

F. Environmental Review

The purpose of this chapter is to present an overview and screening of the potential environmental considerations of the Terminal Area Conceptual Development Plan. The following narrative provides preliminary information concerning environmental resources in an effort to define and identify critical resources that would need to be address in the preparation of environmental documentation for the proposed airport development

Alternatives involving the future configuration of the terminal area have been reviewed in previous chapters. The primary changes proposed to the existing terminal area layout include the phased replacement of the terminal building, including the construction of a separate airport administration building, the expansion of surface parking, the expansion of rental car facilities and surface parking, and the development of three non-aviation commercial areas adjacent to the airport entrance.

Existing Conditions

Mesa County is located within the temperate steppe mountain ecoregion of west-central Colorado. The Airport is located on sloping terrain and the Colorado River and the Gunnison River are the predominant water features in the vicinity of the Airport. Both rivers join approximately four miles southwest of the Airport. The climate of Mesa County is characterized as mild, with an average annual rainfall of approximately 8.6 inches and an average annual snowfall of approximately 25.1 inches. Average annual maximum temperature is 65° F, and the average annual minimum temperature is 40° F.

The City of Grand Junction and Mesa County both have zoning and development codes that help guide development. Areas to the south and west of the Airport consist of various zoning districts including both Residential and Nonresidential zoning districts. Existing zoning within airport environs south and west of the Airport is predominantly residential and industrial with some business/commercial, public facilities, and planned development. The majority of the land north and east of the Airport is owned by the Bureau of Land Management (BLM) and is zoned by Mesa County as Agricultural, Forestry, Transitional district (AFT). The AFT district is primarily intended to accommodate agricultural operations and very low-density single-family residential development.

Surface transportation access to the terminal area at the Grand Junction Regional Airport is provided via Horizon Drive and H Road. Horizon Drive connects with Interstate 70 less than one mile southwest of the airport entrance. Passenger terminal access is provided via a traditional terminal loop road system consisting of Walker Field Drive and Falcon Way. Additional roadways providing access to airport related facilities in the vicinity of the terminal area include Landing View Lane, Eagle Drive, Navigators Way, Aviators Way and Blue Angle Lane.

Future Conditions

The following future conditions discussion is based on the assumption that all the projects included in the proposed terminal area 20-year capital improvement program are implemented. An analysis of the potential environmental impacts of implementing these projects allows for the identification of any potentially significant environmental concerns and also allows for the identification of the level of documentation required to receive environmental clearance for each project. It is anticipated that the majority of the terminal area projects can be environmentally cleared using the FAA Northwest Mountain Region's Categorical Exclusion Form. However, it is possible that some future phases of the replacement terminal project may require the preparation of an Environmental Assessments (EA).

Noise

The proposed terminal area projects are not anticipated to have an impact on the number or type of aircraft operations occurring at the Grand Junction Regional Airport over the 20-year planning period. No aircraft noise analysis will be required prior to implementation of any of these projects.

Compatible Land Use

Establishing land use compatibility within airport environs is the responsibility of local authorities, but should be based on a recognized standard. Federal Aviation Regulations (FAR) Part 150 *Land Use Compatibility Guidelines* are the acknowledged standard by the federal government regarding aircraft noise at airports. The following illustration, entitled *LAND USE COMPATIBILITY MATRIX*, indicates those land uses that are compatible within certain DNL noise contours. It identifies land uses as being compatible, incompatible, or compatible if sound attenuated.

The guidelines can act as a guide to the city and county for establishing sensible land use planning and control practices, and as a tool for comparing relative land use impacts resulting

from the proposed airport development. It must be remembered that the DNL noise contours do not delineate areas that are either free from excessive noise or areas that will be subjected to excessive noise. In other words, it cannot be expected that a person living on one side of a DNL noise contour will have a markedly different reaction than a person living nearby, but on the other side. What can be expected is that the general aggregate community response to noise within the DNL 65 noise contour, for example, will be less than the public response from the DNL 75 noise contour. While the proposed terminal area projects will have an effect on the number or type of aircraft operations or aircraft noise exposure at the airport, consideration should be given to the development of compatible land uses primarily on the non-aviation parcels within the terminal area. Noise sensitive land uses such as residential, schools, hospitals, nursing homes, and churches should be avoided.

