CHAPTER SEVEN: ENVIRONMENTAL EVALUATION

7.1 Introduction

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 Yellowstone Regional Airport to determine whether the proposed actions could, individually or collectively, have the potential to significantly 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 1050.1F, *Environmental Impacts: Policies and Procedures*, compliance with NEPA is generally satisfied through the preparation of an Environmental Assessment (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 1050.1F and Order 5050.4B, *National Environmental Policy Act* (NEPA) *Implementation Instructions for Airport Actions*.

Upon preliminary evaluation, it is anticipated that most 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 federal official.

7.2 Environmental Analysis

Table 7-1 provides a description of the environmental resources which could be impacted by the proposed airport development as discussed in previous chapters.

Table 7-1 Environmental Evaluation

Environmental Resource	Potential Resource Impacts
Air Quality. 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_3), Carbon Monoxide (CO), Sulfur Dioxide (SO_2), Nitrogen Dioxide (NO_2), 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 review apply within both NEPA and permit requirements.	• There are no non-attainment or maintenance areas for NAAQs criteria in Park County. • 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 earthwork and pavement removal are common air pollutants during construction. • Best management practices (BMPs) during construction will need to be implemented in order to reduce impacts to air quality during construction.
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.	• No impacts. 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-	• The land area under the runway approaches at Yellowstone Regional Airport is predominantly vacant natural and agricultural land. • The Master Plan is not recommending capacity enhancement projects that would lead to increased noise levels on noise sensitive uses.

Environmental Resource	Potential Resource Impacts
sensitive areas within the 65 DNL noise contour.	
Construction Impacts. Construction impacts typically relate to the effects on specific impact categories, such as air quality or noise, during construction.	• The use of Best Management Practices (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. • 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.
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, is substantially reduced or lost.	• No park, recreation area, federal park, state park or wildlife refuges will be affected by anticipated development.

Environmental Resource	Potential Resource Impacts
Farmlands. 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.	• Proposed projects should not remove any farmland area from agricultural production.
Fish, Wildlife, and Plants. 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.	• According to the U.S. Fish and Wildlife Service Wyoming County List of Threatened, Endangered, Proposed and Candidate Species, four listed species may be located in Park County: the Canada Lynx, Grizzly Bear, Ute Ladies' Tresses and the Western Glacier Stonefly. The Whitebark Pine is a candidate species which may be located in Park County. • Determination of the presence of listed species and potential impacts would need to be confirmed for individual projects through consultation with the U.S. Fish and Wildlife Service.
Floodplains. Significant impacts to floodplains occur when a proposed action results in notable adverse impacts on natural and beneficial 100-year floodplain values.	• According to the Flood Insurance Rate Maps (FIRM) produced by the Federal Emergency Management Agency (FEMA), no floodplains exist within project areas. The nearest floodplain are

Environmental Resource	Potential Resource Impacts
	Alkalai Lake and Beck Lake across Highway 20 and off airport property.
Hazardous Materials, Pollution Prevention, and Solid Waste. 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.	• A Stormwater Pollution Prevention Plan (SWPPP) will be required for construction projects to address storm-water 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. • As a result of increased operations at the airport, solid waste output may slightly increase; however, these increases are not anticipated to be significant.
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.	• A cultural resource survey was conducted on a portion of airport property in 2019. No impact to historical, architectural, archaeological or cultural resources were identified. • Additional cultural resource survey(s) may be required for projects disturbing previously unsurveyed ground. • The FAA may need to undertake Section 106 Coordination with the State Historic Preservation Office to confirm previous findings as applicable to proposed improvements.
Light Emissions and Visual Impacts. 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.	• Proposed projects at the airport will introduce new light sources. • Development in the terminal and general aviation areas will result in new lighting in the area. • The proposed development is not anticipated to create an annoyance among people in the vicinity or interfere with their normal activities as the area of proposed development is not located adjacent to a population center.

