DRAFT ENVIRONMENTAL ASSESSMENT

PROPOSED FUEL SYSTEM RELOCATION AND REPLACEMENT, APRON RECONFIGURATION AND EXPANSION, HANGAR ACCESS ROAD RELOCATION AND LAND ACQUISITION

Taylor Municipal Airport, Taylor, Navajo County, Arizona

Prepared For

TOWN OF TAYLOR, ARIZONA

and

United States Department of Transportation
Federal Aviation Administration

Prepared By
Armstrong Consultants, Inc.
Grand Junction, Colorado

MARCH 2015

This environmental assessment becomes a federal document when evaluated, signed and dated by the responsible FAA official.

Responsible FAA Official Date

GENERAL INFORMATION ABOUT THIS DOCUMENT

WHAT'S IN THIS DOCUMENT? This document contains a Draft Environmental Assessment (EA) for the proposed Fuel System Relocation and Replacement, Apron Reconfiguration and Expansion, Hangar Access Road Relocation and Land Acquisition Project at the Taylor Municipal Airport. This document discloses the analysis and findings of the potential impacts of the Proposed Action, the No Action, and other reasonable alternatives.

BACKGROUND. The Proposed Action to relocate and replace the existing fuel system, reconfigure and expand the existing apron, relocate the existing hangar access road, and acquire land for Runway Protection Zone control supports airport safety and operations.

WHAT SHOULD YOU DO? Read the Draft EA to understand the actions that the Town of Taylor and the FAA intend to take on this Proposed Action. Copies are available for review at the Snowflake-Taylor Public Library, the administrative offices of the Town of Taylor, at the FAA's Phoenix Airport District Office, and at the FAA's Western-Pacific Region Office in Hawthorne, CA. A list of these locations where the Draft EA is available is in Chapter 5.

If you have important information you believe has not been considered in this document or comments about the conclusions, you may submit your written comments by letter to the following address:

Justin Pietz
Armstrong Consultants
861 Rood Avenue
Grand Junction, CO 81501

The cutoff date for comment submission is no later than 5:00 PM – Mountain Standard Time, April 20, 2015. Please allow enough time for mailing. We must receive your comments by the deadline, not simply postmarked by that date.

WHAT HAPPENS AFTER THIS? Under the National Environmental Policy Act, the Town of Taylor will prepare written responses to comments received on the adequacy of the information presented in the Draft EA and prepare a Final EA for transmittal to FAA for approval. Following review of the Final EA, the FAA will either issue a Finding of No Significant Impact or decide to prepare a Federal Environmental Impact Statement.

Before including your name, address, telephone number, email, or other personal identifying information in your comment, be advised that your entire comment – including your personal identifying information - may be publicly available at any time. While you can ask us in your comment to withhold your personal identifying information from public review, we cannot guarantee that we will be able to do so.

TABLE OF CONTENTS

CHAPTER 1: PURPOSE AND NEED PAGE

1.1 INTRODUCTION 1-1
1.2 PROJECT BACKGROUND 1-2
1.3 DESCRIPTION OF THE PROPOSED ACTION 1-4
1.4 PURPOSE AND NEED FOR THE PROPOSED ACTION 1-5
1.4.1 TOWN OF TAYLOR'S PURPOSE AND NEED 1-5
1.4.2 FAA'S PURPOSE AND NEED 1-6
1.4.3 REQUESTED FEDERAL ACTION AND ESTIMATED DEVELOPMENT SCHEDULE 1-6
1.5 PRELIMINARY PROJECT SCHEDULE 1-9
1.6 DOCUMENT ORGANIZATION 1-9

CHAPTER 2: DEVELOPMENT ALTERNATIVES PAGE

2.1 INTRODUCTION 2-1
2.2 ALTERNATIVES 2-1
2.3 APPLICABLE GOVERNMENT REGULATIONS 2-2

CHAPTER 3: AFFECTED ENVIRONMENT PAGE

3.1 INTRODUCTION 3-1
3.1.1 PROJECT LOCATION 3-1
3.2 AIR QUALITY 3-2
3.3 COASTAL RESOURCES 3-3
3.4 COMPATIBLE LAND USE 3-3
3.5 CONSTRUCTION ACTIVITIES 3-5
3.6 DEPARTMENT OF TRANSPORTATION ACT: SECTION 4 (F) 3-5
3.7 FARMLANDS 3-7
3.8 FISH, WILDLIFE AND PLANTS 3-8
3.9 FLOODPLAINS 3-10
3.10 HAZARDOUS MATERIALS, POLLUTION PREVENTION AND SOLID WASTE 3-11
3.11 HISTORICAL AND ARCHITECTURAL, ARCHEOLOGICAL AND CULTURAL RESOURCES 3-12
3.12 LIGHT EMISSIONS AND VISUAL IMPACTS 3-12
3.13 NATURAL RESOURCES AND ENERGY SUPPLY 3-12
3.14 NOISE 3-12
3.15 SOCIOECONOMIC, ENVIRONMENTAL JUSTICE, CHILDREN'S ENVIRONMENTAL HEALTH AND SAFETY RISKS 3-13
3.15.1 SOCIOECONOMICS 3-13
3.15.2 ENVIRONMENTAL JUSTICE 3-14
3.15.3 CHILDREN'S ENVIRONMENTAL HEALTH AND SAFETY RISKS 3-14
3.16 WATER QUALITY 3-15
3.17 WETLANDS 3-15
3.18 WILD AND SCENIC RIVERS 3-15

CHAPTER 4: ENVIRONMENTAL CONSEQUENCES AND MITIGATION PAGE

4.1 INTRODUCTION 4-1
4.2 NO POTENTIAL FOR EFFECT 4-1
4.3 AIR QUALITY 4-1

4.4 COMPATIBLE LAND USE 4-2
4.5 FARMLANDS 4-6
4.6 FISH, WILDLIFE AND PLANTS 4-6
4.7 FLOODPLAINS 4-6
4.8 HAZARDOUS MATERIALS, POLLUTION PREVENTION AND SOLID WASTE 4-7
4.9 HISTORICAL AND ARCHITECTURAL, ARCHEOLOGICAL AND CULTURAL RESOURCES 4-8
4.10 LIGHT EMISSIONS AND VISUAL IMPACTS 4-8
4.11 NATURAL RESOURCES AND ENERGY SUPPLY 4-9
4.12 NOISE 4-9
4.13 SECONDARY (INDUCED) IMPACTS 4-10
4.14 SOCIOECONOMIC IMPACTS, ENVIRONMENTAL JUSTICE AND CHILDREN'S ENVIRONMENTAL HEALTH AND SAFETY RISKS 4-10
4.14.1 SOCIOECONOMIC IMPACTS 4-10
4.14.2 ENVIRONMENTAL JUSTICE 4-11
4.14.3 CHILDREN'S ENVIRONMENTAL HEALTH AND SAFETY RISK 4-12
4.15 WATER QUALITY 4-12
4.16 WETLANDS 4-13
4.17 WILD AND SCENIC RIVERS 4-14
4.18 OTHER CONSIDERATIONS 4-14
4.19 DEGREE OF CONTROVERSY ON ENVIRONMENTAL GROUNDS 4-15
4.20 CUMULATIVE IMPACTS 4-15
4.20.1 AIR QUALITY 4-16
4.20.2 COASTAL RESOURCES 4-16
4.20.3 COMPATIBLE LAND USE 4-16
4.20.4 CONSTRUCTION IMPACTS 4-16
4.20.5 DEPARTMENT OF TRANSPORTATION ACT, SECTION 4(F) 4-16
4.20.6 FARMLANDS 4-16
4.20.7 FISH, WILDLIFE AND PLANTS 4-17
4.20.8 FLOODPLAINS 4-17
4.20.9 HAZARDOUS MATERIALS, POLLUTION PREVENTION AND SOLID WASTE 4-17
4.20.10 HISTORICAL AND ARCHITECTURAL, ARCHEOLOGICAL AND CULTURAL RESOURCES 4-17
4.20.11 LIGHT EMISSIONS AND VISUAL IMPACTS 4-17
4.20.12 NATURAL RESOURCES AND ENERGY SUPPLY 4-17
4.20.13 NOISE 4-17
4.20.14 SOCIOECONOMIC IMPACTS, ENVIRONMENTAL JUSTICE AND CHILDREN'S ENVIRONMENTAL HEALTH AND SAFETY RISKS 4-17
4.20.15 WATER QUALITY 4-18
4.20.16 WETLANDS 4-18
4.20.17 WILD AND SCENIC RIVERS 4-18
4.21 SUMMARY OF ENVIRONMENTAL IMPACTS 4-18

CHAPTER 5: COORDINATION AND PUBLIC INVOLVEMENT PAGE

5.1 AGENCY SCOPING 5-1
5.2 DRAFT EA AND NOTICE OF AVAILABILITY 5-1

CHAPTER 6: PREPARERS PAGE

6.1 PREPARERS..... ..6-1

CHAPTER 7: REFERENCES PAGE

7.1 REFERENCES 7-1

TABLES PAGE

1-1 TAYLOR MUNICIPAL AIRPORT TERMINAL AREA FORECAST 1-4
3-1 LIST OF NATIONAL AND STATE FORESTS, PARKS AND WILDERNESS AREAS.....3-6
3-2 PLANTS OBSERVED DURING THE SITE SURVEY OF THE PROJECT AREA 3-8
3-3 WILDLIFE SPECIES OBSERVED DURING THE SITE SURVEY OF THE PROJECT AREA 3-9
3-4 ESA PROTECTED SPECIES IN NAVAJO COUNTY, ARIZONA 3-9
3-5 TOWN OF TAYLOR EMPLOYMENT DISTRIBUTION.....3-14
3-6 TOWN OF TAYLOR ETHNIC GROUP DEMOGRAPHICS.....3-14
4-1 LAND USES 4-4
4-2 ESA PROTECTED SPECIES FOR NAVAJO COUNTY, ARIZONA DETERMINATION OF EFFECT 4-6
4-3 CUMULATIVE PROJECTS WITHIN THE VICINITY OF THE PROPOSED ACTION 4-16
4-4 POTENTIAL ENVIRONMENTAL IMPACTS 4-19

FIGURES PAGE

1-1 LOCATION MAP.....1-1
1-2 EXISTING FUEL TANK 1-2
1-3 EXISTING AIRPORT FACILITIES.....1-3
1-4 EXISTING APRON 1-4
1-5 PROPOSED ACTION 1-7
1-6 PROPOSED APRON RECONFIGURATION/EXPANSION 1-8
1-7 AIRPORT LAYOUT PLAN.....1-11
1-8 EXHIBIT "A" PROPERTY MAP.....1-12
3-1 LOCATION AND VICINITY MAPS 3-1
3-2 NONATTAINMENT MAP 3-3
3-3 TAYLOR ZONING MAP 3-4
3-4 EXISTING LAND PARCELS.....3-5
3-5 SURROUNDING SECTION 4(F) RESOURCES.....3-6
3-6 FARMLAND CLASSIFICATION MAP.....3-7
3-7 FLOODPLAIN MAP 3-11
3-8 EXISTING 65 DNL NOISE CONTOUR.....3-13
3-9 WETLANDS SURROUNDING THE TAYLOR MUNICIPAL AIRPORT 3-16
4-1 SURROUNDING LAND USES 4-3
4-2 UNECONOMICAL REMNANTS.....4-11

APPENDICES

A. AGENCY COORDINATION
B. AGENCY RESPONSE
C. PUBLIC INVOLVEMENT
D. CULTURAL AND BIOLOGICAL SURVEYS
E. AIR QUALITY EMISSIONS INVENTORY

CHAPTER 1
PURPOSE AND NEED

TAYLOR MUNICIPAL AIRPORT
ENVIRONMENTAL ASSESSMENT

CHAPTER ONE
PURPOSE AND NEED

1.1 INTRODUCTION

The Town of Taylor proposes to relocate and replace the airport fuel system, reconfigure and expand the apron, relocate the hangar access road, and acquire land to secure the Runway Protection Zone.

The Taylor Municipal Airport is located in eastern Arizona, approximately two miles southwest of the Town of Taylor, in Navajo County, Arizona. The Town of Taylor is located in the valley of Silver Creek, on Arizona Highway 77. Surrounding land features include the Mogollon Rim and the White Mountains to the south and west of Taylor. The Town of Taylor is also located immediately south of its sister city, Snowflake, Arizona. Taylor lies in an area of great contrast- barren desert to the north and mountain ranges to the south. The Petrified Forest National Park, located North of Taylor is one of the nations' most unique parks. Within the Petrified Forest National Park is the Painted Desert and north of the park is the Navajo Indian Reservation with such attractions as Monument Valley and Oraibi, the oldest continually occupied village in the United States To the south and west of Taylor are high mountains and forests, including the White Mountain, Sitgreaves National Forest and the Mogollon Rim.

The airport is located within the Taylor Town limits at an elevation of 5,823 feet above Mean Sea Level (MSL), in Sections 3 and 9, Township 12 North, Range 21 East of the Gila and Salt River Meridian. According to the airport property deeds the Taylor Municipal Airport property encompasses 198.5 acres and is owned and operated by the Town of Taylor, Arizona. The airport is located at 34° 27' 09.84" N Latitude and 110° 06' 54.12" W Longitude, according to the current Airport Layout Plan (ALP) dated February, 2010. Figure 1-1 shows the location of the Taylor Municipal Airport in relation to other public-use airports within the State of Arizona.

The Taylor Municipal Airport is included in the Federal Aviation Administration's (FAA) National Plan of Integrated Airport Systems (NPIAS) and the Arizona State Airport System Plan. As such, it is eligible for federal grant assistance

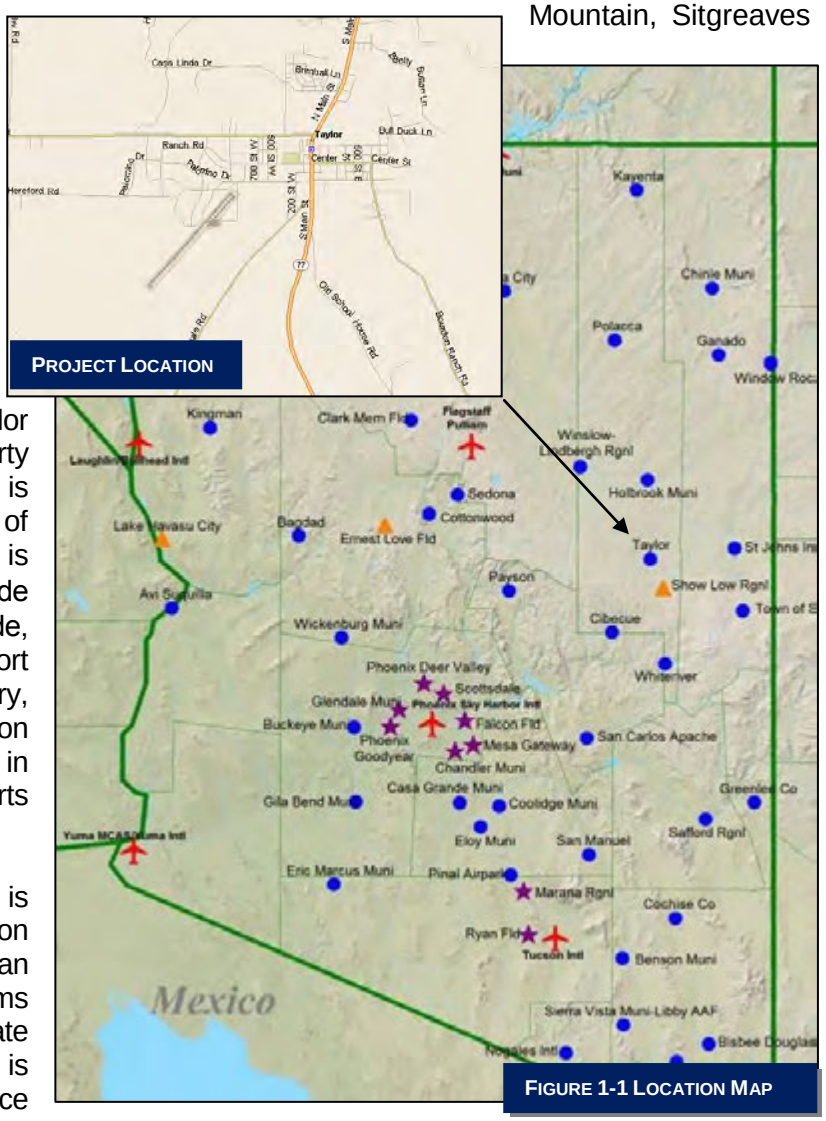


FIGURE 1-1 LOCATION MAP

under the Airport Improvement Program (AIP) and grant assistance from the Arizona Department of Transportation (ADOT) Multimodal Planning Division (MPD) Aeronautics Group.

The Taylor Municipal Airport is a General Aviation (GA) Airport and is identified as a GA-Community Airport in the 2008 Arizona State Airports System Plan. As defined by the Arizona State Airports System Plan, GA-Community Airports are airports that serve regional economies, connecting to state and national economies and serve all types general aviation aircraft.

1.2 PROJECT BACKGROUND

Existing facilities at the Taylor Municipal Airport include a single runway, Runway 3/21, a full length parallel taxiway, aircraft parking apron, terminal building, fixed based operator (FBO), fuel storage and aircraft hangars as shown in Figures 1-2. Runway 3/21 is 7,000 feet by 75 feet wide with a pavement strength of 12,500 pounds single wheel gear (SWG). The aircraft parking apron is connected to the runway via five connector taxiways and a full length parallel taxiway. Runway 3/21 is lighted with pilot-controlled Medium Intensity Runway Lights (MIRL) and the taxiways are identified with retro-reflective markers. Visual aids include Precision Approach Path Indicators (PAPIs), Runway End Identifier Lights (REILs) on both ends of Runway 3/21, airport beacon, lighted windcone and segmented circle. The aircraft parking apron consists of approximately 17,600 square yards and 22 aircraft tie downs with a pavement strength of 12,500 pounds SWG. Existing hangar facilities include 13 hangars consisting of one conventional/box hangar and 12 T-hangars. The 4,800 square foot terminal building includes a lobby area, pilot briefing room, airport manager's office, pilot lounge, and restrooms. Fuel storage includes one 5,000 gallon aboveground storage tank (ASTs) for 100LL AvGas. The Taylor Municipal Airport has a non-precision GPS approach to Runway 21. The existing airport fuel tank is shown in Figure 1-2. The runway was reconstructed in 2009 as part of an American Recovery and Reinvestment Act (ARRA) project.

FIGURE 1-2 EXISTING FUEL TANK

The existing facilities are shown in Figure 1-3 and the existing apron is shown in Figure 1-4.

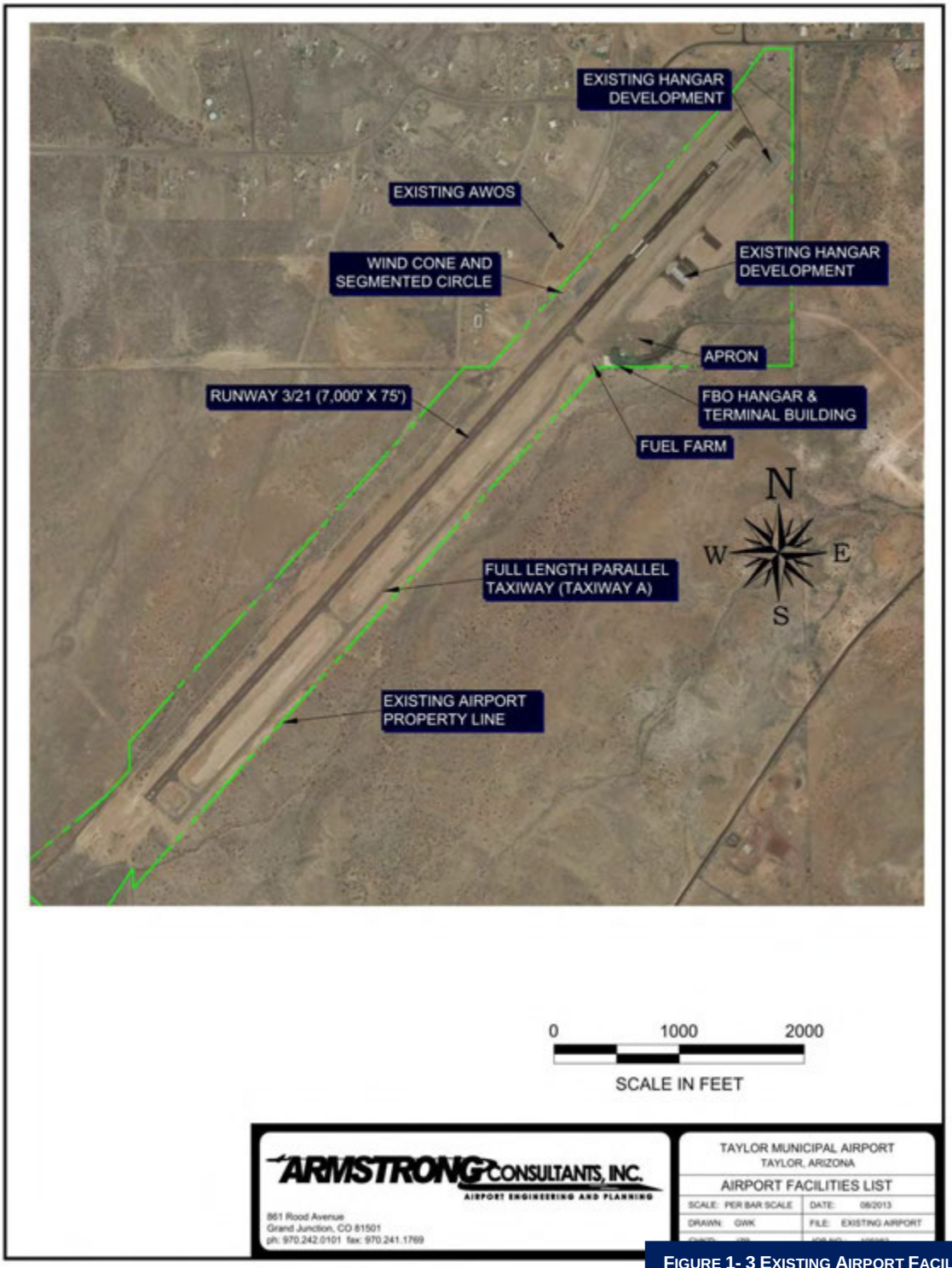


FIGURE 1- 3 EXISTING AIRPORT FACILITIES

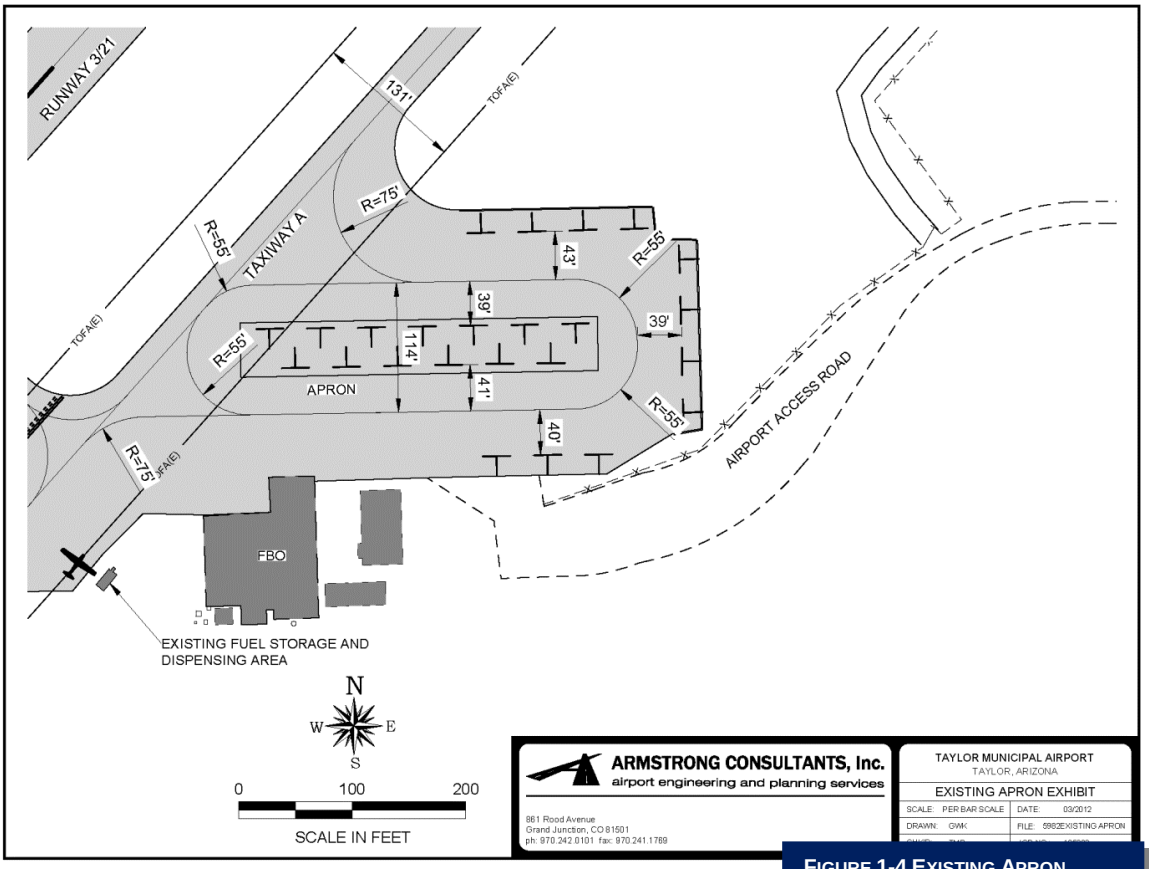


FIGURE 1-4 EXISTING APRON

The forecast of aviation activity at the Taylor Municipal Airport was obtained from the FAA's Terminal Area Forecast (TAF) depicted in Table 1-1 and is the most recent available forecast for the airport. The Airport Master Plan forecast is dated 2005.

TABLE 1-1 TAYLOR MUNICIPAL AIRPORT TERMINAL AREA FORECAST

Year	Air Taxi & Commuter	General Aviation	Total Itinerant Operations	Local Operations	Total Operations	Total Based Aircraft
2015	200	1,400	1,600	2,200	3,800	36
2020	200	1,400	1,600	2,200	3,800	36
2025	200	1,400	1,600	2,200	3,800	36

Source: FAA, 2013

1.3 DESCRIPTION OF THE PROPOSED ACTION

This Environmental Assessment (EA) has been prepared in accordance with the requirements of Section 102(2) (c) of the National Environmental Policy Act (NEPA) of 1969 (PL 91-190, 42 United States Code (USC) 4321 et. seq.) and 49 Code of Federal Regulations (CFR) 471. Through NEPA, Congress requires federal agencies to consider the environmental effects of the Proposed Action and reasonable alternatives, including the No Action alternatives per 40 CFR 1502.14.

The format and subject matter included within this report conform to the requirements and standards set forth by the FAA as contained within FAA Order 1050.1E, *Environmental Impacts: Policies and Procedures*; FAA Order 5050.4B, *NEPA Implementing Instructions for Airport Actions*; and the Environmental Desk Reference for Airport Actions.

