

Final Environmental Assessment
Fountain Road Temporary Housing Site
Joplin, Jasper County Missouri
FEMA-1980-DR-MO
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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: Prosperity Temporary Housing Sites

B. Environmental Assessment

This Environmental Assessment (EA) 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, but the town's emergency manager stated that the number was between 10% and 20%, with roughly 2,000 buildings destroyed. The Missouri Emergency Management Agency reported more than 990 injured and as of June 13, the death toll from the tornado stood at 152.

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. Displaced individuals and families are currently living in shelters and at other dispersed temporary housing locations. Therefore, the need exists to expedite the selection and development process of group site locations for temporary manufactured homes. Temporary housing will minimize the amount of time displaced individuals spend in shelters and at other dispersed locations.

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). Section 408 of the Stafford Act authorizes FEMA's Individual Assistance Program to provide emergency temporary housing for disaster victims whose homes are uninhabitable. The purpose of this project is to assist the Joplin residents in their recovery from the natural disaster by providing temporary housing.

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, where FEMA would not build temporary housing, and the Proposed Action, where FEMA would build temporary housing in Joplin, Jasper County, Missouri.

Alternative 1 – No Action Alternative

Under the No Action Alternative, FEMA would not fund the Proposed Action. Because the tornado destroyed approximately 10-20 percent of the houses and a large number of Joplin's residents remain in other locations with their families and friends, in travel trailers, and motels in other surrounding cities such as Carthage and Springfield. This will result in further economic and personal hardships for affected residents, disrupt school attendance and the school system, and further strain the county's social and economic infrastructure.

Alternative 2 – Temporary Housing on the Joplin Fountain Road Site (Proposed Action)

In considering the "range of reasonable alternatives," efforts were made to first use existing manufactured home sites. As a result of the number of people displaced by the Joplin tornado, existing manufactured home sites were limited and could not address the current need. The Proposed Action provides temporary housing for families displaced by the tornado in the Joplin vicinity of Jasper County, Missouri. This alternative would provide disaster victims with temporary housing on a group housing site located at 310 East Fountain Road, Joplin, Jasper County, Missouri. The proposed site is 5.75 acres in size and would enable the development of up to 48 manufactured homes at this location. The group site will include development of temporary gravel pads for housing foundation, emergency storm shelters, bus shelters, mailbox units, gravel and asphalt roadways, and all utilities related to the infrastructure of the community including a sewer system, waterline installation, phone, cable, and electric. FEMA expects that the manufactured homes will be hauled from the site to suitable locations elsewhere (to be determined on a case-by-case basis) when the temporary housing need ends. The site will then be seeded or used by the property owner in a manner consistent with applicable land use approvals.

E. Project Location

The Fountain Road temporary housing site is located at 310 East Fountain Road, Joplin, Missouri, which is in the west central portion of Jasper County, Missouri and outside the city limits of Joplin. This site is bordered on the north by Fountain Road and it is 1/4 mile east of State Highway 43. It is 6 miles north of Interstate 44 and is accessible via State Highway 43 (see Attachment 1, Figure 1, Vicinity Map in the attachments section). The proposed site is Parcel 16-7.0-26-20-001-005.000 located in Section 26, Township 28 north, Range 33 west, Jasper County, Missouri, Carl Junction and Joplin West Quad. (Latitude 37.127298 N and Longitude - 94.506614W).

F. Site Description

The proposed Fountain Road group housing site consists of approximately 5.75 acres located directly east and southeast of an existing trailer park. The Fountain Road property is owned by Thomas Family Trust, 4200 Deacon, Bakersfield, California 93307. The property is currently mowed and maintained as an open space. Utility services including water, sewer, power, and telephone would be extended to the site. The Fountain Road site has an existing road located along the west side of the property. The property to the south and south east is woodlands and to the east is residences and pasture. The terrain is relatively level (1% to 3% slope) with no streams or floodplains present on this property. The action would result in the development of up to 48 manufactured homes on the site. The group site will include development of temporary gravel pads for housing foundation, emergency storm shelters, bus shelters, mailbox units, gravel and asphalt roadways, and all utilities related to the infrastructure of the community including a sewer system, waterline installation, phone and cable, and electric. FEMA expects that the manufactured homes will be hauled from the site to suitable locations elsewhere (to be determined on a case-by-case basis) when the temporary housing need ends. The site will then be seeded or used by the property owner in a manner consistent with applicable land use approvals.

G. Project Description

The Proposed Action will involve the development of up to 48 manufactured homes on the site. The group site will include development of temporary gravel pads for housing foundation, emergency storm shelters, bus shelters, mailbox units, gravel and asphalt roadways, and all utilities related to the infrastructure of the community including a sewer system, waterline installation, phone and cable, and electric. FEMA expects that the manufactured homes will be hauled from the site to suitable locations elsewhere (to be determined on a case-by-case basis) when the temporary housing need ends. The site will then be seeded or used by the property owner in a manner consistent with applicable land use approvals. Development of the site will require a number of steps including surveying, clearing, stripping, soil testing, grading, utility and access road design and installation, and stormwater and erosion control. Site occupancy is not expected to exceed 18 months. Utilities on the site will include potable water, sanitary sewer, storm sewer, telephone, and electricity. 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. Site preparation will require grading to create appropriate building pads, road grades, and to shed stormwater to appropriate locations. Best management practices (BMPs) will be implemented to reduce or eliminate runoff impacts during proposed construction activities and reduce the potential for soil erosion after construction. A safety fence will be installed and maintained around the site perimeter during construction. FEMA expects that the manufactured homes will be hauled from the site to suitable locations elsewhere (to be determined on a case-by-case basis) when the temporary housing need has ended. The site can then be seeded and restored to previous conditions and/or used by the landowner in a manner consistent with applicable land use approvals.

H. Sites Considered and Dismissed

In order to expedite the site selection process, the City of Joplin provided FEMA and the Corps with a list of potential sites. These were reviewed available aerial photos and maps, conducted site reconnaissance field surveys, and contacted state and local officials to identify the best potential sites. Factors considered in choosing a site include: site topography; property owner willingness; past land use, if it was already planned for development; access to existing utilities; and engineering feasibility. Some sites were dropped from consideration for various reasons. Other suitable group sites may be addressed in a subsequent NEPA Environmental Assessment.

I. Affected Environment and Environmental Consequences

In order to meet the proposed purpose and need of timely delivery of emergency temporary housing, an expedited environmental review process was conducted to analyze all natural and human environmental issues associated with the Fountain Road site. The environmental review process included field reconnaissance at the site, background research, and expedited agency consultation. The field reconnaissance was conducted on June 19, 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 with the Environmental Protection Agency, U.S. Fish and Wildlife Service (USFWS), Natural Resources Conservation Service (NRCS), Missouri Department of Conservation (MDC), Missouri Department of Natural Resources, and Missouri State Historic Preservation Office (SHPO) produced “No Effect” determination letters from each agency. 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 nondetectable 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.

Affected Environment/ Resource Area	Impacts				Mitigation	Agency Coordination/Permit s	Comments
	Negligible	Minor	Moderate	Major			
Geology & Soils	X				None		The implementation of construction BMPs will reduce sedimentation.
Hydrology & Floodplains (Executive Order 11988)		X			None		Site is outside designated FEMA 500 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		The site would be seeded and /or used by the landowner in a manner consistent with applicable land use approvals after the temporary housing is removed.
Threatened & Endangered (Endangered Species Act Section 7)	X				None	USFWS (6/20/11) and MDC (6/21/11) determinations of "No Effect."	
Cultural Resources (National Historic preservation Act Section 106)	X				If unanticipated historic or cultural materials are discovered during construction, construction activities shall immediately cease within 100 feet of the materials until their cultural affiliation and ultimate disposition are determined in consultation with the Kansas SHPO, FEMA Environmental Liaison Officer and other interested parties.	SHPO determination of "No Effect" (6/20/11).	
Socioeconomic/Recreation	X				None		
Environmental Justice	X				None		

Affected Environment/ Resource Area	Impacts				Mitigation	Agency Coordination/Per mits	Comments
	Negligible	Minor	Moderate	Major			
Noise		X			If necessary, noise reduction measures would be instituted including: 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.		See Section J.
Safety & Security		X			Implement BMPs for construction and Manufactured home anchoring and installation. . Approved safety and management plans would be implemented to address phased construction, UFAS considerations, ventilation to prevent formaldehyde vapors, and appropriate signage and fencing. Emergency shelters should be included to accommodate all residents of the manufactured homes. Temporary guard shacks should be constructed at construction sites to protect residents.	The contractor will coordinate with city, county and state governments to obtain required permits.	Manufactured homes will be installed per manufacturer's requirements; upto-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. All activities will be conducted in a safe manner in accordance with the standards specified in OSHA regulations
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. Alternatively, the site could be abandoned in view of finding another site that better meets the identified project purpose and need.		
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 pkeep, local environment, traffic volume, and usage.	The construction contractor will coordinate with 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, which 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 topography of the proposed Fountain Road site is relatively flat (1 to 3 % slope) with drainage generally flowing from the south to the north. Information from the U.S. Department of Agriculture Natural Resources Conservation Service (NRCS) shows that soils at his site are Maplegrove silt loam, 1 to 3 percent slopes, which is identified as moderately well drained and partially hydric. All areas of Maplegrove silt loam soils are classified as prime farmland. Under the Farmland Protection Policy Act, coordination with the NRCS is required for the conversion of prime farmlands to non-agricultural uses. The Fountain Road Temporary housing site is located outside the city limits of Joplin and the NRCS conducted a review of the effects of this project on the prime farmland of Jasper County, Missouri. NRCS concluded that the conversion of this 5.75 acres of prime farmland into temporary housing would impact less than 0.1% of the prime farmland in the county. Therefore, the NRCS concluded that this project would have minimal effect of the prime farmland of Jasper County, Missouri. Due to the minimal effect of the activity, NRCS did not recommend or require any mitigation measures. NRCS provided written documentation of their review under the Farmland Protection Act for the Fountain road temporary housing (see Attachment 2, Figure 2, NRCS clearance in the Attachments section). 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 geology and minimal temporary effects to the soils.

Mitigation Measures

The existing geology, topography, and soils would not preclude the use of the site for temporary manufactured homes. There are negligible impacts to geology and more than minimal temporary effects to the soils, therefore mitigation measures are not required.

Hydrology and Floodplains

A review of the Proposed Action's found that the effect that 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 (Carl Junction & Joplin West Quads) located at the Fountain Road temporary housing site. A field inspection of the Fountain Road site conducted on June 19, 2011, revealed that there are no streams or discernable drainages on the property. The closest named stream to this site is Center Creek located approximately 2.7 miles north of the north boundary of this property. The south side of the property is noticeably higher than the south part of the property. As a result, rain falling on the Fountain Road housing site would drain from north to south. During a field investigation of the site one low micro depression (wetlands) was identified near the north

portion of the site on June 19, 2011. This 0.0008 acre wetland was determined to be isolated and non-jurisdictional for the purposes of Section 404 of the Clean Water Act. The FEMA Floodplain Maps were reviewed and the Fountain Road temporary housing site is located outside all designated flood plains (see Attachment 3, Figure 3, FEMA Flood Map from Google Earth in the Attachment section). The nearest floodplains to this site are located ½ mile north of the north property line. The review of the existing information on the hydrology and floodplains of the proposed site indicates that there are no floodplain issues to preclude the use of the site for temporary manufactured homes. 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 floodplains.

