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Chapter Five Environmental Overview

INTRODUCTION

This evaluation has been prepared pursuant to Section 102 (2) of the *National Environmental Policy Act (NEPA) of 1969*, as well as Title V of the Airport and Airway Improvement Act of 1982, as amended. In addition, the subject matter discussed within the body of the narrative text is completed in accordance with Federal Aviation Administration (FAA) Order 5050.4B, *NEPA Implementing Instructions for Airport Actions*, and FAA Order 1050.1E, *Environmental Impact: Policies and Procedures*.

ENVIRONMENTAL IMPACT CATEGORIES

The main purpose of the environmental overview is to evaluate the potential significant environmental impacts posed by the future improvements associated with the preferred airfield and terminal area alternatives. Additionally, this review will examine 20 separate environmental consequences as they pertain to capital airport improvements and highlight potential permitting and regulatory requirements associated with each impact category.

Noise

Noise can be broadly defined as any sound that is unwanted. Accurately identifying particular noise that is unwanted or intrusive is difficult due to the subjective nature of judgment on the part of the listener. Also, it may be just as difficult to measure the intrusiveness of the sound effects. In most cases, individual attitudes regarding airports are more important in determining reactions to airport noise rather than actual noise exposure. Aircraft arrivals and departures are generally considered intrusive and unwanted noise in the opinion of the listener. These facts alone constitute aircraft and airport sound emissions as the most notable environmental impact to the local community.

The prime methodology for objectively determining aircraft noise emissions at airports includes combining single event noise measures into a cumulative noise profile to objectively measure and analyze the effects of aircraft noise. The most common technique for determining and forecasting cumulative noise exposure at airports is the Day-Night Average Sound Level (DNL). To obtain a daily DNL exposure reading, aircraft noise is measured in one second intervals and recorded over a 24-hour period rather than relying on loud single events. The cumulative aircraft noise exposure compiles all noise measurements during the specified period of time and is averaged over an hourly and then daily basis. The resulting Noise Exposure Map (NEM) is a compilation of defined or identified specific categories of aircraft operating at the airport, identified and specific aircraft flight tracks (arrival, departure, touch-and-go), runway use percentages, types of engines installed on aircraft, and average day, evening, and night use percentage by aircraft.

Noise

Based upon projected activity at HFJ, the preferred airfield alternative is not expected to create adverse cumulative noise impacts within the immediate vicinity of the Airport.

Compatible Land Use

Based on projected aviation demand, coupled with existing and proposed land uses in the area, HFJ is expected to be compatible with current and future land uses from a noise compatibility standpoint.

Ultimately, the City of Monett and Barry County, as well as Lawrence and Newton counties, are recommended to enact a height and hazard zoning ordinance to preserve the Airport's airspace infrastructure.

Social Impacts

Because HFJ's future capital improvement plan will include residential acquisition and acquisition of cropland, potential short-term social impacts are possible involving the affected landowners. However, these potential impacts are not considered significant based on experience and judgment.

The Integrated Noise Model (INM) version 7.0 was utilized to develop the noise exposure map (NEM) to depict the areas affected by varying levels of noise emissions in the vicinity of HFJ. In plotting noise contours, INM depicts only those noise contours with the most significance, including the 55, 65 and 75 DNL. According to federal guidelines, and for purposes of planning, zoning and ordinance considerations, land uses adjacent to airports are considered to be compatible in areas where the noise exposure level is less than 65 DNL.

For purposes of determining airport noise exposure, HFJ's demand forecasts were utilized to generate a baseline of activity of approximately 38,500 annual operations for the year 2029. This includes 25,200 operations by single engine airplanes, 4,000 multi-engine operations, 1,900 turbo-prop operations and approximately 7,400 business jet operations. Completion and examination of the ultimate NEM for the preferred HFJ airfield alternative, as depicted in **Exhibit 5.1**, concludes that the 65 DNL noise contour is expected to be contained within the ultimate property boundary. Accordingly, based upon projected activity at HFJ, the preferred airfield alternative is not expected to create adverse cumulative noise impacts within the immediate vicinity of the Airport.

Compatible Land Use

Existing and planned land uses in and around HFJ were discussed in Chapter 1, *Airport Environs and Land Use*. The land use surrounding the Airport is primarily agricultural in nature. Scattered low density residential use exists within the general area as well.

Based on projected aviation demand, coupled with existing and proposed land uses in the area, HFJ is expected to be compatible with current and future land uses from a noise compatibility standpoint. Additionally, those parcels of land recommended for acquisition to allow for airfield expansion are recommended to be converted to aviation related uses (i.e. agricultural and/or aviation operations) once acquired.

