involve the development of a maximum of 31 acres of the site. Site preparation would require grading to construct building pads, roads, parking lots, helipads, walkways, and all utilities related to the infrastructure of the complex. Utility services including water, sewer, electric, and telephone would be extended to the site from adjacent areas. In addition, stormwater management facilities would be constructed in accordance with local, state and Federal requirements. Best management practices (BMPs) would be implemented to reduce or eliminate runoff impacts during proposed construction activities and to reduce the potential for soil erosion after construction. A safety fence would be installed and maintained around the site perimeter during construction. The facilities would include the development of temporary gravel pads for foundations, gravel and asphalt roadways, parking, walkways waterline installation, phone and cable, electric, and modular components for the structures. The contractor will ensure that the new utility infrastructure is compatible with capacity needed for the remainder of the city and/or county. Access to the site from surrounding roads along with internal circulation will also be designed in coordination with applicable city and/or county staff. The estimated footprint sizes for specific features are: buildings/structures-2.81 acres, helipad-0.44 acre, parking-1.98 acre, and roads/walkways-3.21 acres. The existing 6.04 cleared/graded area would be fully utilized, thereby reducing the extent of further clearing that is necessary to construct the facilities. The attached Figure 2 depicts the estimated footprint of the project.

H. Sites Considered and Dismissed

Factors considered in choosing a site include: site topography; ownership of the property; past land use, prior development planning; access to existing utilities; and engineering feasibility. In the aftermath of the destruction, it was necessary the hospital set up a field hospital on an outlying portion of the facility, opposite S. Pitcher Avenue from the damage. Consideration was given to using more of the damaged facility; however, due to the potential for biohazards, the widespread damage, and the need for demolition access to the existing hospital site and associated infrastructure, and the need to use the existing parking lots for vehicles, this alternative was dismissed. Timing became a crucial factor in the hospital's consideration of alternatives. The region lost a 367-bed facility with a full range of services which has left a large void in vital medical services for the region. Due to the availability of the proposed site, current ownership by the hospital, location, access to utilities, as well as the urgency for the facilities, the proposed site was chosen. The hospital has yet to determine long-range plans for a permanent facility.

I. Affected Environment and Environmental Consequences

In order to meet the proposed purpose and need of timely delivery of emergency temporary medical facilities, an expedited environmental review process was conducted to analyze all natural and human environmental issues associated with the proposed site. The environmental review process included field reconnaissance at the site, background research, and expedited agency consultation. The field reconnaissance was conducted on June 28 and July 5, 2011. Background research consisted of a review of census statistics, wetlands maps, FEMA floodplain maps, hazardous materials databases, archaeological and historic structures databases, threatened and endangered species information, soil surveys, and other available information. Expedited agency consultation through verbal and written communications was conducted with the Environmental Protection Agency (EPA), U.S. Fish and Wildlife Service (USFWS), U.S. Army Corps of Engineers (USACE), Missouri Department of Conservation (MDC), Missouri Department of Natural Resources, and Missouri State Historic Preservation Office (SHPO). No significant concerns were expressed by these agencies. The following table (Table 1) summarizes the results of the environmental review process for the various resource areas (e.g., water quality, air quality, etc.). Definitions of the impact intensity are described below:

Negligible: The resource area would not be affected, or changes would be either non-detectable or if detected, would have effects that would be slight and local. Impacts would be well below regulatory standards, as applicable.

Minor: Changes to the resource would be measurable, although the changes would be small and localized. Impacts would be within or below regulatory standards, as applicable. Mitigation measures would negate any potential adverse effects.

Moderate: Changes to the resource would be measurable and have both localized and regional scale impacts. Impacts would be within or below regulatory standards, but historical conditions

are being altered on a short-term basis. Mitigation measures would be necessary and would reduce any potential adverse effects.

Major: Changes would be readily measurable and have substantial consequences on a local and regional level. Impacts would exceed regulatory standards. Mitigation measures to offset the adverse effects would be required to reduce impacts, though long-term changes to the resource would be expected.

Table 1 Affected Environment and Environmental Consequences

Affected Environment/ Resource Area	Impacts					Mitigation	Agency Coordination/Permit s	Comments
	Negligible	Minor	Moderate	Major				
Geology & Soils	X					BMPs		The implementation of construction BMPs will reduce sedimentation.
Hydrology & Floodplains (Executive Order 11988)	X					None		Site is outside designated FEMA 100 year floodplain according to FEMA floodplain maps.
Wetlands (Executive Order 11990)	X					None		The site does not contain jurisdictional wetlands.
Water Quality		X				Implement construction BMPs. Install silt fences/straw bales to reduce soil erosion and sedimentation. Construction contractor to cover any fill stored on site and implement requirements of NPDES stormwater discharge permit, if required.	NPDES stormwater permit or waiver to be obtained by construction contractor.	The drainage system will be required to meet local and county requirements,
Air Quality			X			Temporary roads should be constructed of permeable asphalt-like millings, gravel, or similar material to reduce airborne particles. Periodic wetting during construction and home removal would reduce fugitive dust.		County air shed is in attainment for criteria pollutants per the Clean Air Act.
Vegetation & Wildlife			X			None		Extent of vegetation removal would be minimized to accommodate only what is necessary for facility. Disturbed areas to be stabilized and seeded when construction is complete.
Threatened & Endangered (Endangered Species Act Section 7)	X					None	USFWS (6/30/11) and MDC (6/29/11) determinations.	No State or Federally Listed Endangered Species at this site.
Cultural Resources (National Historic preservation Act Section 106)	X					If unanticipated historic or cultural materials are discovered during construction, construction shall immediately cease within 100 feet of the materials until their cultural affiliation and ultimate disposition are determined in consultation with the Missouri SHPO, FEMA Environmental Liaison Officer and other interested parties.	SHPO determination (6/29/11).	No effect
Socioeconomic/Recreation	X					None		
Environmental Justice	X					None		

Table 1 (Continued) Affected Environment and Environmental Consequences

Affected Environment/ Resource Area	Impacts					Mitigation	Agency Coordination/Per mits	Comments
	Negligible	Minor	Moderate	Major				
Noise		X				If necessary, noise reduction measures associated with construction would be instituted including: 1) restricting the 24-hour construction schedule; 2) using a 7 a.m. to 7 p.m. construction schedule; and/or 3) completing noisier activities during the day if using a 24-hour schedule.	Contractor shall coordinate with the designated hospital POC.	Noise impacts would mostly affect the temporary field hospital. See Section J.
Safety & Security		X				Implement BMPs for construction . Appropriate construction fencing and signage. Monitoring of lead levels during ground disturbances and remediation in accordance with EPA standards/local requirements. Surface exploration of mine features in construction footprint and evaluation for further mitigation measures.	The contractor will coordinate with city, county and state governments to obtain required permits. MDNR email report (7/6/2011)	Temporary facilities will be installed per manufacturer's requirements; up to-date safety procedures provided in FEMA technical papers; and federal state and local codes and ordinances including precautions in installing anchors to maximize safety during severe weather and storm shelters will be installed. All activities will be conducted in a safe manner in accordance with the standards specified in OSHA regulations. See Section J.
Hazardous Materials	X					If hazardous materials are found between start of construction and final site closure, the materials shall be remediated, abated, or disposed of as appropriate and handled in accordance with applicable local, state, and federal laws and regulations.	MDNR (6/30/2011) No sites.	No potential environmental hazards were observed during field reconnaissance on June 28, 2011.
Traffic & Transportation		X				The construction contractor would need to work with city and county staff to assure that the local level of service on the roadway remains adequate. The contractor should design the roadways for multiple ingress and egress to site. The road and lane widths should be designed to allow ample room for emergency vehicles to pass. The roadways should be graveled and compacted to facilitate maintenance and keep local environment, traffic volume, and usage.	The construction contractor will coordinate with hospital, city and county staff.	See Section J.

J. Potential Impact Analysis

Geology and Soils

The Proposed Action's effect on geology and soils would be negligible. Jasper County lies on the northwest portion of the Ozark Plateau. The Ozark Plateau is an elliptical uplifted geologic dome. Bedrock units in the Ozark Plateau have been tilted and faulted by multiple cycles of uplift and erosion since the Precambrian era (before 542 million years ago). Jasper County, Missouri is part of the Tri-State Mining District, a historic lead and zinc mining area that covers over 2,500 square miles of Missouri, Kansas, and Oklahoma. The elevations within the proposed site range from 970 to 1,030 feet AMSL, with drainage generally flowing from the north to the south. The uppermost bedrock on the site is the Mississippian-age Warsaw Limestone with about 10 to 15 feet of very cherty residuum overlying it.

Information from the U.S. Department of Agriculture Natural Resources Conservation Service (NRCS) shows that soils at his site are predominately Goss extremely gravelly silt loam, 15 to 35 percent slopes, which are identified as well drained; Reuter extremely gravelly silt loam, 8 to 15 percent slopes, which are identified as somewhat excessively drained; and Reuter very gravelly silt loam, 3 to 8 percent slopes, which are identified as somewhat excessively drained. In a letter dated July 6, 2011, the Missouri office of the NRCS stated "Since the entire project area is located within the city limits of Joplin, Missouri, no prime farmland or farmland of statewide importance will be converted, Farmland Protection and Policy Act does not apply." The No Action Alternative would entail no construction or preparation of sites for temporary medical facilities; therefore, there would be no impacts to geology and soils.

Mitigation Measures

The existing geology, topography, and soils would not preclude the use of the site for temporary medical facilities. There are negligible impacts to geologic features and no more than minimal temporary effects to the soils. The contractor would be required to identify and implement specific BMPs (e.g., silt fences, hay bales, etc.) to reduce or eliminate runoff impacts during proposed construction activities and to reduce the potential for soil erosion after construction.

