FINAL ENVIRONMENTAL ASSESSMENT

for

Runway Incursion Mitigation and Related Improvements

at

Boise Airport

Boise, Idaho

Prepared for

City of Boise, Department of Aviation

and

U.S. Department of Transportation

Federal Aviation Administration

FAA Unique Identification Number: EAXX-021-12-ARP-1755170436

Prepared by:

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JUNE 2026

DECLARATION RELATED TO PAGE LIMITS: The FAA has considered the factors mandated by NEPA and the EA represents the FAA's good-faith effort to prioritize documentation of the most important considerations required by the statute within the congressionally mandated page limits. This prioritization reflects the FAA's expert judgment, and any considerations addressed briefly or left unaddressed were, in the FAA's judgment, comparatively not of a substantive nature that meaningfully informed the consideration of environmental effects and the resulting decision on how to proceed.

DECLARATION RELATED TO DEADLINE: The EA represents the FAA's good-faith effort to fulfill NEPA's requirements within the Congressional timeline and is substantially complete. In the FAA's expert opinion, the FAA has thoroughly considered the factors mandated by NEPA. In the FAA's judgment, the analysis contained herein is adequate to inform and reasonably explain the FAA's final decision regarding the proposed federal action.

This Environmental Assessment becomes a Federal document when evaluated and signed the responsible FAA Official.

HEIDY SUE BRUNER Digitally signed by HEIDY SUE BRUNER Date: 2026.06.04 14:12:01 -06'00'

Responsible FAA Official

6/4/26

Date

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1 Background and Proposed Action

The Federal Aviation Administration (FAA) (see **Appendix A** for a list of all acronyms and abbreviations) is the lead federal agency for this programmatic Environmental Assessment (EA) to ensure compliance with the National Environmental Policy Act (NEPA). This EA is prepared pursuant to NEPA Section 102(2)(c), and in accordance with FAA Order 1050.1G, *FAA National Environmental Policy Act Implementing Procedures,* and U.S. Department of Transportation (US DOT) Order 5610.1D, *DOT's Procedures for Considering Environmental Impacts*.

The preparation of this programmatic EA is based on the best available knowledge and data available at the time of writing and evaluates reasonably foreseeable effects related to safety improvements at Boise Airport (Airport). Once implemented, the safety improvements proposed at the Airport will require subsequent amendments to existing instrument flight procedures (IFPs) at the Airport. The FAA develops and publishes IFPs to establish a safe and orderly flow of air traffic for pilots to land on, or depart from, a runway at an airport. However, until the physical improvements are completed, and new runway information is available, IFPs cannot be changed or amended.

The use of a programmatic EA, and subsequent preparation of a project specific NEPA analysis, is referred to as "tiering" the environmental review (see FAA Order 1050.1G, Section 3.1). This programmatic EA analysis addresses the proposed safety improvements that would remove a designated hot spot, correct non-standard taxiway geometry, align the thresholds of the parallel runways, and implement other associated

improvements and is based on reasonable assumptions of future flight paths due to the proposed improvements and their amended IFPs. A tiered NEPA analysis will be conducted for IFPs once detailed data on those procedures is available. For more background information and references see **Appendix B**.

The City of Boise (Airport Sponsor) owns the Boise Airport under the supervision of the Boise Airport Commission. The Airport is in the City of Boise in Ada County, Idaho. The Airport is the largest commercial service airport in Idaho and serves residents of the Boise City—Nampa, Idaho metropolitan area (see Figure B-1 in **Appendix B**).

There are two parallel runways at the Airport, differentiated from each other by Right "R" and Left "L" designations (see Figure B-2 in **Appendix B**) Runway 10L/28R is 10,000 feet long by 150 feet wide; and Runway 10R/28L is 9,763 feet long by 150 feet wide.[1] The two runways are parallel but staggered in alignment, meaning the runway ends, or thresholds, do not line up. Air carriers prefer the use of Runway 10L/28R due to the proximity to the passenger terminal, while corporate jets, military aircraft and helicopters prefer to use Runway 10R/28L due to proximity to the Idaho Air National Guard (IDANG) and corporate hangar facilities on the south side of the Airport.[2]

There are navigational aids (NAVAIDs) at the Airport, which are "physical devices on the ground that aircraft can detect and fly to" and are designed to "assist the pilot to land safely and efficiently." The FAA establishes specific criteria to allow each NAVAID to function properly, including the location of the NAVAID in relation to a runway or taxiway. Additionally, there are specific separation and clearance standards for each NAVAID.[3] **Figure 1-1** and Table B-1 in **Appendix B** identify the NAVAIDs and visual approach aids associated with each runway at the Airport.

Other facilities at the Airport include a network of taxiways, taxilanes, and aprons; as well as cargo operators, fixed-based operators (FBO), IDANG, Idaho Army National Guard (IDARNG), maintenance and safety facilities, and the terminal building, among other Airport features and structures.

The Airport also has an assault strip that is 5,000 feet long south of West Gowen Road. The IDANG mainly uses this assault strip; however, civilian use is allowed with

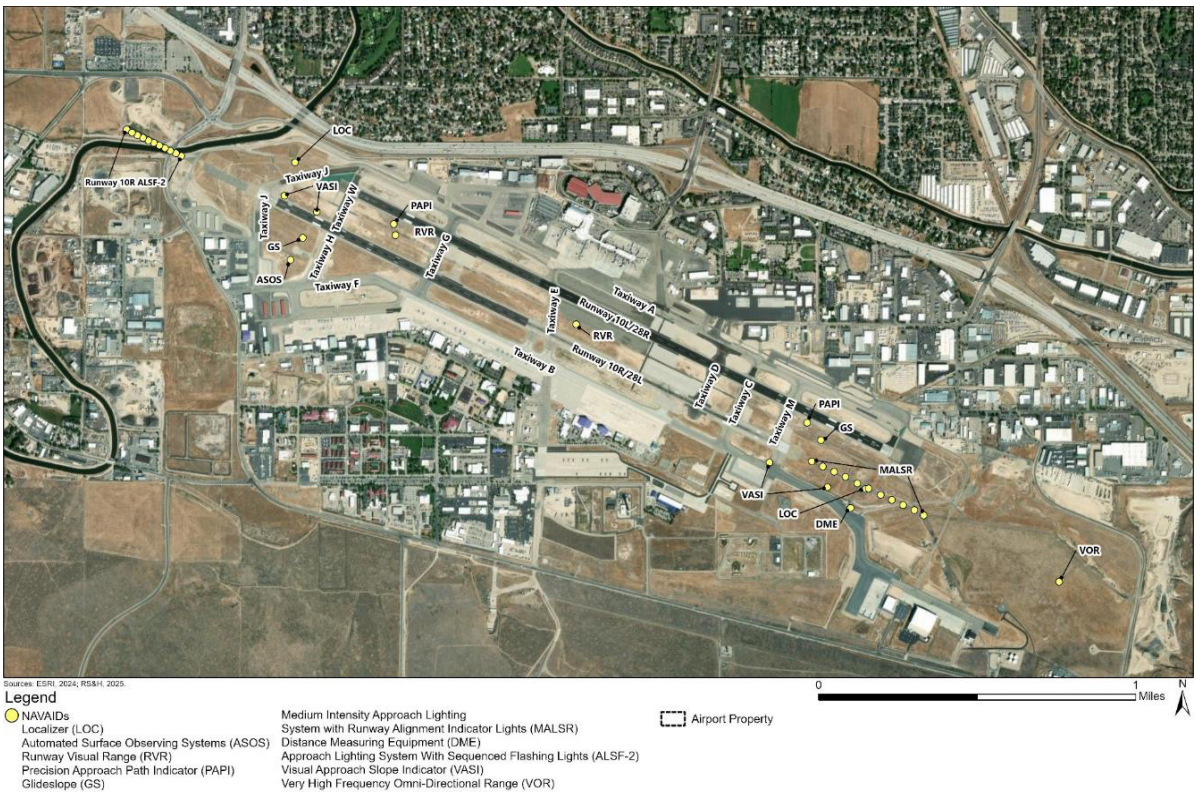
1 FAA. Terminal Procedures and Airport Diagrams, Boise Air Terminal/Gowen Field. Retrieved February 2021, from FAA: https://aeronav.faa.gov/d-tpp/2510/00057ad.pdf#nameddest=(BOI).
2 Ricondo. (2019, December). Boise Airport Master Plan Update.
3 FAA. (2022, March 31). Advisory Circular (AC) 150/5300-13B, *Airport Design, Change 1*.

permission and consists mostly of helicopter training.[4] The assault strip is not connected to the airfield or used for commercial operations.

1.1 Airport Planning

The Airport Sponsor completed an Airport Master Plan Update (see **Appendix B** for background on FAA master plans) in December 2019 (2019 MPU). The 2019 MPU identified a "hot spot" and areas of taxiway geometry, which do not meet current FAA standards and should be corrected to improve safety at the Airport, and align the thresholds of the parallel runways. Following the preparation of the 2019 MPU discussions between the FAA, Airport Sponsor, and other stakeholders further identified the increased risk for wrong surface landings due to the Airport's staggered runway thresholds. The FAA has identified staggered runway thresholds as a possible contributing factor to wrong runway operations (WRO), which are an operational hazard due to the potential for aircraft to inadvertently line up to the incorrect runway while on final approach.

Figure 1-1: Airport Airside Facilities



[4] Ricondo. (2019, December). Boise Airport Master Plan Update.

1.1.1 Hot Spot

A “hot spot” is a location on an airport movement area with a history or potential risk of collision or runway incursion, and where heightened attention by pilots and drivers is necessary. Hot spots generally lead to increased risk for runway incursions. An “incursion” is “any occurrence at an airport involving the incorrect presence of an aircraft, vehicle or person on the protected area of a surface designated for the landing and takeoff of aircraft.” Hot spots are of specific interest to correct as they contribute to safety issues at an airport. The Airport has a hot spot at the intersection of Taxiways A, J, and W leading to Runway 10L (see **Figure 1-2**), likely as a result of nonstandard taxiway geometry at this taxiway intersection. For detailed information on hot spots, see **Appendix B**.

Figure 1-2: Hot Spot and Nonstandard Taxiway Geometry at the Airport

1.1.2 Nonstandard Taxiway Geometry

The geometry of some taxiways at the Airport were identified in the 2019 MPU as not meeting current FAA standards (see **Figure 1-2**). Taxiway J, is an end around taxiway

(EAT), which is located within the Runway 10L/28R Runway Safety Area (RSA) and Runway Protection Zone (RPZ), which is defined as an FAA nonstandard condition. Taxiway J, as an EAT, also does not allow for ninety-degree angles to either Runway 10L/28R or Runway 10R/28L as required by current FAA design standards. According to the FAA, intersection angles less than ninety degrees do not provide the best view of the actual runway or for approach for a pilot at the holding position and can contribute to runway incursions. The nonstandard taxiway geometry for this area of the Airport was officially included as part of the FAA's Runway Incursion Mitigation (RIM) program in 2018. These types of taxiway geometry issues contribute to the increased risk of runway incursions. For detailed information on nonstandard taxiway geometry at the Airport, see **Appendix B**.

1.1.3 Wrong Surface Landing

Since 2016, there have been 18 documented wrong surface landings at the Airport due to the staggered runway thresholds (see **Figure 1-3**), meaning an inbound aircraft was cleared to land on one runway, but mistakenly landed on the other runway. For detailed information on wrong surface landings at the Airport, see **Appendix B**.

Figure 1-3: Staggered Runway Thresholds at the Airport

1.2 Proposed Action

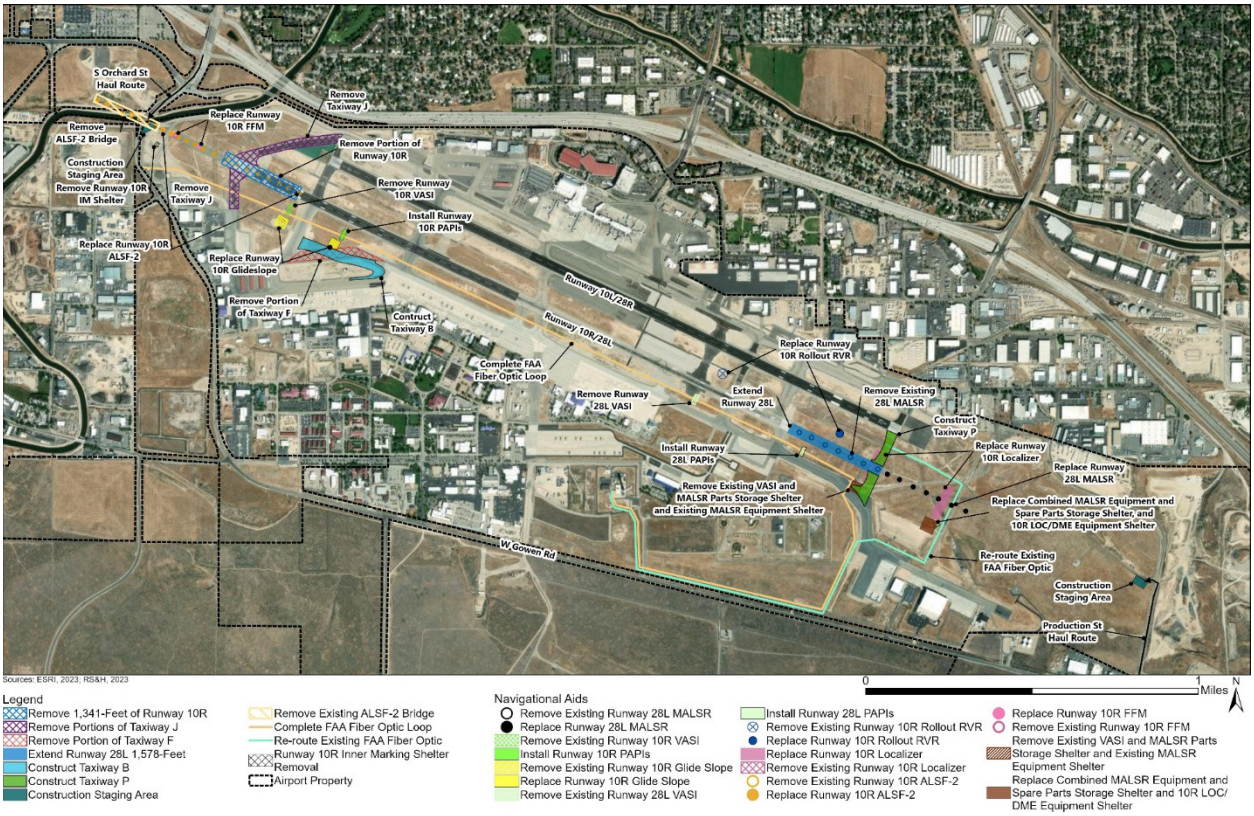
The Proposed Action, as described below, would enhance safety at the Airport by addressing the runway safety deficiencies that have led to runway incursions by physically removing the FAA-designated hot spot, correcting nonstandard taxiway geometry, and aligning the two runway thresholds to meet current FAA Airport Design Standards consistent with the FAA AC 150/5300-13B, *Airport Design, Change 1.*

The Airport Sponsor proposes to remove 1,341 feet from the end of Runway 10R and extend the Runway 28L end by 1,578 feet for a total new Runway 10R/28L length of 10,000 feet. This change would allow for two full parallel runways at the Airport, 10,000 feet in length, with aligned runway thresholds. Relocation and/or replacement of associated NAVAIDs on the runways would also be necessary. Due to FAA requirements for NAVAID locations, the relocated NAVAIDs for Runway 10R/28L would conflict with existing Taxiway F. To correct this, the Airport Sponsor would remove portions of Taxiway F, and extend Taxiway B. To correct taxiway geometry and remove the hot spot, the Airport Sponsor proposes to remove portions of Taxiway J.

Detailed components of the Proposed Action, shown in **Figure 1-4**, include:

- Remove 1,341 feet from the end of Runway 10R
- Extend Runway 28L by 1,578 feet
- Remove Portions of Taxiway J
- Construct Taxiway P off the Runway 28L end
- Construct Taxiway B off of Taxiway W
- Remove Portion of Taxiway F
- Relocate Runway 10R Distance Measuring Equipment (DME)
- Replace and Relocate Runway 10R Localizer
- Relocate Runway 10R Approach Lighting System with Sequenced Flashing Lights (ALSF-2) and remove the ALSF-2 support bridge
- Replace and Relocate Runway 10R VASI with Precision Approach Path Indicators (PAPIs) in a new location
- Relocate Runway 10R Glideslope (GS)
- Relocate Runway 10R Runway Visual Range (RVR)
- Replace and Relocate Runway 28L VASI with PAPIs in a new location
- Remove 10R Inner Marker (IM)
- Remove and Replace Runway 28L Medium Intensity Approach Lighting System with Runway Alignment Indicator Lights (MALSR)
- Relocation of the NAVAIDs as noted above would also include the relocation of associated equipment / storage shelters
- Install new conduit and underground vaults for utilities such as power and fiber optic transmission systems in support of the NAVAIDs
- Amend instrument flight procedures (IFPs)

Figure 1-4: Proposed Action



The Airport Sponsor would accomplish all NAVAID relocations and replacements associated with the Proposed Action through a reimbursable agreement with the FAA. The FAA would continue to own all NAVAIDs associated with the Proposed Action. Additionally, the NAVAIDS require new conduits to hold the fiber optic cabling as existing conduits are at capacity. The FAA is proposing to install the conduit in a new location (see **Figure 1-4**). The final technical specifications related to trenching ground disturbance installation methods, including dimensions, depth, and restoration procedures would be subject to approval by the FAA. A typical conduit trench width is three feet wide and typical conduit trench depth ranges from four to six feet deep. Construction would consist of open trench construction through open fields and directional bore construction underneath existing taxiway pavements. Conduits containing fiber optics would be concrete encased wherever possible.

Access to the Proposed Action's east side would be via West Gowen Road and Production Street and the construction staging area for the east side would occur on Airport property on previously disturbed ground. Access to the Proposed Action's west

side would be via South Orchard Street and the construction staging area would also occur on Airport property on previously disturbed ground (see **Figure 1-4**).

The Airport Sponsor anticipates construction of the Proposed Action to occur over three years, starting in 2028 and ending in 2030. In 2028, the first year of construction, the construction of the fiber optic cable loop would take place, and Runway 10R/28L would be extended 1,578 feet at the 28L end. The Airport Sponsor would close Runway 10R/28L for the duration of the extension construction during 2028. All operations would shift to Runway 10L/28R when Runway 10R/28L is closed for construction. In 2029, the second year of construction, 1,341 feet of Runway 10R/28L would be removed at the 10R end. During the two runway closures in 2028 and 2029, the Airport Sponsor has the potential to rehabilitate the remainder of the Runway 10R/28L pavement. The first full year for operation of Runway 10R/28L with aligned runway ends to Runway 10L/28R would occur upon construction completion in 2030. In 2030, the ALSF-2 bridge removal over the New York Canal would occur for about three weeks during the dry period, which is typically between November and March. The Airport Sponsor would need to close Runway 10R/28L during the bridge removal and operations would shift to Runway 10L/28R.

The Proposed Action would remove about 502,682 square feet (11 acres) of impervious surface and add about 439,520 square feet (10 acres) of impervious surface, which results in a net loss (the removal) of about 63,162 square feet (one acre) of impervious surface at the Airport. The Proposed Action would not introduce new aircraft or operations to the Airport but, instead would increase safety to serve the aircraft currently operating at the Airport and forecasted operations.

2 Purpose and Need

The discussion of the purpose and need for the federal action provides the foundation for identifying reasonable alternatives to a Proposed Action. The purpose and need identifies the problem facing the airport sponsor, the “need” for the project, and describes what would be achieved by the Proposed Action, the “purpose” of the project.

2.1 Purpose for the Proposed Action

The purpose of the Proposed Action is to enhance runway safety at the Airport by eliminating a hot spot, correcting nonstandard taxiway geometry, and reducing the

likelihood of wrong surface landings as identified during the 2019 MPU process and the Safety Risk Management (SRM) Panel by aligning the thresholds of parallel runways.

2.2 Need

The Proposed Action is needed because the 2019 MPU development process determined runway safety issues at the Airport including a need to eliminate FAA-designated hot spots, correct nonstandard taxiway geometry, and align the runway thresholds to increase runway safety and reduce the risk for runway incursions and wrong surface landings. As a result of these improvements, NAVAIDs at the Airport would be shifted and/or relocation as described in **Section 1.2** of the EA.