Ultimately, the City of Monett and Barry County, as well as Lawrence and Newton counties, are recommended to enact a height and hazard zoning ordinance to preserve the Airport's airspace infrastructure. A height and hazard zoning ordinance would also not only regulate the land use to control the height of objects within the immediate vicinity of HFJ, but would ensure land use compatibility adjacent to the Airport.

Social Impacts

Examination of potential social impacts related to airport development and expansion generally include acquisition of property; relocation of residences or businesses; alteration of surface transportation routes; disruption to established communities; and altered planned development.

The preferred airfield development alternative involves acquisition of approximately 340 acres in fee simple to the north, south and west of the Airport. The land to be acquired consists primarily of open fields and gently rolling hills containing low yield cropland and six residences. Given that residential structures are expected to be acquired, the City is recommended to abide by provisions



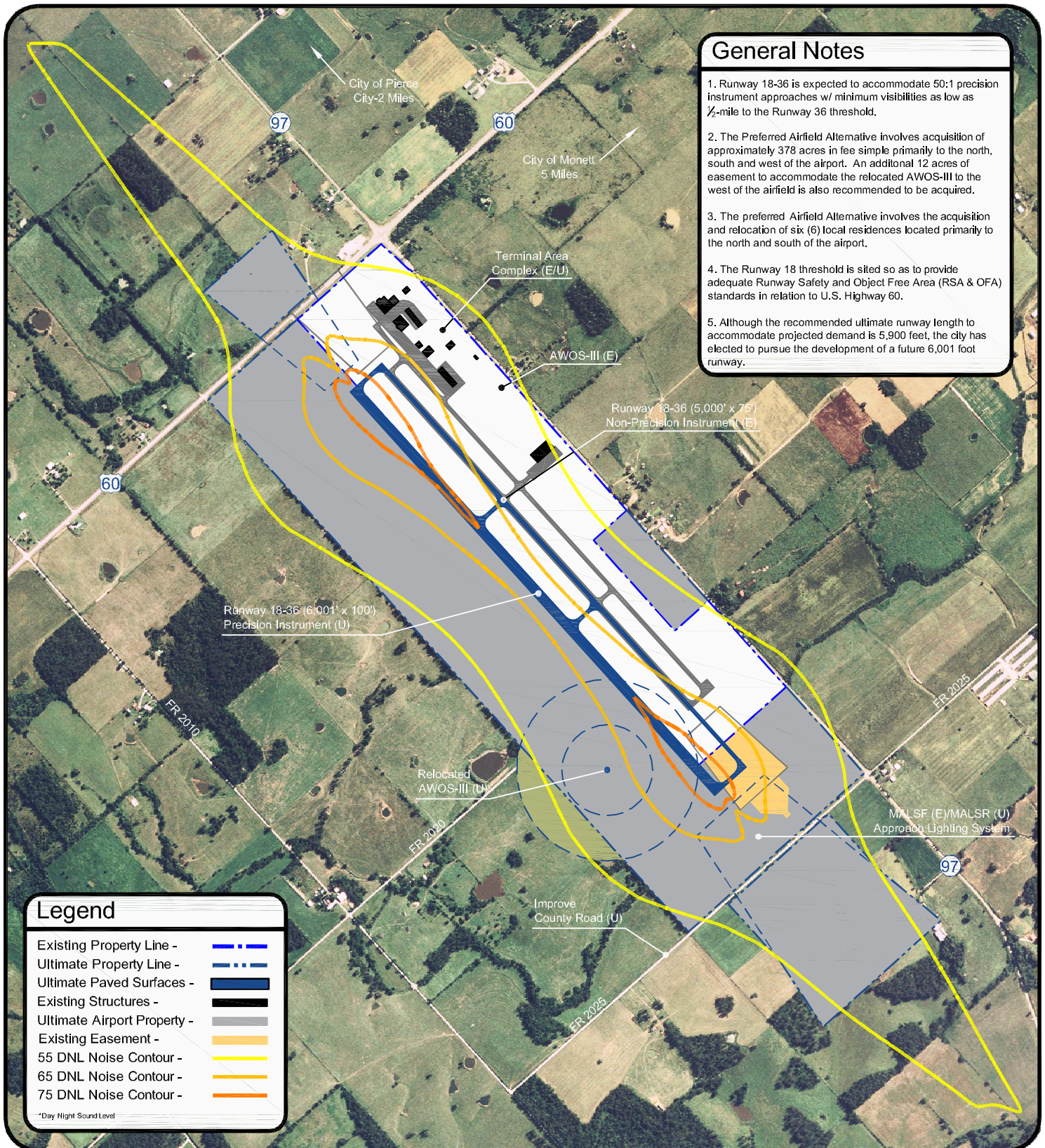
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MONETT MUNICIPAL AIRPORT (HFJ)

City of Monett, Missouri

Exhibit 5.1-Preferred Airfield Alternative INM Version 7.0 Noise Exposure Map-NEM (2029)



Source: National Agricultural Imagery Program (NAIP), Barry County, MO.