Hydrology and Floodplains

A review of the Proposed Action found that the effect it would have on hydrology and floodplains would be negligible. There are no blue line streams, as shown on the U.S.G.S. Quad Map (Joplin West) located on the proposed site. A field inspection of the site conducted on June 28, 2011, revealed that there are no streams or discernable drainages within the boundaries of the site. Some unnamed streams exist to the east and west of the site. These streams flow south and are tributaries to Shoal Creek, the closest named stream which is located approximately 1.2 miles to the south. The north side of the property is noticeably higher than the southern portion. As a result, drainage on the site travels from north to south. The FEMA Floodplain Maps were reviewed and the proposed site is located outside all designated flood plains (Attachments, Figure 2, Joplin Missouri-Potential Hospital Site). A 100-year floodplain exists outside of the southeast side of the site. In light of the elevation changes and a review of existing information

on hydrology and the existence of floodplains, no reasons exist to preclude the use of the site for temporary medical facilities. The No Action Alternative would entail no construction or preparation of sites for temporary medical facilities; therefore, there would be no hydrology or floodplain impacts.

Mitigation Measures

The contractor would be required to identify and implement specific BMPs (e.g., silt fences, hay bales, etc.) to reduce or eliminate runoff impacts during proposed construction activities and to reduce the potential for soil erosion after construction. A vegetated upland buffer, to the maximum extent practicable, should be left in place on the site between the project and stream/floodplain areas.

Wetlands

Wetlands consist of lands where saturation with water is the dominant factor determining the nature of soil development and the types of plant and animal inhabitants. For regulatory purposes under Section 404 of the Clean Water Act, the term wetland is defined as “those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs and similar areas.” Wetlands are valuable biological resources that perform many functions, including groundwater recharge, flood flow attenuation, erosion control, and water quality improvement. Wetlands also provide habitat for many plants and animals, including threatened and endangered species. Executive Order 11990 “Protection of Wetlands” directs all federal agencies to “minimize the destruction, loss or degradation of wetlands.” A review of the U.S. Fish and Wildlife Service (USFWS) National Wetland Inventory Maps (NWI) did not identify any wetlands within the proposed site (Attachments, Figure 1, Vicinity Map). Soils at this site are mapped by the Natural Resources Conservation Service (NRCS) as somewhat excessively drained or well drained, indicating a lack of hydrology near the soil surface (Attachments, Figure 1, Vicinity Map). A field reconnaissance of the site conducted on June 28, 2011, resulted in no observations of wetlands. There are also no stream swales or drainages of floodplains on the subject property. The FEMA has determined that the project’s effect on wetlands and waters of the United States would be negligible. The No Action Alternative would entail no construction or preparation of sites for temporary medical facilities; therefore, there would be no impacts to any jurisdictional wetlands.

Mitigation Measures

No wetlands exist on the site; therefore mitigation measures are not required.

Water Quality

There are no streams located on the subject property. The general drainage on this property appears to be from north to south. The largest named stream near the site is Shoal Creek, located about 1.2 miles to the south. Streams exist closer to the site, but due to their sizes and the fact

that they lie outside of the site, they would have no hydrologic influence on the proposed site. A General National Pollutant Discharge Elimination System (NPDES) Permit (ground disturbance permit, or a waiver of the permit, would be required to be obtained from the Missouri Department of Natural Resources before any work could begin. The General NPDES Permit is obtained by developing a Stormwater Pollution Prevention Plan that implements a series of BMPs (e.g., silt fences, hay bales, etc.). The Contractor must implement specific BMPs to reduce or eliminate runoff impacts during proposed construction activities of the Proposed Action and to reduce the potential for soil erosion after construction, regardless of whether a NPDES Permit or a waiver from the permit requirement is secured. No work would begin until the NPDES Permit or a waiver is issued by the MDNR. The No Action Alternative would entail no construction or preparation of sites for temporary medical facilities; therefore, there would be no impacts to water quality.

Mitigation Measures

The contractor would be required to identify and implement specific BMPs (e.g., silt fences, hay bales, etc.) to reduce or eliminate runoff impacts during proposed construction activities and to reduce the potential for soil erosion after construction. In order to convey stormwater runoff, the contractor will be required to design drainage features such that flows would be appropriately directed during storm events. The drainage system will be required to meet local and county requirements.

Air Quality

Within the proposed temporary facility area, air quality programs are coordinated with the Missouri Department of Natural Resources (MDNR) and Region VII of the Environmental Protection Agency (EPA). According to the EPA Green Book, Nonattainment Status for Each County (see Attachment 5, Figure 5 EPA Air Quality Information in Attachments section) by Year for Missouri (http://www.epa.gov/airquality/greenbk/anayo_mo.html) Jasper County is considered an attainment area for all criteria air pollutants. The Proposed Action would include activities that would produce a minor, temporary, and localized impact from vehicle emissions and dust particles. Tractor-trailers would transport the temporary facilities to the site. Construction equipment would be required for site preparation. Equipment use would temporarily increase emissions; however, no long-term air quality impacts are anticipated. It is not anticipated that Federal or state air quality attainment levels would not be exceeded. Construction activity associated with the Proposed Action would produce pollutant emissions. Heavy equipment would produce small amounts of hydrocarbons and exhaust fumes. It would be expected that some air pollutants would increase in the project areas; however, the concentrations of these pollutants would not cause the region to reach nonattainment status. The construction contractor would be required to maintain the vehicles on the sites in good working order to minimize pollutant emissions. Fugitive dust would also result from proposed construction activities. The contractor would be required to address dust suppression activities. Adverse impacts to air quality resulting from the proposed activity would be short term and temporary during construction only. The No Action Alternative would result in fewer emissions overall and less impact to air quality.

Mitigation Measures

Temporary roads on the site during construction should be constructed of permeable asphalt like millings, gravel, or similar material to reduce airborne particles. Periodic wetting during construction and home removal would reduce fugitive dust. The contractor shall appropriately cover any fill stored on site during unit installation or removal. These measures would help reduce air quality impacts on asthmatics, seniors, and other sensitive residents.

Vegetation and Wildlife

The proposed site consists of an existing cleared and graded area of approximately 6.04 acres with approximately 24.96 acres of forest that would be cleared. The proposed Action Area is located within the city limits of Joplin and is surrounded by urban features including commercial and medical facilities, roads, and residential areas, with surrounding or nearby utilities. Site preparation for construction of the temporary facilities would require clearing and grading the majority of site. Maximum clearing limits would encompass 24.96 acres of forest, consisting of mixed hardwoods including oak, elm, sycamore, black cherry, walnut, hickory, sassafras, and other species, as well as shrubs and herbaceous vegetation, providing habitat for both terrestrial and avian wildlife. The presence of deer was noted during a site visit to the property on June 28, 2011. Overall, habitat quality in the immediate project area is high related to plant species composition. However, the site is isolated from other tracts of forest and lacks a wildlife corridor to connect the site to other habitats, thus limiting the sites suitability as an area of high value to terrestrial wildlife, such as deer, coyotes, raccoons, opossums, and other species. The Proposed Action would have minimal impact on wildlife populations and overall, minor impacts to vegetation. The No Action Alternative would entail no construction or preparation of sites for temporary emergency housing of tornado victims; therefore, there would be no impacts to either vegetation or wildlife.

Mitigation Measures

The project would be required to minimize, to the maximum extent practicable, the extent of forest clearing by using only those areas necessary to construct the temporary facilities. If practicable, select trees and vegetation would be retained if possible between entranceways and temporary structures to minimize removal. All disturbed areas should be stabilized during and immediately after construction and should be seeded and/or replanted with shrubs and trees.

Threatened and Endangered Species

The project's effect on threatened and endangered species has been determined to be negligible. Both the USFWS and MDC were contacted by email and requested to evaluate the site for potential use by Federally listed or state listed threatened and/or endangered species with potential to occur in Jasper County. The USFWS responded on June 30, 2011, by stating that "The Federally protected Indiana bat may occur in southwest Missouri, including Jasper and Newton Counties but known records are from 60 miles away. Normally, we would recommend that a non-forested area be chosen for construction activities. But we understand the urgency of the situation in Joplin, so we do not have any further comments on the project under Section 7 of

the Endangered Species Act” (Attachment 3, Figure 3, USFWS Comments). The MDC provided a response on June 29, 2011, stating that “there are no state endangered species or species or natural communities of conservation concern known to occur on the area. Based on the information in the database and the description of the area, it is unlikely there will be impacts to state-listed species” (Attachment 4, Figure 4, MDC Determination of No Effect). The No Action Alternative would entail no construction or preparation of sites for temporary medical facilities; therefore, there would be no impacts to threatened or endangered species.

Mitigation Measures

There are negligible impacts to threatened and endangered species; therefore mitigation measures are not required.

Cultural Resources

Historic and archaeological resources are protected by a number of statutes and regulations at all levels of government and must be taken into consideration during the NEPA process. Prior to the implementation of a Proposed Action, potential impacts to historic and archaeological resources must be reviewed. Section 106 of the National Historic Preservation Act (NHPA) requires federal agencies to consider the effects of Proposed Actions on historic properties. Historic properties must also be given consideration under NEPA, and Section 106 encourages maximum cooperation with NEPA. The National Register of Historic Places (NRHP) is a federally maintained list of districts, sites, buildings, structures, objects, and landscapes significant in American history, prehistory, architecture, archaeology, engineering, and culture. Archaeological sites are places where past peoples left physical evidence of their occupation. Sites may include ruins and foundations of historic-era buildings and structures. Native American cultural resources may include human skeletal remains, funerary items, sacred items, and objects of cultural patrimony. Historic properties can also include traditional cultural properties (TCPs). The Proposed Action is located in Jasper County, in southwestern Missouri. The site of the Proposed Action is located in the city of Joplin Missouri, south of 28th Street between Pitcher Ave, the eastern border and South Jackson Ave, the western border. The sites southern limit is 32nd Street. Coordination was initiated with the Missouri State Historic Preservation Office (SHPO) on June 29, 2011. The Missouri SHPO issued an email dated June 29, 2011, that provided written documentation that there are no historic or cultural resources sites within the temporary hospital facility site. The Missouri SHPO’s response provides a determination that the Proposed Action will have No Effect on historic properties (Attachment 5, Figure 5, SHPO Determination of No Effect). The No Action Alternative would entail no construction or preparation of sites for temporary medical facilities; therefore, there would be no impact to any known properties listed; on or eligible properties for listing on the NRHP.