2.3 Requested Federal Actions

- Unconditional approval of the Airport Layout Plan (ALP) to depict those portions of the Proposed Action as described in **Section 1.2** Proposed Action, which is subject to FAA review and approval pursuant to 49 U.S.C. §§ 40103(b) and 47107(a)(16)(B).
- Determination that Environmental Analysis Prerequisites associated with any future Airport Improvement Program (AIP) funding application regarding the Proposed Action have been fulfilled pursuant to 49 United States Code § 47101 and/or the imposition and use of Passenger Facility Charges (PFCs) have been fulfilled pursuant to 49 U.S.C. § 40117, as implemented by 14 Code of Federal Regulations (CFR) § 158.25.
- Amendments to existing instrument approach and departure procedures at the Airport.
- Relocate and/or replace the following FAA-owned NAVAIDs: relocate Runway 10R DME, replace and relocate Runway 10R localizer, remove 10R inner marker, relocate Runway 10R ALSF-2, replace Runway 10R VASI with Runway 10R PAPIs, relocate Runway 10R glideslope, relocate Runway 10R RVR, replace Runway 28L VASI with PAPIs, and replace Runway 28L MALSR.
- Construct fiber optic cable loop through reimbursable agreement between the Airport Sponsor and FAA.

3 Alternatives

There is no requirement for a specific number of alternatives, and an EA may limit the range of alternatives to the proposed action and no action. The EA briefly explains which alternatives were considered but eliminated from further study.

3.1 Alternatives Screening Process

The alternatives screening used the following two-level screening process. Level 1 screening evaluated each alternative's ability to satisfy the Purpose and Need of the Proposed Action, enhancing runway safety at the Airport, by eliminating hot spots, nonstandard taxiway geometry, and staggered runway thresholds, reducing the likelihood of wrong surface landings, as described in **Section 1.1**. Level 2 screening evaluated whether each alternative was technically feasible and reasonable.

3.2 Comparison of Alternatives

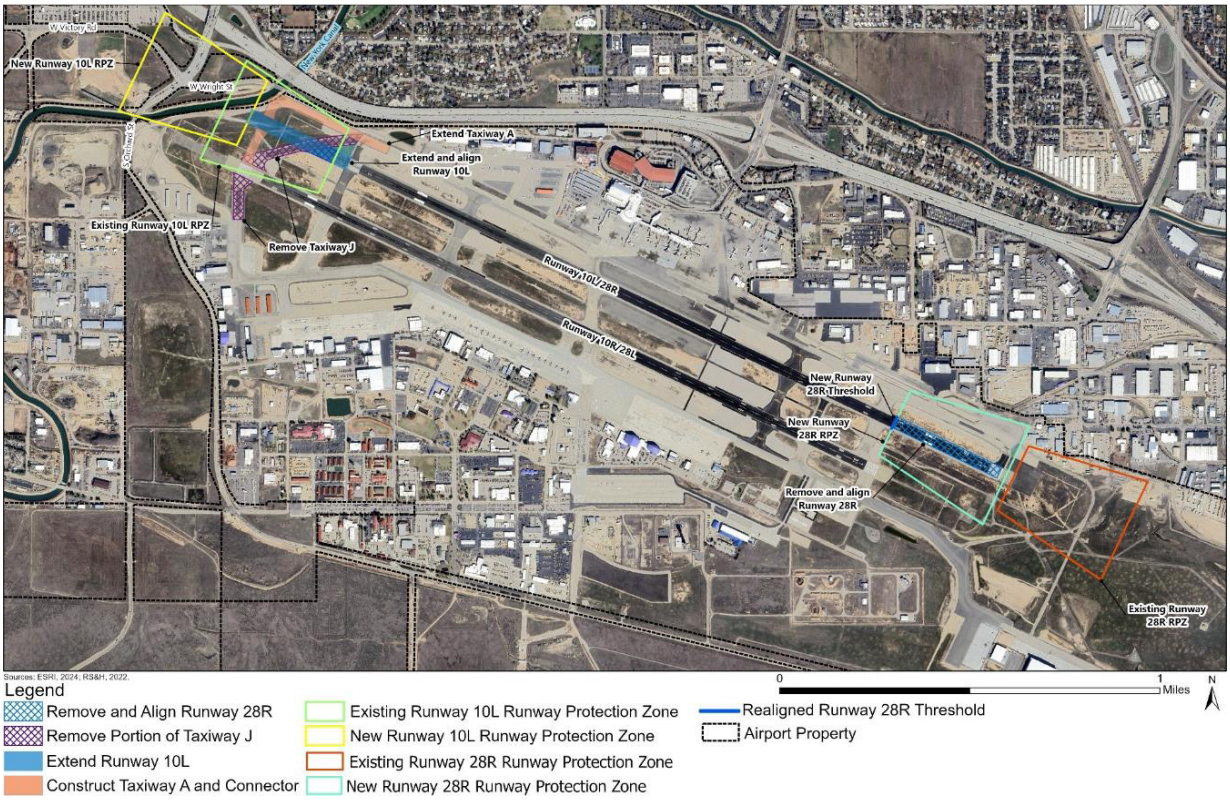
This EA identifies three alternatives, which addresses the runway safety issues discussed in **Section 1.1**. These three alternatives would correct the hot spot, nonstandard taxiway geometry, and the staggered runway thresholds.

3.2.1 Alternative 1: Align Runway 10L/28R Threshold

Alternative 1 would align Runway 10L/28R to match parallel Runway 10R/28L (see **Figure 3-1**). The Airport Sponsor would lengthen the Runway 10L end and shorten the Runway 28R end. Taxiway A would be extended to provide departing aircraft the full use of Runway 10R/28L for take-offs. See **Appendix C** for more details on the screening criteria applied to Alternative 1.

Alternative 1 meets the Purpose and Need described in **Section 2.1**. and is technically feasible to implement. However, it is not reasonable considering the safety, policy, environmental, social, or economic consequences associated with potentially relocating roadways, parking lots, and impacts to the New York Canal and communities to the west of the Airport. Therefore, this alternative was eliminated from further consideration and is not carried forward for further analysis in this EA.

Figure 3-1: Alternative 1: Align Runway 10L/28R Threshold

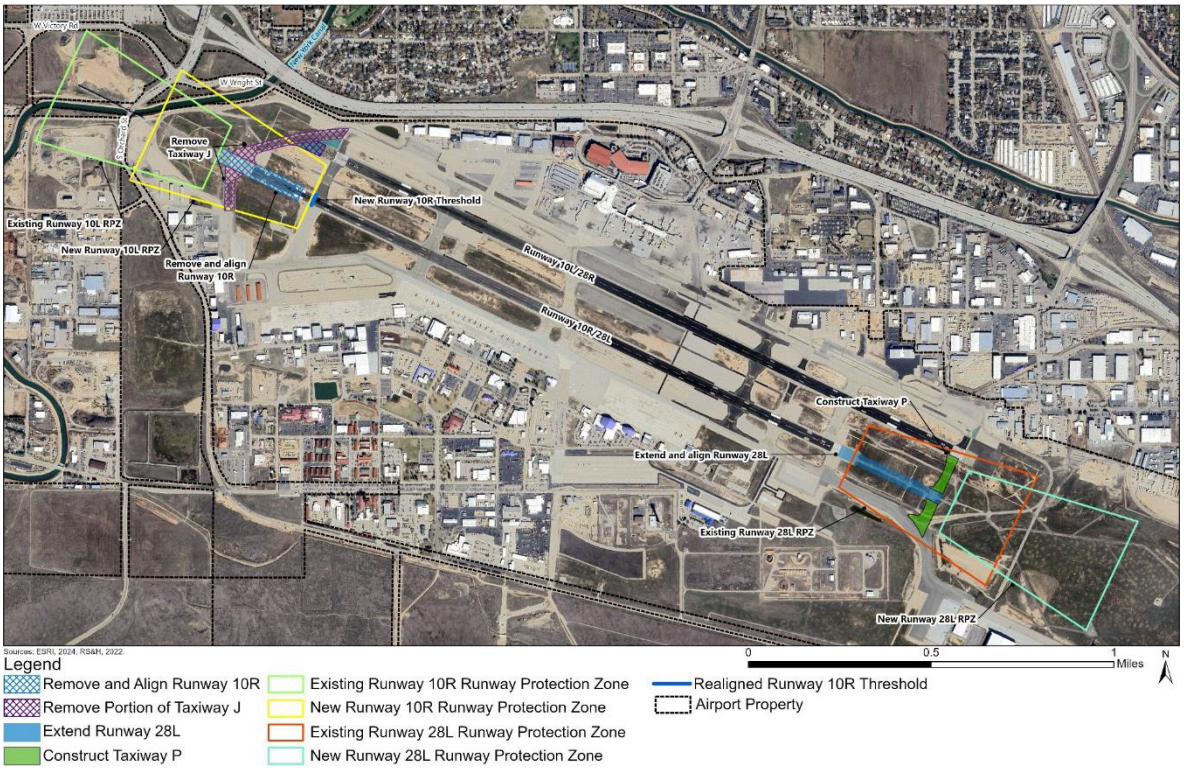


3.2.2 Alternative 2: Align Runway 10R/28L Threshold (Proposed Action)

Alternative 2 was the preferred alternative from the 2019 MPU and would align the runway ends of Runway 10R/28L to match parallel Runway 10L/28R (see **Figure 3-2**). The Airport Sponsor would shorten Runway 10R end and lengthen the Runway 28L end. See **Appendix C** for more details on the screening criteria applied to Alternative 2.

Alternative 2 meets the Purpose and Need described in **Section 2.1** and is considered both technically feasible and reasonable and is therefore, carried forward for further analysis in this EA as the Proposed Action.

Figure 3-2: Alternative 2: Align Runway 10R/28L Threshold (Proposed Action)



3.2.3 Alternative 3: Align Runway 10R/28L and Runway 10L/28R Thresholds

Alternative 3 would shorten each of the runways to match the other and align the runway thresholds (see **Figure 3-3**), by shortening the Runway 10R and Runway 28R ends. See **Appendix C** for more details on the screening criteria applied to Alternative 3.

Alternative 3 meets the Purpose and Need described in **Section 2.1**. and is technically feasible to implement. However, it is not reasonable considering safety, policy, environmental, social, or economic consequences. Specifically, shortening both runways would reduce the length of both runways below the recommended length of 10,000 feet as stated in the 2019 MPU. This reduced runway length could raise safety issues for larger and heavier aircraft and present potential revenue loss to the Airport Sponsor due to the shortened runways resulting in reduced payloads for the airlines. Therefore, this alternative was eliminated from further consideration and is not carried forward for further analysis in this EA.

Figure 3-3: Alternative 3: Align Runway 10R/28L and Runway 10L/28R Thresholds

3.2.4 No Action Alternative

Under the No Action Alternative, the Airport Sponsor would not correct the hot spot, nonstandard taxiway geometry, or align the runway thresholds. The Airport Sponsor would continue to operate and serve forecast aviation demands with existing facilities. The No Action Alternative does not meet the project's Purpose and Need and current FAA safety and design standards to enhance runway safety at the Airport would not be met. Although the No Action Alternative does not meet the project's Purpose and Need, it does serve as a baseline for a comparison of impacts to the preferred alternative and is therefore retained for analysis.

3.3 Alternatives Carried Forward for Analysis in this EA

3.3.1 Alternatives 2: Align Runway 10R/28L Threshold (Proposed Action)

Alternative 2 is the only alternative that meets the Level 1 and Level 2 screening criteria. **Section 1.2** provides a detailed description of Alternative 2 project components and is

shown in **Figure 1-4**. Alternative 2 is referred to as the Proposed Action for the remainder of this EA.

3.3.2 Alternative 4: No Action Alternative

Alternative 4 is retained to serve as a baseline for a comparison of impacts to the Proposed Action. Alternative 4 is referred to as the No Action Alternative for the remainder of this EA.

4 Affected Environment, Environmental Consequences, and Mitigation

This chapter provides an overview of reasonably foreseeable environmental impacts related to the alternatives discussed in **Section 3.3** on each resource category defined by FAA Order 1050.1G, *FAA National Environmental Policy Act Implementing Procedures*. The analysis of each resource category includes the following:

- Affected Environment: describes the existing conditions that could be affected by the Proposed Action.
- Environmental Consequences: evaluates the reasonably foreseeable environmental consequences of the No Action Alternative and the Proposed Action. Significance thresholds for each resource category described in FAA Order 1050.1G, Exhibit A-1, aid in the analysis provided in this chapter.
- Mitigation Measures: describes mitigation measures related to anticipated impacts.

Data used to determine the affected environment was collected by reviewing existing documentation provided by the Airport Sponsor, public databases, and consulting with agencies with specific knowledge of a resource category and conducting field investigations.

As described in **Section 3.2.4**, the No Action Alternative is evaluated and compared to the Proposed Action and provides a baseline comparison for potential impacts from the Proposed Action.

This EA is considered programmatic since IFPs will not be developed by the FAA until physical improvements to Runway 10R/28L have been completed and new runway survey information is available (see **Section 1.2** for more information on this programmatic EA and IFPs). This EA's analysis addresses the proposed safety

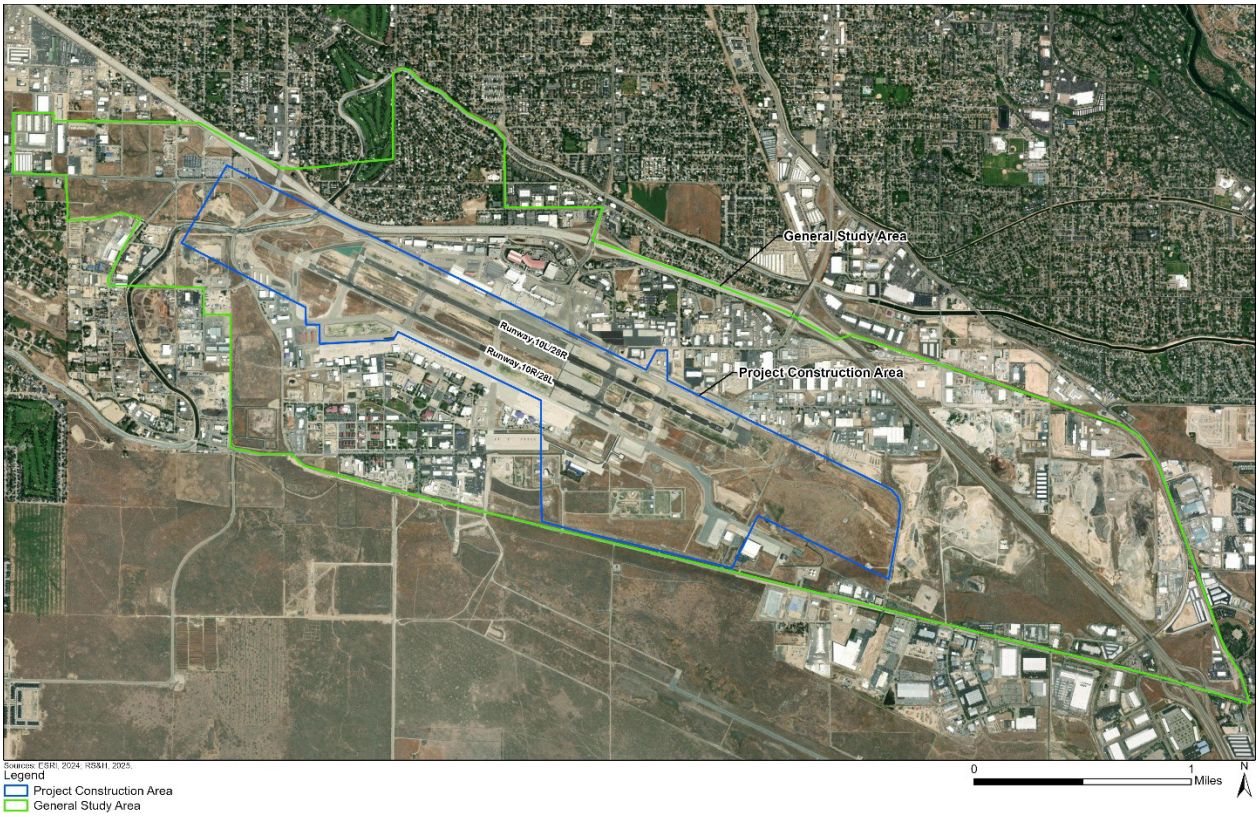
improvements described in **Section 1.2** and future flight paths due to the proposed safety improvements and the amended IFPs that are based on reasonable assumptions. Based on the information available at the time of this EA, environmental impacts due to the Proposed Action's amended IFPs should not be appreciably different from the disclosed effects described in this EA.

4.1 Study Area

The General Study Area, as seen in **Figure 4-1**, encompasses about 4,143 acres and is entirely within Ada County. The General Study Area includes the Project Construction Area and an additional buffer to account for a larger geographic area in which other reasonably foreseeable project impacts to resource categories may occur (e.g., air quality, noise-sensitive land uses, socioeconomic impacts, U.S. Department of Transportation Act, Section 4(f) resources, and historic and cultural resources). The General Study Area boundary was based on the Airport's existing Day-Night Average Sound Level (DNL) 65 decibel (dB) noise contour and the boundary lines were squared off to follow natural boundaries and roadways in the Airport vicinity.

The Project Construction Area, as seen in **Figure 4-1**, encompasses about 1,125 acres, is entirely on Airport property, and represents the area where ground disturbing activities (including construction staging) for the Proposed Action would occur. The Project Construction Area is mostly rectangular but extends to the south near West Gowen Road. This extension addresses the area in which NAVAID cabling would be replaced and includes the Airport's electrical vault.

Figure 4-1: Study Area



4.2 Environmental Resources Not Affected

FAA Order 1050.1G describes environmental resource categories to be evaluated in an EA. Some of the listed environmental resource categories would not be affected by the Proposed Action because they are not present.

4.2.1 Coastal Resources

Idaho is not a coastal state and does not have coastal resources protected under the Coastal Zone Management Act, the Coastal Barrier Resources Act, the National Marine Sanctuaries Act, Executive Order 13089, Coral Reef Protection, or Executive Order 13547, Stewardship of the Ocean, Our Coasts, and the Great Lakes. Therefore, the Proposed Action would have **no effect** on coastal resources.

4.2.2 Farmlands

The Proposed Action would convert land that is prime farmland, if irrigated, as well as farmland of statewide importance, if irrigated.[5] However, under Section 523(10)(B) of the Farmland Protection Policy Act (FPPA), land that is committed to urban development is not subject to provisions of the FPPA. The Project Construction Area is in an urban area.[6] Therefore, the Proposed Action would have **no effect** on farmlands.

4.2.3 Floodplains

According to Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM), the Airport is in FIRMs 16001C0280G, 16001C0286H, 16001C0259H, and 16001C0287H, all of which are effective since February 19, 2003, and FIRM 16001C0291J, effective since June 19, 2020.[7] However, construction associated with the Proposed Action would not occur in the floodplain (see Figure B-7 in **Appendix B** for floodplains near the Project Construction Area). Therefore, the construction and operation of the Proposed Action would have **no effect** on floodplains.

4.2.4 Wild and Scenic Rivers

There are no Wild and Scenic Rivers, protected rivers, or river segments in or near the Proposed Action. The closest wild and scenic river is the Big Jacks Creek, located over 55 miles south of the Proposed Action.[8] The closest river in the Nationwide Rivers Inventory and the closest state protected river is the South Fork Boise River, located 30 miles east of the Project Construction Area.[9] [10] Therefore, the Proposed Action would have **no effect** on wild and scenic rivers or protected rivers.

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5 USDA. (2021, September). Natural Resources Conservation Service Web Soil Survey, Farmland Classification. Accessed September 2021, from USDA: https://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx.

6 USCB (2010). Urban Area Maps, Boise, ID. Accessed September 2021, from USCB: https://www2.census.gov/geo/maps/dc10map/UAUC_RefMap/ua/ua08785_boise_city_id/DC10UA08785_001.pdf.

7 FEMA. (2021, September). Flood Map Service Center, FIRM 16001C0280G, effective date 2/19/2003; FIRM 16001C0286H, effective date 2/19/2003; FIRM 16001C0259H, effective 2/19/2003; FIRM 16001C0287H, effective date 2/19/2003; FIRM 16001C0291J, effective 6/19/2020. Accessed September 2021, from FEMA: https://msc.fema.gov/portal/search.

8 NPS. (2019, March). National Wild and Scenic Rivers System, Idaho. Accessed September 2021, from NPS: https://www.rivers.gov/idaho.php.