LAND USE	YEARLY DAY-NIGHT NOISE LEVEL (DNL) IN DECIBELS					
	BELOW 65	65-70	70-75	75-80	80-85	OVER 85
RESIDENTIAL						
Residential, other than mobile homes and transient lodgings	Y	N(1)	N(1)	N	N	N
Mobile home parks	Y	N	N	N	N	N
Transient lodgings	Y	N(1)	N(1)	N(1)	N	N
PUBLIC USE						
Schools	Y	N(1)	N(1)	N	N	N
Hospitals and nursing homes	Y	25	30	N	N	N
Churches, auditoriums and concert halls	Y	25	30	N	N	N
Governmental services	Y	Y	25	30	N	N
Transportation	Y	Y	Y(2)	Y(3)	Y(4)	Y(4)
Parking	Y	Y	Y(2)	Y(3)	Y(4)	N
COMMERCIAL USE						
Offices, business and professional	Y	Y	25	30	N	N
Wholesale and retail-building materials, hardware and farm equipment	Y	Y	Y(2)	Y(3)	Y(4)	N
Retail trade-general	Y	Y	25	30	N	N
Utilities	Y	Y	Y(2)	Y(3)	Y(4)	N
Communication	Y	Y	25	30	N	N
MANUFACTURING AND PRODUCTION						
Manufacturing, general	Y	Y	Y(2)	Y(3)	Y(4)	N
Photographic and optical	Y	Y	25	30	N	N
Agriculture (except livestock) and forestry	Y	Y(6)	Y(7)	Y(8)	Y(8)	Y(8)
Livestock farming and breeding	Y	Y(6)	Y(7)	N	N	N
Mining and fishing resource production and extraction	Y	Y	Y	Y	Y	Y
RECREATIONAL						
Outdoor sports arenas and spectator sports	Y	Y(5)	Y(5)	N	N	N
Outdoor music shells, amphitheaters	Y	N	N	N	N	N
Nature exhibits and zoos	Y	Y	N	N	N	N
Amusements, parks, resorts and camps	Y	Y	Y	N	N	N
Golf courses, riding stables and water recreation	Y	Y	25	30	N	N

Numbers in parentheses refer to NOTES.

The designations contained in this table do not constitute a Federal determination that any use of land covered by the program is acceptable or unacceptable under Federal, State or local law. The responsibility for determining the acceptable and permissible land uses and the relationship between specific properties and specific noise contours rests with the local authorities. FAA determinations under Part 150 are not intended to substitute federally determined land uses for those determined to be appropriate by local authorities in response to locally determined needs and values in achieving noise compatible land uses.

TABLE KEY

SLUCM	Standard Land Use Coding Manual.
Y(Yes)	Land Use and related structures compatible without restrictions.
N(No)	Land Use and related structures are not compatible and should be prohibited.
NLR	Noise Level Reduction (outdoor to indoor) to be achieved through incorporation of noise attenuation into the design and construction of the structure.
25, 30 or 35	Land Use and related structures generally compatible; measures to achieve NLR of 25, 30 or 35 dB must be incorporated into design and construction of structure.

NOTES

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| <p>(1) Where the community determines that residential or school uses must be allowed, measures to achieve outdoor to indoor Noise Level Reduction (NLR) of at least 25 dB to 30 dB should be incorporated into building codes and be considered in individual approvals. Normal residential construction can be expected to provide a NLR of 20 dB, thus, the reduction requirements are often stated as 5, 10 or 15 dB over standard construction and normally assume mechanical ventilation and closed windows year round. However, the use of NLR criteria will not eliminate outdoor noise problems.</p> <p>(2) Measures to achieve NLR of 25 dB must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise sensitive areas or where the normal noise level is low.</p> <p>(3) Measures to achieve NLR of 30 dB must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise sensitive areas or where the normal noise level is low.</p> | <p>(4) Measures to achieve NLR of 35 dB must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise sensitive areas or where the normal noise level is low.</p> <p>(5) Land use compatible provided that special sound reinforcement systems are installed.</p> <p>(6) Residential buildings require an NLR of 25.</p> <p>(7) Residential buildings require an NLR of 30.</p> <p>(8) Residential buildings not permitted.</p> |
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Figure F1 Land Use Compatibility Matrix



