



Appendix B

ENVIRONMENTAL EVALUATION

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Analysis of the potential environmental impacts of proposed airport development projects is an important component of the Airport Master Plan process. The primary purpose of this section is to evaluate the proposed development program for the Coolidge Municipal Airport to determine whether proposed development actions could individually or collectively affect the quality of the environment.

Construction of the improvements depicted on the Airport Layout Plan will require compliance with the *National Environmental Policy Act (NEPA) of 1969*, as amended, to receive federal financial assistance. For projects not “categorically excluded” under FAA Order 1050.1E, *Environmental Impacts: Policies and Procedures*, compliance with NEPA is generally satisfied through the preparation of an Environmental Assessment (EA). In instances where significant environmental impacts are expected, an Environmental Impact Statement (EIS) may be required. While this portion of the master plan is not designed to satisfy the NEPA requirements for a categorical exclusion, EA, or EIS, it is intended to supply a preliminary review of environmental issues that would need to be analyzed in more detail within the NEPA process. This evaluation considers all environmental categories required for the NEPA process as outlined in FAA Order 1050.1E and Order 5050.4B, *National Environmental Policy Act (NEPA) Implementation Instructions for Airport Actions*.

During the inventory process for this Master Plan, the existing environmental condition was researched and documented within Chapter One. This evaluation will

determine if any previously identified resources could be impacted by the proposed airport development projects discussed in Chapter Five and depicted on Exhibit 5A.

AIR QUALITY

The U.S. Environmental Protection Agency (EPA) has adopted air quality standards that specify the maximum permissible short term and long term concentrations of various air contaminants. The National Ambient Air Quality Standards (NAAQS) consist of primary and secondary standards for six criteria pollutants, which include: Ozone (O₃), Carbon Monoxide (CO), Sulfur Dioxide (SO₂), Nitrogen Dioxide (NO₂), Particulate matter (PM₁₀ and PM_{2.5}), and Lead (Pb). Potentially significant air quality impacts, associated with an FAA project or action, would be demonstrated by the project or action exceeding one or more of the NAAQS for any of the time periods analyzed. Various levels of air quality impact review apply within both NEPA and permit requirements. According to the most recent update contained on the EPA's Greenbook website, Coolidge Municipal Airport is located in a portion of Pinal County that is currently designated as an attainment area for all criteria pollutants. An attainment area is defined as a geographical area where the levels of all criteria pollutants meet the NAAQS.

Construction projects planned at the airport could have temporary air quality impacts during construction. Emissions from the operation of construction vehicles and fugitive dust from pavement removal are common air pollutants during construction. However, with the use of best management practices (BMPs) during construction, these air quality impacts can be significantly lessened. Additionally, a dust control permit from the Pinal County Air Quality Control District may be required for earthmoving activities related to construction projects at the airport.

COASTAL RESOURCES

Federal activities involving or affecting coastal resources are governed by the *Coastal Barriers Resource Act* (CBRA), the *Coastal Zone Management Act* (CZMA), and E.O. 13089, Coral Reef Protection.

The airport is not located within a Coastal Management Zone or Coastal Barrier Area.

COMPATIBLE LAND USE

The compatibility of existing and planned land uses in the vicinity of an airport is usually associated with the extent of the airport's noise impacts. Typically, significant impacts will occur over noise-sensitive areas within the 65 DNL noise contour.

Noise contours were not prepared as part of this Master Plan. Due to the absence of noise-sensitive land uses within the vicinity of the airport, it is not anticipated that the planned development at the airport will result in land use compatibility conflicts.

Compatible land use also addresses nearby features that could pose a threat to safe aircraft operations by attracting wildlife (e.g., landfills and ponds). The closest landfill to the airport is located approximately five miles north of the airport. Additionally, the Central Arizona Project Canal is located immediately west of the airport.

