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# AIRPORT PLANS

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## 7. ENVIRONMENTAL CONSIDERATIONS

A review of the potential environmental impacts associated with proposed airport projects is an essential consideration in the Airport Master Plan process. The primary purpose of this section is to review the proposed improvement program at Avi Suquilla Airport to determine whether the proposed actions could, individually or collectively, have the potential to significantly affect the quality of the environment. An Environmental Assessment was completed for the relocation of Runway 1-19 in August, 2006 with a Finding of No Significant Impact (FONSI) and Record of Decision (ROD) issued in June, 2006. The EA contained an airport wide Cultural Resources Inventory and a biological assessment. The information contained in this evaluation was obtained primarily from these studies, various internet websites, and analysis by the consultant.

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 EA. Instances in which 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*.

Upon preliminary evaluation, none of the projects identified in the Master Plan for development during the planning period fall within the “airport actions normally requiring an EA.” under FAA Order 5050.4B. (Note: The extension of Runway 1-19, which is identified beyond the planning period will require an EA.) It is anticipated that most, if not all projects identified to occur during the planning period will be able to proceed with a Categorical Exclusion. Final determination of the extent of environmental evaluation required under NEPA will be made by the responsible FAA official.

### ENVIRONMENTAL ANALYSIS

The following table provides a description of the environmental resources which could be impacted by the proposed airport development as discussed in Chapter Four.



Table 7-1 Environmental Evaluation

Environmental Resource	Potential Resource Impacts
<p><b>Air Quality.</b> The U.S. Environmental Protection Agency (EPA) has adopted air quality standards that specifies 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 (O<sub>3</sub>), Carbon Monoxide (CO), Sulfur Dioxide (SO<sub>2</sub>), Nitrogen Dioxide (NO<sub>2</sub>), Particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>), 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 review apply within both NEPA and permit requirements.</p>	<ul style="list-style-type: none"> <li>• No projects within the planning horizon are located within non-attainment areas for criteria pollutants.</li> <li>• A number of 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.</li> <li>• Best management practices (BMPs) during construction will need to be implemented in order to reduce impacts to air quality during construction. Examples of BMPs include:               <ul style="list-style-type: none"> <li>○ Minimization of exposed erodible earth to the extent possible</li> <li>○ Stabilization of exposed earth with dust palliative, pavement or other cover as early as possible,</li> <li>○ Application of water or other stabilizing agents to work and haul areas,</li> <li>○ Covering, shielding, or stabilizing stockpiled materials as necessary, and</li> <li>○ Use of covered haul trucks</li> </ul> </li> </ul>
<p><b>Coastal Resources.</b> 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.</p>	<ul style="list-style-type: none"> <li>• No impacts. The airport is not located within a Coastal Management Zone or Coastal Barrier Area.</li> </ul>
<p><b>Compatible Land Use.</b> 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.</p>	<ul style="list-style-type: none"> <li>• As discussed further within the noise section, the Master Plan is not recommending capacity enhancement projects that would lead to increased noise levels on noise sensitive uses.</li> <li>• It is recommended that CRIT adopt regulations and develop guidelines to insure land use in the vicinity of the airport remains compatible with the airport.</li> </ul>



Environmental Resource	Potential Resource Impacts
<p><b>Construction Impacts.</b> Construction impacts typically relate to the effects on specific impact categories, such as air quality or noise, during construction.</p>	<ul style="list-style-type: none"> <li>• The use of BMPs during construction is typically a requirement of construction related permits such as a National Pollution Discharge Elimination System (NPDES) permit. Use of these measures typically alleviates potential resource impacts.</li> <li>• Construction-related noise impacts may be experienced during development of the proposed facilities. However, these impacts typically do not arise unless construction is being undertaken during early morning, evening, or nighttime hours.</li> </ul>
<p><b>Department of Transportation Act, Section 4(f).</b> 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, is substantially reduced or lost.</p>	<ul style="list-style-type: none"> <li>• No impact. No park, recreation area, federal park, state park or wildlife refuges will be affected by anticipated development.</li> </ul>
<p><b>Farmlands.</b> Under the <i>Farmland Protection Policy Act (FPPA)</i>, 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.</p>	<ul style="list-style-type: none"> <li>• No impact. According to the Soil Survey of Colorado River Indian Reservation Arizona-California, the soils found at Avi Suquilla Airport (Superstition series) do not meet the soil requirements for prime or unique farmlands.</li> </ul>