Mitigation Measures

There are no historic or archaeological issues associated with the Proposed Action, therefore mitigation measures are not required. In accordance with the NHPA, if unanticipated historic or cultural materials are discovered during construction, all construction activities shall immediately cease within 100 feet of the materials until their cultural affiliation and ultimate

disposition are determined in consultation with the Missouri SHPO, FEMA Environmental Liaison Officer and other interested parties.

Socioeconomic/Recreation

The Proposed Action is located in the City of Joplin in Jasper County, located in southwestern Missouri. Based on the U.S. Census 2010 data, there were 114,756 people, 43,625 households, and 28,982 families residing in the county. Prior to the storms, the population density was 179 persons per square mile. The racial makeup of the county was 92.1 percent White, 1.7 percent Black or African American, 1.3 percent Native American, 0.9 percent Asian, 1.7 percent from other races, and 2.3 percent from two or more races. Hispanic or Latino, of any race, comprised 3.2 percent of the population. There were 28,982 households, out of which 32.4 percent had children under the age of 18 living with them, 49.5 percent were married couples living together, 13.0 percent had a female householder with no husband present, and 33.6 percent were non-families. Of the households, 27.3 percent were made up of individuals and 11.0 percent had someone living alone who was 65 years of age or older. The average household size was 2.57 and the average family size was 3.13. The median age was 34.4 years. The median income for a household in the county was \$37,294, and the median income for a family was \$43,710. The per capita income for the county was \$19,513. About 14.6 percent of families and 18.4 percent of the population were below the poverty line, including 25.1 percent of those under age 18 and 10.2 percent of those aged 65 or older. The labor force in Jasper County totaled approximately 57,069 in 2010, which represents a decline of 6.2 percent from 2005.

Industries providing employment are:

- Management, professional, and related occupations (26.1 percent).
- Sales and office occupations (25.7 percent)
- Production, transportation, and material moving occupations (19.3 percent)

The Jasper County unemployment rate in 2010 was 8.0 percent. In 2010, the types of workers were:

- Private wage or salary: 83.4 percent
- Government: 8.9 percent
- Self-employed, not incorporated: 7.7 percent
- Unpaid family work: 0.1 percent

The Proposed Action would result in significant social and economic improvements. The proposed action would have a positive impact on public health and safety, community cohesion, and employment in the area. The negative impacts from the loss of the St. Johns, a critical medical facility, would be significantly lessened by the construction of the planned temporary medical services. During site development, staging, and placement of the modular medical facilities, short-term negative impacts would likely occur such as an increase in noise levels, an increase air emissions and an increase traffic volume. None of these are expected to be significant. Additionally, it is likely that rebuilding of the surrounding devastated residential and commercial properties will be concurrent with hospital activity and impacts due to the construction of the temporary medical facilities will comprise only a fraction of the expected

activities. Safety concerns related to potential increases in traffic volume can be attenuated through the appropriate placement of construction and safety signage.

These effects would be short-lived and would terminate when site development was complete. The No Action Alternative would entail no construction or preparation of the site for the temporary hospital facilities. The residents and city of Joplin would not benefit from the replacement facilities, alternate facilities would face overcrowding.

Mitigation Measures

There are negligible socioeconomic impacts, therefore mitigation measures are not required. The proposed action would result in enhanced socioeconomic conditions.

Environmental Justice

Executive Order 12898, Environmental Justice, requires each federal agency to identify and address, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income households in the United States. The Proposed Action would not have disproportionately high and adverse impacts on minority or low-income populations. The level of commitment is proportional to the level of need of the affected community, regardless of socioeconomic status. The No Action Alternative would entail no construction or preparation of sites for temporary medical facilities; therefore, there would be no impacts to minority or low-income populations.

Mitigation Measures

There are no impacts to minority or low-income populations due to the Proposed Action, therefore mitigation measures are not required.

Noise

Noise is defined as “sound undesirable because it is intense and/or loud enough to damage hearing, interferes with speech communication and sleep, or is annoying. Sound varies simultaneously in level (or loudness) and frequency content (pitch), as well as in time of occurrence and duration. The fundamental measure of sound level is expressed in unit of decibels (dB)) using a logarithmic scale.

It is the policy of Federal agencies to assess long-term, cumulative exposure to environmental noise in terms of day-night average sound level (DNL). The Federal Interagency Committee on Urban Noise has developed land use compatibility guidelines for noise. DNL values of 65 dBA and less are normally compatible with residential land uses.

Potential noise impacts associated with construction of the Proposed Action will be reduced to the maximum extent possible. Once the temporary medical facilities are established, some additional noise would be generated from the vehicles and activities of people working at or coming to the hospital. While noise will continue to exist, noise levels would not be expected to

result in any significant long-term adverse impacts to residents who redevelop their homes in the adjacent areas. The No Action Alternative would entail no construction or preparation of the site therefore, there would be no noise impacts.

Mitigation Measures

If necessary, noise reduction measures would be instituted. These measures include:

- 1) restricting the 24-hour construction schedule
- 2) using a 7 a.m. to 7 p.m. construction schedule
- 3) completing construction closest to potential sensitive receptor first; and/or
- 4) completing noisier activities during the day if using a 24-hour schedule.

Safety and Security

Safety and security issues analyzed as part of the Proposed Action include the health and safety of the individuals working on site development activities, transporting hospital units to the site, and the well-being of the people living in or adjacent to the site. For implementation of the Proposed Action, the contractor's construction engineer will identify and rectify potential safety hazards at the selected site staging and construction.

Safety during construction is a high priority for both the personnel constructing the sites, and residents associated with the Proposed Action. An on-site review was conducted by an MDNR geologist to evaluate the site's potential to harbor hazardous conditions associated with historical mining operations (Attachment 6, Figure 6, MDNR Geological Survey Program Report). The review included mining features that had been previously located, and where historical mapping depicted features associated with mines and/or mine shafts. His post-visit observations, reported by the Missouri Geological Survey Program office, concluded "The operations observed were primarily small depressions with adjoining mounds of chat. Mr. Pierce reported that none of the operations within the footprint showed evidence of being a vertical shaft; however, three of depressions have concrete and were littered with trash. The concrete may be related to mining; however, it is also possible that it was dumped at a later date." Except for two locations, where mine features consisting of depressions existed, the remaining eight mine feature sites are located outside of the construction footprint for the project (Attachment 7, Figure 7, Joplin Missouri-Proposed Temporary Hospital Site-Mine Features-EPA Sample Locations).

Construction is anticipated to be performed in phases to better manage safety considerations. First aid and other medical services would be readily available throughout the duration of site development. To assure safety, the contractor will develop and obtain approvals of a construction management plan, a quality plan, an accident prevention plan, and an environmental protection plan. The construction management plan should include steps to ensure that areas where grading or construction would occur in the vicinity of mine features are investigated prior to performing work. Chain-link fences will be provided for site security and safety. The site for the Proposed Action will be designed to meet the guidelines established by the Uniform Federal Accessibility Standards (UFAS) standards including the required number of UFAS compliant units. The modular hospital units will be installed to comply with the appropriate manufacturer's requirements, the most up-to-date safety procedures, federal, state, and local codes and ordinances, including safety precautions in installing anchors that will maximize safety and

reduce risks during severe weather events. Emergency shelters would be included to accommodate the hospital patients, staff, and others, including individuals with limited mobility and disability.

Fire and police protection would be provided by the City of Joplin and/or Jasper County. In addition, St. John's employs its own security force to monitor the facilities and activities. Adverse impacts resulting from the safety and security issues associated with this project would be minor. The No Action Alternative would entail no construction or preparation of sites for temporary emergency housing of tornado victims; therefore, there would be safety or security impacts.

Mitigation Measures

Safety and security mitigation measures would include the use of BMPs for construction and the installation/implementation of approved safety and management plans, phased construction, UFAS considerations, and appropriate signage and fencing. The contractor will post appropriate signage and fencing to minimize potential adverse public safety concerns. Appropriate signage and barriers should be in place prior to construction activities in order to alert pedestrians and motorists of project activities and traffic pattern changes. The contractor will also place fencing around the site perimeter to protect residents from vehicular traffic on surrounding roads and will provide 24-hour security services at the site during construction, if needed. To minimize worker and public health and safety risks from project construction and closure, all construction and closure work will be done using qualified personnel trained in the proper use of construction equipment, including all appropriate safety precautions. Additionally, all activities will be conducted in a safe manner in accordance with the standards specified in Occupation Safety and Health Administration (OSHA) regulations.

Areas where grading or construction would occur in the vicinity of mine features should be investigated prior to performing work to ensure that no underground hazards exist. These areas should be located, marked, and evaluated prior to construction by a person qualified to perform such work and to make recommendations to mitigate unforeseen conditions.

Hazardous Materials and Toxic Wastes

A review of potential hazardous and toxic materials associated with the site and surrounding areas was conducted. Information was gathered based on records and observations made of the site during field reconnaissance surveys on June 28 and July 5. MDNR staff provided written documentation from Federal and State resources on hazardous and toxic wastes, including superfund sites, underground storage tanks, hazardous waste or resource recovery facilities, brownfields and voluntary clean-up sites. Based upon the written documentation it was concluded that no hazardous sites exist in the vicinity of the proposed project (Attachment 8, Figure 8, MDNR Hazardous Waste Site Maps). On-site evaluations for lead contamination were conducted by a representative from the EPA. The site was evaluated using visual observations and sampling with a Portable X-Ray Fluorescence (XRF) instrument. Visual observations search for a lack of vegetation which, in known mining areas is indicative of elevated levels of mine

waste, including lead, zinc, and cadmium. Observance of chat like materials is also indicative of elevated levels of mine waste. Visual observations, based on site reconnaissance and data from the MDNR's Inventory of Mines, Occurrences and Prospects database and repository mapping, revealed surface features associated with mining at several locations on the site. Elevated readings of lead above remediation criteria were measured at some of the locations associated with these features, primarily along the southern perimeter of the site (Attachment 7, Figure 7, Joplin Missouri-Proposed Temporary Hospital Site-Mine Features-EPA Sample Locations and Attachment 9, Figure 9, EPA Site Review). The sites with elevated readings (sites 8, 9, and 10) are not within the construction footprint. The No Action Alternative would entail no construction or preparation of sites for temporary medical facilities. No hazardous materials were observed at the site, therefore there would be no impacts from hazardous materials.

