Airport Master Plan

Duluth International Airport

Prepared for Duluth Airport Authority

6 Environmental Overview

The National Environmental Policy Act of 1969 (NEPA) requires that environmental impacts of proposed airport development be considered throughout the planning period. Three categories of environmental actions relevant to airport development are outlined in 40 Code of Federal Regulations (CFR) Parts 1500 – 1508. Every project proposed for an airport is categorized into one of these three actions:

- Categorical Exclusions (CatEx) – Projects categorically excluded are those actions that have been found under normal circumstances to have no potential for significant environmental impact.
- Actions Normally Requiring an Environmental Assessment (EA) – Projects normally requiring an EA are actions that have been found by experience to sometimes have significant environmental impacts.
- Actions Normally Requiring an Environmental Impact Statement (EIS) – The purpose of an EA is to determine whether or not a project will have significant impacts. Based on the results reported in an EA, the FAA then prepares either a finding of no significant impact (FONSI) or an EIS. An EIS further investigates a project's potential environmental impacts.

The major product of the Master Plan process is the ALP, which shows an airport's existing and planned development. Federal Aviation Regulations require that an airport operator undertake an environmental analysis for the planned development for FAA review and approval if it plans to apply for federal grants to fund development depicted on the ALP. Due to the limited shelf-life of environmental studies, a formal EA or Categorical Exclusion documentation is typically developed at such time to ensure the environmental work is current within the timeframe during which the actual project would be undertaken.

Of the projects identified in Chapter 4 and 5 that would trigger a federal action, the majority can be reviewed through a CatEx document. However, there are a few projects which will trigger an EA based on available information and the identified project scope. Projects that are anticipated to require NEPA evaluation through an EA include:

- Hangar 101 Demolition
- Air Traffic Control Tower Replacement
- Taxiway A Reconstruction Phases 7-8 and Holding Bay/Arm-Dearm Pad Construction

Although not expected to be completed in the planning term as a funding source has not been identified, the Runway 3/21 extension project (including runway extension, obstruction removal, Taxiway C, D and F extensions) will also require an EA.

A detailed environmental inventory is included in **Chapter 2**. The following areas of possible environmental impact must be addressed in detail in the planning and design phase for the improvements recommended in **Chapter 4** and **Chapter 5**.

6.1 Environmental Impact Overview

6.1.1 Air Quality

The Clean Air Act (CAA) established National Ambient Air Quality Standards (NAAQS) for six pollutants, termed “criteria pollutants” and requires each State to adopt a plan to achieve the NAAQS for each pollutant within specific timeframes. These air quality plans are known as State Implementation Plans (SIP). The State of Minnesota has developed a SIP, which contains the rules and programs the State will use to help ensure air quality continues to meet the NAAQS.

The potentially significant impact of future recommended development on the attainment and maintenance of air quality standards must be disclosed. Conformity with the SIP must also be demonstrated. The information on the EPA Greenbook website (https://www.epa.gov/green-bookhttp://www.epa.gov/air/oaqps/greenbk/index.html) indicates that there are no non-attainment areas in the City of Duluth and surrounding areas. However, the City of Duluth, including the Airport, is a Maintenance Area for carbon monoxide (CO). The proposed projects are not expected to have significant impacts to CO levels.

6.1.2 Coastal Resources

Federal agencies are required to consult with the USFWS before committing funds for projects or actions within the CBRS. The Airport is approximately nine (9) miles outside of the nearest CBRS, which is located along Lake Superior.

The CZMA applies to states having an approved Coastal Zone Management (CZM) plan. The CZM plan is implemented by a designated state or local agency and proposed federal actions within the CZM boundary must work to achieve consistency with the applicable CZM plan. The CZM plan typically compliments and implements relevant and applicable federal, state, and local regulations, policies and management plans to achieve the goals and intent of the CZMA. In Minnesota, the CZM is implemented through Minnesota’s Lake Superior Coastal Program (MLSCP), a federal-state partnership dedicated to comprehensive planning and management within the designated Coastal Boundary of Lake Superior. MLSCP is administered by the MNDNR and encourages greater cooperation, simplifies governmental processes, and provides tools for implementing existing policies, authorities, and programs within the Coastal Boundary. The Airport is located entirely within the Coastal Boundary with the City of Duluth as the local unit of government. **The proposed projects are not anticipated to have impacts to coastal resources**.

6.1.3 Section 4(f)

Section 4(f) legislation was established under the Department of Transportation (DOT) Act of 1966 (now codified at 49 USC 303, 23 USC 138) and protects publicly owned land in public parks, recreation areas, or wildlife and waterfowl refuges of national, state, or local significance or lands from a historic site of national, state, or local significance.

