DRAFT

Environmental Assessment for Improving Runway 11-29 to D-IV Standards and Constructing Northside General Aviation Area Improvements

at

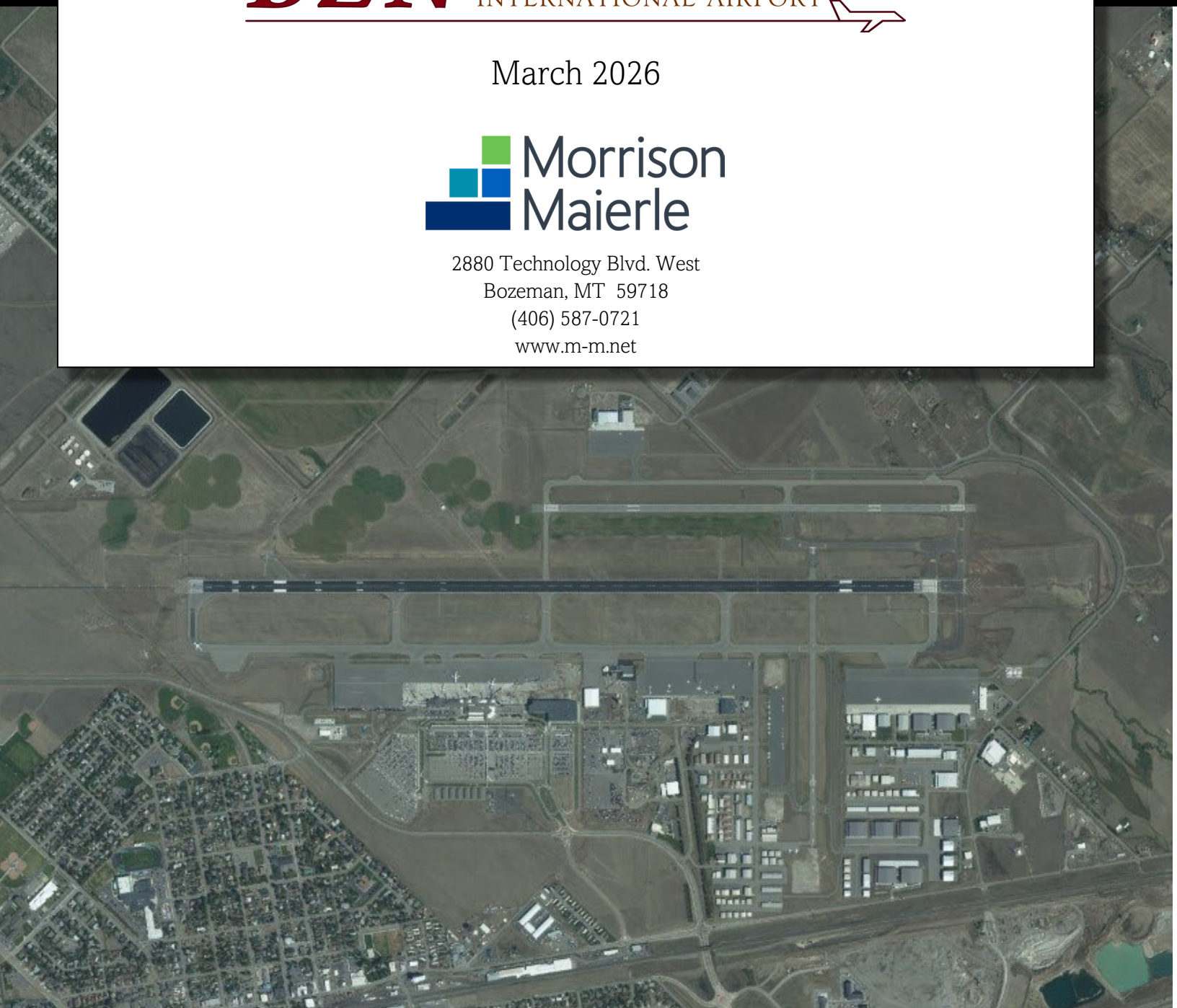
Bozeman Yellowstone International Airport
Belgrade, Montana

BZN Bozeman Yellowstone INTERNATIONAL AIRPORT

March 2026

Morrison Maierle

2880 Technology Blvd. West
Bozeman, MT 59718
(406) 587-0721
www.m-m.net



Draft Environmental Assessment

for

Improving Runway 11-29 to D-IV Standards and Constructing Northside General Aviation Area Improvements
at

Bozeman Yellowstone International Airport
Belgrade, Montana

March 2026

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

Responsible FAA Official

Date

Table of Contents

Table of Figures

Table of Tables

Appendices

Chapter 1 – Background and Proposed Action

1.1 Introduction

The Bozeman Yellowstone International Airport (the Airport or BZN) is located in Gallatin County in southwest Montana (**Figure 1-1**). The Gallatin Airport Authority (Sponsor) is a public authority created, established, and empowered by the Gallatin County Commission with complete authority over the Airport. The Sponsor is proposing to improve Runway 11-29 by lengthening and widening the runway to accommodate larger aircraft and to construct improvements north of Runway 11-29 in the Northside General Aviation Development Area to accommodate the construction of hangars to meet user demand.

These improvements require modification to the Airport Layout Plan (ALP). In addition, the Sponsor will seek federal funding assistance. Both actions, approval of the ALP and federal funding, are considered federal actions. Pursuant to the National Environmental Policy Act (NEPA), the approving federal agency must disclose potential environmental consequences of the action(s) before a federal action can be undertaken. The Federal Aviation Administration (FAA) is the responsible federal agency for these proposed actions.

This Environmental Assessment (EA) has been prepared in accordance with US DOT Order 5610.1D *DOT's Procedures for Considering Environmental Impacts*, FAA Order 1050.1G *Environmental Impacts: Policies and Procedures,* FAA Order 5050.4B *National Environmental Policy Act (NEPA) Implementing Instructions for Airport Actions* and other FAA guidance.

1.2 Airport Location

The Airport is in the Gallatin Valley of southwest Montana. BZN serves as a commercial service airport and year-around gateway for two Yellowstone National Park entrances. It also provides access to the recreation areas of Big Sky Resort and the Bridger Bowl Ski Area as well as the business centers of Bozeman, Big Sky, Manhattan, Three Forks, and Livingston and higher education at Montana State University. Access to BZN is via Interstate 90 and State Highway 205, which runs east and west through the city of Belgrade, Montana.

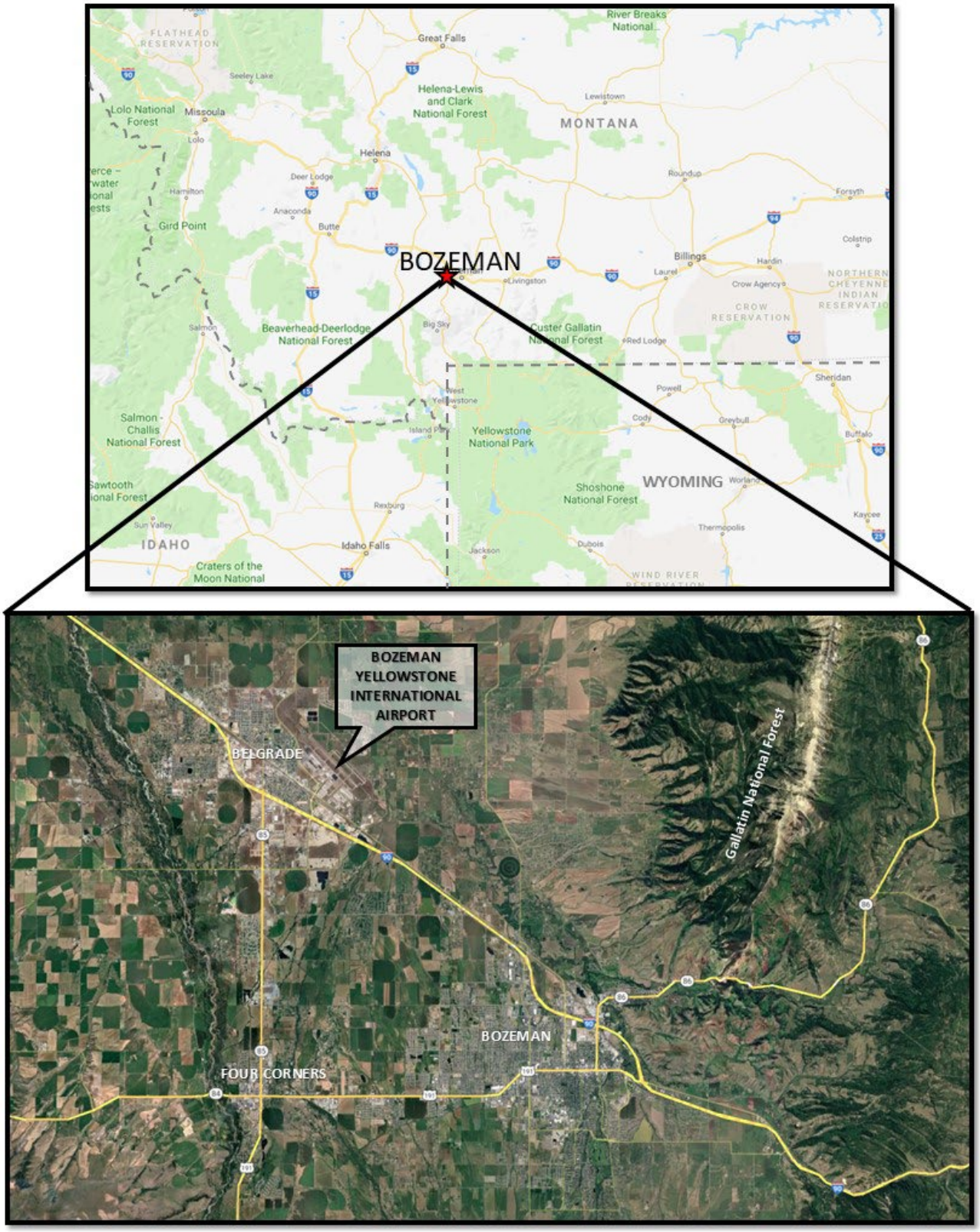


Figure 1-1. Location Map

1.3 Background and Existing Facilities

BZN ranks as the seventh busiest passenger airport in the seven-state FAA Northwest Mountain Region (MT, WA, OR, ID, WY, UT and CO) and is the busiest airport in Montana with approximately 2.4 million passengers using BZN every year. BZN is served by nine airlines (several are seasonal), two cargo carriers, and seven aircraft and helicopter charter services as well as five flight schools.

BZN has four active runways: Runway 12-30 (primary runway) functions as the commercial service runway, is also used by the General Aviation (GA) fleet, and is built to accommodate up to category D-IV aircraft (an explanation of these categories is in the following paragraphs). Runways 11-29 (secondary runway), Runway 3-21 (crosswind runway), and turf Runway 11G-29G (turf runway) serve general aviation (GA) aircraft exclusively. Runway 11-29 is built to accommodate category B-II (small) aircraft, Runway 3-21 is built to accommodate category B-I (small) aircraft, and Runway 11G-29G is built to accommodate category B-I (small) aircraft.

The categories of aircraft described above correspond to each runway's Runway Design Code (RDC), which is a code defining the design standards that apply to an existing or planned runway based on the critical aircraft. Letter designations (A-D) refer to an aircraft's approach speed, while the roman numeral designation (I-VI) refer to an aircraft's tail height and wingspan. 'Small' aircraft are those with a maximum certified takeoff weight of 12,500 pounds or less. Per FAA Advisory Circular (AC) 150/5300-13B, the width of a runway is determined by its RDC, and the length is a recommendation provided by FAA guidance for the category of aircraft that regularly uses or will use the runway in the future.

Figure 1-2 below shows representative aircraft for each category and **Table 1-1** below shows existing and future categories for each runway at BZN.

Figure 1-2: Aircraft Categories

Table 1-1. Facility Classifications

	Existing Classification	Ultimate Classification
Runway 12-30	D-IV	D-IV
Runway 11-29	B-II (Small)	D-IV
Runway 3-21	B-I (Small)	B-II (Small)
NW/SE Turf Runway	B-I (Small)	B-I (Small)/Removal
Taxiways	TDG 5	TDG 5

A parallel taxiway system serves Runway 12-30 and Runway 11-29. In addition, several taxilanes provide access routes to the hangar and general aviation areas located south and north of the runways.

BZN is served by a Very High Frequency Omnidirectional Range Station (VOR) short-range radio navigation system collocated with Distance Measuring Equipment (VOR/DME). Bozeman's VOR/DME is one of the only "High Altitude" VORs in the region, making it a vital navigation aid to aircraft using BZN and to those navigating a route to elsewhere in the region. The VOR/DME is located west of Runway 11-29 and north of Runway 12-30 at approximately mid-field.

BZN is also served by an Airport Traffic Control Beacon Interrogator (ATCBI-6) "Beacon-Only" radar facility located north of Runway 12-30. It provides surveillance support to the Boise Terminal Radar Approach Control Facilities (TRACON) and Salt Lake City Air Route Traffic Control Center (ARTCC). As the ATCBI-6 at BZN is not visual radar, the system can only see aircraft operating with radio transponders. The Airport Traffic Control Tower (ATCT) operated at BZN uses the ATCBI-6 for situational awareness, but it is not considered to be a radar environment. As such, the radar is not considered to increase the number of aircraft that BZN can safely accommodate.

Figure 1-3 provides a graphic presentation of the existing airport facilities.

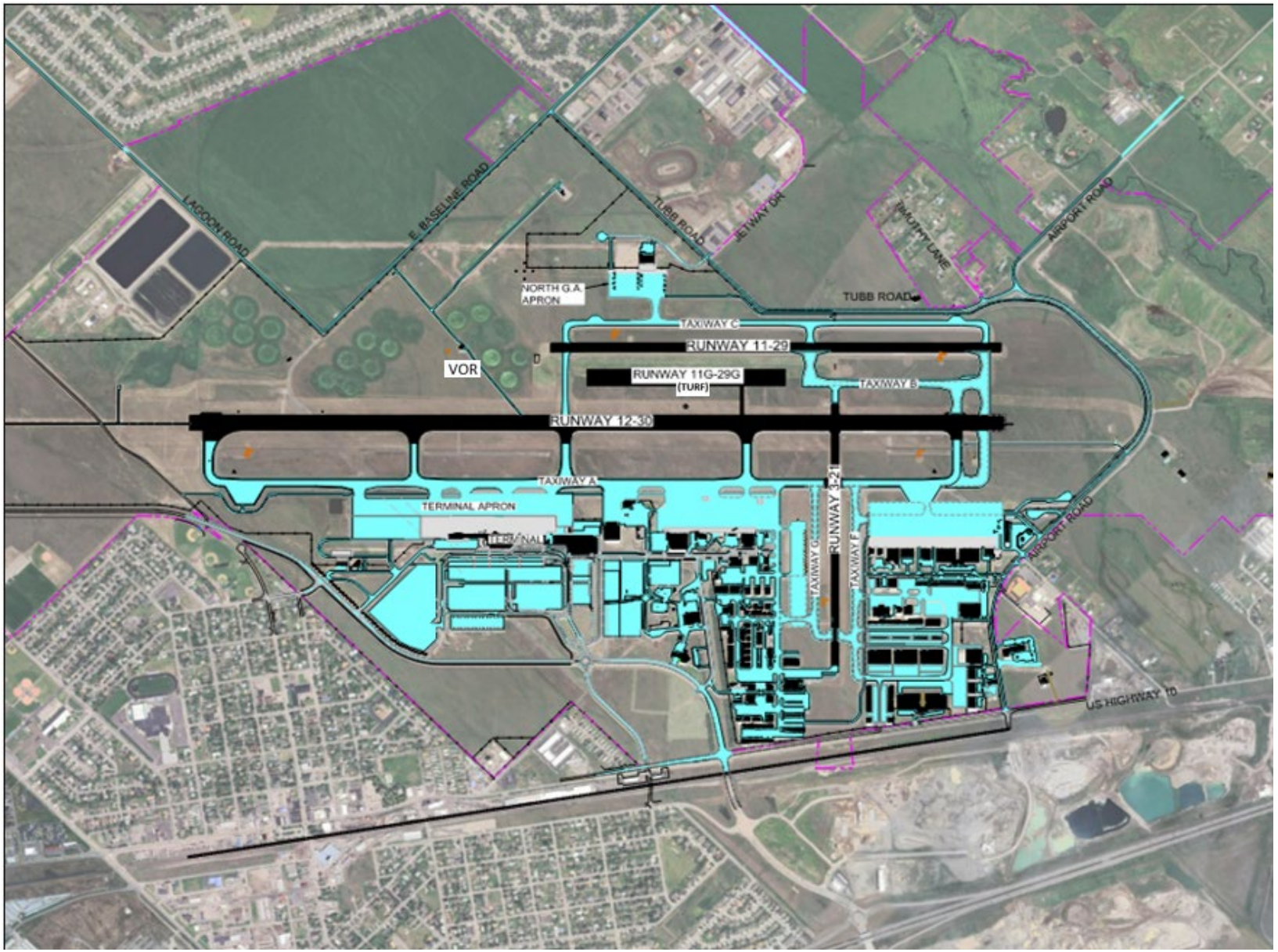


Figure 1-3. Existing Airport Layout

1.4 2020 Airport Master Plan Recommendations

The FAA recommends primary airports the size of BZN complete an Airport Master Plan (AMP) Study every 5-7 years. The 2020 AMP (BZN Airport Master Plan – **Appendix A**), completed in 2023 identified a number of projects that would be needed to accommodate future demand for airfield operations and hangars throughout the planning period (through 2039). The 2020 AMP explored options to increase runway operational capacity and provide hangar areas for a rapidly growing general aviation community based at the airport.

Annual Service Volume (ASV) is used to measure the operational capacity of an airport and was used in the 2020 AMP to estimate the number of aircraft operations BZN's runway system can safely accommodate in a year. In general, a high ASV indicates that the airport can safely accommodate a high number of aircraft in its current configuration. However, when an airport experiences operations that exceed ASV; and especially when combined with high peak hour demands, it is an indication that air traffic is congested at times in the airport environment, and beyond FAA recommended concentrations. A congested environment can result in reduced level of service, reduced aircraft separation, increased delays, and a greater potential for safety issues. The FAA recommends planning for capacity improvement projects when operations reach 60%-75% of ASV.

In 2019, operations at BZN were at 86% of ASV. And the 2020 AMP forecasts predicted that airport operations would continue to grow at a high rate and would therefore require capacity improvements at the Airport. These predictions are reflected in observed operations that showed 113% of ASV as of August 2024. Operations in 2019 led the 2020 AMP to examine contributing factors that impact ASV and explore options to raise ASV at BZN. The 2020 AMP concluded fleet mix, terrain, and runway end usage at BZN contribute to the lower ASV at the airport.

BZN is regularly used by both high speed and low speed aircraft. The current radar beacon at BZN can only "see" aircraft operating with radio transponders, and therefore, is not considered to be a radar environment. Because of this mixed use of high and low speed aircraft, the air traffic control tower personnel are forced to hold arriving and departing traffic to maintain proper separation of aircraft. This mix of aircraft in a non-radar environment is one contribution to a lower ASV.

Terrain also plays a key role in lowering ASV at the Airport. BZN is surrounded by mountainous terrain: the Bridger Mountains, Crazy Mountains, and Bangtail Range to the east/northeast, the Castle and Little Belt Mountains to the north, and the Spanish Peaks and Gallatin Ranges to the south. These mountain ranges limit approach directions into the Bozeman area. Terrain to the west of the airport is flatter and the slope of the runway rises slightly from the Runway 12 end to the Runway 30 end. These factors contribute to a situation in which air traffic prefers to approach BZN over lower terrain to land on the uphill slope of Runway 12 (landing toward the east) creating an environment where the Runway 12 end is used for both takeoffs and landings approximately 80 percent of the time. It is not feasible to remove the terrain to the east to increase the use of the Runway 30 end. This preference for using the Runway 12 end for both approach and departure due to terrain also contributes to the lower ASV at BZN.

The 2020 AMP presented general strategies that can be used to raise ASV and also apply to the situation at Bozeman. These strategies include constructing new runways, improving existing runways to standards in which a greater range of aircraft can operate, installing or upgrading the radar, or reducing challenges to approaches and departures to allow increased usage of runway

ends. The 2020 AMP found that upgrading Runway 11-29 to match the capabilities of Runway 12-30 is the most effective and feasible option to raise the ASV at BZN.

Along with the growth in operations contributing to congestion, the 2020 AMP concluded that 189 new based aircraft would locate at BZN during the 20-year planning period. The existing general aviation area to the south of Runway 12-30 is built out with no room for new hangars. The 2020 AMP presented the Northside General Aviation Development area as the solution, as the area would provide hangar expansion for general aviation aircraft owners in the short and medium planning horizons.

1.4.1 Runway 11-29 Length and Width Conclusions

The critical aircraft at BZN is the Boeing 757-200. The 757-200 meets the FAA defined criteria for Runway Design Code (RDC) D-IV. The 2020 AMP concluded that to raise the ASV at BZN Runway 11-29 should be lengthened to 7,480 feet and widened to 150 feet to match the capabilities of Runway 12-30, which is built to D-IV standards.

However, the length of Runway 11-29 is currently limited by Airport Road to the east and the VOR (VHF Omnidirectional Range Station) to the west. The VOR is in the footprint of the area shown on the ALP for the extension of Runway 11-29 but can be relocated. **Figure 1-4. VOR Relocation** illustrates the existing location and proposed relocation site from the 2020 AMP versus the Future Layout of the Airport.

Ideally, Runway 11-29 would ultimately be extended to a length of 10,500 feet, matching the ultimate proposed length of Runway 12-30. This is impractical given the location of municipal sewage lagoons to the northwest.

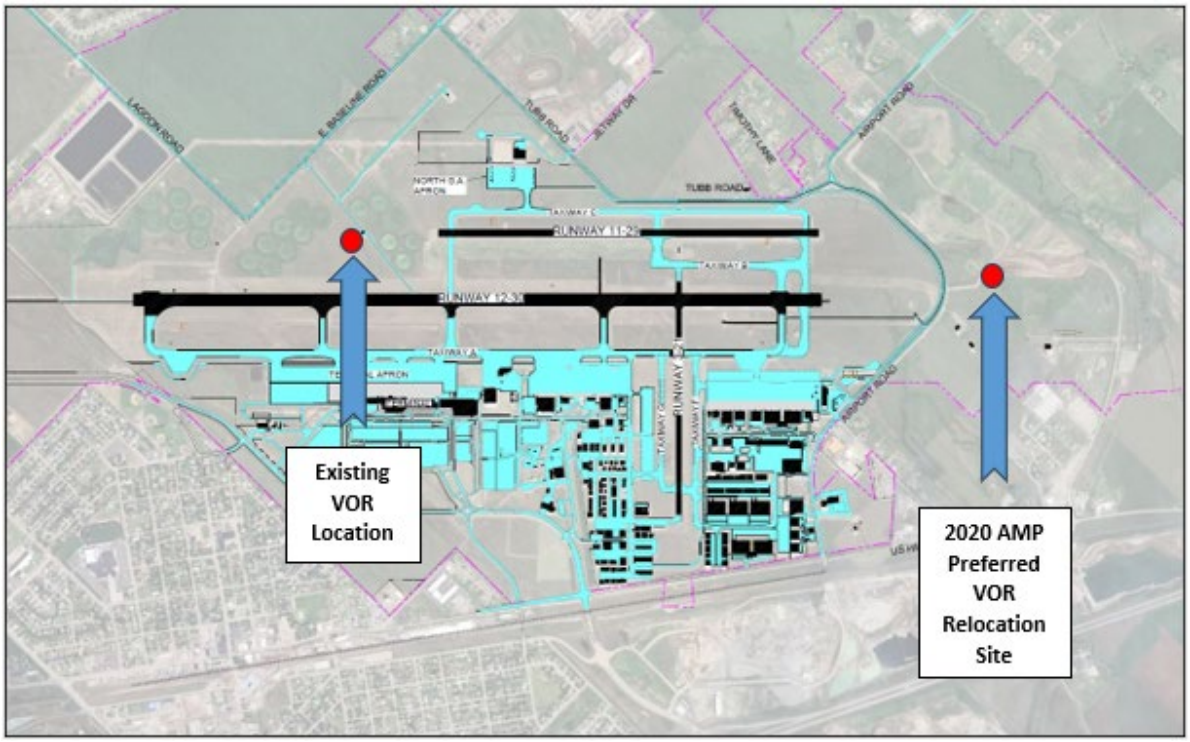


Figure 1-4. VOR Relocation

Preliminary analysis within the 2020 AMP indicates that an extension of Runway 11-29 to 7,480 feet is possible while maintaining the Runway Protection Zones (RPZ) clear of incompatible uses. As shown on **Table 1-2**, this length would be adequate for landings by the critical aircraft at BZN. This offers a viable opportunity to utilize Runway 11-29 as an arrival runway with Runway 12-30 utilized as a departure runway. The Proposed Action, as described in **Section 1.5**, was developed and refined in the 2020 AMP. The Proposed Action will safely and efficiently accommodate the annual volume of air traffic currently using and forecast to use BZN within the 20-year planning horizon.