As part of the Master Plan process, an airport disclosure map is being created which depicts the airport influence area. This area, which encompasses land surrounding the airport, is determined by airport traffic patterns. This disclosure map will be filed with the State of Arizona Department of Real Estate. Any person purchasing property that is located within the boundaries of the airport influence area will be made aware of the property's proximity to the airport.

CONSTRUCTION IMPACTS

Construction impacts typically relate to the effects on specific impact categories, such as air quality or noise, during construction. The use of BMPs during construction is typically a requirement of construction-related permits such as an Arizona Pollutant Discharge Elimination System (AZPDES) permit. Use of these measures typically alleviates potential resource impacts.

Short term construction-related noise impacts could occur with implementation of the proposed project as the area immediately northeast of the airport contains residential land uses. However, these impacts typically do not arise unless construction is being undertaken during early morning, evening, or nighttime hours.

Construction-related air quality impacts can be expected. Air emissions related to construction activities will be short term in nature and will be included in the air emissions inventory, as required for NEPA documentation efforts. As previously discussed, a dust control permit from the Pinal County Air Quality Control District may also be required for earthmoving activities related to construction projects at the airport.

DEPARTMENT OF TRANSPORTATION ACT SECTION 4(F)

A significant impact would occur when a proposed action involves more than a minimal physical use of a Section 4(f) property, (publicly owned land from a public

park, recreation area, or wildlife and waterfowl refuge of national, state, or local significance, or any land from a historic site of national, state, or local significance) or is deemed a “constructive use” substantially impairing the Section 4(f) property where mitigation measures do not reduce or eliminate the impacts. Substantial impairment would occur when impacts to Section 4(f) lands are sufficiently serious that the value of the site in terms of its prior significance and enjoyment are substantially reduced or lost. There are no properties that are considered Section 4(f) lands within the vicinity of the airport.

FARMLAND

Under the *Farmland Protection Policy Act* (FPPA), federal agencies are directed to identify and take into account the adverse effects of federal programs on the preservation of farmland to consider appropriate alternative actions which could lessen adverse effects, and to assure that such federal programs are, to the extent practicable, compatible with state or local government programs and policies to protect farmland. The FPPA guidelines apply to farmland classified as prime or unique, or of state or local importance as determined by the appropriate government agency, with concurrence by the Secretary of Agriculture.

Based on a review of information available from the Natural Resource Conservation Service Soil Survey, lands within the existing and proposed airport property boundary are not classified as prime farmland or soils of statewide importance.

FISH, WILDLIFE, AND PLANTS

Through consultation with the Fish and Wildlife Service (FWS) and the National Marine Fisheries Service (NMFS), the FAA determines that a significant impact to fish, wildlife or plants will result when the proposed action would likely jeopardize the continued existence of a species in question, or would result in the destruction or adverse modification of federally designated critical habitat in the area. Lesser impacts, as outlined by agencies and organizations having jurisdiction, can also result in a significant impact.

Table B1 identifies the state and federally listed threatened, endangered, and candidate species with the potential to occur in Pinal County.