Induced Socioeconomic Impacts

The preferred development alternative, although expected to potentially pose minor social impacts during construction, is not expected to produce significant fluctuations in population trends or growth, nor is it expected to place undue burden on public service demands or overly influence changes in business or political conditions.

Air Quality

The forecast of aviation demand for HFJ is well below the required annual operational activity to warrant an air quality analysis. Therefore, it is expected that no potential for significant air quality impacts will exist in the future.

found in the Uniform Relocation Assistance and Real Property Acquisition Policies Act, as well as FAA Order 5100.37B, Land Acquisition and Relocation Assistance for Airport Projects.

Because HFJ's future capital improvement plan will include residential acquisition and acquisition of cropland, potential short-term social impacts are possible involving the affected landowners. However, these potential impacts are not considered significant based on experience and judgment.

Furthermore, the proposed airfield expansion is not expected to include significant road closures and/or realignments. It should be noted that FR 2025, located south of HFJ, is recommended to be improved which may involve a slight shift in the centerline of the road to accommodate future runway safety areas. This improvement is expected to be temporary in nature and is not expected to significantly alter surface transportation routes in the area. Lastly, the proposed airfield development is not expected to disrupt or alter established residential or commercial developments.

Induced Socioeconomic Impacts

Induced socioeconomic impacts address those impacts on the local and surrounding communities that relate to the preferred airport development alternatives including overall population increases or fluctuations, increased public service demands and influenced changes to the local business, political, or economic conditions to the extent brought about by airport expansion.

The preferred development alternative, although expected to potentially pose minor social impacts during construction, is not expected to produce significant fluctuations in population trends or growth, nor is it expected to place undue burden on public service demands or overly influence changes in business or political conditions. It is generally believed that induced social impacts will normally not be significant except where there are also significant impacts in other categories, especially noise, land use or direct social impacts. However, these assumptions are recommended to be confirmed by an Environmental Assessment (EA) completed during the short-term phase of the Airport's capital improvement program.

Air Quality

The *Clean Air Act of 1970* (CAA) was enacted to protect the nation's air quality, as well as the public health. Amendments in 1970, 1977, and 1990 established federal standards to control air pollution emissions and to delegate the implementation of such standards to the states. The CAA Amendments of 1977 stated that any federally-funded project shall conform to State Implementation Plan (SIP) criteria in order to assure that airport development projects conform to mandates for controlling potential air pollution impacts by meeting federal air quality standards.

According to FAA Order 5050.4B, *NEPA Implementing Instructions for Airport Actions*, as well as FAA Handbook, entitled [Air Quality Procedures for Civilian Airports and Air Force Bases](#), Report No. FAA EE 82-21, no air quality analysis is required for general aviation airports if the level of forecast demand activity at the airport is less than 180,000 annual operations. The forecast of aviation demand for HFJ

is well below the required annual operational activity to warrant an air quality analysis. Therefore, it is expected that no potential for significant air quality impacts will exist in the future.

In regards to the preferred development alternatives, the Missouri Department of Natural Resources (MoDNR) indicated that if any commercial and/or residential buildings are demolished or renovated, the City must ensure compliance with National Emissions Standards for Hazardous Air Pollutants (NESHAPs) and state standards addressing asbestos inspection, mitigation and disposal. The City is recommended to coordinate structural demolition with MoDNR's Air Pollution Control Program. Secondly, MoDNR noted that if any open air burning operations to clear brush and/or trees are conducted, the City must contact DNR's southwest regional office located in Springfield to ensure permitting compliance.

Water Quality

The *Federal Water Pollution Control Act of 1972* (FWPCA) sought to restore the nation's navigable waterways and lakes so that they provide safe conditions to humans and wildlife. The FWPCA, as amended by the *Clean Water Act of 1977* (CWA), provided for the establishment of water quality standards, control of discharges into surface and subsurface waters, development of waste treatment management plans and practices, as well as issuance of permits for discharges and for dredged or fill material.