Mitigation Measures

The Fountain Road Temporary Housing site is determined to be outside any floodplain, therefore mitigation measures are not required.

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.” A review of the U.S. Fish and Wildlife Service (USFWS) National Wetland Inventory Maps (NWI) did not identify any wetlands within the proposed Fountain Road temporary housing site. Soils at this site are mapped by the Natural Resources Conservation Service (NRCS) as Maplegrove silt loam, 1 to 3 percent slopes. The Maplegrove silt loam is a moderately well drained soil, but it does have hydric inclusions of Lanton soils. A field reconnaissance of the site conducted on June 19, 2011, revealed a marginal 0.0008 acre depressional wetland located on the Fountain Road temporary housing site. There are no stream swales, drainages of floodplains on the subject property. Therefore this small depressional wetland would be isolated and has no hydrologic connection to waters of the United States. 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.” The isolated wetland identified at the Fountain Road temporary housing site has no nexus to traditional navigable waters. Therefore, this 0.0008 isolated wetland would not be jurisdictional under Section 404 of the Clean Water Act. The Environmental Protection Agency provided a written concurrence to the Corps that the wetland at this site is isolated and non-jurisdictional for the purposes of Section 404 of the Clean Water Act (see Attachment 4, Figure 4, Jurisdictional Determination and EPA clearance in the Attachments section) 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 emergency housing of tornado victims; therefore, there would be no impacts to any jurisdictional wetlands.

Mitigation Measures

There are negligible impacts to jurisdictional wetlands, 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 the south (higher ground) to the north (lower ground). The largest named stream near the site is Center Creek, located about 2.5 miles to the north of the north property line. There are also intermittent and ephemeral streams located much closer, but due to their small size and distance away, they would have no hydrologic influence on the Fountain Road temporary housing site. Soils at this location are mapped Maplegrove silt loam, which is a moderately well drained soil, but it does have hydric inclusions of Lanton soils. A small micro depressional wetlands that measured 0.0008 acre was noted onsite. 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 emergency housing of tornado victims; 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 so that flows will not flood site residents or surrounding properties during storm events. The drainage system will be required to meet local and county requirements, including the acquisition of easements if applicable.

Air Quality

Within the Fountain Road temporary housing area, air quality programs are coordinated with the Missouri Department of Natural Resources (MDNR). On the Federal level, air quality programs are coordinated with 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 manufactured homes 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. 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 some longer commutes by the displaced people than under the Proposed Action and, therefore, a very small amount of additional vehicle emissions. However, because the No Action Alternative would not involve construction activities and emissions, it 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 Fountain Road site is a 5.75 acre open grassy field that is regularly mowed and maintained as open space. The proposed Action Area is located outside the city limits and area surrounding this property is primarily woodlands, pasture and residential. For the Proposed Action, land use in the project area is predominantly rural, with no information available for zoning or future development. Site preparation for construction of temporary emergency housing would require grading and disturbance of the existing vegetative cover. It is expected that when the temporary housing need has ended, the manufactured homes would be hauled from the site to suitable locations elsewhere. The site can then be seeded and restored to previous conditions and/or used by the landowner in a manner consistent with applicable land use approvals. Thus, the minimal impact to existing vegetation from the Proposed Action would be temporary. Wildlife in the area for the Proposed Action is typical of an open agricultural landscape. Common wildlife species include white-tailed deer, coyote, northern raccoons, striped skunk, Virginia opossum, eastern gray squirrel, least shrew, and eastern mole. Common birds found in the local area include the American robin, eastern meadow lark, house finch, Robin, European starling, mourning dove, and black-capped chickadee. Overall, habitat quality in the immediate project area is low because of mowing and residential disturbance, which severely limits the extent and diversity of

wildlife habitat. The Proposed Action would have minimal impact on the existing faunal conditions. 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

There are negligible impacts to vegetation and wildlife, therefore mitigation measures are not required.

Threatened and Endangered Species

The project's effect on threatened and endangered species has been determined to be negligible. The Action Area is a 5.75 acre open grassy field that is regularly mowed and maintained as open space. As a result, the natural native vegetation no longer exists on this property. The land adjacent to this property is primarily woodlands, pasture and residential. This site is located outside the city limits and the surrounded area is primarily rural. The property at this proposed housing site is actively mowed and maintained as open space further reducing its value to wildlife. 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 20, 2011, by stating that there are no Federally listed threatened or endangered species at the proposed temporary housing location (see Attachment 6, Figure 6, USFWS ESA clearance in the Attachments section). The MDC provide a response on June 21, 2011 that the Proposed Action will have No Effect on any state listed threatened or endangered species or species in need of conservation (see Attachment 7, Figure 7 MDC Determination of No Effect in the Attachments section). 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 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 ¼ mile east of State Highway 43, on Fountain Road. The proposed temporary housing site borders Fountain Road along the north property line. The Corps initiated coordination with the Missouri State Historic Preservation Office (SHPO) on June 19, 2011. On June 20, 2011, the Missouri SHPO issued an email that provided written documentation that there are no historic or cultural resource sites within the 5.75 acre Fountain Road temporary housing site. The Missouri SHPO's response provides a determination that the Proposed Action will have No Effect on historic properties (see Attachment 8, Figure 8 SHPO Determination of No Effect, in the Attachments section). The No Action Alternative would entail no construction or preparation of sites for temporary emergency housing for tornado victims; 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. According to the U.S. Census Bureau, the county has a total area of 409,600 acres, or about 640 square miles. 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 City of Joplin is located at 37° 5' 3" N, 94° 30' 47" W 37 (37.084167, -94.513056). According to the U.S. Census in 2005-2009, there were 48,790 people in Joplin and the city has a total area of 31.5 square miles. Based on the 2005-2009 Census, there were 20,228 households and 11,731 families residing in 23,361 housing units. The population density was 1,549 persons per square mile. The racial makeup of the city was 90.2 percent White, 1.8 percent Native American, 1.2 percent Asian, 1.2 percent from other races, and 2.3 percent from two or more races. Hispanic or Latino persons were 3.2 percent of the population. Of the 20,228 households in Joplin, 26.6 percent had children under the age of 18 living with them, 41.2 percent were married couples living together, 12.7 percent had a female householder with no husband present, and 42.0 percent were non-families. Of all households, 33.5 percent were made up of individuals and 12.6 percent had someone living alone who was 65 years of age or older. The average household size was 2.32 and the average family size was 2.92. The median age was 35.3 years. The median income for a household in the city was \$35,566, and the median income for a family was \$42,967. The per capita income for the city was \$21,247. About 14.3 percent of families and 18.3 percent of the population were below the poverty line, including 24.1 percent of those under age 18 and 8.4 percent of those aged 65 or older.

The Proposed Action would result in negligible social or economic impacts. The Proposed Action would have a positive impact on public health and safety, community cohesion, and employment in the area. People displaced by the tornado event will be able to stay in the community and keep their jobs while their homes are being made habitable. The site being considered for development of temporary emergency housing is near existing residential and commercial areas. The temporary residents, therefore, would be close to stores, post offices, schools, and other services necessary for urban living. During site development and the staging and placement of the manufactured homes for the Proposed Action, short-term negative impacts would likely occur in the following areas: an increase in noise levels and disruption of normal community traffic patterns. These effects would be attenuated through the appropriate placement of construction and safety signage.

These effects would be short-lived and terminate when site development and manufactured home placement were complete. The No Action Alternative would entail no construction or preparation of sites for temporary emergency housing for tornado victims. Residents that could not return to their homes would have to find other accommodations such as with friends or

family members or in hotels or apartments available in nearby areas. Persons unable to remain in Joplin would face longer travel times and social disruption as a result of relocation.

Mitigation Measures

There are negligible socioeconomic impacts, therefore mitigation measures are not required.

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 emergency housing of tornado victims; 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 housing is established, additional noise would be generated from the vehicles and activities of people inhabiting the completed units. While noise at the selected site would increase, 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, because the temporary site would eventually be vacated. The No Action Alternative would entail no construction or preparation of sites for temporary emergency housing of tornado victims; 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 the housing units to the site, and the well-being of the people living in or adjacent to the temporary housing 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 housing sites. Safety during construction is a high priority for both the personnel constructing the sites, and residents associated with the Proposed Action. 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. Chainlinked 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 site's common or public areas will be accessible for people with disabilities in accordance with UFAS guidelines through providing firm, stable, and slip-resistant materials. The manufactured home units will be installed to comply with the appropriate manufacturer's requirements; the most up-to-date safety procedures provided in FEMA technical papers on installation of manufactured homes; as well as 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 in the group site to accommodate the residents of the manufactured homes including individuals with limited mobility and disability.

FEMA now requires that all manufacturers provide temporary housing units that meet indoor air levels for formaldehyde that are less than 0.016 parts per million. Incorporated as a new contract specification, this is not a health based value and occupants should not presume that current temporary housing units that exceed this value are of concern for potential formaldehyde health effects. FEMA has modified its contracting procedures to require that manufacturers certify that their temporary housing units meet this indoor air level for formaldehyde. FEMA will implement a testing program to confirm compliance and provide the results to States for their review. When temporary housing is needed, each State will exercise its public health responsibility and determine the indoor air quality level for formaldehyde that is acceptable before any units are provided to its residents.

While the U.S. Government has does not have an indoor air health level for formaldehyde in housing, we note that the World Health Organization has set a value of 0.100 ppm for odor and

sensory irritation for the general population and the nonindustrial indoor environment. Similarly, Health Canada has recommended a value of 0.040 ppm for chronic exposures.

The safety and security of the residents of the manufactured homes will be a high priority. Precast concrete storm shelters will be placed at the site to provide to provide shelter to residents in the event of severe storms. Fire and police protection will be provided by the City of Joplin and/or Jasper County. The school district shall provide busing for the area students if required. The locations of temporary school facilities have been established and it is anticipated that school are located in a manner that is conducive to the safety and convenience of the residents. 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 manufactured home installation, implementation of approved safety and management plans, phased construction, UFAS considerations, and appropriate signage and fencing. The fencing and gates shall not impede or hinder future restoration work. 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. Emergency shelters would be included in the group site to accommodate the residents of the manufactured homes including individuals with limited mobility and disability.