**TABLE B1
Federally Listed Threatened, Endangered, and
Candidate Species with Habitat in Pinal County**

COMMON NAME	SCIENTIFIC NAME	HABITAT	STATUS
Arizona Hedgehog Cactus	<i>Echinocereus triglochidiatus</i> var. <i>arizonicus</i>	Ecotone between interior chaparral and madrean evergreen woodland.	Endangered
Desert Pupfish	<i>Cyprinodon macularius</i>	Shallow springs, small streams, and marshes. Tolerates saline and warm water.	Endangered
Gila Chub	<i>Gila intermedia</i>	Pools, springs, cienegas, and streams.	Endangered
Lesser Long-nosed Bat	<i>Leptonycteris curasoae yerbabuena</i>	Desert scrub habitat with agave and columnar cacti present as food plants.	Endangered
Loach Minnow	<i>Tiaroga cobitis</i>	Small to large perennial streams with swift shallow water over cobble and gravel.	Threatened
Mexican Spotted Owl	<i>Strix occidentalis lucida</i>	Nests in canyons and dense forests with multilayered foliage structure.	Threatened
Nichol Turk's Head Cactus	<i>Echinocactus horizontalis</i> var. <i>nicholii</i>	Sonoran desert scrub.	Endangered
Razorback Sucker	<i>Xyrauchen texanus</i>	Riverine and lacustrine areas, generally not in fast moving water and may use backwaters.	Endangered
Southwestern Willow Flycatcher	<i>Empidonax traillii eximius</i>	Cottonwood/willow and tamarisk vegetation communities along rivers and streams.	Endangered
Spikedance	<i>Meda fulgida</i>	Moderate to large perennial streams with gravel substrates and moderate to swift velocities over sand and gravel substitutes.	Threatened
Yuma Clapper Rail	<i>Rallus longirostris yumanensis</i>	Fresh water and brackish marshes.	Endangered
Acuna Cactus	<i>Echinomastus erectocentrus</i> var. <i>acunensis</i>	Well drained knolls and gravel ridges in Sonoran desert scrub.	Candidate
Northern Mexican Garter snake	<i>Thamnophis eques megalops</i>	Found in source-area wetlands, large river riparian woodlands and forests, and streamside gallery forests.	Candidate
Yellow-billed Cuckoo	<i>Coccyzus americanus</i>	Large blocks of riparian woodlands (cottonwood, willow, or tamarisk galleries).	Candidate

Source: U.S. Fish and Wildlife Service, Pinal County Species List, March 2010

As indicated in the table, several of the listed species, such as the desert pupfish, loach minnow, razorback sucker, Gila chub, spikedace, and Yuma clapper rail re-

quire aquatic habitat which is not present at the airport. Additionally, habitat for species such as the Mexican spotted owl, which requires canyons and forests and the Southwestern willow flycatcher which requires riparian areas, is not present at the airport. Additionally, as discussed in Chapter One, a search of the Arizona Department of Fish and Game *Online Environmental Review Tool* indicates that no federal special status species have been located within two miles of the airport. Field investigation to determine the presence of protected species may be required prior to undertaking proposed projects at the airport that include areas with minimal disturbance, such as the proposed property acquisition.

FLOODPLAINS

As defined in FAA Order 1050.1E, floodplains consist of “lowland and relatively flat areas adjoining inland and coastal water including flood prone areas of offshore islands, including at a minimum, that area subject to one percent or greater chance of flooding in any given year.” Federal agencies are directed to take action to reduce the risk of flood loss, minimize the impact of floods on human safety, health and welfare, and restore and preserve the natural and beneficial values served by floodplains. Floodplains have natural and beneficial values, such as providing ground water recharge, water quality maintenance, fish, wildlife, plants, open space, natural beauty, outdoor recreation, agriculture, and forestry. FAA Order 1050.1E (12) (c) indicates that “if the proposed action and reasonable alternatives are not within the limits of a base floodplain (100-year flood area),” that it may be assumed that there are no floodplain impacts. The limits of base floodplains are determined by Flood Insurance Rate Maps (FIRM) prepared by the Federal Emergency Management Agency (FEMA).

A review of FEMA Floodplain Insurance Rate Map Panel 04021C1250E indicates that no 100-year floodplains are present within the vicinity of the airport.

HAZARDOUS MATERIALS, POLLUTION PREVENTION, AND SOLID WASTE

Federal, state, and local laws regulate hazardous materials use, storage, transport, and disposal. These laws may extend to past and future landowners of properties containing these materials. In addition, disrupting sites containing hazardous materials or contaminates may cause significant impacts to soil, surface water, groundwater, air quality, and the organisms using these resources.