Mitigation Measures

The process of clearing and grading the site may reveal earthen materials containing elevated levels of lead. These areas should be evaluated after clearing/ground disturbance to establish remediation needs. Areas with averages above 400 parts per million (ppm) of lead should be covered in accordance with EPA guidelines. Other hazardous materials were not observed at the site or revealed through a thorough evaluation of available databases and other information. However, if any are found between start of construction and final site closure, all hazardous materials shall be remediated, abated, or disposed of as appropriate, and otherwise handled in accordance with applicable local, state, and federal laws and regulations. Alternatively, the site could be abandoned in view of finding another site that better meets the identified project purpose and need.

Traffic and Transportation

Large vehicle traffic within the general project area would increase due to the ingress and egress of construction equipment. There would also be an increase in traffic of passenger vehicles related to construction work schedules. However, these traffic impacts would be limited to the duration of construction. After the hospital is established there will likely be a permanent increase in local passenger traffic around the project due to hospital associated business. The No Action Alternative would entail no construction or preparation of the temporary hospital site therefore, there would be no impacts to traffic and transportation.

Mitigation Measures

Due to the increased traffic volume associated with the construction equipment and worker vehicles, the contractor should coordinate with the City Public Works Department to assure that the local level of service on the roadway remains adequate. The contractor should design the roadways to allow multiple ingress and egress to site. The roads and lane widths should be designed to allow ample room for fire and emergency apparatus to pass as defined by local codes. The roadways should at a minimum be graveled and compacted to facilitate maintenance and upkeep, local environment, traffic volume, and usage.

K. Public Involvement

Due to the emergency nature of this action, a public notice will be issued. A Public Notice and Public Notice of Availability, would be published in the *Joplin Globe* and other local newspapers. The Public Notice and the DEA would also be posted on the Public Notice Board at the Joplin City Hall, 602 South Main Street, Joplin, Missouri 64801. If no substantive comments were received, the DEA would become Final and the initial Public Notice would also serve as the final Public Notice. If no public comments were received, this document serves as the final EA. If comments are received they would be addressed and become incorporated into a Final EA.

L. Conclusion

Attachment 10 shows photographs of the devastation to Joplin, Missouri after the EF-5 tornado that occurred on May 22, 2011. The Proposed Action will involve the construction of temporary medical facilities to enable health professionals to provide vital medical and health related services and facilities to the residents of Joplin and the surrounding region and to relieve the burden that the loss of the hospital has placed on the remaining medical facilities in the region. Development of the site will require a number of steps including surveying, clearing, stripping, soil testing, grading, utility and access road design and installation, placement of modular components, and the installation of stormwater and erosion control measures.

On the basis of the findings of this DEA and coordination with the appropriate agencies, it is our initial determination that implementation of the Proposed Action and mitigation measures described in this DEA would not have any significant adverse impacts to the human or natural environment. All requirements of NEPA will be satisfied after the review period for the Environmental Assessment and Finding of No Significant Impact.

M. References

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Executive Order 11990. 1977. Protection of Wetlands, 42 Federal Register (FR) 26961.

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16 U.S. Code (USC) 470 et seq. National Historic Preservation Act of 1966. Public Law 102-575, as amended.

16 USC 470aa et seq. Archaeological Resources Protection Act of 1979. Public Law 96-95, as amended.

16 USC 1531 et seq. Endangered Species Act of 1973. Public Law 100-478, as amended.

25 USC 3001 et seq. Native American Graves Protection and Repatriation Act. Public Law 101-601.

33 USC 1251 et seq. Clean Water Act. Public Law 100-4, as amended.

42 USC 4321 et seq. National Environmental Policy Act of 1969. Public Law 91-190, as amended.

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U.S. Fish and Wildlife Service. State-listed Species Information.
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U.S. Fish and Wildlife Service. 2011 (last updated). Wetlands Mapper
<http://www.fws.gov/wetlands/Data/Mapper.html> Accessed July 2011.

U.S. Geological Survey Topographic Maps. “Joplin West” Quadrangle.

Agencies Consulted:

Environmental Protection Agency

Missouri Department of Conservation

Missouri Department of Natural Resources

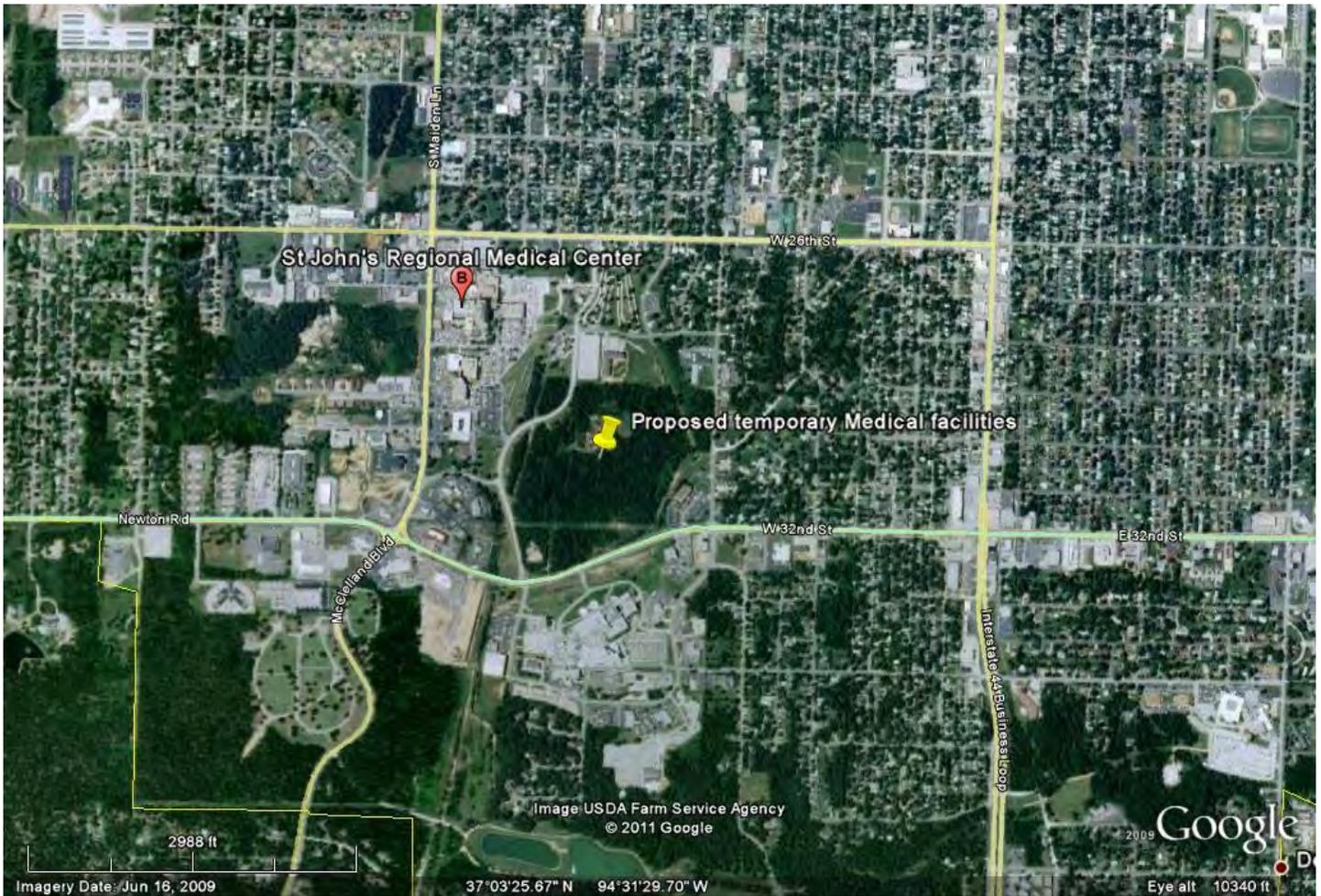
Missouri State Historic Preservation Officer