Hazardous Materials and Toxic Wastes

A review of potential hazardous and toxic materials associated with the site and surrounding areas was conducted. The report is based on records observations made of the site and adjoining properties during a field reconnaissance survey on June 19, 2011. In addition, the report includes data generated through research of historical documents, topographic maps, and aerial photographs; as well as the findings of the Google Earth data layers for hazardous sites (see Attachment 9, Figure 9, Hazardous Sites Maps in the Attachments section). The summary of the findings of the report follows: The site is currently maintained as a mowed field to provided open space. At the time of site reconnaissance, the subject property was predominately crabgrass. No areas of stressed vegetation, structures, or scared surfaces were observed. A small depressed areas was observed on the subject property and it was determined to be an isolated wetland. No sheens, odors, or stressed vegetation were observed in the vicinity of this area. The

research of federal, state, and local government databases revealed no record of hazardous materials sites or spills at the subject property or within a 1,000-foot radius of the subject property borders. The Missouri Department of Natural Resources (DNR) provided copies of their search maps and explained in a June 21, 2011, telephone conversation that there are no hazardous sites within a quarter mile of the Fountain Road temporary housing site (see Attachment 10, Figure 10, Missouri DNR clearance in the Attachments section). The No Action Alternative would entail no construction or preparation of sites for temporary emergency housing of tornado victims. No hazardous materials were observed at the site, therefore there would be no impacts from hazardous materials.

Mitigation Measures

Hazardous materials were not observed at the site or through the research; 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

Currently, Fountain Road a blacktop road borders the property on the north side. There is a traffic light on State Highway 43 and Fountain Road, ¼ mile west of the proposed temporary housing site. Traffic within the general project area would increase due to the ingress and egress of construction equipment. However, this traffic impact would be short term and limited to the duration of construction. Traffic volumes would also increase due to the residents of the site. Again, this traffic impact would be short term and minor to the duration of the need for temporary housing at the site. 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 traffic and transportation.

Mitigation Measures

Due to the increased traffic volume associated with the construction vehicles and temporary residents, the contractor would need to work with the City Public Works Department and/or the Jasper County Road and Bridge Supervisor 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, the public notice would be issued concurrent with the development of the temporary housing sites. 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.

L. Conclusion

Attachment 11 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 a temporary group site to accommodate up to 48 manufactured homes. Development of the Fountain Road temporary housing site will require a number of steps including surveying, clearing, stripping, soil testing, grading, utility and access road design, and installation, and stormwater and erosion control. Site occupancy is not expected to exceed 18 months. The project will ultimately provide the installation of utility and roadway infrastructure supporting future residential development of the site. The water and sewer service may allow for future development of adjoining areas. Expansion to these areas would, by its nature, need to be consistent with the growth management objectives of the City of Joplin and/or Jasper County. During the course of this EA, FEMA coordinated with the following agencies: USFWS; Missouri Department of Natural Resources; Missouri SHPO; Missouri Department of Conservation; Missouri Natural Resource Conservation Service; KDWP; Jasper County Appraiser, Register of Deeds, and Planning Departments; and the City of Joplin Administrator and Public Works Department.

On the basis of the findings of this EA and coordination with the appropriate agencies, it is our initial determination that implementation of the Proposed Action and mitigation measures described in this EA 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

Environmental Data Resources (EDR), Inc. 2007. Environmental Records Search, 1 Mile Radius of the Proposed Project Area. www.edrnet.com.

Executive Order 12898. 1994. Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, 59 FR 7629.

Executive Order 11988. 1977. Floodplain Management, 42 FR 26951.

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

Farmland Protection Policy Act of 1981, Section 1540(b), 7 U.S.C. 4201(b).

Federal Emergency Management Agency (FEMA). 2010 . Disaster Information Missouri Severe Storms, Tornadoes, And Flooding <http://www.fema.gov/news/event.fema?id=14395>.

FEMA. 1976. Flood Insurance Rate Map. Joplin, Missouri, Panel #200501A.

FEMA Environmental Considerations: 44 CFR 10 –8: Determination of requirement for environmental review

Missouri Department of Natural Resources – Water Protection Program Programs.<http://www.dnr.mo.gov/env/wpp/stormwater> .Accessed June 2011.

Missouri Department of Conservation. <http://www.mdc.state.mos.us>. Accessed June 2011.

Robert T. Stafford Disaster Relief and Emergency Assistance Act (Public Law 93-288). http://www.fema.gov/pdf/about/stafford_act.pdf. As amended 1.1.3 USC at <http://www.gpoaccess.gov/uscode/index.html>. Accessed June 2011.

The White House. 2011 (last updated). Statement on Federal Disaster Assistance for Missouri. <http://www.whitehouse.gov/news/releases/2007/05/20070506.html>. Accessed June 2011.

U.S. Census Bureau (USCB). 2010. <http://www.census.gov>. Accessed June 2011.

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.

U.S. Department of Agriculture. 1986. Soils Survey of Jasper County, Missouri. June.

U.S. Department of Agriculture, National Resources Conservation Service (USDA-NRCS). 2010. <http://websoilsurvey.nrcs.usda.gov/app/>. Accessed June 2011.

USDA-NRCS. 1986. Soil Survey of Jasper County, Missouri. June. <http://www.soils.udsda.gov>. Accessed June 2011.

U.S. Fish and Wildlife Service. 1990. National Wetland Inventory map, Joplin, Missouri.

U.S. Fish and Wildlife Service. State-listed Species Information.
http://www.ecos.fws.gov/tess_public/StateListingAndOccurrence.do?state=MS. Accessed June 2011.

U.S. Fish and Wildlife Service. 2006 (last updated). Wetlands Information.
<http://www.wetlandsfws.er.usgs.gov>. Accessed June 2011.

U.S. Geological Survey Topographic Maps. “Webb City and Carl Junction” Quadrangles.

Additional Information Websites:

<http://www.epodunk.com/cgi-bin/popInfo.php?locIndex=4680>
<http://www.fema.gov/plan/ehp/index.shtm>
<http://www.epa.gov/owow/wetlands/regs/eo11990.html>

Agencies Consulted:

City of Joplin

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)



Sunflower Temporary Housing Site, located on 25 acres and would be developed for up to 150 temporary housing units. Site is located at 4350 West 32nd Street, Joplin, Missouri. It is in SW ¼ Section 18, Township 27 north, Range 33 west, Jasper County, Kansas
Lat. 37.057482 Long. -94.582989

Figure 2, NRCS Farmland Protection Policy Act Clearance
(See attached)

Cory, Luke M NWK

From: Johnston, Allan - Springfield, MO [allan.johnston@mo.usda.gov]
Sent: Tuesday, June 28, 2011 6:48 AM
To: Cory, Luke M NWK
Subject: Joplin Tornado Temporary Housing AD-1006

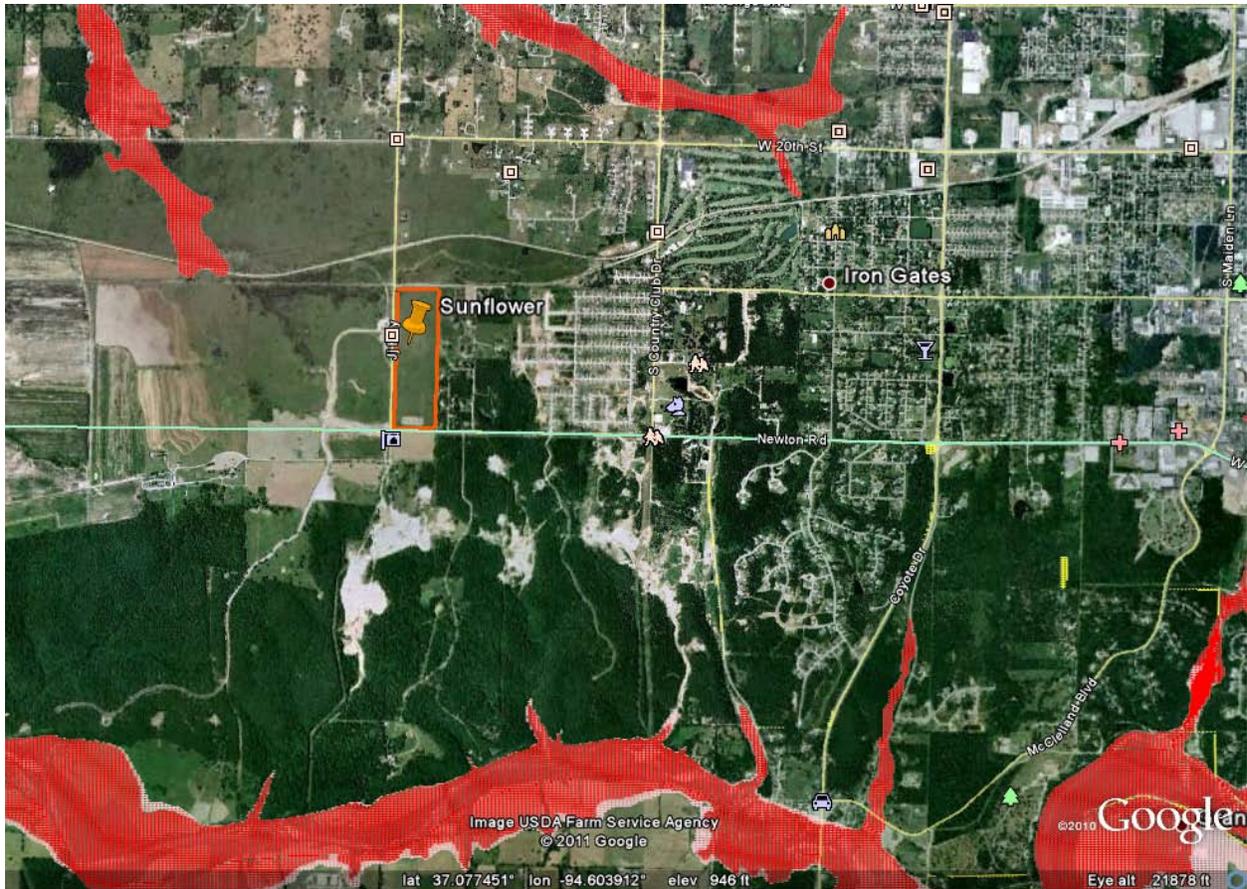
Luke,

As per our previous discussion, rather the temporary housing site is converted permanently to urban land at the end of the lifespan of the project, (18 months) or restored to its current condition as agricultural land will have only a minimal effect on prime farmland or farmland of statewide importance for Jasper, Co. Mo. NRCS would like to be notified in the future if a decision is made to leave the project site as urban land.

Thank You
Allan Johnston
Area Resource Soil Scientist
Natural Resources Conservation Service
Area Office
688 State Hwy. B
Springfield, Mo. 65802

Ph 417-831-5246 ex133

Figure 3, FEMA Flood Map from Google Earth
(See attached)



Sunflower Temporary Housing Site Flood Hazard Map

A **Special Flood Hazard Area (SFHA)** is an area delineated on a National Flood Insurance Program map as being subject to inundation by the base flood. A **base flood** is the flood that has a 1-percent chance of being equaled or exceeded in any given year (sometimes called the "100-year" flood). SFHAs are determined using statistical analyses of records of river flow, storm tides, and rainfall; information obtained through consultation with a community; floodplain topographic surveys; and hydrologic and hydraulic analyses. (Note that they are not a feature that you can see by looking at the ground, and so cannot be traced from an aerial photograph.)

Figure 4, Corps Jurisdictional Determination
(See attached)

APPROVED JURISDICTIONAL DETERMINATION FORM
U.S. Army Corps of Engineers

This form should be completed by following the instructions provided in Section IV of the JD Form Instructional Guidebook.