The EPA’s *EnviroMapper for Envirofacts*¹ was consulted regarding the presence of impaired waters or regulated hazardous sites. No impaired waters are located on or

¹ <http://www.epa.gov/enviro/emef/>, Accessed March 2010.

in the vicinity of the airport. According to the site, there are no SUPERFUND hazardous waste sites located within the vicinity of the airport.

An environmental due diligence audit (EDDA) may be required for the area identified for acquisition to determine the presence of any recognized environmental conditions (RECs). An REC is defined by the American Society for Testing and Materials as the presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances, or petroleum products into the ground, groundwater, or surface water of a property.

A construction-related AZPDES permit may be required prior to on-airport construction projects. The permit requires a Notice of Intent for all construction activities disturbing one or more acre of land. In conjunction with the AZPDES, a Storm Water Pollution Prevention Plan (SWPPP) may be required to outline the best management practices to be used to minimize impacts to storm water conveyance systems.

As a result of increased operations at the airport, solid waste may slightly increase; however, these increases are not anticipated to be significant. According to Arizona Department of Environmental Quality records, the nearest landfill facility is the Ironwood Landfill located approximately five miles north of the airport.²

HISTORICAL, ARCHITECTURAL, ARCHAEOLOGICAL, AND CULTURAL RESOURCES

Impacts may occur when the proposed project causes an adverse effect on a property which has been identified (or is unearthed during construction) as having historical, architectural, archaeological, or cultural significance.

Prior to implementation of the planned improvements, coordination with the State Historic Preservation Office will be needed to determine if field surveys are warranted. Projects such as the relocation of the airport access road, Runway 5-23 extension and associated runway safety area grading, and construction of the parallel taxiway extension will disturb land which has not been disturbed previously. Projects including the connecting taxiways and landside development will occur in areas that have been previously disturbed.

² Arizona Department of Environmental Quality, <http://www.azdeq.gov/environment/waste/solid/download/active.pdf>, accessed March 2010

LIGHT EMISSIONS AND VISUAL IMPACTS

Airport lighting is characterized as either airfield lighting (i.e., runway, taxiway, approach and landing lights) or landside lighting (i.e., security lights, building interior lighting, parking lights, and signage). Generally, airport lighting does not result in significant impacts unless a high intensity strobe light, such as a runway end identification light (REIL), would produce glare on any adjoining site, particularly residential uses.

Visual impacts relate to the extent that the proposed development contrasts with the existing environment and whether a jurisdictional agency considers this contrast objectionable. The visual sight of aircraft, aircraft contrails, or aircraft lights at night, particularly at a distance that is not normally intrusive, should not be assumed to constitute an adverse impact.

Airside development will include a 2,638-foot extension to Runway 5-23 and associated parallel taxiway, construction of additional connecting taxiways, and the construction of medium intensity approach lighting systems (MALS) at both ends of Runway 5-23. The runway extension will result in the extension of runway and taxiway lighting and the construction of connecting taxiways will result in additional airfield lighting. The MALS will also increase the light emissions at the airport.

Landside development at the airport includes new hangar space, aviation use revenue support parcels, aviation use support parcels, and the relocation of the airport access road. Additional security lighting for these facilities will increase light emissions at the airport.

As previously discussed, development surrounding the airport is limited and there are no light-sensitive land uses within the immediate vicinity. If the potential for lighting or visual impacts is determined to be associated with the planned development, consultation with local residents and the owners of light-sensitive sites may be needed to determine possible alternatives to minimize these effects without risking aviation safety or efficiency. Additional coordination with state, regional, or local art or architecture councils, tribes, or other organizations having an interest in airport-associated visual effects may be necessary.

NATURAL RESOURCES AND ENERGY SUPPLY

In instances of proposed actions, such as the expansion of utilities, power companies or other suppliers of energy will need to be contacted to determine if the proposed project demands can be met by existing or planned facilities.

Increased use of energy and natural resources are anticipated as the operations at the airport grow. None of the planned development projects are anticipated to result in significant increases in energy consumption.