Environmental Resource	Potential Resource Impacts
Natural Resources and Energy Supply. 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.	• 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.
Noise. 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.	• FAA's Environmental Desk Reference states: "for most actions, FAA need not do a noise analysis for airport actions whose 65 DNL contour lies entirely within airport boundaries." • It also states; "An Airport with 90,000 annual (247 average daily) operations of piston-powered aircraft operations in Approach Categories A through D (i.e., landing speed < 166 knots); or 700 annual jet powered aircraft operations would represent a basis for initiating an FAA study of surrounding noise impacts." • The land area under the runway approaches at Yellowstone Regional Airport is predominantly vacant natural and agricultural land. • The Master Plan is not recommending capacity enhancement projects that would lead to increased noise levels on noise sensitive uses.
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	• 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

Environmental Resource	Potential Resource Impacts
activity to the extent influenced by airport development.	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.
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.	• The proposed projects will not result in proportionately high or adverse impacts to human health, nor result in disproportionate health and safety risks to children.
Water Quality. 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.	• A Stormwater Pollution Prevention Plan (SWPPP) will be required to address storm-water runoff during construction projects. 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.
Wetlands. 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	• 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

Environmental Resource	Potential Resource Impacts
vegetation or aquatic life that requires saturated or seasonally saturated soil conditions for growth and reproduction.	"Classification of Wetlands and Deepwater Habitats of the United States (Cowardin, et al., 1979).
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.	• The proposed airport development projects will not impact on any designated Wild and Scenic Rivers. No rivers meeting the definition of a "Wild and Scenic River" are located on or in the vicinity of airport property.

7.3 Airport Solid Waste & Recycling

7.3.1 Background

The purpose of this section is to review the existing solid waste recycling plan and activity at the Yellowstone Regional Airport (Airport). In September 2012, the Federal Aviation Administration (FAA) issued *Program Guidance Letter 12-08* on how to implement the relevant sections of Public Law 112-95, the FAA Modernization and Reform Act of 2012 (FMRA) until such time when Public Law 112-95 can be included within future revisions of *FAA Order 5100-38C, Airport Improvement Handbook* and *FAA Advisory Circular (AC) 150 / 5070-6B, Airport Master Plans*. Included in the FMRA was the incorporation of reference guidance provided by the U.S. Environmental Protection Agency. As stated in Section 133 of the FMRA, a grant for an airport master plan may not be issued until confirmation that the master plan scope of work includes a review of solid waste recycling at the airport.

The change requires that the following issues be addressed:

- Feasibility of Solid Waste Recycling at the Airport,
- Minimizing the Generation of Solid Waste at the Airport,
- Operation and Maintenance Requirements Related to Solid Waste,
- Review of Waste Management Contracts, and
- Potential Cost Savings or Generation of Revenue from Solid Waste Recycling.

To this end, the following tasks were completed:

- Review of Existing Solid Waste Handling and Recycling
- Existing Practices including Operations and Maintenance Issues
- Existing Waste Management Contracts
- Identification of Recycling Opportunities
- Identification of alternatives to Minimize Generation of Solid Waste and

- Identification of the potential for Cost Savings or Revenue Potential from Recycling.

7.3.2 Review of Solid Waste Recycling

Existing Solid Waste Handling and Recycling

Federal, state, and local agencies regulate different types of waste based on what the waste contains. In general waste from airports can be divided into seven types of waste. These are: (1) municipal solid waste (MSW); 2) construction/demolition waste; 3) green waste; 4) food waste; 5) waste from aircraft flights; 6) lavatory waste; 7) spill cleanup/remediation waste; and 8) hazardous materials. These are further described in **Table 7-2: Waste Types**.

Table 7-2: Waste Types

Waste Type	Description
Municipal Solid (MSW)	Consists of everyday items that are used and then discarded, such as product packaging, furniture, clothing, bottles, food scraps, and newspapers.
Construction /Demolition (C&D)	Generally categorized as MSW. However, as it can be a major component of airport waste, it has been separated into its own category in this document. C&D waste is any nonhazardous solid waste from land clearing, excavation, and/or the construction, demolition, renovation or repair of structures, roads, and utilities. C&D waste commonly includes concrete, wood, metals, drywall, carpet, plastic, pipes, land clearing debris, cardboard, and salvaged building components. In some instances, C&D waste may be subject to special requirements (e.g., tar impregnated roofing materials, asbestos containing building materials, etc.).
Green	Categorized as MSW and is also referred to as yard waste. Green waste consists of tree, shrub and grass clippings, leaves, weeds, small branches, seeds, pods and similar debris generated by landscape maintenance activities.
Food	Food that is not consumed or is the waste generated and discarded during food preparation activities. Food wastes are considered part of the MSW waste stream.
Deplaned	A type of MSW removed from passenger aircraft. These include bottles and cans, newspaper and mixed paper, plastic cups and service ware, food waste, food soiled paper, and paper towels. Waste that comes off the airplanes after flights can represent 20% of an airport's total municipal solid waste stream.