Table 1-2. Recommended Runway Lengths

	A 319	A 320	A 321	737-800	737-900	757-200
Maximum Landing Design Weight (MLW)	134,482	142,198	164,244	146,300	146,300	220,000
Landing Length						
- Wet Conditions	6,210	6,300	7,475	7,700	8,000	6,300
- Dry conditions	5,400	5,900	6,500	6,800	7,000	5,500
Maximum Takeoff Design Weight (MTOW)	166,449	169,756	182,984	174,200	174,200	240,000
Takeoff Weight for length of haul @ 1500 NM	142,000	153,000	165,000	147,000	160,000	211,000
Takeoff Length for length of haul @ 1500 NM	6,500	6,700	7,500	8,500	9,700	8,200
Takeoff Length Adjusted for length of haul @ 1500 NM	6,900	7,100	7,900	8,900	10,100	8,600
Takeoff Weight for length of haul @ 2000 NM	154,000	164,000	177,000	154,000	166,000	221,000
Takeoff Length for length of haul @ 2000 NM	9,000	8,200	10,000	9,900	11,500	9,500
Takeoff Length Adjusted for length of haul @ 2000 NM	9,400	8,600	10,400	10,300	11,900	9,900
Haul Length w. 9,000 ft Runway	1,900	2,500	1,800	1,600	800	1,700
Haul Length w. 10,500 ft Runway	2,700	2,700	2,100	2,100	1,700	2,200

Notes:
Assumes maximum passengers & baggage @200 lb. ea.
Assumes temperature of 83° F.
A319 Wet Conditions calculated by adding 15% to dry conditions.
Manufacturers' data is for planning purposes and recommends consultation with local commercial air carriers to determine actual aircraft operating weights and conditions prior to construction of a runway extension.

Source: 2020 AMP

1.4.2 Northside General Aviation Development Layout

The 2020 AMP identified the area north of Runway 11-29 as the most compatible area for new hangars to be built. The layout for the area was decided on to ensure flexibility to provide space for multiple users of large and small general aviation aircraft.

1.4.3 Decision to Prepare an Environmental Assessment

Following the completion of the 2020 MP, the Sponsor submitted an ALP to the FAA. The ALP depicted potential future development to the north of Runway 11-29 and a Runway 11-29 extension, among other proposed projects concerning future land use at BZN. The FAA conditionally approved the ALP in January 2023. The condition requires the Airport Authority to obtain FAA environmental approval for the proposed projects depicted on the ALP over which the FAA has regulatory authority. The next step toward implementing development projects depicted on the ALP that require environmental review and included on the airport's short to medium term Capital Improvement Plan (CIP) is to conduct an environmental review as required by NEPA.

1.5 Proposed Action

The primary elements of the Proposed Action evaluated in this EA are:

- Improve Runway 11-29 to meet D-IV standards (widen and extend)
- Construct Northside General Aviation Development
- Several ancillary projects are needed to ensure safe operations associated with the improvements to Runway 11-29 and the Northside General Aviation Development.

An overall layout of the Proposed Action is provided in **Figure 1-5.** Details and Ancillary improvements associated with Runway 11-29 Improvements are included in **Figure 1-6**.

Details and Ancillary improvements associated with Runway 11-29 Improvements include:

- Widen Runway 11-29 from 75 feet to 150 feet
- Lengthen Runway 11-29 from 5,050 feet long to 7,480 feet long
- Relocate the VOR needs to an area east of the Runway 11-29 end (to an abandoned gravel pit that will require filling/grading) to allow for the extension of Runway 11-29
- Relocate the Precision Approach Path Indicators (PAPI) for Runway 11 to facilitate the extension of Runway 11-29
- Extend Medium Intensity Runway Lighting (MIRL) to accommodate extension of Runway 11-29
- Close turf Runway 11G-29G
- Relocate effluent irrigation due to its proximity to the footprint of the extended Runway 11-29 environment
- Construct Taxiway and C, taxiway connectors, and General Aviation Area hangar access taxilanes
- Install/extend associated Medium Intensity Taxiway Lighting (MITL)
- Abandon portions of Airport Road, Tubb Road, East Baseline Road, and Lagoon Road on airport property abandoned to accommodate safety areas related to the runway extension
- Construct the proposed Tarmac Trail (including any associated improvements to State Highway 205)
- Modify flight procedures to accommodate commercial and general aviation aircraft flying during Instrument Flight Rules conditions (bad weather)
- Request a sidestep instrument procedure from Runway 12-30s Instrument Localizer System to Runway 11-29 to allow approaches during inclement weather
- Relocate and expand security fence to ensure the secure airside is separated from nonsecure landside endeavors
- Improve drainage to protect infrastructure and airport assets from the damaging effects of standing water

Details and Ancillary improvements associated with construction of the Northside General Aviation Area include:

- Construct apron(s), taxilanes, hangars and supporting infrastructure (vehicle access roads, utilities (water, sewer, power, power/natural gas/fiber/phone), etc.) north of Runway 11-29 to connect hangar users to the airfield and their respective hangars
- Abandon portions of Tubb Road, East Baseline Road, and Lagoon Road on airport property to make room for and access hangar expansion development

- Construct the proposed Tarmac Trail (including any associated improvements to State Highway 205)
- Improve drainage to protect infrastructure and airport assets from the damaging effects of standing water

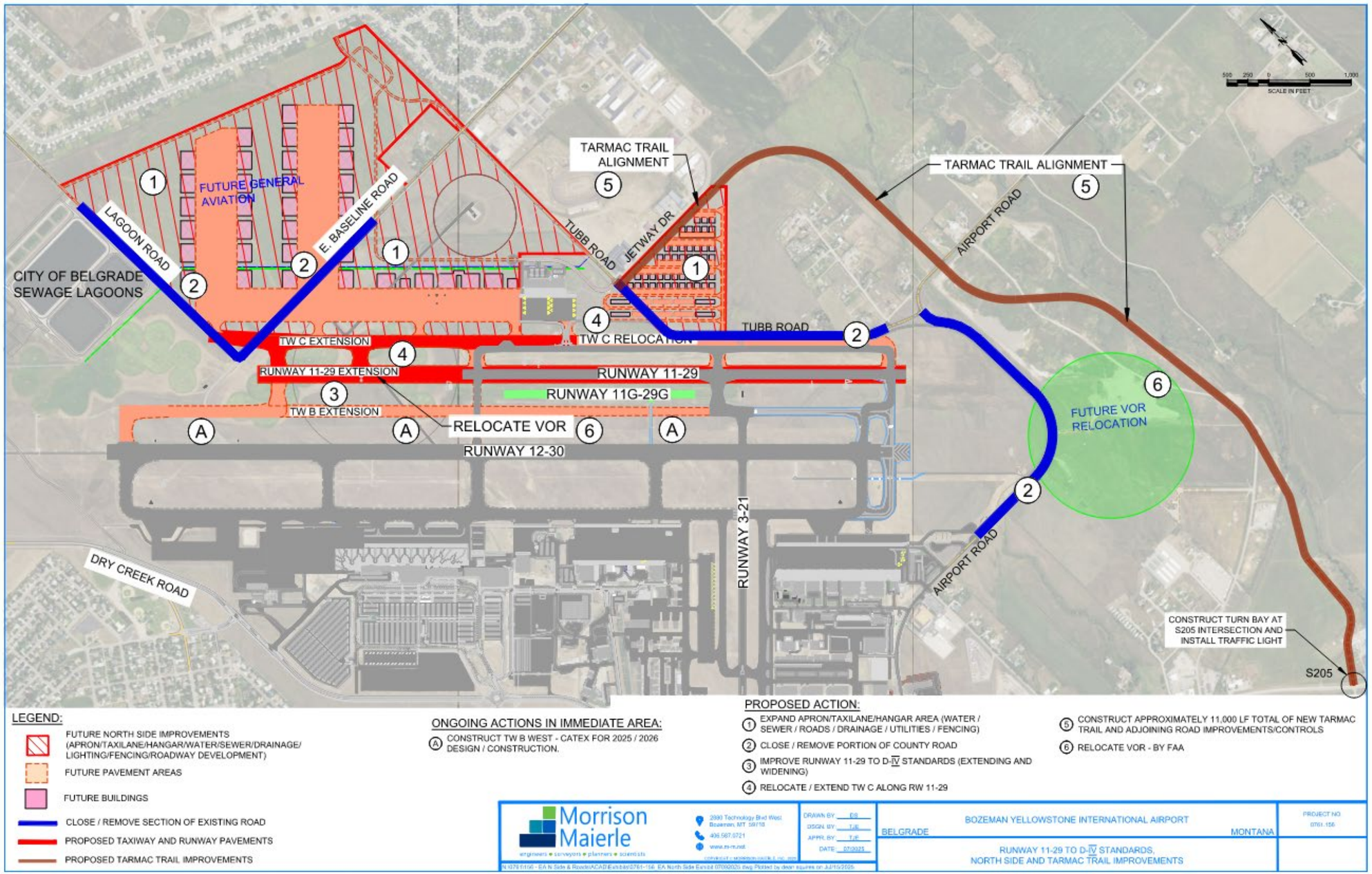
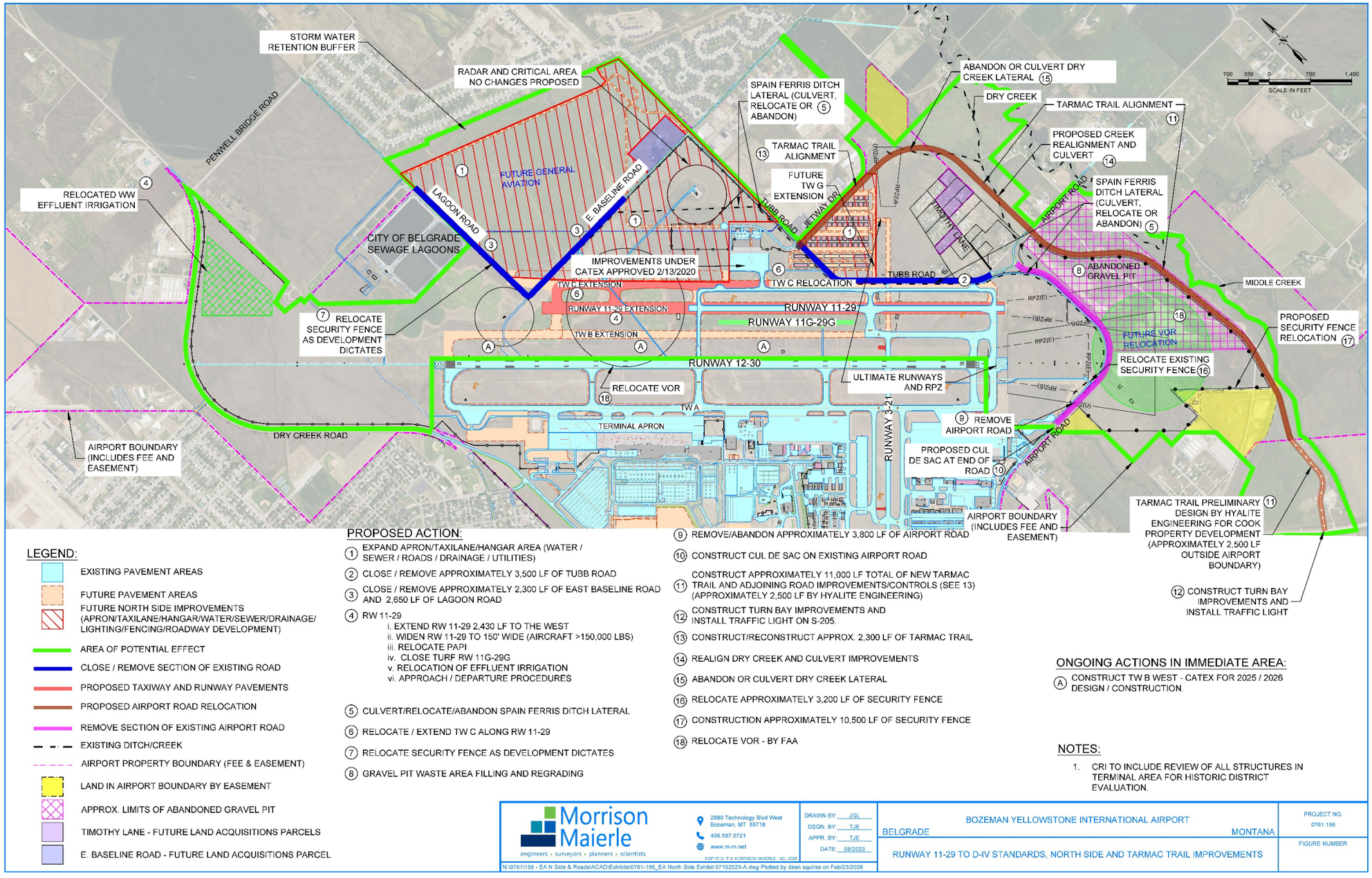


Figure 1-5. Proposed Action



LEGEND:

- EXISTING PAVEMENT AREAS
- FUTURE PAVEMENT AREAS
- FUTURE NORTH SIDE IMPROVEMENTS (APRON/TAXILANE/HANGAR/WATER/SEWER/DRAINAGE/ LIGHTING/FENCING/ROADWAY DEVELOPMENT)
- AREA OF POTENTIAL EFFECT
- CLOSE / REMOVE SECTION OF EXISTING ROAD
- PROPOSED TAXIWAY AND RUNWAY PAVEMENTS
- PROPOSED AIRPORT ROAD RELOCATION
- REMOVE SECTION OF EXISTING AIRPORT ROAD
- EXISTING DITCH/CREEK
- AIRPORT PROPERTY BOUNDARY (FEE & EASEMENT)
- LAND IN AIRPORT BOUNDARY BY EASEMENT
- APPROX. LIMITS OF ABANDONED GRAVEL PIT
- TIMOTHY LANE - FUTURE LAND ACQUISITIONS PARCELS
- E. BASELINE ROAD - FUTURE LAND ACQUISITIONS PARCEL

PROPOSED ACTION:

1. EXPAND APRON/TAXILANE/HANGAR AREA (WATER / SEWER / ROADS / DRAINAGE / UTILITIES)
2. CLOSE / REMOVE APPROXIMATELY 3,500 LF OF TUBB ROAD
3. CLOSE / REMOVE APPROXIMATELY 2,300 LF OF EAST BASELINE ROAD AND 2,650 LF OF LAGOON ROAD
4. RW 11-29
   - i. EXTEND RW 11-29 2,430 LF TO THE WEST
   - ii. WIDEN RW 11-29 TO 150' WIDE (AIRCRAFT >150,000 LBS)
   - iii. RELOCATE PAPI
   - iv. CLOSE TURF RW 11G-29G
   - v. RELOCATION OF EFFLUENT IRRIGATION
   - vi. APPROACH / DEPARTURE PROCEDURES
5. CULVERT/RELOCATE/ABANDON SPAIN FERRIS DITCH LATERAL
6. RELOCATE / EXTEND TW C ALONG RW 11-29
7. RELOCATE SECURITY FENCE AS DEVELOPMENT DICTATES
8. GRAVEL PIT WASTE AREA FILLING AND REGRADING
9. REMOVE/ABANDON APPROXIMATELY 3,800 LF OF AIRPORT ROAD
10. CONSTRUCT CUL DE SAC ON EXISTING AIRPORT ROAD
11. CONSTRUCT APPROXIMATELY 11,000 LF TOTAL OF NEW TARMAC TRAIL AND ADJOINING ROAD IMPROVEMENTS/CONTROLS (SEE 13) (APPROXIMATELY 2,500 LF BY HYALITE ENGINEERING)
12. CONSTRUCT TURN BAY IMPROVEMENTS AND INSTALL TRAFFIC LIGHT ON S-205.
13. CONSTRUCT/RECONSTRUCT APPROX. 2,300 LF OF TARMAC TRAIL
14. REALIGN DRY CREEK AND CULVERT IMPROVEMENTS
15. ABANDON OR CULVERT DRY CREEK LATERAL
16. RELOCATE APPROXIMATELY 3,200 LF OF SECURITY FENCE
17. CONSTRUCTION APPROXIMATELY 10,500 LF OF SECURITY FENCE
18. RELOCATE VOR - BY FAA

ONGOING ACTIONS IN IMMEDIATE AREA:

A. CONSTRUCT TW B WEST - CATEX FOR 2025 / 2026 DESIGN / CONSTRUCTION.

NOTES:

1. CRI TO INCLUDE REVIEW OF ALL STRUCTURES IN TERMINAL AREA FOR HISTORIC DISTRICT EVALUATION.

Morrison Maierle
engineers • surveyors • planners • scientists
2880 Technology Blvd West
Bozeman, MT 59718
406.587.0721
www.m-m.net
COPYR © T.E.M MORRISON MAIERLE INC. 2020

DRAWN BY: JGL
DSGN. BY: TJE
APPR. BY: TJE
DATE: 08/2023

N:\0761\156 - EA N Side & Roads\ACAD\Exhibits\0761-156_EA North Side Exhibit 07152025-A.dwg Plotted by dean squires on Feb/23/2026

BOZEMAN YELLOWSTONE INTERNATIONAL AIRPORT
BELGRADE MONTANA

RUNWAY 11-29 TO D-IV STANDARDS, NORTH SIDE AND TARMAC TRAIL IMPROVEMENTS

PROJECT NO. 0761.156

FIGURE NUMBER

Figure 1-6. Proposed Action Details and Ancillary Improvements

Chapter 2 – PURPOSE AND NEED

This chapter identifies the purpose of and need for the Proposed Federal Actions. It presents the problem(s) to be solved (need) and describes what the Airport Authority as the Sponsor and the FAA are trying to achieve by implementing the Proposed Action (purpose).

2.1 Purpose of the Proposed Action

The purpose of the Proposed Action is to increase safety and level of service at BZN by increasing the Annual Service Volume (ASV) through improvements to Runway 11-29 to accommodate a D-IV Runway Design Code (RDC) and providing additional areas suitable for hangars to meet airport user demand.

2.2 Need for the Proposed Action

Runway 11-29 needs to be improved to higher standards to allow for its use by a greater range of aircraft to increase the ASV at BZN. To accomplish this, Runway 11-29 needs to be widened and extended, which also requires associated improvements.

With current hangar areas built out on the south side of the Airport, there is no longer room in established areas of the Airport to build new hangars. The expansion of the Northside Hangar Area will expand aircraft facilities for hangar, apron, taxilane, and taxiway infrastructure that will meet demand for more hangars at the airport.

2.2.1 Need to Improve Runway 11-29 to D-IV Standards

An extension and widening of Runway 11-29 to meet RDC D-IV width and safety area standards following guidance set forth in FAA Advisory Circular (AC) 150-5300-13B, *Airport Design,* and runway length recommendations set forth in FAA AC 150-5325-4B*, Runway Length Requirements for Airport Design* are needed to increase Annual Service Volume (ASV) at BZN.

Exceeding ASV and experiencing high peak hour demands reflect that air traffic is at times congested in the airport environment and beyond FAA recommended concentrations. A congested environment can result in reduced level of service, reduced aircraft separation, increased delays, and greater potential for safety issues. The FAA recommends planning for capacity improvement projects when operations reach 60%-75% of ASV. In 2019 operations at BZN were at 86% of ASV. As of August 2024, BZN is at 113% of ASV.

Based on the operations forecasts from the 2020 AMP, it is expected that within the planning horizon the airport is likely to provide service for over 140,000 operations per year. The Proposed Action would increase the Airport's ASV, thereby reducing congestion on the primary runway and the airspace surrounding the airport.

Associated improvements required to complete the improvements to Runway 11-29 can be found in Section 1.5 **Proposed Action**.

2.2.2 Need to Construct Northside General Aviation Area Improvements

Demand forecasts prepared in Chapter 2 of the 2020 AMP concluded that 189 new based aircraft would locate at BZN during the 20-year planning period. The airport currently has a hangar waiting list consisting of 64 (as of November 2024) aircraft owners and the southside general aviation area has no space for more hangars.

Associated projects required to complete the Northside General Aviation Area can be found in Section 1.5 **Proposed Action**.

2.3 Federal Actions

The Gallatin Airport Authority is requesting the following federal actions from the FAA:

1. Unconditional approval of the Airport Layout Plan (ALP) to depict those portions of the Proposed Action subject to FAA review and approval pursuant to 49 USC 47107(a)(16)(B).

2. Federal funding for the proposed actions under the Airport Improvement Program (AIP);

3. Determination that Environmental Analysis Prerequisites associated with any future Airport Improvement Program (AIP) funding applications associated with the Proposed Action have been fulfilled pursuant to 49 U.S.C. § 47101.

4. Amendments to existing instrument approach and departure procedures at the Airport.

5. Approval of construction, installation, and relocation of FAA-owned navigational and visual aids, including but not limited to the VOR, approach lighting systems, taxiway edge lighting, signage, and all associated utility lines.

Chapter 3 – ALTERNATIVES

Alternatives were derived from the 2020 AMP which identified proposed improvements to Runway 11-29 to raise the ASV at the airport and the construction of the Northside General Aviation Area to meet hangar demand. Only those alternatives determined to be reasonable relative to their ability to fulfill the purpose and need for the proposed action warrant detailed analysis.

Alternatives were screened using a two-step screening process:

- Step 1 screening considered the ability of the alternative to meet the stated Purpose and Need in Chapter 2.

- Step 2 screening evaluated whether each alternative was technically feasible and reasonable in terms of comparative safety, policy, environmental, social, or economic consequences.

Alternatives that passed both steps of the screening process were forwarded for further consideration in this EA.

3.1 Alternatives Evaluation Process

3.1.1 Alternatives Eliminated from Further Analysis

Strategies that were eliminated because they did not pass both steps of the screening process are described below.

- Building a new commercial airport in the area

This potential alternative could meet the purpose and need by providing an alternative for air traffic that would normally fly into BZN thereby reducing operations at the airport and would also provide more hangar space. However, building a new airport in the area is not a feasible option due the costs involved as well as the fact that there is no sponsor interested in constructing and operating a new commercial airport in the area.

- Restricting operations at the airport

BZN is a public use airport that receives funding from the FAA and as a result is not authorized to restrict operations. This means the airport cannot direct users not to use the airport or restrict use during peak times.

- Constructing new runways

This potential alternative is not feasible as BZN is surrounded by development and does not have the necessary space on airport property to build a new runway with the needed separation distance from the other two runways that could contribute to an increase in ASV.