Natural Resources Conservation Service

U.S. Army Corps of Engineers

U.S. Fish and Wildlife Service

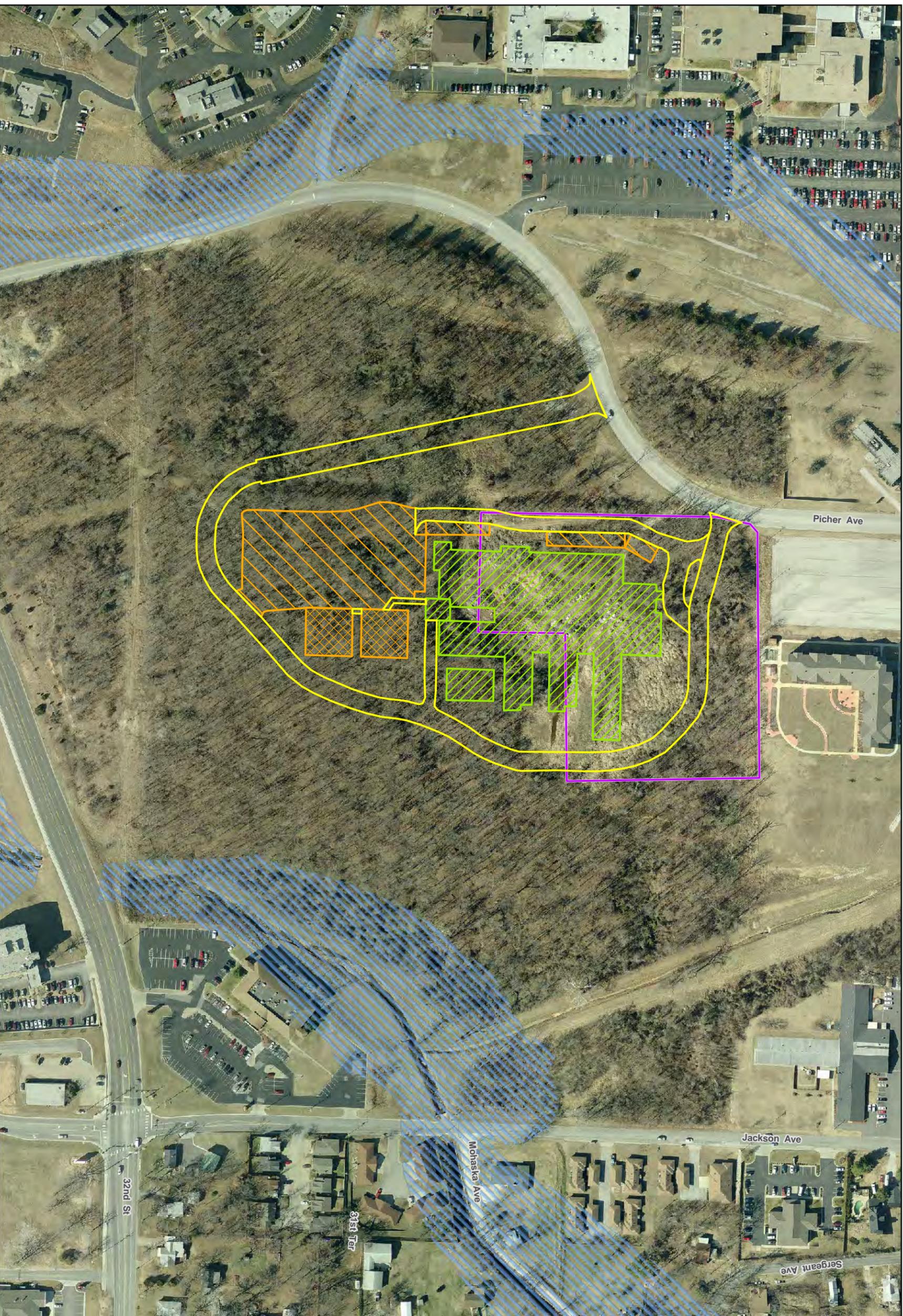
Figure 1, Vicinity Map
(See attached)



St. John's Hospital-Proposed Temporary Medical Facilities Site

Figure 2, Joplin Missouri-Proposed Temporary Hospital Site
(See attached)

JOPLIN MISSOURI - PROPOSED TEMPORARY HOSPITAL SITE

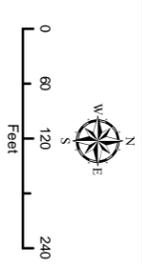


Legend

- Hospital Site - ~31.00-acres
- Road/Walkway - ~3.21-acres
- Building/Structures - ~2.81-acres
- Helipad - ~0.44-acre
- Parking - ~1.98-acres
- National Wetland Inventory
- Cleared Area - ~6.04-acres
- FEMA - 100 year Flood Zone

FEMA FIRM Panel: 29097C0267D
Published: 3/16/2006

Location Map



DISCLAIMER - While the United States Army Corps of Engineers (hereinafter referred to as USACE) has made a reasonable effort to ensure the accuracy of the maps and associated data, it should be noted that the maps and associated data are provided as a general guide only. USACE does not warrant, guarantee, or make any representation as to the accuracy, completeness, or timeliness of any of the data provided herein. The USACE, its officers, agents, employees, or servants shall not be held liable for any decisions made or actions taken or for any damages or losses of any kind, including but not limited to, those resulting from the use of the maps and associated data. By using these maps and associated data the user does so entirely at their own risk and without any liability to USACE. The user agrees to indemnify, defend, and hold USACE, its officers, agents, employees, or servants harmless from any and all claims, damages, losses, or expenses, including reasonable attorneys' fees, that may be incurred by USACE, its officers, agents, employees, or servants in any form whatsoever for any damages or losses of any kind, including but not limited to, those resulting from the use of the maps and associated data.

Figure 3, USFWS Comments
(See attached)

From: Rick_Hansen@fws.gov
To: [Bruce, Kevin J NAN02](#)
Cc: burnett.bryant@epa.gov; cheryl.seeger@dnr.mo.gov; [Henry, Debra J NWP](#); [Bavouset, Edward](#); [Ruben, Howard NAN02](#); [Sternburg, Janet MVS External Stakeholder](#); janice.steele@fema.gov; [Chang, Jennifer C NWD](#); jerry.prewett@dnr.mo.gov; [Deel, Judith MVS External Stakeholder](#); larry.pierce@dnr.mo.gov; [Cory, Luke M NWK](#); [Ganley, Michael J NAD](#); richard.hughes1@dhs.gov; [O'Donnell, Sean B NAN02](#); Amy_Salveter@fws.gov; Shauna_Marquardt@fws.gov; chelsea.klein@dhs.gov
Subject: Re: St. John's Hospital temporary medical facilities (UNCLASSIFIED)
Date: Thursday, June 30, 2011 4:33:01 PM

Kevin:

This is in response to your request for me to review the revised construction footprint for the St. John's Hospital-temporary medical facilities in Joplin Missouri. The revised plan will require the clearing/grading of an additional 29.33 acres of forest. Your memo indicated that the forested area consists of a variety of hardwood species and is dominated by oak trees generally ranging in sizes up to 3 feet in diameter. The federally protected Indiana bat may occur in southwest Missouri, including Jasper and Newton Counties but known records are from 60 miles away. Normally, we would recommend that a non-forested area be chosen for construction activities. But we understand the urgency of the situation in Joplin, so we do not have any further comments on the project under Section 7 of the Endangered Species Act. If you should have questions, please contact me at the address below.

Rick L. Hansen
U.S. Fish and Wildlife Service
Ecological Services
101 Park DeVille Drive, Suite A
Columbia, Missouri 65203
573-234-2132, ext. 106
fax 573-234-2181
rick_hansen@fws.gov

Figure 4, MDC Determination of No Effect
(See attached)

-----Original Message-----

From: Janet Sternburg [mailto:Janet.Sternburg@mdc.mo.gov]
Sent: Wednesday, June 29, 2011 6:30 PM
To: Bruce, Kevin J NAN02; Hansen, Rick MVS External Stakeholder;
burnett.bryant@epa.gov; Deel, Judith MVS External Stakeholder;
cheryl.seeger@dnr.mo.gov; larry.pierce@dnr.mo.gov; jerry.prewett@dnr.mo.gov
Cc: Ruben, Howard NAN02; Henry, Debra J NWP; Cory, Luke M NWK; Bavouset, Edward ;
O'Donnell, Sean B NAN02; Chang, Jennifer C NWD; Ganley, Michael J NAD;
richard.hughes1@dhs.gov; janice.steele@fema.gov
Subject: RE: St. John's Hospital temporary medical facilities (UNCLASSIFIED)

Kevin,

Thank you for seeking input from the Missouri Department of Conservation on state endangered species within the expanded site for the temporary location of St. John's Hospital. As with the original site, a review of the Natural Heritage Database and other data layers for the project in Section 15, T27N, R33W, Jasper County, Missouri showed that there are no state endangered species or species or natural communities of conservation concern known to occur on the area. Based on the information in the database and your description of the area, it is unlikely there will be impacts to state-listed species.

Should you complete a Natural Heritage Review of the site using the internet tool, you will learn the site is within the known range of the greater prairie chicken, gray bats and karst topography. However, while the site is within the range of these species, we have no nearby records for either species. Karst features (e.g., springs, sinkholes, cave openings) might be present on the area. For future reference and to avoid impacts to karst features, I have attached the best management practices for this resource.

If you have questions on this response or if I may be of further assistance, please let me know.

Janet

Janet Sternburg
Policy Coordinator
Missouri Dept. of Conservation
P. O. Box 180
Jefferson City, MO 65102
573-522-4115 Ext. 3372
Fax. 573-5264495
janet.sternburg@mdc.mo.gov

UPS/FED Ex Address:
2901 W. Truman Blvd.
Jefferson City, MO 65109

Figure 5, SHPO Determination of No Effect
(See attached)

-----Original Message-----

From: Deel, Judith [mailto:judith.deel@dnr.mo.gov]

Sent: Wednesday, June 29, 2011 2:20 PM

To: Bruce, Kevin J NAN02; Hansen, Rick MVS External Stakeholder; Sternburg, Janet MVS External Stakeholder; burnett.bryant@epa.gov; Seeger, Cheryl; Pierce, Larry; Prewett, Jerry

Cc: Ruben, Howard NAN02; Henry, Debra J NWP; Cory, Luke M NWK; Bavouset, Edward ; O'Donnell, Sean B NAN02; Chang, Jennifer C NWD; Ganley, Michael J NAD; richard.hughes1@dhs.gov; janice.steele@fema.gov

Subject: RE: St. John's Hospital temporary medical facilities (UNCLASSIFIED)

Welcome, Kevin,

The State Historic Preservation Office has reviewed the information provided and determined that there will be "no historic properties affected" by the expansion of the St. John's Hospital temporary medical facilities project. While there may have been an historic site, as suggested by the round brick feature, the area appears to have been extensively developed and disturbed, and it is highly unlikely that there would be sufficient integrity to have a site with the potential to yield significant information.