Coordination with the U.S. Army Corps of Engineers (USACE), the EPA, and MoDNR is recommended so that the preferred airfield and terminal area development alternatives can be evaluated with respect to their potential impact on groundwater aquifers and jurisdictional waters of the United States and wetlands, as well as state water quality issues.

During the construction of the preferred development alternatives, the City will be required to complete a National Pollutant Discharge Elimination System (NPDES) Permit, as well as a Spill Prevention Control, and Countermeasure (SPCC) Program. These permits are intended to demonstrate that state, Federal and local permit requirements can be met by the City. Additionally, in preventing storm water runoff and soil erosion during construction of the preferred development alternatives, exercise of Best Management Practices (BMP) are encouraged. BMPs reduce erosion, minimize sedimentation, and control non-storm water discharges in order to maintain water quality on and off the airport premises. Also, because the preferred development alternatives will involve disturbance of greater than one acre, land disturbance and storm water permits from the MoDNR will be required. The permit involves the utilization of BMPs to minimize off-site erosion into nearby waters.

Finally, the USACE indicated in their response that the City is recommended to contact the USACE's Little Rock District Office to determine the potential need for Department of the Army (DA) permit authorization and/or a Section 404 Water Quality Certification prior to construction activities initiating on the preferred development alternatives.

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DOT, Section 4(f) & 6(f)

Given the absence of Section 4(f) lands in the vicinity of HFJ, the preferred development alternative is not expected to impact any 4(f) resources in the area. Additionally, given the lack of Section 6(f) lands immediately adjacent to HFJ, the preferred alternatives are also not expected to impact this classification of publicly owned lands.

Cultural Resources

The State Historic Preservation Officer (SHPO) for the MoDNR, State Historical Preservation Office, after reviewing the preferred development alternatives and performing a review in accordance with Title 36, Code of Federal Regulations (CFR) 800, found that there will be no historic property affected by the preferred airfield alternative.

Department of Transportation Act, Section 4(f) and Section 6(f)

The U.S. Department of Transportation's Section 4(f) law (49 USC 303) states that Federal funds may not be approved for projects that use land from a significant publicly-owned park, recreation area, wildlife or waterfowl refuge, or any significant historic site unless it is determined that there is no feasible and prudent alternative to the use of land from such properties and the action includes all possible planning to minimize harm to the property resulting from such use.

Section 6(f) of the Land and Water Conservation Fund (L&WCF) Act states that property purchased or developed with funds under the Act may not be converted to other than outdoor public recreation uses. The Act also states that land required from such properties must be replaced with property of at least equal fair market value and of reasonably equivalent usefulness and location, or be compensated through other means in consultation with DNR, the agency responsible for administering L&WCF funds and other aspects of the Act.

Given the absence of Section 4(f) lands in the vicinity of HFJ, the preferred development alternative is not expected to impact any 4(f) resources in the area. Additionally, given the lack of Section 6(f) lands immediately adjacent to HFJ, the preferred alternatives are also not expected to impact this classification of publicly owned lands.

Historic, Architectural, Archeological, and Cultural Resources

The *National Historic Preservation Act of 1966* states that if any properties in or eligible for inclusion into the National Register of Historic Places are within the area of the Proposed Action's potential environmental impact, and if so, what impacts, direct and indirect, could be expected to affect the cultural, historic, archeological or architectural qualities of the property. Another piece of legislation, the *Archeological and Historic Preservation Act of 1974*, provides for the recovery, survey, and preservation of scientific, prehistoric, historical, archeological, and paleontologic data where the data may be adversely affected by a federal, federally funded, or federally licensed project.

The State Historic Preservation Officer (SHPO) for the MoDNR, State Historical Preservation Office, after reviewing the preferred development alternatives and performing a review in accordance with Title 36, Code of Federal Regulations (CFR) 800, found that there will be no historic property affected by the preferred airfield alternative.

Biotic Communities (Including both Flora and Fauna)

The *Fish and Wildlife Coordination Act of 1934* authorizes the Departments of Agriculture and Commerce to provide assistance to and cooperate with Federal and state agencies to protect and increase the supply of game and fur-bearing animals, as well as to study the effects of polluting substances on wildlife. The Act also authorizes the preparation of plans to protect wildlife resources and the completion of wildlife surveys on public lands in an effort to prevent loss of and damage to wildlife resources. The amendments enacted in 1946 require consultation with the U.S. Fish and Wildlife Service (USFWS), as well as state fish and wildlife agencies where the waters of any stream or other body of water are proposed

or authorized, permitted or licensed to be impounded, diverted or otherwise controlled or modified by any agency under a Federal permit or license.