SECTION I: BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): June 24, 2011

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: Kansas City District, FEMA Temporary Housing/Sunflower Site

C. PROJECT LOCATION AND BACKGROUND INFORMATION: Section 18 & 19, T-27-N, R-33-W

State: Missouri County/parish/borough: Jasper City: Joplin
Center coordinates of site (lat/long in degree decimal format): Lat. 37.057482° **N**, Long. -94.582989° **W**.
Universal Transverse Mercator:

Name of nearest waterbody: Shoal Creek

Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Spring River

Name of watershed or Hydrologic Unit Code (HUC):

- Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.
 Check if other sites (e.g., offsite mitigation sites, disposal sites, etc...) are associated with this action and are recorded on a different JD form.

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

- Office (Desk) Determination. Date:
 Field Determination. Date(s): June 21, 2011

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There **Are no** "navigable waters of the U.S." within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [Required]

- Waters subject to the ebb and flow of the tide.
 Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.
Explain: .

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

There **Are no** "waters of the U.S." within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [Required]

1. Waters of the U.S.

a. Indicate presence of waters of U.S. in review area (check all that apply):¹

- TNWs, including territorial seas
 Wetlands adjacent to TNWs
 Relatively permanent waters² (RPWs) that flow directly or indirectly into TNWs
 Non-RPWs that flow directly or indirectly into TNWs
 Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
 Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
 Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
 Impoundments of jurisdictional waters
 Isolated (interstate or intrastate) waters, including isolated wetlands

b. Identify (estimate) size of waters of the U.S. in the review area:

Non-wetland waters: linear feet: width (ft) and/or acres.
Wetlands: acres.

c. Limits (boundaries) of jurisdiction based on: Pick List

Elevation of established OHWM (if known): .

2. Non-regulated waters/wetlands (check if applicable):³

- Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional.
Explain: **This site is located entirely in the uplands.** .

¹ Boxes checked below shall be supported by completing the appropriate sections in Section III below.

² For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).

³ Supporting documentation is presented in Section III.F.

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

1. TNW

Identify TNW: .

Summarize rationale supporting determination: .

2. Wetland adjacent to TNW

Summarize rationale supporting conclusion that wetland is “adjacent”:

B. CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under *Rapanos* have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are “relatively permanent waters” (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. **Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even though a significant nexus finding is not required as a matter of law.**

If the waterbody⁴ is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

1. Characteristics of non-TNWs that flow directly or indirectly into TNW

(i) General Area Conditions:

Watershed size: **Pick List**

Drainage area: **Pick List**

Average annual rainfall: inches

Average annual snowfall: inches

(ii) Physical Characteristics:

(a) Relationship with TNW:

Tributary flows directly into TNW.

Tributary flows through **Pick List** tributaries before entering TNW.

Project waters are **Pick List** river miles from TNW.

Project waters are **Pick List** river miles from RPW.

Project waters are **Pick List** aerial (straight) miles from TNW.

Project waters are **Pick List** aerial (straight) miles from RPW.

Project waters cross or serve as state boundaries. Explain: .

Identify flow route to TNW⁵: .

Tributary stream order, if known: .

⁴ Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.

⁵ Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

(b) General Tributary Characteristics (check all that apply):

Tributary is: Natural
 Artificial (man-made). Explain:
 Manipulated (man-altered). Explain:

Tributary properties with respect to top of bank (estimate):

Average width: feet
Average depth: feet
Average side slopes: **Pick List**.

Primary tributary substrate composition (check all that apply):

Silts Sands Concrete
 Cobbles Gravel Muck
 Bedrock Vegetation. Type/% cover:
 Other. Explain:

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain:

Presence of run/riffle/pool complexes. Explain:

Tributary geometry: Pick List

Tributary gradient (approximate average slope): %

(c) Flow:

Tributary provides for: Pick List

Estimate average number of flow events in review area/year: Pick List

Describe flow regime:

Other information on duration and volume:

Surface flow is: Pick List. Characteristics:

Subsurface flow: Pick List. Explain findings:

Dye (or other) test performed:

Tributary has (check all that apply):

Bed and banks
 OHWM⁶ (check all indicators that apply):
 clear, natural line impressed on the bank the presence of litter and debris
 changes in the character of soil destruction of terrestrial vegetation
 shelving the presence of wrack line
 vegetation matted down, bent, or absent sediment sorting
 leaf litter disturbed or washed away scour
 sediment deposition multiple observed or predicted flow events
 water staining abrupt change in plant community
 other (list):
 Discontinuous OHWM.⁷ Explain:

If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply):

High Tide Line indicated by: Mean High Water Mark indicated by:
 oil or scum line along shore objects survey to available datum;
 fine shell or debris deposits (foreshore) physical markings;
 physical markings/characteristics vegetation lines/changes in vegetation types.
 tidal gauges
 other (list):

(iii) **Chemical Characteristics:**

Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).

Explain:

Identify specific pollutants, if known:

⁶A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break.

⁷Ibid.

(iv) **Biological Characteristics. Channel supports (check all that apply):**

- Riparian corridor. Characteristics (type, average width):
- Wetland fringe. Characteristics:
- Habitat for:
 - Federally Listed species. Explain findings:
 - Fish/spawn areas. Explain findings:
 - Other environmentally-sensitive species. Explain findings:
 - Aquatic/wildlife diversity. Explain findings:

2. **Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW**

(i) **Physical Characteristics:**

(a) General Wetland Characteristics:

Properties:

Wetland size: acres

Wetland type. Explain:

Wetland quality. Explain:

Project wetlands cross or serve as state boundaries. Explain:

(b) General Flow Relationship with Non-TNW:

Flow is: **Pick List**. Explain:

Surface flow is: **Pick List**

Characteristics:

Subsurface flow: **Pick List**. Explain findings:

- Dye (or other) test performed:

(c) Wetland Adjacency Determination with Non-TNW:

Directly abutting

Not directly abutting

Discrete wetland hydrologic connection. Explain:

Ecological connection. Explain:

Separated by berm/barrier. Explain:

(d) Proximity (Relationship) to TNW

Project wetlands are **Pick List** river miles from TNW.

Project waters are **Pick List** aerial (straight) miles from TNW.

Flow is from: **Pick List**.

Estimate approximate location of wetland as within the **Pick List** floodplain.

(ii) **Chemical Characteristics:**

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain:

Identify specific pollutants, if known:

(iii) **Biological Characteristics. Wetland supports (check all that apply):**

- Riparian buffer. Characteristics (type, average width):
- Vegetation type/percent cover. Explain:
- Habitat for:
 - Federally Listed species. Explain findings:
 - Fish/spawn areas. Explain findings:
 - Other environmentally-sensitive species. Explain findings:
 - Aquatic/wildlife diversity. Explain findings:

3. **Characteristics of all wetlands adjacent to the tributary (if any)**

All wetland(s) being considered in the cumulative analysis: **Pick List**

Approximately () acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

Directly abuts? (Y/N) Size (in acres) Directly abuts? (Y/N) Size (in acres)

Summarize overall biological, chemical and physical functions being performed: .

C. SIGNIFICANT NEXUS DETERMINATION

A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of a TNW. For each of the following situations, a significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW. Considerations when evaluating significant nexus include, but are not limited to the volume, duration, and frequency of the flow of water in the tributary and its proximity to a TNW, and the functions performed by the tributary and all its adjacent wetlands. It is not appropriate to determine significant nexus based solely on any specific threshold of distance (e.g. between a tributary and its adjacent wetland or between a tributary and the TNW). Similarly, the fact an adjacent wetland lies within or outside of a floodplain is not solely determinative of significant nexus.

Draw connections between the features documented and the effects on the TNW, as identified in the *Rapanos* Guidance and discussed in the Instructional Guidebook. Factors to consider include, for example:

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

Note: the above list of considerations is not inclusive and other functions observed or known to occur should be documented below:

1. **Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D: .
2. **Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: .
3. **Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: .

D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL THAT APPLY):

1. **TNWs and Adjacent Wetlands.** Check all that apply and provide size estimates in review area:

- TNWs: linear feet width (ft), Or, acres.
- Wetlands adjacent to TNWs: acres.

2. **RPWs that flow directly or indirectly into TNWs.**

- Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial: .
- Tributaries of TNW where tributaries have continuous flow “seasonally” (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally: .

Provide estimates for jurisdictional waters in the review area (check all that apply):

- Tributary waters: linear feet width (ft).
 - Other non-wetland waters: acres.
- Identify type(s) of waters: .

3. Non-RPWs⁸ that flow directly or indirectly into TNWs.

- Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional waters within the review area (check all that apply):

- Tributary waters: linear feet width (ft).
 - Other non-wetland waters: acres.
- Identify type(s) of waters: .

4. Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.

- Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.
 - Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .
 - Wetlands directly abutting an RPW where tributaries typically flow "seasonally." Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .

Provide acreage estimates for jurisdictional wetlands in the review area: acres.

5. Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.

- Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide acreage estimates for jurisdictional wetlands in the review area: acres.

6. Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs.

- Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional wetlands in the review area: acres.

7. Impoundments of jurisdictional waters.⁹

As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.

- Demonstrate that impoundment was created from "waters of the U.S.," or
- Demonstrate that water meets the criteria for one of the categories presented above (1-6), or
- Demonstrate that water is isolated with a nexus to commerce (see E below).

E. ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY):¹⁰

- which are or could be used by interstate or foreign travelers for recreational or other purposes.
- from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.
- which are or could be used for industrial purposes by industries in interstate commerce.
- Interstate isolated waters. Explain: .
- Other factors. Explain: .

Identify water body and summarize rationale supporting determination: .

⁸See Footnote # 3.

⁹To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.

¹⁰Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA Memorandum Regarding CWA Act Jurisdiction Following Rapanos.

Provide estimates for jurisdictional waters in the review area (check all that apply):

- Tributary waters: linear feet width (ft).
- Other non-wetland waters: acres.
 Identify type(s) of waters: .
- Wetlands: acres.

F. NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY):

- If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.
- Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.
 - Prior to the Jan 2001 Supreme Court decision in "SWANCC," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR).
- Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain: .
- Other: (explain, if not covered above): **Uplands.**

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):

- Non-wetland waters (i.e., rivers, streams): linear feet width (ft).
- Lakes/ponds: acres.
- Other non-wetland waters: acres. List type of aquatic resource: .
- Wetlands: acres.

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply):

- Non-wetland waters (i.e., rivers, streams): linear feet, width (ft).
- Lakes/ponds: acres.
- Other non-wetland waters: acres. List type of aquatic resource: .
- Wetlands: acres.

SECTION IV: DATA SOURCES.

A. SUPPORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked and requested, appropriately reference sources below):

- Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: .
- Data sheets prepared/submitted by or on behalf of the applicant/consultant.
 - Office concurs with data sheets/delineation report.
 - Office does not concur with data sheets/delineation report.
- Data sheets prepared by the Corps: .
- Corps navigable waters' study: .
- U.S. Geological Survey Hydrologic Atlas: .
 - USGS NHD data.
 - USGS 8 and 12 digit HUC maps.
- U.S. Geological Survey map(s). Cite scale & quad name: .
- USDA Natural Resources Conservation Service Soil Survey. Citation: Jasper County, Missouri.
- National wetlands inventory map(s). Cite name: .
- State/Local wetland inventory map(s): .
- FEMA/FIRM maps: .
- 100-year Floodplain Elevation is: (National Geodetic Vertical Datum of 1929)
- Photographs: Aerial (Name & Date): Google Earth.
 or Other (Name & Date): site photos 6/21/2011.
- Previous determination(s). File no. and date of response letter: .
- Applicable/supporting case law: .
- Applicable/supporting scientific literature: .
- Other information (please specify): Upland pasture site location.

B. ADDITIONAL COMMENTS TO SUPPORT JD: .



Location Map

Figure 5, EPA Air Quality Information
(See attached)



Green Book



Contact Us Search: All EPA This Area

You are here: EPA Home » Green Book » Nonattainment Status for Each County by Year for Missouri

Nonattainment Status for Each County by Year for Missouri Including Previous 1-Hour Ozone Counties

Listed by County, Pollutant then Area

As of April 21, 2011

Select a State: [AK](#) | [AL](#) | [AR](#) | [AZ](#) | [CA](#) | [CO](#) | [CT](#) | [DC](#) | [DE](#) | [FL](#) | [GA](#) | [GU](#) | [IA](#) | [ID](#) | [IL](#) | [IN](#) | [KS](#) | [KY](#) | [LA](#) | [MA](#) | [MD](#) | [ME](#) | [MI](#) | [MN](#) | [MO](#) | [MT](#) | [NC](#) | [NE](#) | [NH](#) | [NJ](#) | [NM](#) | [NV](#) | [NY](#) | [OH](#) | [OR](#) | [PA](#) | [PR](#) | [RI](#) | [SC](#) | [TN](#) | [TX](#) | [UT](#) | [VA](#) | [WA](#) | [WI](#) | [WV](#) | [WY](#) |

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County	Pollutant	Area Name	Nonattainment in Year	Redesignation to Maintenance	Classification	Cty NA Whole/Part	Pop (2000)	FIPS State/Cnty
MISSOURI								
Clay Co	1-Hr Ozone	Kansas City, MO-KS		07/23/1992	Other	Whole	184,006	29/047
Dent Co	Lead 2008	Iron, MO		//	Nonattainment	Part	0	29/065
Franklin Co	1-Hr Ozone	St Louis, MO-IL		05/12/2003	Serious	Whole	93,807	29/071
Franklin Co	8-Hr Ozone	St Louis, MO-IL		//	Moderate	Whole	93,807	29/071
Franklin Co	PM-2.5 1997	St. Louis, MO-IL		//	Nonattainment	Whole	93,807	29/071
Iron Co	Lead	Iron County (part); Dent Township, MO		12/18/2000		Part	1,419	29/093
Iron Co	Lead	Iron County (part); Liberty and Arcadia, MO		11/29/2004		Part	6,094	29/093
Iron Co	Lead 2008	Iron, MO		//	Nonattainment	Part	0	29/093
Jackson Co	1-Hr Ozone	Kansas City, MO-KS		07/23/1992	Other	Whole	654,880	29/095
Jefferson Co	1-Hr Ozone	St Louis, MO-IL		05/12/2003	Serious	Whole	198,099	29/099
Jefferson Co	8-Hr Ozone	St Louis, MO-IL		//	Moderate	Whole	198,099	29/099
Jefferson Co	Lead	Jefferson County (part); Herculaneum, MO		//		Part	2,318	29/099
Jefferson Co	Lead 2008	Jefferson County, MO		//	Nonattainment	Part	2,318	29/099
Jefferson Co	PM-2.5 1997	St. Louis, MO-IL		//	Nonattainment	Whole	198,099	29/099
Platte Co	1-Hr Ozone	Kansas City, MO-KS		07/23/1992	Other	Whole	73,781	29/165
Reynolds Co	Lead 2008	Iron, MO		//	Nonattainment	Part	0	29/179
St Charles Co	1-Hr Ozone	St Louis, MO-IL		05/12/2003	Serious	Whole	283,883	29/183
St Charles Co	8-Hr Ozone	St Louis, MO-IL		//	Moderate	Whole	283,883	29/183
St Charles Co	PM-2.5 1997	St. Louis, MO-IL		//	Nonattainment	Whole	283,883	29/183
St Louis	1-Hr Ozone	St Louis, MO-IL		05/12/2003	Serious	Whole	348,189	29/510
St Louis	8-Hr Ozone	St Louis, MO-IL		//	Moderate	Whole	348,189	29/510

St Louis	CO	St Louis, MO	92 93 94 95 96 97 98	03/29/1999	Not Classified	Whole	348,189	29/510
St Louis	PM-2.5 1997	St. Louis, MO-IL	05 06 07 08 09 10 11	//	Nonattainment	Whole	348,189	29/510
St Louis Co	1-Hr Ozone	St Louis, MO-IL	92 93 94 95 96 97 98 99 00 01 02	05/12/2003	Serious	Whole	1,016,315	29/189
St Louis Co	8-Hr Ozone	St Louis, MO-IL	04 05 06 07 08 09 10 11	//	Moderate	Whole	1,016,315	29/189
St Louis Co	CO	St Louis, MO	92 93 94 95 96 97 98	03/29/1999	Not Classified	Part	924,034	29/189
St Louis Co	PM-2.5 1997	St. Louis, MO-IL	05 06 07 08 09 10 11	//	Nonattainment	Whole	1,016,315	29/189

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Last updated on Thursday, April 21, 2011

Figure 6, USFWS ESA Clearance
(See attached)

Cory, Luke M NWK

From: Rick_Hansen@fws.gov
Sent: Wednesday, June 22, 2011 12:27 PM
To: Cory, Luke M NWK
Subject: Re: Endangered Species Act Clearance Sunflower Temporary Housing Site (UNCLASSIFIED)
Attachments: Site Map.pdf; Photos.pdf

Luke:

I have reviewed the information and photos for the location of the Sunflower Temporary Housing Site in Joplin, MO. There are no federally listed species in the project area so this is a no effect determination under the ESA. I don't have any further comments concerning the project.

If you have any questions, contact me at the address below.

thanks, Rick

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

"Cory, Luke M
NWK"
<Luke.M.Cory@usac
e.army.mil>

06/22/2011 11:07
AM

To
"Sternburg, Janet MVS External
Stakeholder"
<janet.sternburg@mdc.mo.gov>,
"Hansen, Rick MVS External
Stakeholder" <Rick_Hansen@fws.gov>

cc

Subject
Endangered Species Act Clearance
Sunflower Temporary Housing Site
(UNCLASSIFIED)

Classification: UNCLASSIFIED

Caveats: NONE

I have another site, Sunflower Temporary Housing Site that FEMA & the Corps is requested Endangered Species Clearance for. It is an approximately 48 acre site, but only the southernmost 25 acres would be developed for temporary housing (up to 150 units). Overall the dominant vegetation is Tall Fescue, but there is also warm season native grass and native forbs present throughout the site (see attached photos). The property is located outside the city limits and is currently used for hay production. The site consist entirely of uplands, there are no streams, wetlands or water features present. To the east is a residential development with each residence located on a large lot (possible over an acre in size). To the west is Wildwood Ranch, a proposed planned community in the early stages of development. To the north and south are hay fields similar to this site. Site is located at 4350 West 32nd Street, Joplin, Missouri. It is in SW ¼ Section 18, Township 27 north, Range 33 west, Jasper County, Kansas

Please review this site for potential impacts to state or federal threatened or endangered species or species of concern. If you have any specific questions about the site, call me and I will try to answer them.

Thank you,
Luke M. Cory
U.S. Army Corps of Engineers
(202) 294-1076

Classification: UNCLASSIFIED

Caveats: NONE(See attached file: Site Map.pdf)(See attached file: Photos.pdf)

Figure 7, MDC Determination of No Effect
(See attached)

Cory, Luke M NWK

From: Janet Sternburg [Janet.Sternburg@mdc.mo.gov]
Sent: Thursday, June 23, 2011 2:07 PM
To: Cory, Luke M NWK
Cc: Hansen, Rick MVS External Stakeholder; Rhonda Rimer; Tim Russell
Subject: FW: Endangered Species Act Clearance Sunflower Temporary Housing Site (UNCLASSIFIED)
Attachments: Site Map.pdf; Photos.pdf

Hello Luke,

As we discussed this morning, the identified site for temporary housing is a hardpan prairie and it is included in the Natural Heritage Database as a high quality natural community. This private prairie was included in the 1988 Natural Features Inventory of Jasper County. It was described at that time as having moderate to low species diversity with moderate to heavy fescue invasion and is considered an Exceptional example of a hardpan prairie with a grade of B/C. As far as we know, there are no state-listed endangered species or species of conservation concern on the area.

In order to minimize impacts to the prairie, and based on your site visit information that most of the area is fairly homogenous in plant diversity with a heavy invasion of fescue, but relatively numerous occurrences of warm-season grasses and forbs, we agree with your suggestion of consolidating the placement of trailers, to the extent practical. This will reduce site disturbance to the area. If the landowner chooses to restore the area to prior conditions after the FEMA trailers and other FEMA supplied infrastructure is removed and if the landowner is interested in technical information to help improve prairie habitat, please have them contact the Department of Conservation.

Thank you for coordinating with the Department. Please let me know if you have any questions.

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

----- Forwarded by Rick Hansen/R3/FWS/DOI on 06/22/2011 12:28 PM -----

Rick
Hansen/R3/FWS/DOI

To

06/22/2011 12:27
PM

"Cory, Luke M NWK"
<Luke.M.Cory@usace.army.mil>

cc

Subject

Re: Endangered Species Act
Clearance Sunflower Temporary
Housing Site (UNCLASSIFIED)
(Document link: Rick Hansen)

Luke:

I have reviewed the information and photos for the location of the Sunflower Temporary Housing Site in Joplin, MO. There are no federally listed speices in the project area so this is a no effect determination under the ESA. I don't have any further comments concerning the project.

If you have any questions, contact me at the address below.

thanks, Rick

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

"Cory, Luke M
NWK"
<Luke.M.Cory@usac
e.army.mil>

06/22/2011 11:07
AM

To

"Sternburg, Janet MVS External
Stakeholder"
<janet.sternburg@mdc.mo.gov>,
"Hansen, Rick MVS External
Stakeholder" <Rick_Hansen@fws.gov>

cc

Subject

Endangered Species Act Clearance
Sunflower Temporary Housing Site
(UNCLASSIFIED)

Classification: UNCLASSIFIED

Caveats: NONE

I have another site, Sunflower Temporary Housing Site that FEMA & the Corps is requested Endangered Species Clearance for. It is an approximately 48 acre site, but only the southernmost 25 acres would be developed for temporary housing (up to 150 units). Overall the dominant vegetation is Tall Fescue, but there is also warm season native grass and native forbs present throughout the site (see attached photos). The property is located outside the city limits and is currently used for hay production. The site consist entirely of uplands, there are no streams, wetlands or water features present. To the east is a residential development with each residence located on a large lot (possible over an acre in size). To the west is Wildwood Ranch, a proposed planned community in the early stages of development. To the north and south are hay fields similar to this site. Site is located at 4350 West 32nd Street, Joplin, Missouri. It is in SW ¼ Section 18, Township 27 north, Range 33 west, Jasper County, Kansas

Please review this site for potential impacts to state or federal threatened or endangered species or species of concern. If you have any specific questions about the site, call me and I will try to answer them.