SECONDARY (INDUCED) IMPACTS

These impacts address those secondary impacts to surrounding communities resulting from the proposed development, including shifts in patterns of population growth, public service demands, and changes in business and economic activity to the extent influenced by airport development.

Significant shifts in patterns of population movement or growth or public service demands are not anticipated as a result of the proposed development. It could be expected, however, that the proposed development would potentially induce positive socioeconomic impacts for the community over a period of years. The airport, with expanded facilities and services, would be expected to attract additional users. It is also expected to encourage industry and trade, and to enhance the future growth and expansion of the community's economic base. Future socioeconomic impacts resulting from the proposed development are anticipated to be primarily positive in nature.

SOCIOECONOMIC IMPACTS, ENVIRONMENTAL JUSTICE, AND CHILDREN'S ENVIRONMENTAL HEALTH AND SAFETY RISKS

Impacts occur when disproportionately high and adverse human health or environmental effects occur to minority and low-income populations; disproportionate health and safety risks occur to children; and extensive relocation of residents, businesses, and disruptive traffic patterns are experienced.

Socioeconomic impacts known to result from airport improvements are often associated with relocation activities or other community disruptions, including alterations to surface transportation patterns, division or disruption of existing communities, interferences with orderly planned development, or an appreciable change in employment related to the project.

The acquisition of real property or displacing people or businesses is required to conform to the *Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970* (URARPAPA). These regulations mandate that certain relocation assistance services be made available to owners/tenants of the properties.

The proposed airport development concept includes the extension of Runway 5-23. Associated with the runway extension is the acquisition of approximately 78.5 acres northeast of the airport to ensure airport control over land uses within the runway protection zone (RPZ) and to prevent incompatible land uses within this area. Additionally, southwest of the airport, a four-acre parcel is proposed to be acquired to accommodate the MALS and a 20-acre easement is proposed to ensure airport control over the RPZ. Acquisition of these parcels will not require the relocation of residents or businesses. Additionally, the construction of the Runway 5-23 extension may result in alterations to local traffic patterns as it will require the relocation of the airport access road.

Executive Order 12898, *Federal Action to Address Environmental Justice in Minority Populations and Low-Income Populations*, and the accompanying Presidential Memorandum, and Order DOT 5610.2, *Environmental Justice*, require FAA to provide for meaningful public involvement by minority and low-income populations, as well as analysis that identifies and addresses potential impacts on these populations that may be disproportionately high and adverse.

Based on a review of U.S. Census Bureau information, blocks within the airport environs do not contain high percentages of minority populations or high percentages of residents below the poverty level.

Pursuant to Executive Order 13045, *Protection of Children from Environmental Health Risks and Safety Risks*, federal agencies are directed to identify and assess environmental health and safety risks that may disproportionately affect children. These risks include those that are attributable to products or substances that a child is likely to come in contact with or ingest, such as air, food, drinking water, recreational waters, soil, or products to which they may be exposed.

During construction of the projects outlined within the master plan, appropriate measures should be taken to prevent access by unauthorized persons to construction project areas. Additionally, best management practices should be implemented to decrease environmental health risks to children.

WATER QUALITY

The *Clean Water Act* provides the authority to establish water quality standards, control discharges, develop waste treatment management plans and practices, prevent or minimize the loss of wetlands, and regulate other issues concerning water quality. Water quality concerns related to airport development most often relate to the potential for surface runoff and soil erosion, as well as the storage and handling of fuel, petroleum products, solvents, etc.

The Central Arizona Project Canal is located immediately west of the airport. The proposed development projects identified in the Master Plan will not impact this watercourse. The Environmental Protection Agency's *EnviroMapper* website indicates that there are no impaired streams within the vicinity of the airport, thereby being in violation of established water quality standards.