Judith Deel
Compliance Coordinator
State Historic Preservation Office
P.O. Box 176
Jefferson City, Missouri 65102
judith.deel@dnr.mo.gov
573/751-7862 (phone)

Figure 6, MDNR Geological Survey Program Report
(See attached)

-----Original Message-----

From: Price, Peter [mailto:peter.price@dnr.mo.gov]

Sent: Wednesday, July 06, 2011 5:04 PM

To: Bruce, Kevin J NAN02; Cory, Luke M NWK

Cc: Prewett, Jerry; Pierce, Larry; Allen, Brian; Willoughby, Randall; Hall, Wendell

Subject: Situation report: St. Johns Hosp. and South Middle School Athletic Fields

Situation report

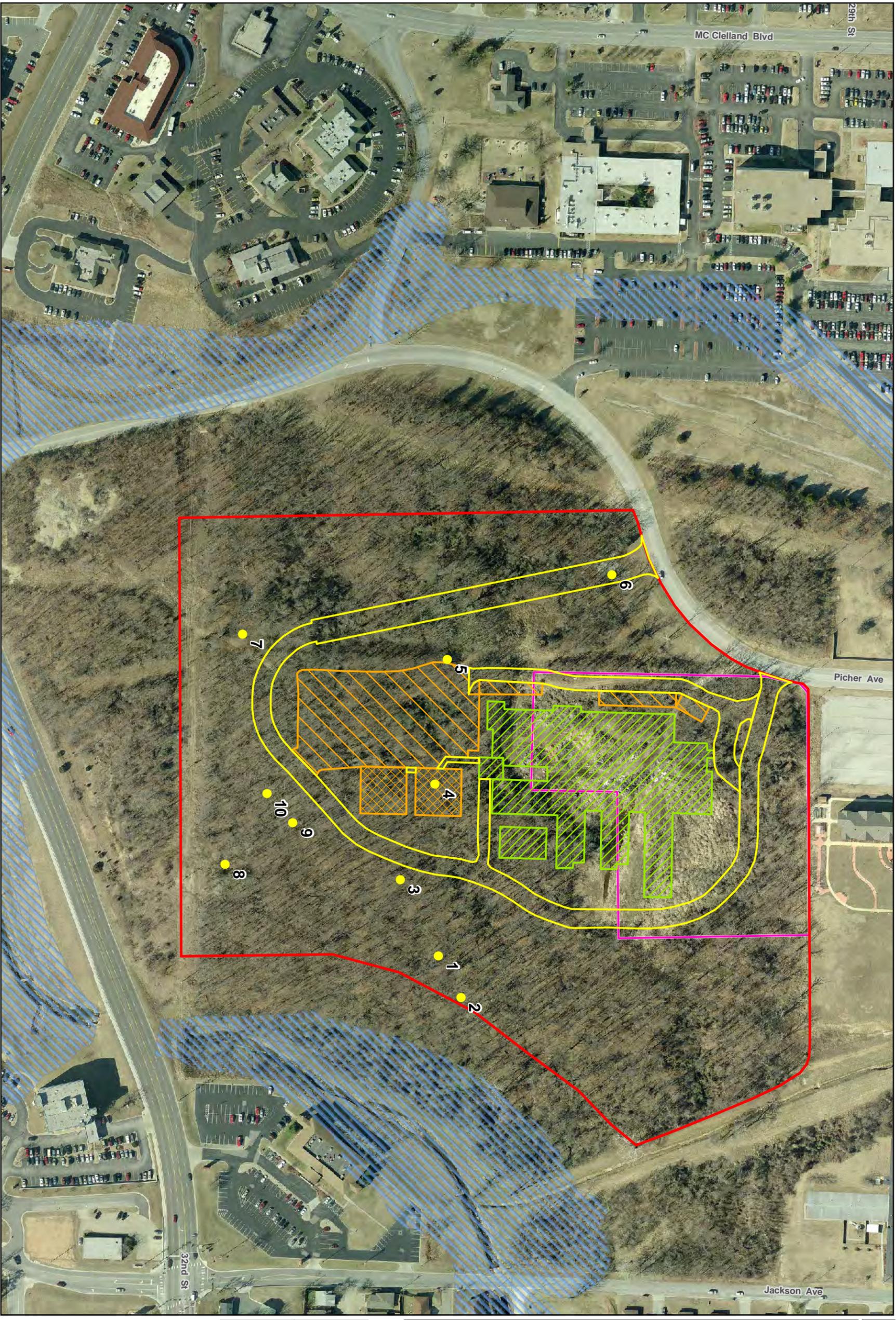
July 5, 2011

St. John's Hospital Site, SW 1/4, Sect. 15, T. 27 N., R. 33 W., Jasper County, Mo.

Mr. Pierce met with Kevin Bruce, US COE, and viewed several mining areas at the expanded St. John's Hospital footprint. The operations observed were primarily small depressions with adjoining mounds of chat. Mr. Pierce reported that none of the operations within the footprint showed evidence of being a vertical shaft, however, three of depressions have concrete and were littered with trash. The concrete may be related to mining, however, it is also possible that it was dumped at a later date.

Figure 7, Joplin Missouri-Proposed Temporary Hospital Site-Mine
Features-EPA Sample Locations
(See attached)

JOPLIN MISSOURI - PROPOSED TEMPORARY HOSPITAL SITE - MINE FEATURES - EPA SAMPLE LOCATIONS

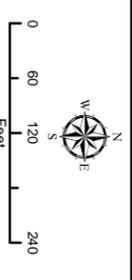


Legend

- Road/Walkway - 3.21 -acres
- Building/Structures - 2.81 -acres
- Helipad - 0.44-acre
- Parking - 1.98-acres
- Project Site - 31.00-Acres
- 9.60 Acres
- Cleared Area - 6.04-acres
- 100 year Flood Zone
- Mining Feature - EPA Samples

FEMA FIRM Panel: 29097C0267D
 Published: 3/16/2006

Location Map

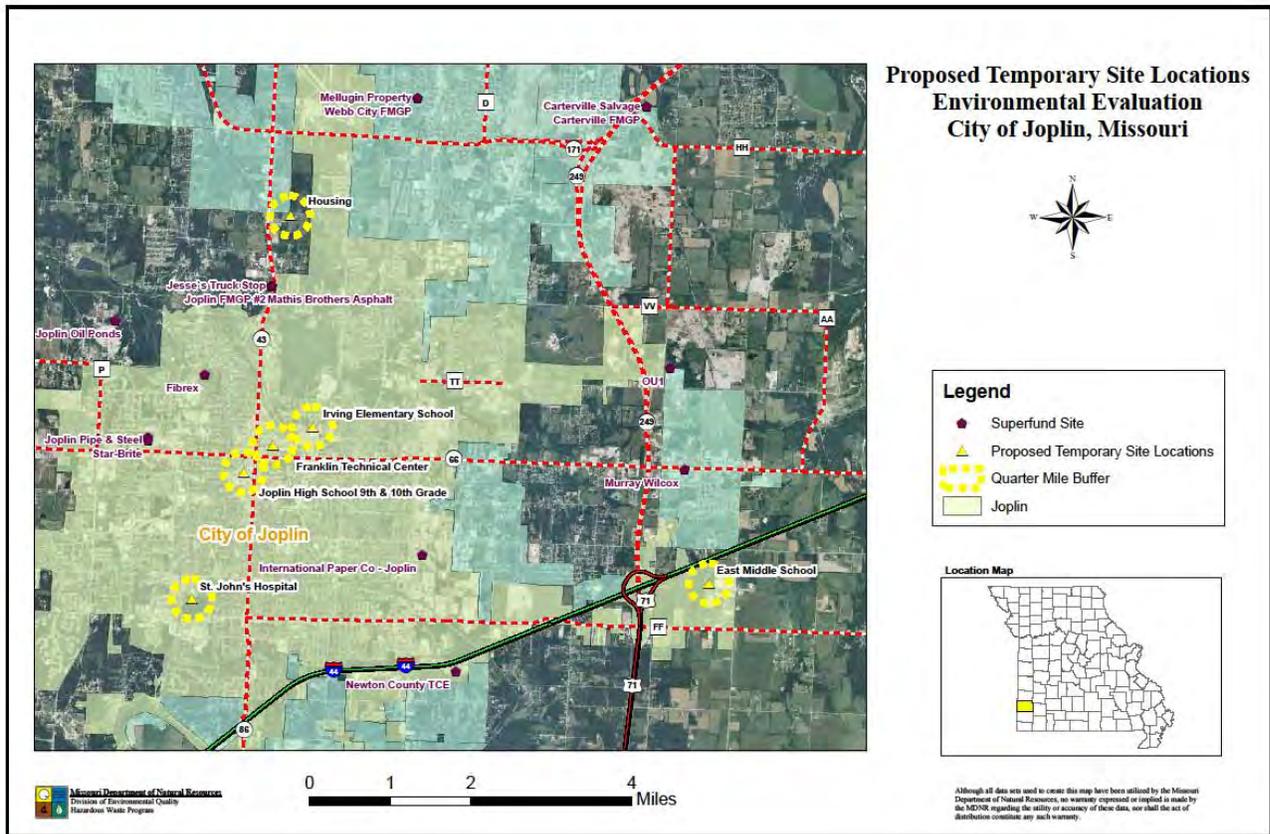


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Figure 8, MDNR Hazardous Waste Site Maps
(See attached)

Federal Facilities/Permitted Facilities/USTs/BVCPs: Vicinity of Critical Public Facilities

St Johns Hospital/Franklin Tech Ctr/Washington Ed Ctr/Memorail School/Cross Roads Ind. Park



From: Jackson, Shelly

Sent: Tuesday, June 21, 2011 8:22 AM

To: Allen, Brian

Cc: Warren, Julieann; Stinson, Dennis; Nussbaum, Rich; Garrett, Valerie

Subject: Joplin Tornado EIR-Superfund

There are no Superfund Sites within a quarter mile of the six proposed temporary locations in Joplin. A .pdf map is attached to show where the nearest Superfund sites are located.