- Upgrading the radar

Upgrading the radar at BZN does not meet the purpose and need as described in Chapter 2. While an upgraded radar will increase the ASV at the airport, it will not increase it to the level needed to maintain operations below 60 percent of ASV at BZN.

- Reduce challenges to approaches and departures to allow increased usage of runway ends

Challenges to approaches and departures at BZN largely involve terrain limiting use of the Runway 30 end and thereby increasing use of the Runway 12 end for both approaches and departures. It is not financially or physically feasible to remove the limiting terrain from the approach or departure surfaces of the Runway 30 end at BZN.

3.1.2 Alternatives Advanced for Further Analysis

3.1.2.1 Step One - Achieves Purpose and Need

Table 3-1. Step One Screening: Increase Annual Service Volume (ASV) at BZN and **Table 3-2. Step One Screening: Provide Additional Hangar Space** provide a description of the alternatives and the results of the Step One Screening process.

Table 3-1. Step One Screening: Increase Annual Service Volume (ASV) at BZN

ALTERNATIVE	Would the alternative meet the purpose and need to increase the Annual Service Volume (ASV) at BZN by improving Runway 11-29 to accommodate a D-IV Runway Design Code (RDC)?	Move to Step Two?
Increase ASV Alternative *(Extend and Widen Runway 11-29 to meet D-IV Standards)*	This alternative would meet the purpose and need. This configuration will increase ASV and allows the airport to operate at less than 100% ASV as opposed to the 113% of ASV in which the airport currently operates. According to the 2020 AMP, to the extent practicable Runway 11-29 should be constructed to comparable standards as Runway 12-30, which is built to D-IV standards. This improvement would effectively raise the ASV at BZN. To improve the runway to D-IV standards Runway 11-29 will be lengthened to 7,480 feet and 150 feet wide. Associated improvements needed to accommodate the extension and widening of the runway include: • The VOR will be moved to another location on the airfield as it is currently in the footprint of the proposed extended runway. • The Runway 11 PAPI will need to be relocated as appropriate to facilitate the shift of the runway threshold. • Associated lighting will be needed to facilitate the runway and parallel taxiway environment as FAA required infrastructure. • Turf Runway 11G-29G will be closed due to its proximity to the expanded Runway 11-29 environment.	**YES**

	• Effluent irrigation will be relocated due to its proximity to the footprint of the extended Runway 11-29 environment. • Taxiways will be constructed to allow for the movement of aircraft to and from the runway. • Portions of Tubb Rd. and Airport Rd. will be abandoned to accommodate taxiways and safety areas needed for the extension. • Portions of Lagoon and Baseline Roads located on airport property will be abandoned to accommodate safety areas related to the runway extension. • To accommodate commercial and general aviation aircraft flying during Instrument Flight Rules conditions (bad weather), modifications to Runway 12-30 procedures will be required for use into Runway 11-29. • The improved Runway 11-29 will need a sidestep instrument procedure from Runway 12-30s Instrument Localizer System to allow approaches during inclement weather. • Security fence relocation and expansion will be needed to ensure the secure airside is separated from nonsecure landside endeavors. • Drainage improvements are needed to protect infrastructure and airport assets from the damaging effects of standing water. **Figures 3-1** and **3-2** show the alternative and associated projects for the runway extension and widening. A traffic impact study was completed for all Proposed Action roadway improvements and impacts (**Appendix B**).	

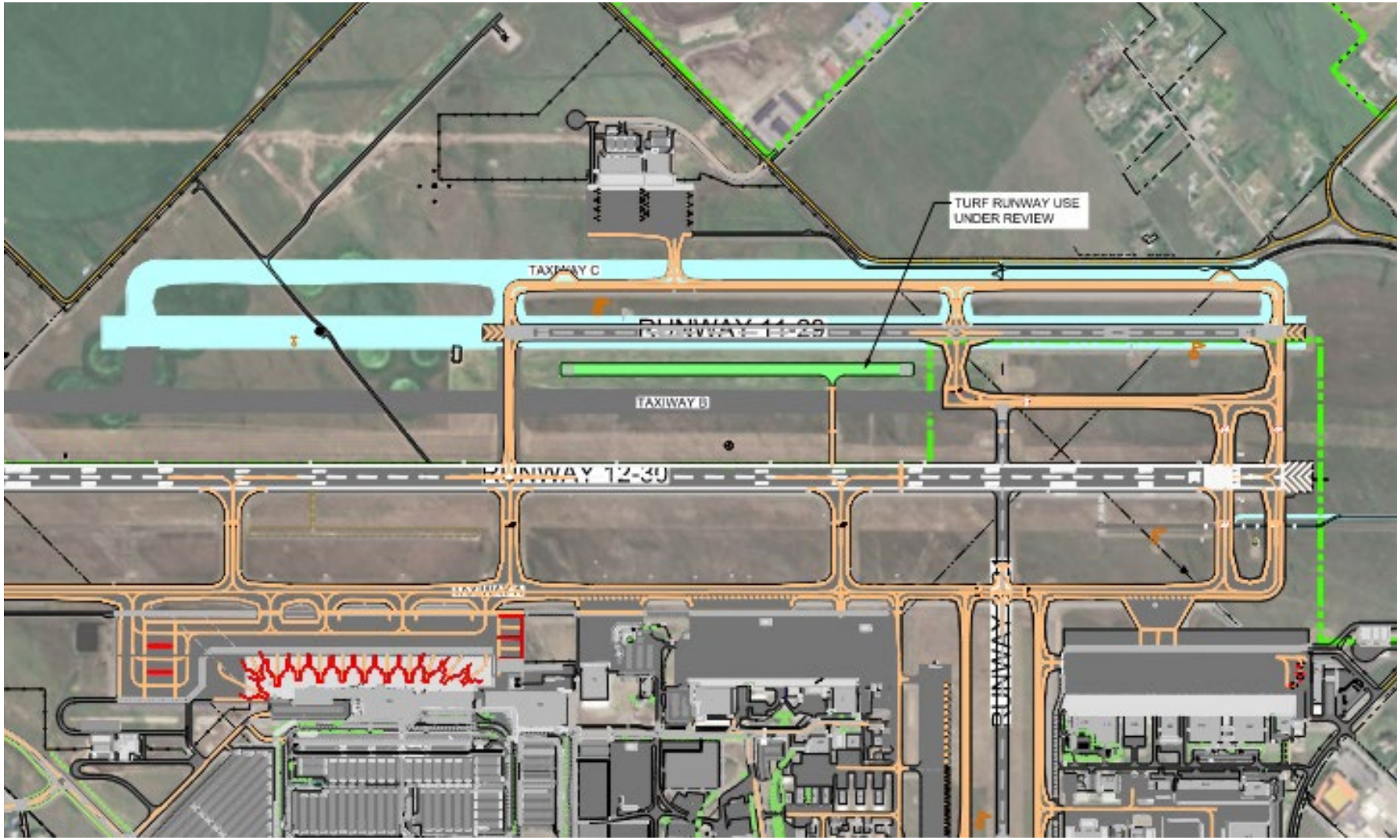


Figure 3-1. Runway 11-29 Extension, Widening, and Taxiway Improvements

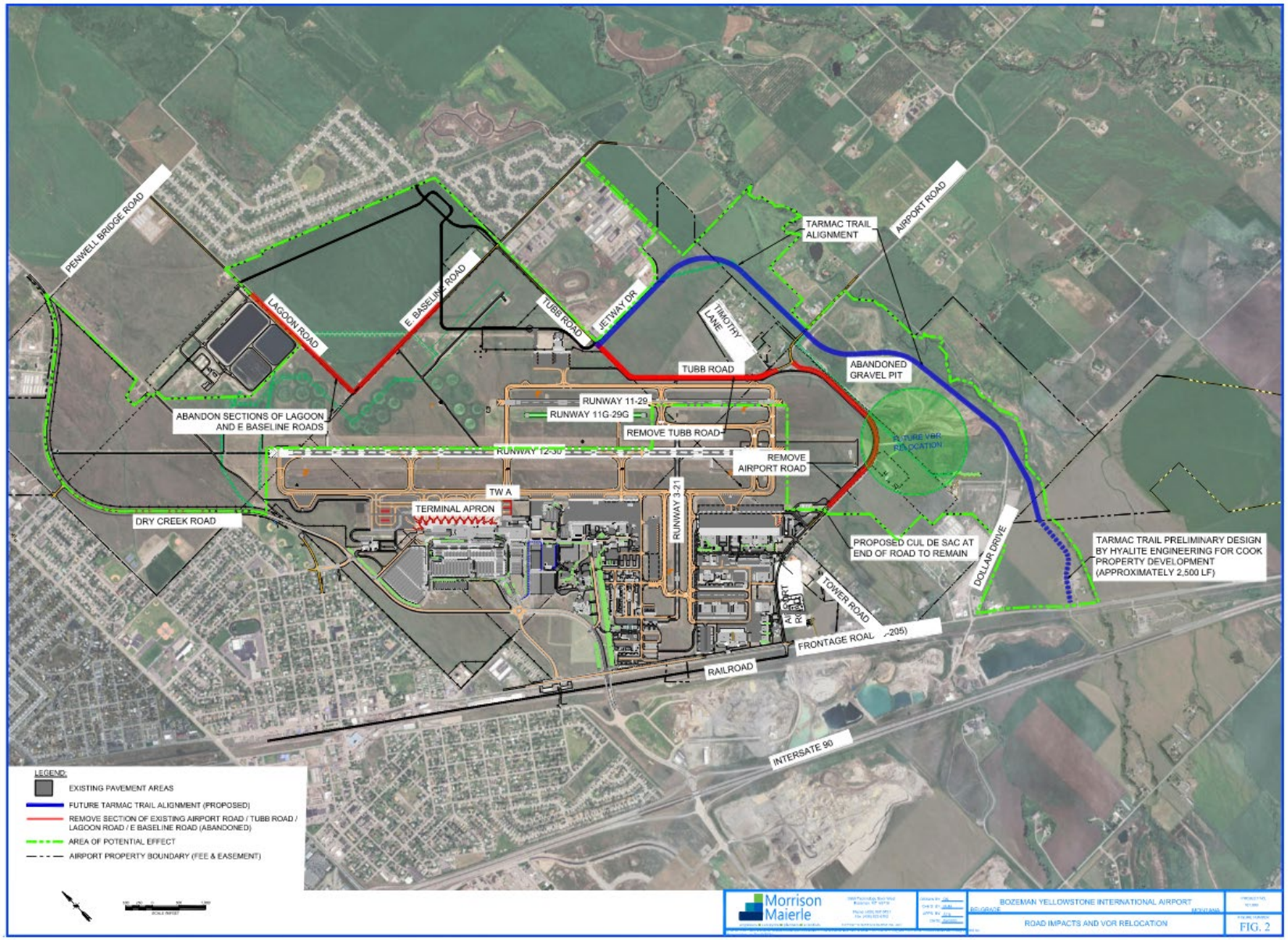


Figure 3-2. Road Improvements and VOR Relocation

Table 3-2. Step One Screening: Provide Additional Hangar Space

ALTERNATIVE	Would the alternative meet the purpose and need to provide additional hangar space for based aircraft to meet airport user demand?	Move to Step Two?
Provide Additional Hangar Space Alternative *(Northside General Aviation Hangar Development Area)*	This alternative would meet the purpose and need. Demand forecasts prepared in Chapter 2 of the 2020 AMP concluded that 189 new based aircraft would locate at BZN during the 20-year planning period. The airport currently has a hangar waiting list consisting of 64 (as of November 2024) aircraft owners and the southside general aviation area has no space for more hangars. Associated improvements needed to accommodate the construction of the Northside General Aviation Area include: • Aprons and taxilanes are needed north of Runway 11-29 to connect hangar users to the airfield and their respective hangars. • Ancillary infrastructure with water, sanitary sewer, power/natural gas/fiber/phone utilities will be needed to support hangar infrastructure. • Abandonment of portions of Tubb Road and improvements to Tarmac Trail are needed to make room for and access the development. • Portions of Lagoon and Baseline Roads located on airport property will be abandoned to facilitate hangar area expansion. • Security fence relocation and expansion will be needed to ensure the secure airside is separated from nonsecure landside endeavors. • Drainage improvements are needed to protect infrastructure and airport assets from the damaging effects of standing water. **Figure 3-3** shows the alternative for the Northside General Aviation Area. A traffic impact study was completed for all Proposed Action roadway improvements and impacts (**Appendix B**).	**YES**

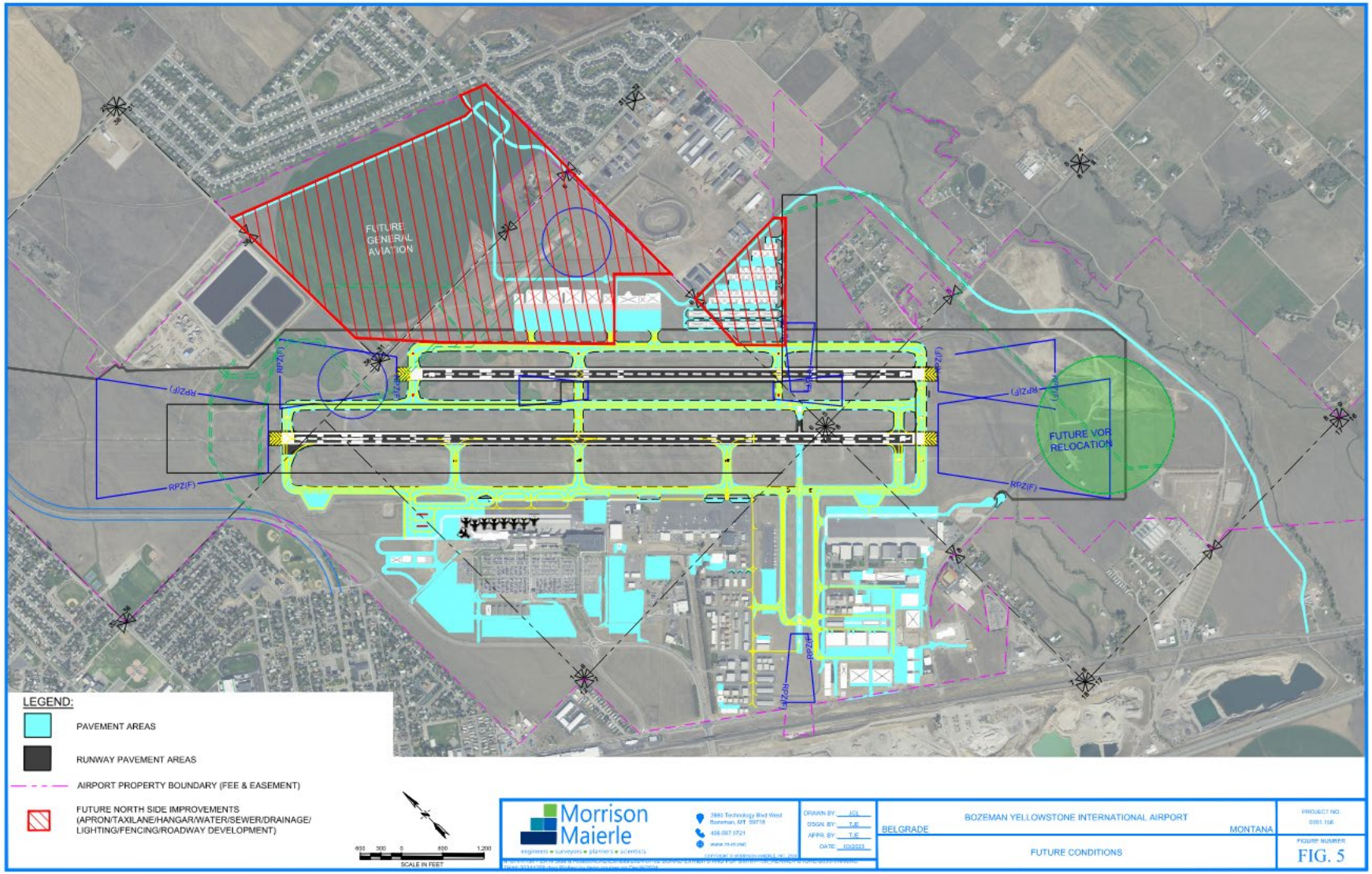


Figure 3-3. North General Aviation Development Area

3.1.2 Step Two – Technically and Economically Feasible

Table 3-3. Step Two Screening: Increase Annual Service Volume (ASV) at BZN and **Table 3-4. Step Two Screening: Provide Additional Hangar Space** summarizes the Step Two evaluation findings.

Table 3-3. Step Two Screening: Increase Annual Service Volume (ASV) at BZN

ALTERNATIVE	Would the alternative be technically and economically feasible?	Retain for Detailed Analysis?
Increase ASV Alternative *(Extend and Widen Runway 11-29 to meet D-IV Standards)*	This alternative would be technically and economically feasible. Evaluation of the costs and benefits of the project concluded the northwest extension will be the only extension for Runway 11-29 within the ten-year planning horizon. This extension will allow for BZN's critical aircraft to land on the runway. The final length for this project will be 7,430 feet. Using federal grant programs such as the Airport Improvement Program, Bipartisan Infrastructure Law, and Passenger Facility Charge, and using Local funding sources will allow the necessary financial resources to be available for the project.	**YES**

Table 3-4. Step Two Screening: Provide Additional Hangar Space

ALTERNATIVE	Would the alternative be technically and economically feasible?	Retain for Detailed Analysis?
Provide Additional Hangar Space Alternative *(Northside General Aviation Hangar Development Area)*	This alternative would be technically and economically feasible. Evaluation of the costs and benefits of the project concluded the Northside area of the airport was the only reasonable area that is able to support the development of a general hangar area. Using federal grant programs such as the Airport Improvement Program, Bipartisan Infrastructure Law, and Passenger Facility Charge, and using Local funding sources will allow the necessary financial resources to be available for the project. There are countless options for the layout of hangar areas. The 2020 AMP did not provide for the in-depth analysis of every option, but rather provides a general overview of the intent and potential implications of various options. The preferred alternatives as reflected in the 2020 AMP and ALP reflects considerations for apron(s), taxilanes, hangar layouts, vehicle access/parking, utilities, security fencing, protection of radar and airside safety and object free areas, among others. The 2020 AMP layout and improvements are being evaluated within this EA.	**YES**

3.2 Alternatives Retained for Detailed Analysis in the EA

Based on the screening analysis, two alternatives were carried forward for further detailed environmental evaluation in the EA: the No Action Alternative and the Proposed Action. The Proposed Action includes the only surviving alternative(s).

No Action Alternative:

- With the No Action Alternative, no changes would be made from the existing conditions. While the No Action Alternative does not meet the purpose and need, it serves as a basis of comparison during the assessment of the impacts of the alternatives.

Proposed Action:

- Increase ASV Alternative *(Extend and Widen Runway 11-29 to meet D-IV):* This alternative extends Runway 11-29 by 2,430 feet to the northwest and widens the runway to 150 feet.

- Provide Additional Hangar Space Alternative *(Northside General Aviation Hangar Development Area):* This alternative involves the construction of the Northside General Aviation Development Area.

Chapter 4 – AFFECTED ENVIRONMENT, ENVIRONMENTAL CONSEQUENCES, AND MITIGATION

4.1 Introduction

This chapter examines the Environmental Impact Categories (EIC) defined by FAA Order 1050.1G. The evaluation of each EIC includes the following elements:

(1) Affected Environment, which describes the existing natural, ecological, cultural, social, and economic conditions that could be impacted by the Proposed Action;

(2) Environmental Consequences, which evaluates the potential human and environmental consequences of the No Action Alternative and Proposed Action for each environmental resource;

(3) Significance Thresholds and Conclusions, based on thresholds provided in FAA Order 1050.1G, Appendix A, Exhibit A-1 Significance Determination for FAA Actions; and

(4) Mitigation Commitments related to anticipated impacts.

4.1.1 Flight Paths and Future Development of Flight Procedures

In this section, flight paths and flight procedures refer to two different things. Both are specific aviation terms defined in FAA documents. (Flight paths are defined in FAA Order JO 7610.14A and flight procedures are defined in 14 CFR Part 1.)

A flight path is the actual trajectory the aircraft follows through the air. It describes the 3D route where the airplane physically goes and it can include altitude changes, turns, climbs, and descents. It can be planned (e.g., in the flight management system) or actual (what really happened, including deviations due to wind, ATC, weather, etc.). A flight path can be thought of as the real movement of the aircraft in space. Flight paths at any given airport, including the existing flight paths at the Bozeman Yellowstone International Airport (Airport or BZN), are a result of the layout of the runways, surrounding terrain, established air traffic control procedures, and other inherent environmental factors.

A flight procedure is a published set of instructions that pilots follow. A procedure defines specific waypoints, required altitudes, speeds, headings, and navigation guidance. A flight procedure can be thought of as a pre-designed template followed by a pilot for the safe approach and departure of aircraft.

Instrument flight procedures (IFPs) are developed and published by the FAA to establish safe and orderly flow of air traffic for pilots to land on, or depart from, a runway at an airport. At the Airport, there are 10 published instrument flight procedures related to Runway 12-30. There are no proposed changes to any of the existing procedures at this time.

Flight procedures would not be changed or amended for the extension of Runway 11-29 until the physical improvements have been completed and new runway survey information is available. This would not likely take place immediately upon completion of the Runway 11-29 extension. Any procedure development and environmental review under NEPA will be done through the Flight Procedures Office (FPO) and Air Traffic Organization (ATO) at a later date. As the runways are too close for simultaneous Instrument Flight Rules (IFR) operations, procedure development will not affect Annual Service Volume (ASV). Procedures would instead facilitate safety upgrades for operations.

4.1.2 Study Area

A 1,532-acre general Study Area was defined for this EA to include direct impacts (such as ground disturbance) and indirect impacts (such as noise and light). The general Study Area is shown in **Figure 4-1** and includes land owned by the Airport and privately owned land that is needed to complete road relocations and improvements.

The site is in Gallatin County, Montana adjacent to the City of Belgrade. The project would occur to the north, east, and northeast of the existing runway and airport facilities, as well as along roads and future alignments of roads further east and north of the airport boundary.

The Bridger Mountains are located approximately 6.5 miles east of airport property and rise to an elevation of roughly 5,000 feet above the valley floor to 9,600 feet above mean sea level. The land directly surrounding BZN in all directions is relatively flat with an elevation of approximately 4,460 feet above mean sea level. The City of Belgrade's sewer lagoons are located near the northwest boundary of the airport on State of Montana property that is under a right-of-way deed with the airport. Soils present in the Study Area consist of loams, clay loams, clay and sandy gravels. Several gravel pits are located east and south of BZN. These are separated from the airport by the Frontage Road (S205) to the south and east and Airport Road to the east.