This EA will evaluate the environmental impacts of the Proposed Action that includes the following projects:

1) Relocation and replacement of the fuel system outside of the existing Taxiway Object Free Area (OFA). The proposed action would include removing the existing above-ground tank and replacing the existing 5,000 gallon 100LL AvGas tank with a 10,000 gallon 100LL AvGas. The fuel system would be relocated on the reconfigured apron outside of the Taxiway OFA. There would be no ground disturbing activities related to the relocation and replacement of the fuel system. The existing fuel system would be disposed of at the nearest landfill approved to accommodate deactivated fuel systems.
2) Reconfiguration of the aircraft parking apron and tiedowns to meet Group II design standards. This proposed action would include crack seal, fog seal, removal of existing tiedown configuration and the addition of approximately 9,000 square yards of pavement to provide a combination of Group I and Group II taxilane separation. The depth of the ground disturbance would be approximately 12 to 16 inches.
3) Replacement of the aircraft hangar access road outside of the Runway Object Free Area (ROFA) and Runway Safety Area (RSA). The proposed action would include constructing approximately 1,600 linear foot of a 24 foot wide gravel road along the southeast side of the hangars. The depth of the ground disturbance would be approximately three to four inches. A vehicle parking lot would also be constructed of gravel. The vehicle parking lot would be approximately 10 feet wide and 200 feet in length and have a ground disturbance of approximately three to four inches. This proposed alignment would provide access to existing and future hangar development outside of the Taxiway OFA, ROFA and RSA areas.
4) Acquisition of four acres of land (Parcel 4) to obtain control of the RPZ. The proposed action would acquire the four acres of land fee simple.

The proposed action development projects are shown in Figure 1-5 and Figure 1-6.

1.4 PURPOSE AND NEED FOR THE PROPOSED ACTION

The CEQ regulations implementing NEPA require that an EA specify the underlying Purpose of and need to which an agency is responding in proposing actions and alternatives (40 CFR 1502.13).

1.4.1 TOWN OF TAYLOR'S PURPOSE AND NEED

The purpose and need for the proposed action is to provide an airport that meets the needs of the airport users in a safe, efficient and economically feasible manner. The Taylor Municipal Airport provides air transportation to the Town of Taylor and surrounding communities with access to air medivac services, aerial firefighting services, personal transportation, business transportation, government transportation, flight training activity and recreational flights.

The detailed purpose and need for the proposed action items are listed below.

1) The existing above ground fuel tank located adjacent to Taxiway A results in a penetration of the Taxiway Object Free Area (Taxiway OFA) when aircraft park in front of the tank during re-fueling operations. According to FAA design standards, objects and structures, including fuel systems, need to be located outside of the Taxiway OFA in order to ensure wing tip clearance when aircraft are taxiing on the taxiway centerline. These fueling aircraft block the parallel taxiway requiring aircraft to back-taxi on the runway for departure or after landing. The relocation of the fuel tank to a central location within the apron area to meet the Taxiway OFA requirements is necessary to avoid aircraft from having to back taxi on the active runway, increasing the chances of a runway incursion, while aircraft are conducting re-fueling operations. Additionally, providing adequate OFA would minimize the risk of aircraft wingtip collisions while on the taxiway. The Town of Taylor also has a need to increase the capacity of the existing fuel tank to allow full tanker truck deliveries at the airport. The current tank can only accommodate a half delivery which results in increased fuel delivery costs making the airport less desirable due to fuel costs.

2) The existing aircraft parking apron remains fully utilized with existing based and continuous transient aircraft. The existing apron provides 79 feet of Taxilane Object Free Area (Taxilane OFA), which provides adequate wingtip clearance between the tiedowns, for Group I design standards. However, since the airport is configured to accommodate Group II design standards, it is recommended that the distance between tiedowns along the taxilane be increased to 115 feet of Taxilane OFA. In doing so, this would minimize the risk of aircraft wingtip collisions on the movement area by providing adequate separation distances.

3) The existing access road to the T-hangar area is located within the Runway Object Free Area (ROFA) and Runway Safety Area (RSA). In the event of a runway excursion, objects located within the ROFA and RSA pose significant threats to aircraft. This portion of access road needs to be closed, relocated and/or removed from the ROFA and RSA to eliminate the non-standard condition. According to FAA design standards roads are not permitted within the ROFA or RSA.

4) Portions of the Runway Protection Zone (RPZ) on the approach end of Runway 21 are currently uncontrolled by the airport. Gaining control of the RPZ is needed to avoid future incompatible development and to protect the Federal investment in the airport. The existing land owner has stated their preference to develop the parcel, which is considered to be an incompatible land use within a RPZ.

1.4.2 FAA'S PURPOSE AND NEED

FAA's statutory mission is to ensure the safe and efficient use of navigable airspace in the U.S. The FAA must ensure that the Proposed Action does not derogate the safety of aircraft and airport operations at Taylor Municipal Airport. Moreover, it is the policy of the FAA under 49 USC §47101(a)(13) that airports should be as self-sustaining as possible. In addition, under §47101(a)(6) it is policy that airport development projects provide for the protection and enhancement of natural resources and the quality of the environment in the U.S.

1.4.3 REQUESTED FEDERAL ACTION AND ESTIMATED DEVELOPMENT SCHEDULE

To correct existing nonstandard conditions and provide surrounding land use control the Town of Taylor requests the necessary funding and environmental approval of the proposed action. The proposed action is identified on the 2010 FAA conditionally approved Airport Layout Plan (ALP) for the Taylor Municipal Airport, included in Figure 1-7. The FAA is the lead federal agency responsible for environmental approval.

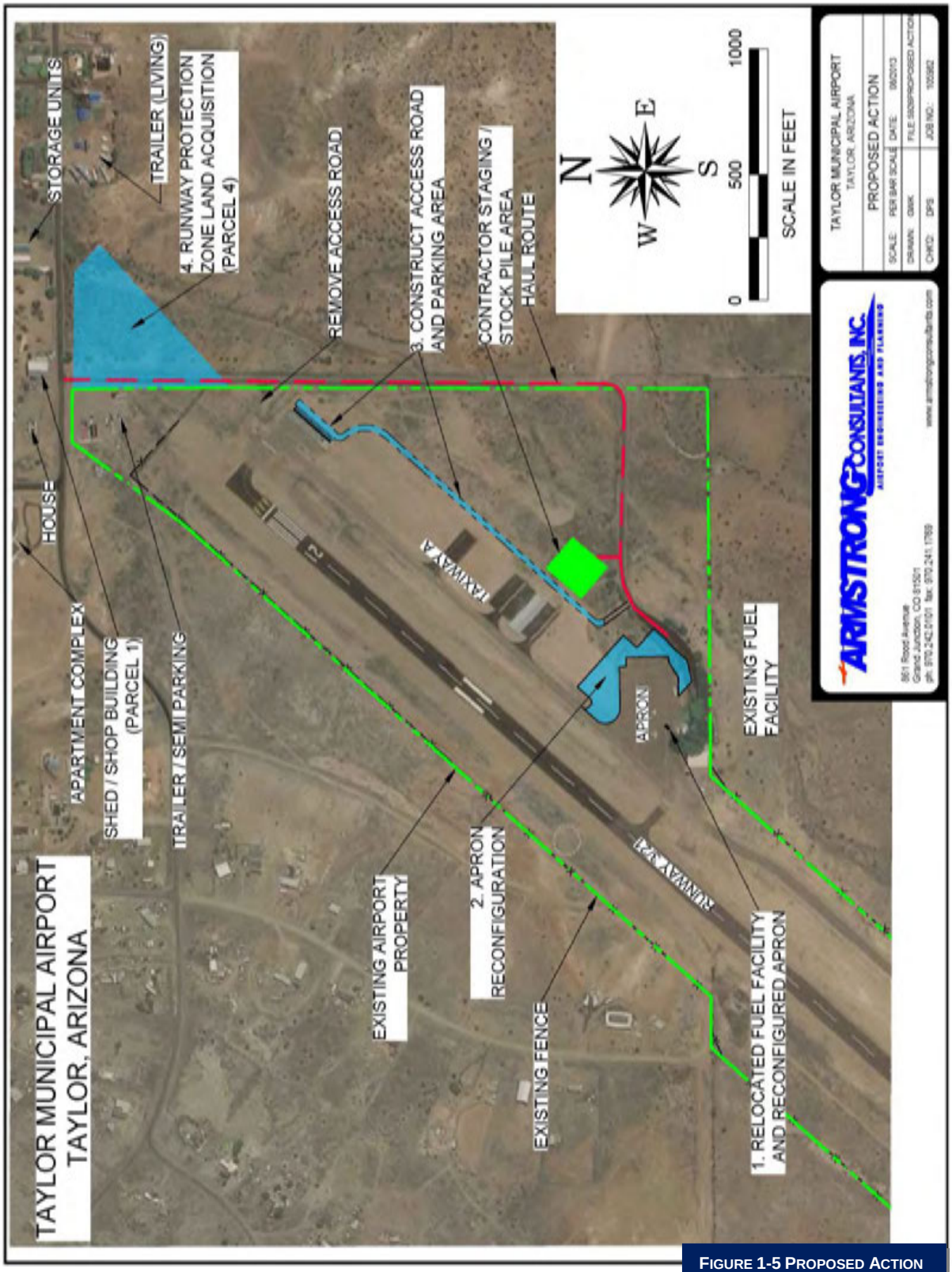


FIGURE 1-5 PROPOSED ACTION

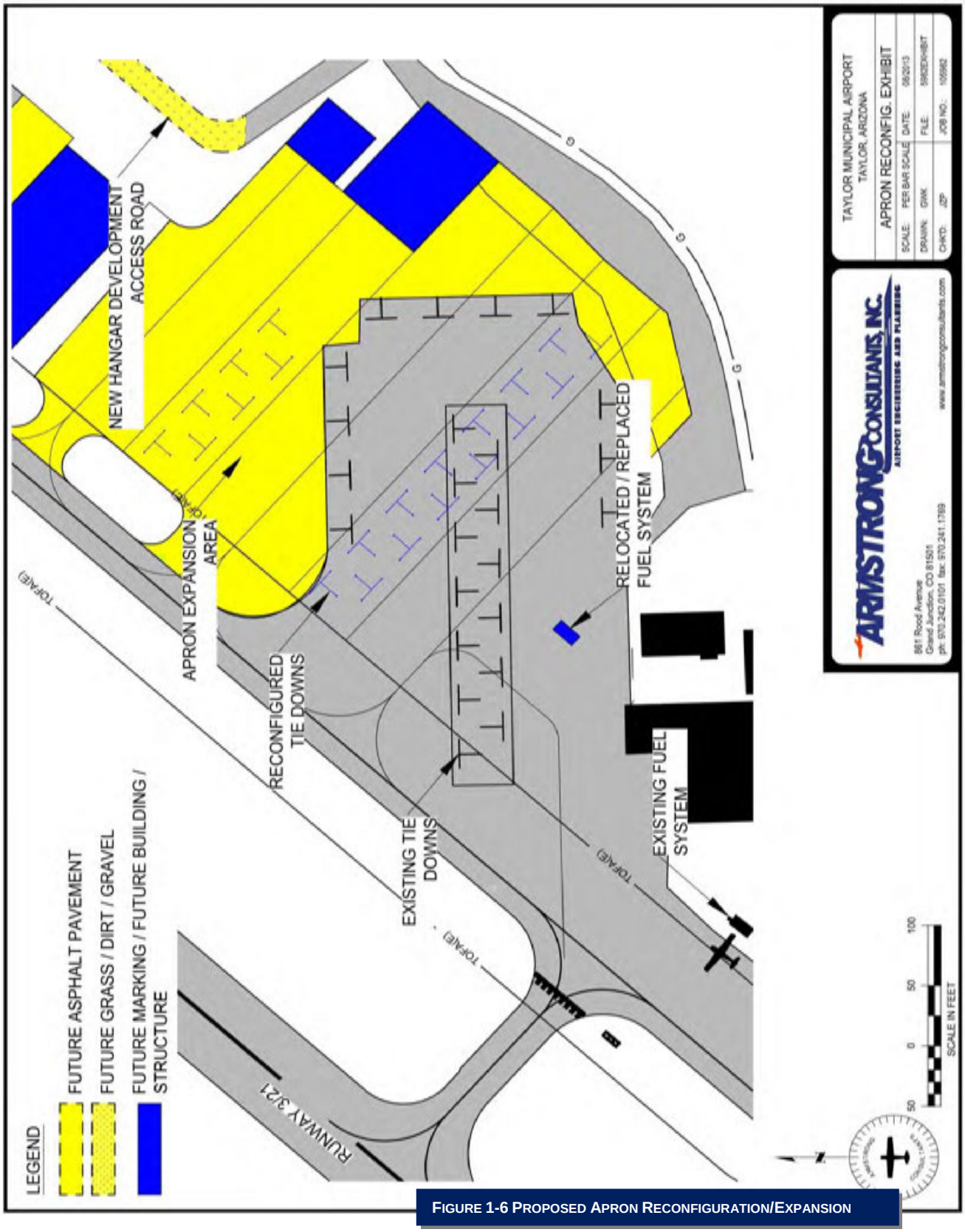


FIGURE 1-6 PROPOSED APRON RECONFIGURATION/EXPANSION

1.5 PRELIMINARY PROJECT SCHEDULE

The Environmental Assessment is needed to assess and disclose the environmental impacts of the proposed federal action. The EA process is anticipated to be completed in 2015. Should a FONSI be issued, the engineering and design process and land acquisition would begin in 2016.

1.6 DOCUMENT ORGANIZATION

The Contents of each section in the EA are summarized below:

- Chapter 1, Purpose and Need, provides a description of the Taylor Municipal Airport and the Proposed Action, its purpose, and why it is needed.
- Chapter 2, Alternatives, provides an overview of the identification and screening of alternatives considered as part of the environmental evaluation process.
- Chapter 3, Affected Environment, describes existing environmental conditions within the project study areas.
- Chapter 4, Environmental Consequences, discusses and compares the environmental impacts associated with the Proposed Action and the No Action Alternative.
- Chapter 5, List of Preparers.
- Chapter 6, List of Abbreviations and Acronyms.
- Chapter 7, References.

This Page Intentionally Left Blank

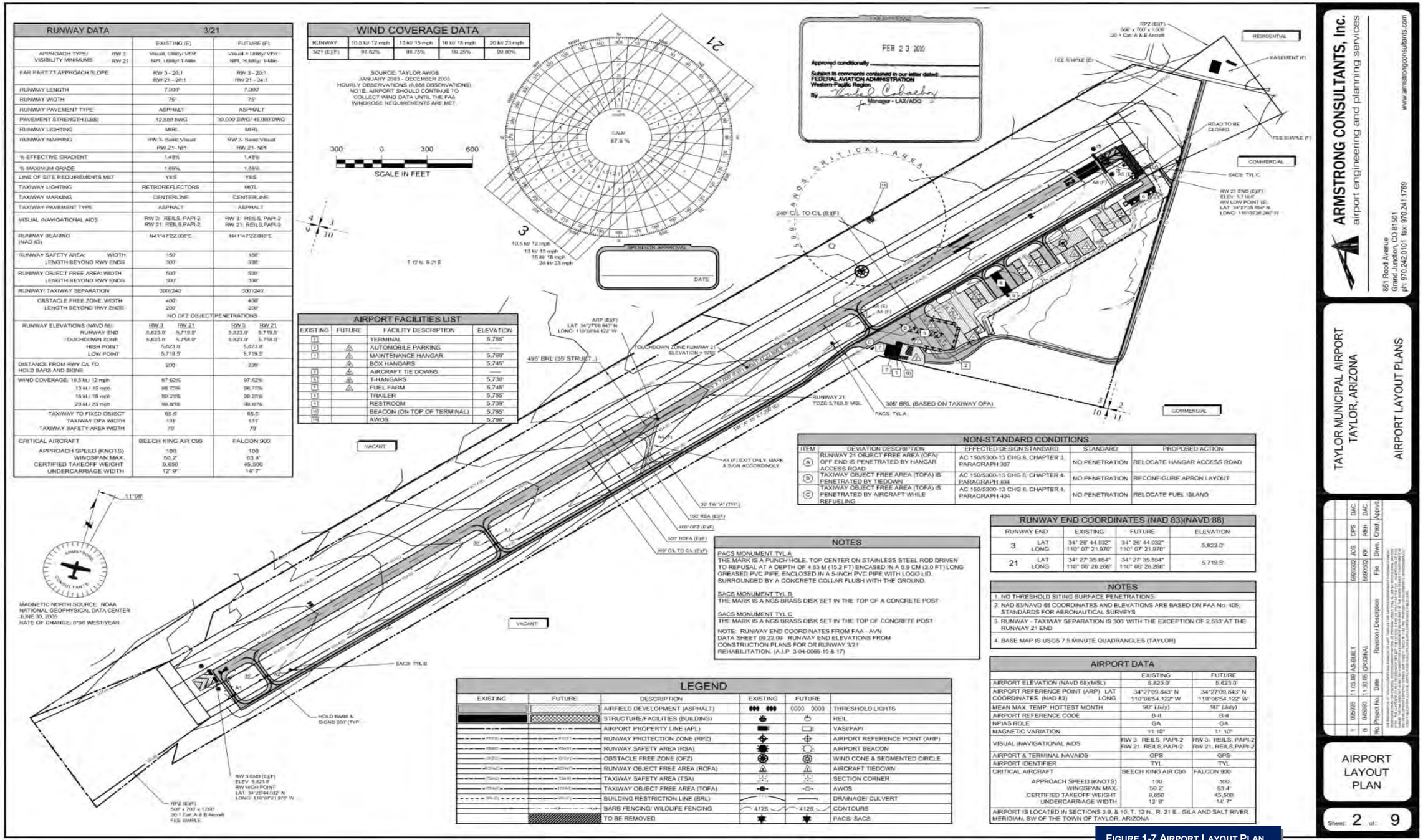


FIGURE 1-7 AIRPORT LAYOUT PLAN

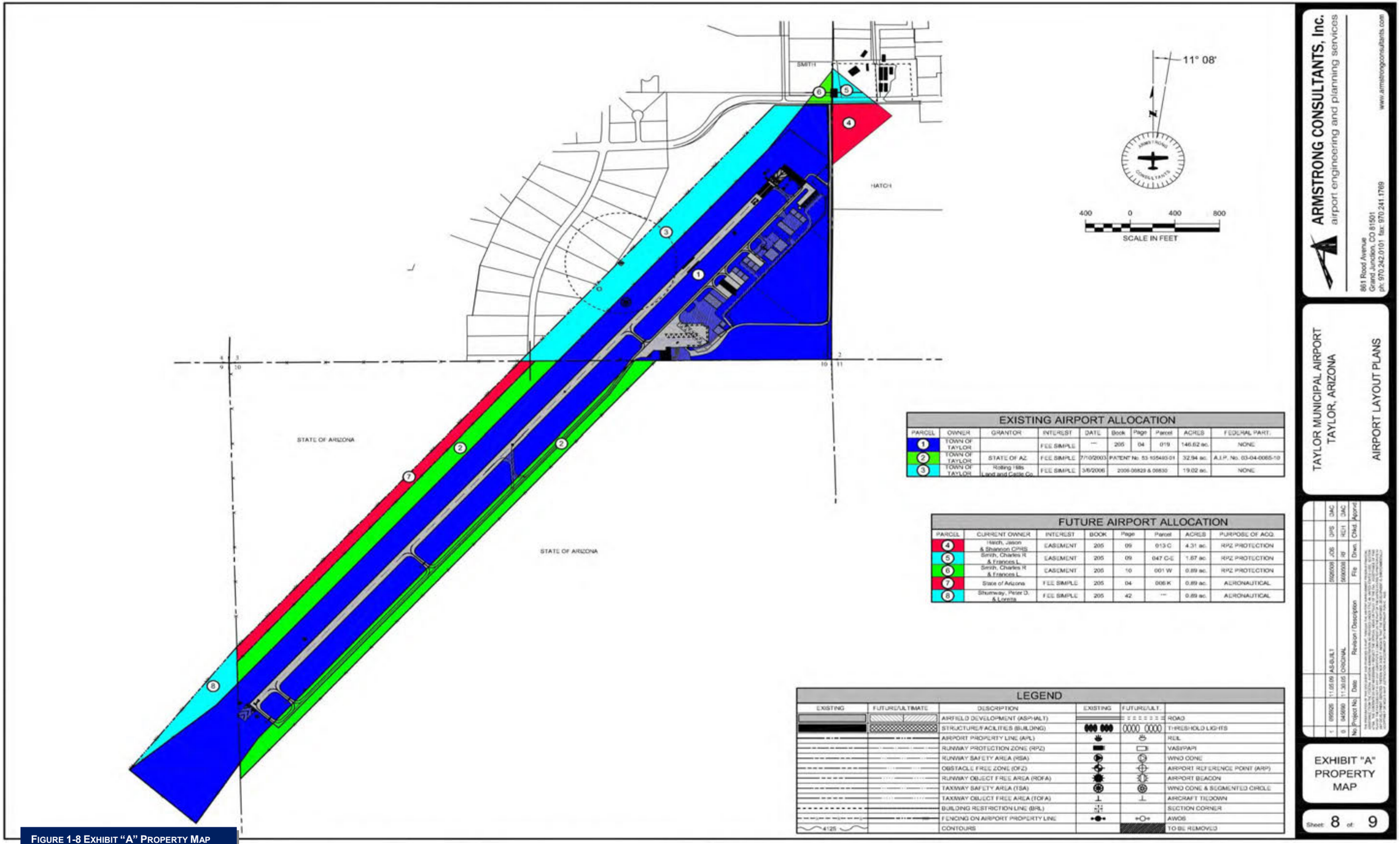


FIGURE 1-8 EXHIBIT "A" PROPERTY MAP

CHAPTER 2
DEVELOPMENT ALTERNATIVES

TAYLOR MUNICIPAL AIRPORT
ENVIRONMENTAL ASSESSMENT

CHAPTER TWO
ALTERNATIVES

2.1 INTRODUCTION

The CEQ is an entity within the U.S. government that is tasked with, among other responsibilities, overseeing federal agency implementation of NEPA requirements. CEQ regulations for implementing NEPA require a thorough and objective assessment of all “reasonable” alternatives to achieve the purpose and need of a proposed action, as well as the assessment of a no action alternative [40 CFR Part 1508.9; 40 CFR Part 1502.14].

This chapter describes the process used to identify the range of alternatives for consideration in this EA and the associated screening process used to determine which of the alternatives would reasonably satisfy the purpose and need. Alternatives considered, but determined to not reasonably meet the purpose and need are not carried forward through the analysis of environmental consequences in Chapter 4.

Several alternatives were evaluated to meet the purpose and need described in Chapter 1.

2.2 ALTERNATIVES

ALTERNATIVE A (PROPOSED ACTION)

Alternative A would include the following tasks: relocation and replacement of the existing fuel system outside of the Taxiway OFA; reconfiguration of the existing aircraft parking apron to meet Design Standards for Group II aircraft; relocation of the aircraft hangar access road outside of the runway object free area; and acquisition of 4 acres of land within the RPZ.

Alternative A would correct several nonstandard conditions identified on the existing approved ALP and would provide the needed facilities for the existing and future demand at the Taylor Municipal Airport. This alternative would require land acquisition for the control of the existing RPZ to Runway 21.

ALTERNATIVE B

Alternative B would include the following tasks: relocation and replacement of the existing fuel system outside of the Taxiway OFA; construct a new aircraft parking apron to meet Design Standards for Group II aircraft in a new location; relocate the hangar access road outside of the ROFA in a new location; and relocate Runway 21 end 1,200 feet to place the entire RPZ on existing airport property.

Alternative B would correct the airport's existing nonstandard conditions. No land acquisition would be required; however, the length of Runway 3/21 would be reduced by approximately 1,200 feet.

ALTERNATIVE C (NO ACTION)

Alternative C would keep the airport essentially as is and would not include correcting existing nonstandard conditions.

Alternative C, the no action alternative, would have no environmental impacts. The no action alternative would also require no capital investment from the FAA, State or local community.

The no action alternative does not provide for meeting the recommended FAA design standards. The no action alternative does not meet the goals and objectives of the Town of Taylor which includes providing a safe airport that meets B-II design standards.

SELECTION OF ALTERNATIVES

Alternative B would provide corrections to the existing nonstandard conditions at the Taylor Municipal Airport. However a 1,200 foot reduction in runway length would diminish the airport's utility by reducing the percentage of small aircraft utilization from 97 percent to 80 percent. The runway length reduction was found to be unacceptable to the Town of Taylor and inconsistent with the recommended runway length for the airport. Alternative B has therefore been eliminated from further review.

As a result of the alternative analysis, Alternative B was eliminated from further consideration and Alternative A has been carried forward for further evaluation in Chapter 4. The no action alternative, Alternative C, has also been carried forward for further evaluation in Chapter 4 as required under FAA Orders 5050.4B and 1050.1E, and pursuant to the CEQ regulations.

2.3 APPLICABLE GOVERNMENT REGULATIONS

In accordance with FAA Order 5050.4B and CEQ § 1502.25(a)

List of Considered Federal Laws and Statutes	Citation
American Indian Religious Freedom Act of 1978	Public Law 103-344
Anadromous Fish Conservation Act of 1965	Public Law 89-304
Archaeological and Historic Preservation Act of 1974	Public Law 86-253, as amended by Public Law 93-291, 16 U.S.C. § 469 et seq.
Archaeological Resource Protection Act	Public Law 96-95; 16 U.S.C. 470aa-mm
Clean Water Act	U.S. Code. 1977. Vol. 33, Section 1951 et seq. (1988)
Coastal Barriers Resource Act of 1982	Public Law 97-348; 16 U.S.C 3501-3510
Coastal Zone Management Act of 1972	Public Law 92-583, 16 U.S.C. 1451-1456
Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended by the Community Environmental Response Facilitation Act of 1992	49 U.S.C. §§ 6901-9675
Endangered Species Act of 1973	Public Law 85-624; 16 U.S.C. 661, 664 note, 1008 note
Farmland Protection Policy Act	Public Law 97-98 and 7 CFR Part 658
Land and Water Conservation Fund Act of 1965, Section 6(f)	Public Law 88-578; 16 U.S.C 4601-8(f)(3)
Magnuson-Stevens Fishery Conservation and Management Act	Public Law 94-265
Marine Mammal Protection Act of 1972	16 U.S.C. 1361-1407, P.L. 92-522

List of Considered Federal Laws and Statutes (Continued)

Migratory Bird Treaty Act of 1918	16 U.S.C. 703-712
National Historic Preservation Act of 1966, as amended	Public Law 89-665; 16 U.S.C. 470(f)
Native American Graves Protection and Repatriation Act	Public Law 101-601
Resource Conservation and Recovery Act of 1976, as amended by the Solid Waste Disposal Act 1980	Public Law 94-580 49 U.S.C. §§ 6901-6992(k) Public Law 96-482 and Public Law. 98-616
Safe Drinking Water Act	Public Law 93-523
Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970	Public Law 91-528; 42 U.S.C. 4601
Wild and Scenic Rivers Act	Public Law 90-542; 16 U.S.C. 1271 et seq.
Notes: CFR = Code of Federal Regulations FR = Federal Register U.S.C. = United States Code	

List of Considered Executive Orders	Citation
EO 11593, *Protection and Enhancement of the Cultural Environment*	
EO 11990, Protection of Wetlands and Order DOT 5660.1A, Preservation of the Nation's Wetlands	
EO 11998, *Floodplain Management* and Order DOT 5650.2 - Floodplain Management and Protection	43 FR 6030
EO 12372, *Intergovernmental Review of Federal Programs*	
EO 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*	59 FR 7629
EO 13007, *Indian Sacred Sites*	61 FR 26771
EO 13045, *Protection of Children from Environmental Health Risks and Safety Risks*	62 FR 19883
EO 13089, *Coral Reef Protection*	
EO 13112, *Invasive Species*	
EO 13158, *Marine Protection Areas*	
EO 13175, *Consultation and Coordination with Indian Tribal Governments*	
EO 13186, *Responsibilities of Federal Agencies to Protect Migratory Birds*	
EO 13274, *Environmental Stewardship and Transportation Infrastructure Projects*	
Notes: FR = Federal Register OE. = Executive Order	

List of Considered FAA Orders and other Guidance
49 USC Subchapter I, Section 303.C, formerly Section 4(f)
49 USC Subpart B Chapter 471, Section 47106. (c)
FAA Order 1050.1E: *Environmental Impacts Policies and Procedures*
FAA Order 5050.4B: *National Environmental Policy Act Implementing Instructions for Airport Actions*

CHAPTER 3
AFFECTED ENVIRONMENT

TAYLOR MUNICIPAL AIRPORT
ENVIRONMENTAL ASSESSMENT

CHAPTER THREE
AFFECTED ENVIRONMENT

3.1 INTRODUCTION

This chapter describes existing conditions within the vicinity of the proposed action and provides the baseline for assessment of the resulting environmental impacts and its alternatives.