9 NPS. (2021, September). Nationwide Rivers Inventory. Accessed September 2021, from NPS: https://www.nps.gov/maps/.

10 IDWR. (2021, September). State Protected Streams. Accessed September 2021, from IDWR: https://maps.idwr.idaho.gov/agol/ProtectedStreams/.

4.3 Environmental Resources Potentially Affected

4.3.1 Aviation Emissions and Air Quality

The Clean Air Act (CAA) is the primary statute related to air quality. The CAA regulates air pollutant emissions from stationary and mobile sources and authorizes the U.S. Environmental Protection Agency (USEPA) to establish National Ambient Air Quality Standards (NAAQS) for criteria pollutants. The CAA also gives the USEPA authority to regulate Hazardous Air Pollutants. The USEPA sets NAAQS for certain air pollutants to protect public health and welfare. The USEPA has identified the following six criteria air pollutants and has set NAAQS for them: Carbon Monoxide (CO), Lead (Pb), Nitrogen Dioxide (NO_2), 8-Hour Ozone (O_3) Particulate Matter (PM_{10} and $PM_{2.5}$), and Sulfur Dioxide (SO_2).

Areas found to be in violation of one or more NAAQS are classified as “nonattainment areas.” States with nonattainment areas must develop a State Implementation Plan (SIP) demonstrating how the areas would be brought back into attainment of the NAAQS within designated timeframes. Areas where concentrations of the criteria pollutants are below (i.e., within) these threshold levels are classified as “attainment areas.” Areas with prior nonattainment status that have since transitioned to attainment are known as “maintenance areas.” For more information on aviation emissions and air quality, and references see **Appendix D**.

4.3.1.1 Affected Environment

The General Study Area is located in Ada County. According to the USEPA Greenbook, Ada County is classified as an attainment area for Pb, NO_2, O_3, $PM_{2.5}$, and SO_2, a maintenance area for PM_{10} and “Not Classified” for CO. However, according to the Idaho Department of Environmental Quality (IDEQ), the maintenance periods for both PM_{10} and CO have “sunset”, which means Ada County is no longer in “nonattainment” status for any of these NAAQS. The maintenance period for PM_{10} was “sunset” on November 26, 2023, and the maintenance period for CO was “sunset” on December 27, 2022. Therefore, Ada County is in attainment for all NAAQS.

4.3.1.2 Environmental Consequences

No Action Alternative

Under the No Action Alternative, no construction would occur. No emissions would be created from fuel combustion in construction equipment and vehicles. Additionally, no fugitive dust emissions would be created from disturbed ground and haul routes. As a result, there would be **no effect** on air quality.

Proposed Action

The Proposed Action would not increase or change the number or type of aircraft operations at the Airport beyond the current forecast. Additionally, the Airport is in attainment for all the NAAQS. The FAA lists four Screening Criteria questions to determine the appropriate level of analysis for attainment areas (see **Appendix D**). The Screening Criteria questions apply to the construction period and the operational period of a proposed action. The four screening criteria questions were applied to the Proposed Action and there are no emissions from the activity levels above the amounts specified (see **Appendix D)**; therefore, a construction emissions inventory (CEI) or operational emissions inventory is not required. However, a quantitative analysis of the Proposed Action's construction emissions using the USEPA's Motor Vehicle Emission Simulator (MOVES4), and the Proposed Action's operational emissions due to the change in taxiing distances and times using the Aviation Environmental Design Tool (AEDT) were prepared and can be found in **Appendix D**.

The Proposed Action would not exceed *de minimis* thresholds for any NAAQS due to either operational or construction emissions. Therefore, the Proposed Action would have **no significant effect** on air quality.

4.3.1.3 Mitigation Measures

The Proposed Action would not exceed the *de minimis* thresholds and no significant effect would occur. All work will be conducted in compliance with applicable regulations. Mitigation measures are not required or proposed.

4.3.2 Biological Resources

Many regulations provide for the protection of certain biological resources including the Endangered Species Act, Fish and Wildlife Coordination Act, and Migratory Bird Treaty

Act (MBTA), among many others. For more information on biological resources and references see **Appendix E**.

4.3.2.1 Affected Environment

Threatened and Endangered Species

U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) was retrieved to identify federally listed threatened and endangered species with the potential to occur in the Project Construction Area. The IPaC report identified two threatened species, Slickspot Peppergrass and Yellow-billed Cuckoo, one proposed endangered species, Suckley's Cuckoo Bumble Bee, and one proposed threatened species, Monarch Butterfly. See **Appendix E.1** for more information on these species.

Site surveys were conducted in 2018 and 2024 for the Project Construction Area and showed no presence of Slickspot Peppergrass and no suitable habitat for the Slickspot Peppergrass (see **Appendix E.2**). According to the IPaC report, there is no critical habitat for the Slickspot Peppergrass in the Project Construction Area. Additionally, the 2019 MPU states that the only sightings of the Slickspot Peppergrass have been on Airport property south of West Gowen Road, outside the Project Construction Area. The FAA consulted on the results of the 2024 survey with USFWS on December 13, 2024, with a *no effect* determination for slickspot peppergrass. The USFWS responded on December 16, 2024, concurring with the FAA's *no effect* determination (see **Appendix E.3**). For aviation safety and as required under 49 U.S.C. §44706, as implemented by 14 CFR Part 139 §139.337, the Airport undergoes routine maintenance activities to control vegetation and wildlife around aircraft movement areas in accordance with the Airport Sponsor's Wildlife Hazard Management Plan (WHMP).[11] The goal is to maintain or eliminate vegetation within Airport property that could provide food or cover for hazardous wildlife. As a result, the Project Construction Area has been heavily disturbed and is not expected or intended to include suitable habitat for Slickspot Peppergrass.

State Sensitive Species

Idaho Fish and Game (IDFG) lists rare and sensitive species by county. The species are categorized by their Species of Greatest Conservation Need (SGCN) status based

[11] Boise Airport. (2017, July). Boise Airport Certification Manual, Exhibit 11 – Wildlife Hazard Management Plan.

on the priority for conservation. IDFG identified 34 species listed as either S1, S2, or S3 in the Species Conservation Status database as potentially occurring in Ada County, where the Project Construction Area is located (see **Appendix E**). Although these 34 species can occur within Ada County, they are not expected to occur on the Airport. As noted above, for aviation safety and as required under 49 U.S.C. §44706, as implemented by 14 CFR Part 139 §139.337, the Airport undergoes routine maintenance activities in accordance with the Airport Sponsor's WHMP.

General Wildlife and Vegetation

Wildlife poses a serious risk to aviation safety, causing wildlife-aircraft strikes that can result in the loss of the aircraft and even the loss of life. To reduce the risk of wildlife strikes, the Airport undergoes routine maintenance activities in accordance with the Airport Sponsor's WHMP and as required under 49 U.S.C. §44706, as implemented by 14 CFR Part 139 §139.337. Accordingly, the Project Construction Area has been heavily disturbed by existing development and is not expected or intended to include the presence of suitable habitat for general wildlife and vegetation. Some limited vegetation exists on the Airport in the form of grasses and shrubs. South of the runways, there is an area leased to the military with several deciduous trees and some evergreens. For purposes of aviation safety, transient wildlife species are discouraged from using Airport property. Wildlife populations and wildlife diversity are low at the Airport due to the developed and disturbed nature of the site and the need to preserve Airport safety.

Migratory Birds

According to the USFWS IPaC report, 19 birds protected by the MBTA, including the Bald Eagle protected under the Bald and Golden Eagle Protection Act (BGEPA), have the potential to be found around the Project Construction Area (see **Appendix E**).

Bird-strikes are a serious risk to aviation safety. As noted above, the Airport undergoes routine maintenance activities in accordance with their WHMP, as required under 49 U.S.C. §44706, as implemented by 14 CFR Part 139 §139.337. Therefore, the Project Construction Area has been heavily disturbed and is not expected or intended to include the presence of suitable habitat for species protected under the MBTA and the BGEPA.

4.3.2.2 Environmental Consequences

The Airport Sponsor's WHMP was consulted to determine ongoing efforts to control wildlife in the vicinity of the Airport to increase the safety of the airfield. Wildlife hazard mitigation includes eliminating vegetated areas, discouraging nesting and loafing of birds in grass and gravel areas, eliminating trees and woodland cover, disposing of all animal carcasses immediately, avoiding increases in wildlife hazards resulting from architectural or landscape changes, and landscaping the airport appropriately. For purposes of aviation safety, the Airport undergoes routine maintenance activities in accordance with the Airport Sponsor's WHMP, as required by 49 U.S.C. §44706, as implemented by 14 CFR Part 139 §139.337. Additionally, habitat is maintained at the Airport in accordance with the Memorandum of Agreement (MOA) to address Aircraft-Wildlife Strikes between the FAA and the USFWS (and additional agencies) who recognize the importance of reducing wildlife attractants and hazards at an airport for aviation safety.[12] As a result, the Project Construction Area has been heavily disturbed and is not expected or intended to include the presence of or provide suitable habitat for biological resources.

No Action Alternative

Under the No Action Alternative, the Airport Sponsor would not implement the runway shift and extension, taxiway construction, and relocation or replacement of NAVAIDs. There would be no development or construction and no change to the operational setting of the Airport. Therefore, there would be **no effect** on biological resources.

Proposed Action

Federal species and State-Sensitive Species

The Project Construction Area is heavily developed and disturbed. The Airport Sponsor conducts wildlife mitigation and maintenance activities based on the WHMP, as required by 49 U.S.C. § 44706, as implemented by 14 CFR Part 139 § 139.337 to reduce wildlife hazards at the Airport. As a result, the Project Construction Area is not expected or intended to include the presence of or suitable habitat for the federally protected

[12] Memorandum of Agreement Between the Federal Aviation Administration, the U.S. Air Force, the U.S. Army, the U.S. Environmental Protection Agency, the U.S. Fish and Wildlife Service, and the U.S. Department of Agriculture to Address Aircraft-Wildlife Strikes.

species identified as having the potential to occur in Project Construction Area. See **Appendix E** for more information on the federally protected and state-sensitive species.

Migratory Birds

Construction of the Proposed Action would not remove trees from the Project Construction Area as no trees exist in the Project Construction Area. Construction activities would include grading of land that is currently maintained by the Airport Sponsor in a manner to control vegetation and wildlife in accordance with the WHMP. The WHMP recommends removing all shrubs on Airport property, or at a minimum 600 feet from runway centerlines. These activities keep migratory bird presence in the Project Construction Area to a minimum. The ALSF-2 bridge over New York Canal would be inspected for bird nests before the bridge is removed and any nests would be removed outside of the breeding and nesting season.

Implementing the Proposed Action would have no significant impact on migratory birds because the Project Construction Area has been heavily disturbed by existing development and wildlife mitigation measures. The Airport is actively managed to reduce the risk for bird-strikes. On-going maintenance activities discourage the presence of migratory birds and their suitable habitat.

General Wildlife and Vegetation

The Project Construction Area is largely composed of the airfield with maintained vegetation. Current wildlife hazard management activities under the WHMP are intended to deter the presence of wildlife and vegetation on Airport property for aviation safety. The absence of vegetation due to wildlife control measures employed by the Airport Sponsor in accordance with their WHMP, as required by 49 U.S.C. §44706, as implemented by 14 CFR Part 139 §139.337, eliminates suitable habitats for state-sensitive species, general wildlife and vegetation, and migratory birds. Therefore, the Proposed Action is anticipated to have **no significant impact** to biological resources.

4.3.2.3 Mitigation Measures

As described above, the Proposed Action would have no effect on threatened or endangered species or critical habitat and no significant impact on other biological resources. All work will be conducted in compliance with applicable regulations. Mitigation measures are not required or proposed.

4.3.3 Department of Transportation Act, Section 4(f)

Section 4(f) of the USDOT Act of 1966[13] (Section 4(f)) protects significant publicly owned parks, recreational areas, wildlife and waterfowl refuges, and public and private historic sites. Historic sites include prehistoric and historic districts, sites, buildings, structures, or objects listed in, or eligible for listing in, the National Register of Historic Places (NRHP). Section 4(f) is specific to USDOT and provides that the Secretary of Transportation may approve a transportation program or project requiring the use of a Section 4(f) resource, only if there is no feasible and prudent alternative to using that land and the program or project includes all possible planning to minimize harm resulting from the use.

Section 6(f) of the Land and Water Conservation Fund Act of 1965 (LWCFA) provides funds for buying or developing public-use recreational lands through grants to local and state governments. Section 6(f) prevents the conversion of lands purchased or developed with LWCFA funds to non-recreation uses, like airport projects, unless the Secretary of the Department of Interior (DOI), through the National Park Service (NPS), approves the conversion of the land use.

4.3.3.1 Affected Environment

There are several Section 4(f) resources in the General Study Area; a publicly owned park, and six potentially eligible historic properties (see **Figure 4-2**). Owyhee Park is in the northern portion of the General Study Area and offers basketball courts, tennis courts, playgrounds, open play areas, and restrooms.[14] Owyhee Park is also the only Section 6(f) property in the General Study Area.[15] Owyhee Park is buffered from the Airport by I-84 (I-84), vegetation, and a roadway noise barrier that borders I-84, between the Airport and Owyhee Park.

[13] Codified at 49 U.S.C. § 303.
[14] City of Boise. (2022). Parks and Recreation, Owyhee Park. Accessed June 2022, from City of Boise: https://www.cityofboise.org/departments/parks-and-recreation/parks/owyhee-park/.
[15] LWCF. (2022). Map of Past Projects. Accessed September 2022, from LWCF: https://lwcf.tplgis.org/mappast/.

Figure 4-2: Section 4(f) Resources in the General Study Area

The November 2019 Cultural Resources Report (CRR) identified six potentially eligible historic properties at the Airport (see **Appendix F** for the CRR). For more discussion on historic properties see **Section 4.3.5.1**.

4.3.3.2 Environmental Consequences

For Section 4(f) purposes, an action would "use" a resource in one of two ways.

- Physical Use: The action physically occupies and directly uses the Section 4(f) resource. An action's occupancy or direct control (via purchase) causes a change in the use of the Section 4(f) resource. Examples include land or a permanent easement, physical occupation of a portion or all of the property, or alteration of structures or facilities on the property.

- Constructive Use: The action indirectly uses a Section 4(f) resource by substantially impairing the resource's intended use, features, or attributes. Examples include impacts resulting from noise, air pollution, and water pollution.

Potential Section 4(f) resource impacts were assessed from satellite imagery to determine the potential adverse short-term construction (physical use) and long-term operational (constructive use) impacts that could result from the Proposed Action. Factors considered included location, significance determination, and the intended function of the Proposed Action.

No Action Alternative

Under the No Action Alternative, the Airport Sponsor would not implement the runway shift and extension, taxiway construction, and relocation or replacement of NAVAIDs. The Airport Sponsor would continue to operate the Airport and serve forecast aviation demands. As there would be no change to aircraft operations or taxi distances, and no construction would occur, there would be **no physical or constructive use** to Section 4(f) properties.

Proposed Action

Construction of the Proposed Action would occur entirely on Airport Property and would not require the physical use (direct use) of any Section 4(f) property. NAVAIDs would be removed and relocated in the area surrounding the Compass Swing Base; however, as stated in **Section 4.3.5**, there would be no effect to the Compass Swing Base during construction because the Airport Sponsor would install construction fencing around the Compass Swing Base preventing all construction equipment and personnel from entering the area and disturbing the resource. Additionally, there would be no constructive use (indirect effect) of any Section 4(f) property during construction (see **Sections 4.3.1**, **4.3.7**, **4.3.8**, **4.3.10**, and **4.3.11**).

Under the Proposed Action, two Section 4(f) resources, the Compass Swing Base and two of the four Large Single Bay Hangars are within the 2028 and 2029 DNL 65+ dB noise contours, while three Section 4(f) resources, the Compass Swing Base and three of the four Large Single Bay Hangars are within the 2030 and 2035 DNL 65+ dB noise contours. However, there would not be a DNL 1.5 dB increase in the DNL 65+ dB noise contours as a result of the Proposed Action compared to the No Action Alternative[16] (see **Section 4.3.8**, Noise and Noise-Compatible Land Use for more details). The FAA made a determination of *No Historic Properties Affected* due to the Proposed Action

[16] The 1.5 dB increase in the DNL 65 dB noise contour is the threshold for determining whether a change in noise is considered significant.

and the Idaho State Historic Preservation Office (SHPO) concurred. See **Section 4.3.5** for more details.

All other Section 4(f) resources in General Study Area, including Owyhee Park, are outside of the 2028, 2029, 2030, and 2035 DNL 65+ dB noise contours. Owyhee Park is also buffered from the Airport by I-84, vegetation, and a roadway noise barrier that borders I-84, between the Airport and Owyhee Park. Additionally, implementation of the Proposed Action would not significantly affect the area's air quality, natural resources, noise, visual effects, or water resources (see **Sections 4.3.1**, **4.3.7**, **4.3.8**, **4.3.10**, and **4.3.11**, respectively) that could affect any Section 4(f) resources. Therefore, the Proposed Action would not constructively use (indirectly affect) any Section 4(f) property.

There would be **no physical or constructive use** of Section 4(f) resources because of construction or operation of the Proposed Action.

4.3.3.3 Mitigation Measures

The Proposed Action would not physically or constructively use Section 4(f) resources and no mitigation is required. A special condition will be added to the construction contract to place construction fencing around the Compass Swing Base so that no construction equipment or personnel enter that area and disturb the resource during construction.

4.3.4 Hazardous Materials, Solid Waste, and Pollution Prevention

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and Resource Conservation and Recovery Act (RCRA) broadly define "hazardous materials." According to FAA 1050.1 Desk Reference, "*hazardous material is any substance or material that has been determined to be capable of posing an unreasonable risk to health, safety, and property when transported in commerce"* and includes hazardous wastes and hazardous substances. According to RCRA, solid waste includes construction and demolition debris, and paper/cardboard. Pollution prevention includes methods to avoid, prevent, or reduce pollutant discharges or emissions as a result of a project.

4.3.4.1 Affected Environment

USEPA records revealed no sites listed on or under consideration for listing on the National Priorities List (NPL) or the Superfund Alternative Approach (SAA) within the Project Construction Area.[17] There are two Toxic Release Inventory (TRI) sites in the General Study Area: the Army National Guard Orchard Combat Training Center Ranges and the Ergon Asphalt & Emulsions Inc. site (see **Figure 4-3**).[18] [19] There are no Toxic Substances Control Act (TSCA) facilities within the Project Construction Area.[20]

Activities conducted by the Airport Sponsor and its tenants involve the storage and use of various hazardous materials. Petroleum fuels such as Jet-A, diesel, and gasoline are the primary hazardous materials stored and used at the Airport. The storage systems are designed and operated in accordance with applicable federal and state regulatory requirements. The Airport Sponsor maintains a Spill Prevention Control and Countermeasure (SPCC) plan for oil storage systems under the direct operational control of the Airport, which was updated and approved on October 19, 2021.[21] Airport Sponsor policy[22] requires tenants to maintain SPCC plans for their oil storage and dispensing systems. SPCC plans require performance of routine equipment inspections and training of oil handling personnel. Solid wastes generated at the Airport are transported to the Ada County Landfill.

[17] USEPA. (2021, September 15). National Priorities List and Superfund Alternative Approach Sites, Idaho. Accessed January 2022, from USEPA: https://www.epa.gov/superfund/search-superfund-sites-where-you-live.

[18] USEPA. (2022). Toxic Release Inventory Explorer, 2020 TRI Factsheet: ZIP Code - 83705. Accessed June 2022, from USEPA: https://enviro.epa.gov/triexplorer/tri_factsheet.factsheet?pParent=TRIQ1&pDataset=TRIQ1&pzip=83705&pyear=2020.