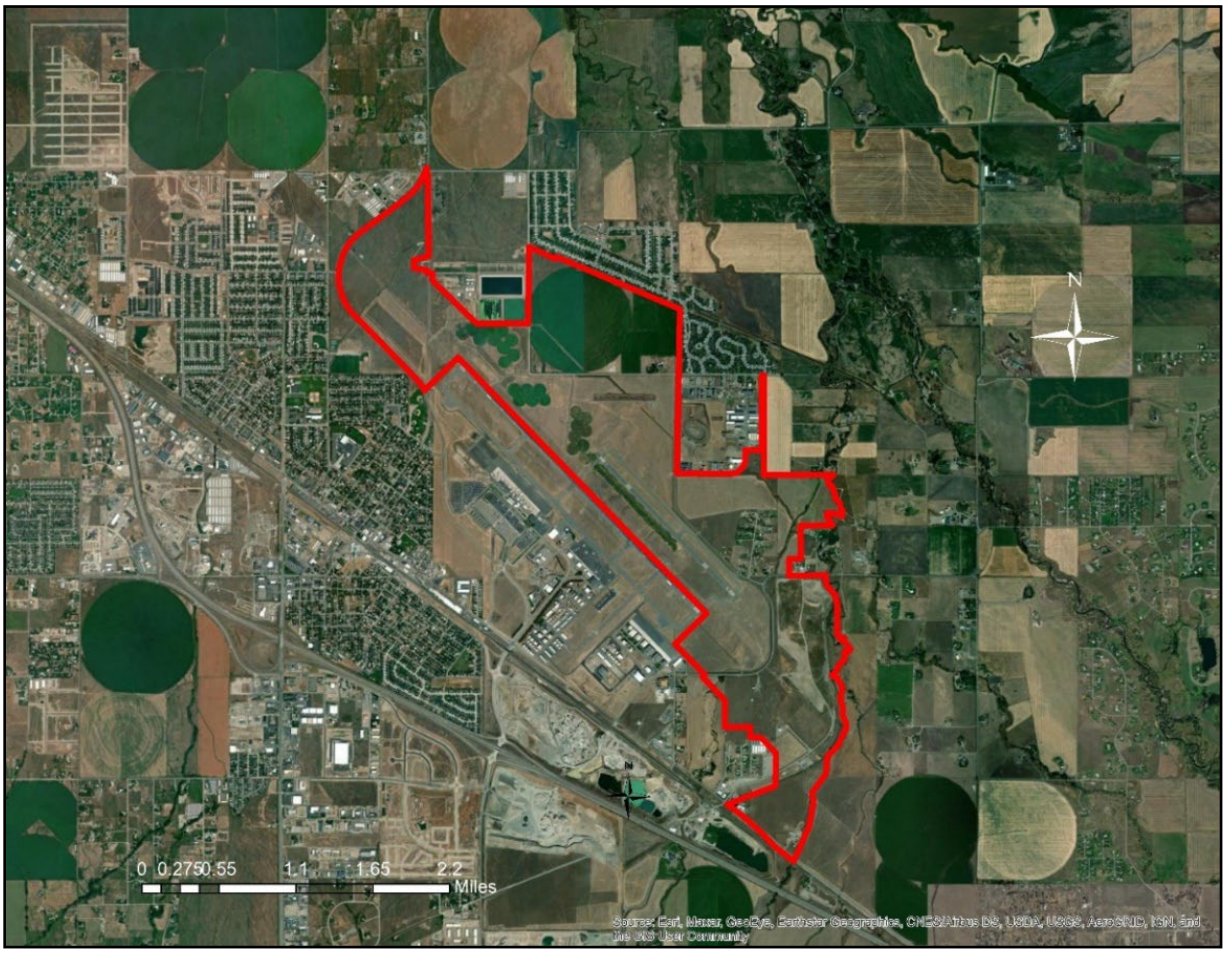


Figure 4-1. Study Area

4.1.3 Environmental Impact Categories Dismissed from further Analysis

After consideration of the anticipated impacts of the proposed action and other alternatives, the following resources summarized in **Table 4-1** were identified as not having potential for other than insignificant impacts and are dismissed from further consideration.

Table 4-1. Non-Issue Resource Categories

Environmental Impact Categories	Evaluation
Coastal Resources	Coastal Resources include all natural resources occurring within and near coastal waters and shore lands. The nearest coastal waterways are in the vicinity of Seattle, Washington, approximately 550 miles to the west. Therefore, this resource category is eliminated from further consideration in this evaluation.
Water Resources (partial) • Floodplains • Wild and Scenic Rivers	• Floodplains – there are no FEMA regulatory floodplains within the project area. (See **Appendix D**) • Wild and Scenic Rivers – there are no designated Wild and Scenic Rivers within the project area or in Gallatin County.

4.2 Aviation Emissions and Air Quality

The Clean Air Act (CAA) requires the U.S. Environmental Protection Agency (EPA) to set National Ambient Air Quality Standards (NAAQS) for air pollutants that are considered harmful to public health and the environment. Additionally, Montana has adopted Montana Ambient Air Quality Standards (MAAQS).

The CAA General Conformity Rule prohibits federal agencies (including the FAA) from permitting or funding projects that do not conform to an applicable State Implementation Plan (SIP). The rule ensures that project-related air pollutant emissions do not contribute to the degradation of air quality conditions in an area.

4.2.1 Affected Environment

The EPA designates areas with measured pollutant concentrations that are lower than the NAAQS as being in attainment, and areas with pollutant concentrations that exceed the NAAQS as nonattainment. Once a nonattainment area meets the NAAQS and the additional re-designation requirements in the CAA, the EPA re-designates the area to be “maintenance.” Areas are designated as unclassifiable when there is a lack of sufficient data to form the basis of an attainment status determination. The Airport is located in Gallatin County, an area that is designated to be in attainment for all NAAQS.

4.2.2 Environmental Consequences

The project Air Quality Assessment (see **Appendix E**) includes a summary of applicable regulations and an inventory of emissions expected to result from the Proposed Action. Because Gallatin County is in attainment for all criteria air pollutants, the General Conformity requirements of the CAA, which aim at making sure that a SIP is adhered to, are not applicable.

4.2.2.1 Construction Emissions

Construction emissions are temporary and include fugitive dust emissions from site preparation and combustion emissions from the operation of construction equipment, vehicles at the site (e.g., scrapers, dozers, delivery trucks, etc.), and vehicles transporting construction workers to and from the site.

The Airport Construction Emissions Inventory Tool (ACEIT) (Transportation Research Board, 2014) was used to estimate short-term construction emissions associated with the proposed improvements at BZN. The emission inventories were prepared for the criteria air pollutants carbon monoxide (CO) and particulate matter (PM10 and PM2.5). Estimates of volatile organic compounds (VOCs) and nitrogen oxides (NOx), which are precursors to the air pollutant O3, were also prepared. While ACEIT does not provide emission estimates of nitrogen dioxide (NO2) or sulfur dioxide (SO2), the model does provide estimates of NOx and SOx emissions of which NO2 and SO2 are components, respectively.

Project-specific details (i.e., project types and square footages) were used in the ACEIT to estimate construction activities and equipment/vehicle activity data (e.g., equipment mixes/operating times). **Table 4-2** lists the construction activities that would be necessary to implement the Proposed Action at BZN. For the purpose of preparing the inventory, construction of the proposed improvements was assumed to begin in the year 2026 and continue through the year 2030. The emissions inventories of CO, PM, VOC, NOx, and SOx resulting from construction of the proposed improvements at BZN are provided in **Table 4-2**. As shown, the greatest level of collective emissions would occur in the year 2026.

Table 4-2. Projected Construction Schedule / Activities and Construction Emission Inventory Results

Timeframe	Construction/Demolition Activities					
2026	Airport Road Demo/Tarmac Trail Construction					
2027	Taxiway C Relocation and Extension					
2029	Runway 11/29 Extension and Widening					
2030	Northside Apron and Taxilanes					
Year	**CO***	**NOx***	**S0x***	**PM10***	**PM2.5***	**VOC***
2026	9	4	<1	1	<1	40
2027	7	3	<1	<1	<1	34
2029	3	1	<1	<1	<1	15
2030	5	2	<1	<1	<1	27

**Tons*

Note: Emission estimates are rounded.
Source: Morrison-Maierle, 2024.

4.2.2.2 Operational Emissions

The Proposed Action has the potential to change the level of emissions associated with the aircraft taxi mode.

Aircraft taxi emissions with and without the Proposed Action were computed using the FAA's Aviation Environmental Design Tool (AEDT), Version 3g[1]. The average time that aircraft would

[1] AEDT 3g is the current release version of AEDT. Additional information on AEDT is available at: https://aedt.faa.gov/.

taxi with the No Action and Proposed Action alternatives is provided in **Table 4-3**. Taxi times were derived by assuming a taxi speed of ten miles-per hour and measured distances to/from the ends of all runways to the intersection of Taxiways A and A3 with and without the Proposed Action.

Table 4-3. Aircraft Taxi Times

Runway End	Taxi Times (minutes)		
	No Action	Proposed Action	Difference
11	1.92	5.94	4.02
29	7.44	7.44	0
12	5.64	5.64	0
30	6.00	6.00	0
3	5.58	5.58	0
21	4.92	4.92	0

Note: Taxi times were calculated based on an assumed taxi speed of ten miles per hour.

Aircraft operation levels were obtained from BZN Flight Tracking System Data and FAA Operations Network (OpsNet), for current operations and FAA's 2023 Terminal Area Forecast (TAF) for future operations. **Table 4-4** summarizes the aircraft fleet mix and number of annual aircraft operations modeled in AEDT for the 2023, 2030 and 2035 conditions. Additional details on aircraft fleet mix and operations are in **Appendix E**.

Table 4-4. Aircraft Fleet Mix and Operations

Aircraft Type	Number of Operations		
	2023	2030	2035
Commercial Jets	20,181	24,373	27,003
Business Jets	15,204	15,544	16,070
Multi-engine GA	8,998	9,200	9,511
Single-engine GA	83,220	85,084	87,963
Helicopters	307	314	325
Military	307	307	307
Total	**128,217**	**134,822**	**141,178**

Note: Totals may not equal due to rounding
Sources: BZN Flight Tracking System Data, Federal Aviation Administration (FAA) Operations Network (OpsNet), FAA Terminal Area Forecast (TAF)

Table 4-5 presents the aircraft-related operational emission inventories for the future No Action and Proposed Action conditions. As shown, with the Proposed Action, operational emissions are estimated to increase slightly. The increase in emissions would occur because the aircraft taxi times are greater with the proposed lengthening of Runway 11-29.

Table 4-5. Aircraft Taxi Emissions (tons)

Year	Alternative	CO	PM_{10}	$PM_{2.5}$	VOC	NO_X	SO_X
2030	No Action	201.7	0.5	0.5	38.4	20.4	6.2
	Proposed Action	213.0	0.6	0.6	41.1	21.9	6.7
	Net Difference	**11.3**	**0.1**	**0.1**	**2.7**	**1.5**	**0.5**
2035	No Action	214.6	0.6	0.6	40.1	22.3	6.8
	Proposed Action	221.0	0.6	0.6	42.7	23.9	7.2
	Net Difference	**6.4**	**0.0**	**0.0**	**2.6**	**1.6**	**0.5**

4.2.3 Significance Threshold, Conclusion and Mitigation Commitments

According to FAA Order 1050.1G, the threshold for determining if an action would have a significant impact on air quality is if the action would cause pollutant concentrations to exceed one or more of the NAAQS or to increase the frequency or severity of any such existing violations. Since the project is in an attainment area, the General Conformity Rule does not apply.

The No Action Alternative would have no effect on air quality, as no construction would occur, and there would be no changes to the current operating environment of the Airport beyond normal projected growth.

The Proposed Action would result in minor, short-term emissions associated with construction activities and minimal emissions increases associated with slightly increased taxi times. These increases would result in a negligible impact to air quality and would not cause violations of the NAAQS. Therefore, the Proposed Action would have **no significant impact** on air quality.

No mitigation is required or proposed.

4.3 Biological Resources

Biological resources include fish, wildlife, and plants and consider the following categories:

Special status species (state or federally listed threatened or endangered species, marine mammals, or species of concern, such as species proposed for listing or migratory birds)

Environmentally sensitive or critical habitats

The Endangered Species Act (ESA), the Fish, and Wildlife Coordination Act, the Fish and Wildlife Conservation Act, the Bald and Golden Eagle Protection Act, and the Migratory Bird Treaty Act are among the provisions set forth for the protection of biological resources.

4.3.1 Affected Environment

4.3.1.1 Threatened and Endangered Species

The U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) website provides information on threatened, endangered, and candidate species within a county or specific area. IPaC data was initially retrieved June 21, 2024, and indicated that Canada lynx (*Lynx canadensis*), grizzly bear (*Ursus arctos horribilis*), North American wolverine (*Gulo gulo luscus*), Ute ladies'-tresses (*Spiranthes diluvialis*), and the Monarch butterfly (*Danaus plexippus*) should be considered in the effects analysis for the project (See **Appendix F**).

USFWS provided a follow-up letter dated September 27, 2024, that offered site-specific information. In that letter, USFWS indicated that they do not expect "significant effects" to grizzly bears, Canada lynx, and wolverines considering existing habitat conditions and the semi-developed nature of the project area. Further, they indicated that Ute ladies'-tresses were known to occur approximately seven miles northwest of the of the Study Area and they recommended that the EA include a detailed analysis of potential habitat for the species within the project area and that surveys for the species be conducted if suitable habitat were found within areas that would be affected.

In a July 8, 2025, meeting between the FAA, USFWS, and the Airport's consultant, USFWS verbally concurred with the FAA's conclusion that grizzly bears, Canada lynx, and wolverines are not expected to be present at the site. Additionally, USFWS reiterated the need to conduct a habitat assessment for Ute ladies' tresses. The habitat assessment was conducted on August 7, 2025, following procedures listed in the USFWS Montana Field Guide Office Guidelines for Conducting and Reporting Botanical Inventories and Monitoring of Federally Listed, Proposed and Candidate Species and the Ute Ladies'-tresses Orchid Potential Habitat Rating Sheet. Findings were documented in a technical memo entitled Assessment of Potential Habitat for *Spiranthes diluvialis* (Ute Ladies'-Tresses) at Bozeman Yellowstone International Airport, Gallatin County, Montana (**Appendix F**). The assessment concluded that the BZN airport project area does not support suitable habitat for *Spiranthes diluvialis*. In an August 25, 2025, meeting between the FAA, USFWS, and the Airport's consultant, USFWS verbally concurred with the FAA's conclusion that Ute ladies' tresses habitat is not present within areas that would be affected by the project and as such, Ute ladies' tresses are not expected to be present at the site.

4.3.1.2 State Listed Species of Concern

Designation of a species as a Montana Species of Concern is not a statutory or regulatory classification. Species of concern are native Montana animals or plants that are considered to be "at risk" due to declining population trends, threats to their habitat, and/or restricted distribution.

A February 2024 Montana Natural Heritage Program (MNHP) file search for occurrences of species of concern on the sections of land containing Airport property and a one-mile buffer on all sides identified occurrences of 17 species as shown within **Appendix F.** Although these species are listed in the MNHP data, they are not expected or encouraged to be on site as the airport is managed in a manner to support aviation safety, rather than habitat.

4.3.1.3 General Wildlife and Vegetation

A variety of wildlife exists in Gallatin County. A review of Foresman's Mammals of Montana (Foresman 2012) indicated that there have been 68 species of mammals in Gallatin County for which specimens have been collected or recorded. An additional six species are thought to likely occur in the county based on broader generalized Northern American Range distributions. The proximity of BZN to the surrounding agricultural, urban areas, major transportation corridors, gravel pits, and segmented environments makes the property less than optimal habitat for most terrestrial species.

A 7-foot chain link fabric security fence with 12 inches of barbed wire on top encompasses the air operations area of the airport property. The fence restricts entry to the larger wildlife – deer, elk, etc. to reduce hazards to aircraft. Smaller wildlife, including fox, skunk, birds, are not restricted by the security fence. That said, the airport is maintained in a manner to support aviation safety rather than wildlife habitat.

Results from the mammal survey conducted for the Wildlife Hazards Assessment include observations of two meadow voles and two deer mice. Larger mammals, such as deer, antelope, coyotes, and marmots were observed outside of the perimeter of the airport fence (Airport Wildlife Consultants 2014). (See **Appendix G**.) Species observed on the airport property during the 2023 on-site field investigation and recorded in the October 2024 Wildlife Observation memorandum (**Appendix F**) are shown in **Table 4-6**.

Table 4-6. Direct Wildlife Observations within the Study Area.

Species	Scientific name	Year observed	Type of observation
Bald eagle	*Haliaeetus leucocephalus*	2023	Direct
Beaver	*Castor canadensis*	2023	Feeding sign
Mule deer	*Odocoileus hemionus*	2023	Direct
Ring-necked duck	*Aythya collaris*	2023	Direct
Coyote	*Canis latrans*	2023	Feces

Waterbodies on the airport property are listed in **Table 4-7** below. See Figure 7 of the aquatic resource delineation report for a map of aquatic features within the Study Area (**Appendix H**).

Table 4-7. Aquatic Habitat within the Study Area.

Feature name	Feature type	Feature Detail	Feature length within study area (ft)
Hyalite Creek	Perennial Stream	**Hyalite Creek** bounds much of the eastern edge of the study area. The channel meanders northwards, with a well-defined bed and bank generally 20-30 feet wide. Large trees with brushy understory border the creek. According to the FISHMT database the following fish species have been observed in this creek: Arctic graying, brook trout, brown trout, longnose dace, longnose sucker, mottled sculpin, mountain sucker, mountain whitefish, rainbow trout, and white sucker.	15,512.0
Dry Creek	Perennial Stream	**Dry Creek** meanders through the center of the study area in a northward direction. The creek crosses underneath Airport Road into a fenced airport zone to join the Spain Ferris Fork Ditch for approximately 2,868 feet before leaving the ditch channel at a headgate. Dry Creek becomes brushy, bordered by trees and shrubs, north of Airport Road. The bed and bank are well-defined throughout the investigation area, despite localized flooding. FISHMT did not contain data for this creek.	4,247.1
Middle Creek	Perennial Stream	**Middle Creek** enters the study area for a small section only, in the northeast corner, flowing northward. A steep and well-defined bed and bank characterize this section of the creek. FISHMT did not contain data for this creek.	2,168.6
Spain Ferris Fork Ditch & Dry Creek	Stream/ ditch	**Spain Ferris Fork Ditch** flows multiple directions through the airport area. Partial realignment of sections of the ditch is not yet reflected in USGS maps. The Spain Ferris Fork Ditch was built in 1905 and starts on the West Gallatin River near Bozeman Hot Springs. The Ditch flows northeast for approximately 18 miles and terminates into Hyalite Creek. Fish may occasionally stray into this ditch, but the Spain Ferris Ditch is not considered a viable fishery. No fisheries data for the seasonal Spain Ferris Ditch is maintained on the FISHMT database.	2,868.0

Feature name	Feature type	Feature Detail	Feature length within study area (ft)
Spain Ferris Fork Ditch	Ditch	**Spain Ferris Fork Ditch & Dry Creek** (both in the same channel) flows northward in a narrow channel for approximately 2,868 feet before leaving the ditch channel at a headgate south of Airport Road. The Spain Ferris Fork Ditch was built in 1905 and starts on the West Gallatin River near Bozeman Hot Springs. The Ditch flows northeast for approximately 18 miles and terminates into Hyalite Creek. Fish may occasionally stray into this ditch, but the Spain Ferris Ditch is not considered a viable fishery. No fisheries data for the seasonal Spain Ferris Ditch is maintained on FWP FISHMT database.	15,285.7
Mammoth Ditch	Ditch	**Mammoth Ditch** flows northward in the western zone of the study area. Although not flowing at the time of investigation area, facultative vegetation bordering the ditch indicates recent wet conditions. Mammoth Ditch does not provide fisheries habitat.	2,788.0

4.3.1.4 Migratory Birds and Bald and Golden Eagles

The Migratory Bird Treaty Act (MBTA) prohibits the taking (including killing, capturing, selling, trading, and transport) of protected migratory bird species without prior authorization by the USFWS. The Bald and Golden Eagle Protection Act (BGEPA) provides additional protection for bald and golden eagles and prohibits the taking of bald or golden eagles, including their parts, nests, or eggs. The BGEPA defines “take” as to “pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb.” The term “disturb” means to agitate or bother a bald or golden eagle to the degree that causes, it is likely to cause, based on the best scientific information available, 1) injury to an eagle; 2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior; or 3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior.

According to the USFWS IPaC report, 20 birds protected by the MBTA may be located within the Study Area. This document is available in **Appendix F**.

A bald eagle was observed during the on-site investigation October 2024 near the bridge over Hyalite Creek. The USFWS stated in their letter that the closest documented nesting activity is a 2012 record of a bald eagle nesting along Hyalite Creek approximately 0.75 mile northeast of the project area. No project activities will occur near Hyalite Creek where the bald eagle was observed.

4.3.2 Environmental Consequences

According to FAA Order 1050.1G, a proposed action would result in significant impacts if the USFWS or the National Marine Fisheries Service determines that the action would be likely to jeopardize the continued existence of a federally listed threatened or endangered species or would result in the destruction or adverse modification of federally designated critical habitat. Other factors to consider if an action would result in impacts:

- A long-term or permanent loss of unlisted plant or wildlife species, i.e., extirpation of the species from a large project area (e.g., a new commercial service airport).
- Adverse impacts to special status species (e.g., state species of concern, species proposed for listing, migratory birds, bald and golden eagles) or their habitats

- Substantial loss, reduction, degradation, disturbance or fragmentation of native species' habitats or their population.
- Adverse impacts on a species' reproductive success rates, natural mortality rates, non-natural mortality rates (e.g., road kills and hunting), or ability to sustain the minimum population levels required for population maintenance.

4.3.2.1 Threatened and Endangered Species

Grizzly Bear – Threatened

Grizzly bears are not expected to present on the airport and the proposed project will have No Effect on grizzly bears.

Canada Lynx – Threatened

Canada lynx are not expected to be present on the airport and the proposed project will have No Effect on the Canada lynx.

Wolverine – Threatened

North American Wolverine are not expected to present on the airport and, the proposed project will have **No Effect** on the North American wolverine.

Ute Ladies'-Tresses – Threatened

The BZN airport project area does not support suitable habitat for *Spiranthes diluvialis*. Therefore, Ute Ladies' tresses are not expected to be present on the airport, and the proposed project will have **No Effect** on Ute Ladies'-tresses.

Monarch Butterfly – Candidate

The monarch butterfly occurs statewide in Montana from approximately June through November in open places, native prairie, foothills, open valley bottoms, open weedy fields, roadsides, pastures, marshes, and suburban areas. Monarch butterflies utilize milkweed for host plants during the breeding season and migrate long distances to warmer climates in the fall. The project area does not lie within one of the major flyways for the monarch butterfly (USFS 2023).

Although it is possible for monarchs to migrate through the project area, the airport actively manages the area for airport safety, not habitat. As such, the lack of milkweed plants and other useful forbs makes it an unlikely stop for the butterfly. **Therefore, the proposed project is not likely to jeopardize the continued existence of the monarch butterfly.**

4.3.2.2 State Listed Species of Concern

According to the MNHP, numerous state sensitive species may occur in proximity to the project area. However, the airport is managed in a manner to support aviation safety and not to support habitat, whether or not the project is carried out. As such, if the species moves through the area, the individuals are not likely to find suitable habitat to encourage them to stay. The project will not contribute to a trend toward federal listing or cause loss of viability to the population of these species. The Proposed Action is expected to have **no significant effect** on state sensitive species.

4.3.2.3 General Wildlife and Vegetation

The Study Area is largely composed of the airfield (maintained grassy area) and surrounding agricultural land, including waterways (both natural and man-made). Although somewhat limited due to the activities on the land, portions of the Study Area outside of the security fence do provide a riparian habitat along the waterways and grassy areas for nesting, foraging, and hunting. The Proposed Action will have limited impacts to associated riparian habitat. The reduction of habitat would not be significant when compared to alternative riparian habitat along other portions of the waterways.

Various types of birds are the most common type of wildlife in the area; however, the Proposed Action will have limited impacts on trees that may provide nesting habitat. Ground nesting birds or small mammal species may be permanently or temporarily displaced due to some of the activities listed in the Proposed Action. Sufficient suitable habitat is available in the immediate vicinity to provide refuge for displaced species. The Proposed Action includes expanding the existing wildlife fence along additional portions of the airport property. The fence would reduce the number of wildlife, such as deer, elk, and moose from entering the airfield, which increase risk of harm to both humans and wildlife. However, the loss of habitat is not significant when compared to available habitat in the surrounding area.

Therefore, the Proposed Action may impact but will not likely contribute to a trend towards federal listing or loss of viability for any general wildlife and vegetation species.

4.3.2.4 Migratory Birds

Habitat for nesting birds protected by MBTA, such as grassy areas and the riparian corridor along waterways, is present within the Study Area. The Proposed Action would also place portions of Dry Creek in culverts and remove associated riparian habitat. However, the reduction in habitat in this area would not be significant when compared to alternative riparian habitat along other portions of the Creek and other waterways within the area.