3.1.1 PROJECT LOCATION

The project location is defined as the Taylor Municipal Airport and its environs in Taylor, Arizona. Figure 3-1 depicts location and vicinity maps of the area.

FIGURE 3-1 LOCATION AND VICINITY MAPS

The Taylor Municipal Airport is located in eastern Arizona, approximately two miles southwest of the Town of Taylor. Taylor is located approximately 170 miles northeast of Phoenix, Arizona and 121 miles southeast of Flagstaff, Arizona.

The Taylor Municipal Airport is a general aviation facility that serves the Town of Taylor and its surrounding communities. According to the Town of Taylor's website, the Town of Taylor was settled by James Pearce and named after John Taylor, 3rd President of the Church of Jesus Christ of Latter-Day Saints. The town was established in 1881 and incorporated in 1966. The Taylor Municipal Airport is accessed by traveling west on Willow Lane off of Main Street (Highway 77) and then turning south on Airport Road. The airport is situated at 5,823 feet above MSL and located at 34° 27' 09.84" N Latitude and 110° 06' 54.12" W Longitude, according to the current Airport Layout Plan (ALP) dated October, 2009.

According to 2013 FAA TAF, there are currently 36 based aircraft at the airport and approximately 3,800 annual aircraft operations. Based on the current ALP (2010) and the FAA Form 5010 (2013), existing airport facilities include Runway 3/21, which is 7,000 feet long by 75 feet wide, pilot-controlled MIRLs and taxiways outlined with retro-reflective markers. Visual aids include PAPIs, airport beacon, lighted windcone and segmented circle. Airfield pavements are constructed to a strength of 12,500 pounds SWG. There is an existing nonprecision GPS instrument approach to Runway 21. Existing hangar facilities include 13 hangars including 1 conventional/box hangar/FBO and 12 T-Hangars.

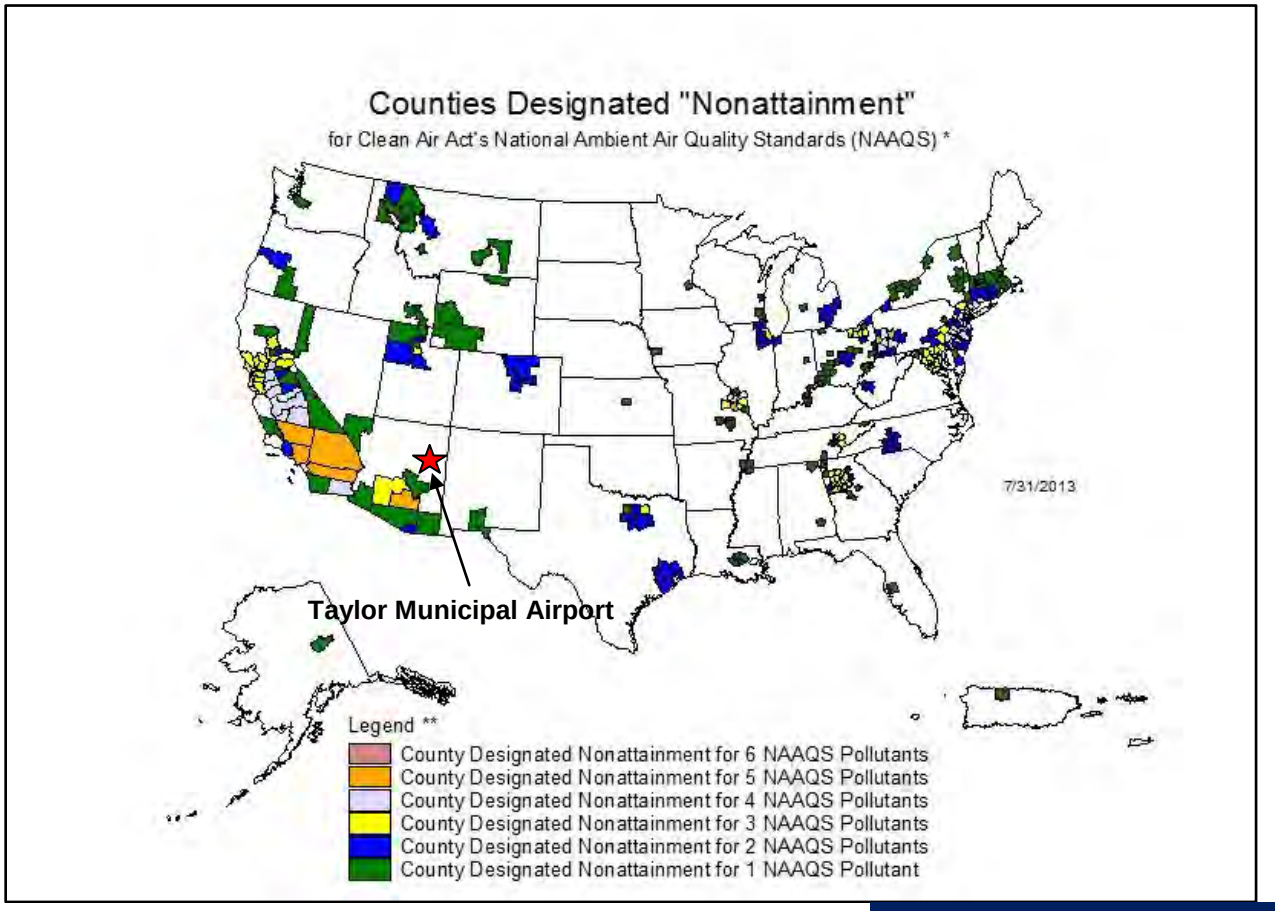
According to the Western Regional Climate Center, the Town of Taylor is located in southern Navajo County in an area that receives approximately 12 to 16 inches of precipitation annually. Average annual snowfall for the Taylor area is 17.9 inches. The average maximum temperature of the hottest month, July, is 90.0 degrees Fahrenheit, while the average minimum temperature of the coldest month, January, is 17.2 degrees Fahrenheit. The annual average maximum temperature is 69.7 degrees Fahrenheit and the annual average minimum temperature is 36.4 degrees Fahrenheit.

3.2 AIR QUALITY

The quality of surface air is evaluated by measuring ambient concentrations of pollutants that are known to have negative effects. National Ambient Air Quality Standards (NAAQS) that have been set by the Environmental Protection Agency (EPA) designate Navajo County as being in attainment for all ambient NAAQS air quality standards. As depicted in Figure 3-2, the Taylor Municipal Airport is not located within, or in close proximity to, any designated nonattainment areas.

An attainment area is a geographical area where the levels of all criteria air pollutants meet NAAQS air quality standards. In contrast, areas designated as being in nonattainment are geographic areas where the concentration of one or more of the criteria air pollutants is higher than NAAQS.

A Greenhouse Gas (GHG) Emission Inventory, contained within Appendix E, evaluated existing Taylor Municipal Airport operations and found existing emissions to be less than de minimis levels.



Source: EPA, 2013

FIGURE 3-2 NONATTAINMENT MAP

3.3 COASTAL RESOURCES

There are no coastal zones within the vicinity of the Taylor Municipal Airport. The Taylor Municipal Airport is located over 292 miles from the Gulf of California.

3.4 COMPATIBLE LAND USE

Land use compatibility conflicts are a common problem around many airports in the United States, for both large transport airports and smaller general aviation facilities. In urban areas, as well as some rural settings, airport owners find that essential expansion to meet the demands of airport traffic is difficult to achieve due to the nearby development of incompatible land uses.

Airport compatible land uses are those which are not adversely affected by airport operations and that do not adversely affect the use of the airport. Incompatible uses typically consist of medium to high-density residential areas, built in close proximity to an existing airfield prior to enactment of suitable land-use zoning legislation. The residents of these developments, with substantial investments in their homes, may view the airport and its activities as a threat to their health, safety and quality of life. In addition, incompatible land uses also include large gatherings of people.

The Taylor Municipal Airport is surrounded by predominantly open land to the south and a mix of commercial, light industrial and residential to the north (see Figure 3-3).

The closest populated areas to the Taylor Municipal Airport are located immediately north of the airport. The majority of the Town of Taylor is located within either the Traffic Pattern Zone or Airport Influence Zone. There are also a number of residential land uses.

The RPZ off the approach end of Runway 3 is owned fee simple by the airport and is undeveloped and considered to be compatible with the airport. A portion of the Runway 21 RPZ (Parcel 1) is owned by the airport. The remainder of the RPZ is privately owned, uncontrolled by the airport and consists of Parcel 4 which is undeveloped, Parcel 5 which contains a shed and a maintenance shop and residential property, and Parcel 6 which is currently undeveloped (see Figure 3-4).

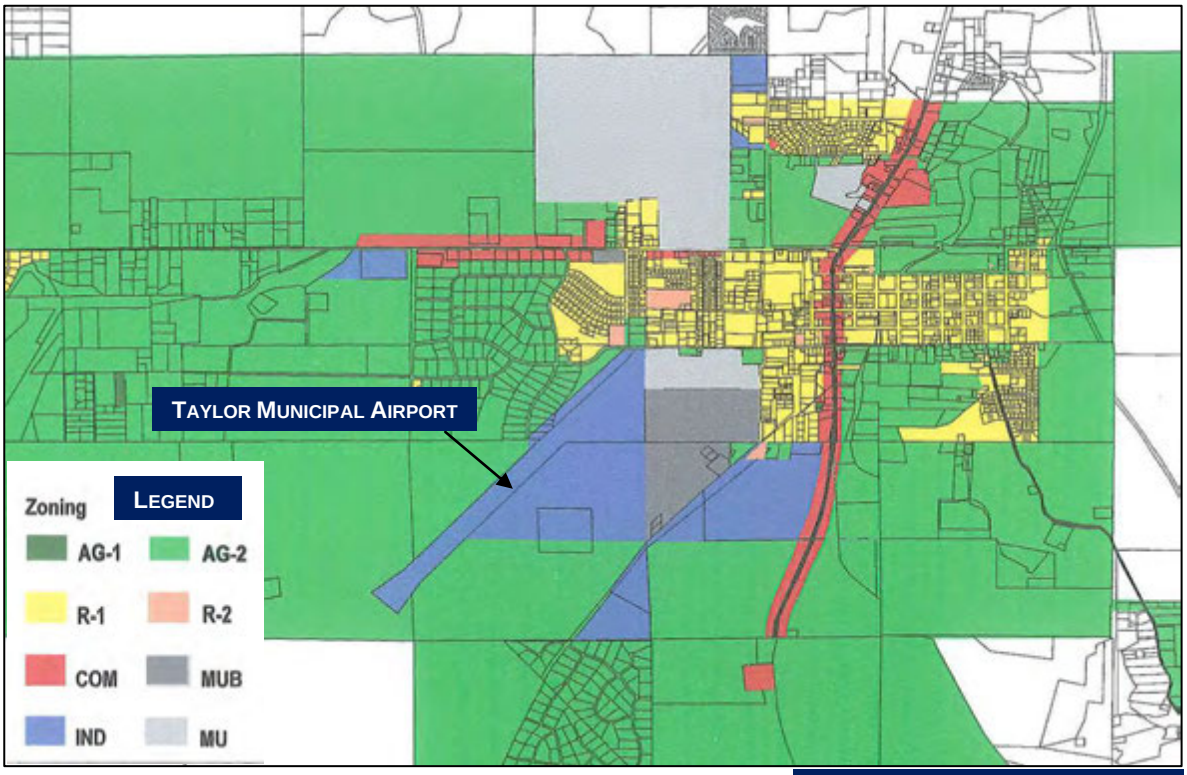


FIGURE 3-3 TAYLOR ZONING MAP

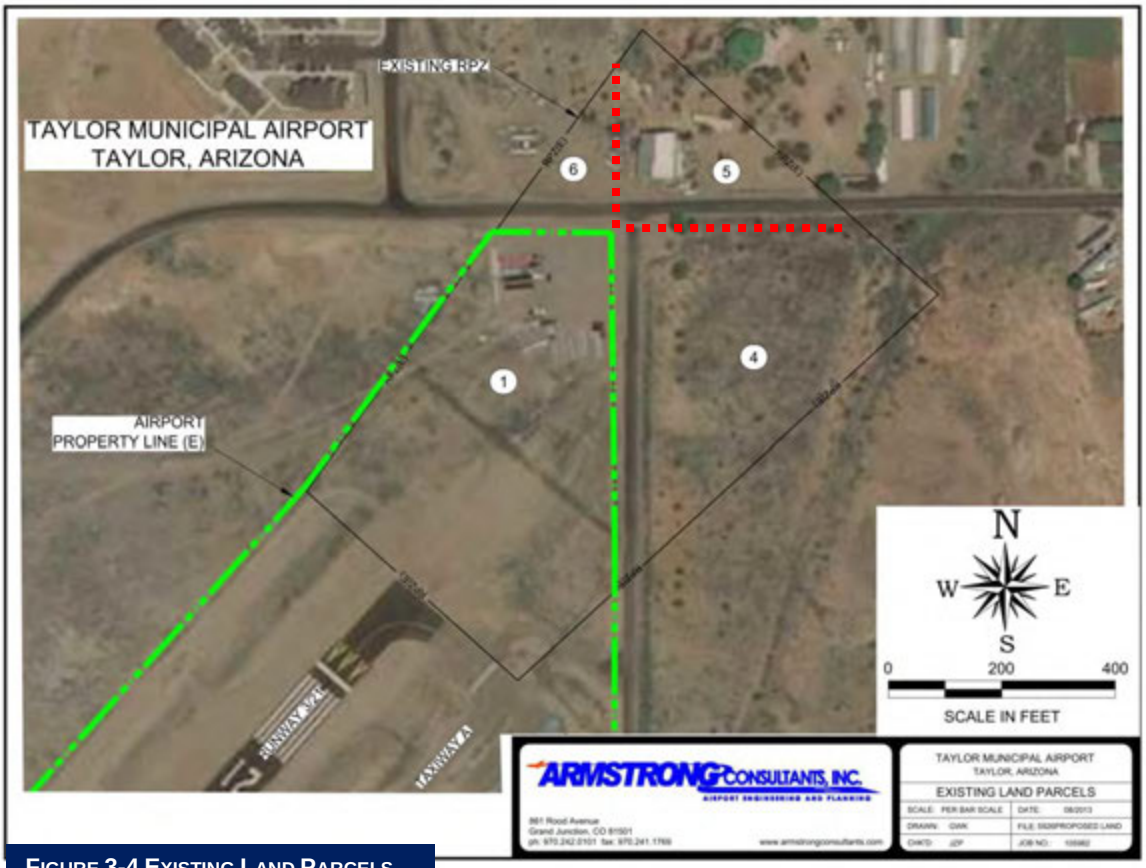


FIGURE 3-4 EXISTING LAND PARCELS

3.5 CONSTRUCTION ACTIVITIES

There are currently no ongoing construction activities on or within the vicinity of the Taylor Municipal Airport that would be a factor in determining baseline environmental conditions for the proposed action.

3.6 DEPARTMENT OF TRANSPORTATION ACT: SECTION 4 (F)

Section 303c of 49 USC formerly Section 4(f) of Department of Transportation Act of 1966, provides that the Secretary of Transportation shall not approve any program or project that requires the use of any publicly owned land from a public park, recreation area or wildlife and waterfowl refuge of National, State or Local significance or land from a historic site of National, State or Local significance, as determined by the officials having jurisdiction thereof, unless there is no feasible and prudent alternative to the use of such land and such project includes all possible planning to minimize harm resulting from the use.

The nearest Section 4(f) land is located approximately one mile north of the Taylor Municipal Airport (Well Park). Table 3-1 contains a list of National Forests, State Parks and Wilderness Areas located within the vicinity of the Taylor Municipal Airport.

TABLE 3-1 LIST OF NATIONAL AND STATE FORESTS, PARKS AND WILDERNESS AREAS

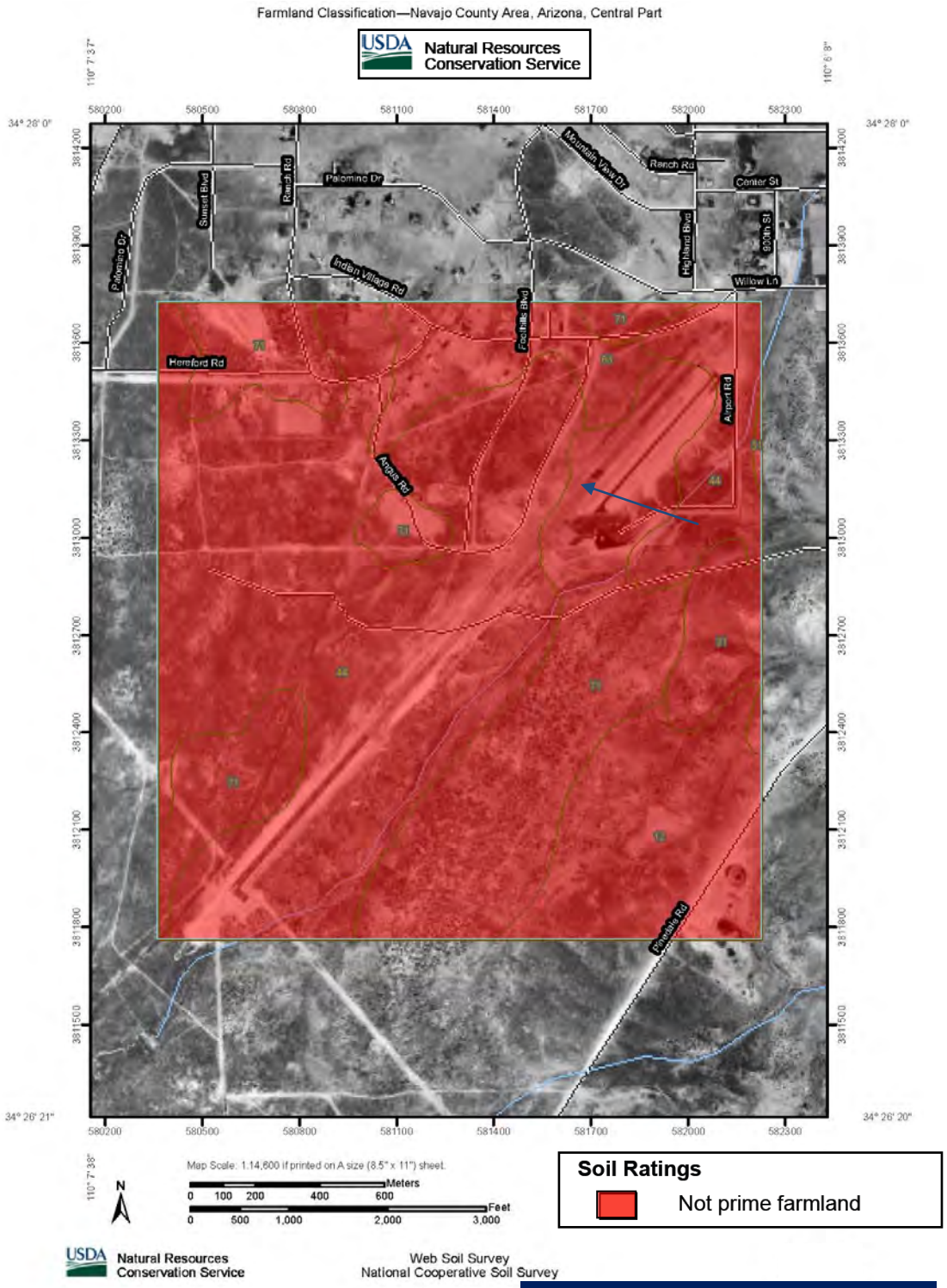
Description	Direction	Distance (Statute Miles)
Well Park (Town of Taylor)	N	1
Apache and Sitgreaves National Forest	S	10
Petrified Forest National Park	NE	27
Mount Baldy Primitive Area	SE	46
Salt River Canyon Wilderness Area	SW	50
Hellsgate Wilderness Area	SW	51
Sierra Ancha Wilderness Area	SW	60

Source: Microsoft Maps, 2013

FIGURE 3-5 SURROUNDING SECTION 4(F) RESOURCES

3.7 FARMLANDS

The Taylor Municipal Airport is not located on or in the vicinity of prime and unique farmland. A farmland classification map obtained from the U.S. Department of Agriculture (USDA) classifies land within the area surrounding the airport as not prime or unique farmlands. A copy of the map is contained in Figure 3-6.



Source: U.S. Department of Agriculture 2013

FIGURE 3-6 FARMLAND CLASSIFICATION MAP

3.8 FISH, WILDLIFE AND PLANTS

Cardno-Entrix, Inc., completed an initial site survey in 2010. This site survey was re-evaluated in 2015. Lists of observed wildlife and plants at the site, and Endangered Species Act (ESA) protected species for Navajo County, Arizona (2015) are presented in Tables 3-2, 3-3 and 3-4. All ESA protected species were evaluated for their potential to be present in and around the Taylor Municipal Airport, based on general geographic and elevation distribution, habitat requirements and documented occurrence records available from the USFWS.

TABLE 3-2 PLANTS OBSERVED DURING SITE SURVEY OF THE PROJECT AREA

Scientific Name	Common Name	Wetland Indicator Status
Achnaterum hymenoides	Indian ricegrass	FACU
Agropyron elongatum	tall wheatgrass	UPL
Artemisia tridentata	big sagebrush	UPL
Chrysothamnus nauseosus	rubber rabbitrush	UPL
Cirsium vulgare	bull thistle	FACU
Convulvus arvensis	field bindweed	UPL
Cornus sericea ssp. sericea	redosier dogwood	FACW
Distichlis spicata	inland saltgrass	FACW
Elaeagnus angustifolia	Russian olive	FACW
Encelia farinosa	brittlebush	UPL
Erodium cicutarium	redstem stork's bill	UPL
Halogeton glomeratus	halogeton	UPL
Helianthus annuus	common sunflower	FAC
Heterotheca subaxillaris	camphorweed	UPL
Hordeum jubatum	foxtail barley	FACW
Hordeum vulgare	common barley	UPL
Kochia scoparia	Mexican summer-cypress	FACU
Lactuca tatarica var. pulchella	Blue lettuce	FAC
Lupinus wyethii	wyeth lupine	FACU
Medicago sativa	alfalfa	UPL
Melilotus officinalis	yellow sweetclover	FACU
Opuntia clavata	club cholla	UPL
Opuntia engelmannii	Englemann's prickly pear	UPL
Pinus edulis	pinyon pine	UPL
Populus fremontii	fremont cottonwood	FACW
Ribes aureum	golden currant	FACW
Salix exigua	Coyote willow	OBL
Salsola kali	Russian thistle	FACU
Sonchus oleraceus	common sowthistle	UPL
Sphaeralcea munroana	Munro's globemallow	UPL
Tamarix ramosissima	saltcedar	NI
Tragopogon dubius	western salsify	UPL
Typha latifolia	broadleaf cattail	OBL

TABLE 3-2 PLANTS OBSERVED DURING SITE SURVEY OF THE PROJECT AREA

Ulmus pumila	Siberian elm	FACU
Xanthium strumarium	common cocklebur	FAC

Source: Cardno-Entrix, 2015

TABLE 3-3 WILDLIFE SPECIES OBSERVED DURING SITE SURVEY OF THE PROJECT AREA

Common Name	Scientific Name	Classification
Golden-mantled Ground Squirrel	*Spermophilus lateralis*	Mammal
Mule Deer	*Odocoileus hemionus*	Mammal
Prairie Dog	*Cynomys parvidens*	Mammal
Raccoon	Procyon Lotor	Mammal
Coyotes	*Canis latrans*	Mammal
Jack Rabbit	*Lepus californicus*	Mammal
Eastern Cottontail Rabbit	Sylvilagus *floridanus*	Mammal
Common Ground-Dove	*Columbina passerina*	Songbird
Broad-billed Hummingbird	*Cynanthus latirostris*	Songbird
Northern Cardinal	*Cardinalis cardinalis*	Songbird
House Finch	*Carpodacus mexicanus*	Songbird
Common Rosefinch	*Carpodacus erythrinus*	Songbird
Cassin's Finch	*Carpodacus cassinii*	Songbird
Ground Sparrow	*Melozone leucotis*	Songbird
Savannah Sparrow	*Passerculus sandwichensis*	Songbird
Western Meadowlark	*Sturnella neglecta*	Songbird
Black-billed Magpie	*Pica pica*	Songbird
American Robin	*Turdus migratorius*	Songbird
European Starling	*Sturnus vulgaris*	Songbird
American Crow	*Corvus brachyrhynchos*	Songbird
Mourning Dove	*Zenaida macroura*	Game bird
Western Hognose Snake	Heterodon nasicus	Reptile
Gopher Snake	*Pituophis catenifer*	Reptile
Garter Snake	*Thamnophis sirtalis*	Reptile
Western Rattlesnake	*Crotalus viridis*	Reptile

Source: Cardno-Entrix, 2015

TABLE 3-4 ESA PROTECTED SPECIES FOR NAVAJO COUNTY, ARIZONA

Common Name	Scientific Name	Status	Habitat Requirement	Presence/Absence
Apache trout	*Oncorhynchus apache*	FT	Streams and rivers above 6,000 ft. elevation with adequate stream flow and shading; temperature below 77 degrees F; and substrate of boulders, rocks, gravel and sand/silt.	No suitable habitat
Black footed ferret	*Mustela nigripes*	FE	Grassland plains generally found in association with prairie dogs.	No suitable habitat

TABLE 3-4 ESA PROTECTED SPECIES FOR NAVAJO COUNTY, ARIZONA

California condor	*Gymnogy californianus*	FE	High desert canyons and plateaus.	No suitable habitat
Chiricachua leopard frog	*Rana chiricahuensis*	FT	Streams, rivers, backwaters, ponds, and stock tanks that is mostly free from introduced fish, crayfish, and bullfrogs.	No suitable habitat
Gray wolf	*Canis lupus*	FE	Chaparral, woodland, and forested areas. May cross desert areas.	No suitable habitat
Gila trout	*Oncorhynchus gilae*	T	Clear, cold intermittent mountain streams in arid regions.	No suitable habitat
Little Colorado spinedace	*Lepidomeda vittata*	FT	Moderate to small streams; found in pools and riffles with water flowing over fine gravel and silt substrate.	No suitable habitat
Loach minnow	*Tiaroga cobitis*	FT	Benthic species of small to large perennial streams with swift shallow water over cobble and gravel. Recurrent flooding and natural hydrograph important.	No suitable habitat
Mexican spotted owl	*Strix occidentalis lucida*	FT	Nests in canyons and dense forests with multilayered foliage structure.	No suitable habitat
Navajo sedge	*Carex specuicola*	FT	Silty soils at shady seeps and springs.	No suitable habitat
New Mexico Jumping Mouse	*Zapus hudsonius luteus*	E	Sedge-forb-willow zones along permanent streams in the Jemez and Sacramento mountain ranges, large wet meadows within river flood plains and narrow riparian zones along irrigation ditches.	No suitable habitat
Northern Mexican gartersnake	*Thamnophis eques megalops*	C	Cienegas, stock tanks, large-river riparian woodlands and forests, streamside gallery forests.	No suitable habitat
Peebles Navajo cactus	*Pediocactus peeblesianus*	FE	Gravely soils of the Shinarump conglomerate of the Chinle Formation.	None, site was surveyed and no Peebles Navajo cactus found
Roundtail chub	*Gila robusta*	C	Cool to warm waters of rivers and streams, often occupy the deepest pools and eddies of large streams.	No suitable habitat
Southwestern willow flycatcher	*Empidonax traillii extimus*	FE	Cottonwood/willow and tamarisk vegetation communities along rivers and streams.	No suitable habitat
Welsh's Milkweed	*Asclepias welshii*	T	Occurs in natural unstable drifting dunes of the Coral Pink Sand Dunes. Dunes occur in sagebrush, juniper, and ponderosa pine communities at or near 5,400 to 6,100 feet.	No suitable habitat
Yellow-billed cuckoo	*Coccyzus americanus*	C	Large blocks of riparian woodlands (cottonwood, willow, or tamarisk galleries).	No suitable habitat

Source: USFWS and Cardno-Entrix, 2015
FT = Federal Threatened, FE = Federal Endangered, C = Candidate

3.9 FLOODPLAINS

Floodplains are defined by Executive Order 11988, *Floodplain Management*, as the lowland and relatively flat areas adjoining coastal water . . . including at a minimum, that area subject to a one percent or greater chance of flooding in any given year . . . ", that is, an area which would

be inundated by a 100-year flood. As indicated by Federal Emergency Management Agency's (FEMA) Flood Insurance Rate Maps (FIRM) map Community Panel No. 4253(E) September 26, 2008, located in Figure 3-7, the airport is located adjacent to two zones classified as floodplains. The areas are classified as Zone AE which indicates the base floodplain where base flood elevations are provided and Zone X which indicates an area of moderate flood hazard, usually the area between the limits of the 100-year and 500-year floods. B Zones are also used to designate base floodplains of lesser hazards, such as areas protected by levees from 100-year flood, or shallow flooding areas with average depths of less than one foot or drainage areas less than 1 square mile.