Shelly

573-751-1288

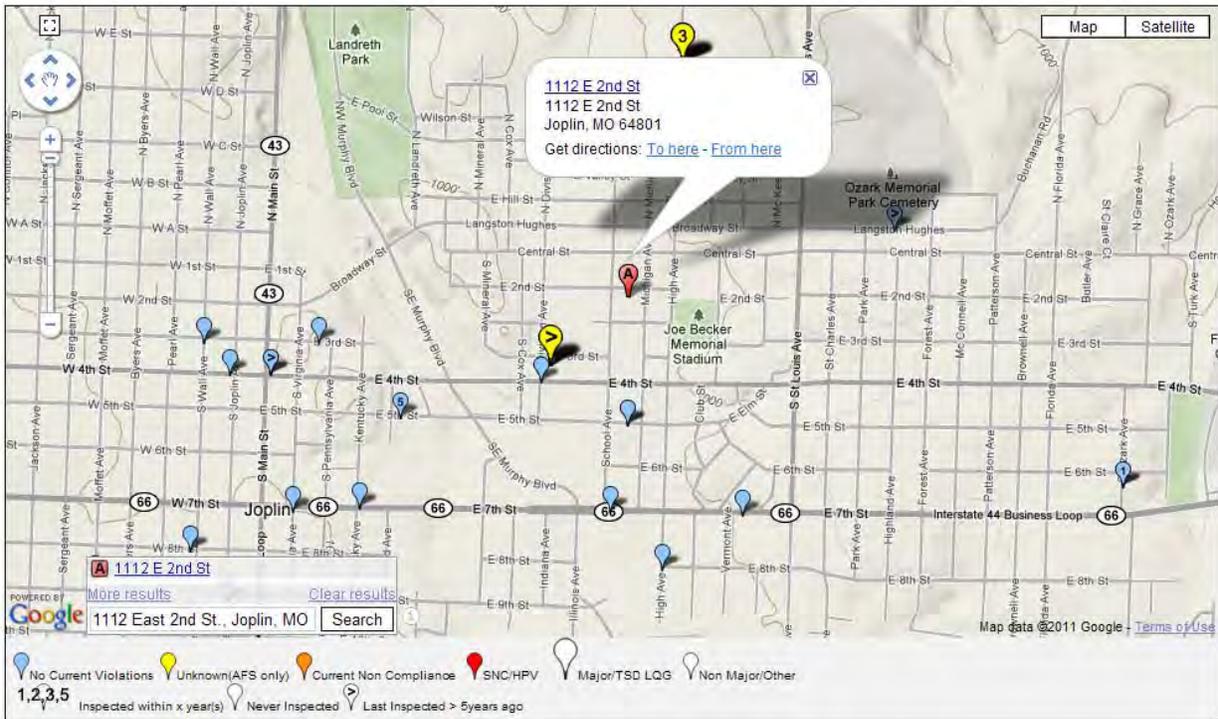
The Federal Facilities Section does not have any sites within a quarter mile radius of the six temporary facility locations in the Joplin area.

Shawn Muenks, P.E.

Missouri Department of Natural Resources P.O. Box 176, Jefferson City, MO 65102-0176

Ph: (573)751-3107

email: shawn.muenks@dnr.mo.gov

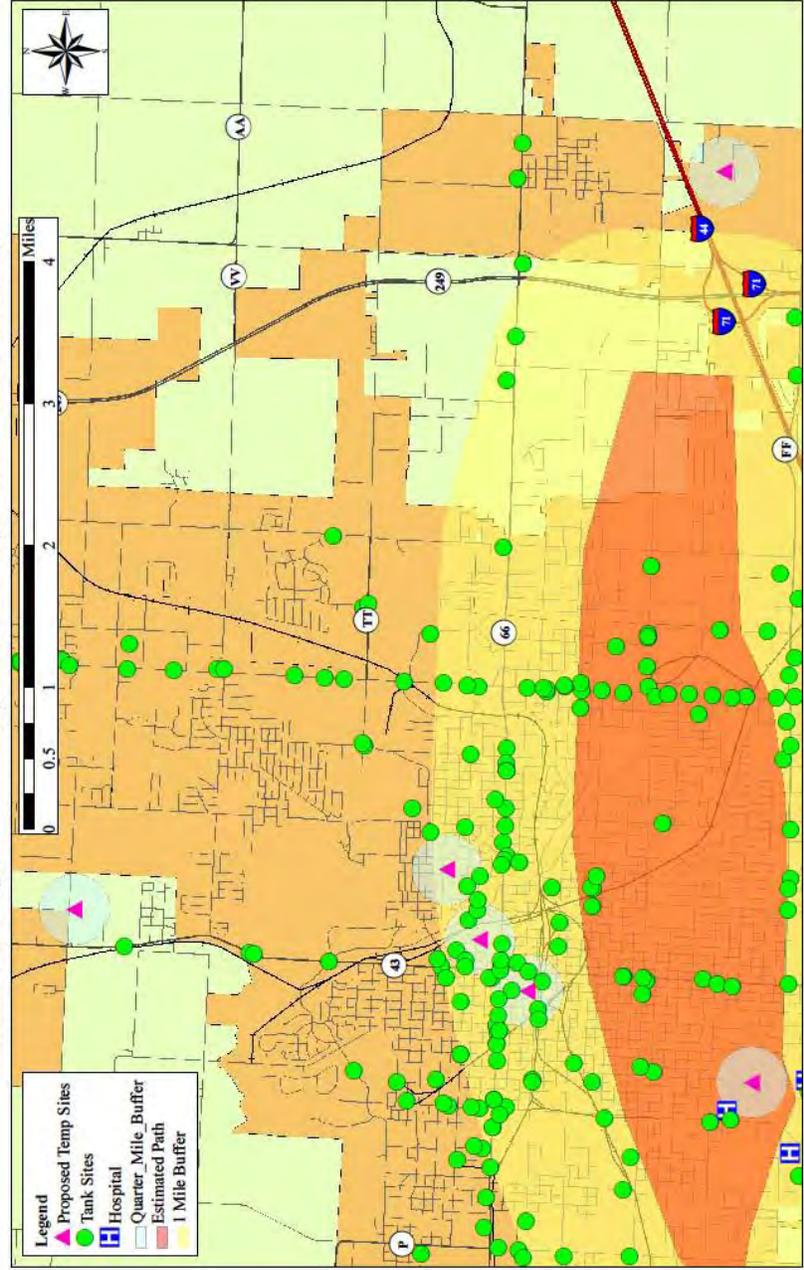


We don't have any former interim status or permitted hazardous waste or resource recovery facilities within 1/4 mile of the proposed locations. That said, I did go into EPA's ECHO database and pulled maps of regulated facilities (mainly hw generators) in close proximity to the proposed locations and identified a few of those for your consideration. I don't foresee that any of these would be problematic with respect to siting infrastructure but thought you should be aware just in case.

Richard A. Nussbaum, P.E., R.G.
 Chief, Permits Section
 Hazardous Waste Program
 (573) 751-3553
rich.nussbaum@dnr.mo.gov

Joplin, Missouri

Potentially Impacted Underground Storage Tank Sites (Tornado)



Although data sets used to create this map have been compiled by the Missouri Department of Natural Resources, no warranty, expressed or implied, is made by the department as to the accuracy of the data and related materials. The act of distribution shall not constitute any warranty, and no responsibility is assumed by the department in the use of these data or related materials.

Missouri Department of Natural Resources
Division of Environmental Quality
Hazardous Waste Program



Attached are maps showing the registered tank sites located within 1/4 mile of the proposed sites. As you can see, there are no registered tank sites within 1/4 mile of the proposed hospital site, or the proposed housing site or the proposed East Middle School site.

I checked the records in our database for the sites that fell within the 1/4 mile radius of the other proposed locations. This is what I found:

Irving Elementary School -- There are 3 registered petroleum storage tank sites within 1/4 mile of the proposed Irving Elementary School site. (One of the sites didn't get plotted on the map, but is located at Jasper & 2nd & Division Avenue. right next to the proposed site) The tanks at all these sites have been removed and we have issued no further action letters for the sites. We have no information that would indicate there is contamination from any of these sites that would impact the proposed school at this location.

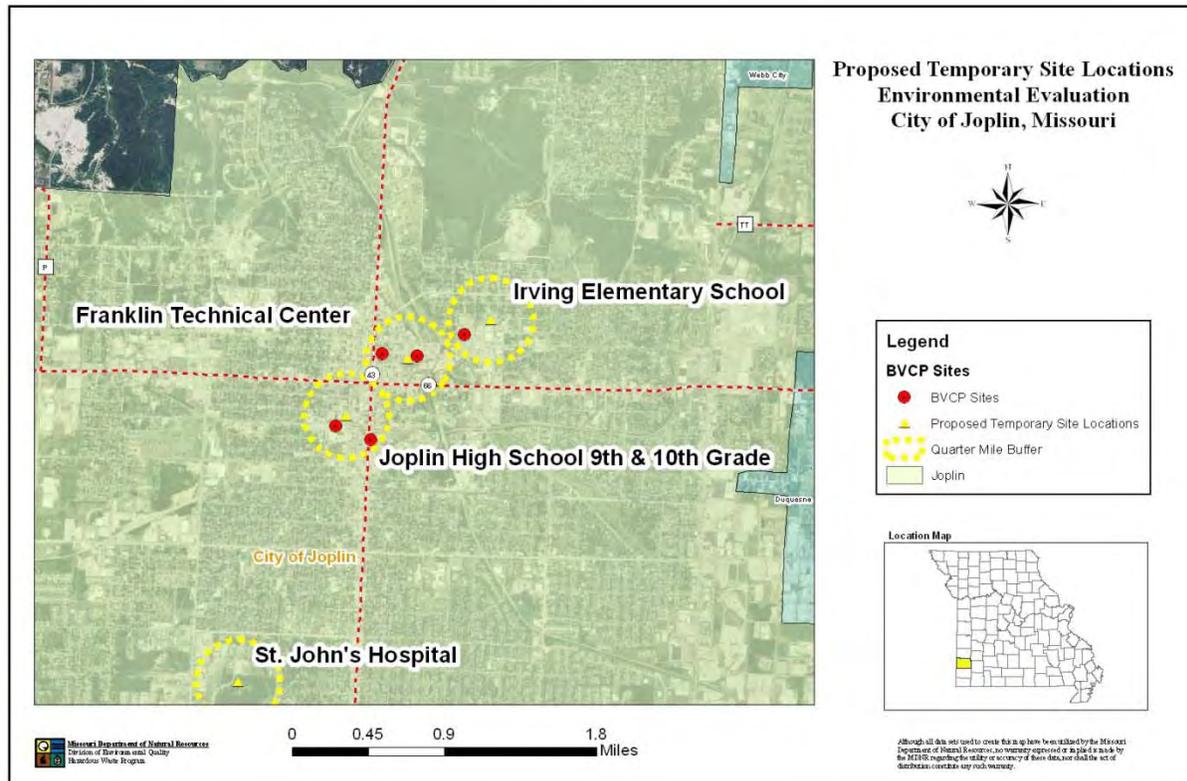
Franklin Technical Center -- There are 8 registered petroleum storage tank sites within 1/4 mile of the proposed Franklin Technical Center site. The tanks for all sites have either been removed or closed in place. No further action letters were issued for 5 of the sites (ST1884, ST1834, ST21040, ST1871, and ST2391). Two of the sites (ST20570 & ST1895) were closed before tank regulations were in place requiring closure reports to be submitted, so we have no reports for them and no data to show whether there was any release of petroleum products at those sites. The tanks at the last site (ST21530) were recently removed 2007 and we are still working with the consultant to complete the closure documentation so we can issue the no further action letter. We have no information to indicate there is any off-site contamination resulting from a release at this site that would pose any threat to the proposed relocation site. So, the only sites that might need further checking are ST20570 Larry Dickey Distribution @ 730 E. 5th Street, and ST1871 Continental Imports @ 402 E. 7th Street.