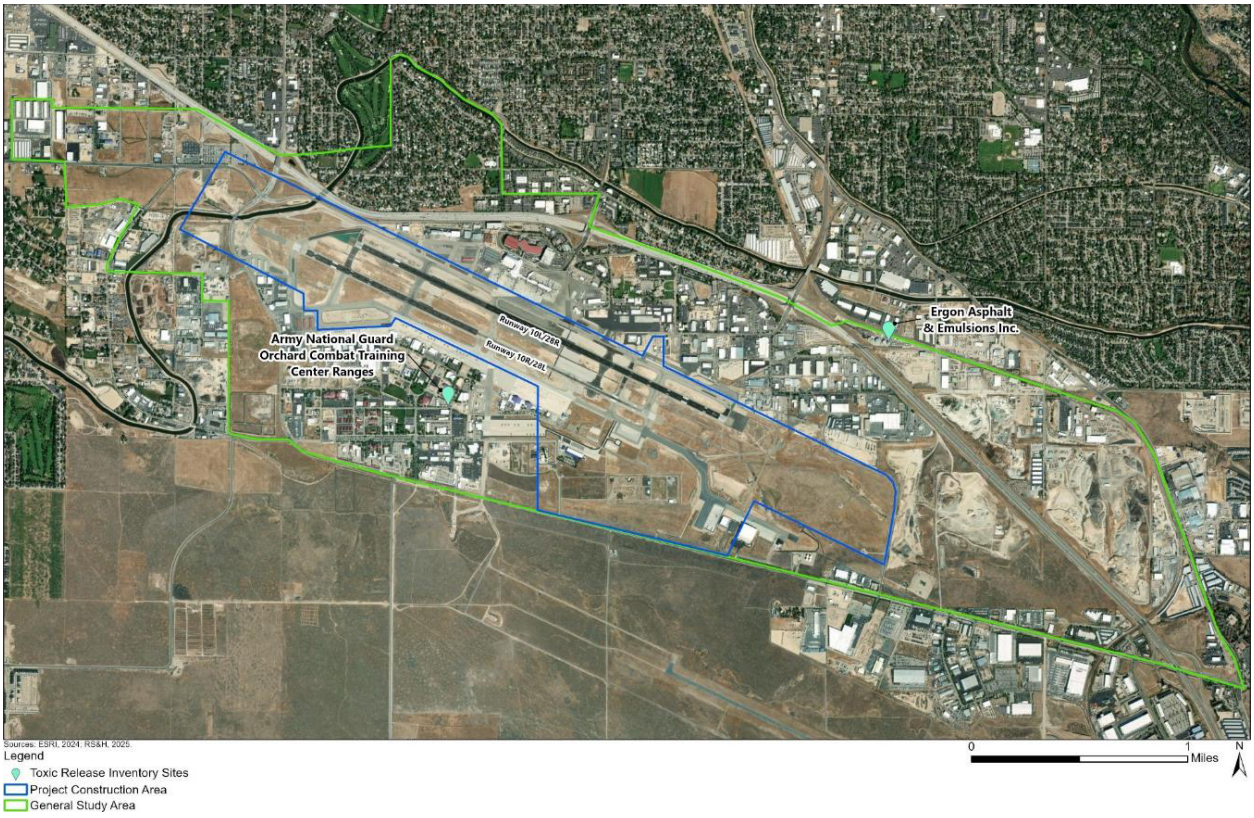
[19] USEPA. (2022). Toxic Release Inventory Explorer, 2020 TRI Factsheet: ZIP Code - 83716. Accessed June 2022, from USEPA: https://enviro.epa.gov/triexplorer/tri_factsheet.factsheet?pParent=TRIQ1&pDataset=TRIQ1&pzip=83716&pyear=2020.

[20] USEPA. (2022). Toxic Substances Control Act, Envirofacts. Accessed January 2022, from USEPA: https://enviro.epa.gov/facts/.

[21] HDR Engineering, Inc. (2021, October 19). *Spill Prevention, Control, and Countermeasure Plan, City of Boise – Airport.* Accessed February 2022, from Boise Airport: https://www.iflyboise.com/media/1730/final-spcc-boise-airport-october-2021.pdf.

[22] Boise Airport. (2003). Boise Airport Rules and Regulations. Retrieved September 2022, from Boise Airport: https://www.iflyboise.com/media/1190/2003rulesregulations.pdf.

Figure 4-3: Hazardous Materials in the Project Study Area



4.3.4.2 Environmental Consequences

This EA analyzed the potential increase in hazardous materials and waste at the Airport under the Proposed Action, including construction and operation activities and how those materials and wastes would be handled and stored at the Airport.

No Action Alternative

Under the No Action Alternative, the Airport Sponsor would not implement the runway shift and extension, taxiway construction, and relocation or replacement of NAVAIDs. The Airport Sponsor would continue to operate the Airport and serve forecast aviation demands. As there would be no change to the Airport's current operating setting, there would be no change to the Airport's hazardous materials, solid waste or pollution policies or procedures. Therefore, there would be **no effect** on hazardous materials, solid waste, and pollution prevention.

Proposed Action

Construction of the Proposed Action would result in temporary increases in storing hazardous materials at the Airport. Hazardous materials would primarily be in the form of diesel fuel and lubricants for the operation and maintenance of construction equipment. The hazardous materials would be stored and used at the construction staging areas and would be stored in compliance with federal, state, and local regulatory requirements and permit conditions requiring pollution prevention measures. Additionally, all construction debris and waste would be disposed of at the appropriate authorized disposal facility.

Operations resulting from the Proposed Action would not significantly change the type or quantity of hazardous materials stored and used at the Airport, or solid waste disposed from the Airport. Under the Proposed Action, hazardous materials currently used at the Airport would be stored and used as they currently are in accordance with federal, state, and local regulations. The Airport Sponsor would be responsible for ensuring the construction contractor follows the Stormwater Pollution Prevention Permit (SWPPP) during construction and would update its SPCC plan to reflect facility changes and maintain compliance with applicable regulatory requirements.

The Proposed Action would not introduce new hazardous materials to the Airport's standard operating procedures. The Proposed Action would comply with all federal, state, and local regulations for the Airport's solid waste and hazardous materials. Therefore, construction and implementation of the Proposed Action would have **no significant impact** on hazardous materials, solid waste, or pollution prevention at the Airport.

4.3.4.3 Mitigation Measures

All work will be conducted in compliance with applicable regulations. No mitigation measures are required or proposed.

4.3.5 Historical, Architectural, Archaeological, and Cultural Resources

Section 106 of the National Historic Preservation Act (NHPA) (54 U.S.C. §§ 300101 et seq.) requires federal agencies to account for the effects of their undertaking and consult with the State Historic Preservation Officer (SHPO), Tribal Historic Preservation Officers (THPO), and other parties to develop and evaluate alternatives or modifications

to the undertaking where necessary to avoid, minimize, or mitigate adverse effects on historic properties. For more information on historical, architectural, archaeological, and cultural resources, and references see **Appendix F**.

4.3.5.1 Affected Environment

The Area of Potential Effects (APE) for purposes of complying with the NHPA was defined in consultation with the SHPO and includes the geographic areas within which the Proposed Action may directly or indirectly cause alterations in the character or use of historic properties (see **Figure 4-4**). No properties listed on the NRHP are in the APE.[23] The closest property listed on the NRHP is Whitney School, located over 2,500 feet north of the APE.

The 2019 CRR identified six potentially eligible historic properties at the Airport (see **Appendix F**). The FAA coordinated the results of the CRR with the SHPO (see **Appendix F** for relevant correspondence). FAA determined and SHPO agreed that the four Large Single Bay Hangars (located south of Taxiway K) and the Compass Swing Base are individually eligible for listing on the NRHP. In addition, the three World War II Cantonment Buildings are not eligible individually but are eligible as a Historic District (see **Figure 4-4**). The Compass Swing Base is within the construction area of the Proposed Action in the APE and the Large Single Bay Hangars and World War II Cantonment Buildings are not.

4.3.5.2 Environmental Consequences

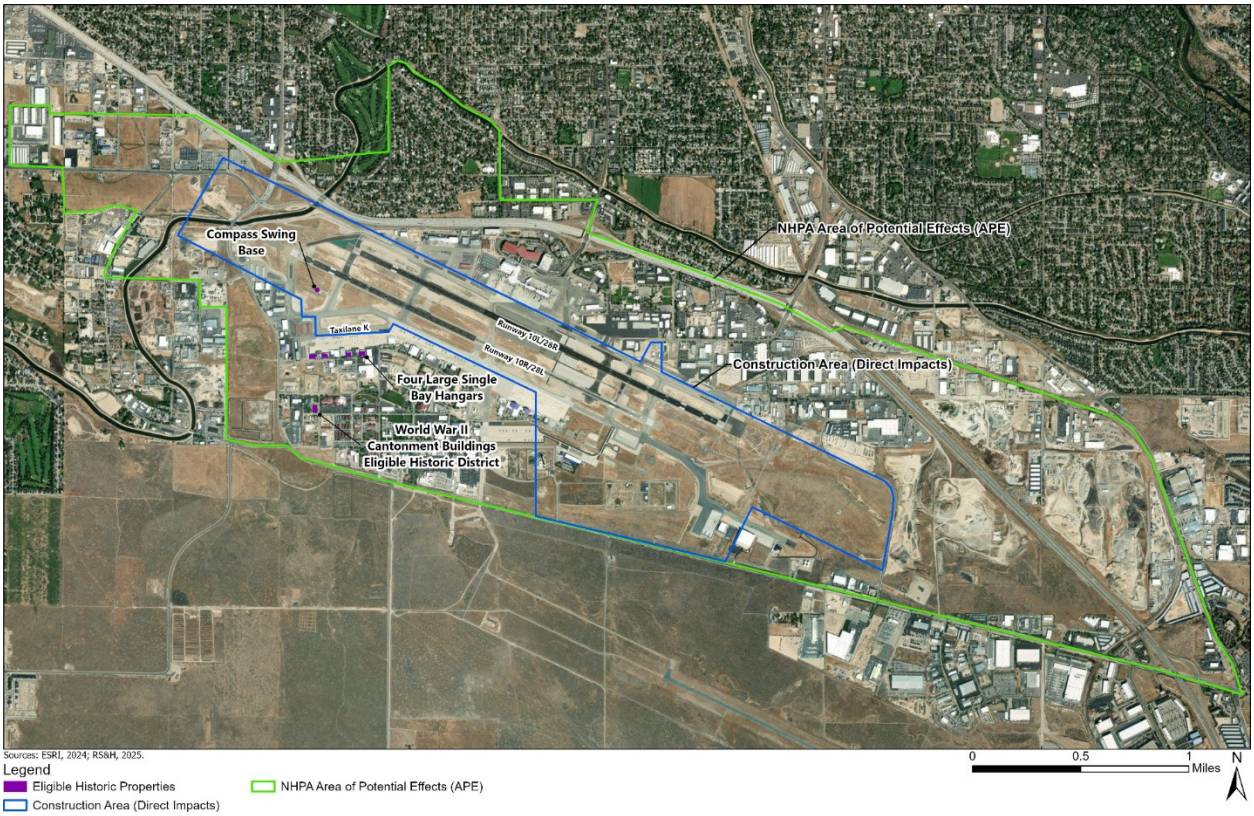
This analysis uses information from the CRR and subsequent consultation with the Idaho SHPO (see **Appendix F**), as well as the NRHP database.

No Action Alternative

Under the No Action Alternative, the Airport Sponsor would not implement the runway shift and extension, taxiway construction, and relocation or replacement of NAVAIDs. There would be no construction and no change to the Airport's existing operational setting. Therefore, there would be ***no effect*** to historic, architectural, archeological, or cultural resources.

[23] NPS. (2021, October). National Register of Historic Places. Accessed January 2022, from NPS: https://www.nps.gov/maps/full.html?mapId=7ad17cc9-b808-4ff8-a2f9-a99909164466.

Figure 4-4: APE and Eligible Historic Resources in the APE



Proposed Action

Through coordination, the FAA determined and the Idaho SHPO concurred that there would be "*No Historic Properties Affected*" as a result of the Proposed Undertaking (see **Appendix F**).[24]

The Compass Swing Base, which was determined eligible for inclusion in the NRHP, is a circular concrete slab 130 feet in diameter that features compass points painted in yellow at the perimeter. Construction of the Proposed Action would include ground disturbance near the Compass Swing Base. To ensure that the Compass Swing Bass is not affected during construction, the Airport Sponsor will ensure that construction plans label the area as "do not disturb" and construction documents will contractually require the contractor to install construction fencing around the Compass Swing Base to prevent disturbance to the resource.

[24] Wright Consulting Services LLC and Preservation Solutions LLC. (2019, November). *Boise Airport Cultural Resources Report.*

The FAA initiated consultation with the Tribes for the Proposed Action that might have an interest in the Proposed Action on September 20, 2022. None of the Tribes responded. The FAA's attempt at consultation with the Tribes and lack of response was communicated to the Idaho SHPO in the FAA's consultation letter to the Idaho SHPO dated October 28, 2022. This consultation is included in **Appendix F**.

The FAA had multiple communications with the Idaho SHPO regarding the proposed undertaking. The FAA determined and SHPO concurred *No Historic Properties Affected* due to the undertaking and consultation correspondence is included in **Appendix F**.

4.3.5.3 Mitigation Measures

The FAA determined, and Idaho SHPO concurred, that the Proposed Action would result in *No Historic Properties Affected*, and no mitigation is required. That said, the Airport Sponsor will ensure that construction plans label the area around the Compass Swing Base as "do not disturb" and construction documents will contractually require the contractor to install construction fencing around the Compass Swing Base to prevent disturbance to the resource. An additional contract provision will obligate the Contractor to adhere to an Inadvertent Discovery Plan protocol in the unlikely event that there is an unanticipated discovery of archeological material during construction.

4.3.6 Land Use

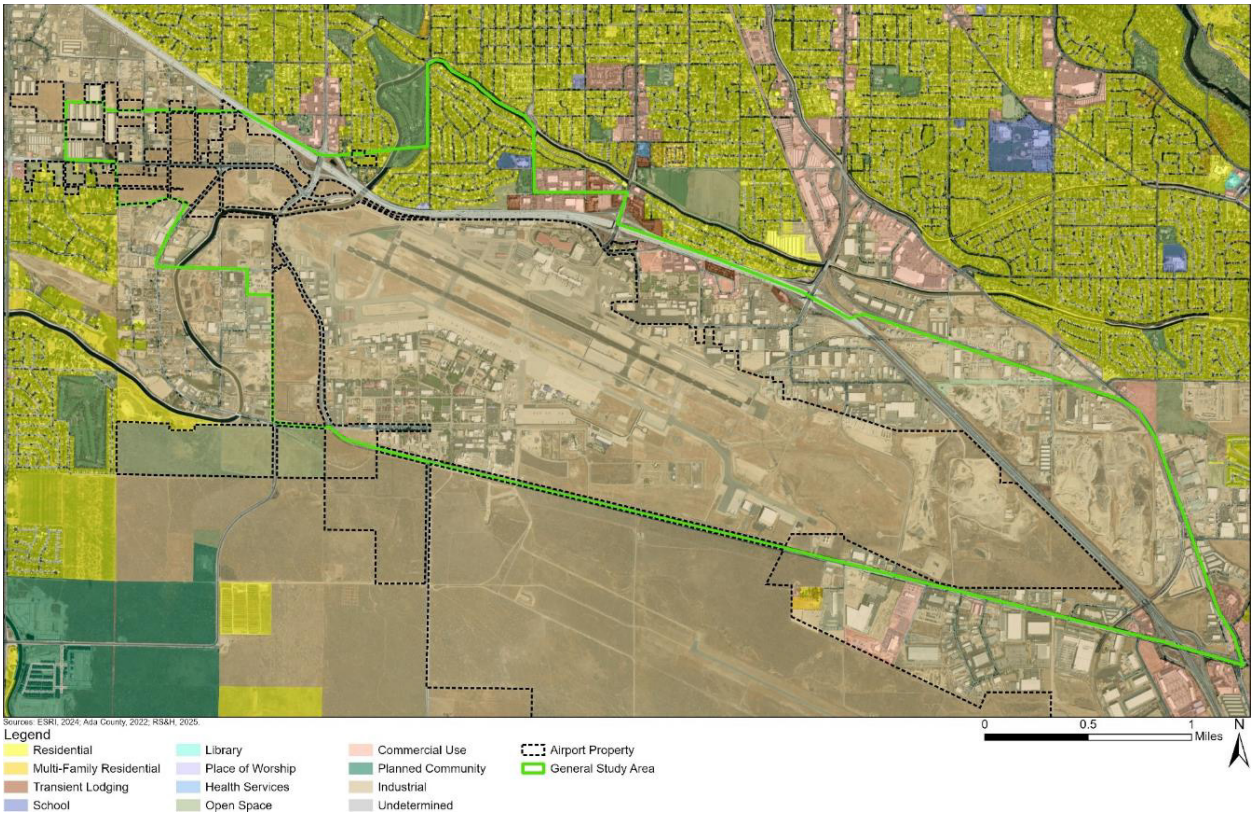
The Airport and Airway Improvement Act and state and local regulations are the primary regulations related to land use. Compatible land use around an airport increases safety and minimizes the effects from airport operations. Airport projects receiving federal funding may not be approved unless the Airport Sponsor provides written assurance that appropriate action, including the adoption of zoning laws, has been or would be taken, to the extent reasonable, to restrict the use of land adjacent to or in the immediate vicinity of the airport to activities and purposes compatible with normal airport operations, including the landing and takeoff of aircraft.

4.3.6.1 Affected Environment

The Airport is in the City of Boise and is entirely within Ada County. Existing land uses at the Airport and surrounding the Airport are shown in **Figure 4-5**. Airport property is designated as industrial land use. The area north of the Airport is fully developed and contains residential housing and commercial businesses, and I-84 is between the

closest residential area and the Airport. The area east of the Airport is partially developed and is used primarily for industrial purposes. The area to the south of the Airport is sparsely developed rangeland/agricultural land with some industrial development. The area west of the Airport is partially developed and includes industrial development and open space.[25]

Figure 4-5: Existing Land Uses in the General Study Area



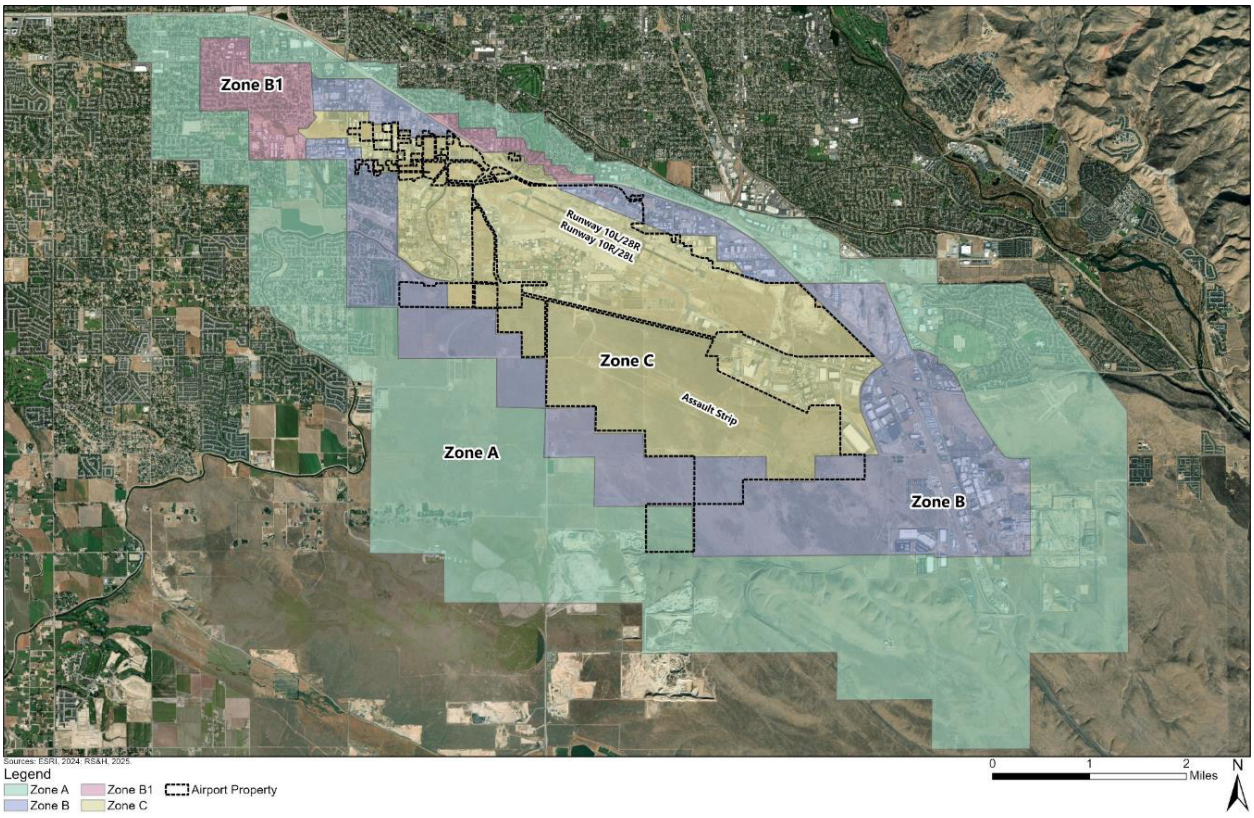
The City of Boise has designated an Airport Influence Area (AIA) surrounding the Airport (see **Figure 4-6**).[26] The AIA establishes future development principles that ensure land uses are compatible with the Airport.[27] There are four zones in the AIA with specific requirements for future development:

- Zone A is the outermost zone and requires new residential development and schools to install sound proofing with a rating that results in a reduction of 25 Decibel (dB).