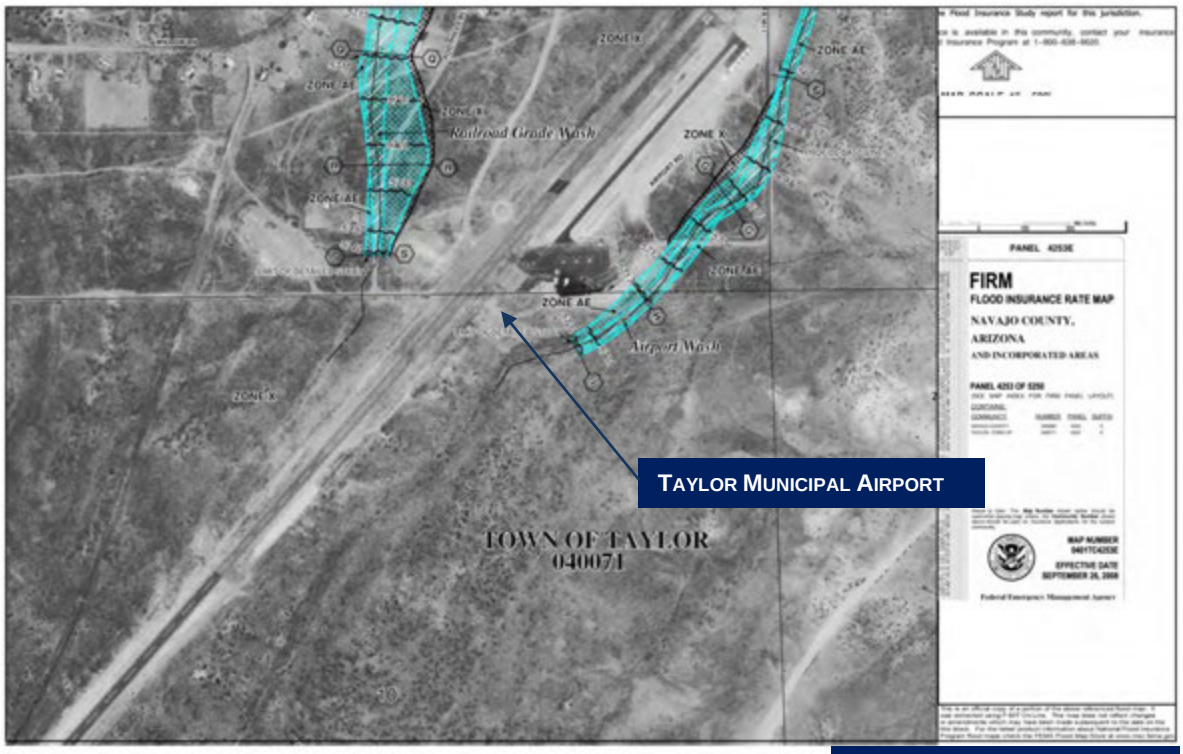


FIGURE 3-7 FLOODPLAIN MAP

Source: FEMA 2013

3.10 HAZARDOUS MATERIALS, POLLUTION PREVENTION AND SOLID WASTE

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

According to the EPA, there are two permitted small generators or handlers of hazardous waste within ten miles of the Taylor Municipal Airport. Small generators or handlers of hazardous waste include; the Navajo County Pinedale Road Yard and Brimhall Sand Rock and Building Materials.

3.11 HISTORICAL AND ARCHITECTURAL, ARCHEOLOGICAL AND CULTURAL RESOURCES

A Cultural Resource Survey of the Taylor Municipal Airport was completed by Cardno-ENTRIX, Inc. on September 25, 2010. An area of 63 acres was surveyed on foot with 20 meter transects. Ground cover was sufficiently sparse to identify artifacts on the ground, if present. The survey identified no historic or prehistoric sites or isolates. A copy of the Cultural Resource Survey report is included in Appendix D of this Environmental Assessment.

3.12 LIGHT EMISSIONS AND VISUAL IMPACTS

Light emissions result from the production of artificial ambient light by production stations. The production of light is a direct result to the station's angle and strength. Airfield lighting is the main source of light emissions at the Taylor Municipal Airport and includes MIRLs, 2-box PAPIs, a rotating beacon and lighted wind cone. Rotating airport beacons are provided so pilots can identify the location of an airport at night or in reduced visibility conditions. The rotating beacon consists of alternating white and green lights rotating at six rotations per minute and is mounted on a tower. Specifications for airport beacons allow the beam to be angled from 2° to 12° above the horizon. The standard setting is 6°. If necessary, the beacon can be shielded to reduce visibility of the beacon from below the horizon line. The MIRLs are single white light mounted on posts spaced at 200 foot intervals along both edges of the runway. They define the boundaries of the runway surface usable for takeoff and landing. The Taylor Municipal Airport also has PAPIs on Runways 3 and 21 that are used for visual descent guidance and consist of two light units located to the left of the runway and perpendicular to the runway centerline. The lights are directed at a glide path angle of 3° above the runway. If the aircraft is above the glide path, the pilot will see all white lights. If the pilot is on the proper glide path, the light unit closest to the runway will be red and the unit farthest from the runway will be white. When the pilot is below the glide path the light units will be red. PAPIs have an effective visual range from the air of approximately five miles during the day and up to twenty miles at night. These visual aids are extremely useful and enhance safety in situations where there are few visual references surrounding the airport.

3.13 NATURAL RESOURCES AND ENERGY SUPPLY

Available utilities at the Taylor Municipal Airport include water, sewer, power, phone and gas. Electricity is provided by Arizona Public Service Company (APS) through a 3-phase power line, natural gas is provided by Citizens Utilities, telephone services are provided by Citizens Communications and the Town of Taylor provides water, sewer and septic system. The terminal building is served by the septic system. The septic tank and leach field is located on the east side of the terminal building, outside of any future development area (see Figure 1-5). The Town has also constructed restroom adjacent to the mid-field hangar development area which are connected to Municipal water and sewer. The water line serving the airport is a six inch water line. Fuel storage at the airport consists one 5,000 gallon AvGas (100LL) aboveground fuel storage tank.

3.14 NOISE

Noise analysis considerations include whether the Federal thresholds of noise exposure are exceeded, whether the 65 day-night level (DNL) noise contour extends beyond airport property and if there are any residences, churches, schools, hospitals or other noise sensitive land uses within the 65 DNL noise contour.

The Taylor Municipal Airport is located more than one mile from the Central Business District. The nearest noise sensitive areas include single family residences located northwest of the

airport. An existing condition 65 DNL noise contour was developed for the airport. As discussed in FAA Order 5050.4B, if less than 90,000 piston and 700 jet annual operations at the airport occur, operations would not generate a 65 DNL that extends beyond the airport property. Based on current operations the 65 DNL contour remains on airport property as shown in Figure 3-8, no 70 or 56 DNL contour was generated and there are no noise sensitive land uses within the existing 65 DNL noise contour.

FIGURE 3-8 EXISTING 65 DNL NOISE CONTOUR

3.15 SOCIIOECONOMICS, ENVIRONMENTAL JUSTICE, CHILDREN'S ENVIRONMENTAL HEALTH AND SAFETY RISKS

The issues relevant to the evaluation of environmental impacts include environmental justice, employment and economic activity, children's health and safety risks, and transportation resources.

3.15.1 SOCIOECONOMICS

The population of the Town of Taylor was 4,112 persons in 2009, based on 2010 U.S. Census Bureau estimates. The population of the Town of Taylor increased from 3,176 in 2000 to 4,112 in 2009, an increase of 29 percent.

According to the 2010 US Census, the median income for a household in Taylor was $50,358 and the median income for a family was $51,525. The per capita income for the Town was $15,897 and 13.9 percent of the residents were living at or below the national poverty level.

Based on the 2010 census, Table 3-5 contains the employment distribution for the Town of Taylor.

TABLE 3-5 TOWN OF TAYLOR EMPLOYMENT DISTRIBUTION

Industry	Percentage of Whole
Agriculture, forestry, fishing and hunting, and mining	4.9%
Construction	11.9%
Manufacturing	10.1%
Wholesale trade	1.6%
Retail trade	5.7%
Transportation and warehousing, and utilities	17.2%
Information	1.0%
Finance and insurance, and real estate and rental and leasing	6.5%
Professional, scientific, and management, and administrative, and waste management services	2.4%
Educational services and health care and social assistance	28.0%
Arts, entertainment, and recreation, and accommodation and food services	0.8%
Other services, except public administration	6.9%
Public administration	3.0%

Source: 2010 Census

Transportation resources located within the study area include locally owned streets such as Airport Road and Indian Village Road.

3.15.2 ENVIRONMENTAL JUSTICE

EO 12898, *Environmental Justice,* issued in 1994, requires each Federal agency to include environmental justice as part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse impacts of its programs, policies and activities ton minority and/or low income populations.

Review of the 2010 Census provided the information below about the ethnic demographics of the Town of Taylor.

TABLE 3-6 TOWN OF TAYLOR ETHNIC GROUP DEMOGRAPHICS

Race	Percentage
White	86.0%
Black or African American	0.2%
American Indian and Alaska Native	4.8%
Asian	0.3%
Native Hawaiian and Other Pacific Islander	0.1%
Some other race	6.0%
Hispanic or Latino (of any race)	13.3%

Source: 2010 Census

The study area does not include residential, commercial or other land uses that have a high minority occupancy rate. There are no known environmental justice risks associated with the project area.

3.15.3 CHILDREN'S ENVIRONMENTAL HEALTH AND SAFETY RISKS

There are no residential land uses, daycare centers, preschools or schools located within the study area. There are no known children's environmental health and safety risks associated with the project area.

3.16 WATER QUALITY

Water quality considerations related to airport development often include increased surface runoff and erosion and pollution from fuel, oil, solvents and deicing fluids. Potential pollution could come from petroleum products spilled on the surface and carried through drainage channels off of the airport. State and Federal laws and regulations have been established to safeguard these facilities. These regulations include standards for above ground and underground storage tanks, leak detection and overflow protection.

An effective Stormwater Pollution Prevention Plan (SWPPP) identifies storm water discharge points on the airport, describes measures and controls to minimize discharges and details spill prevention and response procedures. In December of 2008, the EPA amended the Oil Pollution Prevention Regulation at Title 40 of the Code of Federal Regulations, Part 112 (40 CFR Part 112). Subparts A through C of this regulation is often referred to as the "SPCC rule" because they describe requirements for certain facilities (including airports) to prepare and implement Spill Prevention Control and Countermeasure (SPCC) Plans. As such, the Town is required to have and maintain SWPPP and SPCC plans. The Town complies with this requirement.

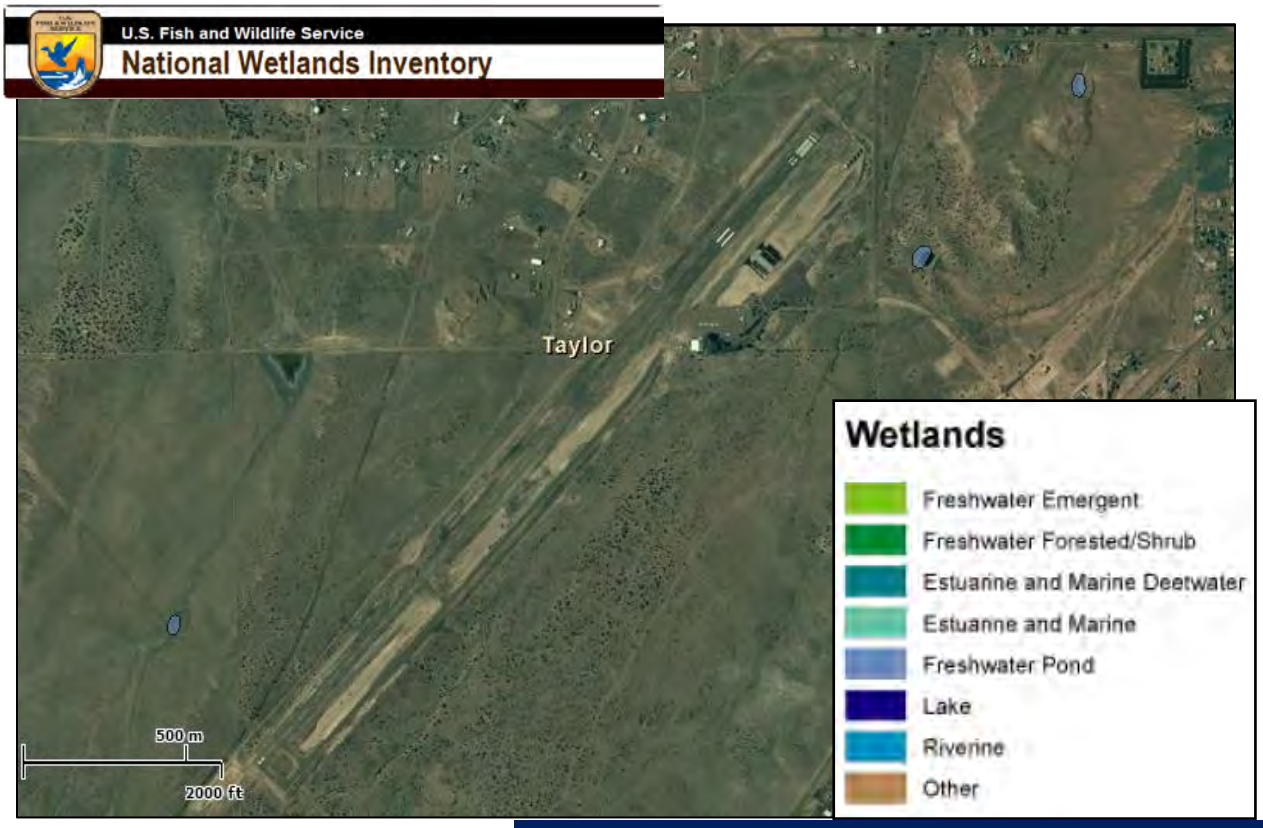
3.17 WETLANDS

Wetlands are defined in Executive Order 11990, *Protection of Wetlands*, as "those areas that are inundated by surface or ground water with a frequency sufficient to support and under normal circumstances does or would support, a prevalence of vegetation or aquatic life that requires saturated or seasonally saturated soil conditions for growth and reproduction. Wetlands generally include swamps, marshes, bogs and similar areas such as sloughs, potholes, wet meadows, river overflows and natural ponds. Jurisdictional Waters of the United States may also include drainage channels, washes, ditches, arroyos or other waterways that are tributaries to Navigable Water of the United States or other waters where the degradation or destruction of which could affect interstate or foreign commerce.

As identified by the USFWS National Wetlands Inventory map in Figure 3-9 the project area is located atop a mesa in an upland environment. Therefore, no wetlands exist within existing airport property.

3.18 WILD AND SCENIC RIVERS

The Wild and Scenic River list from the National Park Service indicated two Wild and Scenic Rivers in Arizona including Fossil Creek and the Verde River. Both rivers are located more than 100 miles from the Taylor Municipal Airport.



Source: U.S. Fish and Wildlife Service, 2013

FIGURE 3-9 WETLANDS SURROUNDING THE TAYLOR MUNICIPAL AIRPORT

Chapter 4

Environmental Consequences and Mitigation

Taylor Municipal Airport Environmental Assessment

CHAPTER FOUR
ENVIRONMENTAL CONSEQUENCES AND MITIGATION

4.1 INTRODUCTION

This chapter examines the reasonably foreseeable direct and indirect effects of each alternative on each environmental impact category associated with the development of Alternative A (the Proposed Action alternative) and Alternative C (the No Action alternative) in a comparative format. The description and analysis of each impact category includes sufficient information to determine the proposed actions effects relative to the threshold of significance described in FAA Orders 5050.4B, National Environmental Policy Act (NEPA) Implementation Instructions for Airport Actions and 1050.1E Environmental Impacts: Policies and Procedures that has been set for each impact category. If an alternative is found to potentially exceed the threshold of significance for a specific category, reasonable mitigation measures are applied to reduce the impact to a less than significant level. If an alternative is found to exceed the threshold of significance and cannot be mitigated to below the threshold of significance, an EIS would be required; if no other reasonable alternatives exist.

Agencies at the local, state and federal level that exercise responsibility and/or have an interest in specific environmental impact areas have been contacted and were sent information regarding the planned airport development and were solicited for comments (see Appendix A). Agency responses to this inquiry are included in Appendix B.

The following sections describe and examine the environmental impact for each impact category, in accordance with FAA Orders 5050.4B and 1050.1E. The sections provide an evaluation of the environmental consequences for Alternative A and the No Action alternative.

4.2 NO POTENTIAL FOR EFFECT

Certain resource categories would not be impacted by the alternatives. Due to the proposed project's location, the following categories have been omitted from further Environmental Consequence evaluation:

- Coastal Resources
- Department of Transportation Section 4(F)
- Farmlands

4.3 AIR QUALITY

The Clean Air Act of 1970 was enacted to reduce emissions of specific pollutants via uniform federal standards. These standards include the NAAQS which set maximum allowable ambient concentrations of ozone (O_3), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), carbon monoxide (CO), lead (Pb), particulate matter 10 microns (PM_{10}) and particulate matter 2.5 microns ($PM_{2.5}$). Section 176(c) of the Act, in part, states that no federal agency shall engage in, support in any way or provide financial assistance for, license, permit or approve any activity that does not conform to the State Implementation Plan. The threshold of significant impact is considered to be when the proposed project exceeds one or more of the NAAQS for any of the time periods analyzed.

As depicted in Figure 3-2, the EPA identifies the Taylor Municipal Airport as not being located in, or in close proximity to, any nonattainment areas. Correspondence was sent to the Arizona

Department of Environmental Quality (AZDEQ), Air Quality Division regarding the Proposed Action. AZDEQ provided written concurrence in September, 2010. The Air Quality Division concluded that the area of potential effect is located in an attainment area for the National Ambient Air Quality Standards. As such a general conformity determination is not required. The AZDEQ recommended that the contractor be advised to follow Best Management Practices (BMPs) to minimize fugitive dust emissions during construction. A copy of the letter is contained within Appendix B.

An Air Quality Inventory for Greenhouse Gas Emissions was completed for the Proposed Action alternative and is contained within Appendix E. Based on the Greenhouse Gas Emissions Inventory the Proposed Action emissions are far less than de minimis levels and would not result in a significant impact to air quality.

No impacts to air quality would occur as a result of the No Action alternative.

4.4 COMPATIBLE LAND USE

Land use compatibility conflicts are a common problem around many airports in the United States, both for large airports and smaller general aviation facilities. In urban areas, as well as some rural settings, airport owners find that essential expansion to meet the demands of airport traffic is difficult to achieve due to the nearby development of incompatible land uses. The incompatible uses typically consist of medium to high density residential areas, built in close proximity to an existing airfield prior to enactment of suitable land-use zoning legislation. The issue of aircraft noise is generally the most commonly perceived environmental impact upon the surrounding community. Conflicts may also exist in the protection of runway approach and transitional zones to assure the safety of both the flying public and the adjacent property owners. Adequate land for this use should be owned in fee, controlled in easements or protected through zoning. The threshold of significant impact is considered to be when a noise sensitive area falls within the 65 DNL.

14 CFR Part 150 recommends guidelines for planning and land use compatibility within various levels of aircraft noise exposure as summarized in Table 4-1. Although the FAA provides these guidelines, it is the local jurisdictions' responsibility for determining and implementing compatible land uses.

FAA Advisory Circular 150/5200-33, Hazardous Wildlife Attractants On or Near Airports, stipulates any solid waste disposal facilities (i.e. sanitary landfills) and sewage treatment ponds located within 5,000 feet of all runways used by piston powered aircraft or within 10,000 feet of all runways used by turbine powered aircraft are considered to be an incompatible land use because of the potential for conflicts between bird habitat and low flying aircraft. Existing landfills and sewage treatment facilities are located more than 10,000 feet from Runway 3/21.

The Proposed Action alternative would not expand or shift RPZ or protected airspace surfaces and would not result in increased environmental impacts with respect to compatible land uses. In contrast, the Proposed Action would improve airport compatible land uses by acquiring a portion of land within the RPZ (Parcel 4) to eliminate the potential for existing and future incompatible development within that parcel.

The No Action alternative would not impact existing land uses.

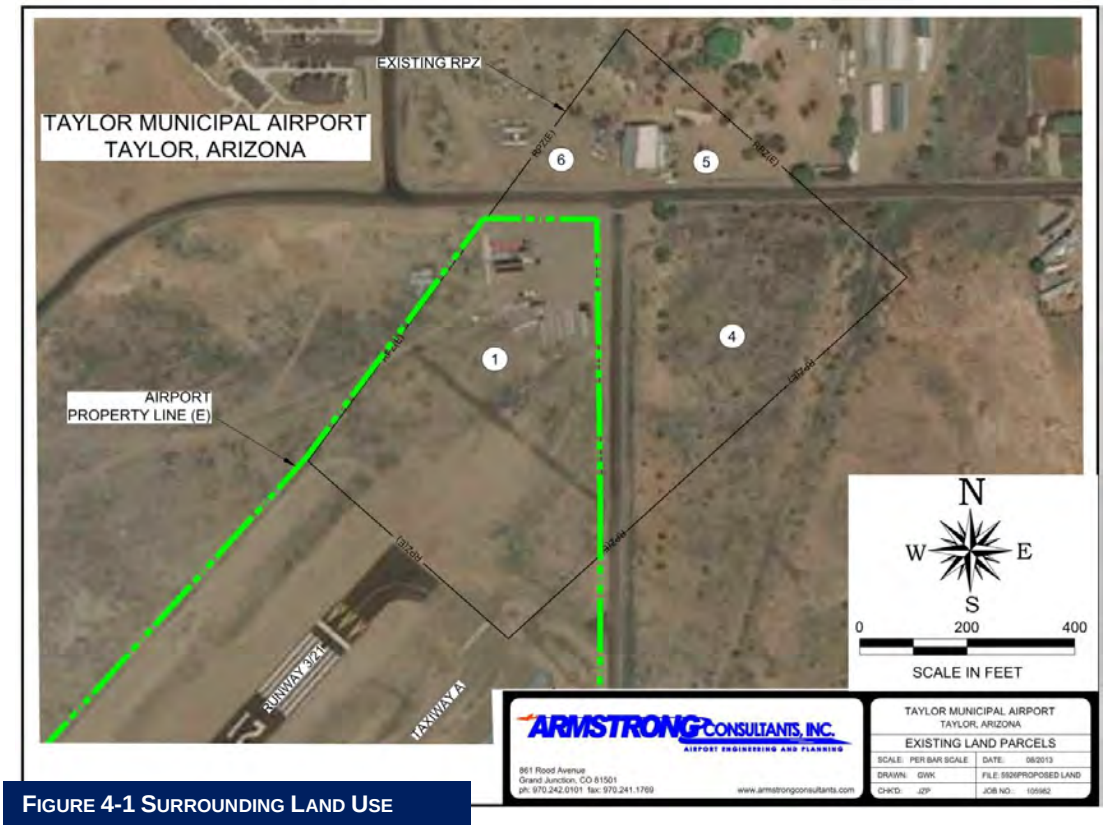


FIGURE 4-1 SURROUNDING LAND USE

TABLE 4-1 LAND USES

Land Use	Yearly day-night average sound level (DNL) in decibels					
	Below 65	65-70	70-75	75-80	80-85	Over 85
RESIDENTIAL						
Residential, other than mobile homes and transient lodging	Y	N(1)	N(1)	N	N	N
Mobile Home Parks	Y	N	N	N	N	N
Transient Lodging	Y	N(1)	N(1)	N(1)	N	N
PUBLIC USE						
Schools	Y	N(1)	N(1)	N	N	N
Hospitals and nursing homes	Y	25	30	N	N	N
Churches, auditoriums and concert halls	Y	25	30	N	N	N
Government services	Y	Y	25	30	N	N
Transportation	Y	Y	Y(2)	Y(3)	Y(4)	Y (4)
Parking	Y	Y	Y(2)	Y(3)	Y(4)	N
COMMERCIAL USE						
Offices, business and professional	Y	Y	25	30	N	N
Wholesale and retail—building materials, hardware and farm equipment	Y	Y	Y(2)	Y(3)	Y(4)	N
Retail trade – general	Y	Y	25	30	N	N
Utilities	Y	Y	Y(2)	Y(3)	Y(4)	N
Communications	Y	Y	25	30	N	N
MANUFACTURING AND PRODUCTION						
Manufacturing – general	Y	Y	Y(2)	Y(3)	Y(4)	N
Photographic and optical	Y	Y	25	30	N	N
Agriculture (except livestock) and forestry	Y	Y(6)	Y(7)	Y(8)	Y(8)	Y (8)
Livestock farming and breeding	Y	Y(6)	Y(7)	N	N	N
Mining and fishing, resource production and extraction	Y	Y	Y	Y	Y	Y
RECREATIONAL						
Outdoor sports arenas and spectator sports	Y	Y(5)	Y(5)	N	N	N
Outdoor music shells, amphitheaters	Y	N	N	N	N	N
Nature exhibits and zoos	Y	Y	N	N	N	N
Amusements, parks, resorts and camps	Y	Y	Y	N	N	N
Golf courses, riding stables and water recreation	Y	Y	25	30	N	N

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

Key to Table

SLUCM = Standard Land Use Coding Manual.