The U.S. Fish and Wildlife Service (USFWS) and the Missouri Department of Conservation were consulted to provide input on potential impacts posed by the preferred development alternatives on biotic communities in the vicinity of HFJ. The USFWS reviewed the proposal and determined that there were no critical habitats located within the project area. Also, Missouri Conservation indicated that there were no wildlife preserves, designated wilderness areas, or critical habitats within one mile of HFJ. Accordingly, the preferred development alternatives proposed for HFJ are not expected to significantly impact any biotic communities in the area.

Endangered and Threatened Species of Flora and Fauna

The *Endangered Species Act of 1973* provides for the preservation of threatened and endangered species of fish, wildlife and plants in their respective biotic communities which refers to the flora and fauna habitats (vegetation and wildlife) that might be present in the locality of proposed construction projects. In addition, should a construction project affect water resources including wetlands, ground-water, impoundment, diversion, deepening, controlling, modifying, polluting, dredging, or filling of any stream or other body of water, provisions of the Endangered Species Act make the Fish and Wildlife Coordination Act applicable as well.

The USFWS and Missouri Conservation were consulted to provide input on potential impacts posed by the preferred development alternative on endangered and threatened species. Both agencies determined that no Federal or state-listed endangered or candidate species occur within the project site or within one mile of HFJ. Therefore, the preferred development alternatives proposed for HFJ are not expected to significantly impact any endangered or threatened species.

Wetlands

The importance of wetlands is emphasized in Executive Order (EO) 11990, issued May 24, 1977, as well as Section 404 of the *Clean Water Act of 1977*. E.O. 11990 is implemented by DOT Order 5660.1A, *Preservation of the Nation's Wetlands*. Wetlands are defined in E.O. 11990, *Protection of Wetlands*, as "...those areas that are inundated by surface or ground water with a frequency sufficient to support and under normal circumstances does or would support a prevalence of vegetative or aquatic life that requires saturated or seasonally saturated soil conditions for growth and reproduction. Wetlands generally include swamps, marshes, bogs, or similar areas..." The intent of the Clean Water Act, Section 404, as well as E.O. 11990, is to avoid short and long-term adverse impacts associated with damaging or modifying wetlands area, as well as to avoid construction in wetlands where there is a reasonable alternative.

The USACE was consulted to provide input on potential impacts posed by the preferred development alternative to wetlands in the proposed project area. In their correspondence, the USACE, Little Rock District Office, indicated that a DA permit authorization and/or Section 404 permit may be required if the preferred airfield alternative involves the discharge of dredged or fill material into jurisdictional waters of the U.S. Impacts to potential jurisdictional waters are recommended to be evaluated prior to construction activities related to the preferred alternatives.

Biotic Communities

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Wetlands

The USACE, Little Rock District Office, indicated that a DA permit authorization and/or Section 404 permit may be required if the preferred airfield alternative involves the discharge of dredged or fill material into jurisdictional waters of the U.S.

Floodplains

Prior to development of the preferred airfield alternative the Sponsor is recommended to coordinate with FEMA, the City's floodplain administrator, as well as the Missouri Floodplain and Stormwater Managers Association, Region 7 (SW Missouri) to determine the overall affect posed by runway expansion at HFJ and develop strategies to minimize the impact to the floodplain.

Wild & Scenic Rivers

The national inventory for the Wild and Scenic Rivers System does not list any rivers of this classification within the vicinity of HFJ and does not warrant further consideration or investigation.

Floodplains

Floodplains are characterized as low lying flatlands adjoining inland and coastal waters where the possibility of flooding in any given year is approximately one percent or greater. These inland and coastal waters susceptible to flooding are most likely within the 100-year floodplain. Knowledge of floodplains in the vicinity of an airport is important in reducing the risk of flood loss, restoration and preservation of natural beneficial values of floodplains including groundwater recharge to aquaculture and forestry.

According to Executive Order 11988, *Floodplains*, and the U.S. Department of Transportation (DOT) Order 5650.2, *Floodplain Management and Protection*, all airport development actions must avoid floodplains, if a practicable alternative exists. If no practicable alternative exists, actions in a floodplain must be designed to minimize adverse impact to the floodplain's natural and beneficial values. The design must also minimize the potential risks for flood-related property loss and impacts on human safety, health and welfare.

Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRM) for Barry County (Panel No. 29009C0025C) were researched to determine the potential impacts of proposed expansion on existing floodplains. It appears that the ultimate preferred airfield development alternative will impact the 100-year floodplain of an unnamed tributary associated with Capps Creek located to the south and east of the Airport.