Thank you,
Luke M. Cory
U.S. Army Corps of Engineers
(202) 294-1076

Classification: UNCLASSIFIED

Caveats: NONE(See attached file: Site Map.pdf)(See attached file: Photos.pdf)

Figure 8, SHPO Determination of No Effect
(See attached)

Cory, Luke M NWK

From: Deel, Judith [judith.deel@dnr.mo.gov]
Sent: Friday, June 24, 2011 6:21 AM
To: Cory, Luke M NWK
Cc: 'Klein, Chelsea'; Allen, Brian
Subject: RE: Cultural Resource Clearance Sunflower Temporary Housing Site (UNCLASSIFIED)

SHPO concurs that there will be "no historic properties affected" by the Sunflower Temporary Housing Site Project. We have no objections to the initiation of project related activities.

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)

From: Cory, Luke M NWK [mailto:Luke.M.Cory@usace.army.mil]
Sent: Wednesday, June 22, 2011 11:55 AM
To: Deel, Judith
Subject: Cultural Resource Clearance Sunflower Temporary Housing Site (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

Judith,

I am requesting clearance for the proposed Sunflower Temporary Housing Site. This proposed temporary housing site is approximately 25 acres and is relatively level and currently used for hay production. The site consist entirely of uplands, there are no streams, wetlands or water features present. To the east is a residential development with each residence located on a large lot (likely over an acre in size). To the west of this site is Wildwood Ranch, a proposed planned community in the early stages of development. To the north and south are hay fields similar to this site. Site is located at 4350 West 32nd Street, Joplin, Missouri. It is in SW ¼ Section 18, Township 27 north, Range 33 west, Jasper County, Kansas

Please review and let me know if there are any cultural resource issues at this location. I have attached maps and a site photo, if you need anything else or have any questions, just give me a call

Luke M. Cory

Regulatory Team Leader
U.S. Army Corps of Engineers
Kanopolis Regulatory Field Office
107 Riverside Drive
Marquette, Kansas 67464
(816) 389-3027
<http://www.nwk.usace.army.mil/regulatory/regulatory.htm>

Classification: UNCLASSIFIED
Caveats: NONE

Figure 9 MDNR Determination of No Mine Hazard
(See attached)

Cory, Luke M NWK

From: Price, Peter [peter.price@dnr.mo.gov]
Sent: Monday, June 27, 2011 3:54 PM
To: Cory, Luke M NWK
Cc: Allen, Brian; Prewett, Jerry; Pierce, Larry; Gillman, Joe
Subject: RE: Sunflower FEMA Temporary Housing Site (UNCLASSIFIED)

Luke,

I went back and read all the emails that I could find also. Then I did some digging into our files to see just exactly what we have for that Sunflower property (SW 1/4, SW 1/4, Sec 18, T. 27 N., R. 33 W.).

Although our database has an entry for the Wildwood Lease for that section (Sect. 18, T. 27 N., R. 33 W.) and the GIS point is plotted on that tract, there is no indication that mining was actually done on or below the surface of that tract. The Wildwood Lease encompassed the east half of the section (and parts of other sections) and we found mine maps for those areas. There are workings mapped in the east half of the section (some of which are visible in the aerial photography), but none in the west half of the section (where the Sunflower tract is located). To verify this, I checked the 1938 aerial photography of that area (long before reclamation was a concern or even a thought). The Sunflower tract appeared then much as it appears now (without the recent surface disturbance) - undisturbed pasture land. The mining to the south east and west stands out dramatically. Mining in that area was very shallow and if there had been workings, they would be obvious. The miners in those days weren't particular about how the surface looked. And they would not have hauled waste rock any farther than necessary from where they mined it. All this indicates that the likelihood of any mining on the property is very, very slim (but never say never). My professional opinion is that there is little risk of any collapse on this property. Further, I would not be concerned about heavy equipment or moving in housing units.

In reviewing Jerry's cautionary statement about heavy equipment, he did qualify that as specifically applying to areas of known mining. Not the case with Sunflower tract. The surface scar on the tract now does not appear to be mining related but rather a more recent disturbance. With that, I think this tract gets a clean bill of health for your purposes.

Please let me know if you have any other concerns.

Peter Price, RG
Environmental Geology Section Chief
Geological Survey Program, DGLS
573-368-2131

peter.price@dnr.mo.gov

www.dnr.mo.gov/geology

Visit our New On-Line Store at:

<http://www.missourigeologystore.com/> <<http://www.missourigeologystore.com/>>

From: Cory, Luke M NWK [mailto:Luke.M.Cory@usace.army.mil]
Sent: Monday, June 27, 2011 1:14 PM
To: Price, Peter
Cc: Allen, Brian
Subject: Sunflower FEMA Temporary Housing Site (UNCLASSIFIED)

Classification: UNCLASSIFIED

Caveats: NONE

Peter,

I've attached some of the correspondence I've gotten from MDNR regarding mine sites and development of the Sunflower Site for FEMA temporary housing.

In the June 24, 2011 email from Jerry Prewett (see attached) he states: "That being said, I would try to avoid moving heavy equipment, vehicles and heavy foot traffic through, and setting up housing over, places of known mining, i.e. the places that Larry has shown you. Otherwise, if we have no information and see no signs of past mining activities, we would assume the risk is likely to be low." My problem is the fact that we are going to be moving heavy equipment, vehicles, heavy foot traffic and setting up temporary housing and so I need to know what areas to avoid. When I was in the field with Larry, he did not see any problems using this site, so I didn't take any action to mark anything on the map. Jerry's email goes on to say: "It seems to me that everything except the southern boundary where mine workings can be observed and the northeast corner is adequate for use." I would need these areas identified if we need to avoid them.

Luke M. Cory

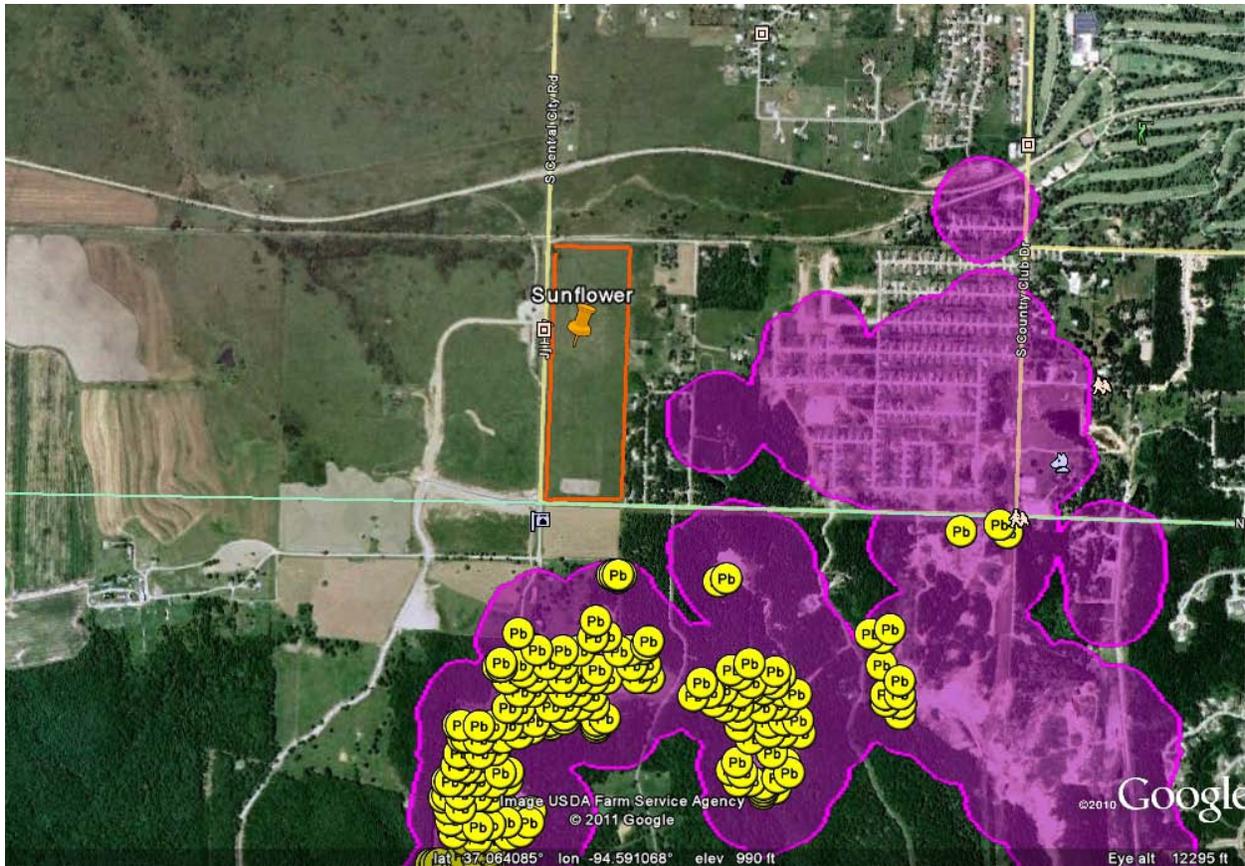
U.S. Army Corps of Engineers

(202) 294-1076 (cell)

Classification: UNCLASSIFIED

Caveats: NONE

Figure 10 Hazardous Sites Map
(See attached)



Sunflower Temporary Housing Site, located on 25 acres and would be developed for up to 150 temporary housing units. Site is located at 4350 West 32nd Street, Joplin, Missouri. It is in SW ¼ Section 18, Township 27 north, Range 33 west, Jasper County, Kansas

Hazardous Substance Map Showing Sunflower 25 Acre Sunflower Temporary Housing Site

Yellow Pb Circle represents Soil Screening Results (>400 ppm Lead)
 Purple Represents Mine Waste Areas

Figure 11 EPA Environmental Clearance
(See attached)

Cory, Luke M NWK

From: Doolan.Mark@epamail.epa.gov
Sent: Friday, June 24, 2011 7:41 AM
To: Cory, Luke M NWK
Subject: Re: Joplin Tornado Recovery (UNCLASSIFIED)

EPA is not aware of any environmental issues at this property.

D. Mark Doolan
U.S. Environmental Protection Agency
901 N. 5th Street; Kansas City, Kansas 66101
(913) 551-7169 fax: (913) 551-8717

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|----->
| From:      |
|----->
>-----|
|-----|
| "Cory, Luke M NWK" <Luke.M.Cory@usace.army.mil>
|
>-----|
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|----->
| To:      |
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>-----|
|-----|
| Mark Doolan/R7/USEPA/US@EPA
|
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| Date:    |
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| 06/23/2011 03:56 PM
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| Subject:  |
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|-----|
| Joplin Tornado Recovery (UNCLASSIFIED)
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>-----|
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Classification: UNCLASSIFIED

Caveats: NONE

Mark,

The Corps is looking at a site west of Joplin (see attached site map) as a potential FEMA temporary housing site. Would you please review the information provided and let me know if EPA is aware of any potential environmental issues. I have reviewed this with MDNR and they even sent a geologist out to look at the site, but did not find any environmental issues at this location.