Y (Yes) = Land Use and related structures compatible without restrictions.

N (No) = Land Use and related structures are not compatible and should be prohibited.

NLR = Noise Level Reduction (outdoor to indoor) to be achieved through incorporation of noise attenuation into the design and construction of the structure.

25, 30 or 35 = Land use and related structures generally compatible; measures to achieve NLR of 25, 30 or 35 dB must be incorporated into design and construction of structure.

Notes to Table

(1) Where the community determines that residential or school uses must be allowed, measures to achieve outdoor to indoor Noise Level Reduction (NLR) of at least 25 dB and 30 dB should be incorporated into building codes and be considered in individual approvals. Normal residential construction can be expected to provide a NLR of 20 dB, thus, the reduction requirements are often stated as 5, 10 or 15 dB over standard construction and normally assume mechanical ventilation and closed windows year round. However, the use of NLR criteria would not eliminate outdoor noise problems.

(2) Measures to achieve NLR of 25 dB must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise sensitive areas or where the normal noise level is low.

(3) Measures to achieve NLR of 30 dB must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise sensitive areas or where the normal noise level is low.

(4) Measures to achieve NLR of 35 dB must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise sensitive areas or where the normal noise level is low.

(5) Land use compatible provided special sound reinforcement systems are installed.

(6) Residential buildings require a NLR of 25.

(7) Residential buildings require a NLR of 30.

(8) Residential buildings not permitted.

Source: FAA Order 1050.1E Environmental Impacts Policies and Procedures

4.5 CONSTRUCTION IMPACTS

Local, state or federal ordinances and regulations address the impacts of construction activities, including construction noise, dust and noise from heavy equipment traffic, disposal of construction debris, air and water pollution. Construction impacts alone are rarely significant pursuant to NEPA. Other relevant NEPA categories should be referenced for further guidance in defining a threshold of significant impact.

Construction operations would cause specific impacts resulting from and limited to construction at the Taylor Municipal Airport. These impacts are distinct and temporary in duration. Best management practices would be used to reduce the impacts due to the construction work. The following are some of the impacts that could be associated with the proposed Taylor Municipal Airport improvements.

- A temporary increase in particulate and gaseous air pollution levels as a result of dust generated by construction activities and by vehicle emissions from equipment and worker's automobiles;
- Increases in solid and sanitary wastes from the workers at the site;
- Traffic volumes would increase in the airport vicinity due to construction activity (workers arriving and departing, delivery of materials, etc.);
- Increase in noise levels at the airport during operation of heavy equipment;
- Construction caused delays or congestion in automobile and aircraft movements; and
- Temporary erosion; or scarring of land surfaces and permanent loss of vegetation in areas that are excavated or otherwise disturbed to carry out future developments.

Construction projects would comply with guidelines set forth in FAA Advisory Circular 150/5370-10G, Standards for Specifying the Construction of Airports. Fugitive dust and erosion control plans would be filed and an emissions permit obtained as necessary for construction activities. These requirements would be specified in the contract documents for the construction.

During construction, trash and food items shall be disposed of properly in predator-proof containers with re-sealing lids and removed regularly to reduce attractiveness to opportunistic predators such as ravens, coyotes, and feral dogs. This trash would be disposed of properly in an approved landfill. Trash includes but is not limited to, cigarettes, cigars, gum wrappers, tissue, cans, paper, and bags. In addition to reducing project effects on listed and sensitive wildlife, the continued proper management of trash at the airfield would help to reduce potential wildlife hazards resulting from the attraction of ravens, coyotes, and dogs.

The Proposed Action alternative would result in short-term construction impacts during the construction process (Apron: 60 days, Road: 30 days and Fuel System: 30 days). These short-term construction impacts could be in sequence or simultaneous depending on funding and are not considered significant. Air quality impacts resulting from construction of the Proposed Action were evaluated earlier in this Chapter (see Air Quality Section) and were not found to be significant. Mitigation measures would include Best Management Practices for Construction, including a fugitive dust control plan.

The No Action alternative would not result in any construction impacts.

4.6 FISH, WILDLIFE AND PLANTS

Section 7 of the ESA, as amended, applies to federal agency actions and sets forth requirements for consultation to determine if the Proposed Action "may affect" any endangered or threatened species. The threshold of significant impact is considered to be when the proposed action jeopardizes the continued existence of species in question or results in the destruction or adverse modification of Federally-designated critical habitats.

As discussed in Section 3.9, no species protected under the ESA are known to occur within the project area and no suitable habitat is present. As detailed in Table 4-2, no effects are anticipated to ESA species or their habitats as a result of the proposed action.

TABLE 4-2 ESA PROTECTED SPECIES FOR NAVAJO COUNTY, ARIZONA DETERMINATION OF EFFECT

Common Name	Scientific Name	Status	Presence/Absence	Effect Determination
Apache trout	*Oncorhynchus apache*	FT	No suitable habitat	No Effect
Black footed ferret	*Mustela nigripes*	FE	No suitable habitat	No Effect
California condor	*Gymnogy californianus*	FE	No suitable habitat	No Effect
Chiricachua leopard frog	*Rana chiricahuensis*	FT	No suitable habitat	No Effect
Gray wolf	*Canis lupus*	FE	No suitable habitat	No Effect
Gila trout	*Oncorhynchus gilae*	T	No suitable habitat	No Effect
Little Colorado spinedace	*Lepidomeda vittata*	FT	No suitable habitat	No Effect
Loach minnow	*Tiaroga cobitis*	FT	No suitable habitat	No Effect
Mexican spotted owl	*Strix occidentalis lucida*	FT	No suitable habitat	No Effect
Navajo sedge	*Carex specuicola*	FT	No suitable habitat	No Effect
New Mexico Jumping Mouse	*Zapus hudsonius luteus*	E	No suitable habitat	No Effect
Northern Mexican gartersnake	*Thamnophis eques megalops*	C	No suitable habitat	No Effect
Peebles Navajo cactus	*Pediocactus peeblesianus*	FE	None, site was surveyed and no Peebles Navajo cactus found	No Effect
Roundtail chub	*Gila robusta*	C	No suitable habitat	No Effect
Southwestern willow flycatcher	*Empidonax traillii extimus*	FE	No suitable habitat	No Effect
Welsh's Milkweed	*Asclepias welshii*	T	No suitable habitat	No Effect
Yellow-billed cuckoo	*Coccyzus americanus*	C	No suitable habitat	No Effect

Source: USFWS, 2015
FT = Federal Threatened, FE = Federal Endangered, C = Candidate

Construction of the expanded parking apron, aircraft hangar access road, and fuel system relocation under the proposed action is anticipated to remove some existing vegetation. This vegetation is currently highly disturbed as a result of ongoing operations and maintenance of the airport facility. It provides low quality habitat and would not constitute as a significant impact.

Acquisition of Parcel 4 would not result in construction activities. Vegetation, habitat, and wildlife species that inhabit this parcel would remain undisturbed. As such, there would be no impact to wildlife or plants that currently occur in Parcel 4 as a result of the proposed action.

The No Action alternative would not result in any effects to threatened, endangered or candidate species.

4.7 FLOODPLAINS

Executive Order 11988 directs federal agencies to take action to reduce the risk of flood loss, minimize the impacts of floods on human safety, health and welfare and restore and preserve

the natural and beneficial values served by floodplains. Order DOT 5650.2 contains DOT's policies and procedures for implementing the executive order. Agencies are required to make a finding that there is no practicable alternative before taking action that would encroach on a base floodplain from a 100-year flood.

The threshold of significant impact is considered to be when the proposed action resulted in notable adverse impacts on natural and beneficial floodplain values. Mitigation measures for base floodplain encroachments may include committing to special flood related design criteria, elevating facilities above base flood level, locating nonconforming structures and facilities out of the floodplain or minimizing fill placed in floodplains.

As described in FAA Order 1050.1E an encroachment into a floodplain would be considered significant if it involves one or more of the following:

- The action would have a high probability of loss of human life.
- The action would likely have substantial, encroachment-associated costs or damage; including interrupting aircraft service or loss of a vital transportation facility (e.g., flooding a runway or taxiway; important navigational aid out of service due to flooding, etc.); or
- The action would cause adverse impacts on natural and beneficial floodplain values.

Based on the FEMA FIRMS (see Figure 3-7) and Biological Resource Survey (Appendix D) it has been determined that the Proposed Action would not impact any floodplains. The proposed improvements would increase runoff from impermeable surfaces. Appropriate drainage features including drainage swales and culverts would be included in the engineering and design of the project. Mitigation measures to minimize erosion and sedimentation during and following construction and runoff control would be incorporated in the construction phase.

The Proposed Action and No Action alternatives would not have a significant impact to floodplains.

4.8 HAZARDOUS MATERIALS, POLLUTION PREVENTION AND SOLID WASTE

Four primary laws have been passed governing the handling and disposal of hazardous materials, chemicals, substances and wastes. The two statutes of most importance to the FAA in proposing actions to construct and operate facilities and navigational aids are the RCRA (as amended by the Federal Facilities Compliance Act of 1992) and the CERCLA, as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA or Superfund) and the Community Environmental Response Facilitation Act of 1992. RCRA governs the generation, treatment, storage and disposal of hazardous wastes. CERCLA provides for consultation with natural resources trustees and cleanup of any release of a hazardous substance (excluding petroleum) into the environment. The threshold of significant impact is considered to be when the proposed project is unable to meet applicable local, State, Tribal or Federal laws and regulations on hazardous or solid waste management.

All SWPPP and SPCC Plans would need to be updated to reflect the new apron and fuel system configurations in accordance with the Proposed Action. Deicing fluids are not expected to be used at the airport.

The Proposed Action would include the removal of the old fuel storage tank by the contractor and salvaged for steel. The existing fuel tank is located above ground and no additional clean

up of the area would be expected. None of the other projects would result in solid waste impacts or hazardous waste impacts.

The No Action alternative would not result in solid waste impacts or hazardous waste impacts.

4.9 HISTORICAL, ARCHITECTURAL, ARCHAEOLOGICAL AND CULTURAL RESOURCES

Historic, architectural, archaeological and cultural properties are protected through the National Historic Preservation Act of 1966 (NHPA) and the Archaeological and Historic Preservation Act of 1974 (AHPA). The NHPA protects properties eligible for inclusion in the National Register of Historic Places and the AHPA protects prehistoric, archaeological and paleontological resources. The threshold of significant impact is determined by the FAA, typically with State Historical Preservation Office (SHPO) consultation.

A cultural resource survey was completed in November, 2010 by ENTRIX, Inc. for the area of potential effect. According to the survey no prehistoric sites were located during the survey. Further, due to the relative thinness of the soil, it is unlikely that archaeological materials would be uncovered during construction. However, in the event that buried archaeological features are found in the course of construction, construction activities will cease and the resources will be assessed by a qualified archaeologist. The Arizona SHPO and interested Tribes will be consulted to determine eligibility of the resources to the National Register of Historic Places. The Cultural Resource Survey can be found in Appendix D.

The Proposed Action would have no effect on historical, cultural, architectural or archaeological resources.

The No Action alternative would not affect historical, cultural, architectural or archaeological resources. The FAA initiated Section 106 consultation with the SHPO to seek concurrence that the proposed projects would have no adverse effect on prehistoric, historic, archaeological or cultural resources. Concurrence from the SHPO was obtained on April 16, 2013. A copy of the letter and concurrence stamp can be found in Appendix B.

4.10 LIGHT EMISSIONS AND VISUAL IMPACTS

Determination of the significance of light emissions and visual impacts is based on the level of visual sensitivity in the area. Light emissions result from the production of artificial ambient light by production stations. The production of light is a direct result of the station's angle and strength. Visual sensitivity is defined as the degree of public interest in a visual resource and concern over adverse changes in the quality of that resource. In general, an impact to a visual resource is significant if implementation of the Proposed Action would result in a substantial alteration to an existing sensitive visual resource.

The elevation of the Taylor Municipal Airport is approximately 20 feet above surrounding terrain which generally blocks the view of the majority of the populated areas surrounding the airport. Existing airport related light emissions and visual impacts are currently limited to residences located along the northwest edge of the airport property and have not received complaints.

The proposed projects would have no impact on light emissions or visual impacts since the Proposed Action would not involve any lighting projects.

The No Action alternative would not result in impacts from light emissions.

4.11 NATURAL RESOURCES AND ENERGY SUPPLY

Executive Order 13123, Greening the Government Through Efficient Energy Management (64 FR 30851, June 8, 1999), encourages each Federal agency to expand the use of renewable energy within its facilities and in its activities. E.O. 13123 also requires each Federal agency to reduce petroleum use, total energy use and associated air emissions and water consumption in its facilities. The FAA has not defined a threshold of significant impact for natural resources and energy supply.

It is also the policy of the FAA, consistent with NEPA and the CEQ regulations, to encourage the development of sustainability. All elements of the transportation system should be designed with a view to their aesthetic impact, conservation of resources such as energy, pollution prevention, harmonization with the community environment and sensitivity to the concerns of the traveling public.

Energy requirements associated with airport development generally falls into two categories: 1) changed demand for stationary facilities (i.e. airfield lighting and terminal building heating) and 2) those that involve the movement of air and ground vehicles (i.e. fuel consumption). The use of natural resources includes primarily construction materials and water.

The Proposed Action would result in increased fuel consumption and temporary increase in construction materials; however, the Proposed Action would not require any natural resources or equipment that are in short supply. Therefore, the Proposed Action alternative would not have a significant impact on the regions natural resources and energy supply.

The No Action alternative would not impact existing energy requirements, air or ground vehicle fuel consumption or natural resource requirements.

4.12 NOISE

The basic measure of noise is the sound pressure level that is recorded in decibels (dBA). The important point to understand when considering the impact of noise on communities is that equal levels of sound pressure can be measured for both high and low frequency sounds. Generally, people are less sensitive to sounds of low frequency than they are to high frequencies. An example of this might be the difference between the rumble of automobile traffic on a nearby highway and the high-pitched whine of jet aircraft passing overhead. At any location, over a period of time, sound pressure fluctuates considerably between low and high frequencies. The differences between dBA and Day-Night Average Noise Level (DNL) are that dBA measurements are instantaneous sound while DNL are sound measurements over a given time frame.

Noise analysis considerations include whether the Federal thresholds of noise exposure are exceeded, whether the 65 DNL noise contour extends beyond airport property and if there are any residences, churches, schools or hospitals within the 65 DNL noise contour. Part 150 Airport Noise Compatibility Planning shows that a perceived noise level that is below DNL 65 is considered acceptable for every land use, including residential.

Three levels of noise analysis exist; 1) no analysis required, 2) Area Equivalent (AE) Method and 3) the Integrated Noise Model. No noise study is required if the airport's total annual operations is less than 90,000 annual piston-powered or 700 total annual jet-powered aircraft operations. The AE Method uses mathematical variations to determine if existing conditions

change causing an increase in noise. If the noise level is expected to increase greater than 17 percent, further evaluation is required. The Integrated Noise Model (INM) method uses average conditions in model form to determine average noise level outputs. The data set is presented in the form of an aerial map depicting the DNL contours.

The forecasted operations for the airport are significantly less than 90,000 annual piston-powered or 700 annual jet-powered aircraft operations. Therefore, no further noise analysis is required. The Proposed Action would have no significant noise impacts.

The No Action alternative would not result in a significant noise impact.

4.13 SECONDARY (INDUCED) IMPACTS

Major development proposals often involve the potential for induced or secondary impacts on surrounding communities. When such potential exists, the EA shall describe in general terms such factors. Examples include: shifts in patterns of population movement and growth; public service demands and changes in business and economic activity to the extent influenced by the airport development. Induced impacts would normally not be significant except where there are also significant impacts in other categories, especially noise, land use or direct social impacts.

The Proposed Action is located approximately two miles southwest of the Town of Taylor. It would not produce development impacts on surrounding communities, such as shifts in population movement and growth; public service demands are expected to be positive in nature with the airport providing and supporting essential community services (such as air ambulance and wildfire fighting) as well as business and tourism (including big game hunting). The Proposed Action would not relocate any businesses or population areas. Therefore no significant secondary (induced) impacts are expected as a result of the Proposed Action.

The No Action alternative would not result in any secondary (induced) impacts.

4.14 SOCIOECONOMIC IMPACTS, ENVIRONMENTAL JUSTICE AND CHILDREN'S ENVIRONMENTAL HEALTH AND SAFETY RISKS

4.14.1 SOCIOECONOMIC IMPACTS

Secondary or indirect impacts involve major shifts in population, changes in economic climate or shifts in levels of public service demand. The effects are directly proportional to the scope of the project under consideration. The threshold of significant impacts are considered to be when the proposed project requires extensive relocation of residents with no sufficient replacement housing, relocations of community businesses which could create severe economic hardships, disruptions of local traffic patterns which would reduce the level of service surrounding the airport and surrounding community or a substantial loss in community tax base.

The socioeconomic impacts produced as a result of the proposed development alternatives at the Taylor Municipal Airport are expected to be positive in nature and would include direct, indirect and induced economic benefits to the local area.

If acquisition of real property or displacement of persons is involved, 49 CFR Part 24 (implementing the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970), as amended must be met for federal projects and projects involving federal funding. Otherwise, the FAA, to the fullest extent possible, observes all local and state laws, regulations

and ordinances concerning zoning, transportation, economic development, housing, etc. when planning, assessing or implementing the Proposed Action.

The Proposed Action includes the acquisition of approximately four acres of land (Parcel 4) for approach and RPZ protection. The affected landowner has indicated that an additional 2.7 acres of land would become uneconomical remnants as a result of the Proposed Action. Figure 4-2 shows Parcel 4 and the uneconomical remnant. The consideration for uneconomical remnants will be determined through the subsequent appraisal and land acquisition process. The acquisition of the parcel and any uneconomical remnants, in accordance with FAA AC 150/5300-17, *Land Acquisition and Relocation Assistance for Airport Improvement Program (AIP) Assisted Projects*, would not result in any socioeconomic impacts.

The No Action alternative would have no socioeconomic impacts.

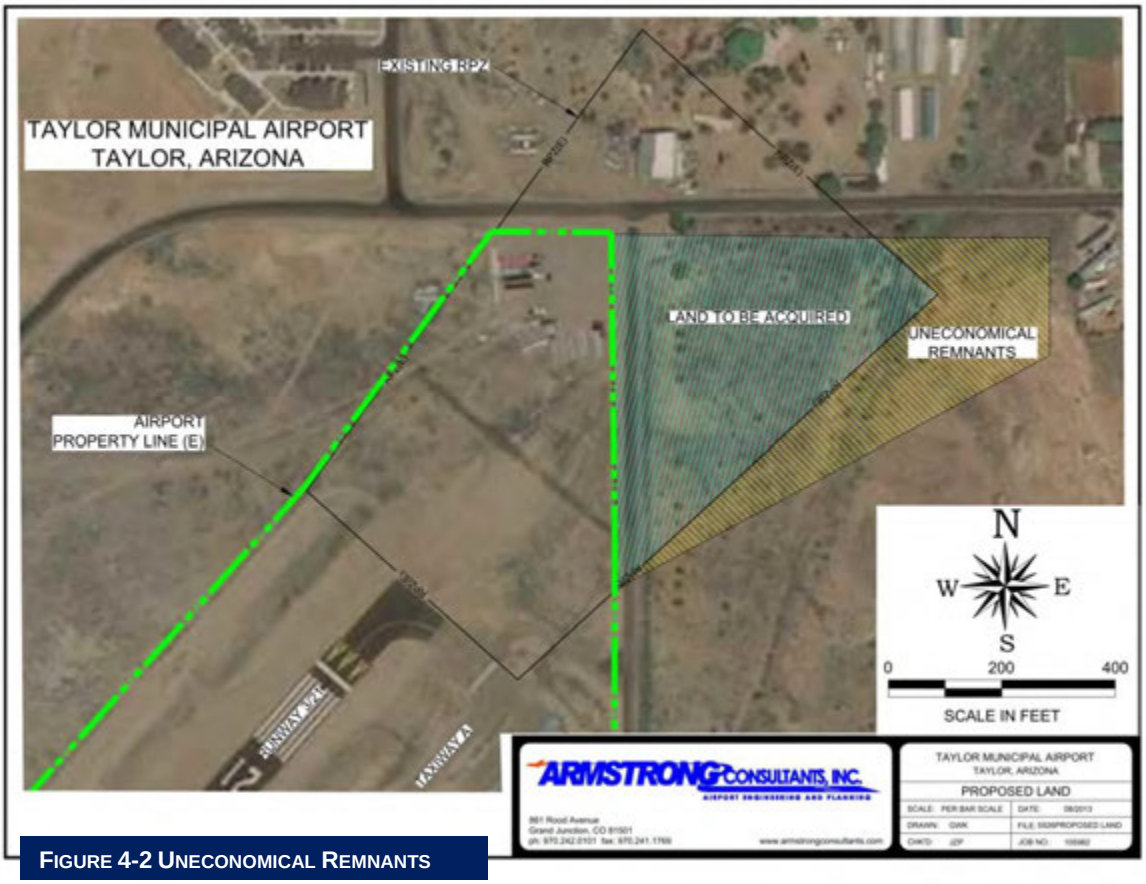


FIGURE 4-2 UNECONOMICAL REMNANTS

4.14.2 ENVIRONMENTAL JUSTICE

Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, the accompanying Presidential Memorandum and Order DOT 5610.2, Environmental Justice, require FAA to provide for meaningful public involvement by minority and low-income populations and analysis, including demographic analysis that identifies and addresses potential impacts on these populations that may be disproportionately high and adverse. Included in this process is the disclosure of the effects on

subsistence patterns of consumption of fish, vegetation or wildlife and effective public participation and access to this information. The Presidential Memorandum that accompanied E.O. 12898, as well as the CEQ and EPA Guidance, encourage consideration of environmental justice impacts in Environmental Assessment's especially to determine whether a disproportionately high and adverse impact may occur. Environmental Justice is examined during evaluation of other impact categories, such as noise, air quality, water quality, hazardous materials and cultural resources.

The focus of the Environmental Justice evaluation is to determine whether the Proposed Action results in an inequitable distribution of negative effects to special population groups, as compared to negative effects on other population groups. These special population groups include minority or otherwise special ethnicity or low-income neighborhoods. The threshold of significant impact is considered to be when the proposed action would create a disproportionate high and adverse human health or environmental effects on minority and low-income populations.

The Proposed Action is not expected to result in any significant negative off-airport impacts including neighborhoods or residences and therefore would not result in disproportionate negative impacts to any special population group. The Proposed Action would not impact any minority or otherwise special ethnicity or low income neighborhoods. Socioeconomic and induced economic impacts are expected to be positive in nature and are expected to benefit all population groups in the area.

The No Action alternative would constrain the potential socioeconomic and induced economic benefits expected from the Proposed Action.

4.14.3 CHILDREN'S ENVIRONMENTAL HEALTH AND SAFETY RISKS

Pursuant to Executive Order 13045, Protection of Children from the Environmental Health Risks, Federal agencies are directed, as appropriate and consistent with the agency's mission, to make it a high priority to identify and assess environmental health risks and safety risks that may disproportionately affect children. Agencies are encouraged to participate in implementation of the Order by ensuring that their policies, programs, activities and standards address disproportionate risks to children that result from environmental health risks or safety risks. The threshold of significant impact is considered to be when the proposed action creates a disproportionate health and safety risk to children.

The Proposed Action is not expected to result in any significant negative off-airport impacts and therefore would not result in any environmental health risks or safety risks on children.

The No Action alternative would not affect children's environmental health and safety.

4.15 WATER QUALITY

Water quality concerns related to airport development most often relate to increased surface runoff, erosion and pollution from fuel, oil, solvents and deicing fluids. Potential pollution could come from petroleum products spilled on the surface and carried through drainage channels off of the airport. State and Federal laws and regulations have been established to safeguard these facilities. These regulations include standards for underground storage tanks, leak detection and overflow protection. The existing SWPPP and Arizona Pollutant Discharge Elimination System (AZPDES) Permit which identifies existing storm water discharge points on the airport would need to be updated to account for the new development. The threshold of

significant impact is determined by water quality regulations and the issuance of permits typically identifies any water quality deficiencies.

Since the Proposed Action would disturb more than one (1) acre of land a general permit for coverage of stormwater discharges under the AZPDES Construction General Permit would be required. As part of the permit coverage an updated SWPPP must be prepared and implemented during the course of construction.

Recommendations established in FAA Advisory Circular (AC) 150/5370-10F, Standards for Specifying Construction of Airports, Item P-156, Temporary Air and Water Pollution, Soil Erosion and Siltation Control, would be incorporated into the project design and specifications. A copy of this AC can be obtained through the World Wide Web through the following Uniform Resource Locator (URL) (http://www.faa.gov/airports/resources/advisory_circulars/media/150-5370-10E/150_5370_10f.pdf).

The design and construction of the proposed improvements would incorporate BMPs to reduce erosion, minimize sedimentation, control non-stormwater discharges and protect the quality of surface water features that could potentially be affected. These practices would be selected based on the site's characteristics and those factors within the contractor's control and may include: construction scheduling, limiting exposed areas, runoff velocity reduction, sediment trapping and good housekeeping practices.

Waste fluids, including oils, coolants, degreasers and aircraft wash facility waste water would be managed and disposed of in accordance with applicable federal, state and local regulations.

Correspondence was sent to the Arizona Department of Environmental Quality, Water Quality Division concerning any actions that should be taken before improvements proceed. The department responded in September, 2010 with information on construction permit requirements. A copy of the letter is included in Appendix B.

The Proposed Action alternative would not result in a significant environmental impact to water quality provided the measures described above are implemented.

The No Action alternative would not have negative impacts to water quality.