Environmental Resource	Potential Resource Impacts
<p><b>Fish, Wildlife, and Plants.</b> The Fish and Wildlife Service (FWS) and the National Marine Fisheries Service (NMFS) determines that a significant impact 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, may result in a significant impact.</p>	<ul style="list-style-type: none"> <li>• A review of US Geological Service Quadrangle maps and US Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) maps revealed that the majority of airport property comprises man-dominated areas, interspersed with upland communities adjacent to the airport. The proposed improvements are not anticipated to impact any sensitive biotic areas.</li> <li>• A field investigation conducted by Aztlan Archaeology, Inc. in April of 2000 identified no federally threatened, endangered, or candidate animal or plant species. Additionally, no Arizona state species of special concern were observed.</li> <li>• These findings would need to be confirmed through consultation with the U.S. Fish and Wildlife Service.</li> </ul>
<p><b>Floodplains.</b> Significant impacts to floodplains occur when a proposed action results in notable adverse impacts on natural and beneficial 100-year floodplain values.</p>	<ul style="list-style-type: none"> <li>• According to the Flood Insurance Rate Maps (FIRM) produced by the Federal Emergency Management Agency (FEMA), the airport area is designated as a Zone C, which is an area outside the 100-year floodplain. The proposed improvements are not anticipated to impact any floodplains. Retention of the increased runoff from the existing and increased impervious areas will eliminate impacts to downstream floodplains.</li> </ul>
<p><b>Hazardous Materials, Pollution Prevention, and Solid Waste.</b> The airport must comply with applicable pollution control statutes and requirements. Impacts may occur when changes to the quantity or type of solid waste generated, or type of disposal, differ greatly from existing conditions.</p>	<ul style="list-style-type: none"> <li>• A portion of the airport, bounded by the cemetery on the south, by the airport boundary on the west, and the existing parallel taxiway and runway on the east and north, has been graded in the past and has some buried household trash on the site</li> <li>• A Stormwater Pollution Prevention Plan (SWPPP) will be required to address stormwater runoff during construction. Temporary barriers, (silt fenced, hay bales, etc.) should be placed around the perimeter of construction areas to prevent silt and sediment due to construction from leaving the project site.</li> <li>• Stormwater retention basins to limit airport runoff from impervious (paved) areas to that which existed before the airport was constructed are in place.</li> <li>• As a result of increased operations at the airport, solid waste output may slightly increase; however, these increases are not anticipated to be significant.</li> </ul>



Environmental Resource	Potential Resource Impacts
<p><b>Historical, Architectural, Archaeological, and Cultural Resources.</b> 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.</p>	<ul style="list-style-type: none"> <li>• The Avi Suquilla Airport property's proximity to the Colorado River on Tribal land lends to its potential for disturbing sites of cultural and historical significance. However, the airport operation has been present since the 1920's. Various improvement projects over the years have disturbed the land within the airport boundary including the area proposed for the future airfield improvements including runway extension, and expansion of the general aviation apron and terminal area.</li> <li>• A cultural resource survey was conducted by the CRIT Museum as a part of the 2005 EA. The results of the investigation indicated no significant findings. The primary basis for this conclusion related to prior disturbance of the property and lack of artifacts encountered.</li> </ul>
<p><b>Light Emissions and Visual Impacts.</b> Impacts occur when lighting associated with an action will create an annoyance among people in the vicinity or interfere with their normal activities. Aesthetic impacts relate to the extent that the development contrasts with the existing environment and whether the jurisdictional agency considers this contrast objectionable.</p>	<ul style="list-style-type: none"> <li>• Light emissions are assessed on the basis of creating an annoyance among residents in the vicinity of the proposed facilities.</li> <li>• The continued operation of the existing airport will not increase the impact of light emissions.</li> <li>• Installation of REILS on both ends of Runway 1-19 may occur in the future.</li> <li>• A MALSR may also be installed on Runway 1 to achieve visibility minimums of ¾ miles.</li> <li>• The installation of these lights does not have any potential to create annoyance because no residences are located near the runway ends.</li> <li>• Lighting associated with apron is not anticipated to create annoyance since the residential areas are several miles away.</li> </ul>
<p><b>Natural Resources and Energy Supply.</b> In instances of major proposed actions, 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.</p>	<ul style="list-style-type: none"> <li>• 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.</li> </ul>