Air Quality

The proposed development outlined in this Terminal Area Plan is not expected to have a significant impact on the long-term quality of the air in the vicinity of the Airport. According to the U.S. Environmental Protection Agency (EPA), Mesa County is in attainment area with federal health-based air quality standards known as the National Ambient Air Quality Standards (NAAQS). A non-attainment area is defined as a locality where air pollution levels persistently exceed the NAAQS. The EPA normally makes this designation only after air quality standards have been exceeded for several consecutive years. The forecast 2030 general aviation operations (i.e., 41,728) and passengers (i.e., 340,445) are well below the thresholds (180,000 general aviation operations and 1.3 million passengers, according to the *Air Quality Procedures for Civilian Airports and Air Force Based Handbook*) required to do a NAAQS assessment. Furthermore, a conformity analysis conducted to ensure actions included in a non-attainment or maintenance area “conforms” to any relevant State Implementation Plan (SIP) will not be required because Mesa County is not considered a non-attainment or maintenance area.

Short-term air quality impacts may be expected from heavy equipment pollutant emissions, fugitive dusts resulting from cut and fill activities, and the operation of portable concrete batch plants. Compliance with all applicable local, state, and federal air quality regulations and permitting requirements will be the responsibility of construction contractors.

Water Quality

The most significant hydrological features in the area include the Colorado River, located south of the Airport, and the Gunnison River, located southwest of the Airport. These rivers join just south of the Grand Junction Central Business District, approximately four miles southwest of the Airport. Additionally, the Indian Wash Creek is located along the eastern border of airport property, and Leach Creek is located to the west of the Airport. Both creeks intersect with the Government Highline Canal that is located west and south of the Airport. Proposed terminal area projects are not anticipated to have any impact on these drainages or the Gunnison or Colorado Rivers.

Any construction projects requiring earthwork will result in some erosion and sedimentation. However, the contractors would be required to follow guidelines outlined in the Federal Aviation Administration’s Advisory Circular 150/5370-10A, *Standards for Specifying Construction of Airports*, which is the FAA’s guidance to airport sponsors concerning protection of the environment during construction. Final plans and specifications for any project will incorporate the provisions of AC 150/5370-10A to ensure minimal impact due to erosion, air pollution, sanitary waste, and the use of chemicals.

Historical, Architectural, Archaeological, and Cultural Resources

Section 106 of the National Historic Preservation Act requires federal agencies, or their designated representatives, to take into account the effects of their undertakings on historic properties, which include archaeological sites, buildings, structures, objects, or districts. The National Register of Historic Places indicates while there are several historic sites within Grand Junction, there are no known historic properties on or near the Airport that would be affected by the proposed airport improvement projects. Because all of the proposed terminal area projects will take place on previously disturbed ground, a cultural resource survey will not be required. However, should any construction activity expose buried archaeological material; work will immediately stop in that area and the FAA, the Colorado Historical Society will be contacted.

Fish, Wildlife, and Plants

The *Endangered Species Act*, as Amended, requires each federal agency to insure that any action authorized, funded, or carried out by such agency is not likely to jeopardize the continued existence of any endangered or threatened species or result in the destruction or adverse modification of habitat of such species. According to the U.S. Department of the Interior Fish and Wildlife Service, Ecological Services, there are eight federal threatened, endangered, and candidate species located within Mesa County, Colorado and one federally proposed as threatened (as of April 2011). The following table entitled *MESA COUNTY THREATENED, ENDANGERED, AND CANDIDATE SPECIES* lists the threatened, endangered, and candidate species for the County. Before any projects could be undertaken, the Airport would need to determine if these threatened and endangered species are located on airport property and within the proposed project area.