Waste Type	Description
	The composition is roughly 30% each of paper waste, compostable food material, and non-recyclable materials, with the balance consisting of cups and beverage containers.
Lavatory	A type of special waste generated when the lavatory tanks of airplanes are emptied via hose and pumped into a lavatory service vehicle, which can be either a self-powered truck or a lavatory cart pulled by a tug. After the aircraft's lavatory tanks are emptied, they are refilled with a mixture of water and disinfecting concentrate, commonly called "blue juice." The lavatory waste removed from the aircraft is transported to a triturator facility, generally located airside near airline operations, for pretreatment prior to discharge to the sanitary sewage system and publicly owned treatment works (POTW). In the U.S., waste from international flights, except Canada, needs to be processed separately as the waste can potentially introduce plant pests and diseases. International waste is governed by the U.S. Department of Agriculture and must follow the handling procedures found in the Manual for Agricultural Clearance.
Spill Cleanup/Remediation	Another type of special waste. This is generated during cleanup of spills and/or remediation of contamination from various sites on an airport. Care must be taken to ensure that these waste materials are not co-mingled with other waste streams and that storage and disposal procedures comply with applicable regulatory requirements.
Hazardous	Must be handled in accordance with stringent federal regulations. Wastes designated as "hazardous" are covered by regulations outlining legal handling, treatment or disposal.

Waste Type	Description
	Hazardous wastes are either specifically "listed" in the regulation (40 CFR 261.31-.33), or are ignitable, corrosive, toxic or reactive (as defined in 40 CFR 261.21 -.24). For details, see the Resource Conservation and Recovery Act ("RCRA") and its amendments and the regulations 40 CFR Subtitle C, Parts 260–270.

Source: FAA "Recycling, Reuse and Waste Reduction at Airports – A Synthesis Document" April 24, 2013

For the Yellowstone Regional Airport, waste is generated from the terminal area, construction projects and the general aviation area. This waste is generated from normal activities around the airport and collected by Park County staff and various contractors.

Existing Practices

In the terminal area custodial services are provided by Yellowstone Regional Airport staff and solid municipal waste is collected by a private garbage collection company and taken to the Park County Landfill. The waste collected in the terminal area includes the public areas as well as individual leased space.

The lavatory carts for the airlines and FBO are disposed of at the Yellowstone Regional Airport in a 1,500 gallon septic tank.

Existing Waste Management Contracts

The disposal of waste is a specialized service not regularly performed by airports. The primary solid waste haulers and recyclers that collect trash from the airport are listed in **Table 7-3: Waste Management & Recycling Handlers**.

Table 7-3 – Waste Management & Recycling Handlers

Type of Waste	Contractor(s)	Tenants
MSW	City of Cody Waste	Terminal & Various Tenants
Aluminum, Steel	Pacific Steel & Recycling	All
Plastic, Paper, Cardboard	City of Cody	All
Grease (Restaurant)	Baker Commodities Inc.	Restaurant
Oil/Diesel	Various Users	Airport

Source: Airport Staff

7.3.3 Solid Waste and Recycling Opportunities

Terminal Area Tenants
The airport provides 4 types of trash container in the terminal for customers, for all municipal waste.

Airport Tenants Outside of Terminal Area
Tenants who operate outside of the terminal area use City of Cody Solid Waste Department to dispose of their solid municipal waste.

Airport Instituted Efforts in Minimizing the Generation of Solid Waste at the Airport
In addition to solid waste/recycling, the Yellowstone Regional Airport has also instituted a number of conservation measures regarding solid waste. All grass at the airport is mulched (in place) and on infrequent occasions when grass is collected it is composted with all other landscaping debris in an offsite composting area. When construction projects occur, any debris that can be reused in the project such as recycled asphalt, is reused when possible.