During construction of any of the planned improvements at the airport, it is suggested that mitigation measures from FAA Advisory Circular 150/5370-10A, *Standards for Specifying Construction of Airports, Item P-156, Temporary Air and Water Pollution, Soil Erosion and Siltation Control*, be incorporated into project design specifications to further mitigate potential water quality impacts. These standards include temporary measures to control water pollution, soil erosion, and siltation through the use of berms, fiber mats, gravels, mulches, slope drains, and other erosion control methods.

WETLANDS AND WATERS OF THE U.S.

The U.S. Army Corps of Engineers (USACE) regulates the discharge of dredge and/or fill material into waters of the United States, including adjacent wetlands, under Section 404 of the *Clean Water Act*.

Wetlands are defined by Executive Order 11990, *Protection of Wetlands*, as “those areas that are inundated by surface or groundwater with a frequency sufficient to support and under normal circumstances does or would support a prevalence of vegetation or aquatic life that requires saturated or seasonally saturated soil conditions for growth and reproduction.” Categories of wetlands include swamps, marshes, bogs, sloughs, potholes, wet meadows, river overflows, mud flats, natural ponds, estuarine area, tidal overflows, and shallow lakes and ponds with emergent vegetation. Wetlands exhibit three characteristics: hydrology, hydrophytes (plants able to tolerate various degrees of flooding or frequent saturation), and poorly drained soils.

Based on the National Resource Conservation Service's Web Soil Survey, one soil type, identified as the Mohall-Contine complex, is present at the airport. The Mohall-Contine complex is not a hydric soil. A review of aerial photography indicates the presence of ephemeral washes located within the proposed acquisition area northeast of the airport. Field surveys and coordination with the U.S. Army Corps of Engineers may be necessary prior to acquiring this parcel to determine the presence of waters of the U.S.