No project activities will occur near Hyalite Creek near where the bald eagle was observed. No large trees have been identified for removal as a part of this project. Any necessary tree/shrub removal will occur between October 1 through January 31, so as not to disturb potential active nest sites. Therefore, the Proposed Action **may impact but will not likely contribute to a trend towards federal listing or loss of viability** of migratory birds or eagles.

4.3.3 Significance Threshold, Conclusion and Mitigation Commitments

The No Action Alternative is a non-development alternative, and therefore, would have no effect on threatened and endangered species, state listed species of concern, general wildlife and vegetation, or migratory birds.

The Proposed Action would have **no effect** on the federally listed grizzly bear, Canada lynx, North American wolverine, Ute ladies' tresses, or monarch butterfly. The Proposed Action is anticipated to have **no significant effect** on state listed species of concern and may impact but **would not likely contribute to a trend towards federal listing or loss of viability** for general wildlife and vegetation, or migratory birds.

The following measures are required to comply with the Migratory Bird Act.

- Contract documents will obligate the contractor to remove suitable nesting habitat features from the project area/construction footprint during nonbreeding season (October 1-January 31).
- Construction will occur in a manner that does not unnecessarily harm migratory bird habitat.

4.4 Land Use

4.4.1 Affected Environment

BZN and surrounding areas fall under multiple land use and zoning jurisdictions. Responsible entities include the City of Belgrade and Gallatin County.

Airport property is within the Belgrade Planning Jurisdiction and portions of it are zoned PLI (Public Lands and Institutions). Airports and customary accessory uses required for their operation are permitted uses under the PLI designation. The underlying zoning does not present obstacles to the general functioning of BZN and the Proposed Action. **Figure 4-2** shows the zoning around the area.

In 1979, the Sponsor established the Airport Influence Area (AIA) which provides noise, height, and land use regulations for the AIA. The AIA was approved by the Gallatin County Commissioners as Resolution #381 on June 28, 1979, and is shown in **Figure 4-2** which also shows land surrounding the Airport is zoned as a mix of commercial, residential, industrial, civic, and open space.

The airport sponsor created and established two airport Land Use Districts (Airport District-A and Airport District-B) to implement the provisions of Resolution 381. The Airport Districts are defined by the AIA as shown in **Figure 4-2**. Airport District-A is defined as the area encompassing the 75 DNL or greater and Airport District-B is defined as the area within the 65 DNL to 75 DNL.

Zoning and Adjacent Land Use

Current zoning and land use surrounding BZN are shown in **Figure 4-2**. The zoning surrounding BZN is compatible with airport operations.

4.4.2 Environmental Consequences

No Action Alternative

With the No Action Alternative, the proposed project would not be undertaken. Therefore, no project-related construction would occur and there would be no impact on land use.

Proposed Action

Although the Proposed Action would result in a shift of Runway 11-29 to the west, the existing Runway 12-30 will still terminate further to the west and would not result in changes to the Airport Overlay. It is not anticipated that there will need to be land use changes on, or adjacent to the airport and proposed action to ensure compatible land uses. Therefore, adverse impacts are not anticipated.

4.4.3 Significance Threshold, Conclusion and Mitigation Commitments

The No Action Alternative is a non-development alternative. The No Action Alternative would have no effect on land use, would not change the existing conditions at the Airport, and therefore, would not result in any changes to the existing zoning designations or use of land.

Under the Proposed Action, no additional incompatible land uses and no additional significance thresholds were identified. Therefore, the Proposed Action would have **no significant effect** on land use within the vicinity of the Airport. No subdivision applications, zoning laws, or zoning regulations will need to be created or augmented in order to implement the Proposed Action. The Proposed Action aligns with current land use planning and zoning requirements; therefore, no mitigation is required.

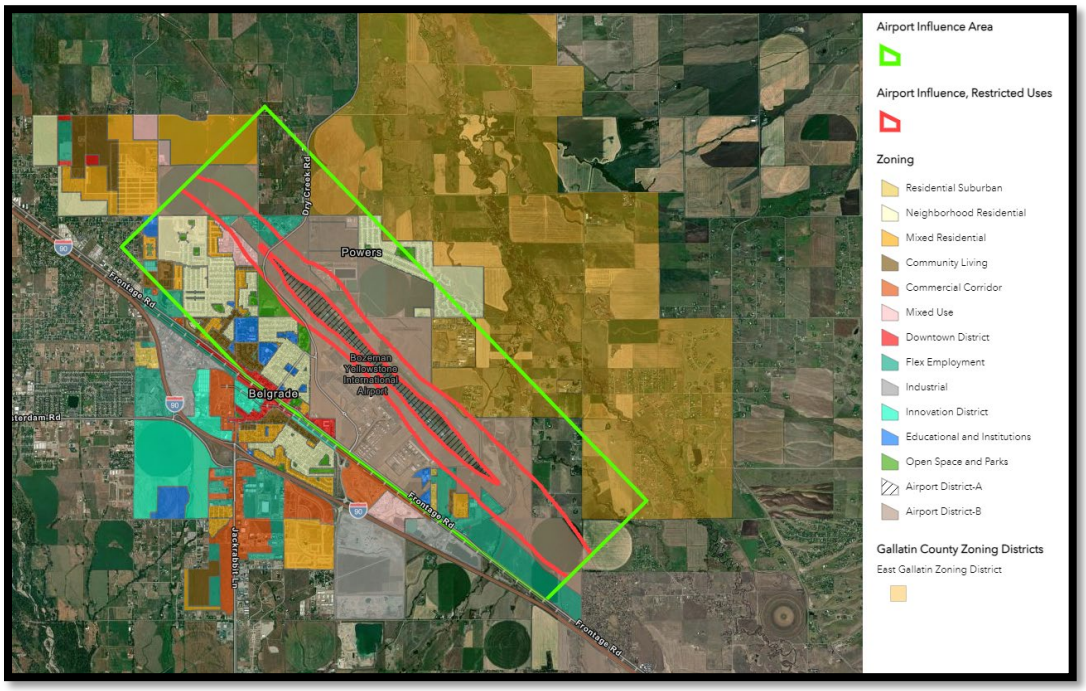


Figure 4-2. Airport Influence Area and Surrounding Land Use

4.5 Section 4(f) and Land and Water Conservation Fund Section 6(f) Resources

4.5.1 Affected Environment

Section 4(f) of the Department of Transportation Act of 1966 protects significant publicly owned parks, recreational areas, wildlife and waterfowl refuges, and public and private historic sites. Section 4(f) provides that the Secretary of Transportation may approve a transportation program or project requiring the use of publicly owned land of a public park, recreation area, or wildlife or waterfowl refuge of national, state, or local significance, or land of an historic site of national, State, or local significance, only if there is no feasible and prudent alternative to the using that land and the program or project includes all possible planning to minimize harm resulting from the use.

In order to identify park, recreational area, and refuge resources, the US Department of Agriculture (USDA) Forest Service Office for the Gallatin National Forest, Gallatin County, the City of Bozeman, and the City of Belgrade were provided a general project description and a

request for comment letter (a listing of agencies consulted, with correspondence received, is provided in **Appendix I**). No comments were received as of the time of this writing.

Potential 4(f) resources around BZN include several public parks in the City of Belgrade, and the Cherry River Fishing Access Site on the East Gallatin River located approximately six miles southeast of BZN. One of the public parks, Belgrade's Lewis and Clark Park, was developed with financial assistance from the Land and Water Conservation Fund (LWCF) and would fall under the requirements of Section 6(f) of the LWCF, if converted. Reference **Table 4-8** and **Figure 4-3** for additional details.

Table 4-8: Section 4(f) Parks Near the Study Area

	Resource	Location	Description
1	Children's Park	405 Bridger View Dr.: Approximately 0.7 mile southwest of the Proposed Action (runway) area	Play equipment, picnic tables, single basketball hoop
2	Clarkin Park	Corner of Madison St. and Jackrabbit Ln. Approximately 1.5 mile southwest of the Proposed Action (runway) area	Gazebo, picnic tables, benches, pavilion
3	Corbett Park	Wild Bill Way and Dillinger Rd. Approximately 1.8 mile northwest of the Proposed Action (runway) area	Play equipment, benches, picnic tables
4	Heaths Bikeway	Accessed from Sunnyside Park at 605 Stiles Ave. Approximately 1.6 mile southwest of the Proposed Action (runway) area	Pathway
5	Jerry Askin Park	419 Stone River Rd. Approximately 2 miles southwest of the Proposed Action (runway) area	Pavilions, picnic benches, play equipment, sprots field, dog park, paths, pond, band shelter, seasonal bathroom
6	Kathy Hollensteiner Memorial Park	South Circle Drive Approximately 1.1 mile west of the Proposed Action (runway) area	Play equipment, climbing rock, pavilion, picnic tables, benches, seasonal restroom
7	Kiwanis Park	702 Home Run Dr. Approximately 1.1 mile west of the Proposed Action (runway) area	Play equipment, picnic table, benches, seasonal ice-skating rink with small warming shelter
8	Las Campanas Park	Access from Sunnyside Park at 605 Stiles Ave. Approximately 1.5 mile southwest of the Proposed Action (runway) area	Open Space
9	Lewis and Clark Park	200 East Central Ave. Approximately 1.0 mile southwest of the Proposed Action (runway) area	Play equipment, pavilion, picnic tables, splash pad, benches, skate park, large open space, seasonal restroom
10	Lion's Park	Intersection of Cameron St. and Weaver Rd. Approximately 0.5 mile west of the Proposed Action (runway) area	Play equipment, pavilion, picnic tables, baseball fields, batting cage, seasonal restroom
11	Mayfair Meadows	Mayfair Dr. Approximately 1.4 mile west of the Proposed Action (runway) area	Large open space
12	McMillan Park	902 Las Campanas. Approximately 1.5 mile southwest of the Proposed Action (runway) area	Play equipment, benches
13	Miller Park	1301 Wyoming. Approximately 1.6 mile southwest of the Proposed Action (runway) area	Small open space, benches
14	Peterson Park	1106 Petersen Dr. Approximately 1.6 mile west of the Proposed Action (runway) area	Small open space

	Resource	Location	Description
15	Prarie View Park	Intersection of Arizona St. and Missoula St. Approximately 1.3 mile southwest of the Proposed Action (runway) area	Play equipment, pavilion, picnic tables, large open space, seasonal porta potty
16	Ryen Glenn Park	W. Silver Circle. Approximately 0.8 mile northeast of the Proposed Action (runway) area	Play equipment, pavilion, picnic tables, walking trails, benches, seasonal restroom
17	Senior Center Park	92 East Cameron Ave. Approximately 0.6 mile southwest of the Proposed Action (runway) area	Benches, pathway, open space, horseshoe pits
18	Sunnyside Park	308 Stiles St. Approximately 1.6 mile southwest of the Proposed Action (runway) area	Single basketball hoop, large open space, swings, picnic tables
19	Triangle Park	Davis St. and Madison St. Approximately 1.25 mile southwest of the Proposed Action (runway) area	Picnic Tables
20	Western Park	1207 Cody Dr. Approximately 2 miles northwest of the Proposed Action (runway) area	Play equipment, open space
21	Winter Park	Corner N. Broadway and Park St. Approximately 1 mile southwest of the Proposed Action (runway) area	Seasonal ice-skating rink with a small warming shelter
22	Belgrade Youth Sports Complex	Spooner Rd and Mayfair Dr. Approximately 0.9 mile west of the Proposed Action (runway) area	Athletic fields

Source: City of Belgrade, MT

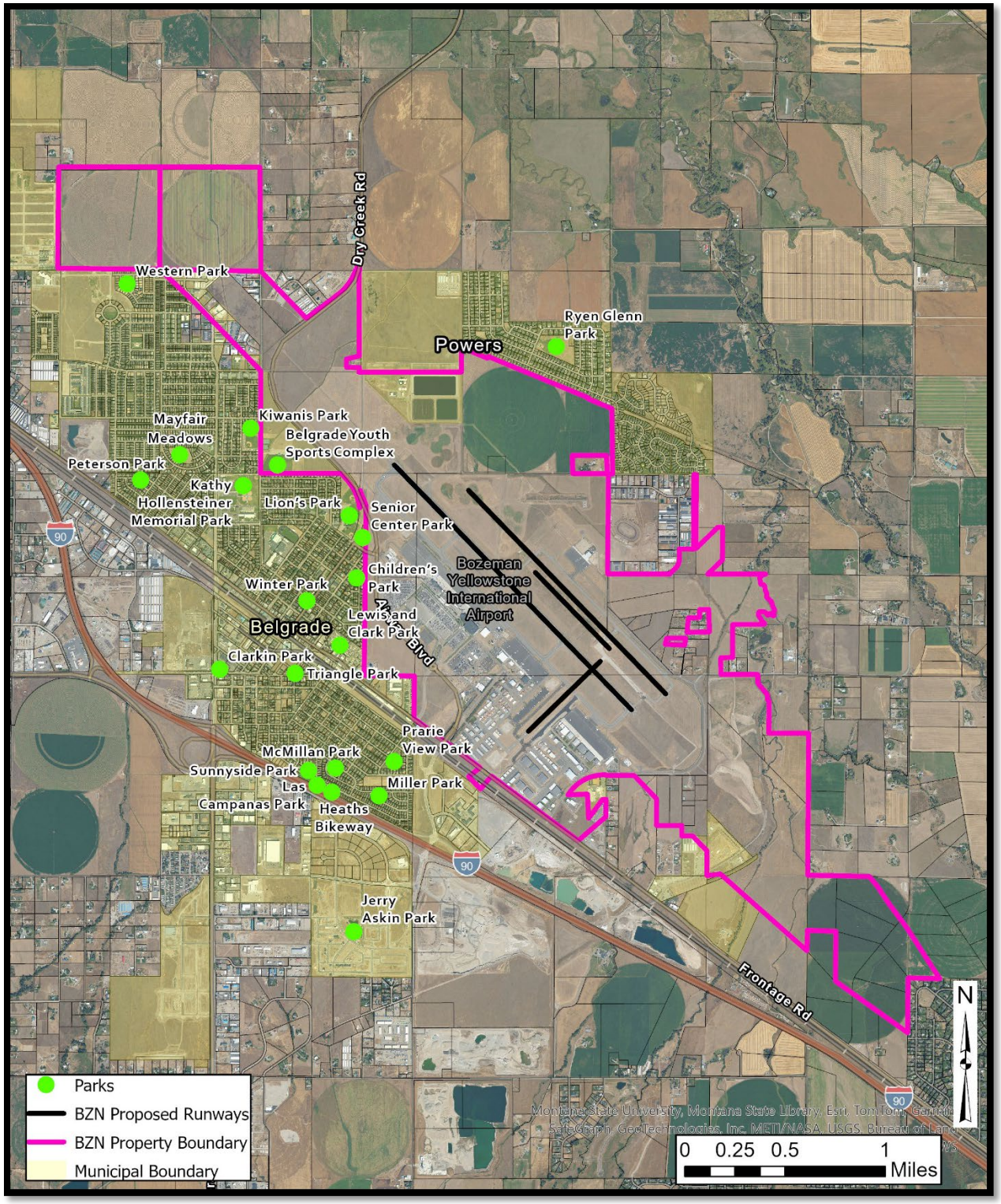


Figure 4-3. Existing 4(f) Parks in the Vicinity of the Airport

Section 4(f) protects historic or archeological properties that are on or eligible for inclusion on the National Register of Historic Places (NRHP). Historic sites were identified during the process required under Section 106 of the National Historic Preservation Act (NHPA). This Section 106 process is detailed in Section 4.8, Historical, Architectural, Archeological and Cultural Resources.

A Class III Cultural Resources Inventory (CRI) and Architectural History Survey was conducted for the Airport and coordinated with SHPO. The CRI report can be found in **Appendix J**.

Results of the CRI records search indicated that there are 15 previously recorded sites (**Table 4-9**) present within a 1-mile radius of the project area or Area of Potential Effect (APE).

Table 4-9: Previously Recorded Sites Within a 1-mile Radius of the Project Area

Site	Site Type	NRHP Status	Relationship to Project Area
24GA1096	Historic Railroad – Northern Pacific Railroad (Low Line Spur)	Eligible	Inside
24GA0391	Historic Residence – Thomas Quaw House	NR Listed	Outside
24GA0394	Historic Homestead/Farmstead – Coscik Farmstead	Unresolved	Inside
24GA0423	Precontact Lithic Material Concentration	Unresolved	Inside
24GA0741	Historic Irrigation System – Mammoth Ditch	Ineligible	Inside
24GA0743	Historic Irrigation System – Spain Ferris Ditch	Eligible	Inside
24GA0768	Historic Industrial Development – Belgrade City Hall and Jail	NR Listed	Outside
24GA1570	Fossil Mammal	Undetermined	Outside
24GA1654	Historic Aviation – 1951 BZN Terminal Building	Eligible	Inside
24GA1901	Historic Exploration - Lewis and Clark National Historic Trail Great Falls to Three Forks	Undetermined	Outside
24GA2225	Historic Commercial Development – Town and Country Food	Ineligible	Outside
24GA2226	Historic Commercial Development – Rocky Mtn Supply	Ineligible	Outside
24GA2293	Historic Commercial Development – Gallatin Farmer's Co.	Undetermined	Outside
24GA2294	Historic Barn	Undetermined	Outside
24GA2295	Historic Residence – Gallatin Valley Milling Co., Employee Housing	Undetermined	Outside

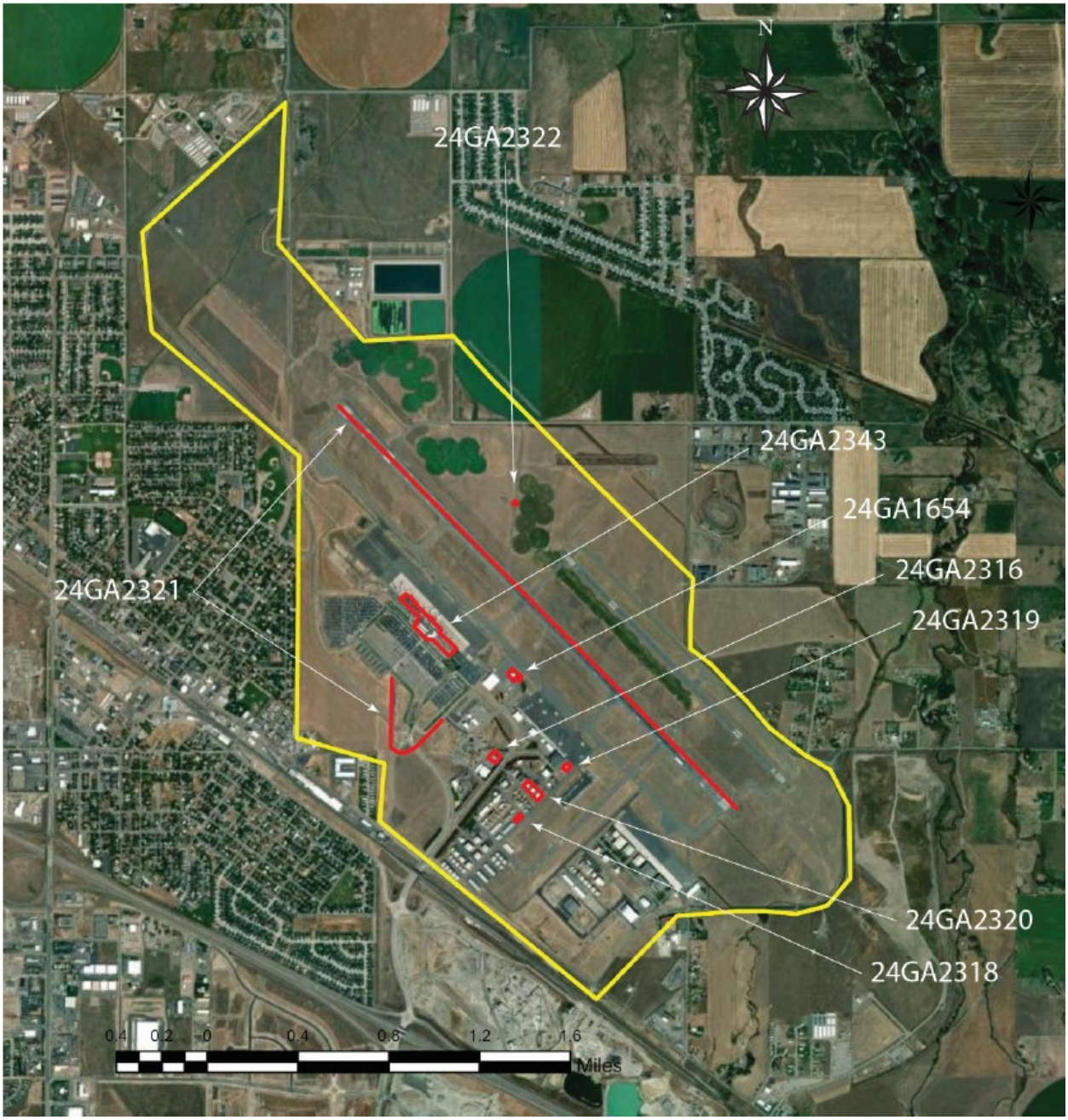
Note: Sites outside of the APE are not mapped within the CRI.
Source: Cultural Resources Inventory in Support of a Bozeman Yellowstone International Airport Environmental Assessment – Extend and Widen Runway 11-29 and Construct North General Aviation Area, Gallatin County, Montana.