Sunflower Temporary Housing Site, located on 25 acres and would be developed for up to 150 temporary housing units. Site is located at 4350 West 32nd Street, Joplin, Missouri. It is in SW ¼ Section 18, Township 27 north, Range 33 west, Jasper County, Kansas

Thank you for your time and consideration in reviewing this.

Luke M. Cory
Regulatory Team Leader
U.S. Army Corps of Engineers
Kanopolis Regulatory Field Office
107 Riverside Drive
Marquette, Kansas 67464
(816) 389-3027
<http://www.nwk.usace.army.mil/regulatory/regulatory.htm>

Classification: UNCLASSIFIED

Caveats: NONE[attachment "Site Map.pdf" deleted by Mark Doolan/R7/USEPA/US] [attachment "Hazardous Material Map.pdf" deleted by Mark Doolan/R7/USEPA/US] [attachment "Photos.pdf" deleted by Mark Doolan/R7/USEPA/US]

Figure 12 MDNR Environmental Clearance
(See attached)

Cory, Luke M NWK

From: Allen, Brian [brian.allen@dnr.mo.gov]
Sent: Wednesday, June 22, 2011 3:02 PM
To: Cory, Luke M NWK
Subject: FW: Request for Environmental Clearance Sunflower Temporary Housing Site (UNCLASSIFIED)

Luke - area is clear for Brownfields/Dry cleaner sites.
BJA

From: Surber, Jennifer
Sent: Wednesday, June 22, 2011 2:52 PM
To: Allen, Brian; Nussbaum, Rich; Flippin, Kathy; Koon, Ken; Luther, Laura; Garrett, Valerie; Bridges, Carey; Stinson, Dennis; Warren, Julieann; Seeger, Cheryl; Pierce, Larry; Prewett, Jerry
Cc: Schmidt, Aaron; Lamb, David; Feeler, Steve; Tippett Mosby, Leanne; Heppard, Daniela; Hall, Wendell; Willoughby, Randall
Subject: RE: Request for Environmental Clearance Sunflower Temporary Housing Site (UNCLASSIFIED)

Brian,
There are no BVCP or dry cleaner sites at this location or in the vicinity.

Jennifer Surber
Environmental Specialist III
Brownfields/Voluntary Cleanup Program
P.O. Box 176, Jefferson City, MO 65102-0176
phone: (573) 526-0181 fax: (573) 526-4817
email: jennifer.surber@dnr.mo.gov <<mailto:jennifer.surber@dnr.mo.gov>>

From: Allen, Brian
Sent: Wednesday, June 22, 2011 1:17 PM
To: Nussbaum, Rich; Flippin, Kathy; Koon, Ken; Luther, Laura; Garrett, Valerie; Surber, Jennifer; Bridges, Carey; Stinson, Dennis; Warren, Julieann; Seeger, Cheryl; Pierce, Larry; Prewett, Jerry
Cc: Schmidt, Aaron; Lamb, David; Feeler, Steve; Tippett Mosby, Leanne; Heppard, Daniela; Hall, Wendell; Willoughby, Randall
Subject: FW: Request for Environmental Clearance Sunflower Temporary Housing Site (UNCLASSIFIED)

All "To's" - we have received another request to evaluate any known environmental concerns for another proposed temporary housing location. Am copying at least two folks in each section/division to ensure we hit someone. Please access the attached documents (would assume EPA provided Pb-related info on haz material map)

We have limited functionality of mapping applications here at Joplin and can track some of this, but would NOT want to miss something, thus, the repeated requests to you all. I appreciate your continued input and responses to these requests - hoping you understand it

makes a significant contribution to the overall recovery effort every time we provide timely info.

Daniela - figuring more may come - can you please set up an email group for "Joplin Site Evaluation" and include of the "To's" and the "Cc's" (+ me)? Thanks all - and call as needed 573-644-3224

Brian

From: Cory, Luke M NWK [Luke.M.Cory@usace.army.mil]
Sent: Wednesday, June 22, 2011 11:20 AM
To: Allen, Brian
Subject: Request for Environmental Clearance Sunflower Temporary Housing Site (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

Brian,

I have another site for MDNR environmental review. It is the Sunflower Temporary Housing Site that FEMA & the Corps are requesting review for potential hazardous sites or any known environmental issues that would make this site unsuitable for temporary housing. The property is approximately 48 acre, but only the southernmost 25 acres would be developed (see attached site map) or used for temporary housing (up to 150 units). Overall the dominant vegetation is Tall Fescue, but there is also warm season native grass and native forbs present throughout the site (see attached photos). The property is located outside the city limits and is currently used for hay production. It is outside the mine waste areas or site that tested high for lead (see attached hazardous material map). The site consist entirely of uplands, there are no streams, wetlands or water features present. To the east is a residential development with each residence located on a large lot (likely over an acre in size). To the west is Wildwood Ranch, a proposed planned community in the early stages of development. To the north and south are hay fields similar to this site. Site is located at 4350 West 32nd Street, Joplin, Missouri. It is in SW ¼ Section 18, Township 27 north, Range 33 west, Jasper County, Kansas

Please review this site for known environmental hazards at this location. If you have any specific questions about the site, call me and I will try to answer them.

Luke M. Cory

U.S. Army Corps of Engineers

(202) 294-1076

Classification: UNCLASSIFIED

Caveats: NONE

Cory, Luke M NWK

From: Allen, Brian [brian.allen@dnr.mo.gov]
Sent: Wednesday, June 22, 2011 3:51 PM
To: Cory, Luke M NWK
Subject: FW: Request for Environmental Clearance Sunflower Temporary Housing Site (UNCLASSIFIED)
Attachments: Joplin Tornado_Sunflower Temp Site.pdf

Tanks (UST) info

From: Luther, Laura
Sent: Wednesday, June 22, 2011 3:30 PM
To: Allen, Brian
Subject: FW: Request for Environmental Clearance Sunflower Temporary Housing Site (UNCLASSIFIED)

Looks like we only had ones site near this area. It was closed to a residential status.

Thanks.

Laura Luther
Remediation Unit Chief
Tanks Section
Missouri DNR
(573) 751-6822
(573) 526-8922 (fax)

From: Heisler, Jeff
Sent: Wednesday, June 22, 2011 3:17 PM
To: Luther, Laura
Cc: Finders, Betty; Koon, Ken; Garrett, Valerie
Subject: RE: Request for Environmental Clearance Sunflower Temporary Housing Site (UNCLASSIFIED)

New map is attached... This appears to be the only site in the area (note that LTS Site Usage is now a part of this search query):

Facility Id	Facility Active	Name	Address	City	Rem Id	Rem Active	Media
Affected	Site Usage	AUL?					
ST3007840	No	CON-WAY TRUCKLOAD	4701 EAST 32 ST	JOPLIN		R008264	No Soil
Residential							

From: Koon, Ken
Sent: Wednesday, June 22, 2011 2:30 PM
To: Heisler, Jeff

Cc: Luther, Laura; Garrett, Valerie; Finders, Betty
Subject: FW: Request for Environmental Clearance Sunflower Temporary Housing Site
(UNCLASSIFIED)

Please check the maps like you did the last time and get to Laura to review and comment. Try and get back to Laura today.

Valerie, we handle these similar to our NEPA/EIS requests we get for building projects, only with more priority.

Thanks

From: Allen, Brian
Sent: Wednesday, June 22, 2011 1:16 PM
To: Nussbaum, Rich; Flippin, Kathy; Koon, Ken; Luther, Laura; Garrett, Valerie; Surber, Jennifer; Bridges, Carey; Stinson, Dennis; Warren, Julieann; Seeger, Cheryl; Pierce, Larry; Prewett, Jerry
Cc: Schmidt, Aaron; Lamb, David; Feeler, Steve; Tippett Mosby, Leanne; Heppard, Daniela; Hall, Wendell; Willoughby, Randall
Subject: FW: Request for Environmental Clearance Sunflower Temporary Housing Site
(UNCLASSIFIED)

All "To's" - we have received another request to evaluate any known environmental concerns for another proposed temporary housing location. Am copying at least two folks in each section/division to ensure we hit someone. Please access the attached documents (would assume EPA provided Pb-related info on haz material map)

We have limited functionality of mapping applications here at Joplin and can track some of this, but would NOT want to miss something, thus, the repeated requests to you all. I appreciate your continued input and responses to these requests - hoping you understand it makes a significant contribution to the overall recovery effort every time we provide timely info.

Daniela - figuring more may come - can you please set up an email group for "Joplin Site Evaluation" and include of the "To's" and the "Cc's" (+ me)? Thanks all - and call as needed 573-644-3224

Brian

From: Cory, Luke M NWK [Luke.M.Cory@usace.army.mil]
Sent: Wednesday, June 22, 2011 11:20 AM
To: Allen, Brian
Subject: Request for Environmental Clearance Sunflower Temporary Housing Site
(UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

Brian,

I have another site for MDNR environmental review. It is the Sunflower Temporary Housing Site that FEMA & the Corps are requesting review for potential hazardous sites or any known environmental issues that would make this site unsuitable for temporary housing. The property is approximately 48 acre, but only the southernmost 25 acres would be developed (see attached site map) or used for temporary housing (up to 150 units). Overall the dominant vegetation is Tall Fescue, but there is also warm season native grass and native forbs present throughout the site (see attached photos). The property is located outside the city limits and is currently used for hay production. It is outside the mine waste areas or site that tested high for lead (see attached hazardous material map). The site consist entirely of uplands, there are no streams, wetlands or water features present. To the east is a residential development with each residence located on a large lot (likely over an acre in size). To the west is Wildwood Ranch, a proposed planned community in the early stages of development. To the north and south are hay fields similar to this site. Site is located at 4350 West 32nd Street, Joplin, Missouri. It is in SW ¼ Section 18, Township 27 north, Range 33 west, Jasper County, Kansas

Please review this site for known environmental hazards at this location. If you have any specific questions about the site, call me and I will try to answer them.