4.16 WETLANDS

Wetlands are defined in Executive Order 11990, Protection of Wetlands, as "those areas that are inundated by surface or ground water with a frequency sufficient to support and under normal circumstances does or would support, a prevalence of vegetation or aquatic life that requires saturated or seasonally saturated soil conditions for growth and reproduction. Wetlands generally include swamps, marshes, bogs and similar areas such as slough, potholes, wet meadows, river overflows and natural ponds. Jurisdictional Waters of the United States may also include drainage channels, washes, ditches, arroyos or other waterways which are tributaries to navigable Waters of the United States or other waters where the degradation or destruction of which could affect interstate or foreign commerce". The threshold of significant impact is considered to be when the proposed project causes any of the following:

- The action would adversely affect the function of a wetland to protect the quality or quantity of municipal water supplies, including sole source, potable water aquifers.

- The action would substantially alter the hydrology needed to sustain the functions and values of the affected wetlands to which it is connected.
- The action would substantially reduce the affected wetland's ability to retain floodwaters or storm-associated runoff, thereby threatening public health, safety or welfare (this includes cultural, recreational and scientific resources important to the public, or property.
- The action would adversely affect the maintenance of natural systems that support wildlife and fish habitat or economically-important timber, food, or fiber resources in the affected or surrounding wetlands.
- The action would promote development of secondary activities or services that would affect the resources mentioned in items (1) through (4) in this section.
- The action would be inconsistent with applicable State wetland strategies.

A Biological Resource Survey of the area of potential effect was conducted by ENTRIX, Inc. in November, 2010 to determine the potential impacts of the Proposed Action. According to the survey, there are no Waters of the United States or wetlands within the area of potential effect.

Correspondence was sent to the Army Corps of Engineers, Arizona Regulatory Office, regarding potential impacts to the wetlands and waters of the United States. The Army Corps of Engineers responded in a letter dated September 30, 2010 stating "based on the information furnished in your letter we have determined that your proposed project is not subject to our jurisdiction under Section 404 of the Clean Water Act. Since there are no waters of the United States within the aforementioned proposed project area, no Section 404 permit is required from our office." A copy of the letter is included in Appendix B.

Therefore, based on the Biological Resource Survey and correspondence with the Army Corps of Engineers, the Proposed Action alternative would not result in significant impacts to wetlands or Jurisdictional Waters of the United States.

The No Action alternative would not result in an impact to wetlands or Jurisdictional Waters of the United States.

4.17 WILD AND SCENIC RIVERS

The Wild and Scenic Rivers Act (PL 90-542) describes those river areas eligible for protection from development. As a general rule, these rivers possess outstanding scenic, recreational, geological, fish and wildlife, historical, cultural or other similar value. The FAA has not defined a threshold of significant impact for wild and scenic rivers.

According to the Wild and Scenic River list from the National Park Service there are two Wild and Scenic Rivers in Arizona: 1) the Fossil Creek, and 2) the Verde River. Both rivers are located more than 100 miles from the Taylor Municipal Airport. Therefore the Proposed Action alternative would not result in an impact to Wild and Scenic Rivers.

The No Action alternative would not impact any Wild and Scenic Rivers.

4.18 OTHER CONSIDERATIONS

Possible conflicts between the Proposed Action and the objectives of federal, regional, state and local land use plans, policies and controls for the area concerned.

1) Community Development

- The Proposed Action would not disrupt or divide the communities nor impede their orderly development.

- The No Action alternative would not disrupt or divide the communities nor impede their orderly development.

2) Consistency of a Proposed Action with any approved state or local plans and laws.

- The Proposed Action alternative is consistent and in compliance with applicable federal, state and local regulations and environmental standards.

- The No Action alternative would have no impact on applicable federal, state or local regulations and environmental standards.

4.19 DEGREE OF CONTROVERSY ON ENVIRONMENTAL GROUNDS

The Proposed Action alternative has not been opposed by any federal, state or local government agency in the past, nor is such opposition present now. There is no known organized and concerted effort by public entities to oppose the action.

A public involvement program has been initiated to inform the community about the proposed project and the Environmental Assessment study. The Draft Environmental Assessment report will be made available for public review and comment for 30 days and the opportunity for a public hearing provided. Any comments received would be included in the appendices along with a copy of the public notice.

4.20 CUMULATIVE IMPACTS

Cumulative impacts are impacts on the environment that result from the incremental impact of the action when added to other past, present and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

Cumulative environmental impacts are most likely to arise when a relationship exists between a proposed activity and other projects expected to occur in a similar location, time period and/or involving similar actions. Projects located in close proximity to the Proposed Action would be expected to have more potential for a relationship that could result in potential impacts than those that are geographically separated.

Notable projects considered to have the potential for creating cumulative impacts in association with the proposed activity are identified in Table 4-3. For each potential impact, the cumulative impact assessment focuses on addressing two fundamental questions 1.) Does a relationship exist such that the impacts from the Proposed Action might affect or be affected by impacts from other actions? 2.) If a relationship exists, then does an assessment reveal any cumulative significant impacts that are not otherwise revealed when the Proposed Action is evaluated by itself? Based on other known past, present and reasonably foreseeable future actions, the cumulative impact of the Proposed Action and No Action alternative would not result in any significantly adverse impacts as defined by FAA Orders 1050.1E and 5050.4B.

TABLE 4-3 CUMULATIVE PROJECTS WITHIN THE VICINITY OF THE PROPOSED ACTION

Project	Proponent	General Location	Description
Development of a Transfer Station	Town of Taylor	Approximately 1.5 miles southwest of the Taylor Municipal Airport.	This project would construct a waste transfer station within the Taylor Industrial Park.
Acquisition or Easement of Parcels 5 & 6	Town of Taylor	Runway 21 Runway Protection Zone	This project would establish control of Parcels 5 & 6 to ensure protection of the RPZ.

4.20.1 AIR QUALITY

Based on the Proposed Action being located within an area of attainment and the air quality emissions inventory of the Proposed Action being far less than de minims levels, the Proposed Action would not result in any significant cumulative impacts to air quality when added to the other reasonably foreseeable actions within the area. The No Action alternative would have no cumulative impacts.

4.20.2 COASTAL RESOURCES

No impacts to coastal resources would occur as a result of the Proposed Action and No Action alternative.

4.20.3 COMPATIBLE LAND USE

The cumulative impact of the proposed action would not encroach on the airport or result in any incompatible land uses. The Proposed Action would instead improve airport compatible land uses by acquiring control of the RPZ. The proposed transfer station is not anticipated to create any hazardous wildlife attractants since the transfer station would keep waste enclosed within trucks and compactors. The easement, or fee-simple acquisition of Parcels 5 and 6 would be accomplished at a future period determined by the Sponsor and FAA. The acquisition of these not result in significant cumulative impacts when combined with the Proposed Action. The No Action alternative would have no cumulative impacts.

4.20.4 CONSTRUCTION IMPACTS

The potential for cumulative impacts from the Proposed Action's construction activities exists; however, BMPs would keep construction related impacts for the Proposed Action below the level of significance. No other known past, present or reasonably foreseeable construction actions would occur within the area to generate a significant cumulative impact.

The No Action alternative would have no cumulative impacts.

4.20.5 DEPARTMENT OF TRANSPORTATION ACT: SECTION 4(F)

The Proposed Action alternative would not require the use or acquisition of any public park, or wildlife and water fowl refuge, or any other Section 4(f) resource. Therefore the Proposed Action would have no cumulative impact on Section 4 (f) resource.

The No Action alternative would have no cumulative impact on Section 4(f) resources.

4.20.6 FARMLANDS
No impacts to farmlands would occur as a result of the Proposed Action and No Action alternative. Therefore, no cumulative impacts to farmlands would occur.

4.20.7 FISH, WILDLIFE AND PLANTS
The Proposed Action and No Action alternative would not result in impacts to Fish, Wildlife and Plants. Therefore, no cumulative impacts to fish, wildlife and plants would occur.

4.20.8 FLOODPLAINS
No impacts to floodplains would occur as a result of the Proposed Action and No Action alternative. Therefore, no cumulative impacts to floodplains would occur.

4.20.9 HAZARDOUS MATERIALS, POLLUTION PREVENTION AND SOLID WASTE
No hazardous material sites would be impacted, nor would there any substantial increase in pollution or solid waste over the long-term as a result of the Proposed Action.

The potential exists for a temporary increase in solid waste during construction; however, the combined waste of the Proposed Action's construction activities within the area would not produce a significant impact over time. No other known past, present or reasonably foreseeable actions would occur within the area to generate a significant cumulative impact.

The No Action alternative would have no cumulative impacts.

4.20.10 HISTORICAL, ARCHITECTURAL, ARCHAEOLOGICAL, AND CULTURAL RESOURCES
The Proposed Action and No Action alternative would have no effect on historical, cultural, architectural or archaeological resources. Therefore, no cumulative adverse effect on historical, cultural, architectural or archaeological resources would occur.

4.20.11 LIGHT EMISSIONS AND VISUAL IMPACTS
The Proposed Action and No Action alternative would have no impact on light emissions and would have no significant visual impacts. The geographic extent for the analysis of cumulative visual is generally limited to the localized area and line of sight. Therefore, the Proposed Action would not combine with any projects listed in Table 4-3 to create any significant cumulative impacts as other known projects would be greater than one mile away. The No Action alternative would have no cumulative impacts.

4.20.12 NATURAL RESOURCES AND ENERGY SUPPLY
The Proposed Action would not require any significant increase in natural resource or energy supply, nor would it be expected to contribute to any cumulative impacts. The No Action alternative would have no cumulative impacts.

4.20.13 NOISE
The Proposed Action alternative would not result in impacts due to noise exposure. The geographic extent for the analysis of cumulative impacts related to noise is generally limited to areas within a few hundred feet of the Proposed Action as noise is generally localized. The primary noise source would result from future aircraft operations at the Taylor Municipal Airport. The No Action alternative would have no cumulative impacts.

4.20.14 SOCIOECONOMIC ENVIRONMENTAL JUSTICE AND CHILDREN'S HEALTH AND SAFETY RISKS
The Proposed Action alternative would result in facilities that meet the needs of airport users and generate a positive cumulative effect on the economy for the Town of Taylor. No other

known projects would combine to create a significant cumulative impact. The No Action alternative would have no cumulative impacts.

4.20.15 WATER QUALITY

The potential for cumulative water quality impacts from the Proposed Action's construction activities exists; however best management practices would keep construction related impacts for the Proposed Action below the level of significance. No other known past, present or reasonably foreseeable construction actions would occur within the area to generate a significant cumulative impact to water quality. The No Action alternative would have no cumulative impacts.

4.20.16 WETLANDS

The Proposed Action is located within an upland environment. Therefore the Proposed Action and No Action alternative would have no cumulative wetland impact.

4.20.17 WILD AND SCENIC RIVERS

The Proposed Action and No Action alternative would not result in an impact to Wild and Scenic Rivers. As a result, there would not be any cumulative impacts related to Wild and Scenic Rivers. The nearest Wild and Scenic Rivers are located more than 100 miles northwest of the Taylor Municipal Airport.

4.21 SUMMARY

Table 4-4 presents a summary of environmental impacts for the Proposed Action relative to all of the specific categories investigated as part of this Environmental Assessment. Where noted, mitigation would be accomplished to reduce the level of impacts too less than the thresholds of significance stipulated in FAA Order 5050.4B.

TABLE 4-4 POTENTIAL ENVIRONMENTAL IMPACTS

Categories	Proposed Action	Remarks	No Action	Remarks
Air Quality	⦿	Dust from Construction Short Term	○	
Coastal Resources	○		○	
Compatible Land Use	○		○	
Construction Impacts	⦿	Short-term noise, dust and exhaust	○	
DOT Act-Section 4(f)	○		○	
Farmlands	○		○	
Fish, Wildlife and Plants	○		○	
Floodplains	○		○	
Hazardous Materials, Pollution, Prevention and Solid Waste	○	Update SPCC and SWPP Plans	○	
Historical, Architectural, Archeological & Cultural Resources	○		○	
Light Emissions and Visual Impacts	○		○	
Natural Resources and Energy Supply	○		○	
Noise	○		○	
Secondary (Induced) Impacts	○		○	
Socioeconomic Impacts, Environmental Justice and Children's Environmental Health and Safety Risks	⦿	Positive-direct and indirect economic benefits	○	
Water Quality	○	Obtain NPDES and Storm Water permit for construction and update SWPPP	○	
Wetlands	○		○	
Wild and Scenic Rivers	○		○	

○ No Impact ⦿ Slight Impact – Does Not Exceed Threshold of Significance ● Significant Impact

CHAPTER 5

COORDINATION AND PUBLIC INVOLVEMENT

TAYLOR MUNICIPAL AIRPORT
ENVIRONMENTAL ASSESSMENT

CHAPTER FIVE
COORDINATION AND PUBLIC INVOLVEMENT

Agency and public involvement in the NEPA process promotes open communication between the public and the government and enhances the ability of the FAA to make an informed decision. NEPA and implementing regulations and procedures from the CEQ direct agencies to make their EAs available to the public during the decision-making process, before actions are taken. The premise of NEPA is that the quality of Federal decisions will be enhanced if proponents provide information to the public and involve the public in the planning process.

5.1 AGENCY SCOPING

The public involvement process provides FAA with the opportunity to cooperate with and consider state and local reviews in its decision whether to approve the Taylor Municipal Airport ALP change and consider future funding. The Town of Taylor initiated public involvement for this project by notifying relevant Federal, state, and local agencies of the Proposed Action in scoping letters that were distributed on September 2, 2010. The scoping letters provided information regarding the Proposed Action and requested input on environmental and other concerns they might have regarding the Proposed Action. Based on the comments received, no issues were identified beyond those that are analyzed in detail in this EA. Scoping letters are included in Appendix A with responses included in Appendix B.

5.2 DRAFT EA AND NOTICE OF AVAILABILITY

The Draft EA and Notice of Availability for the document were published on March 18, 2015 and the Draft EA was made available for public review and comment from March 20 to April 20. The Notice of Availability was published in the Silver Creek Herald on March 18, 2015. The Notice of Availability is included in Appendix C. Hard Copies of the Draft EA is available for public review at the following locations:

Taylor Town Hall
425 Paper Mill Road
Taylor, AZ 85939

Snowflake-Taylor Public Library
418 West 4th Street South
Snowflake, AZ 85937

FAA Phoenix Airports District Office
3800 N. Central Avenue, Suite 1025
Phoenix, AZ 85012

FAA Western Pacific-Region Office
Office of the Airports Division
15000 Aviation Boulevard
Hawthorne, CA 90261

CHAPTER 6
Preparers

TAYLOR MUNICIPAL AIRPORT
ENVIRONMENTAL ASSESSMENT

CHAPTER SIX
PREPARERS

6.1 PREPARERS

Lead Agency
The FAA is the lead Federal agency for preparation of this EA.

U.S. Department of Transportation
Federal Aviation Administration
Phoenix Airport District Office
3800 N. Central Avenue, Suite 1025
Phoenix, AZ 85012

Principal Reviewers
Responsibility for review of this Environmental Assessment (EA) rests with the Federal Aviation Administration (FAA). Listed below are the identities and backgrounds of the principal FAA individuals in accordance with Council on Environmental Quality (CEQ) Regulations and FAA Orders 1050. 1E Environmental Impacts: Policies and Procedures, and 5050.4B, National Environmental Policy Act (NEPA) Implementing Instructions for Airport Actions.

Amy Gibbons, Environmental Protection Specialist, Phoenix Airports District Office, Airports Division, Western Pacific Region. Masters of Environmental Planning, BSc Fisheries and Wildlife Management, 14 years NEPA experience.

Principal Preparers
Responsibility for preparation of this Environmental Assessment Report (EA) rests with the Town of Taylor, Arizona. Listed below are the consultants responsible for preparation of this EA. Armstrong Consultants, Inc. is the primary preparer responsible for the preparation of this Environmental Assessment. The Cultural Resource Survey and Biological Assessment was provided by ENTRIX, Inc. – Environmental Consultants.

Armstrong Consultants, Inc.
Dennis A. Corsi, President, Armstrong Consultants, Inc. Master of Aeronautical Science Aviation Management from Embry-Riddle Aeronautical University and B.S. Aerospace Engineering from Boston University. Mr. Corsi prepares Airport Master Plans, Site Selection Studies and Environmental Assessments. Within this scope of work, Mr. Corsi develops aviation demand forecasts, facility requirements and evaluates development alternatives. Mr. Corsi is also responsible for evaluating potential environmental impacts to the proposed development area and land acquisition matters. Mr. Corsi has 23 years experience in airport planning, operations and management. Specialties include airport master planning, site selection, environmental compliance and noise analysis.

Justin Z. Pietz, Planning Manager, Armstrong Consultants, Inc. B.S. Aerospace Studies, with minors in Aviation Safety and Aeronautical Science Embry-Riddle Aeronautical University. Mr. Pietz prepares Airport Master Plans, Site Selection Studies and Environmental Assessments. Within this scope of work, Mr. Pietz develops aviation demand forecasts, evaluates and projects airport facility requirements and analyzes airport development alternatives. Mr. Pietz is also responsible for evaluating potential environmental impacts to the proposed development area. Mr. Pietz has 13 years experience in airport planning and airport operations.

CHAPTER 7
References

TAYLOR MUNICIPAL AIRPORT
ENVIRONMENTAL ASSESSMENT

CHAPTER SEVEN
REFERENCES

7.1 REFERENCES

ENTRIX, Inc. November 2010. A Cultural Resources Inventory for the Taylor Municipal Airport, Taylor, Arizona. Prepared for Armstrong Consultants, Inc.

Cardno, Inc. February 2015. Taylor Biological Resources Survey.

Environmental Protection Agency, July 2013. Counties Designated Nonattainment Map. Available at www.epa.gov. Accessed August 6, 2013.

Federal Aviation Administration, October 2007. Environmental Desk Reference for Airport Actions. Available at www.faa.gov. Accessed July 17, 2013.

Federal Aviation Administration, June 2004. FAA Order 1050.1E Environmental Impacts Policies and Procedures. Available at www.faa.gov. Accessed July 17, 2013.

Federal Aviation Administration, April 2006. FAA Order 5050.4B. Available at www.faa.gov. Accessed July 17, 2013.

Federal Aviation Administration, July 2013. Terminal Area Forecast. Available at www.faa.gov. Accessed July 17, 2013.

Federal Emergency Management Agency, 2013. Available at www.fema.gov. Accessed July 17, 2013.

Taylor Municipal Airport Layout Plan, Armstrong Consultants, Inc, February 2010.

Taylor Municipal Airport Master Plan, Armstrong Consultants, Inc, November 2005.

United States Census Bureau, 2010. Available at www.census.gov. Accessed July 17, 2013.

United States Department of Agriculture, 2013. Available at www.usda.gov. Accessed July 17, 2013.

United States Fish & Wildlife Service, 2013. National Wetlands Inventory. Available at www.fws.gov. Accessed July 17, 2013.

United States Fish and Wildlife Service, 2013. Threatened, Endangered and Candidates Species Potentially Occurring Within Navajo County, Arizona. Available at www.fws.gov. Accessed July 17, 2013.

APPENDIX A
AGENCY COORDINATION

TAYLOR MUNICIPAL AIRPORT
ENVIRONMENTAL ASSESSMENT

ARMSTRONG CONSULTANTS, INC.
AIRPORT ENGINEERING AND PLANNING

September 2, 2010 ACI# 105982

Ms. Nancy Wrona
Arizona Department of Environmental Quality
Air Quality Division Director
1110 W. Washington St
Mail Code 3415A-3
Phoenix, AZ 85007

RE: Taylor Municipal Airport - Environmental Assessment

Dear Ms. Wrona:

Armstrong Consultants has been retained to prepare an Environmental Assessment for proposed construction at the Taylor Municipal Airport in Taylor, Arizona. The Environmental Assessment is intended to determine the extent of potential environmental impacts associated with the proposed airport improvement projects listed below. To assist us in preparing this Environmental Assessment and to comply with the requirements of NEPA and the Federal Aviation Administration, we request your comments concerning the potential impacts to air quality and any permitting requirements.

Proposed Action:

1) Relocate fence north of Runway 3/21 for approach protection.
2) Relocation/replacement of the fuel system outside of the Taxiway Object Free Area.
3) Reconfiguration and expansion of the aircraft parking apron and tiedowns to meet Group II design standards.
4) Construct aircraft hangar access road outside of the Runway Object Free Area and Runway Safety Area.
5) Acquisition of 4 acres of land for control of the Runway Protection Zone.

Enclosed for your reference is a vicinity map and proposed action drawing at the Taylor Municipal Airport. Please forward any comment at your earliest convenience and please contact me at (970) 242-0101 if you have any questions regarding this project. Thank you for your assistance.

Sincerely,

ARMSTRONG CONSULTANTS, INC.

Justin Pietz

Justin Pietz
Senior Airport Planner

Enclosures

861 Rood Avenue • Grand Junction, Colorado 81501 tel 970.242.0101
www.armstrongconsultants.com fax 970.241.1769

ARMSTRONG CONSULTANTS, INC.
AIRPORT ENGINEERING AND PLANNING

September 2, 2010

ACI# 105982

Ms. Linda Taunt
Arizona Department of Environmental Quality
Water Quality Division Deputy Director
1110 W. Washington St.
Phoenix, AZ 85007

RE: Taylor Municipal Airport - Environmental Assessment

Dear Ms. Taunt:

Armstrong Consultants has been retained to prepare an Environmental Assessment for proposed construction at the Taylor Municipal Airport in Taylor, Arizona. The Environmental Assessment is intended to determine the extent of potential environmental impacts associated with the proposed airport improvement projects listed below. To assist us in preparing this Environmental Assessment and to comply with the requirements of NEPA and the Federal Aviation Administration, we request your comments concerning the possibility of the proposed development actions impacting water quality.

Proposed Action:

1) Relocate fence north of Runway 3/21 for approach protection.
2) Relocation/replacement of the fuel system outside of the Taxiway Object Free Area.
3) Reconfiguration and expansion of the aircraft parking apron and tiedowns to meet Group II design standards.
4) Construct aircraft hangar access road outside of the Runway Object Free Area and Runway Safety Area.
5) Acquisition of 4 acres of land for control of the Runway Protection Zone.

Enclosed for your reference is a vicinity map and proposed action drawing at the Taylor Municipal Airport. Please forward any comment at your earliest convenience and please contact me at (970) 242-0101 if you have any questions regarding this project. Thank you for your assistance.

Sincerely,

ARMSTRONG CONSULTANTS, INC.

Justin Pietz
Senior Airport Planner

Enclosures

861 Rood Avenue • Grand Junction, Colorado 81501
www.armstrongconsultants.com
tel 970.242.0101
fax 970.241.1769

ARMSTRONG CONSULTANTS, INC.
AIRPORT ENGINEERING AND PLANNING

September 2, 2010

ACI# 105982

Ms. Laura Canaca
Project Evaluation Program Supervisor
Arizona Game and Fish Department – WMHB
5000 West Carefree Highway
Phoenix, AZ 85086

RE: Taylor Municipal Airport - Environmental Assessment

Dear Ms. Canaca:

Armstrong Consultants has been retained to prepare an Environmental Assessment for proposed construction at the Taylor Municipal Airport in Taylor, Arizona. The Environmental Assessment is intended to determine the extent of potential environmental impacts associated with the proposed airport improvement projects listed below. To assist us in preparing this Environmental Assessment and to comply with the requirements of NEPA and the Federal Aviation Administration, we request your comments concerning the possibility of the proposed development actions impacting any threatened or endangered species.

Proposed Action:

1) Relocate fence north of Runway 3/21 for approach protection.
2) Relocation/replacement of the fuel system outside of the Taxiway Object Free Area.
3) Reconfiguration and expansion of the aircraft parking apron and tiedowns to meet Group II design standards.
4) Construct aircraft hangar access road outside of the Runway Object Free Area and Runway Safety Area.
5) Acquisition of 4 acres of land for control of the Runway Protection Zone.

Enclosed for your reference is a vicinity map and proposed action drawing at the Taylor Municipal Airport. Please forward any comment at your earliest convenience and please contact me at (970) 242-0101 if you have any questions regarding this project. Thank you for your assistance.

Sincerely,

ARMSTRONG CONSULTANTS, INC.

Justin Pietz

Justin Pietz
Senior Airport Planner

Enclosures

861 Rood Avenue • Grand Junction, Colorado 81501
www.armstrongconsultants.com
tel 970.242.0101
fax 970.241.1769

ARMSTRONG CONSULTANTS, INC.
AIRPORT ENGINEERING AND PLANNING

September 2, 2010

ACI# 105982

Mr. Steve Smarik
Natural Resource Conservation Service
NRCS Arizona State Office
230 North 1st Avenue
Suite 509
Phoenix, AZ 85003

RE: Taylor Municipal Airport - Environmental Assessment

Dear Mr. Smarik:

Armstrong Consultants has been retained to prepare an Environmental Assessment for proposed construction at the Taylor Municipal Airport in Taylor, Arizona. The Environmental Assessment is intended to determine the extent of potential environmental impacts associated with the proposed airport improvement projects listed below. To assist us in preparing this Environmental Assessment and to comply with the requirements of NEPA and the Federal Aviation Administration, we request your comments concerning the possibility of the proposed development actions impacting any prime or unique farmland.

Proposed Action:

1) Relocate fence north of Runway 3/21 for approach protection.
2) Relocation/replacement of the fuel system outside of the Taxiway Object Free Area.
3) Reconfiguration and expansion of the aircraft parking apron and tiedowns to meet Group II design standards.
4) Construct aircraft hangar access road outside of the Runway Object Free Area and Runway Safety Area.
5) Acquisition of 4 acres of land for control of the Runway Protection Zone.

Enclosed for your reference is a vicinity map and proposed action drawing at the Taylor Municipal Airport. Please forward any comment at your earliest convenience and please contact me at (970) 242-0101 if you have any questions regarding this project. Thank you for your assistance.

Sincerely,

ARMSTRONG CONSULTANTS, INC.

Justin Pietz
Senior Airport Planner

Enclosures

861 Rood Avenue • Grand Junction, Colorado 81501
www.armstrongconsultants.com
tel 970.242.0101
fax 970.241.1769

ARMSTRONG CONSULTANTS, INC.
AIRPORT ENGINEERING AND PLANNING

September 2, 2010

ACI# 105982

Mr. Ed Wilson
Arizona Department of Transportation
Development Engineer
Holbrook District Office
2407 Navajo Blvd.
Holbrook, AZ 86025

RE: Taylor Municipal Airport - Environmental Assessment

Dear Mr. Wilson:

Armstrong Consultants has been retained to prepare an Environmental Assessment for proposed construction at the Taylor Municipal Airport in Taylor, Arizona. The Environmental Assessment is intended to determine the extent of potential environmental impacts associated with the proposed airport improvement projects listed below. To assist us in preparing this Environmental Assessment and to comply with the requirements of NEPA and the Federal Aviation Administration, we request your comments concerning the possibility of the proposed development actions impacting any present or future roadway development.

Proposed Action:

1) Relocate fence north of Runway 3/21 for approach protection.
2) Relocation/replacement of the fuel system outside of the Taxiway Object Free Area.
3) Reconfiguration and expansion of the aircraft parking apron and tiedowns to meet Group II design standards.
4) Construct aircraft hangar access road outside of the Runway Object Free Area and Runway Safety Area.
5) Acquisition of 4 acres of land for control of the Runway Protection Zone.