Fieldwork conducted as part of the CRI identified a total of 16 cultural resources within the APE, listed in **Table 4-10** and depicted on **Figure 4-4** and **4-5.**

Table 4-10: APE Cultural Resources with Management Recommendations

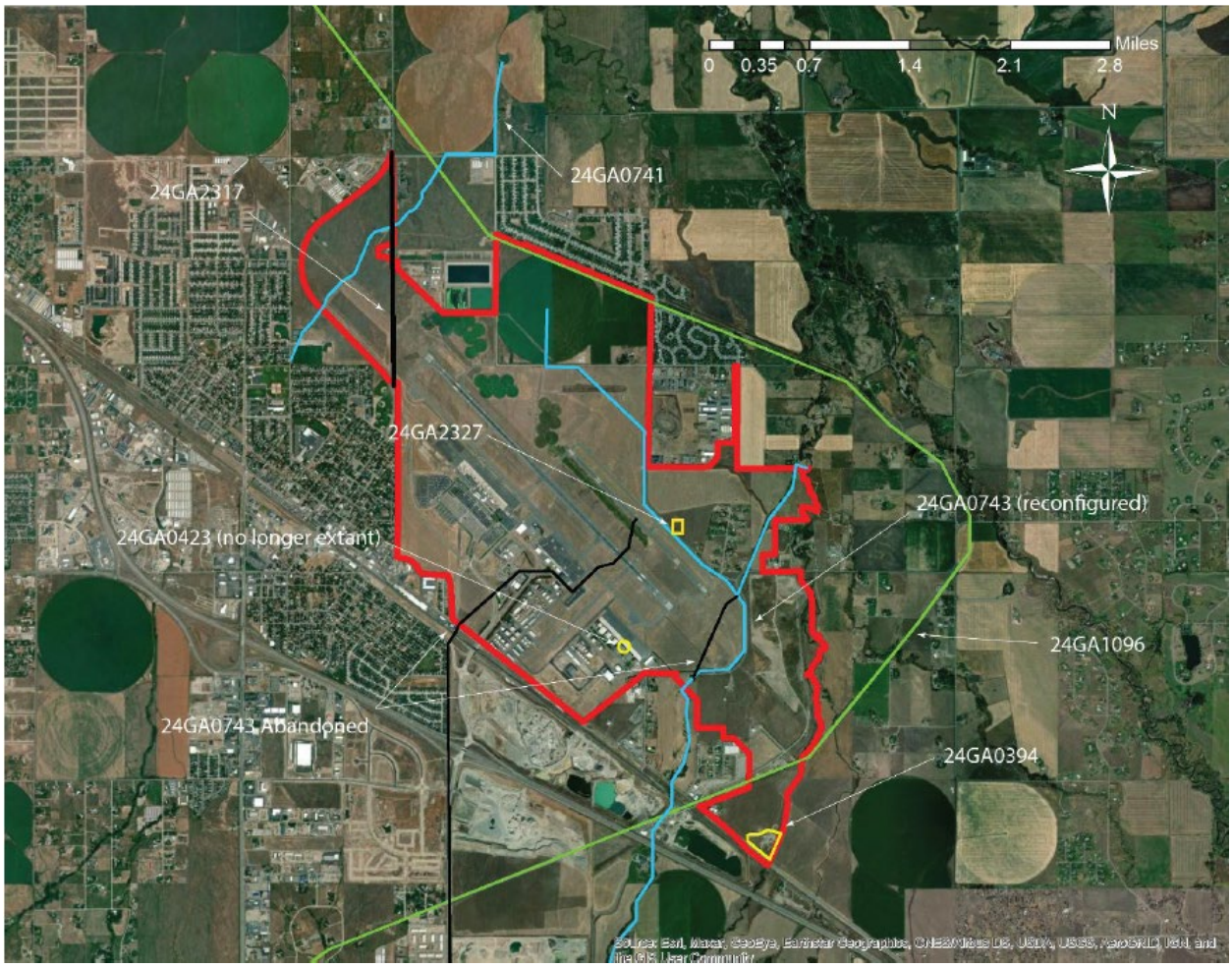
Site Number	Name/ Construction Date	Site Type	Recommended NRHP Status	Project Recommendation
BZN Historic-era Resources				
24GA2322	VOR - 1951	Historic Aviation	Eligible, Criterion A	**Avoid or Mitigate Potential Adverse Effect (HABS/HARE Photography)**
24GA1654	1951 BZN Terminal - 1951	Historic Aviation	Eligible, Criteria A, B, C	**No Adverse Effect**
24GA2321	Old Gallatin Field Taxiway and Runway - 1941	Historic Aviation	Not Eligible	**No Further Work Recommended**
24GA2319	Hangar 6 – Gallatin Flying Service – 1950s	Historic Aviation	Not Eligible	**No Further Work Recommended**
24GA2320	Hangars 8-10 – Lynch Flying Service - 1942	Historic Aviation	Not Eligible	**No Further Work Recommended**
24GA2318	GAA Hangar Building – 1970s	Historic Aviation	Not Eligible	**No Further Work Recommended**
24GA2316	National Guard Armory - 1959	Historic Military	Not Eligible	**No Further Work Recommended**
24GA2343	1977 BZN Terminal - 1977	Historic Aviation	Not Eligible	**No Further Work Recommended**
Ancillary Resources				
24GA0741	Mammoth Ditch - 1866	Historic Irrigation	Not Eligible	**No Further Work Recommended**
24GA2317	Secondary Route 290 – 1945	Historic Transportation	Not Eligible	**No Further Work Recommended**
24GA0423	Precontact Camp – Unknown date	Precontact	Not Eligible/Destroyed	**No Further Work Recommended**
24GA0743	Spain-Ferris Ditch - 1886	Historic Irrigation	Eligible - Criterion A	**Non-Contributing Segment, No Further Work Recommended**
24GA1096	Northern Pacific Low Line Spur - 1919	Historic Railroad	Eligible – Criteria A, B	**Non-Contributing Segment, No Further Work Recommended**
24GA0394	Coscik Place - 1922	Historic Farmstead	Eligible – Criteria A, C	**Not Eligible, No Further Work Recommended**
24GA2327	Heinrich Farmstead - 1914	Historic Farmstead	Not Eligible	**No Further Work Recommended**
BH-ISO-1	Lithic Material – Unknown date	Precontact Isolated Find	Not Eligible	**No Further Work Recommended**

Source: Cultural Resources Inventory in Support of a Bozeman Yellowstone International Airport Environmental Assessment – Extend and Widen Runway 11-29 and Construct North General Aviation Area, Gallatin County, Montana.



Source: Cultural Resources Inventory in Support of a Bozeman Yellowstone International Airport Environmental Assessment – Extend and Widen Runway 11-29 and Construct North General Aviation Area, Gallatin County, Montana.

Figure 4-4: BZN Historic-Era Resources



Source: Cultural Resources Inventory in Support of a Bozeman Yellowstone International Airport Environmental Assessment – Extend and Widen Runway 11-29 and Construct North General Aviation Area, Gallatin County, Montana.

Figure 4-5: BZN Ancillary Historic Resources

Based on the CRI, FAA determined and SHPO concurred that four sites within the APE are eligible for inclusion in the NRHP:

- 24GA2322, Very High Frequency Omni-Directional Range (VOR), is ***eligible*** under Criterion A.
- 24GA1654, 1951 BZN Terminal, is ***eligible*** under any Criteria A, B, and C.
- 24GA0743, Spain-Ferris Ditch, is considered ***eligible*** under Criterion A, but the segments of 24GA0743 located on the BZN grounds are ***non-contributing features***.
- 24GA1096, The Low Line Spur of the Northern Pacific Railroad is considered ***eligible*** under Criteria A and B, but the segments of 24GA1096 on the BZN grounds are ***non-contributing features***.

The sites are discussed in more detail in Section 4.8, Historical, Architectural, Archeological, and Cultural Resources. As the four sites are eligible for listing on the NRHP, they are also protected under Section 4(f).

4.5.2 Environmental Consequences

4.5.2.1 Physical Use

The proposed action will not require acquisition of land from any park, recreational area, or refuge property. As such, no physical use of these types of Section 4(f) protected properties will occur.

The Proposed Action will require relocating the VOR (24GA2322) to another location on the airfield as it is currently in the footprint of the proposed extended runway. There is no prudent and feasible alternative that would allow for physically retaining the VOR's historic character in its current location. The Airport is required to construct a new VOR structure in another location following FAA Order 6820.10 VOR, VOR/DME and VORTAC Siting Criteria and also required to meet FAA maintenance and operations requirements (14 CFR 171.11). FAA concluded and SHPO concurred that the impact will constitute an adverse effect to the VOR (24GA2322). As such, the impact to the VOR is considered a "physical use" of a Section 4(f) resource.

The proposed project will not affect the 1951 BZN Terminal (24GA1654) and will not constitute a physical use to this resource.

4.5.2.2 Constructive Use

Use, within the meaning of Section 4(f), includes not only the physical taking of such property, but also "constructive use." The concept of constructive use is that a project that does not physically use land of a Section 4(f) resource, may still, by means of noise, air pollution, water pollution, or other impacts, severely impact the activities, features, or attributes that qualify the property for protection under Section 4(f). Existing Section 4(f) park, recreational area, and refuge resources in the vicinity of BZN were evaluated for potential constructive use. Also, the historic stretches of the Spain-Ferris Ditch and The Low Line Spur of the Northern Pacific Railroad near the Airport were likewise evaluated for potential constructive use.

The Proposed Action would be consistent with the existing lighting and visual character of the Airport and therefore will not result in additional lighting or visual or effects to Section 4(f) resources. Section 4(f) resources would not experience a DNL 1.5 dB increase at or above DNL 65 dB in 2030 or 2035 as a result of the Proposed Action. As such, there will be no constructive use of a Section 4(f) resources.

More detailed information on light and noise impacts is included in Section 4.9 Visual Effects (Including Lighting) and Section 4.10 Noise and Noise-Compatible Land Use. Both evaluations concluded no significant effect on land uses, including 4(f) resources, within general vicinity of the Study Area.

4.5.3 Significance Threshold, Conclusion and Mitigation Commitments

According to the FAA Order 1050.1G, significant impact thresholds for Section 4(f) property are those that would occur pursuant to NEPA when a proposed action (the Proposed Action) involves more than a minimal physical use of Section 4(f) property or is deemed a "constructive use" substantially impairing the 4(f) property, and mitigation measures do not eliminate or reduce the effects of the use below the threshold of significance.

No Action Alternative

The No Action Alternative would not physically or constructively use Section 4(f) resources. As such there would be no mitigation required.

Proposed Action

The Proposed Action will require the physical use of the BZN VOR. Based on the Section 4(f) Evaluation and coordination between the Sponsor, FAA and SHPO, a finalized Memorandum of Agreement (MOA) has been signed and is attached in **Appendix K**. The MOA includes required mitigation elements including Historic American Buildings Survey (HABS)/Historic American Engineering Record (HAER) level II documentation of the VOR and the design, manufacture, and installation of an interpretive sign for the VOR in the public area of the BZN Terminal.

The proposed project will not affect the 1951 BZN Terminal (24GA1654) and will not constitute a physical use to this resource.

The Proposed Action would be consistent with the existing lighting and visual character of the Airport and therefore will not result in additional lighting or visual or effects to Section 4(f) resources. Section 4(f) resources would not experience a DNL 1.5 dB increase at or above DNL 65 dB in 2030 or 2035 as a result of the Proposed Action. As such, there will be no constructive use of a Section 4(f) resources. More detailed information on light and noise impacts is included in Section 4.9 Visual Effects (Including Lighting) and Section 4.10 Noise and Noise-Compatible Land Use. Both evaluations concluded no significant effect on land uses, including 4(f) resources, within general vicinity of the Study Area.

With the execution of the mitigation measures documented in the Section 4(f) Evaluation and agreed upon in the MOA, the proposed project will have **no significant effect** on resources protected by Section 4(f).

4.6 Farmlands

4.6.1 Affected Environment

The Farmland Protection Policy Act (FPPA), P.L. 97 98, authorized the U.S. Department of Agriculture (USDA) to develop criteria for identifying the effects of Federal programs on the conversion of farmland to nonagricultural uses.

The USDA Natural Resources Conservation Service (NRCS) soil survey of Gallatin County, MT, indicates that 10 mapped soil units (**Table 4-11**) occur within the previously identified Study Area (**Figure 4-1**). The majority (>97% by area) of soils within the Study Area are deep, loamy, well drained, and formed from alluvium (NRCS 2024).

Farmland classification identifies soil units as prime farmland, farmland of statewide importance, farmland of local importance, or unique farmland. The classification recognizes the location and extent of the soils that are best suited to food, feed, fiber, forage, and oilseed crops.

Table 4-11. Soil Units within the Study Area

Map Unit Symbol	Soil Unit Name	Farmland Classification	Acres in AOI	Percent of AOI
741A	Beaverell-Beavwan complex, 0 to 2 percent slopes	Farmland of local importance	674.4	44.0%
241A	Beaverell cobbly loam, 0 to 2 percent slopes	Farmland of local importance	324.7	21.2%
307A	Sudworth silty clay loam, 0 to 2 percent slopes	All areas are prime farmland	181.2	11.8%
33B	Attewan clay loam, 0 to 4 percent slopes	Prime farmland if irrigated	159.4	10.4%
41A	Beaverell loam, 0 to 2 percent slopes	Farmland of local importance	101.2	6.6%

Map Unit Symbol	Soil Unit Name	Farmland Classification	Acres in AOI	Percent of AOI
43A	Beavwan loam, 0 to 2 percent slopes	Farmland of statewide importance	35.6	2.3%
509B	Enbar loam, 0 to 4 percent slopes	All areas are prime farmland	32.4	2.1%
64B	Straw loam, 0 to 4 percent slopes	All areas are prime farmland	21.4	1.4%
511A	Fairway silt loam, 0 to 2 percent slopes	Prime farmland if irrigated	1.6	0.1%
57B	Turner loam, 0 to 4 percent slopes	Prime farmland if irrigated	1.2	0.1%
Total			1,533.1	100%

Most soil units within the AOI are considered prime or important farmland (**Table 4-12**). The core area of the Study Area has functioned as non-farmland to support airport activities since 1929. According to the NRCS, a portion of the Study Area is designated urban area by the US Census Bureau and is therefore excluded from FPPA provisions. The NRCS analyzed the impact of 116-acre parcel.

Table 4-12. Farmland Classification Summary

Farmland Classification	Acres	% of Study Area
All areas are prime farmland	235.0	15%
Farmland of local importance	1,100.3	72%
Farmland of statewide importance	35.6	2%
Prime farmland if irrigated	162.2	11%
Total	1,533.1	100%

4.6.2 Environmental Consequences

With the No Action Alternative, the Proposed Action would not be undertaken. Therefore, no project-related construction would occur and there would be no impact to prime and important farmlands.

The Study Area includes 336 acres of identified farmland. Two hundred and twenty acres of this land is designated Census Urban Area and not included in calculations for relative value below. Therefore, the balance (116 acres) would be removed from agriculture use for future general aviation. Future general aviation uses include paving, creating imperious surfaces.

4.6.3 Significance Threshold, Conclusion and Mitigation Commitments

The NRCS produced the Farmland Conversion Impact Rating Form (AD-1006) as a tool to determine the significance of impacts to farmlands. The form assigns points based on numerous site assessment criteria and the relative value of the farmland to the surrounding area.

Site assessment scores range from 0 to 160 points, while the farmland's relative value for agricultural production can receive between 0 and 100 points. Significant impacts are indicated if the combined total scores between 200 and 260. Scores between 161 and 200 show the potential to adversely affect important farmlands, necessitating further review and alternatives consideration. Scores below 160 are deemed not to require further analysis.

The completed Form AD-1006 for this project was submitted to the NRCS as required by the FPPA. Total assessment points for the conversion of approximately 116 acres of property, not actively farmed for food crops, but mowed for grass and alfalfa hay, is 63. This score does not meet the threshold of 160, demonstrating no further analysis needed. Form AD-1006 is provided in **Appendix L**.

The No Action Alternative will not result in any impacts to “Prime and Important Farmland” as identified by the FPPA.

While the Proposed Action will result in the conversion of approximately 116 acres of property, the results of Form AD-1006 reflect a score of 63. This indicates that there are **no significant impacts** to “Prime and Important Farmland” anticipated to occur and that no mitigation is required.

4.7 Hazardous Materials, Solid Waste, and Pollution Prevention

This section evaluates the potential impacts of the proposed airport expansion on hazardous materials, solid waste, and pollution prevention. NEPA requires that any federally funded, approved, or constructed activity consider these factors to ensure environmental protection and compliance with applicable regulations.

4.7.1 Affected Environment

4.7.1.1 Hazardous Materials

According to the Montana DEQ Data Mapper, accessed on November 15, 2024, no areas requiring EPA oversight during cleanup occur within the existing or proposed boundaries of the Airport (see **Figure 4-6**). The Delta Airlines site (blue triangle marker on (**Figure 4-6**) is listed on a database of sites regulated, or formerly regulated, under the Montana Water Quality Act (WQA) due to a propylene glycol spill reported on February 26, 1997. Cleanup was required by the state, and remedial actions were reported as complete on October 6, 1997. A letter from the Remediation Division of the DEQ—dated October 6, 1997—states that “*…the residual concentrations of propylene glycol remaining in soil at this site do not pose a threat to human health or the environment* (DEQ 1997).” The site was delisted and ranked as “no further action” on the WQA database following the 1997 report.

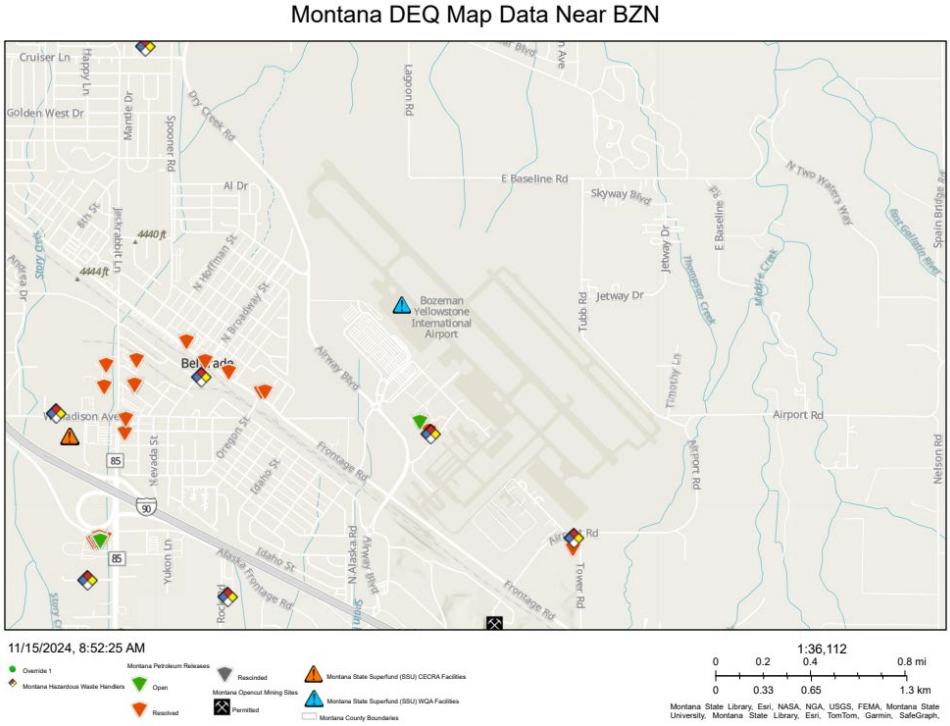


Figure 4-6. Hazardous Materials Sites near Study Area

The Montana Department of Environmental Quality maintains a list of underground storage tank (UST) facility operating permit status throughout the state. There are 14 USTs within one mile of the Study Area, which are listed in **Table 4-13** below (DEQ 2024b).

Table 4-13. Regulated USTs Within 1-mile of BZN

UST Facility Code	Facility Name	Contents	Tank Capacity (gallons)	Last Modified Date
16-12952	GALLATIN FIELD MAINTENANCE SHOP	Diesel	4000	7/26/2022
16-04440	YELLOWSTONE JET CENTER LLC	Aviation Gas	12000	7/10/2024
16-04440	YELLOWSTONE JET CENTER LLC	Jet Fuel (Jet-A, Jet-A1, JP5)	12000	7/10/2024
16-04440	YELLOWSTONE JET CENTER LLC	Jet Fuel (Jet-A, Jet-A1, JP5)	12000	7/10/2024
16-04440	YELLOWSTONE JET CENTER LLC	Jet Fuel (Jet-A, Jet-A1, JP5)	12000	7/10/2024
16-04440	YELLOWSTONE JET CENTER LLC	Jet Fuel (Jet-A, Jet-A1, JP5)	12000	7/10/2024
16-04440	YELLOWSTONE JET CENTER LLC	Jet Fuel (Jet-A, Jet-A1, JP5)	12000	7/10/2024
16-04440	YELLOWSTONE JET CENTER LLC	Jet Fuel (Jet-A, Jet-A1, JP5)	12000	7/10/2024
56-13996	QWEST COMMUNICATIONS	Diesel	1000	3/21/2024
16-07788	TOWN PUMP INC BELGRADE 3	Diesel	10000	12/15/2022
16-07788	TOWN PUMP INC BELGRADE 3	Gasoline	8000	12/15/2022
16-07788	TOWN PUMP INC BELGRADE 3	Gasoline	20000	12/15/2022
60-15152	GALLATIN FIELD AIRPORT	Gasoline	12000	3/13/2024
60-15232	CENTRAL COPTERS	Jet Fuel (Jet-A, Jet-A1, JP5)	10000	6/16/2022

The Yellowstone Jet Center is listed as participating in the Petroleum Tank Release Cleanup Fund, which, according to the Montana DEQ, provides financial resources and a framework for tank owners and operators to manage the cleanup of petroleum contamination.

Two hazardous waste handlers are located on or immediately adjacent to the airport property: the US FAA Bozeman Sector and the Montana National Guard (DEQ 2024b). Both facilities are classified as small quantity generators with no noted records of spills, releases, or violations. Two other hazardous waste generators are located within one mile of the BZN project boundary. **Table 4-14** summarizes the hazardous waste handlers within one mile of BZN.

Table 4-14. Hazardous Waste Generators Within 1-mile of BZN

EPA ID	Site Name	Generator Status	Address	Last Modified Date
MT6211890037	MT ARNG FMS 5 BELGRADE RESERVE CENTER	Small Quantity Generator	361 TOWER RD	4/29/2022
MT9690590048	US FAA BOZEMAN SECTOR FIELD OFC	Conditionally Exempt Small Quantity Generator	33 GALLATIN FIELD	9/30/2020
MTR000207324	JOHNS MANVILLE	Small Quantity Generator	100 S BROADWAY	8/23/2021
MTR000213074	XTANT MEDICAL	Large Quantity Generator	664 CRUISER LN	4/20/2023

4.7.1.2 Solid Waste

Solid waste is defined by implementing regulations of the Resource Conservation and Recovery Act (RCRA) generally as any discarded material that meets specific regulatory requirements and can include such items as refuse and scrap metal, spent materials, chemical byproducts, and sludge from industrial and municipal wastewater and water treatment plants.

Solid waste at BZN consists of waste generated in the terminal building, maintenance facilities, individual hangars, and on-airport businesses. Construction and demolition debris are generated on the airfield during construction and maintenance projects. Deplaned waste comes from waste removed from aircraft that land at BZN. Inert solid waste removed from airport property is typically disposed of in Logan Landfill, operated by Gallatin County. Contractors on airport projects are required in contract documents to handle and dispose of regulated solid waste in accordance with appropriate federal, state, and local laws and regulations.

4.7.1.3 Pollution Prevention

Pollution prevention describes methods used to avoid, prevent, or reduce pollutant discharges or emissions through strategies such as using fewer toxic inputs, redesigning products, altering manufacturing and maintenance processes, and conserving energy. The Pollution Prevention Act (42 U.S.C. 13101-13109) requires pollution prevention and source reduction to reduce the impact waste has on the environment while in use and after disposal.

Recycling receptacles are provided in the terminal and buildings for use by customers and employees.

4.7.2 Environmental Consequences

No known hazardous waste sites are located within the project area. Construction activities for the Proposed Action would produce solid waste. Construction will also result in the short-term use of hazardous materials such as paints and solvents involved in hangar construction as well as fuel, lubricants, oils, and other materials needed for the operation of construction equipment. The use, handling, and storage of these materials will be done in accordance with federal, state, and local regulations to ensure pollution prevention. When practicable, construction and demolition materials will be recycled.

The implementation of the Proposed Action would not change the type or amount of hazardous materials/substances used at BZN for routine aircraft operations or maintenance activities. Furthermore, the proposed improvements would not result in an increased potential for contamination of surface or groundwater at the Airport.

FAA AC 150/5370-10, *Standards for Specifying Construction of Airports, Item C-102, Temporary Air and Water Pollution, Soil Erosion and Siltation Control,* will be followed to minimize the risk of pollution reaching any surface water. This standard also notes that states and municipalities can have more specific regulations that should be followed.

Generated waste materials would be handled and disposed of in accordance with appropriate federal, state, and local laws and regulations. Millings disposal is not anticipated to be necessary with the proposed project.

4.7.3 Significance Threshold, Conclusion and Mitigation Commitments

According to FAA Order 1050.1G, the FAA has not established a significance threshold for hazardous materials, solid waste, or pollution prevention. However, it has identified factors to consider in evaluating the context and intensity of the potential environmental impacts. These factors include situations in which the Proposed Action would have the potential to:

- Violate applicable federal, state, tribal, or local laws or regulations regarding hazardous materials and solid waste management.
- Involve a contaminated site (e.g., a site listed on the National Priorities List).

- Produce an appreciably different quantity or type of hazardous waste.
- Generate an appreciably different quantity or type of solid waste or use a different method of collection or disposal and/or would exceed local capacity.
- Adversely affect human health and the environment.

No Action Alternative

The No Action Alternative would have no effect on hazardous materials, solid waste, or pollution prevention activities because it is a non-development alternative.