Prior to development of the preferred airfield alternative the Sponsor is recommended to coordinate with FEMA, the City's floodplain administrator, as well as the Missouri Floodplain and Stormwater Managers Association, Region 7 (SW Missouri) to determine the overall affect posed by runway expansion at HFJ and develop strategies to minimize the impact to the floodplain.

Wild and Scenic Rivers

The National Wild and Scenic Rivers System is a classification of certain selected rivers of the U.S. which, with their immediate environments, possess outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural or other similar values, shall be preserved in free-flowing condition, and that they and their immediate environments shall be protected for the benefit and enjoyment of present and future generations.

The national inventory for the Wild and Scenic Rivers System (<http://www.rivers.gov>) does not list any rivers of this classification within the vicinity of HFJ and does not warrant further consideration or investigation.

Prime and Unique Farmland

The *Farmland Protection Policy Act of 1984* (FPPA) authorizes the U.S. Department of Agriculture (USDA) to develop criteria for evaluating the potential effects of federally-funded transportation projects on the conversion of farmland to nonagricultural uses. This evaluation includes determining the adverse impacts to prime farmland, mitigating or minimizing adverse effects, and ensuring that transportation projects are compatible with local, state, and private programs aimed at preserving farmland areas.

The USDA, Natural Resources Conservation Service (NRCS), in accordance with the FPPA, is recommended to be provided with an AD-1006 Form to be completed in an effort to determine what impacts, if any, to prime farmland are posed by the preferred development alternative. For HFJ, a vast majority of land and easement acquisition will not require land use conversion and will most likely continue to be utilized for agricultural purposes. Accordingly, the NRCS indicated that the project area will be exempt from the FPPA and that no high yield croplands will be impacted by the project.

Energy Supply and Natural Resources

The preferred development alternative will be evaluated to determine any significant impacts on local energy resources including construction of additional buildings or aviation-related facilities such as airfield and runway lighting or those energy requirements associated with the movement of air and ground vehicles.

The preferred alternatives will result in an increase in energy demand related to the installation of airfield lighting improvements including runway lighting and visual approach aids as well as the construction of T-hangars and clear span hangars within the terminal area complex. However, this increase in energy demand is not considered to have a measurable effect on local energy supplies and is expected to be accommodated by current utility facilities and providers.

The overall aircraft operational activity of the Airport is expected to increase as a result of the implementation of the preferred alternatives. However, the preferred alternative is not expected to significantly increase aircraft ground operations or movement times nor is it expected to have an appreciable effect on existing flight patterns or en route flight times. With a minimal increase in local airport activity, the surface transportation activity is expected to increase at a nominal rate as well. Motor vehicle fuel consumption is not expected to increase significantly because airport access routes are not expected to be adversely influenced by the development of the preferred alternatives.

With regard to natural resources, with the exception of automobile gasoline and aviation fuel, the preferred development alternative is not anticipated to impact rare materials that are in short supply. Also, the proposed alternatives are not expected to result in demand for natural resources or energy reserves exceeding supplies. Therefore, the preferred alternative is not expected to significantly impact energy supplies or natural resources of the Barry, Lawrence and Newton tri-county and/or the Monett area.

Light Emissions

Light emissions created by the preferred airfield alternative require consideration to determine whether or not runway lighting would create an annoyance to the population residing in the vicinity of HFJ. The preferred alternative will include the installation or upgrade of the following runway lighting systems:

- **Medium Intensity Runway Lighting (MIRL):** MIRL is a steady burning lighting system classified by the system's intensity or brightness. The brightness of the system is classified by a series of "steps" varying from low (15 watts) to medium (40 watts) intensity depending on the visibility conditions, as well as 10, 30,

Prime Farmland

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Natural Resources

The preferred alternative is not expected to significantly impact energy supplies or natural resources of the Barry, Lawrence and Newton tri-county and/or the Monett area.

Light Emissions

Given the lighting systems currently utilized and proposed for use at HFJ, the preferred airfield alternative is not expected to contribute significant light emissions. However, should these lighting systems prove to result in excess ambient light, particular adjustments and engineered solutions can be made to the systems during or after installation.

and 100 percent of the required level of brightness. Runway 18-36 is currently equipped with MIRL and is recommended to be upgraded to high intensity runway lighting (HIRL) upon extension of and establishment of a 50:1 precision instrument approach procedure to the Runway 36 approach end.