Enclosed for your reference is a vicinity map and proposed action drawing at the Taylor Municipal Airport. Please forward any comment at your earliest convenience and please contact me at (970) 242-0101 if you have any questions regarding this project. Thank you for your assistance.

Sincerely,

ARMSTRONG CONSULTANTS, INC.

Justin Pietz

Justin Pietz
Senior Airport Planner

Enclosures

861 Rood Avenue • Grand Junction, Colorado 81501 tel 970.242.0101
www.armstrongconsultants.com fax 970.241.1769

ARMSTRONG CONSULTANTS, INC.
AIRPORT ENGINEERING AND PLANNING

September 2, 2010

ACI# 105982

Ms. Kim M. Gavigan, P.E., CFM
Chief, Water Resources Planning Section
US Army Corps of Engineers
Los Angeles District
3636 North Central Avenue
Suite 900
Phoenix, AZ 85012

RE: Taylor Municipal Airport - Environmental Assessment

Dear Ms. Gavigan:

Armstrong Consultants has been retained to prepare an Environmental Assessment for proposed construction at the Taylor Municipal Airport in Taylor, Arizona. The Environmental Assessment is intended to determine the extent of potential environmental impacts associated with the proposed airport improvement projects listed below. To assist us in preparing this Environmental Assessment and to comply with the requirements of NEPA and the Federal Aviation Administration, we request your comments concerning the possibility of the proposed development actions impacting wetlands or waters of the U.S.

Proposed Action:

1) Relocate fence north of Runway 3/21 for approach protection.
2) Relocation/replacement of the fuel system outside of the Taxiway Object Free Area.
3) Reconfiguration and expansion of the aircraft parking apron and tiedowns to meet Group II design standards.
4) Construct aircraft hangar access road outside of the Runway Object Free Area and Runway Safety Area.
5) Acquisition of 4 acres of land for control of the Runway Protection Zone.

Enclosed for your reference is a vicinity map and proposed action drawing at the Taylor Municipal Airport. Please forward any comment at your earliest convenience and please contact me at (970) 242-0101 if you have any questions regarding this project. Thank you for your assistance.

Sincerely,

ARMSTRONG CONSULTANTS, INC.

Justin Pietz

Justin Pietz
Senior Airport Planner

Enclosures

861 Rood Avenue • Grand Junction, Colorado 81501
www.armstrongconsultants.com
tel 970.242.0101
fax 970.241.1769

ARMSTRONG CONSULTANTS, INC.
AIRPORT ENGINEERING AND PLANNING

September 2, 2010

ACI# 105982

Mr. Dan Shein
Arizona State Parks Resource Management
Section Manager
1300 W. Washington
Phoenix, AZ 85007

RE: Taylor Municipal Airport - Environmental Assessment

Dear Mr. Shein:

Armstrong Consultants has been retained to prepare an Environmental Assessment for proposed construction at the Taylor Municipal Airport in Taylor, Arizona. The Environmental Assessment is intended to determine the extent of potential environmental impacts associated with the proposed airport improvement projects listed below. To assist us in preparing this Environmental Assessment and to comply with the requirements of NEPA and the Federal Aviation Administration, we request your comments concerning the possibility of the proposed development actions impacting State Parks.

Proposed Action:

1) Relocate fence north of Runway 3/21 for approach protection.
2) Relocation/replacement of the fuel system outside of the Taxiway Object Free Area.
3) Reconfiguration and expansion of the aircraft parking apron and tiedowns to meet Group II design standards.
4) Construct aircraft hangar access road outside of the Runway Object Free Area and Runway Safety Area.
5) Acquisition of 4 acres of land for control of the Runway Protection Zone.

Enclosed for your reference is a vicinity map and proposed action drawing at the Taylor Municipal Airport. Please forward any comment at your earliest convenience and please contact me at (970) 242-0101 if you have any questions regarding this project. Thank you for your assistance.

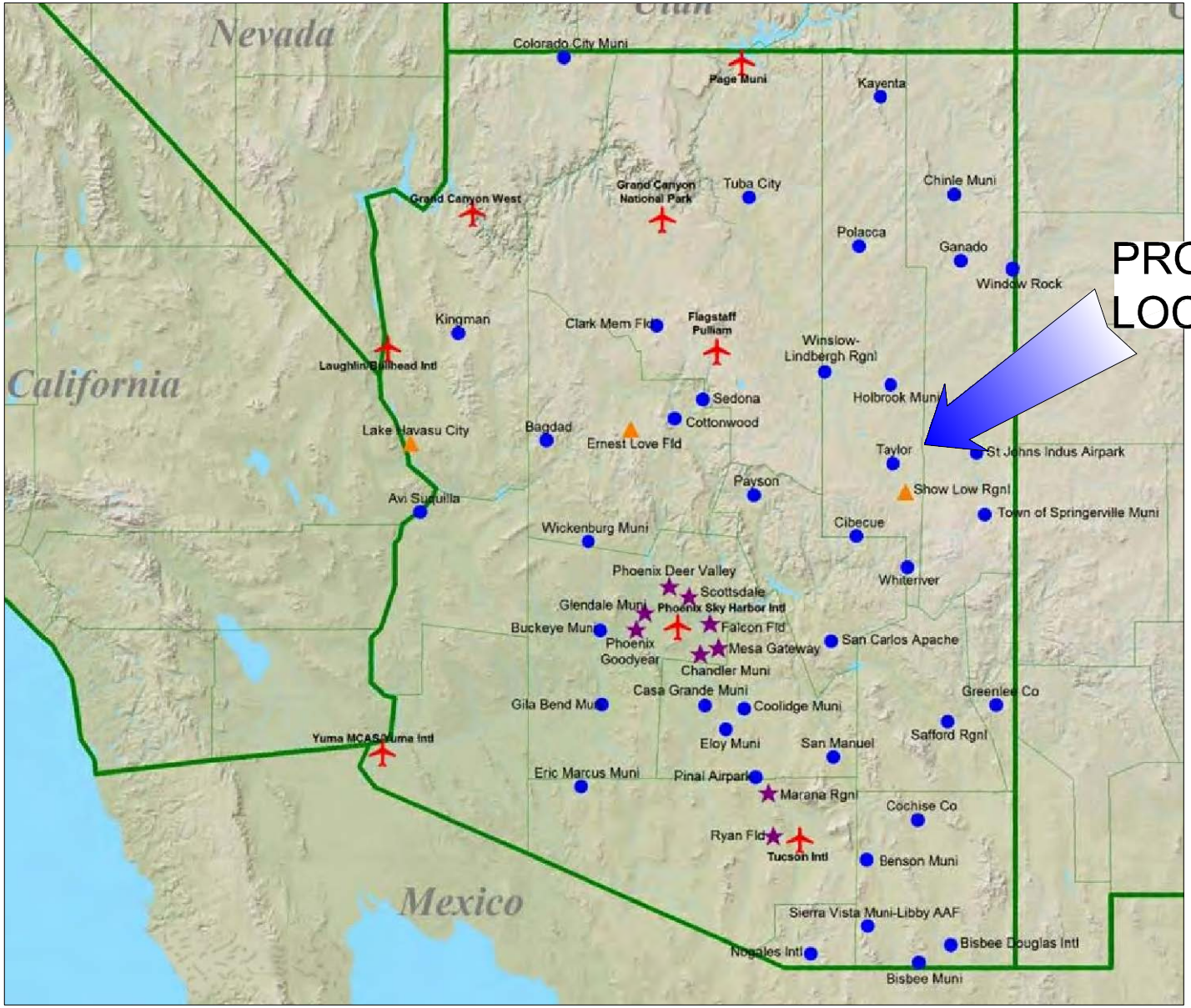
Sincerely,

ARMSTRONG CONSULTANTS, INC.

Justin Pietz
Senior Airport Planner

Enclosures

861 Rood Avenue • Grand Junction, Colorado 81501
www.armstrongconsultants.com
tel 970.242.0101
fax 970.241.1769



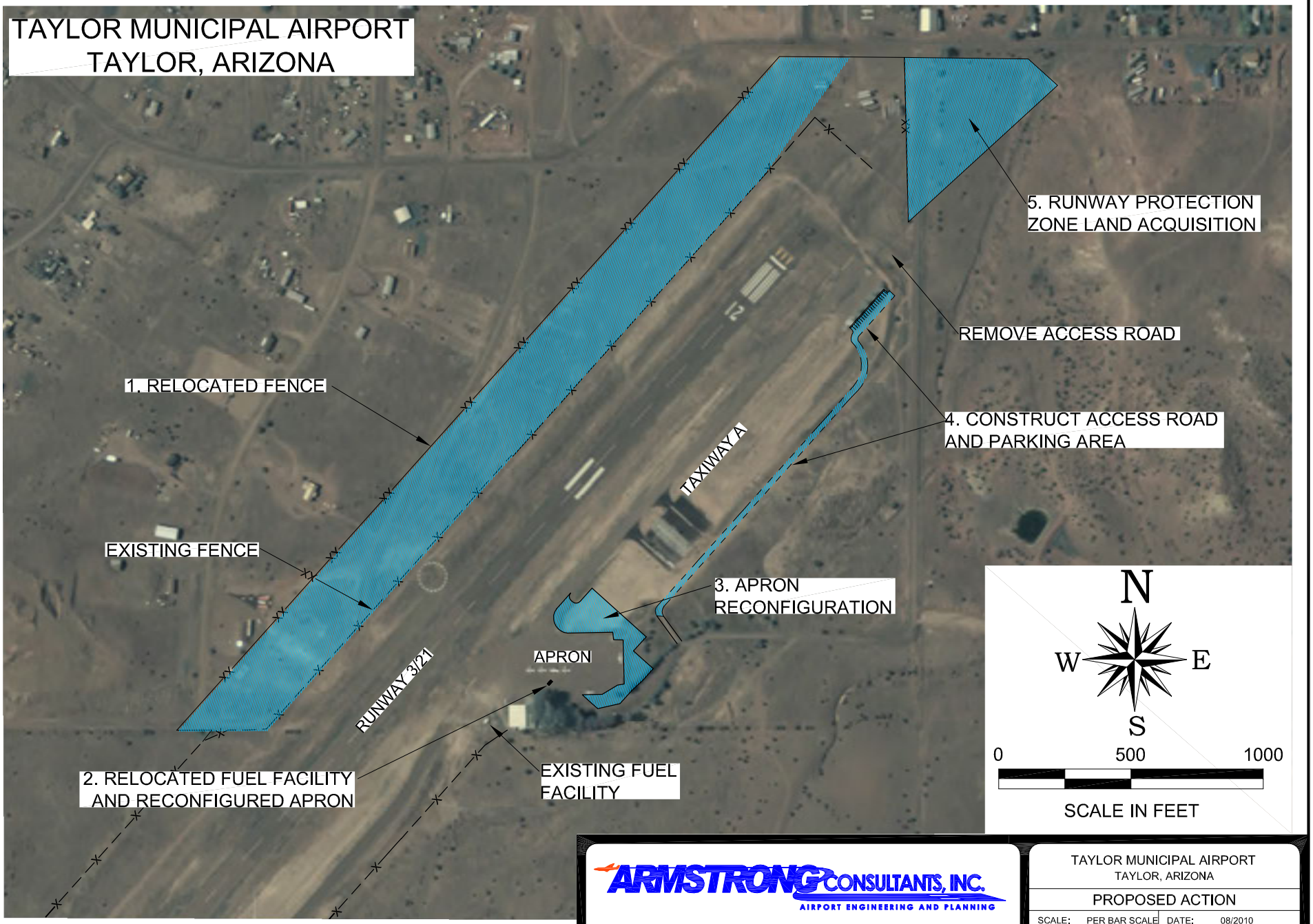
ARMSTRONG CONSULTANTS, INC.
AIRPORT ENGINEERING AND PLANNING

861 Rood Avenue
Grand Junction, CO 81501
ph: 970.242.0101 fax: 970.241.1769
www.armstrongconsultants.com

TAYLOR MUNICIPAL AIRPORT
TAYLOR, ARIZONA

VICINITY MAP

SCALE:	NOT TO SCALE	DATE:	09/2010
DRAWN:	GWK	FILE:	5926PROPOSED ACTION
CHK'D:	JZP	JOB NO.:	105982



ARMSTRONG CONSULTANTS, INC.
AIRPORT ENGINEERING AND PLANNING
861 Rood Avenue
Grand Junction, CO 81501
ph: 970.242.0101 fax: 970.241.1769
www.armstrongconsultants.com

TAYLOR MUNICIPAL AIRPORT
TAYLOR, ARIZONA

PROPOSED ACTION

SCALE:	PER BAR SCALE	DATE:	08/2010
DRAWN:	GWK	FILE:	5926PROPOSED ACTION
CHK'D:	DPS	JOB NO.:	105982

APPENDIX B
AGENCY RESPONSES

TAYLOR MUNICIPAL AIRPORT
ENVIRONMENTAL ASSESSMENT

RECEIVED SEP 24 2010

ARIZONA DEPARTMENT
OF
ENVIRONMENTAL QUALITY

1110 West Washington Street • Phoenix, Arizona 85007
(602) 771-2300 • www.azdeq.gov

Janice K. Brewer
Governor

Benjamin H. Grumbles
Director

September 20, 2010

Mr. Justin Pietz
Senior Airport Planner
Armstrong Consultants, Inc.
861 Rood Avenue
Grand Junction, Colorado 81501

Project: Scoping Letter: Taylor Municipal Airport – Environmental Assessment

Dear Mr. Pietz:

Tthe Air Quality Division of the Arizona Department of Environmental Quality received your Scoping Input request for the proposed Taylor Municipal Airport Improvements.

The Air Quality Division has concluded the project is located in an attainment area for the National Ambient Air Quality Standards. As such a General Conformity Determination may not be required.

The Air Quality Division is responding by providing information to aid in the reduction of emissions during the construction processes. These emissions could include particulate matter (dust). Both particulate matter 10-microns (PM_{10}) and particulate matter 2.5-microns ($PM_{2.5}$) in size are subject to National Ambient Air Quality Standards (NAAQS). PM_{10} and smaller can penetrate the lungs of human beings and animals, and $PM_{2.5}$ and smaller is difficult for lungs to expel and has been linked to increases in death rates and heart attacks by disturbing heart rhythms and increasing plaque and clotting; respiratory infections, asthma attacks and chronic obstructive pulmonary disease (COPD) aggravation.

To comply with applicable air pollution control requirements and minimize adverse impacts on public health and welfare, the following information is provided:

REDUCE DISTURBANCE of PARTICULATE MATTER during CONSTRUCTION

The following measures are recommended to reduce disturbance of particulate matter, including emissions caused by strong winds as well as machinery and trucks tracking soil off the construction site:

I. Site Preparation and Construction
   A. Minimize land disturbance;
   B. Suppress dust on traveled paths which are not paved through wetting, use of watering trucks, chemical dust suppressants, or other reasonable precautions to prevent dust entering ambient air
   C. Cover trucks when hauling soil;
   D. Minimize soil track-out by washing or cleaning truck wheels before leaving construction site;
   E. Stabilize the surface of soil piles; and
   F. Create windbreaks

II. Site Restoration
   A. Revegetate any disturbed land not used;
   B. Remove unused material; and
   C. Remove soil piles via covered trucks.

The following rules are applicable to reducing dust during construction, demolition and earth moving activities are enclosed:

- ☐ Arizona Administrative Code R18-2-604 through -607
- ☐ Arizona Administrative Code R18-2-804

Should you have further questions, please do not hesitate to call me at (602) 771-2375 or A. "Bonnie" Cockrell at (602) 771-2378 of the Planning Section Staff.

Very truly yours,

Diane L. Arnst, Manager
Air Quality Planning Section

Enclosure

cc: Bret Parke, EV Administrative Counsel
A. "Bonnie" Cockrell, Environmental Program Specialist, Air Planning
File No. 244411 (244161)

R18-2-604. Open Areas, Dry Washes, or Riverbeds

A. No person shall cause, suffer, allow, or permit a building or its appurtenances, or a building or subdivision site, or a driveway, or a parking area, or a vacant lot or sales lot, or an urban or suburban open area to be constructed, used, altered, repaired, demolished, cleared, or leveled, or the earth to be moved or excavated, without taking reasonable precautions to limit excessive amounts of particulate matter from becoming airborne. Dust and other types of air contaminants shall be kept to a minimum by good modern practices such as using an approved dust suppressant or adhesive soil stabilizer, paving, covering, landscaping, continuous wetting, detouring, barring access, or other acceptable means.

B. No person shall cause, suffer, allow, or permit a vacant lot, or an urban or suburban open area, to be driven over or used by motor vehicles, trucks, cars, cycles, bikes, or buggies, or by animals such as horses, without taking reasonable precautions to limit excessive amounts of particulates from becoming airborne. Dust shall be kept to a minimum by using an approved dust suppressant, or adhesive soil stabilizer, or by paving, or by barring access to the property, or by other acceptable means.

C. No person shall operate a motor vehicle for recreational purposes in a dry wash, riverbed or open area in such a way as to cause or contribute to visible dust emissions which then cross property lines into a residential, recreational, institutional, educational, retail sales, hotel or business premises. For purposes of this subsection "motor vehicles" shall include, but not be limited to trucks, cars, cycles, bikes, buggies and 3-wheelers. Any person who violates the provisions of this subsection shall be subject to prosecution under A.R.S. § 49-463.

Historical Note

Adopted effective May 14, 1979 (Supp. 79-1). Former Section R9-3-604 renumbered without change as Section R18-2-604 (Supp. 87-3). Amended effective September 26, 1990 (Supp. 90-3). Former Section R18-2-604 renumbered to R18-2-804, new Section R18-2-604 renumbered from R18-2-404 and amended effective November 15, 1993 (Supp. 93-4).

R18-2-605. Roadways and Streets

A. No person shall cause, suffer, allow or permit the use, repair, construction or reconstruction of a roadway or alley without taking reasonable precautions to prevent excessive amounts of particulate matter from becoming airborne. Dust and other particulates shall be kept to a minimum by employing temporary paving, dust suppressants, wetting down, detouring or by other reasonable means.

B. No person shall cause, suffer, allow or permit transportation of materials likely to give rise to airborne dust without taking reasonable precautions, such as wetting, applying dust suppressants, or covering the load, to prevent particulate matter from becoming airborne. Earth or other material that is deposited by trucking or earth moving equipment shall be removed from paved streets by the person responsible for such deposits.

Historical Note

Adopted effective May 14, 1979 (Supp. 79-1). Former Section R9-3-605 renumbered without change as Section R18-2-605 (Supp. 87-3). Amended effective September 26, 1990 (Supp. 90-3). Former Section R18-2-605 renumbered to R18-2-805, new Section R18-2-605 renumbered from R18-2-405 effective November 15, 1993 (Supp. 93-4).

R18-2-606. Material Handling

No person shall cause, suffer, allow or permit crushing, screening, handling, transporting or conveying of materials or other operations likely to result in significant amounts of airborne dust without taking reasonable precautions, such as the use of spray bars, wetting agents, dust suppressants, covering the load, and hoods to prevent excessive amounts of particulate matter from becoming airborne.

Historical Note

Section R18-2-606 renumbered from R18-2-406 effective November 15, 1993 (Supp. 93-4).

R18-2-607. Storage Piles

A. No person shall cause, suffer, allow, or permit organic or inorganic dust producing material to be stacked, piled, or otherwise stored without taking reasonable precautions such as chemical stabilization, wetting, or covering to prevent excessive amounts of particulate matter from becoming airborne.

B. Stacking and reclaiming machinery utilized at storage piles shall be operated at all times with a minimum fall of material and in such manner, or with the use of spray bars and wetting agents, as to prevent excessive amounts of particulate matter from becoming airborne.

Historical Note

Section R18-2-607 renumbered from R18-2-407 effective November 15, 1993 (Supp. 93-4).

R18-2-804. Roadway and Site Cleaning Machinery

A. No person shall cause, allow or permit to be emitted into the atmosphere from any roadway and site cleaning machinery smoke or dust for any period greater than 10 consecutive seconds, the opacity of which exceeds 40%. Visible emissions when starting cold equipment shall be exempt from this requirement for the first 10 minutes.

B. In addition to complying with subsection (A), no person shall cause, allow or permit the cleaning of any site, roadway, or alley without taking reasonable precautions to prevent particulate matter from becoming airborne. Reasonable precautions may include applying dust suppressants. Earth or other material shall be removed from paved streets onto which earth or other material has been transported by trucking or earth moving equipment, erosion by water or by other means.

Historical Note

Adopted effective February 26, 1988 (Supp. 88-1). Amended effective September 26, 1990 (Supp. 90-3). Amended effective February 3, 1993 (Supp. 93-1). Former Section R18-2-804 renumbered to Section R18-2-904, new Section R18-2-804 renumbered from R18-2-604 effective November 15, 1993 (Supp. 93-4).

THE STATE OF ARIZONA
GAME AND FISH DEPARTMENT
5000 W. CAREFREE HIGHWAY
PHOENIX, AZ 85086-5000
(602) 942-3000 • WWW.AZGFD.GOV

GOVERNOR
JANICE K. BREWER
COMMISSIONERS
CHAIR, JENNIFER L. MARTIN, PHOENIX
ROBERT R. WOODHOUSE, ROLL
NORMAN W. FREEMAN, CHINO VALLEY
JACK F. HUSTED, SPRINGERVILLE
J.W. HARRIS, TUCSON
DIRECTOR
LARRY D. VOYLES
DEPUTY DIRECTORS
GARY R. HOVATTER
BOB BROSCHEID

RECEIVED OCT 29 2010

October 25, 2010

Justin Pietz
Armstrong Consultants, Inc.
861 Rood Avenue
Grand Junction, Colorado 81501

Re: Environmental Review for Taylor Municipal Airport.

Dear Mr. Pietz:

The Arizona Game and Fish Department (Department) has reviewed your request for an environmental review of the above-referenced project area. A search using our On-Line Environmental Review Tool (receipt 20101025013485) found one Listed Threatened, Endangered or Candidate Species (Little Colorado Spinedace) and no Designated or Proposed Critical Habitat within 3 miles of your project area. The search also indicated the project is within 3 miles of a breeding population of bald eagles. Bald eagles are protected under the Bald and Golden Eagle Act. The Department recommends you contact the U.S. Fish and Wildlife Service to obtain their determination regarding potential impacts on these species.

The Department has no further comments at this time. If you have any questions regarding this letter, please contact me at (623) 236-7513. General status information, county and watershed distribution lists and abstracts for some special status species are also available on our web site at http://www.azgfd.gov/hdms.

Sincerely,

Daniel E. Nelson
Project Evaluation Specialist
(623) 236-7513

CC: Dave Dorhum, AGFD; Debra Bills USFWS

M10-09212806

M10-09212806

ARMSTRONG CONSULTANTS, INC.
AIRPORT ENGINEERING AND PLANNING

September 2, 2010 ACI# 105982

Ms. Laura Canaca
Project Evaluation Program Supervisor
Arizona Game and Fish Department – WMHB
5000 West Carefree Highway
Phoenix, AZ 85086

RE: Taylor Municipal Airport - Environmental Assessment

Dear Ms. Canaca:

Armstrong Consultants has been retained to prepare an Environmental Assessment for proposed construction at the Taylor Municipal Airport in Taylor, Arizona. The Environmental Assessment is intended to determine the extent of potential environmental impacts associated with the proposed airport improvement projects listed below. To assist us in preparing this Environmental Assessment and to comply with the requirements of NEPA and the Federal Aviation Administration, we request your comments concerning the possibility of the proposed development actions impacting any threatened or endangered species.

Proposed Action:

1) Relocate fence north of Runway 3/21 for approach protection.
2) Relocation/replacement of the fuel system outside of the Taxiway Object Free Area.
3) Reconfiguration and expansion of the aircraft parking apron and tiedowns to meet Group II design standards.
4) Construct aircraft hangar access road outside of the Runway Object Free Area and Runway Safety Area.
5) Acquisition of 4 acres of land for control of the Runway Protection Zone.

Enclosed for your reference is a vicinity map and proposed action drawing at the Taylor Municipal Airport. Please forward any comment at your earliest convenience and please contact me at (970) 242-0101 if you have any questions regarding this project. Thank you for your assistance.

Sincerely,

ARMSTRONG CONSULTANTS, INC.

Justin Pietz

Justin Pietz
Senior Airport Planner

RECEIVED
SEP 7 2010
AGFD - HABITAT BRANCH

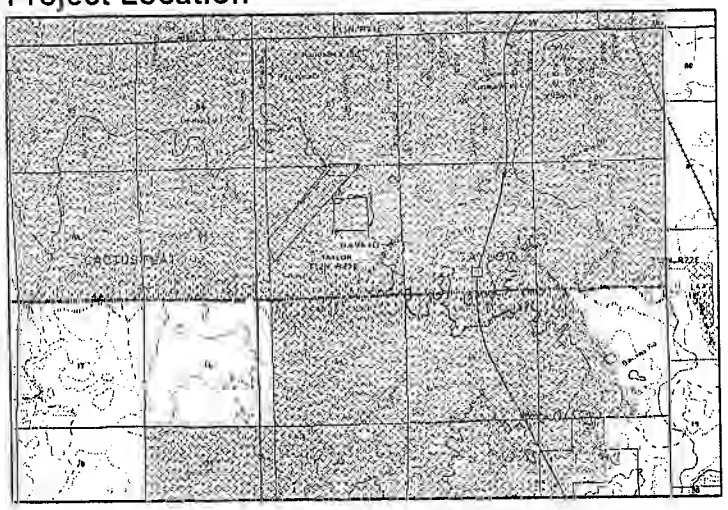
Enclosures

861 Rood Avenue • Grand Junction, Colorado 81501 **tel** 970.242.0101
www.armstrongconsultants.com **fax** 970.241.1769

Transportation Planning

Arizona's On-line Environmental Review Tool
Search ID: 20101025013485
Project Name: Taylor Municipal Airport
Date: 10/25/2010 7:41:09 AM

Project Location



Project Name: Taylor Municipal Airport
Submitted By: PEP Project Evaluation Program
On behalf of: ASLD
Project Search ID: 20101025013485
Date: 10/25/2010 7:41:04 AM
Project Category: Transportation & Infrastructure,Airports,Construction of new runways, terminals/concourses, other facilities
Project Coordinates (UTM Zone 12-NAD 83): 581052.187, 3812466.538 meter
Project Area: 90.953 acres
Project Perimeter: 3526.658 meter
County: NAVAJO
USGS 7.5 Minute Quadrangle ID: 947
Quadrangle Name: TAYLOR
Project locality is currently being scoped

Location Accuracy Disclaimer

Project locations are assumed to be both precise and accurate for the purposes of environmental review. The creator/owner of the Project Review Receipt is solely responsible for the project location and thus the correctness of the Project Review Receipt content.

The Department appreciates the opportunity to provide in-depth comments and project review when additional information or environmental documentation becomes available.