Luke M. Cory

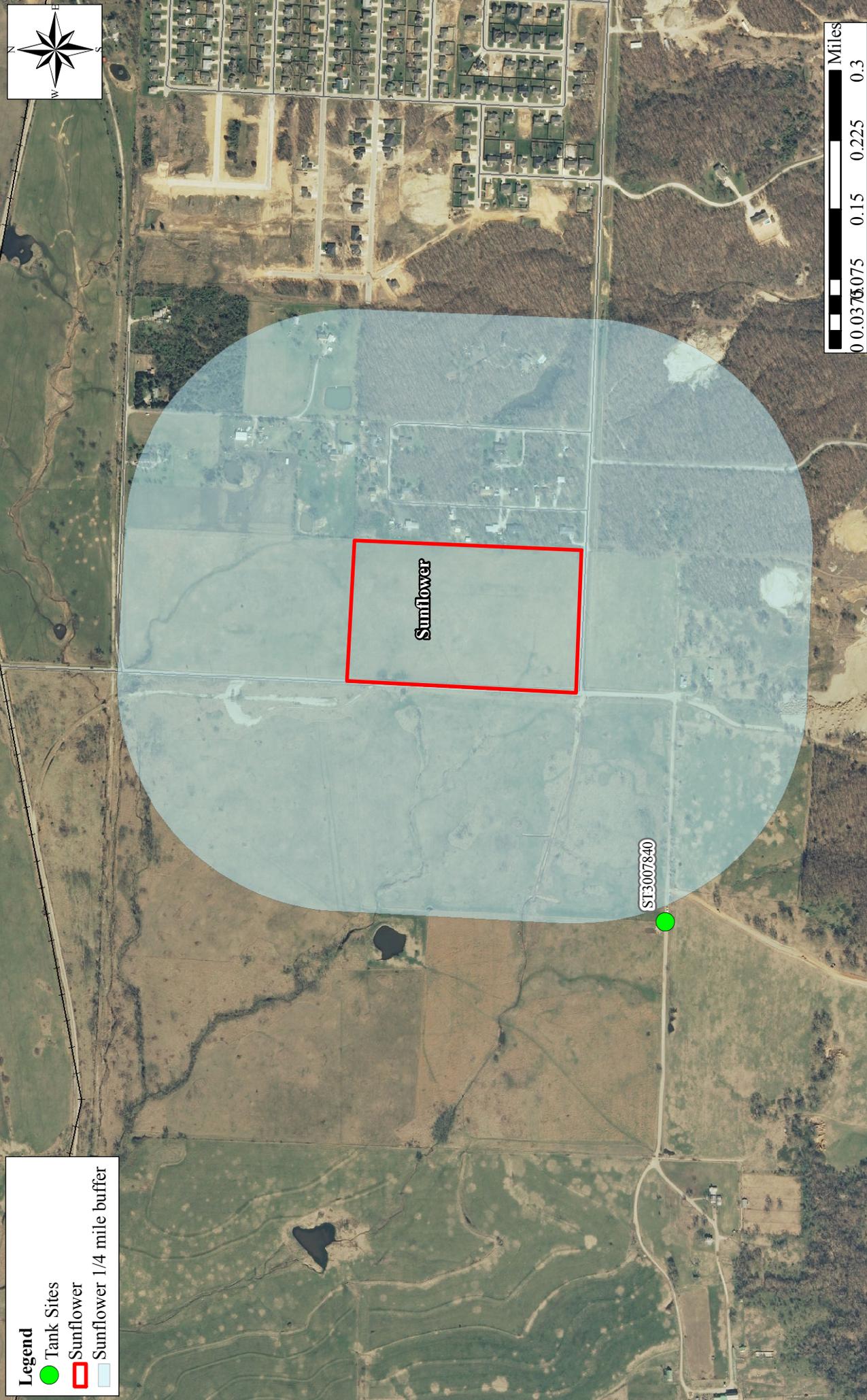
U.S. Army Corps of Engineers

(202) 294-1076

Classification: UNCLASSIFIED

Caveats: NONE

Joplin, Missouri Potentially Impacted Underground Storage Tank Sites (Tornado)



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

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 such warranty, and no responsibility is assumed by the department in the use of these data or related materials.



Cory, Luke M NWK

From: Allen, Brian [brian.allen@dnr.mo.gov]
Sent: Wednesday, June 22, 2011 5:51 PM
To: Cory, Luke M NWK
Subject: FW: EIR Sunflower Temporary Housing Site (UNCLASSIFIED) (Joplin Tornado) - Superfund

Luke - no CERCLA issues

From: Jackson, Shelly
Sent: Wednesday, June 22, 2011 4:13 PM
To: Allen, Brian
Cc: Warren, Julieann; Vance, Steve
Subject: EIR Sunflower Temporary Housing Site (UNCLASSIFIED) (Joplin Tornado) - Superfund

There are no superfund sites within the identified Sunflower Temporary Housing Site location. The nearest Superfund site is three miles to the northeast.

Steve, thanks for the map.

Shelly
573-751-1288

From: Vance, Steve
Sent: Wednesday, June 22, 2011 3:37 PM
To: Jackson, Shelly; Bridges, Carey; Surber, Jennifer; Fanska, Bill; Heisler, Jeff; Muenks, Shawn; Williams, Mary
Cc: Hansen, Dennis; McMichael, Angie
Subject: FW: Request for Environmental Clearance Sunflower Temporary Housing Site (UNCLASSIFIED) (Joplin Tornado)

Per the attached email:

This is an EIR request that I received Today. I have created an ArcView map (Joplin_Sunflower_Temp_Housing.mxd) located in M:\EIRs\Joplin Sunflower Temp Housing. The JPG attachment is a copy of the ArcView map I created. Please respond to Brian Allen ASAP.

Angie, Dennis, Mary,

There are no Hazardous Waste Generators within the quarter mile buffer.

Thanks,

Steve Vance
GIS Analyst
Information Technology Services Division
(573) 751-5942

From: Nussbaum, Rich
Sent: Wednesday, June 22, 2011 1:24 PM
To: Vance, Steve
Subject: FW: Request for Environmental Clearance Sunflower Temporary Housing Site
(UNCLASSIFIED)

FYI.

Richard A. Nussbaum, P.E.,R.G.

Chief, Permits Section

Hazardous Waste Program

(573) 751-3553

rich.nussbaum@dnr.mo.gov

From: Allen, Brian
Sent: Wednesday, June 22, 2011 1:17 PM
To: Nussbaum, Rich; Flippin, Kathy; Koon, Ken; Luther, Laura; Garrett, Valerie; Surber, Jennifer; Bridges, Carey; Stinson, Dennis; Warren, Julieann; Seeger, Cheryl; Pierce, Larry; Prewett, Jerry

Cc: Schmidt, Aaron; Lamb, David; Feeler, Steve; Tippet Mosby, Leanne; Heppard, Daniela; Hall, Wendell; Willoughby, Randall
Subject: FW: Request for Environmental Clearance Sunflower Temporary Housing Site
(UNCLASSIFIED)

All "To's" - we have received another request to evaluate any known environmental concerns for another proposed temporary housing location. Am copying at least two folks in each section/divison to ensure we hit someone. Please access the attached documents (would assume EPA provided Pb-related info on haz material map)

We have limited functionality of mapping applications here at Joplin and can track some of this, but would NOT want to miss something, thus, the repeated requests to you all. I appreciate your continued input and responses to these requests - hoping you understand it makes a significant contribution to the overall recovery effort every time we provide timely info.

Daniela - figuring more may come - can you please set up an email group for "Joplin Site Evaluation" and include of the "To's" and the "Cc's" (+ me)? Thanks all - and call as needed 573-644-3224

Brian

From: Cory, Luke M NWK [Luke.M.Cory@usace.army.mil]
Sent: Wednesday, June 22, 2011 11:20 AM
To: Allen, Brian
Subject: Request for Environmental Clearance Sunflower Temporary Housing Site (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

Brian,

I have another site for MDNR environmental review. It is the Sunflower Temporary Housing Site that FEMA & the Corps are requesting review for potential hazardous sites or any known environmental issues that would make this site unsuitable for temporary housing. The property is approximately 48 acre, but only the southernmost 25 acres would be developed (see attached site map) or used for temporary housing (up to 150 units). Overall the dominant vegetation is Tall Fescue, but there is also warm season native grass and native forbs present throughout the site (see attached photos). The property is located outside the city limits and is currently used for hay production. It is outside the mine waste areas or site that tested high for lead (see attached hazardous material map). The site consist entirely of uplands, there are no streams, wetlands or water features present. To the east is a residential development with each residence located on a large lot (likely over an acre in size). To the west is Wildwood Ranch, a proposed planned community in the early stages of development. To the north and south are hay fields similar to this site. Site is located at 4350 West 32nd Street, Joplin, Missouri. It is in SW ¼ Section 18, Township 27 north, Range 33 west, Jasper County, Kansas

Please review this site for known environmental hazards at this location. If you have any specific questions about the site, call me and I will try to answer them.

Luke M. Cory

U.S. Army Corps of Engineers

(202) 294-1076

Classification: UNCLASSIFIED

Caveats: NONE

Cory, Luke M NWK

From: Allen, Brian [brian.allen@dnr.mo.gov]
Sent: Thursday, June 23, 2011 10:45 AM
To: Cory, Luke M NWK
Cc: Hall, Wendell; Willoughby, Randall
Subject: Fw: Request for Environmental Clearance Sunflower Temporary Housing Site (UNCLASSIFIED) (Joplin Tornado)

L-this clears sunflower for hw/rcra issues. As soon as u and dgl's meet-think we're ok

From: Fanska, Bill
Sent: Thursday, June 23, 2011 09:42 AM
To: Allen, Brian
Cc: Nussbaum, Rich; Vance, Steve
Subject: RE: Request for Environmental Clearance Sunflower Temporary Housing Site (UNCLASSIFIED) (Joplin Tornado)

There are not any former interim status or permitted hazardous waste or resource recovery facilities within 1/4 mile of the proposed locations. The closest of facilities for the RCRA Permitting Section are located approximately 2 mile to the northeast of the area of interest.

From: Vance, Steve
Sent: Wednesday, June 22, 2011 3:37 PM
To: Jackson, Shelly; Bridges, Carey; Surber, Jennifer; Fanska, Bill; Heisler, Jeff; Muenks, Shawn; Williams, Mary
Cc: Hansen, Dennis; McMichael, Angie
Subject: FW: Request for Environmental Clearance Sunflower Temporary Housing Site (UNCLASSIFIED) (Joplin Tornado)

Per the attached email:

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Angie, Dennis, Mary,

There are no Hazardous Waste Generators within the quarter mile buffer.

Thanks,

Steve Vance
GIS Analyst
Information Technology Services Division
(573) 751-5942

From: Nussbaum, Rich
Sent: Wednesday, June 22, 2011 1:24 PM
To: Vance, Steve
Subject: FW: Request for Environmental Clearance Sunflower Temporary Housing Site
(UNCLASSIFIED)

FYI.

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

From: Allen, Brian
Sent: Wednesday, June 22, 2011 1:17 PM
To: Nussbaum, Rich; Flippin, Kathy; Koon, Ken; Luther, Laura; Garrett, Valerie; Surber, Jennifer; Bridges, Carey; Stinson, Dennis; Warren, Julieann; Seeger, Cheryl; Pierce, Larry; Prewett, Jerry
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Brian

From: Cory, Luke M NWK [Luke.M.Cory@usace.army.mil]
Sent: Wednesday, June 22, 2011 11:20 AM
To: Allen, Brian
Subject: Request for Environmental Clearance Sunflower Temporary Housing Site (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

Brian,

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Please review this site for known environmental hazards at this location. If you have any specific questions about the site, call me and I will try to answer them.

Luke M. Cory

U.S. Army Corps of Engineers

(202) 294-1076

Classification: UNCLASSIFIED

Caveats: NONE

Figure 13 Photographs of Joplin, Missouri after the F5 Tornado
(See attached)