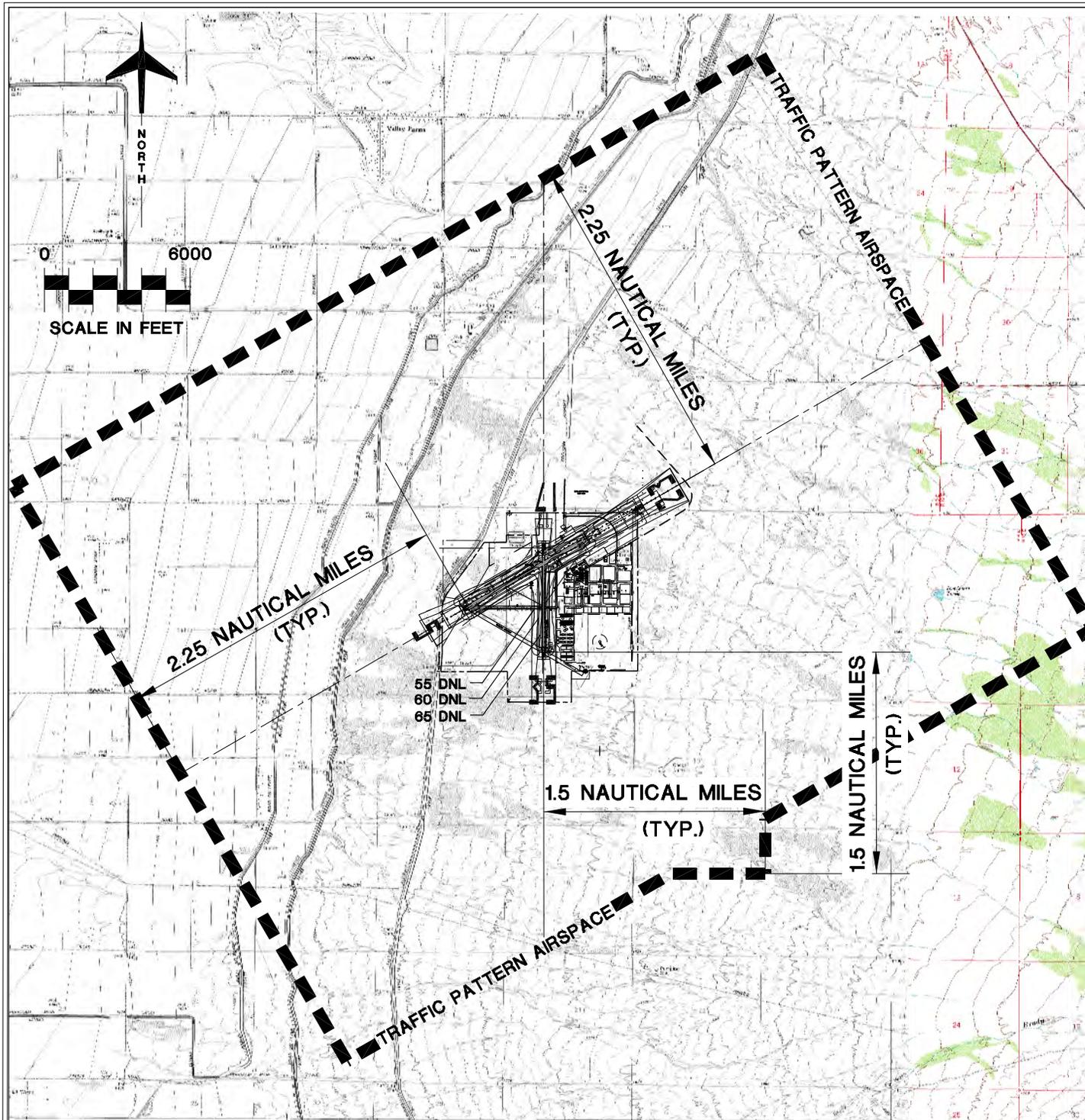
WILD AND SCENIC RIVERS

Wild and scenic rivers (WSR) are designated by the *Wild and Scenic River Act*. A National Rivers Inventory (NRI) is maintained to identify those river segments which are protected under this Act. No wild and scenic rivers are located in the vicinity of the airport.

PUBLIC AIRPORT DISCLOSURE MAP

Arizona Revised Statutes (ARS) 28-8486, *Public Airport Disclosure*, provides for an airport owner to publish a map depicting the “territory in the vicinity of the airport.” The territory in the vicinity of the airport is defined as the traffic pattern airspace and the property that experiences 60 day-night noise level (DNL) or higher in counties with a population of more than 500,000, and 65 DNL or higher in counties with less than 500,000 residents. ARS 28-8486 provides for the State Real Estate Office to prepare a disclosure map in conjunction with the airport owner. The Disclosure Map is recorded with the County Recorder.

Exhibit B1 depicts the Disclosure Map for Coolidge Municipal Airport. Traffic pattern airspace is a function of the approach category for each runway.



NOTES:

1. This map has been prepared in accordance with the Arizona Revised Statutes, Section 28-8486, relating to Public Airport Disclosure.
2. Traffic Pattern Airspace Boundaries have been established in accordance with the guidelines provided in the FAA Order JO 7400.2G.
3. The Airport Noise Contours have been developed with the Integrated Noise Model (Version 5.0) and are based on Total Annual Operations (Take-offs and Landings) of 12,300.
4. 1 Nautical mile = 6,080 feet or 1.1516 statute miles.
5. Base map derived from electronic USGS mapping quadrangles, Cactus Forest and Valley Farms.

LEGEND:

-  TRAFFIC PATTERN AIRSPACE
-  NOISE CONTOURS DAY NIGHT LEVEL (DNL)
-  EXISTING AIRPORT PROPERTY LINE
-  EXTENDED RUNWAY CENTERLINE

**COOLIDGE MUNICIPAL AIRPORT
PUBLIC AIRPORT
DISCLOSURE MAP
COOLIDGE, ARIZONA**

PLANNED BY: Matt Quick

DETAILED BY: Maggie Beaver

APPROVED BY: James M. Harris, P.E.

January 31, 2011 SHEET 1 OF 1