[25] Ricondo. (2019, December), Boise Airport Master Plan Update.
[26] City of Boise. (1999 September). BoiseMap Property Viewer. Accessed January 2022, from City of Boise: https://gismap.cityofboise.org/Html5Viewer/?viewer=publicpropertymap.
[27] City of Boise. (2001, November). Blueprint Boise, Chapter 3: *Community Structure and Design*. Accessed January 2022, from City of Boise: https://www.cityofboise.org/media/3029/bb_chapter_3-05232021.pdf.

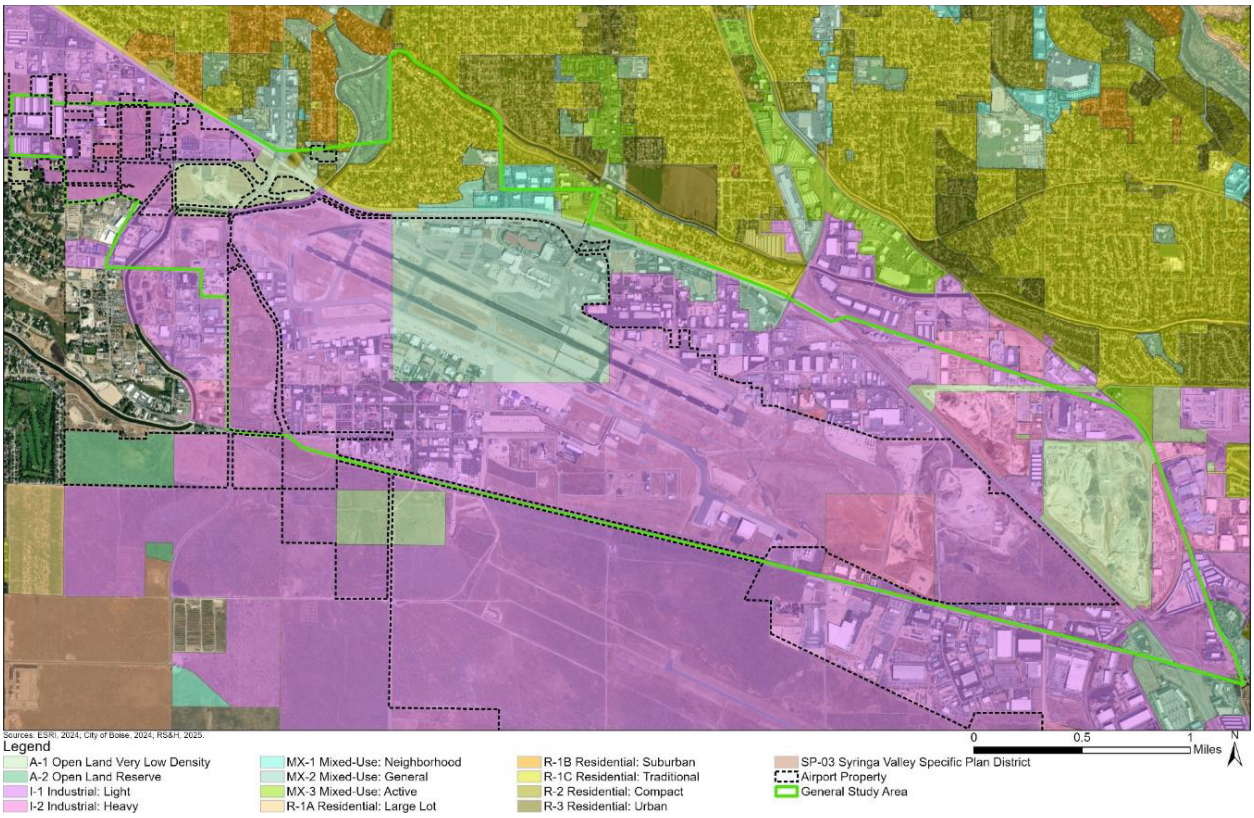
- Zone B does not allow for residential development, and compatible land uses include office and commercial uses, and require sound attenuation of 30 dB in noise-sensitive areas of facilities.
- Zone B1 does not allow new schools, limits residential development to three residential units per acre, and requires the same sound attenuation of 30 dB in noise-sensitive areas of facilities. Zone B1 allows office and commercial uses as compatible land uses.
- Zone C classifies residences as non-conforming and allows for non-noise sensitive manufacturing, industrial, and commercial uses with sound attenuation of 30 dB in noise-sensitive areas of facilities.

Figure 4-6: Airport Influence Zones at Boise Airport



The City of Boise controls zoning in the General Study Area and zoning was identified using the City of Boise's interactive mapping system (see).[28] The General Study Area contains zoning for Open Land, Industrial, Mixed-Use, and Residential uses.

Figure 4-7: Zoning in the General Study Area



4.3.6.2 Environmental Consequences

The compatibility of existing and planned land uses with an aviation or aerospace proposal is usually associated with noise impacts, as described in FAA 1050.1 Desk Reference, Chapter 11, *Noise and Noise-Compatible Land Use*. In addition to the impacts of noise on land use compatibility, other potential impacts of FAA actions may also affect land use compatibility such as the disruption of communities, relocation, induced socioeconomic impacts, and land uses protected under Section 4(f).

The most current land use designations were obtained from the 2019 MPU for the General Study Area. The land use analysis considered existing land uses within the General Study Area and evaluated the Proposed Action to determine whether it would

[28] City of Boise. (2021, October). Zoning, Search Zoning by Address. Accessed February 2022, from City of Boise: https://www.cityofboise.org/departments/planning-and-development-services/planning-and-zoning/zoning/.

be compatible with land use guidelines within the City of Boise. An adverse impact or incompatible land use would occur if the Proposed Action does not comply with current land use designations.

No Action Alternative

Under the No Action Alternative, the Airport Sponsor would not implement the runway shift and extension, taxiway construction, and relocation or replacement of NAVAIDs. There would be no change in existing land use. Therefore, there would be **no effect** on land use.

Proposed Action

The Proposed Action does not require the acquisition of land. The shift in the Runway 10R RPZ would remove most of the incompatible land uses currently in the RPZ by removing several portions of roads in the vicinity of the Airport from the RPZ.

Construction of the Proposed Action would occur entirely on Airport property and would be compatible with the existing Airport environment. As described in **Section 4.3.6.1**, the Airport's current land use is designated as "industrial," and the Proposed Action is consistent with that designation.

Implementing the Proposed Action would be compatible with the existing Airport environment and the AIAs and would not introduce new aircraft or operations to the Airport. Additionally, as described in **Section 4.3.8.2**, the change to the noise contour due to the Proposed Action would not affect noise-sensitive land uses. As described throughout Chapter 4, the Proposed Action would not disrupt communities or affect Section 4(f) resources. There is no need for the Airport Sponsor to change its existing property boundaries to include incompatible land uses. Therefore, the Proposed Action would not change the land use in or around the Project Construction Area.

In addition to the protection of compatible land uses surrounding the Airport and the AIAs, **Appendix G** contains the Airport Sponsor land use assurance letter providing written assurance that "*appropriate action has been or will be taken, to the extent reasonable to restrict the use of land adjacent to or in the immediate vicinity of the Airport to activities and purposes compatible with normal Airport operations, including landing and takeoff of aircraft. This assurance applies to both existing and planned land uses*."

4.3.6.3 Mitigation Measures

Construction and implementation of the Proposed Action would have no effect on land use. Therefore, no mitigation is required or proposed.

4.3.7 Natural Resources and Energy Supply

FAA Order 1050.1F requires “an evaluation of a project’s consumption of natural resources and demands on energy supplies from projects, as well as the conservation potential of alternatives and mitigation measures. Consumption of natural resources and use of energy supplies may result from construction, operation, and/or maintenance of the proposed action or alternatives.” This impact category provides an evaluation of a project’s consumption of natural resources and use of energy supplies that are expected to result from construction, operation, and/or maintenance of the proposed action or alternative(s).

4.3.7.1 Affected Environment

Airport personnel and tenants regularly use consumable materials to maintain various airside and landside facilities and services. Those materials may include asphalt, concrete, aggregate for sub-base materials, various metals associated with such maintenance, and fuels associated with the operation of aircraft and vehicles.

Electrical power is necessary to keep the Airport operational and safe. Airport lighting within the Project Construction Area consists of airfield NAVAIDs, runway and taxiway edge lighting, signage, landside lighting for buildings, access roadways, apron areas, and automobile parking areas. According to the 2019 MPU, Idaho Power supplies the Airport with electricity, Intermountain Gas Company supplies natural gas and the Airport Sponsor stores fuel in underground tanks east of South Vista Avenue and north of the North Cargo Apron. Also according to the 2019 MPU, the Airfield Electrical Building is located north of Runway 10L/28R and east of Taxiway A1 and there is one electrical substation on the Airport property at the intersection of Production Street and West Gowen Road.

4.3.7.2 Environmental Consequences

No Action Alternative

Under the No Action Alternative, the Airport Sponsor would not implement the runway shift and extension, taxiway construction, and relocation or replacement of NAVAIDs. No construction would occur and operations at the Airport would not change beyond what is forecast to occur. There would be no use of natural resources or energy supply beyond what would occur with the forecast. Therefore, there would be **no effect** on natural resources and energy supply.

Proposed Action

Construction of the Proposed Action would temporarily increase the use of natural resources such as aggregate, sub-base materials, and oils. These resources are not rare or in short supply, and the quantity required for a project of this size would not place an undue strain on supplies. Construction would also increase the energy demand at the Airport; however, this increase would be temporary and minor, and within the supply capabilities of Idaho Power.

Implementation of the Proposed Action would not introduce new aircraft or operations to the Airport and, therefore, would not increase the use of natural resources at the Airport beyond supporting growth that is forecast to occur with or without implementation of the Proposed Action. With the Proposed Action, taxi distances from the closest terminal location would decrease by 710 feet to the Runway 10R end and increase by 1,765 feet to the Runway 28L end. Likewise, the taxi distances from the farthest terminal location would decrease by 690 feet to the Runway 10R end and increase by 1,770 feet to the Runway 28L end. However, this would not result in a significant increase of fuel consumption that would strain available resources. A small increase in the required electrical demand at the Airport is anticipated due to Runway 10R/28L being extended by 1,578 feet and requiring additional runway edge lighting and for the operation of newly installed NAVAIDs. However, the replacement PAPIs are proposed to have light-emitting diode (LED) lighting, which could result in a minor improvement to the efficiency of energy use at the Airport over the older NAVAIDs currently in use. Any increase in energy supply would not be significant and would be within the supply capabilities of Idaho Power. Therefore, there would be **no significant effect** on natural resources or energy supply.

4.3.7.3 Mitigation Measures

Construction and implementation of the Proposed Action would not result in a significant impact to natural resources and energy supply. Therefore, no mitigation is required or proposed.

4.3.8 Noise and Noise-Compatible Land Use

The Airport and Airway Improvement Act as well as the Airport Noise and Capacity Act are the primary regulations related to noise and noise-compatible land use. DNL is based on sound levels measured in relative intensity of sound decibels (dB) on the A-weighted scale (dBA) over a time-weighted average normalized to 24-hours. DNL has been widely accepted as the best method to describe aircraft noise exposure. The USEPA identifies DNL as the principal metric for airport noise analysis. The FAA requires DNL as the noise descriptor in aircraft noise exposure analysis and noise compatibility planning. DNL levels are commonly shown as lines of equal noise exposure, similar to terrain contour maps, referred to as noise contours. FAA's approved AEDT, version 3e model was used to develop aircraft noise contours for the existing conditions and potential noise impacts for the No Action Alternative and the Proposed Action for 2028, 2029, 2030, and 2035.

The 2019 MPU developed forecasts for the Airport as part of the MPU process, which the FAA approved. The FAA approved the use of the 2019 MPU forecasts for this EA in a memo dated August 2024 (see **Appendix H**). **Table 4-1** presents the aircraft operations data for the years being analyzed for impacts due to the Proposed Action compared to the No Action Alternative. These include: 2019 (existing conditions year), 2028, 2029, and 2030 (three construction years), 2030 (opening year for the Proposed Action), and 2035 (five years post opening year for the Proposed Action). The forecast is the same regardless of the implementation of the Proposed Action and the operations for the No Action Alternative and Proposed Action are the same for all analysis years. **Appendix I** contains detailed aircraft fleet mix data used in the EA analysis. For more information on noise and noise-compatible land use, and references see **Appendix I**.

Table 4-1
Aircraft Operations at the Airport for the Proposed Action Analysis Years

Year	Passenger Airlines	Cargo/a/	GA	Other Air Taxi	Military/b/	Total Operations
2019	45,487	5,484	66,425	6,490	16,349	140,235
2028	50,994	6,703	75,310	7,346	16,349	156,702
2029	51,616	6,832	76,715	7,442	16,349	158,954
2030	52,229	6,956	78,222	7,535	16,349	161,291
2035	54,540	7,541	86,694	7,904	16,349	173,028

Notes:
/a/ - The FAA TAF does not list cargo operations separately; however, the 2019 MPU separated cargo into its own category.
/b/ - Airport Master Plan Update forecast constant military operations for years 2020 through 2035 based on lack of justification for military missions increasing or decreasing.

Source: FAA, 2021; Ricondo, 2019; RS&H, 2024.

4.3.8.1 Affected Environment

As described in **Section 4.3.6.1**, there are residential areas within the General Study Area. At the Runway 10R end, I-84 buffers the closest residential area from the Airport and is about 200 feet north of the Project Construction Area. Line of sight from this residential area is predominantly blocked by vegetation and a roadway noise barrier that borders I-84, between the Airport and the residential area. At the Runway 28L end, the closest residential area is about 2,800 feet north of the Project Construction Area and is buffered from the Airport by I-84 and industrial development. Line of sight from this residential area is predominantly blocked by vegetation and a roadway noise barrier that borders I-84, between the Airport and the residential area, as well as industrial development.

The noise environment is commonly depicted in lines of equal noise levels, or noise contours. These noise contours are supplemented with noise data for selected points such as noise-sensitive receptors. The noise analysis takes the following operational characteristics into account: the number of aircraft operations, aircraft fleet mix, aircraft noise and performance characteristics, flight tracks, and runway use.

Analysis of the existing noise environment is based on the 2019 calendar year annual operational conditions. Flight track data was purchased from Envirosuite for the

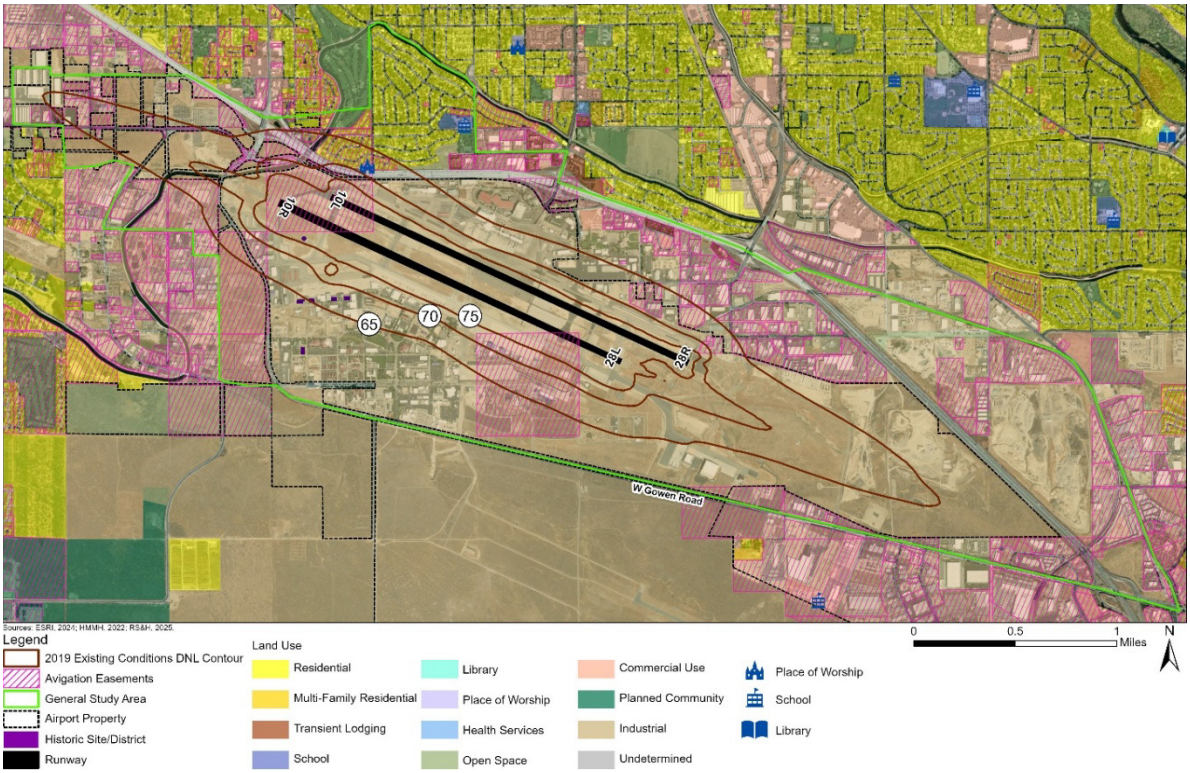
calendar year 2019, which was then scaled to the forecasted operational counts for 2019 (see **Table 4-1**).

Using FAA's approved AEDT, version 3e model, **Figure 4-8** displays the DNL[29] 65-75 dB noise contours for the 2019 Existing Conditions over a map of the existing land use in the General Study Area and also shows land uses and individual noise-sensitive locations such as schools, places of worship, and eligible historic resources. The FAA's guidelines for land use compatibility presented in Appendix A of 14 CFR Part 150 (see **Appendix I**) state that all land uses are compatible with aircraft noise below the DNL 65 dB noise contour. The DNL 65 dB noise contour extends into mostly vacant and industrial land to the northwest and southeast. One place of worship, the Kingdom Hall of Jehovah's Witnesses at 3299 South Roosevelt Street is within the 2019 DNL 65 dB noise contour. One eligible historic resource, three of the four Large Single Bay Hangars, are within the DNL 65 dB noise contour. A portion of the 2019 DNL 65 and 70 dB noise contours extend into residential land uses immediately to the north of the end of Runway 10L. One eligible historic resource, the Compass Swing Base, is within the DNL 75 dB noise contour (see **Figure 4-8**). The DNL 65+ dB noise contour covers about 1,591 acres and contains 254 residents and 96 housing units in the Hillcrest neighborhood. See **Appendix I** for detailed information and figures, including land uses, for the existing noise contours.

The Airport completed a Part 150 Noise Compatibility Program (NCP) in 2015, and in compliance with one of the mitigation measures, the Airport Sponsor purchased avigation easements over noise-sensitive land uses to make them compatible land uses (see **Figure 4-8**). The residential areas and place of worship north of the Airport have avigation easements on the properties to ensure the Airport Sponsor's right to use navigable airspace, to generate noise associated with aircraft operations, and to prohibit future airspace obstructions.

[29] DNL is a metric that reflects a person's cumulative exposure to sound over a 24-hour period, expressed as the noise level of the average day of the year based on annual aircraft operations.

Figure 4-8: 2019 Existing Conditions Noise Contours and Avigation Easements



4.3.8.2 Environmental Consequences

The potential noise effects associated with the Proposed Action were evaluated using the FAA's approved noise model, AEDT, version 3e. Modeling for the Proposed Action scenarios used the same noise data, performance data, and runway use percentages for each aircraft type operating at the Airport as in the 2019 Existing Conditions. However, flight tracks and runway use for the various Proposed Action analysis years varied based on how the Airport would operate during those years, each of which are described in the Proposed Action sections. **See Appendix I** for more details on the noise modeling.

As outlined in FAA Order 1050.1G, Exhibit A-1, the FAA considers a noise impact to be significant if an action would cause noise sensitive areas to experience an increase in noise of DNL 1.5 dB or more at or above the DNL 65 dB noise contour when compared to the No Action Alternative. The analysis for this EA compared eight future scenarios using the operations data: the No Action Alternative and the Proposed Action in 2028 (the first construction year for the Proposed Action when 1,578 feet would be added to the end of Runway 28L), the No Action Alternative and the Proposed Action in 2029 (the

second construction year for the Proposed Action when 1,341 feet would be removed from the end of Runway 10R), the No Action Alternative and the Proposed Action in 2030 (the opening year for the Proposed Action), and the No Action Alternative and the Proposed Action in 2035 (five years after opening year).