Table F1

MESA COUNTY THREATENED, ENDANGERED, AND CANDIDATE SPECIES

Common Name	Scientific Name	Status
Yellow-billed cuckoo	<i>Coccyzus americanus</i>	Candidate
Canada lynx	<i>Lynx canadensis</i>	Threatened
Humpback chub ¹	<i>Gila cypha</i>	Endangered
Colorado pikeminnow ¹	<i>Ptychocheilus lucius</i>	Endangered
Bonytail chub ¹	<i>Gila elegans</i>	Endangered
Razorback sucker ¹	<i>Xyrauchen texanus</i>	Endangered
Greenback cutthroat trout ²	<i>Oncorhynchus clarki stomias</i>	Threatened
Colorado hookless cactus	<i>Sclerocactus glaucus</i>	Threatened
DeBeque phacelia	<i>Phacelia submuitica</i>	Proposed Threatened

Sources: U.S. Department of the Interior- Fish and Wildlife Service, Ecological Services- Colorado Field Offices, April 2011. U.S. Fish & Wildlife Service, Threatened & Endangered Species System.

¹ Water depletions in the Upper Colorado River Basin may affect the species and/or critical habitat in downstream reaches in other states.

² Recent genetic tests identified cutthroat population as GJ lineage; therefore, consultation is an interim measure until genetic and taxonomic issues are resolved.

Floodplains and Wetlands

As stated previously, the Airport is located on gently sloping terrain and all drainages in the vicinity of the Airport eventually flow to the Colorado River. Floodplain and drainage impacts are a concern with any project constructed at the Airport and should be designed in accordance with the Airport's Master Drainage Report.

Wetlands are basically defined as areas inundated by surface or groundwater, with a frequency sufficient to support vegetation or aquatic life requiring saturated or seasonally saturated soil conditions for growth and reproduction. Wetlands generally include swamps, marshes, bogs, sloughs, river overflows, mud flats, and natural ponds. Wetlands also include estuarine areas, tidal overflows, shallow lakes and ponds with emergent vegetation, and wetland ecosystems, including those areas that affect, or are affected by, the wetland itself (e.g., adjacent uplands or regions upstream and downstream).

According to the National Wetlands Inventory maintained by the US Fish and Wildlife Service, there are several other freshwater wetlands in the vicinity of the Grand Junction Regional Airport; however, none of these wetlands are located within the terminal area.

Wild and Scenic Rivers

According to a listing of Wild and Scenic Rivers compiled and managed by the Army Corps of Engineers, the Bureau of Land Management, the National Park Service, the U.S. Forest Service, and the U.S. Fish and Wildlife Service, there are no wild and scenic rivers located within the vicinity of Grand Junction Regional Airport. Therefore, there will not be any impacts to a nationally significant river resource as a result of the proposed development within the Airport's terminal area.

Section 4(f) Property

Section 4(f) of the Department of Transportation Act (recodified at 49 USC, Subtitle I, Section 303) provides that no publicly owned park, recreation area, wildlife or waterfowl refuge, or land of a historic site that is of national, state, or local significance will be used, acquired, or affected by programs or projects requiring federal assistance for implementation. Paradise Hills Park, located approximately one mile west of the Airport, is the closest park used for recreation. Land acquisition is not required for any of the proposed terminal area projects and consequently, no section 4(f) impacts are anticipated.

Hazardous Materials, Pollution Prevention, and Solid Waste

Most construction activities have the potential to generate hazardous wastes, and some construction materials constitute hazardous substances. These include fuel, oil, lubricants, paints, solvents, concrete-curing compounds, fertilizers, herbicides, and pesticides. Proper practices can be implemented, to prevent or minimize the potential for these hazardous substances to be released into the environment, and are included below. The project with the highest potential to generate hazardous waste is obviously the replacement of the passenger terminal building and specifically, the demolition of the existing terminal. Construction and demolition best management practices should be followed during this phased project.