Environmental Resource	Potential Resource Impacts
<p><b>Noise.</b> The Yearly Day-Night Average Sound Level (DNL) is used in this study to assess aircraft noise. DNL is the metric currently accepted by the FAA, EPA, and Department of Housing and Urban Development (HUD) as an appropriate measure of cumulative noise exposure. These three federal agencies have each identified the 65 DNL noise contour as the threshold of incompatibility. The threshold of significance for noise, as indicated in FAA Order 5050.4B, is when an action, compared to the no action alternative for the same timeframe, would cause noise sensitive areas located at or above DNL 65 dB to experience a noise increase of at least DNL 1.5 dB.</p>	<ul style="list-style-type: none"> <li>• The 2005 EA examined noise contours for future runway configurations up to 8,400 feet in length and up to 57,995 operations, which represents a more aggressive scenario than that anticipated in this Master Plan Update. Given the land uses around the airport, noise impacts were considered not significant.</li> <li>• As stated in the Land Use section, it is recommended that CRIT adopt regulations and develop guidelines to insure land use in the vicinity of the airport remains compatible with the airport.</li> </ul>
<p><b>Secondary (Induced) Impacts.</b> 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.</p>	<ul style="list-style-type: none"> <li>• 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 tourism, 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.</li> </ul>
<p><b>Socioeconomic Impacts, Environmental Justice, and Children's Environmental Health and Safety Risks.</b> 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.</p>	<ul style="list-style-type: none"> <li>• The proposed projects will not result in proportionately high or adverse impacts to human health, nor will it result in disproportionate health and safety risks to children.</li> </ul>



Environmental Resource	Potential Resource Impacts
<p><b>Water Quality.</b> Water quality concerns associated with airport expansion most often relate to domestic sewage disposal, increased surface runoff and soil erosion, and the storage and handling of fuel, petroleum, solvents, etc.</p>	<ul style="list-style-type: none"> <li>• During the development of the 1997 Airport Master Plan, the US Army Corps of Engineers advised that it is likely that the airport site contains jurisdictional waters as defined in the Clean Water Act. Due to the proximity of the Colorado River to Parker, additional coordination with the US Army Corps of Engineers took place as requested in their 1995 review. The results of the coordination confirmed that a Section 404 Permit from the Corps of Engineers for drilling or filling navigable waters of the US was not required for the runway relocation project.</li> <li>• A Stormwater Pollution Prevention Plan (SWPPP) will be required to address stormwater runoff during construction. Temporary barriers, (silt fenced, hay bales, etc.) should be placed around the perimeter of construction areas to prevent silt and sediment due to construction from leaving the project site.</li> <li>• Stormwater retention basins to limit airport runoff from impervious (paved) areas to that which existed before the airport was constructed are in place.</li> </ul>
<p><b>Wetlands.</b> Wetlands are defined by Executive Order 11990, <i>Protection of Wetlands</i>, 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.</p>	<ul style="list-style-type: none"> <li>• A review of USFWS National Wetlands Inventory (NWI) maps, US Natural Resources Conservation Service soil maps, and aerial photography of the airport indicated that there are no areas designated as wetlands within the airport boundaries. Wetland classifications are as defined in “Classification of Wetlands and Deepwater Habitats of the United States (Cowardin, et al., 1979).</li> <li>• The entire airport site is designated as uplands according to the NWI maps. Uplands, according to the US Department of Agriculture, are those areas which are not sufficiently wet to elicit development of vegetation, soils and/or hydrologic characteristics associated with wetlands.</li> <li>• There are no anticipated impacts to wetlands associated with airport improvements.</li> </ul>
<p><b>Wild and Scenic Rivers.</b> 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.</p>	<ul style="list-style-type: none"> <li>• There are currently two designated Wild and Scenic Rivers at or near the project site. The Verde River is the closest Wild and Scenic River to Avi Suquilla Airport, and is located approximately 130 miles east of the airport.</li> </ul>



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