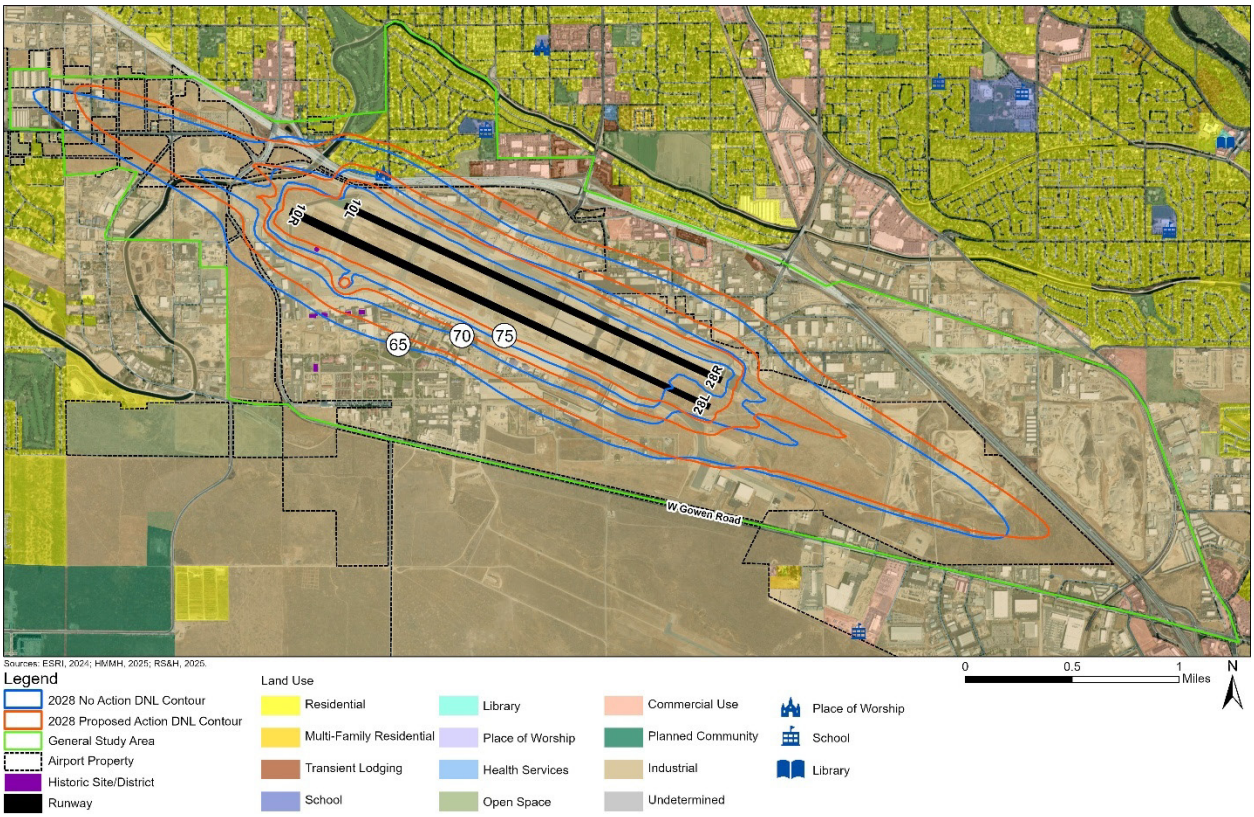
No Action Alternative

Under the No Action Alternative, the Airport Sponsor would not implement the runway shift and extension, taxiway construction, and relocation or replacement of NAVAIDs. There would be no change to the existing runway configuration and the forecasted increase in operations would occur naturally under the No Action Alternative. As such, the No Action Alternative represents forecast conditions for future years 2028 2029, 2030, and 2035 as presented in subsequent sections, with no improvements being made to the Airport.

No Action Alternative (2028)

Figure 4-9 shows the DNL 65+ dB noise contours for the 2028 No Action Alternative, including individual noise-sensitive land uses such as schools, places of worship, and historic resources. The 2028 No Action Alternative DNL 65 dB noise contour extends into mostly vacant and industrial land to the northwest and southeast; however, a portion of the DNL 65 and 70 dB contours extends into residential land uses immediately to the north of the end of Runway 10L. A total of 283 residents and 107 housing units in the Hillcrest neighborhood would be within the DNL 65+ dB noise contours in 2028. The total area of the DNL 65+ dB noise contours under the 2028 No Action Alternative is about 1,681 acres. See **Appendix I** for detailed information and figures, including land uses, for the 2028 No Action Alternative noise contours.

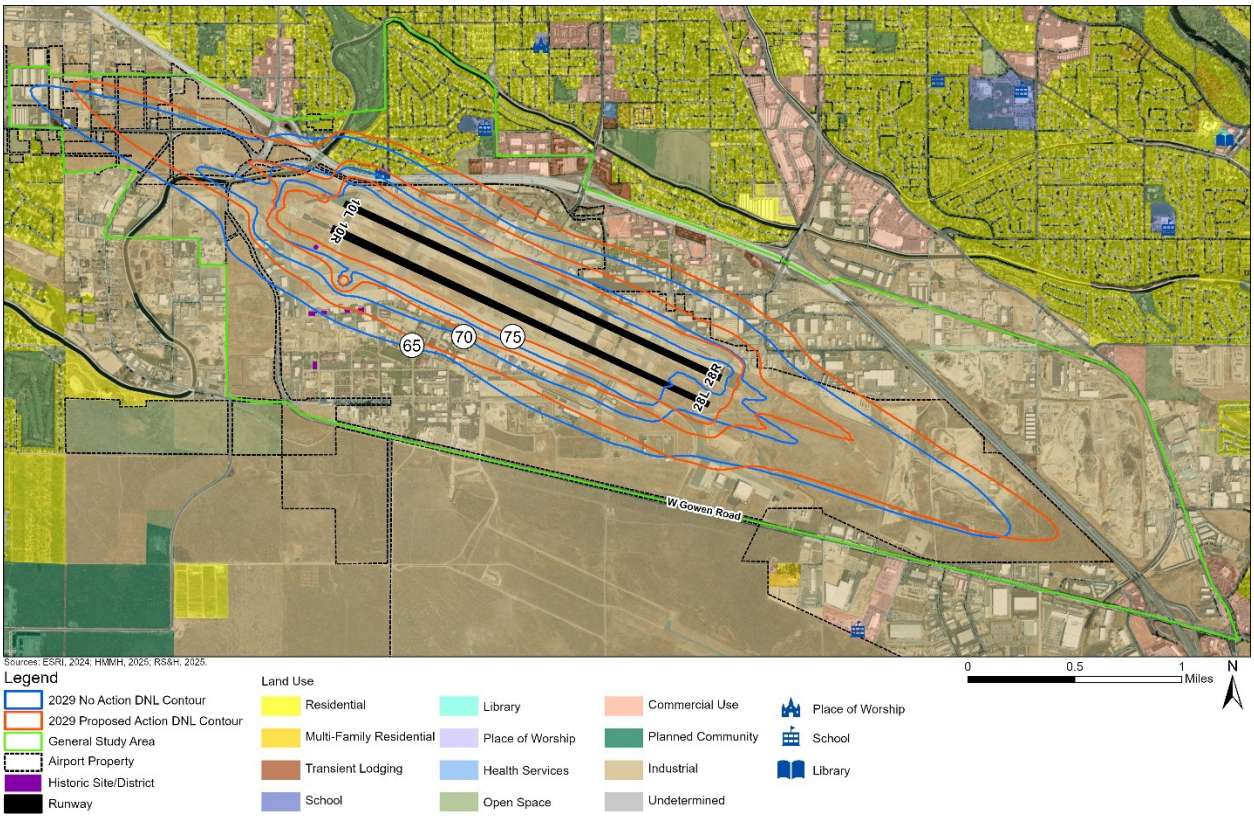
Figure 4-9: No Action Alternative (2028) and Proposed Action (2028)



No Action Alternative (2029)

Figure 4-10 shows the DNL 65+ dB noise contours for the 2029 No Action Alternative. The individual noise-sensitive locations such as schools, places of worship, and historic resources would be the same as those identified for the 2028 No Action Alternative. A total of 288 residents and 110 housing units in the Hillcrest neighborhood would be within the DNL 65+ dB noise contours in 2029. The total area of the DNL 65+ noise contours under the 2029 No Action Alternative is about 1,695 acres. See **Appendix I** for detailed information and figures, including land uses, for the 2029 No Action Alternative noise contours.

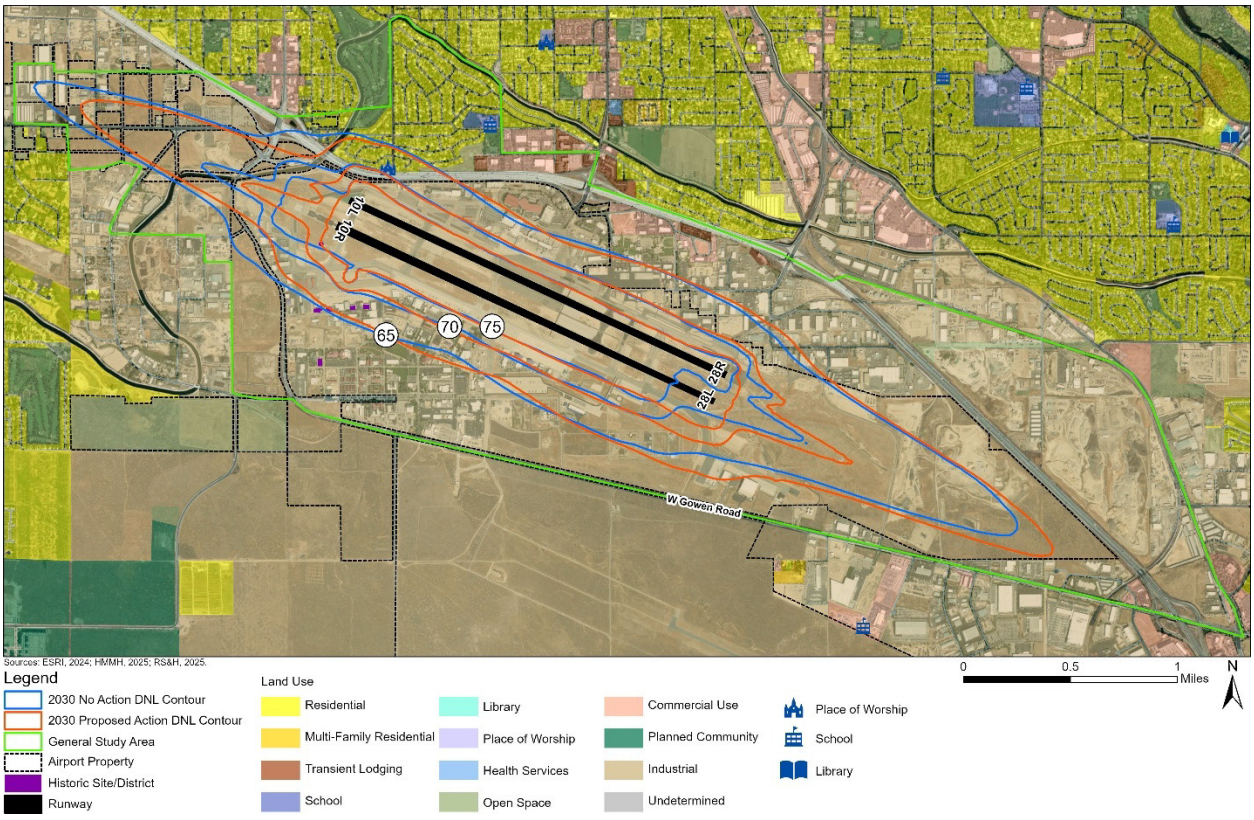
Figure 4-10: No Action Alternative (2029) and Proposed Action (2029)



No Action Alternative (2030)

Figure 4-11 shows the DNL 65+ dB noise contours for the 2030 No Action Alternative. The individual noise-sensitive locations such as schools, places of worship, and historic resources would be the same as the 2028 No Action Alternative, 2029 No Action Alternative, and 2019 Existing Conditions. A total of 292 residents and 111 housing units in the Hillcrest neighborhood would be within the DNL 65+ dB noise contours in 2030. The total area of the DNL 65+ dB noise contours under the 2030 No Action Alternative is about 1,705 acres. See **Appendix I** for detailed information and figures, including land uses, for the 2030 No Action Alternative noise contours.

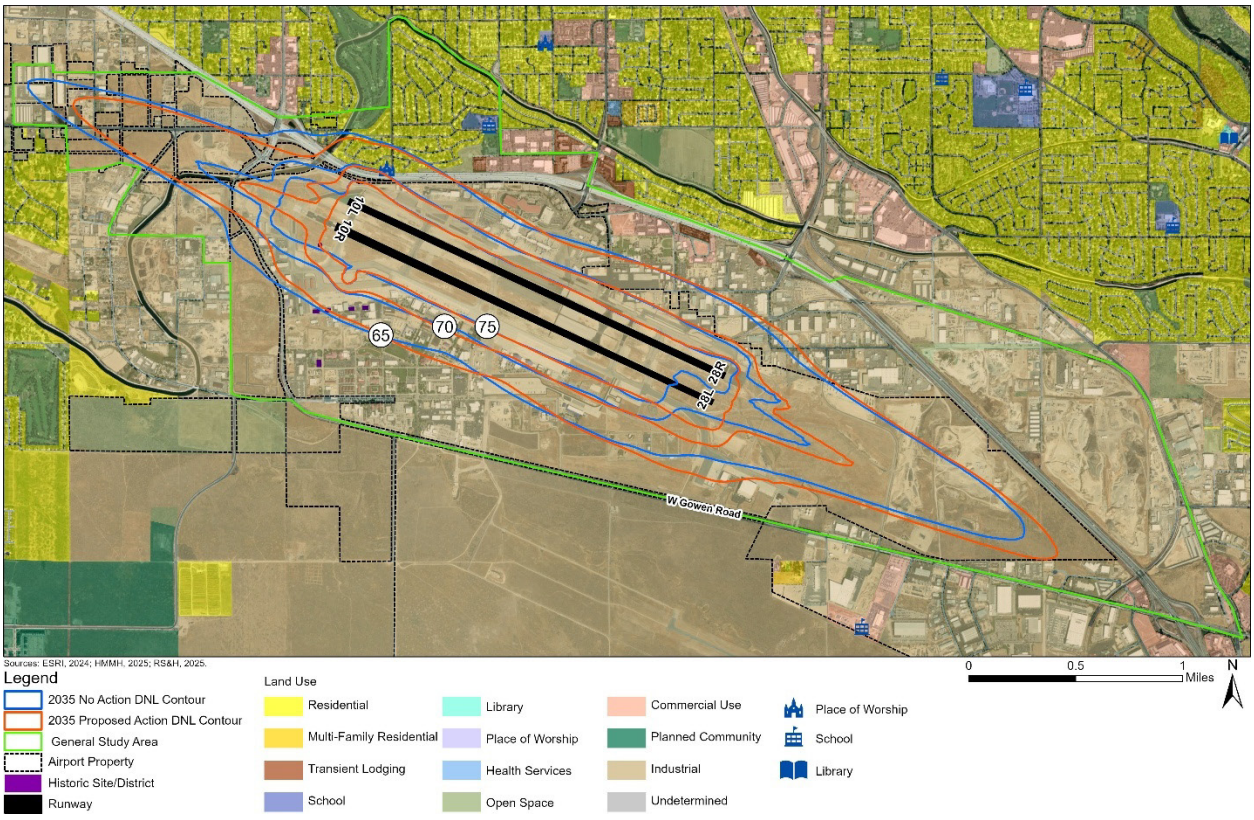
Figure 4-11: No Action Alternative (2030) and Proposed Action (2030)



No Action Alternative (2035)

Figure 4-12 shows the DNL 65+ dB noise contours for the 2035 No Action Alternative. The individual noise-sensitive locations such as schools and places of worship would be the same as the 2028 No Action Alternative, 2029 No Action Alternative, 2030 No Action Alternative, and 2019 Existing Conditions. All four of the Four Large Single Bay Hangars are inside the DNL 65 dB contour, whereas the 2028, 2029, and 2030 No Action Alternatives have three of the four hangars inside the DNL 65 dB contour. A total of 306 residents and 115 housing units in the Hillcrest neighborhood would be within the DNL 65+ dB noise contours in 2035. The total area of the DNL 65+ dB noise contours under the 2035 No Action Alternative is about 1,749 acres. See **Appendix I** for detailed information and figures, including land uses, for the 2035 No Action Alternative noise contours.

Figure 4-12: No Action Alternative (2035) and Proposed Action (2035)



Proposed Action

Proposed Action (2028)

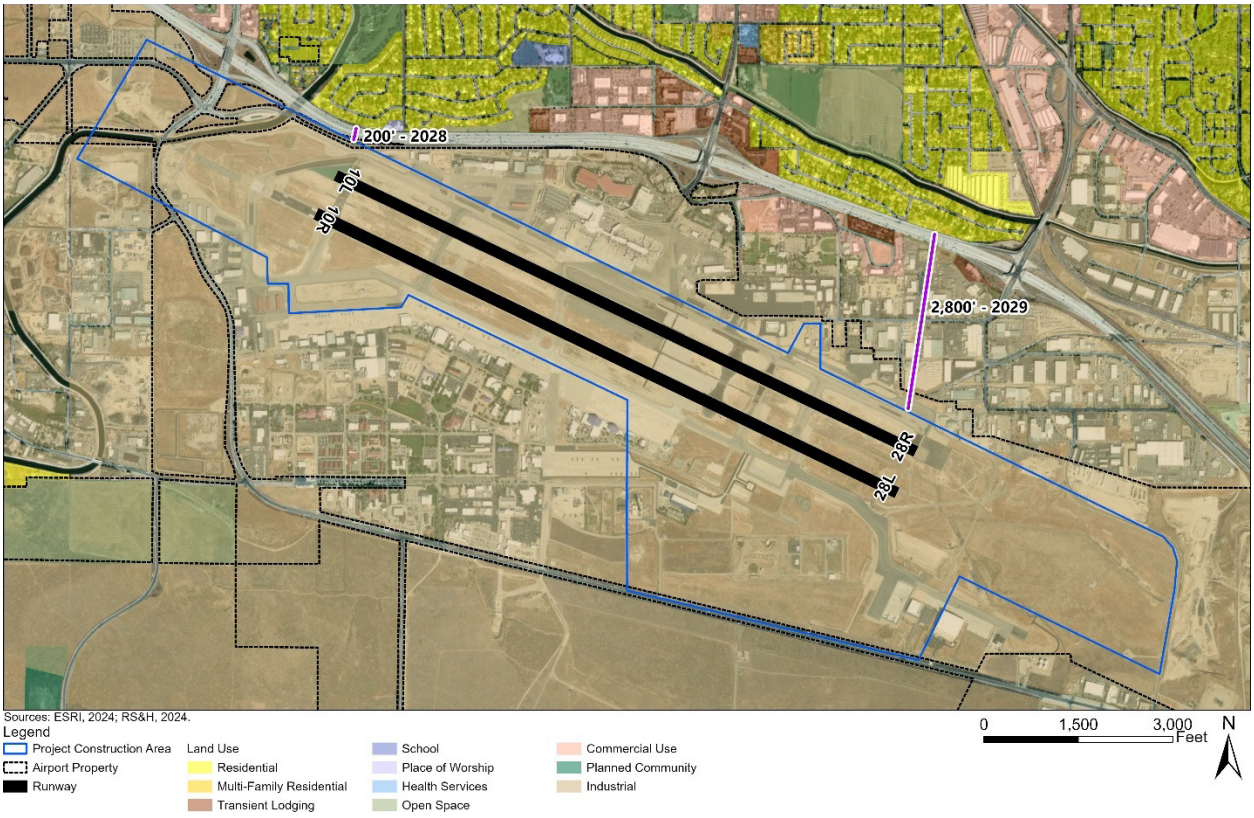
The year 2028 represents the first construction year for the Proposed Action. Construction of the Proposed Action would result in noise from construction vehicles and machinery and would generally be limited to the immediate vicinity of the construction activity. Noise levels would vary depending on the nature of the construction activity and the type and model of equipment in use. Grading and scraping operations are typically the noisiest activities, with noise levels as high as 70 to 90 dBA within 50 feet of their operations; however, distance rapidly attenuates noise levels. Noise from point sources attenuates at a rate of about 6 dB per doubling of distance; in other words, noise levels would be 6 dB less at 100 feet from the equipment, 12 dB less at 200 feet, and 24 dB less at 400 feet. While construction could occur during night-time hours, the majority of construction is expected to occur during day-light hours. As shown in **Figure 4-13**:, the closest residential areas are about 2,800 feet north of the Project Construction Area on the Runway 28L end, where construction is proposed to occur in

2028. This residential area is buffered from the Project Construction Area by I-84, a roadway noise barrier between the residential area and I-84, and industrial development on the south side of I-84. While construction noise associated with the Proposed Action may be heard in this residential area, it is not anticipated to significantly affect the area given the distance from the Project Construction Area, the existing interstate traffic, the roadway noise barrier, and industrial development between the residential area and the Project Construction Area.