Hangar 101 was identified as Eligible for Listing on the National Register of Historic Places and is recommended to be demolished due to its deteriorating condition. Impacts of this project will be evaluated in an Environmental Assessment (EA). No other impacts to Section 4(f) resources are anticipated.

6.1.4 Farmlands

Federal conversion of farmland to non-agricultural uses is regulated by the Farmland Protection Policy Act (FPPA) through the U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NCRS). Farmland is defined by the underlying soil type (not the use of the land) and is classified by the USDA as “prime farmland”, “prime farmland if drained”, or “farmland of statewide importance.” Preservation of

prime farmland is a priority for the USDA, and the sponsors of projects funded with federal support are required to assess the effects of the projects on prime farmland.

While Farmland of Statewide Important exists in areas of the airport, non is expected to be impacted by projects in the 20-year planning term. The majority of the airport soils are not considered prime farmland.

6.1.5 Fish and Wildlife Resources - Rare, Threatened and Endangered Species

The Fish and Wildlife Coordination Act requires that agencies consult with the State wildlife agencies and the Department of the Interior (FWS) concerning the conservation of wildlife resources. The Fish and Wildlife Conservation Act also encourages conservation of non-game fish and wildlife and their habitats.

An “Endangered Species” is defined as any member of the animal or plant kingdom determined to be in danger of extinction throughout all or a significant portion of its range. A “Threatened Species” is defined as any member of the plant or animal kingdom likely to become endangered in the foreseeable future.

The Airport is within the distributional range of the federally-listed Northern long-eared bat (*Myotis septentrionalis* - Threatened). The Northern long-eared bat spends summer months in wooded areas, habitat that is present nearby the Airport. The Northern long-eared bat hibernates in caves and mines.

The Airport is within the designated critical habitat of the federally-listed Canada lynx (*Lynx canadensis* - Threatened). The distribution of lynx in North America is closely associated with the distribution of North American boreal forest. Within these general forest types, lynx are most likely to persist in areas that receive deep snow and have high-density populations of snowshoe hares, the principal prey of lynx. The location of the Airport adjacent to the developed areas of the Cities of Duluth and Hermantown would seem to preclude lynx from active use of the area.

Other than tree clearing in the runway approaches, none of the other recommended development projects are likely to result in an effect to State or Federal threatened or endangered species.

6.1.6 Water Quality

The Federal Water Pollution Control Act, as amended (commonly referred to as 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, location with regard to an aquifer or sensitive ecological area such as a wetlands area, and regulate other issues concerning water quality. Additionally, a National Pollutant Discharge Elimination System (NPDES) permit under Section 402 of the Clean Water Act is required for point-source discharges into waters of the U.S. and for construction activities to protection from construction related erosion and sedimentation. A 404 permit is required to place dredged or fill material in waters of the U.S. including jurisdictional wetlands.

Typically, pollutants carried in airport runoff include spilled fuel and oil, deposits from rubber tires, and accidentally discharged chemicals, i.e., agricultural spray operations, aircraft de-icing, and washing agents. For most airport improvements, design, control during construction, and other mitigation measures can avoid significant impacts to water quality.

For aerial spray wash and deicing facilities at airports, water quality standards require the collection and treatment of materials to prevent distribution into storm water runoff.

A Storm Water Pollution Prevention Plan (SWPPP) is required to identify the Airport operations having the potential to affect storm water and the appropriate Best Management Practices (BMPs) to eliminate or minimize surface water contamination. Erosion and sedimentation control and management of runoff during construction is typically designed during specific improvement projects and reviewed and approved during the NPDES permitting process.

A SWPPP will be required for airport construction projects listed on the CIP and may be required for the construction of additional hangar space and the apron redesign. These impacts and required permits will be evaluated and documented in the NEPA review process.

6.1.7 Water Resources

The future recommended development sites within this Master Plan are not located within an identified floodplain area.

6.1.8 Wetlands

Wetland impacts are not anticipated for all projects; however, impacts are proposed for the following projects

- Realigning Taxiway A connectors,
- Taxiway A realignment near the midfield ramp,
- Construction of the Runway 9 hold bay and realigned perimeter road,
- Taxiway C relocation,
- Additionally, temporary impacts to wetlands may also result from various CIP projects.

It is anticipated that these projects will qualify for approval by the USACE under the Transportation General Permit as well as Individual Permits, depending on impact amounts. Wetland impacts will be disclosed in project NEPA reviews and permits must be obtained from the USACE and WCA prior to any work in or near wetlands.