- **Threshold Lighting and Runway End Indicator Lights (REILs):** This low to medium intensity, pole mounted, frangible, and steady burning lighting system marks the end of the runway by utilizing colored split lenses. The REIL lighting system provides rapid and positive identification of the runway approach end, consisting of a pair of white synchronized high-intensity (200 watt) photo-strobe lights located laterally along the runway threshold and angled 15 degrees from the extended runway centerline. Runway 18-36 is recommended to remain equipped with REILs at both runway ends throughout the planning period.
- **Visual Guidance Indicators:** The Precision Approach Path Indicators (PAPI-4L) system consists of a four lamp housing unit, emitting red and white light beams, which is installed 600-800 feet from the runway threshold and offset 50 feet to the left side. The PAPI-4L system currently in use for Runway 18-36 is recommended to remain in service throughout the planning period.
- **Medium Intensity Approach Lighting System with Sequenced Flashers (MALSF):** The MALSF is a 1,400 foot long array of lights installed along an extended centerline from the landing threshold of the runway and is designed to provide visual acquisition of the runway approach during instrument meteorological conditions (IMC) with minimum visibilities down to $\frac{3}{4}$ -mile. The MALSF system provides three intensity levels which range from 8,000 up to 20,000 candela during heavy IMC conditions. A typical MALSF consists of the light fixture components including nine light bars each with five steady burning white fixtures; three sequence flashing white fixtures; and a threshold bar of 18 steady burning green fixtures. Ultimately, the MALSF serving the Runway 36 threshold is recommended to be upgraded to a MALSR- Medium Intensity Approach Lighting System with Runway Alignment Indicator Lights.
- **Medium Intensity Approach Lighting System with Runway Alignment Indicator Lights (MALSR):** The MALSR is a 2,400 foot long array of lights providing visual acquisition of the runway approach during IMC with minimum visibilities down to $\frac{1}{2}$ -mile. A typical MALSR consists of the light fixture components including nine light bars each with five steady burning white fixtures; five sequence flashing white fixtures; and a threshold bar of 18 steady burning green fixtures. The Runway 36 threshold is recommended to be equipped with a MALSR during the short and/or intermediate planning period.

Given the lighting systems currently utilized and proposed for use at HFJ, the preferred airfield alternative is not expected to contribute significant light emissions. However, should these lighting systems prove to result in excess ambient light, particular adjustments and engineered solutions can be made to the systems during or after installation. Optical baffles can be installed and angular tolerances be made in order to channel the light emitted from the lamps, thereby reducing the likelihood of objectionable light emissions from either runway end.

Solid Waste Impacts

FAA Order 5200.5, *FAA Guidance Concerning Sanitary Landfills On or Near Airports*, provides guidance with respect to the establishment, elimination, or monitoring of sanitary landfills, transfer facilities, and solid waste facilities on or in the vicinity of airports. Assessing the potential impacts of the preferred development alternative on the generation of solid waste is necessary to determine potential available disposal capability and capacity of waste facilities in the region.

The MoDNR, Solid Waste Management Program was consulted to determine the location of the nearest sanitary landfill to HFJ. According to MoDNR, there are no sanitary landfills within a two mile radius of HFJ.

Airport development projects associated with expansion of runways and taxiways, except for construction, rarely include any direct relationship to solid waste collection facilities. Coupled with the location of the nearest landfill to HFJ, the preferred development alternatives will not generate excessive solid waste nor will it be adversely affected by potential wildlife hazards associated with sanitary and/or waste disposal facilities.

The MoDNR did comment that during the implementation of the preferred airfield and terminal area alternatives, the City is recommended to dispose of waste from demolition and/or construction activities at a permitted sanitary landfill or transfer station. This waste cannot be stockpiled at an alternate site for separation at a later time. MoDNR also commented that should any asbestos containing material from demolition of residential and/or commercial structures be identified, a registered asbestos contractor should be contacted to remove and properly dispose of the material.

Lastly, MoDNR indicated that no waste may be buried on-site except for certified clean fill. Certified clean fill includes uncontaminated soil, rock, sand, gravel, concrete, asphaltic concrete, cinder blocks and unpainted brick. Clean fill must not contain extruding material and/or demolition debris.

Construction Impacts

Temporary environmental effects resulting from construction operations include noise of construction equipment on the site; noise and dust from delivery of materials through local roadways; creation of borrow pits and disposal of raw materials; air pollution from burning debris; and water pollution from erosion. Although environmental effects resulting from construction are of lesser magnitude than long-term impacts, they can be minimized through implementation of control measures and utilization of BMPs. Additionally, construction operations are recommended to be conducted in accordance with FAA Advisory Circular (AC) 150/5370-10A, *Standards for Specifying Construction of Airports*, Item P 156- *Temporary Air and Water Pollution, Soil Erosion and Siltation Control*, as well as an established NPDES permit and SPCC program.