Proposed Action

While there is no known hazardous waste contamination within the Proposed Action area, the project improvements have the potential to cause short-term, temporary impacts regarding hazardous materials and solid waste. Proper disposal of construction and demolition materials and a Construction General Permit which includes a Stormwater Pollution Prevention Plan (SWPPP) would be prepared and coordinated with the Montana DEQ, reducing the overall potential for impacts.

The Proposed Action will not 1) violate applicable laws or regulations, 2) involve a contaminated site, 3) generate an appreciably different quantity or type of solid waste or use a different method of collection or disposal that would exceed local capacity, or 4) adversely affect human health and the environment. Therefore, the proposed action is expected to have **no significant effect** on hazardous materials, solid waste, or pollution prevention activities.

The proposed action will adhere to all applicable laws related to hazardous materials and solid waste. No additional mitigation is required or proposed.

4.8 Historical, Architectural, Archeological, and Cultural Resources

The National Historic Preservation Act (NHPA) of 1996, as amended (16 U.S.C. 470 et seq.) established the Advisory Council on Historic Preservation (ACHP) and the National Register of Historic Places (NRHP) maintained by the Secretary of Interior. Section 106 of the NHPA requires federal agencies to consider the effects of their undertaking on properties on or eligible for inclusion in the NRHP. Section 106 also requires consultation with ACHP, the State Historic Preservation Office (SHPO), and/or the Tribal Historic Preservation Officer (THPO) if there is a potential adverse effect to historic properties on or eligible for listing on the NRHP.

The NHPA and its implementing regulations require the identification and evaluation of historical resources that may be affected by a proposed project. It further requires that resources so identified be avoided, if possible, or when avoidance is not possible, that adverse effects of the project on the resources might be mitigated.

For the purposes of Section 106, historic properties are defined as prehistoric and historic sites, buildings, structures, districts, landscapes, and objects that are either eligible for or listed in the NRHP, as well as artifacts, records, and remains related to such properties. Historic properties can also include those cultural resources that are associated with the cultural practices or beliefs of a living community. Historic properties must demonstrate importance in history, architecture, archaeology, engineering, or a culture and meet one or more of the significance criteria identified under Section 106. In addition to demonstrating significance, a historic property must

demonstrate integrity. The seven aspects of integrity include: location, setting, design, materials, workmanship, feeling, and association.

4.8.1 Affected Environment

The undertaking has an area of potential effect (APE) of approximately 4,700 acres. The APE is the same area as the Study Area shown in Figure 4-1. A *Cultural Resources Inventory in Support of a Bozeman Yellowstone International Airport Environmental Assessment – Extend and Widen Runway 11-29 and Construct North General Aviation Area, Gallatin County, Montana* (CRI) was completed in February 2025 to identify potentially eligible historic resources and evaluate potential impacts due to the Proposed Action. The CRI provided a complete architectural evaluation and history of BZN, its buildings, structures, and grounds. The CRI also evaluates the potential for a BZN Historic District.

Fieldwork was conducted to Class III inventory standards in several field sessions in October 2023. A total of sixteen resources were identified during the field inventory, eight on BZN airport property (BZN Resources) and eight off airport property (Ancillary Resources).

FAA determined, and SHPO concurred that twelve resources are not eligible for inclusion in the NRHP under any criteria and no further work is necessary.

- 24GA2357, Bozeman Yellowstone International Airport, as a whole, is ***not eligible*** (not included in the twelve resources).
- 24GA2321, BZN Runway/Taxiway/Apron System, is ***not eligible***.
- 24GA2319, Hangar 6 – Gallatin Flying Service, is ***not eligible***.
- 24GA2320, Hangars 8-10 Lynch Flying Service, is ***not eligible***.
- 24GA2318, Gallatin Airport Authority (GAA) Hangar, is ***not eligible***.
- 24GA2316, National Guard Armory, is ***not eligible***.
- 24GA2343, 1977 BZN Terminal Building, is ***not eligible***.
- 24GA0741, Mammoth Ditch, is ***not eligible***.
- 24GA2317, Secondary Route 290, is ***not eligible***.
- 24GA0423, Precontact Camp, is ***not eligible***.
- 24GA0394, Coscik Place, is ***not eligible***.
- 24GA2327, Heinrich Farmstead, is ***not eligible***.
- BH-ISO-1, Isolated Find, is ***not eligible***.

FAA determined and SHPO concurred that four sites are eligible for inclusion in the NRHP:

- 24GA2322, Very High Frequency Omni-Directional Range (VOR), is ***eligible*** under Criterion A.
- 24GA1654, 1951 BZN Terminal, is ***eligible*** under any Criteria A, B, and C.

- 24GA0743, Spain-Ferris Ditch, is considered ***eligible*** under Criterion A, but the segments of 24GA0743 located on the BZN grounds are ***non-contributing features***.

- 24GA1096, The Low Line Spur of the Northern Pacific Railroad is considered ***eligible*** under Criteria A and B, but the segments of 24GA1096 on the BZN grounds are ***non-contributing features***.

The cultural resource survey report is provided in **Appendix J** and the MOA and Consultation for the Section 106 Process is provided in **Appendix K**.

The FAA invited the Blackfeet Nation, the Confederated Salish and Kootenai Tribes of the Flathead Reservation, the Fort Peck Assiniboine and Sioux Tribes, the Nez Perce Tribe, and the Shoshone-Bannock Tribes of the Fort Hall Reservation to provide information related to the cultural survey and to participate in government-to-government consultation for the proposed improvements. The letters inviting participation were dated May 14, 2025. To date, no comments have been received regarding the presence of cultural or religious significance. Copies of the tribal correspondence are included in **Appendix I**.

On November 3, 2025, FAA submitted Electronic Section 106 Documentation Submittal System (e106) Form notifying the ACHP of the finding that the proposed project may adversely affect historic properties and inviting ACHP to participate in a Section 106 consultation. On November 19, 2025, ACHP responded acknowledging that ACHP did not respond within the 15-day window and reminding FAA of the need to file the Section 106 MOA with the ACHP at the conclusion of the consultation process. Copies of the ACHP correspondence are included in **Appendix I**.

4.8.2 Environmental Consequences

No Action Alternative

No impacts to historical, architectural, archeological and cultural resources have been identified with the No Action Alternative as this is a non-development alternative.

Proposed Action

The 1951 BZN Terminal (24GA1654) is eligible for inclusion in the NHRP, however, the BZN Terminal will not be affected by project-related activities under the Proposed Action. Therefore, the Proposed Action will have ***no effect*** on 24GA1654.

In order to extend Runway 11-29, the VOR (24GA2322) must be relocated from its current location, west of the runway. The footprint of the proposed runway extension overlays the VOR's current location. The VOR is proposed for relocation to the east end of Runway 12-30. When relocated, the VOR is likely to be constructed in accordance with modern standards, impacting its architectural characteristics in addition to impacting its setting. As the VOR is eligible for listing on the NRHP, there will be an **adverse effect** to the VOR with the planned relocation of the facility.

Of the four resources identified by the CRI as eligible for inclusion in the NRHP, two, the Spain-Ferris Ditch (24GA0743), and the Low Line Spur of the Northern Pacific (24GA1096), were determined to lack sufficient integrity within the APE to contribute to eligibility. Therefore, the Proposed Action would have no effect on these resources.

Unanticipated discovery of cultural artifacts is not expected with this project.

4.8.3 Significance Threshold, Conclusion and Mitigation Commitments

According to FAA Order 1050.1G, the FAA does not provide a significance threshold for historical, architectural, archeological, and cultural resources. However, it does provide factors to consider in evaluating the context and intensity of the potential impact an action would have on these resources. These factors include the determination for the action through the Section 106 process (no historic properties affected, no adverse effect, or adverse effect) and if the action involves more than a minimal use of a Section 4(f) resource.

As the non-development alternative, the No Action Alternative will have **no effect** under Section 106 on historical, architectural, archeological, or cultural resources.

The FAA has determined that the need to remove the VOR (24GA2322) will constitute an **Adverse Effect to Historic Properties**. A Memorandum of Agreement (MOA) under Section 106 amongst the FAA, Sponsor and SHPO has been signed to mitigate the adverse effect and is attached in **Appendix K**.

Agreed mitigation includes an Historic American Buildings Survey (HABS) and Historic American Engineering Record (HAER) (HABS/HAER) recordation along with an interpretive display in a public area of the BZN Terminal.

Additionally, the Airport will ensure that contract documents include provisions to ensure that if subsurface cultural manifestations are detected during construction, FAA and SHPO will be notified and work shall be halted until a qualified archaeologist can determine the significance of the resource.

With the execution of the mitigation measures agreed upon in the MOA, the proposed project will have **no significant effect** to historic resources.

4.9 Visual Effects (Including Light Emissions)

4.9.1 Affected Environment

4.9.1.1 Light Emissions

For airports, light emissions of general concern can include ground-based lighting (runway/taxiway lighting, navigational aids, beacons, building/parking lot lighting, etc.), and aircraft lighting from approach lights. Due to relatively low levels of light intensity from airport lighting, light emission impacts are not often identified as having an adverse impact on human activity or the use or characteristics of protected properties. **Table 4-15** lists the light sources that currently exist at BZN.

Table 4-15. Existing Light Sources at BZN

LIGHTING TYPE
High Intensity Runway Lighting (HIRL) - Runway 12-30
Medium Intensity Runway Lighting (MIRL) – Runway 11-29
Distance to Go signage - Runway 12-30
Medium Approach Light System with Runway Alignment Indicator Lights (MALSR) – Runway 12
Precision Approach Path Indicators (PAPIs) – Runway 12-30 and 11-29
Runway End Identifier Lighting (REIL) – Runway 30
Runway Guard Lights (RGRs)
Medium Intensity Taxiway Lighting (MITL) system
Airfield Sign Array

Rotating beacon with clear and green lenses;
Lighted windcones;
Security and apron lighting at the Terminal and miscellaneous buildings and hangars;
Parking lot lighting at the Terminal,
Entrance and circulation road lighting, and
Identification lights, strobe lights, and landing lights typically installed on aircraft.

4.9.1.2 Visual Character

The existing visual character of BZN would be considered an airport setting. The Airport is adjacent to industrial and commercial land uses that are occupied by large structures separated by open land. To the west, the Airport is adjacent to residential neighborhoods to the southwest and lagoons and agricultural land to the west. To the east and north, the Airport is adjacent to residential neighborhoods of varying density, agricultural land, industrial park, and a dirt track racing facility.

4.9.2 Environmental Consequences

4.9.2.1 Light Emissions

Improvements associated with the Proposed Action include the relocation and installation of Medium Intensity Runway Lights (MIRL) on Runway 11-29 and Medium Intensity Taxiway Lights (MITL) on Taxiways B and C and airfield signs. Runway End Identifier Lights (REILs) may be installed at the thresholds of Runway 11-29. Constructed hangars will include exterior lighting typical of a commercial building.

BZN has existed in this area for many decades with comparable lighting features. The relocation and installation of the lights associated with the runway extension would cause light emissions similar to the existing lights, which are currently used to conduct safe airport operations. The new installations associated with the Proposed Action are not anticipated to create an annoyance among people or interfere with normal activities and are consistent with those present at the airport currently.

4.9.2.2 Visual Character

Visual character effects factors to consider are:

- The degree to which the Proposed Action would have the potential to affect the nature of the visual character of the area, including the importance, uniqueness, and aesthetic value of the affected visual resources;
- The degree to which the Proposed Action would have the potential to contrast with the visual resources and/or visual character in the study area(s); and
- The degree to which the Proposed Action would have the potential to block or obstruct the views of visual resources, including whether these resources would still be viewable from other locations.

The Proposed Action would include numerous, large hangars to be built in the area north of the airport and south and west of the homes along Powers Blvd. These hangars will be consistent with the visual character of the existing airport. The Proposed Action would not interfere with the line of sight between the Airport Traffic Control Tower (ATCT) and aircraft movement areas.

4.9.3 Significance Threshold, Conclusion and Mitigation Commitments

According to the FAA Order 1050.1G, the FAA has not established a significance threshold for Light Emissions or for Visual Resources / Visual Character. Factors to consider however, would be if the Proposed Action would have the potential to: 1) create annoyance or interfere with normal activities from light emissions, 2) affect the nature and/or visual character of the area due to light emissions, including the importance, uniqueness, and aesthetic value of the affected visual resources, 3) contrast with the visual resources and/or visual character in the study area, and/or 4) block or obstruct the views of visual resources, including whether these resources would still be viewable from other locations.

The No Action Alternative would have no effect on lighting or visual character as this is a non-development alternative, with no light emissions or visual impacts.

Improvements associated with the Proposed Action include the installation of Medium Intensity Runway Lights (MIRL), Precision Approach Path Indicators (PAPI), Runway End Identifier Lights (REIL), Runway Guard Lights (RGLs), Medium Intensity Taxiway Lights (MITL), airfield signs and exterior building lighting. Because BZN has existed in this area for many decades with comparable lighting features, these new facilities are not anticipated to create an annoyance among people or interfere with normal activities.

The Proposed Action would occupy the viewshed of homes on the south and west sides of Power Blvd but will be consistent with the existing lighting and visual character of the airport and therefore will not result in significant impacts.

The Proposed Action would have **no significant effect** on light emissions, and the visual character within the Study Area and the general vicinity of the Airport. No mitigation is required.

4.10 Natural Resources and Energy Supply

This section considers energy requirements, natural depletable resource requirements, and the conservation potential of alternatives. Though specific significance thresholds for natural resource consumption and energy supply have not been established by the FAA, the proposed action is examined for the potential to cause demand to exceed available or future supplies of these resources.

4.10.1 Affected Environment

Gallatin County has areas rich in natural resources, such as national forestland, wilderness areas, and wildlife refuges. Gallatin County includes about 2,632 square miles or approximately 1,684,480 acres of these natural resources. Twenty-nine square miles of this area (about 1.1%) are water features. Slightly less than half of the County (about 882,000 acres) is in private ownership. The remainder is publicly owned and managed by either the U.S. Forest Service, Bureau of Land Management, National Park Service, Montana Fish, Wildlife, and Parks, Montana Department of Transportation, Department of Natural Resources and Conservation, and various local governments. The Gallatin National Forest (GNF) is the largest single public landholder. The GNF Forest Plan and other respective agency plans govern natural resource management decisions and activities. There are also private lands in the County subject to conservation easements. Such easements are consistent with goals and policies to protect and maintain natural resources such as wildlife habitat.

Electricity and natural gas for Gallatin County, including the Preferred Alternative area, is supplied and delivered by Northwestern Energy.

Energy requirements associated with airport improvements generally consist of either: 1) those related to existing facilities (terminal and airfield lighting requirements), or 2) air/ground vehicle movement requiring fuel consumption.

Implementing the Preferred Alternative will require fuel for construction equipment. However, because project construction activities will be temporary in nature, the impact on fuel consumption related to these activities is also temporary and considered limited. There are also no known sources of minerals or other energy resources on BZN that would be adversely affected by the Preferred Alternative. No increased consumption of fuel from air or ground vehicles are anticipated that would produce a shortage in fuel supplies.

The FAA has not established a significance threshold for Natural Resources and Energy Supply. However, factors to consider include whether the alternative(s) could cause demand to exceed available or future supplies of these resources. While resources will be utilized in the construction of the Preferred Alternative, the quantity is not expected to cause demand to exceed available or future supplies.

4.10.2 Environmental Consequences

No Action Alternative

As no construction activities will occur with the No Action Alternative, no impact to natural resources and energy supply will occur.

Preferred Alternative

Impacts to fuel consumption related to construction activities will be temporary and limited.

4.10.3 Significance Threshold, Conclusion and Mitigation Commitments

As there are no impacts to natural resources and energy supply associated with the No Action Alternative, no mitigation is required. Impacts resulting from the implementation of the Preferred Alternative are anticipated to be insignificant with respect to energy supply, natural resources, and sustainable design, as no energy shortfalls or impacts on energy availability are expected. In addition, there should not be increased consumption from air or ground vehicles that would produce shortages in supplies, beyond the temporary use of construction equipment. No mitigation is required or proposed.

4.11 Noise and Noise-Compatible Land Use

4.11.1 Affected Environment

Airport development projects that have the potential to change an airport's runway configuration; aircraft operations, movements, and types; or aircraft flight characteristics can change the future airport-related noise levels. Noise is measured by the Day-Night Sound Level (DNL), the logarithmic average of sound levels in decibels (dB) and based on a 24-hour Equivalent Sound Level (Leq). The levels are time-weighted, such that noise events occurring during sensitive time periods (from 10pm to 7am) are penalized (i.e., weighted more heavily than those occurring from 7am to 10pm). This penalty accounts for the greater sensitivity to noise during nighttime hours and the decrease in background noise levels during these hours. Determining DNL provides a means of measuring and mapping the potential impacts from airport noise relative to the land uses surrounding an airport.

As part of this EA, a noise analysis was prepared for the Airport, including an analysis of existing conditions. See **Appendix E** for the full report. The noise analysis was developed using the FAA's

Aviation Environmental Design Tool (AEDT) Version 3g. The AEDT is the tool required to evaluate potential aircraft noise impacts from actions subject to NEPA. The AEDT produces aircraft noise contours that delineate areas of equal DNL.

4.11.1.1 Existing DNL Contours (2023)

The existing DNL contours include airport- specific factors used in modeling the existing 2023 DNL contours. The contours were created using 2023 operational data because 2023 was the most current year for which a full year of operational data was available. The 2023 aircraft operations by category are provided in **Table 4-16**. As shown, in 2023 there were 128,217 annual operations (an average of approximately 351 operations per day).

Table 4-16. 2023 Annual Operations

Itinerant					Local			Total
Air Carrier	Air Taxi	General Aviation	Military	Total	Civil	Military	Total	
19,448	12,081	49,545	389	81,463	46,536	218	46,754	128,217

Source: FAA Operations Network (OPSNET)

For the purposes of preparing DNL contours, operational data were segregated by aircraft type. BZN Airport Flight Tracking System data for 2023 was used to develop the AEDT aircraft fleet mix, aircraft day/night percentages, runway use and flight tracks. As required for use in AEDT, annual aircraft operations were converted to annual average-day operations.

The 2023 DNL 65-75 dB contours are provided in **Appendix E**. The DNL 65 dB contour primarily remains within the limits of the existing airport property boundary. There are no noise sensitive structures within the noise contour. The DNL 65dB contour does touch a residential parcel near the intersection of Tubb Road and Airport Road immediately north of the threshold of Runway 29. BZN is in the process of acquiring this and other residential parcels in the neighborhood on a voluntary basis.

4.11.2 Environmental Consequences

The methodology for assessing noise exposure within this EA included preparing DNL contours for the No Action alternative for the year 2030, which is the projected first full year that the airport would operate with the lengthened and widened runway. The contours were developed to assess if a significant noise impact would occur by comparing the noise exposure levels of the future No Action and Proposed Action alternatives. While noise levels are expected to increase in the future due to projected increases in aircraft operations, the Proposed Action itself is not likely to cause or create an increase in aircraft operations. Further, the Proposed Action would move the contours to the northwest, away from the nearest noise sensitive areas to the southeast.

Forecast aircraft operations totals for 2030 and 2035 were obtained from the FAA's Terminal Area Forecast (TAF). FAA's TAF operations forecasts for 2030 and 2035 are provided in **Table 4-17**.

Table 4-17. Forecast Annual Operations

	Itinerant					Local			
Year	Air Carrier	Air Taxi	General Aviation	Military	Total	Civil	Military	Total	Total
2030	24,373	13,840	51,006	455	89,674	44,966	182	45,148	134,822
2035	27,003	14,546	53,345	455	95,349	45,647	182	45,829	141,178

Source: FAA Terminal Area Forecast

4.11.2.1 No Action Noise Exposure - 2030

The 2030 fleet mix was derived from the FAA TAF operation forecast and fleet mix data from the BZN Airport Flight Tracking System. The resultant 2030 average-day aircraft fleet for itinerant and local operations are provided in **Appendix E**. The flight tracks, runway use, and time of day percentages were assumed to be the same as the 2023 condition.

The 2030 No Action DNL 65-75 dB contours are provided in Appendix E. The DNL 65 dB contour primarily remains within the limits of the existing airport property boundary. As with 2023, the DNL 65dB contour touches one residential parcel near the intersection of Tubb Road and Airport Road immediately north of the threshold of Runway 11-29. With increased operations, the 2030 contour extends off airport property to the southeast to impact one additional residential parcel.

4.11.2.2 No Action Noise Exposure - 2035

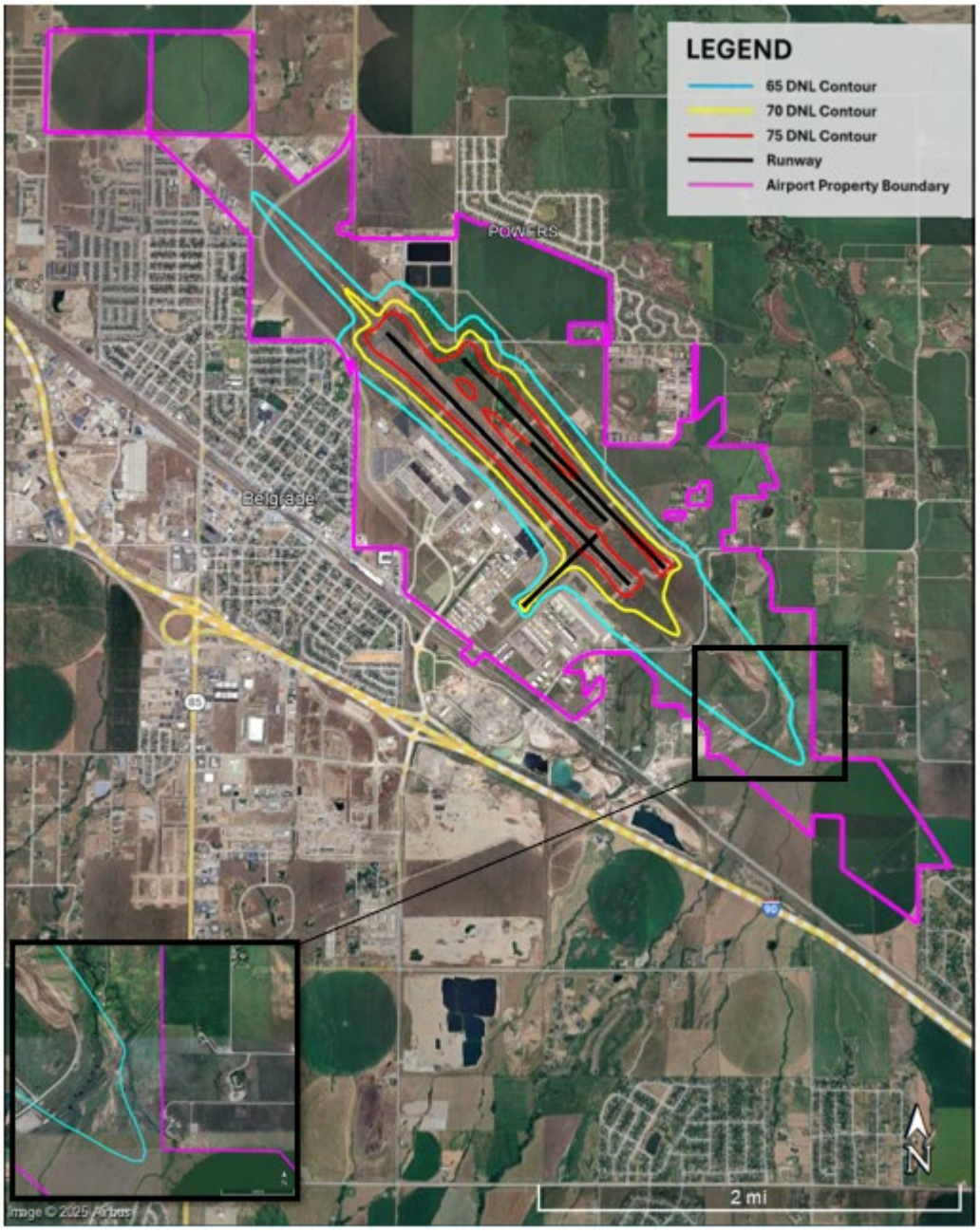
The 2035 fleet mix was derived from the FAA TAF operation forecast and fleet mix data from the BZN Airport Flight Tracking System. The resultant 2035 average-day aircraft fleet for itinerant and local operations are provided in **Appendix E**. The flight tracks, runway use, and time of day percentages were assumed to be the same as the 2030 condition.