Other initiatives instituted by the Yellowstone Regional Airport to reduce the environmental impacts of the Airport include:

- Custodial Cleaning Chemicals – all cleaning products are green seal certified to be non-hazardous to the environment. Airport staff is trained by a professional cleaning trainer on proper cleanliness, spill containment and hazardous material handling.
- Paper Products – All paper products used in building restrooms are green seal certified to be made of recycled products.
- Utility Use Reduction Management – Replacement of older incandescent lighting with higher efficient LED and CFL lights inside and outside of buildings. Much of the airfield lighting system has been replaced in recent years to include more efficient lighting. HVAC systems in many buildings have been replaced with high efficiency boilers and air handling units. Motion sensors are used extensively in all buildings to reduce utility use in unoccupied spaces. Programmable thermostats in all buildings ensure that the building heating/cooling is minimized during unoccupied uses.
- The airport is in the process of phasing out heavy equipment fleet including fire trucks and snow removal equipment. The new equipment will meet the newest emission standards, particularly those with large diesel engines which have the newest "regen" and clean diesel systems built into them to reduce emissions.

Areas Where Gains Can Be Made Within the Terminal Area
It is recommended that the Airport begin a new collection and sorting procedure for recyclables and solid waste. It is important to note that all planning for recycling must start with the "Disposal/Recycling Destination" in mind and must annually be reassessed in the event that the Disposal/Recycling Destination's change. The Yellowstone Regional Airport should recognize and establish four 'streams' for waste. These are based on the best way that recyclables can be handled to minimize cost and maximize

revenue from recyclables. The four streams are:

- **Trash** – all trash not otherwise identified as recyclable. Dispose in standard waste containers and process through a compactor for disposal at the Park County landfill.

- **Typical Recyclables** – plastic, aluminum, steel and glass. Plastic and glass can be comingled and are not affected by any moisture remaining in the container. The Park County Amalgamated Recycling Enterprise Center and other private recyclers can bale this into marketable recyclables. The aluminum and steel should continue to be sorted out and taken to Pacific Steel & Recycling or a similar company to recycle the metals.

Example of Terminal Waste/Recycling Receptacles

- **Paper Products** – newspaper, magazines, office paper. These products can be best collected with receptacles that have narrow slotted openings distinguishing these receptacles for paper only. These items are affected by moisture and cannot be comingled with other recyclables that may contain residual moisture. If paper products are exposed to moisture then the quality of the recyclable is lost and may result in landfilling all the paper exposed to moisture. The Park County Amalgamated Recycling Enterprise Center and other private recyclers can bale this into marketable recyclables.

- **Cardboard Products** – boxes and other cardboard. Most cardboard at the airport is generated from deliveries and therefore can be collected by custodial staff with no specific containers for typical airport customers. These items are affected by moisture and cannot be comingled with other recyclables that may contain residual moisture. If cardboard is exposed to moisture then the quality of the recyclable is lost and may result in landfilling all the cardboard exposed to moisture. The Park County Amalgamated Recycling Enterprise Center and other private recyclers can bale this into marketable recyclables.

Example of Cardboard Container

The airlines serving Cody should be advised about these waste/recycling streams and asked to sort trash being generated on the aircraft into these same four streams. All terminal tenants should be advised of these waste/recycling streams and containers can be provided by the airport or tenant to facilitate sorting.

The airport should monitor this activity, measure as much as is practical and review/refine annually the waste/recycling handling. In addition to waste recycling there are other opportunities for conservation such as low energy use lights, smart thermostat settings, solar electrical generation and heating.

These items are not examined within this study but could be pursued in a comprehensive Environmental & Energy Audit.

Areas Where Gains Can Be Made Outside of the Terminal

Knowing the established waste streams in Cody and Park County, the airport can disseminate this information to all tenants and coordinate centralized containers or recycling efforts to divert recyclables out of the waste stream.

Other Methods Which Would Reduce Environmental Impacts of the Airport

1. Complete an energy audit to see where improvements in existing buildings could be made.
2. Encourage green building policies and practices. Explore the following methods:
    a. White roofs – reduce heat in the summer
    b. Solar wall heating – reduce cost to heat or cool buildings
    c. Wind and phot-voltaic renewable energy system
3. After one year complete a Comprehensive Waste Audit to assess volume of waste and recyclables and results of recycling program changes.

Potential Cost Savings

While exact numbers are not known at this time taking solid municipal waste, deplaned waste and several other wastes out of the waste stream should help reduce the cost for collection services paid by the Airport and its tenants. It is recommended that the Airport work with the solid municipal waste collectors to develop a baseline of trash and recyclables collected at the Yellowstone Regional Airport. A monthly report would show potential areas of improvement and should lead to cost savings in trash collection.