Four primary laws have been passed governing the handling and disposal of hazardous materials, chemicals, substances, and wastes. The statutes of most importance to the FAA in proposing actions to construct and operate facilities and navigational aids are the Resource Conservation and Recovery Act (RCRA) (as amended by the Federal Facilities Compliance Act of 1992), the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA or Superfund), and the Community Environmental Response Facilitation Act of 1992. RCRA governs the generation, treatment, storage, and disposal of hazardous wastes. CERCLA provides for consultation with natural resources trustees and cleanup of any release of a hazardous substance (excluding petroleum) into the environment. The EPA keeps detailed information on all

businesses dealing with Hazardous Materials, water discharge, Superfund sites, toxic releases, and air emissions.

Handling and disposal of hazardous materials is stringently regulated by the federal, state, and local agencies. Hazardous materials, also referred to as dangerous goods, are any solid, liquid, or gas that can harm people, other living organisms, property, or the environment. These materials may be radioactive, flammable, explosive, toxic, corrosive, biohazard, oxidizer, asphyxiate, pathogen, allergen, or may have other properties or characteristics that deem it hazardous in specific circumstances.

According to the Environmental Protection Agency (EPA), there are a small number of sites located near the existing Airport that are permitted as small generators or handlers of hazardous wastes. These include, 3D Systems, Amoco Oil, Bold Petroleum Inc., Continental Grand Junction, Federal Express Corporation, Halco Patching and Sealing Inc., Hamilton Sundstrand, Twin Otter Airborne Research, U.S. BLM Grand Junction District, West Star Aviation, and Western Skyways. None of these sites are located within the terminal area.

The local landfill, Mesa County Landfill, is located approximately seven miles southeast of the City of Grand Junction. This landfill currently has a footprint of approximately 127 acres and Mesa County owns approximately 1,500 acres in the vicinity of the landfill for future use. Consequently, it is likely that the solid waste generated from the demolition of the existing passenger terminal can be accommodated in the existing local landfill.

Chemicals, petroleum-based products, and waste materials, including solid and liquid waste, should be stored in areas specifically designed to prevent discharge into storm water runoff. Areas used for storage of toxic materials should be designed with full enclosure in mind, such as the establishment of a dike around the perimeter of the storage area. Construction equipment maintenance should be performed in a designated area and, control measures, such as drip pans to contain petroleum products, should be implemented. Spills should be cleaned up immediately and disposed of properly.

Farmland

According to the *National Cooperative Soil Survey* from the Natural Resources Conservation Service (NRCS), the soils on and in the vicinity of existing airport property vary widely. The two most abundant soils located within airport property are Killpack-Badlands-Persayo complex, 3-25% slopes, saline; and Uffens fine sandy loam, 1-6% slopes. Neither of these soil types are designated prime or unique farmland. However, there are small segments of designated prime

farmland if irrigated soils in pockets of land surrounded by non-prime farmland soils. It is not anticipated that any of the property within the terminal area is considered prime farmland.

Light Emissions and Visual Impacts

Airfield lighting and rotating beacons are the main sources of light emissions emanating from an airport. Proposed development included in this Terminal Area Plan is not anticipated to significantly change the lighting or visual environment at the Grand Junction Regional Airport.

Summary

On a project-specific basis, each improvement specified in this Terminal Area Plan that receives federal funding or requires a change to the Airport Layout Plan, will require environmental clearance prior to implementation. The environmental documentation required to receive the clearance differs with the complexity of the project and the anticipated level of environmental impacts. This documentation can range from a Categorical Exclusion for simple projects to a full Environmental Impact Statement for projects with potentially significant impacts. The purpose of this Environmental Review chapter is to attempt to document and potentially uncover any significant environmental concerns that might greatly influence the ability to implement one or more of the recommended improvement projects and determine the level of environmental documentation required.

It is important to note that no significant environmental concerns that cannot be addressed or mitigated below significance thresholds have been identified during this planning process. It is also anticipated that the majority of the potential projects included in this Terminal Area Plan can be categorically excluded using the FAA Northwest Mountain Region Categorical Exclusion Form.