Figure 4-9 shows the DNL 65+ dB noise contours for the 2028 Proposed Action, including individual noise-sensitive locations such as residences, schools, places of worship, and historic resources. The place of worship is in the DNL 70 dB noise contour compared to the 2028 No Action Alternative where it is in the DNL 65 dB noise contour. Two of the four Large Single Bay Hangars are within the DNL 65 dB noise contour compared to the 2028 No Action Alternative where three are in the DNL 65 dB noise contour. The Compass Swing Base is in the DNL 70 dB noise contour compared to the 2028 No Action Alternative where it is in the DNL 75 dB noise contour. **Figure 4-9** also shows the 2028 Proposed Action compared to the 2028 No Action Alternative.

A total of 377 residents and 143 housing units in the Hillcrest neighborhood would be within the 2028 Proposed Action DNL 65+ dB noise contours, which is an increase of 94 residents and 36 housing units compared to the 2028 No Action Alternative. The increases in residents and housing units are due to the shift in operations from Runway 10R/28L to Runway 10L/28R during the seven-month construction period, which results in a temporary expanded 2028 Proposed Action DNL 65 dB noise contour. The total area of the DNL 65+ dB noise contours under the 2028 Proposed Action is about 1,700 acres, decreasing about 19 acres compared to the 2028 No Action Alternative.

Figure 4-13: Distance from Project Construction Area to Closest Residential Area During Construction



Areas of change greater than or equal to DNL 1.5 dB due to the 2028 Proposed Action compared to the 2028 No Action Alternative within the DNL 65+ dB noise contours can be found in **Appendix I**. All areas that would experience either a DNL 1.5 dB increase, or decrease are either on Airport property, industrial land uses, or residential units. 24 housing units and 68 residents would move into the DNL 65+ dB noise contours as a result of the 2028 Proposed Action compared to the 2028 No Action Alternative. Nine of these housing units and the place of worship north of the Runway 10L threshold would experience a DNL 1.5 dB increase as a result of the 2028 Proposed Action compared to the 2028 No Action Alternative. However, these sites experiencing a DNL 1.5 dB increase have avigation easements over the property as a mitigation measure of the Airport's Part 150 Study NCP, making them compatible land uses. See **Appendix I** for detailed information and figures, including land uses, for the 2028 Proposed Action noise contours.

Proposed Action (2029)

The year 2029 represents the second construction year for the Proposed Action. Construction would result in similar noise from construction equipment as described in Proposed Action (2028). **Figure 4-13** shows the closest residential areas are just over 200 feet north of the Project Construction Area on the Runway 10R end, where construction is proposed to occur in 2029. This residential area is buffered from the Project Construction Area by I-84 and has a roadway noise barrier between the residential area and I-84. While construction noise associated with the Proposed Action may be heard in this residential area, it is not anticipated to significantly affect the area given the distance from the Project Construction Area and the existing interstate and roadway noise barrier between the residential area and the Project Construction Area.

Figure 4-10 shows the DNL 65+ dB noise contours for the 2029 Proposed Action, including individual noise-sensitive locations such as schools, places of worship, and historic resources. The place of worship is in the DNL 70 dB noise contour compared to the 2029 No Action Alternative where it is in the DNL 65 dB noise contour. Two of the four Large Single Bay Hangars are within the DNL 65 dB noise contour compared to the 2029 No Action Alternative where three are in the DNL 65 dB noise contour. The Compass Swing Base is in the DNL 70 dB noise contour compared to the 2029 No Action Alternative where it is in the DNL 75 dB noise contour. **Figure 4-10** also shows the 2029 Proposed Action compared to the 2029 No Action Alternative.

A total of 360 residents and 29 housing units in the Hillcrest neighborhood would be within the 2029 Proposed Action DNL 65+ dB noise contours, which is an increase of 101 residents and 37 housing units compared to the 2029 No Action Alternative. The increases in residents and housing units are due to the shift in operations from Runway 10R/28L to Runway 10L/28R during the eight-month closure of Runway 10R/28L during the construction period, which results in a temporary expanded 2029 Proposed Action DNL 65 dB noise contour north of the Airport. The total area of the DNL 65+ dB noise contours under the 2029 Proposed Action is about 1,707 acres, which is an increase of about 12 acres compared to the 2029 No Action Alternative.

Areas of change due to the 2029 Proposed Action compared to the 2029 No Action Alternative within the DNL 65+ dB contours can be found in **Appendix I**. All areas that would experience either a DNL 1.5 dB increase, or decrease are either on Airport property, industrial land uses, or residential units. 24 housing units and 75 residents

would move into the DNL 65+ dB noise contours as a result of the 2029 Proposed Action over the 2029 No Action Alternative. Additionally, 12 of these house units and the place of worship north of the Runway 10L threshold would experience a DNL 1.5 dB increase as a result of the 2029 Proposed Action as compared to the 2029 No Action Alternative. However, these sites experiencing a DNL 1.5 dB increase have avigation easements over the property as a mitigation measure of the Airport's Part 150 NCP, making them compatible land uses. See **Appendix I** for detailed information and figures, including land uses, for the 2029 Proposed Action noise contours.

Proposed Action (2030)

The year 2030 represents the opening year for the Proposed Action. This scenario represents the same conditions, including flight tracks and runway use, as the No Action Alternative scenario with the exception that operations on Runway 10R/28L would use the shifted and extended runway thresholds (aligned thresholds) from the 2030 Proposed Action scenario.

Figure 4-11 shows the DNL 65+ dB noise contours for the 2030 Proposed Action, including individual noise-sensitive locations such as schools, places of worship, and historic resources. The place of worship the Compass Swing Base, and the four Large Single Bay Hangars are in the same DNL noise contours as they are in the 2030 No Action Alternative. **Figure 4-11** also shows the 2030 Proposed Action compared to the 2030 No Action Alternative.

A total of 245 residents and 93 housing units in the Hillcrest neighborhood would be within the DNL 65+ dB noise contours in 2030, which is a decrease of 47 residents and 18 housing units compared to the 2030 No Action Alternative. The total area of the DNL 65+ dB noise contours under the 2030 Proposed Action is about 1,698 acres, decreasing about seven acres compared to the 2030 No Action Alternative. The 2030 Proposed Action would decrease residents, housing units, and area (in acres) compared to the 2030 No Action Alternative. None of these resources would experience a DNL 1.5 dB increase in noise as a result of the 2030 Proposed Action. Additionally, no other noise-sensitive sites or eligible historic resources experience a DNL 1.5 dB increase as a result of the 2030 Proposed Action. Therefore, the grid point analysis results (see **Appendix I**) show less than reportable levels of change in DNL as a result of the 2030 Proposed Action compared to the 2030 No Action Alternative. See

Appendix I for detailed information and figures, including land uses, for the 2030 Proposed Action noise contours.

Proposed Action (2035)

The year 2035 represents five years after the opening year for the Proposed Action. Flight tracks and runway use for the 2035 Proposed Action are assumed to be the same as the 2030 Proposed Action.

Figure 4-12 shows the 2035 Proposed Action noise contours, including individual noise-sensitive locations such as schools, places of worship, and historic resources. All the eligible noise-sensitive resources in the 2035 Proposed Action DNL 65+ dB noise contours are the same as the 2035 No Action Alternative DNL 65+ dB noise contours. **Figure 4-12** also shows the 2035 Proposed Action compared to the 2035 No Action Alternative.

A total of 262 residents and 98 housing units in the Hillcrest neighborhood would be within the DNL 65+ dB noise contours in 2035 as a result of the Proposed Action, which is a decrease of 44 residents and 17 housing units compared to the 2035 No Action Alternative. The total area for the 2035 Proposed Action DNL 65+ dB noise contours is about 1,741 acres, which is about eight acres less than the area for the 2035 No Action Alternative DNL 65+ dB noise contours.

The 2035 Proposed Action would decrease the number of residents, housing units, and area (in acres), and no noise-sensitive resources would experience a DNL 1.5 dB increase. Additionally, no other noise-sensitive sites or eligible historic resources experience a DNL 1.5 dB increase as a result of the 2035 Proposed Action compared to the 2035 No Action Alternative. Therefore, the grid point analysis results (see **Appendix I**) show less than reportable levels of change in DNL as a result of the 2035 Proposed Action compared to the 2035 No Action Alternative. See **Appendix I** for detailed information and figures, including land uses, for the 2035 Proposed Action noise contours.

Implementing the Proposed Action (2030 and 2035) would decrease the number of residents, housing units, and acreage in the DNL 65+ dB noise contours as compared to the No Action Alternative and would not result in a DNL 1.5 dB increase over any noise-sensitive sites either during construction or implementation of the Proposed Action. Therefore, there would be **no significant noise impact**.

4.3.8.3 Mitigation Measures

As there would be no significant noise impact on the surrounding community, no mitigation measures are proposed or required.

4.3.9 Socioeconomics and Children's Environmental Health and Safety Risks

Socioeconomics is an umbrella term used to describe a project's social or economic aspects, or a combination of the two. A socioeconomic analysis evaluates how elements of the human environment such as population, employment, housing, and public services might be affected by a proposed action and alternative(s). The Uniform Relocation Assistance and Real Property Acquisitions Policy Act of 1970 is the main regulation governing socioeconomics and includes provisions that must be followed if property acquisition or displacement of people would occur as a result of implementing the proposed action.

EO 13045, *Protection of Children from Environmental Health Risks and Safety Risks*, is the primary regulation for the protection of children and requires federal agencies to "analyze their policies, programs, activities, and standards for any environmental health or safety risks that may disproportionately affect children."[30] For more information on socioeconomics and children's environmental health and safety risks, and references see **Appendix J**.

4.3.9.1 Affected Environment

The General Study Area is within three U.S. Census Bureau (USCB) block groups: Census Tract 18, Block Groups 1 and 2, and Census Tract 21, Block Group 1 (see **Appendix J**). Not all block groups within a census tract were included in the analysis. Only if all or a portion of a block group was within the General Study Area was it then included in the analysis. Census tract and block group boundaries are determined by the USCB and cannot be changed to exactly fit the General Study Area. Therefore, the analysis presented in this EA includes the three census tracts for which the General Study Area falls.

[30] FAA. (2020, February). *1050.1 Desk Reference*.

Socioeconomics

Population and Housing

Table J-1 in **Appendix J** shows the population and housing data for the census tract block groups within the General Study Area individually and combined. Data from these census tracts, the City of Boise, and Ada County were included for comparison purposes. Census Tract 18, Block Group 2 has the highest population at 1,563 people and also had the highest total households (639), average persons per household (2.4), and highest percent occupied housing (95.6). A total of 3,237 people live in the General Study Area census tracts which is about 1,402 households, about 90 percent of which are occupied, for an average of about two persons per household.

Employment

Table J-2 in **Appendix J** shows Census Tract 18 Block Group 1 has the highest unemployment rate (7.7%) when compared to Census Tract 18 Block Group 2 (5.6%) and Census Tract 21 Block Group 1 (3.5%). The General Study Area census tracts have the highest unemployment rate (6.3%) when compared to the City of Boise (4.5%) and Ada County (3.8%).

Economic Activity and Income

Table J-2 in **Appendix J** also shows Census Tract 21, Block Group 1 has the highest median income ($79,286) compared to Census Tract 18 Block Group 2 ($62,865) and Census Tract 18 Block Group 1 ($58,947). Ada County has the highest median income ($72,021) compared to the City of Boise ($65,463) and the General Study Area census tracts ($67,033). The national unemployment rate is (5.3%) and the national median income is ($62,843).

The major roadways serving the Airport are South Orchard Street, West Wright Street, South Vista Avenue, I-84, West Airport Way, West Gowen Road, and Broadway Avenue.

Children's Environmental Health and Safety Risks

In addition to the residential area discussed in **Section 4.3.8**, areas of particular concern for children's health environmental risks and safety include schools, day cares, children's health clinics, and child-friendly recreational facilities. There is one school

within the General Study Area, Owyhee Elementary School. There are no day care facilities or children's health clinics within the General Study Area. There is one child-friendly recreational facility in the General Study Area, Owyhee Park, a city park with a basketball court, playground, tennis courts, open play areas, and restrooms. Table J-3 in **Appendix J** shows individual and combined child age distribution of the General Study Area census tracts compared to the City of Boise and Ada County.

4.3.9.2 Environmental Consequences

The analysis in this section considers the potential for the Proposed Action to have an effect on socioeconomics if the Proposed Action requires nearby populations to move people from their homes; move businesses; divide or disrupt established communities; disrupt orderly, planned development; or create a notable change in employment. The analysis in this section, consistent with FAA requirements, considers the potential for the Proposed Action to affect socioeconomics and children's environmental health and safety risks.

No Action Alternative

Under the No Action Alternative, the Airport Sponsor would not implement the runway shift and extension, taxiway construction, and relocation or replacement of NAVAIDs. Land would not be acquired, and displacement of people or businesses would not occur. There would be no change to the existing operation setting at the Airport. Therefore, there would be **no effect** on socioeconomics or children's environmental health and safety risks.

Proposed Action

Socioeconomics

Construction of the Proposed Action would result in the short-term employment of construction workers. As the construction of the Proposed Action is temporary, this would not cause a shift in population growth or change population growth patterns. Additionally, it is likely construction workers would be from the Boise area and would not require temporary housing or affect the housing environment in the area. Workers employed for the construction of the Proposed Action would most likely be those already in the construction occupation within the Boise area. As such, the construction of the Proposed Action would not affect the labor force in the area. The Airport Sponsor

has indicated construction vehicles and workers would access the Project Construction Area via South Orchard Street, West Gowen Road, and on-Airport roadways. Construction-related traffic would be temporary (e.g., lasting only as long as the construction period each year). Therefore, the construction of the Proposed Action would not have a significant effect on socioeconomics.

Implementing the Proposed Action would not result in any physical changes to the public roadway system providing access to the Airport. Additionally, the Proposed Action would not change the number of employees at the Airport or induce an increase in the number of enplanements at the Airport compared to the No Action Alternative. Therefore, implementation of the Proposed Action would not affect population growth or growth patterns, housing, the labor force in the area, or surface traffic.

Children's Environmental Health and Safety Risks

Construction and implementation of the Proposed Action would occur entirely on Airport property and would not require the acquisition or relocation of any schools, childcare centers, or similar facilities. The Proposed Action would not increase health and safety risks or exposure of environmental contaminants to children in the surrounding community. Construction emissions resulting from the Proposed Action would be temporary and are not significant (see **Section Appendix D**). The Proposed Action does not increase capacity at the Airport or change the fleet mix operating at the Airport so there would be no significant effect from operational emissions.

Construction and implementation of the Proposed Action would not have significant effects on air quality, hazardous materials, noise, and water quality. The Proposed Action would have no effect on economic activity, employment, income, housing, public services, social conditions, in the vicinity of the Airport. Likewise, the Proposed Action would have **no significant effect** on socioeconomics or children's environmental health and safety risks.

4.3.9.3 Mitigation Measures

The Proposed Action would have no significant effect on socioeconomics or children's environmental health and safety risks. No mitigation is required or proposed.

4.3.10 Visual Effects

According to FAA 1050.1 Desk Reference, “visual effects deal broadly with the extent to which the proposed action or alternative(s) would either: 1) produce light emissions that create annoyance or interfere with activities; or 2) contrast with, or detract from, the visual resources and/or the visual character of the existing environment.” In keeping with FAA 1050.1G, the next sections are separated into Light Emissions, and Visual Resource and Visual Character sections.

4.3.10.1 Affected Environment

As described in **Section 4.3.6.1**, there are residential areas within the General Study Area. On the Runway 10R end, the closest residential area is about 200 feet north of the Project Construction Area (see **Figure 4-13**) and is buffered from the Airport by I-84. Line of sight from this residential area is predominantly blocked by vegetation and a roadway noise barrier that borders I-84, between the Airport and the residential area. On the Runway 28L end, the closest residential area is about 2,800 feet north of the Project Construction Area (see **Figure 4-13**), and is buffered from the Airport by I-84 and industrial development. Line of sight from this residential area is predominantly blocked by vegetation and a roadway noise barrier that borders I-84, between the Airport and the residential area, as well as industrial development.

Light Emissions

Current Airport facilities are illuminated by various types of lighting for landside and airside operations.

- Landside Lighting: lighting associated with buildings, parking areas, and roadways.
- Buildings: lights on buildings are focused and directed down
- Parking Areas: surface parking areas have poles with lights directed down, and the parking garage is lit inside
- Roadways: poles with lights directed down
- Airside Lighting: lighting associated with runways, taxiways, NAVAIDs, and apron areas.
- Runways: runway edge lights (high intensity on both runways), runway end identifier light (both runways), lighted wind cones (both runway ends),

threshold lighting (each runway has a colored split lens lighting system)

- Taxiways: major taxiways have blue medium-intensity edge lights
- NAVAIDs: ALSF-2 is a high intensity, flashing light system (Runway 10R), MALSR is a medium intensity NAVAID (Runway 28L), PAPI with four lights (Runway 10L/28R), VASI with four lights (Runway 10R/28L)
- The Runway 10R ALSF-2 lights are on a bridge across New York Canal
- Apron Areas: primary ramp areas have overhead lighting for nighttime operations

Visual Resources and Visual Character

The visual character of the General Study Area can be described as urban due to the amount of development within the area (commercial, industrial, residential) and is generally flat. The General Study Area is characterized by airport facilities (runways, taxiways, hangars, passenger terminal, etc.), roadways, sidewalks, I-84, commercial and industrial buildings, and residential areas. As mentioned in **Section 4.3.6.1** describes the general land uses and visual character of the General Study Area. Additionally, the area west of the Airport includes the ALSF-2 bridge over New York Canal.

The City of Boise has scenic resources, generally recreational areas offering scenic views; however, none are located in the General Study Area. There are open space land uses adjacent to the General Study Area and six historic properties eligible for listing on the NRHP on-Airport property (see **Section 4.3.5.1**).

4.3.10.2 Environmental Consequences

No Action Alternative

Under the No Action Alternative, the Airport Sponsor would not implement the runway shift and extension, taxiway construction, and relocation or replacement of NAVAIDs. Existing operating conditions at the Airport would not change, including no new sources of light emissions. Therefore, the Proposed Action would have **no effect** on light emissions, visual resources, or visual character.

Proposed Action

Light Emissions

Construction of the Proposed Action would occur entirely on Airport property and is likely to occur during daytime hours. If nighttime construction were to occur, it would be restricted to airfield-related construction. Light emissions from any nighttime-related construction would be temporary, lasting only during the construction months (i.e., about six months) for each construction year.

Implementing the Proposed Action would relocate and/or replace existing NAVAIDs (e.g., ALSF-2, VASI, MALSR systems) and shift runway edge lighting and runway end lighting. With the Runway 10R end to be aligned with the Runway 10L threshold, the lighting associated with the runways and NAVAIDs would be relocated and/or replaced further to the east onto the Airport property. The Airport Sponsor would remove the ALSF-2 bridge over New York Canal, resulting in darker skies over that area of the canal during the night when the lights would be visible. Additionally, the Proposed Action includes the removal of Taxiway J, which would remove the blue medium-intensity edge lights. New lighting for the runway shift and taxiways would be located at or near ground level and consistent with the existing light emissions of the Airport, even at night, which is required for the safe operation of aircraft. Additionally, the Airport currently has runway, taxiway, and NAVAID lighting and the Proposed Action would remain at the same intensity as the existing lighting and within the existing airfield. Areas that could experience an annoyance from light emissions are further shielded from the light emissions by I-84, vegetation, and a roadway noise barrier that borders I-84, all of which are located between the Airport and residential area. Therefore, the light emissions associated with the Proposed Action are not anticipated to cause an annoyance or interfere with normal activities or affect the visual character of the area due to the light emissions. The Proposed Action would have **no significant effect** on light emissions.