Joplin High School, 9th & 10th grades -- There are 8 registered UST sites within 1/4 mile of the proposed relocation for the Joplin High School 9th & 10th grades. Our data shows all of the tanks have been removed or closed in place. But only 3 of the sites (ST19880, ST11422, & ST8309) have no further action letters issued. The other 5 sites appear to have been closed prior to the UST regulations requiring closure reports. Therefore, we have no reports or data to show whether or not there was any release from the sites and further checking might be necessary on those. They are ST9871 Boyer Motor Co. @ 421 W. 7th Street; ST2637 Southwestern Bell @ 321 W. 8th Street; ST10643 Clark Service Station @ 929 S. Main; ST1836 Osborn Paper Co @ 1024 Beyers; and ST5625 Industrial Linens, Inc. @827 Virginia Ave.

Let me know if you need any thing else. Thanks.

Valerie Garrett
Hazardous Waste Program
Tanks Section
(573) 526-3385
(573) 526-8922

Brownfields/BVCP



Howard - please see below and attached docs for info related to Brownfields and/or voluntary cleanup sites. Looks like no concerns on proposed locations (proper) - but staff provided site info surrounding locations. I'd be glad to go over this with you as needed.

Brian Allen

Chief, Emergency Response/Field Services Environmental Services Program Missouri
Department of Natural Resources 573.526.3380 brian.allen@dnr.mo.gov

From: Surber, Jennifer

Sent: Tuesday, June 21, 2011 9:11 AM

To: Allen, Brian; Schmidt, Aaron; Nussbaum, Rich; Warren, Julieann; Muenks, Shawn; Garrett, Valerie; Vance, Steve; Hill, Michael; Schloss, Jeff

Cc: Seeger, Cheryl; Prewett, Jerry; Belcher, Jim; Bridges, Carey

Subject: RE: Street address locations for proposed locations for critical infrastructure

Brian,

There are no BVCP sites in the vicinity of the proposed locations for St. John's Hospital or the Fountain Road Temporary Housing. There are five BVCP sites located within a quarter mile of the proposed school locations, but please note that none of these are located at the exact addresses you list below. A JPG is attached showing the locations of these five sites, plus a spreadsheet that lists basic information about these sites, including their locations, status within BVCP, and BVCP project manager. Certificates of Completion and Environmental Covenants for the two closed sites (P.G. Walker, Joplin, and Union City Redevelopment), are available for download from this link:

<http://www.dnr.mo.gov/asp/hwp/bvcp/list.asp> I don't have detailed information about the remaining sites, but I don't see anything indicating any of them have contamination that may be migrating off-site. The listed project managers can be contacted for more details. No dry cleaner sites are in the vicinity of any of the areas of interest.

In addition to the five BVCP sites, there are four Brownfield Assessment sites that fall within a quarter mile of the proposed school locations. These sites are not on the map because we have no GIS data for them. These sites are NOT enrolled in the BVCP, but the BVCP did provide Phase I and II Environmental Site Assessments at these locations for the City of Joplin. Their addresses are below:

- Joplin Transfer & Storage, 507 East 5th St. (adjacent to Joplin FMGP)
- Joplin Plumbing Center, 1042 S. Main
- Joplin Service Station and Tint Shop, 1022 S. Main
- Gryphon Building Detention Area, directly west of Interstate Grocery Bldg (1027 S. Main)

Only one of these four has shown significant contamination: the Gryphon Bldg detention area, which has widespread lead and petroleum contamination in soil. There is no confirmation at this time the the contamination is migrating off-site, but no additional site characterization has been done since the Phase II in November/December 2010. You may contact me directly with questions about the four Brownfields Assessment sites.

This was the best info I could pull together at such short notice, so please feel free to call me with any questions. Thanks!

Jennifer Surber
Environmental Specialist III
Brownfields/Voluntary Cleanup Program
P.O. Box 176, Jefferson City, MO 65102-0176
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Figure 9, EPA Site Reviews
(See attached)

Evaluation of Critical Public Facility sites by USEPA

Hospital Site

The Hospital was evaluated using two standard practices. Visual observations and sampling with a Portable X-ray Fluorescence (XRF) instrument. Visual observations look for lack of substantial vegetation, in known mining areas this is indicative of elevated levels of mine waste. Observance of chat like materials is also indicative of elevated levels of mine waste. Mine waste levels of 800/400 parts per million lead (Pb) (see the attached Lead Protocol), Zinc (Zn) at elevated levels for terrestrial contamination and elevated levels of Cadmium (Cd) at levels exceeding 75 ppm.

Visual observations indicated no observable mine waste in the immediate area. Since the area had been dozed vegetation was not observable, however surrounding areas had substantial vegetation.

The following sampling data, obtained by use of standard sampling protocols using the NITON XRF, indicate no **levels of mine waste which exceed a health concern for humans, to include children.** (levels of concern are based on Site Risk Assessment data previously generated)

Hospital Site					
Pb	Zn	Cd	(ppm)		
1.	240	589	LLD	N37.05780	W094.52641
2.	484	363	LLD	N37.05774	W094.52608
3.	469	543	LLD	N37.05768	W094.52602
4.	108	417	LLD	N37.05755	W094.52668
5.	274	2281	LLD	N37.05746	W094.52689
6.	20	66	LLD	N37.05716	W094.52766

EPA Evaluation of St.Johns Hospital Expansion/Rebuild Site
5 July 2011

The evaluated site, which is located south of the current temporary hospital facilities, has a great deal of major vegetation, much of which has been impacted by the tornado. A walking, visual observation and sampling for mine waste remnants occurred at the accessible areas of the site.

The site has multiple features that indicate prospect mining occurred historically. There does not appear to be a great quantity of mine waste spread across the property, leading to the conclusion that most activity involved prospect mining. There does exist a limited number of overburden rock piles, adjacent to subsidence/collapse or mined features. The absence of quantities of “chat” or “tailings” indicates that limited quantities of ore would most likely have been taken to another site for processing.

Please find the sampling data collected on this date from the site. Most of the samples were taken adjacent to a subsidence/collapse feature.

Lat , Long	Lead or Pb	Zinc or Zn	Cadmium (Cd)	Description
1. 37.05669N, 94.52559W,	471;	355;		depression filled with concrete made of chat
2. 37.05682N, 94.52529W	353,	635;		area with rocks on surface and depression
3. 37.05647N, 94.52614W	73	114		depression or mine shaft feature
4. 37.05667N, 94.52683W,	49,	111		depression or mine shaft feature
5. 37.05674N, 94.52773W,	147,	703		depression or mine shaft feature
6. 37.05769N, 94.52834W	459,	708		not a pit; area along hospital roadway curve
7. 37.05556N, 94.52791W,	177,	13,000,	(Cd 76),	not a subsidence pit, along dirt road
8. 37.05546N, 94.52625W,	2,587,	30,000 –		along power line.
9. 37.05585N, 94.52655W,	1,637,	2,343 -		subsidence hole N of #8
10.37.05570N, 94.52676W,	1,156,	1,132 -		subsidence hole/mine shaft 4 to 6 feet deep

As the data indicates, and primarily adjacent to the mining features along the southern portion of the site, levels of lead are elevated above remediation criteria. The EPA and Missouri **Residential** Cleanup level,

based on risk assessment data, is 400 ppm lead. (Zinc is primarily a terrestrial hazard, but high levels can be indicative of mining activities). Cadmium cleanup values for Missouri non-residential sites is 60 ppm.

Although the data indicates elevated levels in select areas, and adjacent to the observed mine remnants, the process of clearing of the site may show other areas that are impacted by elevated levels of lead.

These areas however would/should be placed into a “remediated” status during construction activities.

The definition of “remediated” would mean areas with averages above 400 ppm lead would be covered in concrete, asphalt, clay of 6” or more with topsoil cover or a topsoil cover of at least 6”-12”, and in an area that would not be disturbed in any other way.

If you should have further questions or need assistance please do not hesitate to contact me at 620-719-7072.

Bryant Burnett, MSHS
CPT, USPHS
USEPA, Region 7
SME Lead, Joplin Tornado

Figure 10, Hospital Photographs after Joplin Missouri F5 Tornado
(See attached)



St. John's Regional Medical Center after the May 22, 2011 Tornado