The 2035 No Action DNL 65-75 dB contours are provided in **Appendix E**. The DNL 65 dB contour primarily remains within the limits of the existing airport property boundary. As with the 2030 No Action Alternative, the DNL 65dB contour touches one residential parcel near the intersection of Tubb Road and Airport Road immediately north of the threshold of Runway 11-29 and, with increased operations, the 2035 contour extends off airport property to the southeast to impact one additional residential parcel.

4.11.2.3 Proposed Action Noise Exposure - 2030

There would be no change to the number of aircraft operations or fleet mix as a result of implementing the Proposed Action beyond forecast projections. Therefore, the number of aircraft operations and fleet mix for the Future (2030) No Action Alternative would remain the same for the Future (2030) Proposed Action. As a result of implementing the Proposed Action, Runway 11-29 would be suitable for use by larger and faster aircraft. Detailed descriptions of fleet mix, runway use percentages and flight tracks utilized for modeling within AEDT are provided in **Appendix E**.

The 2030 Proposed Action DNL 65-75 dB contours are depicted on Figure 4-7. The DNL 65dB contour touches one residential parcel near the intersection of Tubb Road and Airport Road immediately north of the threshold of Runway 11-29. No new noise sensitive land uses or other noise sensitive structures are introduced to the DNL 65 dB noise contour as a result of the Proposed Action in 2030 as compared to the No Action Alternative.



Source: Morrison-Maierle, 2024.

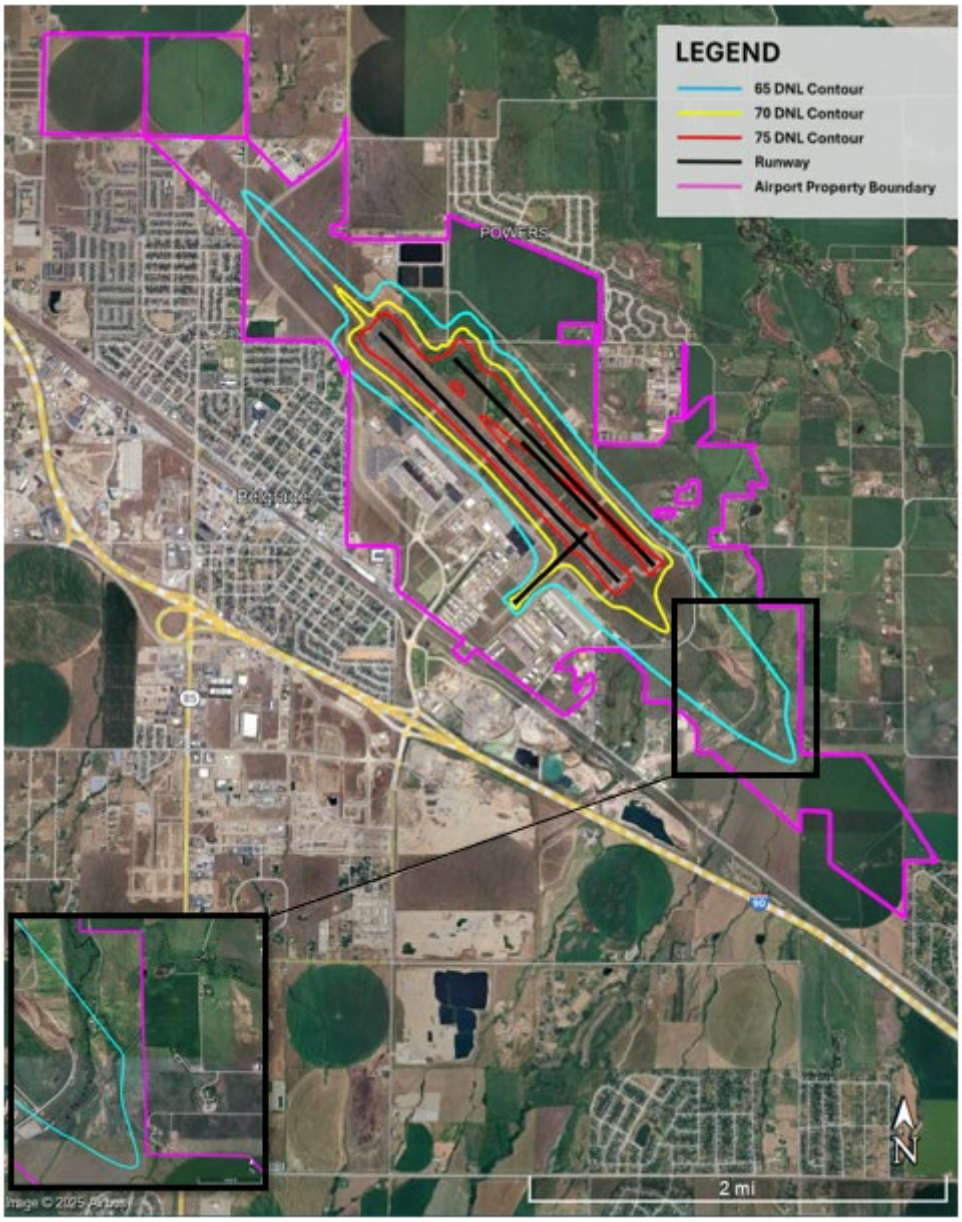
Figure 4-7. 2030 Proposed Action DNL 65-75 dB Contours

4.11.2.4 Proposed Action Noise Exposure - 2035

The 2035 Proposed Action aircraft operations and fleet mix modeled were the same as the 2035 No Action Alternative. Runway use percentages by aircraft type, and flight tracks were adjusted to reflect the 2,430-foot lengthening of Runway 11-29 as detailed in **Appendix E**.

The 2035 Proposed Action DNL 65-75 dB contours are depicted on Figure 4-8. The DNL 65dB contour touches one residential parcel near the intersection of Tubb Road and Airport Road immediately north of the threshold of Runway 11-29. No new noise sensitive land uses or other

noise sensitive structures are introduced to the DNL 65 dB noise contour as a result of the Proposed Action in 2035.



Source: Morrison-Maierle Analysis, 2024

Figure 4-8. 2035 Proposed Action DNL 65-75 dB Contours

4.11.2.5 Proposed Action Construction Impacts

The Proposed Action would result in noise emissions associated with construction activities as identified in Chapter 1. These noise impacts would be localized to project sites and would be short-term and temporary in nature.

4.11.3 Significance Threshold, Conclusion and Mitigation Commitments

Per FAA Order 1050.1G, a significant noise impact would occur if "the action would increase noise by DNL 1.5 dB or more for a noise sensitive area that is [already] exposed to noise at or above

the DNL 65 dB noise exposure level, or that will be exposed at or above the DNL 65 dB level due to a DNL 1.5 dB or greater increase, when compared to the no action alternative for the same timeframe." Noise sensitive areas generally include residential neighborhoods; educational, health, and religious facilities; and cultural and historic sites.

The No Action Alternative would have no effect on noise levels or noise-compatible land use, as it is a non-development alternative. Current noise levels and land uses would remain as they presently exist.

No significant effect on noise and compatible land use are anticipated with the Proposed Action. No noise sensitive areas would experience a DNL 1.5 dB increase at or above DNL 65 dB in 2030 or 2035 as a result of the Proposed Action, and no aircraft noise-related mitigation is required for the proposed improvements.

4.12 Socioeconomic and Children's Environmental Health and Safety Risks

4.12.1 Affected Environment

According to Order 1050.1G, Socioeconomic impacts would include extensive relocation of residents without sufficient replacement housing, extensive relocation of community businesses that would create severe economic hardship for affected communities, disruption of local traffic patterns that substantially reduce the levels of service of the roads serving the airport and its surrounding communities, and the substantial loss of the community's tax base. Children's Environmental Health and Safety Risks concerns would include impacts to the environment (i.e. air quality, noise, and water quality) that have the potential to lead to a disproportionate health or safety risk to children.

4.12.2 Environmental Consequences

Socioeconomic Impacts

Economic impacts of the Preferred Alternative include the required capital outlay for constructing the improvements. The Preferred Alternative was selected through the planning process, in part, due to its lower capital outlay requirement than other development alternatives. Operation and maintenance costs would increase with the additional pavements and electrical systems, but not beyond BZN's expected capabilities to support. The Preferred Alternative is expected to result in positive overall socioeconomic impacts for the community, including business activity and ancillary support services. The majority of this activity is expected to occur during the temporary construction period, with follow-on periods of maintenance and the supply of electricity for lighting and signage.

The Preferred Alternative is not projected to induce substantial economic growth in the area as construction impacts will be temporary, and the improvements are not being made to accommodate additional air traffic but rather to accommodate existing aircraft to bring BZN within service volume thresholds. The reduction in delay should result in savings for aircraft operators due to lower fuel, maintenance, and crew costs. These savings could possibly be applied elsewhere in the local economy. The Preferred Alternative does not disrupt or divide the physical arrangement of an established community, or displace persons or businesses, as all improvements will occur on existing airport property.

Local traffic patterns will be temporarily—and in some cases permanently—altered due to the relocation of portions of Tubb Road and Airport Road, improvements to Tarmac Trail to accommodate taxiways and safety areas needed for the runway extension, and incidental access to project-area roads by construction vehicles and workers. Portions of Lagoon and Baseline

Roads located on airport property will be closed to accommodate safety areas for construction-related vehicles accessing the Preferred Alternative area. Throughout construction, local access will be maintained, and all local businesses will remain accessible.

The increase in traffic due to construction is expected to be limited and is not anticipated to result in negative or disruptive use of local road infrastructure beyond the current level of service. It is expected that much of the construction will be completed by locally based contractors utilizing local labor. This will provide for continued support of the established State income and property tax base. While there may be temporary economic increases within the community from construction workers utilizing hotels, dining establishments, and general retail businesses, these impacts will be limited to the duration of construction.

Neither the No Action Alternative nor the Preferred Alternative is projected to result in any potential to cause factors as noted at the beginning of this section. Therefore, the No Action Alternative and the Preferred Alternative are not expected to significantly impact socioeconomic factors.

Children's Environmental Health and Safety Risks

The No Action Alternative is not expected to result in any change in the existing environment as this is a non-development alternative.

The Preferred Alternative is not projected to introduce any new physical hazards into the existing environment. Emissions from aircraft fuel use and noise will still be present under the existing conditions. Section 4.2, Air Quality, reflects that the area is not in a non-attainment area, nor maintenance area, and is not expected to exceed one or more of the NAAQS pollutants for any of the time periods analyzed for both the No Action Alternative and Preferred Alternative. Section 4.13, Water Quality, does not note any existing or proposed environmental issues associated with the No Action Alternative, nor the Preferred Alternative.

As environmental impacts are not expected to exceed significance thresholds as identified in FAA Order 1050.1G for air quality, noise, and water quality, and there are no other environmental impacts noted that may negatively impact the health and safety of children, it is expected that there will not be any significant impacts as a result of any alternative.

4.12.3 Significance Threshold, Conclusion, Mitigation Commitments

According to the FAA Order 1050.1G, the FAA has not established a significance threshold for Children's Environmental Health and Safety Risks. Factors to consider however, would be if the alternative(s) would have the potential to lead to a disproportionate health or safety risk to children. This may include risks to health or safety attributable to products or substances a child is likely to come into contact with or ingest, such as air, food, drinking water, recreational waters, soil, or products they might use or be exposed to.

No changes will occur under the No Action Alternative, as it is a non-development alternative.

The analysis did not identify any significant impacts to socioeconomic impacts and children's environmental health and safety risks that would occur by implementing the Preferred Alternative. The Proposed Action activities are limited to the land within and immediately surrounding the Airport, and would have no effect on economic activity, employment, income, housing, public services, social conditions, or low-income populations in the vicinity of the Airport. Likewise, the Proposed Action would have no effect on children's environmental health and safety as the proposed construction activities are limited to land currently owned by the Airport or used for agricultural purposes.

There is no mitigation required or proposed for socioeconomic impacts as none of the alternatives are expected to result in negative impacts.

4.13 Water Resources (including Wetlands, Surface Waters, and Groundwater)

The Clean Water Act (CWA) in conjunction with the Fish and Wildlife Coordination Act, Rivers and Harbors Act, the Safe Drinking Water Act, and other local statues establish regulations that protect the Nation's water resources. Water resources include all surface waters and groundwaters – wetlands, floodplains, surface waters, groundwater, and wild and scenic rivers. These are crucial in providing drinking water and in supporting recreation, transportation, commerce, industry, agriculture, and aquatic ecosystems.

"Waters of the United States" (WOTUS) is a legal definition that refers to bodies of water that are subject to federal jurisdiction under the CWA. Not all surface waters are considered WOTUS. A jurisdictional determination is made on a case-by-case basis by the U.S. Army Corps of Engineers (USACE). Non-jurisdictional wetlands are protected under Executive Order 11990.

The following evaluation discusses wetlands, surface waters, and groundwater. (Flood plains, and wild and scenic rivers are discussed in Section 4.1.4.)

4.13.1 Affected Environment

Field delineation of wetlands and other aquatic features occurred in October 2023 and was based on identification of hydric soil conditions, wetland hydrology, and hydrophytic vegetation. The study area was evaluated based on criteria set forth in the 2010 Regional Supplement to the U.S. Army Corps of Engineers USACE Wetland Delineation Manual: Western Mountains, Valleys, and Coast (Version 2.0) (Environmental Laboratory 2010). See Figure 7 in **Appendix H** for a map of the area investigated.

Approximately 10.4 acres of wetlands exist within the study area. Delineated wetlands are grouped into classes by hydrology source, as described in **Table 4-18**.

Table 4-18. Wetland Summary

Name	Cowardin Classification Type	Surface water connection	Description	Acres
Wetland A				**0.259**
A1	Riverine, upper perennial	Hyalite Creek	Pockets and fringe around creek	0.017
A2	Riverine, upper perennial			0.162
A3	Riparian forested			0.069
A4	Riverine, upper perennial			0.010
Wetland B				**7.442**
B1	Freshwater emergent wetland	Dry Creek	Pockets and fringe around creek, within temporarily flooded areas	0.428
B2	Freshwater emergent wetland			0.733
B3	Freshwater emergent & scrub-shrub/forested wetland			4.016
B4	Freshwater emergent wetland			2.264
Wetland C				**1.936**
C1	Freshwater emergent wetland	Spain Ferris Fork Ditch		0.519

Name	Cowardin Classification	Surface water connection	Description	Acres
	Type			
C2	Freshwater emergent wetland		Within temporarily flooded areas/leaking from ditch, ditch fringe	0.271
C3	Freshwater emergent wetland			1.146
Wetland D	Freshwater emergent wetland	Dry Creek/Spain Ferris Fork Ditch	Fringe	**0.529**
Wetland E	Freshwater emergent wetland	Mammoth Ditch	Fringe	**0.257**
Total				**10.423**

The complete methods and results of this delineation are discussed in the wetland delineation report provided in **Appendix H**. All wetlands within the Study Area were determined to be jurisdictional by the USACE Regulatory Office in Helena, Montana.

As discussed in the Wetland Delineation Report, **Table 4-19** lists the surface waters that were identified within the Study Area. These waterways are identified on Figure 2 of the wetland delineation report, provided in **Appendix H**.

Table 4-19. Surface Waters Within Study Area

Surface Waters	Description
Hyalite Creek	Bounds much of the eastern edge of the study area. The channel meanders northwards, with a well-defined bed and bank generally 20-30 feet wide. Large trees with brushy understory border the creek.
Dry Creek	Meanders through the center of the study area in a northwards direction. The creek crosses underneath Airport Road into a fenced airport zone to join the Spain Ferris Fork Ditch for approximately 2,868 feet before leaving the ditch channel at a headgate. Dry Creek becomes brushy, bordered by trees and shrubs, north of Airport Road. The bed and bank are well-defined throughout the study area, despite localized flooding
Spain Ferris Fork Ditch	Flows multiple directions through the airport area. Partial realignment of sections of the ditch is not yet reflected in USGS maps.
Spain Ferris Fork Ditch & Dry Creek (same channel)	Flows northwards in a narrow channel for approximately 2,868 feet before leaving the ditch channel at a headgate south of Airport Road.
Mammoth Ditch	Flows northwards in the western zone of the study area. Although not flowing at the time of study area, facultative vegetation bordering the ditch indicates recent wet conditions.

All waterways delineated within the Study Area were determined to be jurisdictional WOTUS by the USACE Regulatory Office in Helena, Montana. Relevant correspondence is included in **Appendix I**.

There are no Sole Source Aquifers near the Airport nor in Gallatin County. The City of Belgrade draws water for the community (including the Airport) from several wells and stores the water in two water towers. The quality of the water is such that DEQ standards are met without any chlorine treatment, or otherwise. The well depths vary from 80’ to 120’ with groundwater depth varying between 40’ and 60’ throughout the area based on well logs and exposed water table in neighboring gravel pits. For residences outside of City of Belgrade city limits, water is supplied through domestic wells or private water companies.

4.13.2 Environmental Consequences

The Proposed Action has the potential to impact wetlands that are associated with the following waterway work: culvert/relocate/abandon Spain Ferris Ditch lateral; realign Dry Creek and improve existing culverts; abandon or culvert a Dry Creek lateral. These impacts to wetlands will be subject to permitting under Section 404 of the Clean Water Act. Initial design indicates that impacts will likely exceed the 0.1 acre mitigation threshold but be less than 0.5 acre threshold for an Individual Permit .

Under the Proposed Action, the following tasks have the potential to impact surface waters: culvert/relocate/abandon Spain Ferris Ditch lateral; realign Dry Creek and improve existing culverts; abandon or culvert a Dry Creek lateral. Impacts to surface waters will be subject to permitting under Section 404 of the Clean Water Act.

The Proposed Action would increase the amount of impervious surface at the Airport as well as the amount of stormwater runoff.

The Proposed Action would not involve any construction or excavation activities that would have potential to affect groundwater. The Proposed Action does not involve any groundwater development or construction activities associated with new or existing wells. Construction impacts to groundwater are unlikely due to the type of equipment being used and proper use, storage, inspection, and maintenance of equipment.

4.13.3 Significance Threshold, Conclusions and Mitigation Commitments

The No Action Alternative would have no effect on wetlands and surface waters because it is a non-development alternative.

Under the Proposed Action, impact to wetlands and surface waters will occur. Those impacts will be minimized to the extent practicable in consideration of aviation safety needs and will be coordinated with applicable regulatory agencies.

The Airport Sponsor will secure a CWA Section 404 permit from the US Army Corps for impacts to WOTUS. Initial design indicates that the proposed project will likely be permitted under a Nationwide Permit rather than Individual Permit. It is assumed that Nationwide Permit 14 – Linear Transportation Projects, would be a suitable permitting mechanism for project related impacts Preliminary discussions have been had with the COE around proposed improvements, but no specific permitting discussions have been had.

It is anticipated that compensatory mitigation will be required for impacts to WOTUS. It is expected that, as required, compensatory wetland and waterway credits will be purchased from the Upper Missouri Mitigation Bank.

It is also anticipated that a 318 Authorization from MDEQ will be required to authorize short-term increases in turbidity. The contractor will be the permittee for the 318 Authorization.

To account for potential stormwater discharges, FAA AC 150/5370-10, Standards for Specifying Construction of Airports, Item C-102, Temporary Air and Water Pollution, Soil Erosion and Siltation Control, will be followed and the Airport Sponsor will contractually require the contractor to obtain regulatory coverage under the Construction General Stormwater Permit from Montana Department of Environmental Quality.

The Airport's existing industrial stormwater permit will be updated as applicable to reflect any new storm drainage improvements associated with the Proposed Action.

No mitigation is required for groundwater.

With adherence to permits and applicable laws, including compensatory mitigation, the Proposed Action would have **no significant impact** on water resources.

4.14 Proposed Action – Summary of Effects, Mitigation and Significance Determination

The analysis in this EA summarizes the resources present, potential impacts, and mitigations. No significant impacts have been identified. **Table 4-20** provides a summary of the effects, mitigation measures, and significance determinations for each resource from the Proposed Action.

Public involvement, agency and government coordination, and list of preparers of this EA document can be found in **Appendix M**, **I**, and **N** respectively.

Table 4-20. Proposed Action—Summary of Effects, Mitigation Measures, and Significance Determinations

Resource Name	Summary of Effects	Mitigation Measures	Significance Determination
Aviation Emissions and Air Quality	Minor short-term construction emissions and minimal increases with taxi times.	None.	No significant impact.
Biological Resources	Displacement of small mammals and birds.	None.	No effect and no significant effect.
Land Use	No effect.	None.	No significant effect.
Department of Transportation, Section 4(f) & 6(f) Resources	No physical or constructive use of parks, or public areas.	None.	No significant effect.
	FAA determined and SHPO concurred that there will be physical use of the BZN VOR. While there are other historic in and around the APE, there will be no impacts to any other 4(f) or 6(f) resources	MOA to include Historic American Buildings Survey (HABS)/Historic American Engineering Record (HAER) Level II documentation and design, manufacture, installation of an interpretive sign for the VOR in the terminal.	No significant effect.
Farmlands	Conversion of approx. 116 acres with a Form AD-1006 score of 63 points.	None.	No significant impacts.
Hazardous Materials, Solid Waste, Pollution Prevention	Short-term, temporary impacts regarding hazardous materials and solid waste.	Proper disposal of construction and demolition materials and Construction General Permit (includes Stormwater Pollution Prevention Plan (SWPPP)).	No significant effect.
Historical, Architectural, Archeological, and Cultural Resources	FAA determined and SHPO concurred on October 8, 2025, that the need to remove the VOR will constitute an Adverse Effect to Historic Properties. See also Dept. of Transportation 4(f) & 6(f) Resources.	In event unanticipated cultural or historic resource are uncovered, all activities would cease, and the FAA and the MT SHPO would be notified immediately for identification and evaluation. If necessary, the FAA would initiate consultation with SHPO and any interested tribes.	No significant effect.
Visual Effects (Including Light Emissions)	Proposed Action would occupy the viewshed of homes on the south and west sides of Power Blvd but will be consistent with the existing lighting and visual character of the airport.	No mitigation identified; lighting and design would follow existing airport standards.	No significant effect.
Natural Resources and Energy Supply	Temporary impacts associated with construction. Proposed Action impacts anticipated to be insignificant to available resources.	None.	None. Demand not anticipated to exceed supply.

Resource Name	Summary of Effects	Mitigation Measures	Significance Determination
Noise and Noise-Compatible Land Use	No noise sensitive areas would experience a DNL 1.5 dB increase at or above DNL 65 dB in 2030 or 2035.	None.	No significant effect.
Socioeconomic and Children's Environmental Health and Safety Risks	No disproportionate health or safety risks to children and no significant impact identified for socioeconomic factors	None.	None.
Water Resources—Surface Water and Wetlands	Impacts to wetlands and surface waters anticipated.	The Sponsor will contractually obligate the contractor to secure and adhere to applicable state water quality permits. Sponsor to secure CWA Section 404 permit (COE) to be obtained with anticipated compensatory mitigation to include wetland and waterway credits to be purchased from the Upper Missouri Mitigation Bank.	No significant impact.
Water Resources—Groundwater	No effects on groundwater would occur.	None.	No significant impact.

Coastal Resources, Floodplains, and Wild and Scenic Rivers are not reflected as these resources are not present.