Visual Resources and Visual Character

Construction of the Proposed Action would require using large construction equipment and construction vehicles. However, the equipment and vehicles would only be at the Airport during construction and are considered temporary. There are no vertical project components associated with the Proposed Action. All project improvements would take

place on existing Airport property, and in areas that are already developed for the movement of aircraft. After construction, operation of the Airport under the Proposed Action would present a very similar visual character as what currently exists. The removal of the ALSF-2 bridge would not result in a substantial change to the visual character over New York Canal. Residents north of the Airport would continue to be shielded from visibility of the Airport by I-84, vegetation, and a roadway noise barrier bordering I-84, which is between the Airport and the residential area. Overall, from the ground, the visual character of the Airport would not experience a significant change as a result of the operation of the Proposed Action; therefore, significant visual effects are not anticipated. Aerially, the visual character of the Airport would change in that the runway thresholds would be aligned for the safety of the pilots using the Airport. Therefore, the Proposed Action would have **no significant effect** on visual resources or the visual character.

4.3.10.3 Mitigation Measures

The Proposed Action would have no significant effect on light emissions, visual resources, and the visual character within the Project Construction Area and the general vicinity of the Airport. No mitigation is required or proposed.

4.3.11 Water Resources

According to FAA Order 1050.1G, water resources include wetlands, floodplains, surface waters, groundwater, and wild and scenic rivers. As **Section 4.2** describes, there are no floodplains or wild and scenic rivers in the Project Construction Area; therefore, this section does not discuss those resource categories.

The CWA establishes the basic structure for regulating the discharge of pollutants into waters of the United States and Section 303(d), Section 404, Section 401, and Section 402 of the CWA relating to waters of the United States establishes the National Pollutant Discharge Elimination System (NPDES) permit program.

The Safe Water Drinking Act is the primary statute regulating groundwater and prohibits federal agencies from funding actions that would contaminate an USEPA-designated sole source aquifer or its recharge area. For more information on water resources, and references see **Appendix K**.

4.3.11.1 Affected Environment

Wetlands

The National Wetlands Inventory (NWI) shows that wetlands in the Project Construction Area include the New York Canal running through the western edge of the Project Construction Area and an unnamed riverine through the southeastern portion of the Project Construction Area (see **Figure K-1** in **Appendix K.1**). However, the NWI information is outdated because the Project Construction Area has been previously cleared and is heavily disturbed from Airport development; existing Taxilane S, NAVAIDs, a stormwater retention pond, and several on-Airport roadways are in the same location as the unnamed riverine depicted on the NWI. In addition, the unnamed riverine is not identified as a wetland in either the 2019 MPU or the Airport's WHMP. Given the level of existing pavement and development where the unnamed riverine is shown, as well as the fact that no jurisdictional wetlands have been identified on the Airport, no evidence of the unnamed riverine has been found in the Project Construction Area. The ALSF-2 bridge currently spans over the New York Canal.

Surface Waters

The Project Construction Area is within the Five Mile Creek watershed (Hydrologic Unit Code (HUC): 170501140202). The New York Canal runs through the western edge of the Project Construction Area, which has seasonal flow during the spring and summer and is the main source of irrigation water for agricultural lands west and north of the Airport. Flow from the New York Canal discharges into Five Mile Creek, which is listed by the IDEQ as impaired for "suspected nutrient loading." Stormwater runoff generated from airside portions of the Project Construction Area is retained on-site and does not enter the canal.

Stormwater runoff from the Project Construction Area generally sheet flows off airfield pavements into vegetated infields and ditches. Stormwater runoff is then collected in underground storm sewers and conveyed to a series of stormwater retention ponds, which retain stormwater runoff and do not discharge to surface waters under most runoff-producing precipitation events (see **Figure K.2** in **Appendix K.1**). Water quality treatment is also provided in these stormwater retention ponds. During extreme precipitation events, overflow structures may convey stormwater runoff off Airport property. There are four stormwater retention ponds located within or immediately

adjacent to the Project Construction Area and two outside the Project Construction Area that receive stormwater runoff from Project Construction Area (see **Figure K.2** in **Appendix K.1**).

Stormwater runoff within the Project Construction Area is expected to contain pollutants commonly found in runoff from airport sites. These pollutants include glycol, jet fuel, engine oil, lubricants, hydraulic fluid, lavatory waste, chemical solvents, and materials removed from the runway surface during maintenance activities. To manage pollutants in stormwater runoff from activities such as, maintenance, fuel storage, and deicing at the Airport, the Airport Sponsor adheres to its Idaho Pollutant Discharge Elimination System (IPDES) industrial stormwater permit (Permit Number IDR053107). Additionally, a SPCC plan is in place at the Airport to define procedures to prevent and minimize effects on stormwater runoff from an oil spill.

Groundwater

According to FAA 1050.1 Desk Reference, "*groundwater is subsurface water that occupies the space between sand, clay, and rock formations. The term aquifer is used to describe the geologic layers that store or transmit groundwater to wells, springs, and other water sources*." The Project Construction Area is within the Snake River Plain aquifer. There are no sole source aquifers located within the Project Construction Area, the closest being the Eastern Snake River Plain Aquifer about 50 miles to the southeast. The Project Construction Area is located in the Boise Front Ground Water Management Area (see **Figure K-3** in **Appendix K.1**), which means "all or part of the groundwater basin does not have sufficient groundwater to provide a reasonably-safe supply for irrigation or other uses at the current or projected rates of withdrawal."

Based on the nearest Idaho Division of Water Resources (IDWR) groundwater monitoring well, Well #03N 02E 25CBCA1, groundwater elevation within the Project Construction Area is about 2,758 feet North American Vertical Datum of 1988 (NAVD 88). This is about 80 feet below the bottom of existing stormwater ponds in the Project Construction Area. The Project Construction Area is not located within an IDWR Designated Area of Groundwater Concern, and contamination of groundwater is not reported within the Project Construction Area.

4.3.11.2 Environmental Consequences

No Action Alternative

Under the No Action Alternative, the Airport Sponsor would not implement the runway shift and extension, taxiway construction, and relocation or replacement of NAVAIDs. There would be no development or construction and, therefore, the No Action Alternative would have **no effect** on wetlands, surface waters, or groundwater.

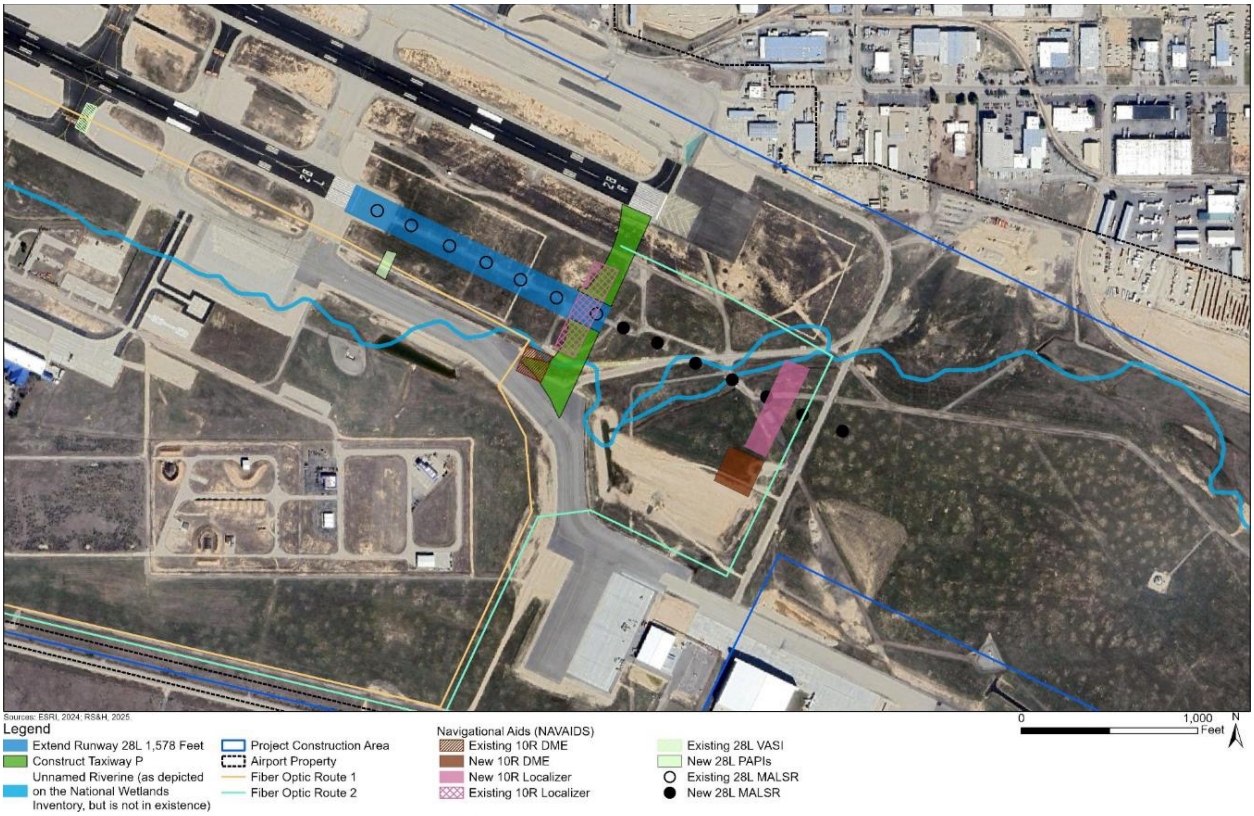
Proposed Action

Wetlands

This analysis includes data obtained from the 2019 MPU, the WHMP, and the NWI. Construction of the Proposed Action requires the relocation of Runway 10R ALSF-2 in connection with the removal of 1,341 feet of Runway 10R. The ALSF-2 is currently located on a bridge over the New York Canal and would be relocated to the southeast onto Airport property. The ALSF-2 bridge would be removed in three phases to minimize impacts and would occur when the New York Canal is dry, which is typically between November and March. See **Appendix K.1** for details on the ALSF-2 bridge removal. The Airport Sponsor consulted the ALSF-2 bridge removal plan with the Bureau of Reclamation in a letter on March 25, 2025 (see **Appendix K.2**), with details on the plan to remove the ALSF-2 bridge without disturbing the New York Canal.

Figure 4-14 shows the Proposed Action in the area of the unnamed riverine. Two project components, the Taxiway P construction and the MALSR replacement, are in the area of the unnamed riverine. However, this area has been heavily developed and disturbed, is maintained by the Airport Sponsor. Therefore, the Proposed Action would have **no effect** on water resources or wetlands.

Figure 4-14: Proposed Action Near NWI Unnamed Riverine Not in Existence



Surface Waters

The surface waters analysis considered potential changes in hydrology and water quality associated with construction and operation of the Proposed Action compared to the No Action Alternative. The analysis considered changes in impervious surfaces that affect stormwater runoff and hydrology and construction activities that have the potential to affect surface waters. Relocation of the NAVAIDs under the Proposed Action were not considered in the hydrologic analysis due to negligible changes in impervious area associated with their relocation. Additionally, removal of the ALSF-2 bridge is not considered as a change in impervious cover as the bridge deck has open mesh grating which does not impede precipitation. Federal, state, and local regulations and permitting requirements were also reviewed for applicability.

Construction of the Proposed Action could impact surface waters as removal of the ALSF-2 bridge would occur adjacent to and over the New York Canal. Removal of the bridge would occur when the New York Canal is dry and would be phased with proper temporary structural controls to prevent the construction debris from entering the canal

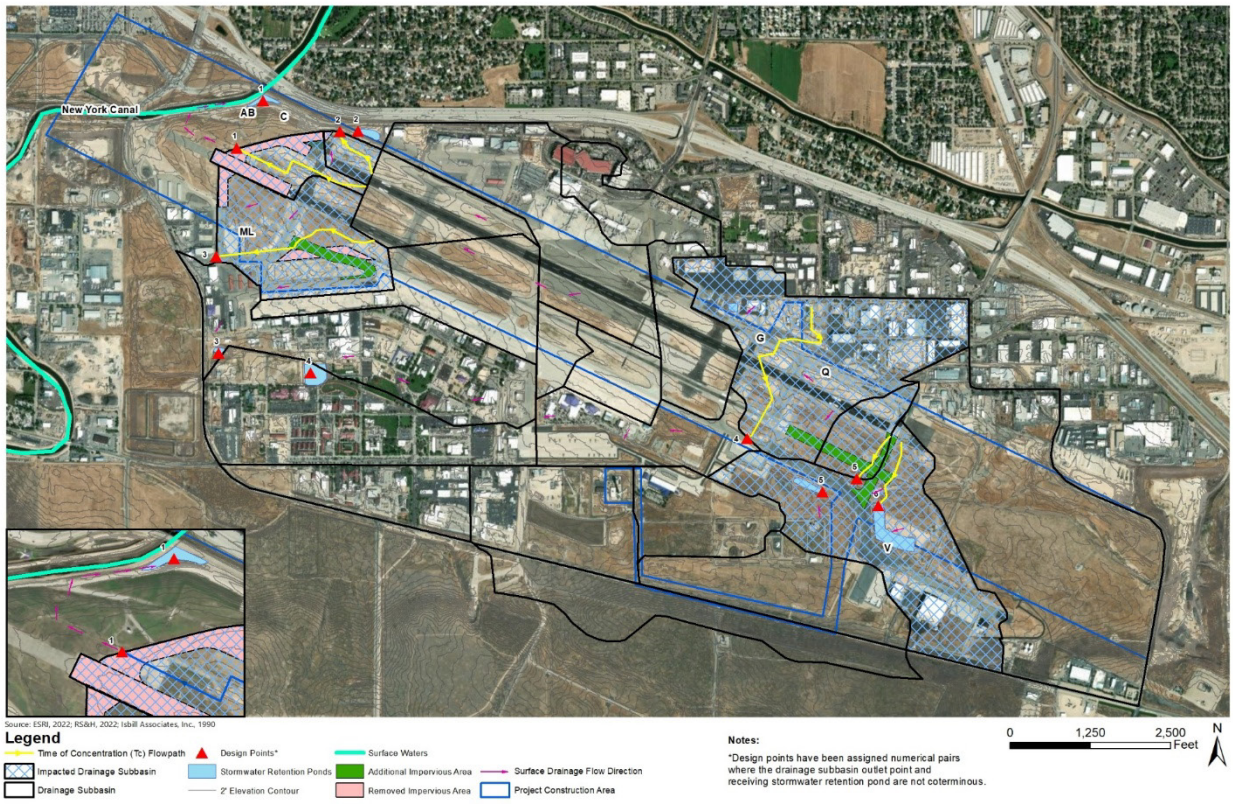
(see **Appendix K.1** for details). Additionally, the construction contractor would provide proper erosion protection and controls to prevent disturbed soil from entering the canal during construction, as discussed below.

Before construction commences, the construction contractor would be required to submit a Notice of Intent (NOI) to IPDES for discharge from construction activities, develop a site-specific construction SWPPP, and obtain a Construction General Permit (CGP) through IDEQ for projects that disturb over one acre or are part of a common plan of development that disturbs over one acre. The Airport Sponsor would be responsible for ensuring the contractor follows the construction SWPPP, which would include erosion control measures including, but not limited to, silt fence, construction waddles, and other sediment barriers. Sediment in stormwater runoff from airside portions the Project Construction Area would be retained on-site in stormwater retention ponds and therefore would not affect surface waters.

Additionally, construction of the Proposed Action has the potential to generate pollutants such as soil sedimentation in stormwater runoff. The IDEQ CGP and construction SWPPP for the Proposed Action would contain measures for handling construction-related chemicals by the construction contractor and action protocols to implement in the event of a spill or release. By securing and adhering to required permits, the Proposed Action would not cause significant impacts to surface waters by exceeding water quality standards established by federal, state, and local regulatory agencies or contaminating public drinking water supply such that public health may be adversely affected.

Implementing the Proposed Action would alter the hydrology and impervious cover in six on-Airport drainage basins, as delineated in the 1990 Stormwater Master Plan. As stated in **Section 1.2**, the Proposed Action would result in a net decrease of impervious surfaces of about one acre. Drainage basin boundaries were also assumed to be the same between existing conditions (see **Figure K-2 Appendix K.1**) and proposed conditions (**Figure 4-15**). Detailed methodology and calculations for hydrologic analysis can be found in **Appendix K.3**.

Figure 4-15: Proposed Action Hydrologic Conditions in the Project Construction Area



Although the Proposed Action would increase stormwater runoff in three of the six on-airport drainage basins, this increased runoff would not adversely impact surface waters as the existing stormwater retention ponds have the capacity to retain the runoff. Stormwater retention ponds that would receive additional stormwater runoff have been expanded by recent Airport construction projects to have adequate storage capacity to accept increased stormwater runoff from future impervious area while maintaining compliance with relevant FAA drawdown criteria (to ensure that standing water complies with FAA AC 150/5200-33C, *Hazardous Wildlife Attractants on or Near Airports*), as well as the City of Boise's specific drawdown criteria. See **Appendix K.3** for further discussion.

Stormwater runoff from the Proposed Action would also need to comply with stormwater criteria as established by IDEQ and the City of Boise Stormwater Management Design Manual. The Proposed Action is located in the Airport Operations Area (AOA), which is regulated by the Airport Sponsor's IPDES Industrial Stormwater Permit IDR053107,

which has an expiration date of February 2026.[31] [32] [33] The IPDES industrial stormwater permit regulates stormwater discharge from industrial activity, including airport transportation facilities. Stormwater runoff generated on Airport property is retained on-site. The Airport Sponsor would be responsible for complying with or amending its existing IPDES Industrial Stormwater Permit for airside areas. This IPDES permit would include the establishment of non-structural controls to limit pollutant discharges to the receiving stormwater retention ponds and minimize the potential water quality effects from operation of the Proposed Action.

Implementing the Proposed Action would not affect water quality in a manner that adversely affects the quality of the public drinking water supply. In addition, the Proposed Action would not increase the use of public water supplies in a manner that adversely affects the overall supply of public water. Stormwater runoff from the Project Construction Area remains on Airport property and is infiltrated or evaporated and would not adversely affect water quality in surface waters.[34] Therefore, the Proposed Action would have **no significant effect** on surface waters.

Groundwater

Assessments of potential groundwater effects were based on location, primary planning results, and the intended function of the Proposed Action. Impacts from the Proposed Action were based on evaluations with respect to groundwater recharge as well as any changes in operational activities for potable water consumption and domestic water treatment. Groundwater at the project construction site is about 80 feet below ground surface. The Proposed Action would not affect groundwater due to the low groundwater table within the Project Construction Area.

The Proposed Action would not involve construction or excavation activities with the potential to affect groundwater due to the low groundwater table within the Project Construction Area. No groundwater withdrawals, construction of new groundwater wells, or modification of groundwater wells are proposed. Construction impacts to groundwater sources would be minimized through adherence to the IDEQ CGP and construction SWPPP by the contractor, which contain measures for proper use, storage, and handling

[31] USEPA. (2022). Enforcement and Compliance History Online (ECHO). Accessed September 2022, from USEPA: https://echo.epa.gov/detailed-facility-report?fid=110000833233.
[32] City of Boise. (2020). City of Boise Stormwater Management Plan.
[33] HDR Engineering, Inc. (2021, May). 2021 Stormwater Pollution Prevention Plan.
[34] Ricondo. (2019, December). Boise Airport Master Plan Update.

of construction-related chemicals and action protocols to implement in the event of a spill or release.

Once constructed, the Proposed Action would not significantly affect groundwater recharge rate as there would be a net reduction of about one acre of impervious surface. Pavement anti-icing occurs on runway and taxiway pavements at the Airport. However, due to the net reduction of impervious surface as a result of the Proposed Action, less anti-icing chemicals would be applied at the Airport. Therefore, implementation of the Proposed Action is not expected to result in direct or indirect adverse impacts to groundwater quality and would have **no effect** on groundwater.

4.3.11.3 Mitigation Measures

All work would be conducted in compliance with applicable regulations. No additional mitigation measures are required or proposed.

5 Agency Coordination and Public Outreach

The Airport Sponsor has provided agencies and the public opportunities to comment on potential effects of the construction and operation of the Proposed Action. See **Appendix L** for more details on the agency coordination and public outreach efforts.

6 References

The list of references that were used to prepare this EA can be viewed in **Appendix M**.

7 List of Preparers

Preparers of this EA included staff from the FAA, the Airport Sponsor, and the RS&H Team. See **Appendix N** for the full list of preparers.