Hazardous Waste

Regulatory law affecting airports includes the Resource Conservation and Recovery Act of 1976 (RCRA). Through this legislation, the U.S Congress directed the EPA to

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Construction Impacts

Although environmental effects resulting from construction are of lesser magnitude than long-term impacts, they can be minimized through implementation of control measures and utilization of BMPs.

Hazardous Waste

In the event that a reportable amount of hazardous wastes are released into the environment, as established by the EPA, the City must contact the National Response Center (NRC), Washington, D.C., at 800.424.8802 and abide by proper reporting requirements and procedures. HFJ is not located in the vicinity of any Superfund Sites as listed on the National Priority List nor will airfield and terminal area development result in creation of hazardous waste.

develop and implement programs meant to protect human health and welfare, as well as the environment, from improper hazardous waste management practices. The RCRA is applicable to any party who transports or generates hazardous waste, as well as those parties who own or operate a facility for the storage, treatment, or disposal of hazardous wastes. Other pertinent legislation regarding this matter includes legislation that was a national campaign aimed at toxic waste cleanup efforts which included The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), a.k.a. Superfund Act, as well as The Superfund Amendments and Reauthorization Act of 1986 (SARA).

Hazardous wastes are those materials that can cause injury or death, or that can damage or pollute the air, land and water. Material waste might also be considered hazardous if the material exhibits any one or all of the following characteristics, including ignitability (flammable or combustible), reactivity (rapid, violent chemical reaction with H₂O or other element), toxicity (high concentrations of heavy metals or pesticides), or corrosiveness (burns or dissolves other elements or various materials). In the event that a reportable amount of hazardous wastes are released into the environment, as established by the EPA, the City must contact the National Response Center (NRC), Washington, D.C., at 800.424.8802 and abide by proper reporting requirements and procedures. HFJ is not located in the vicinity of any Superfund Sites as listed on the National Priority List nor will airfield and terminal area development result in creation of hazardous waste.

In their correspondence, MoDNR commented that any household hazardous waste generated from and/or by acquired residences must be properly managed. This includes waste consistent with the operation of a business out of a home which would not be exempt and would be subject to a hazardous waste determination including management, storage and disposal per applicable regulations. Additionally, MoDNR indicated that construction of hangars is considered a commercial endeavor and requires that all waste from these operations be properly characterized for hazardous waste constituents. All hazardous waste must be managed, stored, transported and disposed of in accordance with applicable guidelines and requirements.

Also, MoDNR noted that if during excavation activities any contaminated soil that could be classified as a hazardous waste is discovered, the MoDNR spill line should be notified immediately.

Environmental Justice

In accordance with Executive Order 12988, *Federal Action to Address Environmental Justice in Minority Populations and Low Income Population* (1994), the preferred development alternative must not pose a disproportional impact on low income or minority communities in the vicinity of the Airport.

It is recommended that during the completion of the future EA the preferred development alternatives be examined to determine if the project poses a potential disproportionate affect on low income and/or minority populations. It is expected that in the course of determining the social and induced socioeconomic impacts of implementing the preferred alternatives, significant impacts, if any, related to environmental justices will be determined.

Environmental Justice

It is recommended that during the completion of the future EA the preferred development alternatives be examined to determine if the project poses a potential disproportionate affect on low income and/or minority populations.

ENVIRONMENTAL OVERVIEW SUMMARY

Table 5.1 details the potential impacts and recommendations to address the environmental impact categories for the preferred airfield and terminal area alternatives at HFJ.

Table 5.1
Environmental Impact Categories Summary

Environmental Categories	Preferred Development Alternatives Impacts/Mitigation
Noise	None
Compatible Land Use	None/Enact Airport Zoning Ordinance
Social Impacts	Not Significant
Induced Socioeconomic Impacts	None
Air Quality	None
Water Quality	Not Significant/Complete NPDES & SPCC Plans
Section 4(f) & Section 6(f) Lands	None
Historic, Archeological & Cultural Resources	None
Biotic Communities (Including Flora and Fauna)	None
Endangered Species of Flora & Fauna	None
Wetlands	None
Floodplains	Not Significant/Coordinate with FEMA & MFSMA
Wild & Scenic Rivers	None
Prime & Unique Farmland	Not Significant/Abide by FPPA & NRCS
Energy Supply & Natural Resources	None
Light Emissions	None
Solid Waste Impacts	None
Construction Impacts	Not Significant
Hazardous Waste	None/Abide by CERCLA & SARA
Environmental Justice	None
MFSMA-Missouri Floodplain and Stormwater Managers Association	

Source: BWR.