6.1.9 Hazardous Materials, Pollution Prevention and Solid Waste

Airport improvements, which consist of development such as runways, taxiways, and terminal buildings, do not normally have a direct significant effect on solid waste collection or disposal. The future recommended development does not include uses that will significantly increase the solid waste generated at the site. **Where possible, construction waste should be recycled and reused on site**.

6.1.10 Historical, Archeological, Architectural and Cultural Resources

The National Historic Preservation Act (NHPA) of 1966, as amended, establishes the Advisory Council on Historic Preservation (ACHP) and the National Register of Historic Places (NRHP). Section 106 of the NHPA requires consideration of the effects of undertaking on properties that are eligible for inclusion in the NRHP. Compliance with Section 106 requires consultation with the State Historic Preservation Officer (SHPO) if there is a potential adverse effect to historic properties on or eligible for listing on the National Register of Historic Places.

The Archeological and Historic Preservation act of 1974 provides for the preservation of historic American sites, buildings, objects, and antiquities of national significance by providing for the survey, recovery, and preservation of historical and archeological data which might otherwise be destroyed or irreparably lost due to a development project.

Hangar 101 was identified as Eligible for Listing on the National Register of Historic Places and is recommended to be demolished due to its deteriorating condition. Impacts of this project will be evaluated in an Environmental Assessment (EA).

Traditional Cultural Places (TCPs) may be eligible for listing on the NRHP and thus may become the subject of Section 106. The potential for the existence of protected tribal resources or TCPs should be confirmed through information consultation with the seven tribes in the State of Minnesota. Development on the airfield may require consultation with tribal interests. The airport should coordinate with the FAA during completion of the NEPA review for each project to determine what type, if any, of tribal coordination is needed.

6.1.11 Noise

None of the future recommended development at the airport will alter the current noise levels at the airport.

Concurrent with this Master Plan, the airport is currently undertaking a Part 150 Noise Compatibility Study. The first component of the study is to prepare Noise Exposure Maps (NEMs) and the second is to develop a Noise Compatibility Program (NCP). The NEMs provide information on the existing noise levels, as well as the expected noise levels for the next five years. The NCP sets forth measures intended to mitigate the impacts of significant noise exposure on noise sensitive areas near DLH and to limit, to the extent possible, the introduction of new incompatible land uses into locations exposed to significant noise levels. Levels of significance are identified in the Federal Aviation Regulations.

The Part 150 Study process is designed to identify noise incompatibilities surrounding an airport, and to recommend measures to both correct existing incompatibilities and to prevent future incompatibilities. For Part 150 Study purposes, noise incompatibilities are defined as residences or public use noise-sensitive facilities (libraries, churches, schools, nursing homes, and hospitals) within the 65 Day-Night Average Sound Level (DNL) noise contour.

- The purpose of conducting a Part 150 Study is to develop a balanced and cost-effective plan for reducing current noise impacts from the airport's operations, where practical, and to limit additional impacts in the future.
- Among the general goals and objectives addressed by a Part 150 Study are the following:
- To reduce, where feasible, existing and forecasted noise levels over existing noise-sensitive land uses;
- To reduce new noise-sensitive developments near the airport;
- To mitigate, where feasible, adverse impacts in accordance with Federal guidelines;
- To provide mitigation measures that are sensitive to the needs of the community and its stability; and
- To be consistent, where feasible, with local land use planning and development policies.

This study identifies existing and future flight corridors, develops aircraft noise exposure maps for current (2020) and future (2025) conditions, evaluates air traffic control procedures that could be implemented to reduce noise exposure over residential areas, considers land use controls that could be established to reduce future incompatible land uses from being developed within high noise areas, and evaluates means to mitigate noise impacts within high noise exposure areas.

The NEM created for the Part 150 Study are included in **Appendix J**. The Noise Compatibility Program includes corrective land use mitigation measures (residential sound insulation program and land acquisition), preventative land use mitigation (Airport Lan Use Management District), and program management measures. Once approved, the airport is eligible to receive funding assistance from the FAA (80% funding) to implement the recommendations. Because the plan is not yet fully approved or adopted, the recommendations are not summarized in this Master Plan. Additionally, a source of local funding must be identified before the recommendations can be included in the airport's CIP. It is recommended that the airport include projects resulting from the Part 150 recommendations once they are approved for implementation. A NEPA review is required prior to obtaining FAA grants to implement any recommendations in the Noise Compatibility Plan.