Special Status Species Occurrences/Critical Habitat/Tribal Lands within 3 miles of Project Vicinity:

Name	Common Name	FWS	USFS	BLM	State
Haliaeetus leucocephalus	Bald Eagle	SC, BGA	S	S	WSC
Haliaeetus leucocephalus (wintering pop.)	Bald Eagle - Winter Population	SC, BGA	S	S	WSC
Pediocactus papyracanthus	Paper-spined Cactus	SC			SR

 APPLICATION INITIALS: _____

United States Department of Agriculture

NRCS

Natural Resources Conservation Service
U.S. Courthouse – Federal Building
230 N. First Avenue, Suite 509
Phoenix, Arizona 85003-1733
(602) 280-8801

RECEIVED OCT - 4 2010

SEP 30 2010

Justin Pietz
Senior Airport Planner
Armstrong Consultants, Inc.
861 Rood Avenue
Grand Junction, Colorado 81501

Dear Mr. Pietz:

This response is in regard to your letter dated September 2, 2010, requesting information regarding the presence of prime and unique land status for the Emergency Taylor Municipal Airport in Taylor, Arizona.

The Natural Resources Conservation Service (NRCS) has general responsibility, nationwide, for implementing the Farmland Protection Policy Act (FPPA) and to review projects that may affect prime farmland and/or wetlands associated with agriculture. After reviewing the information provided, the following is noted:

1. The proposed projects as planned are exempt from the requirements of the FPPA - as revised in 1994, that excludes land which is already in or is committed to urban development, currently used as water storage, or land that is not prime or unique farmland.
2. We do not see any immediate concerns or impacts that would directly affect wetland areas associated with agriculture.

We recommend that any future development projects receive a prime farmland determination prior to any construction activities. Should you have questions, please feel free contact Steve Smarik, Environmental Coordinator, at (602) 280-8785 or at the address shown above.

Thank you again for the chance to review the proposed project.

Sincerely,

THOMAS HEDT
Assistant State Conservationist, Programs

cc:
Rachel Murph, District Conservationist, NRCS, Holbrook, Arizona
Steve Smarik, Environmental Coordinator, NRCS, Phoenix, Arizona

RECEIVED OCT - 4 2010

DEPARTMENT OF THE ARMY
LOS ANGELES DISTRICT, CORPS OF ENGINEERS
ARIZONA-NEVADA AREA OFFICE
3636 NORTH CENTRAL AVENUE, SUITE 900
PHOENIX, ARIZONA 85012-1939

REPLY TO
ATTENTION OF:

September 30, 2010

Office of the Chief
Regulatory Division

Justin Pietz
Senior Airport Planner
Armstrong Consultants, Inc.
861 Rood Avenue
Grand Junction, CO 81501

File Number: SPL-2010-00880-EHB

Dear Mr. Pietz:

I am responding to your letter dated September 2, 2010, in which you requested comments for the proposed development actions at the Taylor Municipal Airport which will include relocation of a fence at Runway 321, as well as the fuel system outside of the Taxiway Object Free Area, expansion of the aircraft parking apron and tiedowns, construction of an aircraft hangar access road and acquisition of 4 acres of land for control of the Runway Protection Zone at 1018 Airport Road, Taylor, County, AZ.

Based on the information furnished in your letter (referenced above), we have determined that your proposed project is not subject to our jurisdiction under Section 404 of the Clean Water Act. Since there are no waters of the United States within the aforementioned proposed project area, no Section 404 permit is required from our office.

Thank you for your letter. If you have questions, please contact Elizabeth H. Brooks at (602) 640-5385 x223.

Sincerely,

Sallie McGuire

Sallie D. McGuire
Chief, Arizona Branch
Regulatory Division

RECEIVED SEP 2 1 2010

ARIZONA DEPARTMENT
OF
ENVIRONMENTAL QUALITY

1110 West Washington Street • Phoenix, Arizona 85007
(602) 771-2300 • www.azdeq.gov

Janice K. Brewer
Governor

Benjamin H. Grumbles
Director

September 15, 2010

Mr. Justin Pietz
Armstrong Consultants, Inc.
861 Rood Avenue
Grand Junction, CO 81501

Re: Taylor Municipal Airport - Environmental Assessment

Dear Mr. Pietz:

We received your September 2, 2010 letter regarding an environmental assessment for the Taylor Municipal Airport's proposed construction, which would include: relocating fencing; relocating and replacing fuel system; reconfiguring and expanding aircraft parking apron and tiedowns; constructing aircraft hanger access road; and acquiring four acres of land. The Arizona Department of Environmental Quality, Water Quality Division (ADEQ) is responsible for ensuring the delivery of safe drinking water to customers of regulated public water systems under the Safe Drinking Water Act, permits for proposed discharges to surface waters of the United States under the federal Clean Water Act (CWA), permits under the state Aquifer Protection Program, and water quality certifications of certain federal licenses and permits. ADEQ would like to make you aware of some water quality issues that may need to be considered.

Stormwater: Stormwater discharges associated with construction activities (clearing, grading, or excavating) that disturb one acre or more must obtain a general permit for coverage of stormwater discharges under the Arizona Pollutant Discharge Elimination System's (AZPDES) Construction General Permit. Permit coverage also is required for construction activities that will disturb less than one acre of land but the project is part of a larger common plan of development or sale and the entire project will ultimately disturb one or more acres. As part of permit coverage, a Stormwater Pollution Prevention Plan (SWPPP) must be prepared, and implemented during the course of construction. The SWPPP must comply with ADEQ's Construction General Permit's SWPPP requirements, and must identify such elements as the project scope, anticipated acreage of land disturbance, and the best management practices that would be implemented to reduce soil erosion, and contain or minimize the pollutants that might be released to waters of the U.S. In addition to preparing the SWPPP, the project proponent must file for permit coverage before construction. If the Taylor Municipal Airport project will disturb the applicable acreage, then Construction General Permit coverage is required. The Construction General Permit, SWPPP checklist, and associated forms are available on ADEQ's website at: http://www.azdeq.gov/environ/water/permits/stormwater.html#const. For questions, please

contact Chris Henninger in our Stormwater and General Permits Unit at (602) 771-4508 or by e-mail at cph@azdeq.gov.

CWA 401 Water Quality Certification: If project activities will occur inside the Ordinary High Water Mark of any water of the U.S., then a CWA section 404 permit (a.k.a. dredge and fill), issued by the U.S. Army Corps of Engineers, may be required. If a 404 permit (or any other federal permit) is required for the project, a state-issued CWA section 401 certification of the permit may be required to ensure that the permitted activities will not result in a violation of Arizona's surface water quality standards. For questions, please contact Bob Scalamera at (602) 771-4502 or by e-mail at rs3@azdeq.gov. The CWA 401 application form can be downloaded from ADEQ's website at: http://www.azdeq.gov/function/forms/appswater.html#dredge.

Multi-Sector General Permit (MSGP): ADEQ is developing an MSGP for stormwater discharges associated with industrial activity, based on the U.S. Environmental Protection Agency version, but tailored to the distinct Arizona environment. Airports and other air transportation facilities that have stormwater discharges are required to obtain MSGP coverage as a Sector S industry. All facilities in Arizona (excluding Indian Country lands) must apply for permit coverage when ADEQ issues its new MSGP. ADEQ anticipates that it will begin the public notice for the MSGP in October 2010. For questions on MSGP coverage, please contact Dennis Turner at (602) 771-4501 or by e-mail at dt1@azdeq.gov.

We appreciate the opportunity to review and provide comments. If you need further information, please contact Wendy LeStarge of my staff at (602) 771-4836 or via e-mail at wl1@azdeq.gov, or myself at (602) 771-4416 or via e-mail at lc1@azdeq.gov.

Sincerely,

Linda Taunt, Deputy Director
Water Quality Division

RECEIVED
SHPO-2013-0368 (111552)
APR 22 2013

RECEIVED
APR 08 2013
DJ
ARIZONA STATE HISTORIC PRESERVATION OFFICE

Federal Aviation Administration
Western-Pacific Region
Airports Division - AWP-600

U.S Department
of Transportation

Western-Pacific Region
Los Angeles Airports District Office

P.O. Box 92007
Los Angeles, CA 90009-2007

Federal Aviation Administration

April 3, 2013

Mr. James Garrison
State Historic Preservation Officer
Arizona State Historic Preservation Office
1300 West Washington
Phoenix AZ 85007

Dear Mr. Garrison:

Taylor Municipal Airport
Draft Environmental Assessment
Proposed Airport Improvements
Taylor, Arizona
Section 106 Consultation

The Federal Aviation Administration (FAA) and the Town of Taylor are preparing a Draft Environmental Assessment (EA) for a proposed Fuel System Relocation, Apron Expansion, Hangar Access Road, and Land Acquisition at the Taylor Municipal Airport. The airport is owned by the Town of Taylor. The FAA is the lead federal agency thereby charged with conducting the Section 106 consultation with the State Historic Preservation Office.

Project Information

The Town of Taylor is proposing improvements at the Taylor Municipal Airport to correct non-standard conditions at the airport in order to meet design standards for the existing B-II Airport Reference Code. The proposed action includes the relocation and replacement of the fuel system, reconfiguration and expansion (approximately 9,000 square yards) of the aircraft parking apron, replacement of the aircraft hangar access road (approximately 1,600 linear feet of gravel road), and acquisition of four acres of land.

Figure 3 in the attached report depicts the area of potential effect (APE). The APE has been previously disturbed from earlier construction projects at the airport.

Project Consultation

In an effort to ensure compliance with 36 CFR 800, Protection of Historic Properties, as amended, the potential effects of the proposed action on cultural, historical, and archaeological resources were assessed. A cultural resources report was completed for the proposed project by ENTRIX in November 2010. The review included a records and an archaeological field search of the project area in order to identify cultural properties listed in or eligible for listing in the National and State Registers of Historic Places and to evaluate the effects of the project on such properties. No historic or prehistoric sites were identified during the survey.

The FAA is initiating Section 106 consultation with your office, effective by the date of this letter. The purpose of this consultation effort is to seek concurrence that the proposed projects at Taylor Municipal Airport will have no adverse effect on prehistoric, historic, archaeological, or cultural resources. We request your written concurrence for:

- APE determination;
- and our no adverse effect on Historic Properties determination.

If you have any questions or need additional information on this submittal, please contact me at (310) 725-3614 or by e-mail at: kristi.regotti@faa.gov.

Sincerely,

Kristi Regotti
Environmental Protection Specialist

Enclosure

CONCUR

16 APRIL 13

Arizona State Historic Preservation Office

APPENDIX C
RECORDS OF PUBLIC INVOLVEMENT

TAYLOR MUNICIPAL AIRPORT
ENVIRONMENTAL ASSESSMENT

Public Notice

NOTICE OF AVAILABILITY OF DRAFT ENVIRONMENTAL ASSESSMENT

Pursuant to Title 49, United States Code §47106(c)(1)(A), notice is hereby given that the Town of Taylor proposes to relocate and replace the fuel system, expand and reconfigure the aircraft parking apron, relocate the hangar access road and acquire land for the Taylor Municipal Airport. The purpose of the proposed action is to improve Object Free Areas, Runway Object Free Areas, Runway Safety Areas, and acquire control of a portion of the Runway Protection Zone. The proposed action will result in amendments to the Airport Layout Plan that require Federal Aviation Administration (FAA) approval. A Draft Environmental Assessment (EA) of the economic, social, and environmental impacts of the proposed action has been prepared.

Copies of the Draft EA are available for the next thirty (30) days for public examination during business hours at:

Taylor Town Hall
425 Paper Mill Road
Taylor, AZ 85939

Snowflake-Taylor Public Library
418 West 4th Street South
Snowflake, AZ 85937

FAA Phoenix Airports District Office
3800 N. Central Avenue, Suite 1025
Phoenix, AZ 85012

FAA Western Pacific-Region Office
Office of the Airports Division
15000 Aviation Boulevard
Hawthorne, CA 90261

An electronic version of the document is also available on the Town website www.tayloraz.org

Written comments on the adequacy of the information disclosed in the Draft EA may be submitted to:

John M. Rostas
Airport Planner
Armstrong Consultants
861 Rood Avenue
Grand Junction, Colorado 81501
Phone: (970) 242-0101
Fax: (970) 241-1769
Email: jrostas@armstrongconsultants.com

Comments must be received no later than 5:00 PM Mountain Standard Time on April 20, 2015. Please ensure adequate time for mailing.

Before including your name, address and telephone number, email, or other personal identifying information in your comment, be advised that your entire comment – including your personal identifying information – may be made publically available at any time. While you can ask us in your comment to withhold from public review your personal identifying information, we cannot guarantee that we will be able to do so.

APPENDIX D
CULTURAL AND BIOLOGICAL SURVEYS

TAYLOR MUNICIPAL AIRPORT
ENVIRONMENTAL ASSESSMENT

A CULTURAL RESOURCES INVENTORY FOR THE TAYLOR MUNICIPAL AIRPORT, TAYLOR, ARIZONA

Prepared for

Armstrong Consultants, Inc.
Grand Junction, Colorado

by

Zachary Nelson, Ph.D.

ENTRIX, Inc.
Salt Lake City, Utah

November 2010

COVER LETTER PREPARED FOR THE
ARIZONA STATE HISTORIC PRESERVATION OFFICE
WITH REGARDS TO THE
TAYLOR MUNICIPAL AIRPORT REMODELING PROJECT

Prepared for Armstrong Consultants, Inc.
By ENTRIX, Inc.

Project Title: A Cultural Resources Inventory for the Taylor Municipal Airport, Navajo County, Arizona

Project Description: ENTRIX Inc. intensively inventoried 63 acres of land surrounding the Taylor Municipal Airport for cultural remains (both historic and prehistoric) in anticipation of a planned upgrade of that facility for Armstrong Consultants, Inc. ENTRIX Senior Archaeologist Dr. Zachary Nelson completed this survey on September 25, 2010. The 63 acres were surveyed on foot with 20 meter transects and recorded using a Trimble Nomad series GPS unit.

Location: The inventoried area is located in Township 12N, Range 21E, Section 3, SE quarter and Section 4, SESESW quarter. Its location is shown on the U.S. Geological Survey (USGS) Taylor, 1998, 7.5' quadrangles.

Number of Acres Surveyed: 63 acres.

Arizona Register-eligible Properties: No historic or prehistoric sites were identified during the survey.

Project Effects: No historic or prehistoric sites on the National Register of Historic Places will be affected by the proposed activity.

Proposed Mitigation/Treatment: None is required.

Requested Action: No prehistoric or historic sites were located during the survey. Therefore, it is recommended that the project be given clearance to proceed with no special stipulations. Further, due to the relative thinness of the soil, it is unlikely that archaeological materials will be uncovered during construction. Hence, it is also recommended that additional archaeological monitoring is not needed. However, in the event that buried archaeological features are found in the course of construction, they should be protected, and reported immediately to the Arizona State Historic Preservation Office.

PROJECT ABSTRACT PREPARED FOR THE
ARIZONA STATE HISTORIC PRESERVATION OFFICE
WITH REGARDS TO THE
TAYLOR MUNICIPAL AIRPORT EXPANSION PROJECT

Prepared for Armstrong Consultants, Inc.
By ENTRIX, Inc.

Project Title: A Cultural Resources Inventory for the Taylor Municipal Airport, Navajo County, Arizona

Report Date: October, 2010

Project Description: ENTRIX Inc. intensively inventoried 63 acres of land surrounding the Taylor Municipal Airport for cultural remains (both historic and prehistoric) in anticipation of a planned upgrade of that facility for Armstrong Consultants, Inc. ENTRIX Senior Archaeologist Dr. Zachary Nelson completed this survey on September 25, 2010. The 63 acres were surveyed on foot with 20 meter transects and recorded using a Trimble Nomad series GPS unit.

Location: The inventoried area is located in Township 12N, Range 21E, Section 3, SE quarter and Section 4, SESESW quarter. Its location is shown on the U.S. Geological Survey (USGS) Taylor, 1998, 7.5' quadrangles.

Number of Acres Surveyed: 63 acres.

Arizona Register-eligible Properties: No historic or prehistoric sites were identified during the survey.

Arizona Register-ineligible Properties: No historic or prehistoric sites were identified during the survey.

Project Effects: No historic or prehistoric sites on (or off) the National Register of Historic Places will be affected by the proposed activity.

Proposed Mitigation/Treatment: None is required.

Requested Action: No prehistoric or historic sites were located during the survey. Therefore, it is recommended that the project be given clearance to proceed with no special stipulations. Further, due to the relative thinness of the soil, it is unlikely that archaeological materials will be uncovered during construction. Hence, it is also recommended that additional archaeological monitoring is not needed. However, in the event that buried archaeological features are found in the course of construction, they should be protected, and reported immediately to the Arizona State Historic Preservation Office.

A CULTURAL RESOURCES INVENTORY FOR THE TAYLOR MUNICIPAL AIRPORT, TAYLOR, ARIZONA

Prepared for

Armstrong Consultants, Inc.
Grand Junction, Colorado

By

Zachary Nelson, Ph.D.

Principal Investigator
Craig Smith

ENTRIX, Inc.
807 East South Temple, Suite 350
Salt Lake City, Utah 84102

November 2010

TABLE OF CONTENTS

1. Introduction …… 1

1.1 Project Location …….. 1

1.2 Description of Proposed Undertaking ……. 1

2.0 Project Setting ……. 5

3.0 File Search Results …….. 7

3.1 Cultural Setting …… 8

4.0 Field Methods …….. 10

5.0 Results …….. 11

6.0 Management Summary ……. 12

7.0 Literature Cited ……. 13

1.0 INTRODUCTION

This report documents the results of a cultural resource inventory on behalf of Armstrong Consultants, Inc. (Armstrong) for a proposed expansion of the Taylor Municipal Airport, located in Navajo County, Arizona. Armstrong, in conjunction with the Taylor Municipal Airport, requested that 63 acres be inventoried around the airport. Currently the land is either not improved or used for airport facilities.

The Arizona Antiquities Acts (ARS Section 41-841 et seq., as amended) and the Arizona State Historic Preservation Act (ARS Section 41-861 et seq., as amended) requirements were met during this project. The archaeologists contracted for this job meet the qualifications noted in 36 CFR 66.3(6)(2) and those of the Secretary of Interior's Professional Qualifications Standards (48 Federal Register 44738-9). This report follows the regulations in 36 CFR 66, "Methods, Standards, and Reporting Requirements for Data Recovery" and includes the reporting standards developed by the Arizona State Land Department (ASLD), Arizona State Historic Preservation Office (SHPO), and Arizona State Museum (ASM) to clarify the reporting requirements of the Arizona Board of Regents Chapter VIII Section 8-203, "Conditions for Working under Permits."

Dr. Zachary Nelson intensively inventoried the parcels on September 25, 2010. Field notes and digital photographs are on file at ENTRIX Inc.'s Salt Lake City office under the "Taylor Airport" project. No artifacts were collected.

1.1 PROJECT LOCATION

The Taylor Municipal airport is located in Navajo County, Arizona, just outside of the town of Taylor (Figure 1). The airport parcel is located in Township 12N, Range 21E, Section 3, SE quarter and Section 4, SESESW quarter. Its location is shown on the U.S. Geological Survey (USGS) Taylor, 1998, 7.5' quadrangles (Figure 2). The airport was constructed after the publication of the USGS maps. This project includes approximately 63 acres, all of which was intensively surveyed. The land is privately owned.

1.2 DESCRIPTION OF PROPOSED UNDERTAKING

The Taylor Municipal Airport plans to expand its existing airport footprint to improve its facilities for small to medium size aircraft. This expansion will involve paving some areas, refitting existing structures and moving the existing fenceline to encompass the airport parcel (Figure 3).

Figure 1. Overview Map Showing Location of the Taylor Airport in Navajo, County.

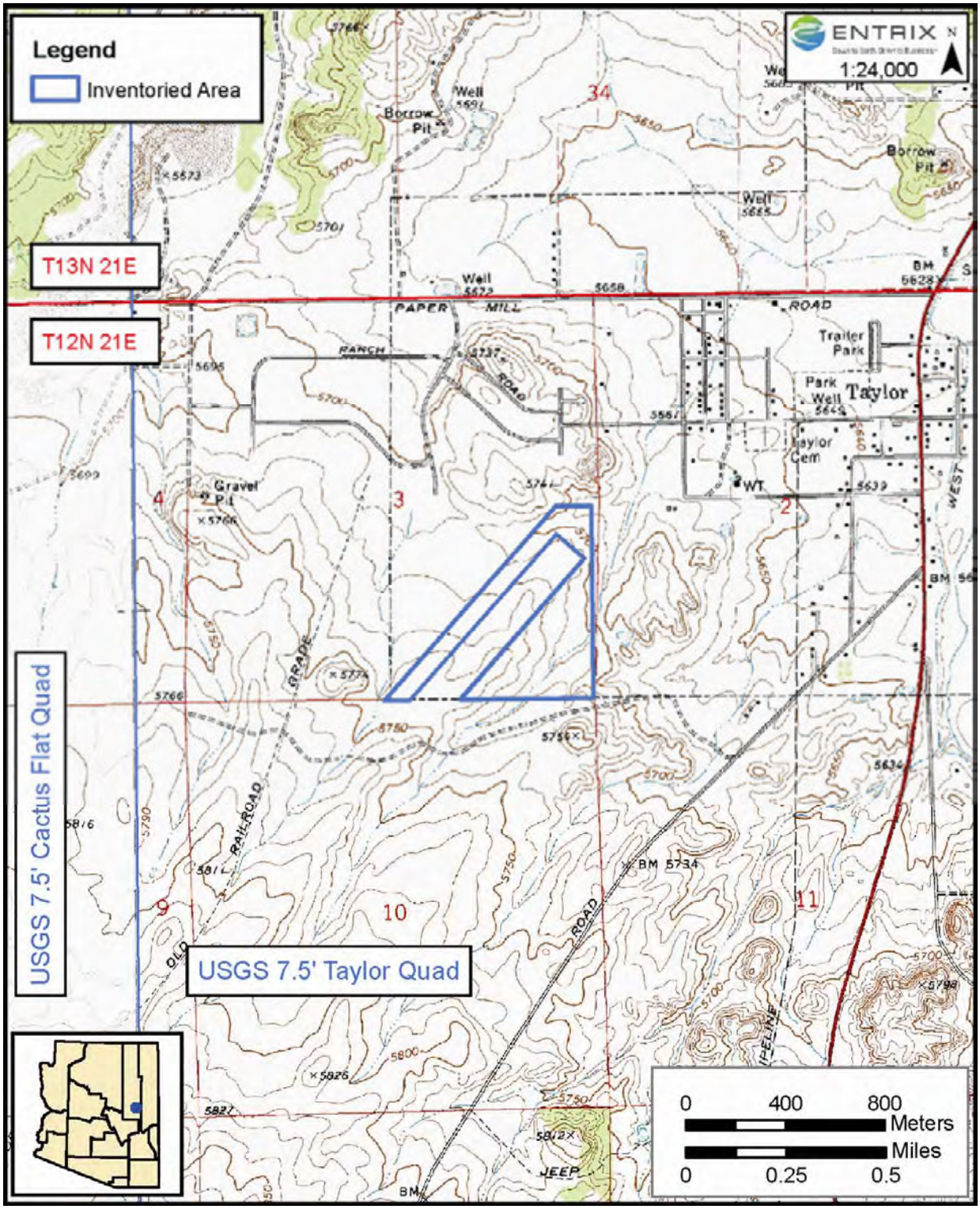


Figure 2. Topographic Map Showing the Taylor Municipal Airport Inventoried Area. Base Map Taken from U.S.G.S. Taylor (1998), Arizona 7.5' Quadrangle.

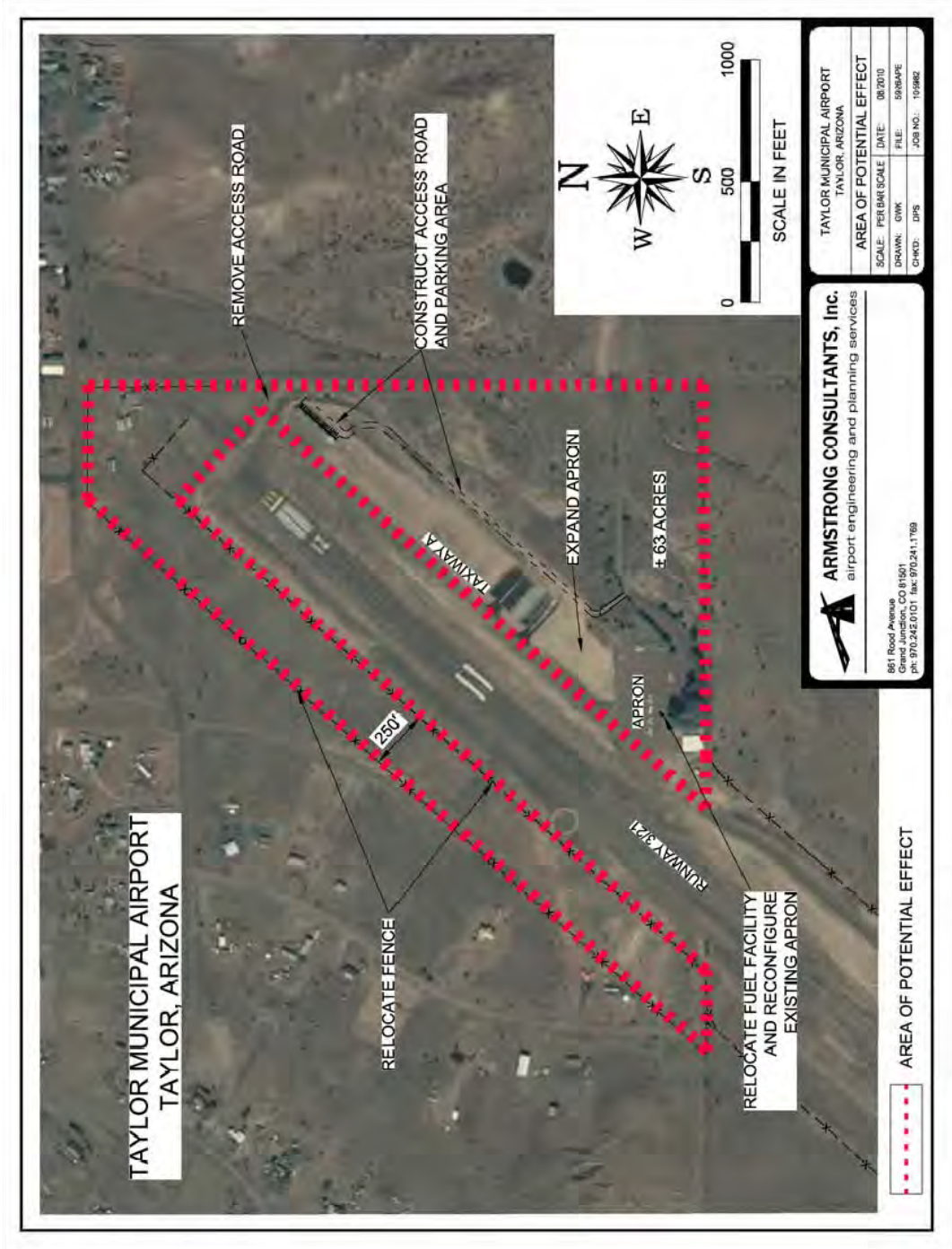


Figure 3. Plan of Airport Construction Activities (From Armstrong).

2.0 PROJECT SETTING

The airport is situated southwest of Taylor, Arizona, on the Colorado Plateau. The town of Taylor and the airport lie between the Mogollon Rim on the west and the White Mountains to the south. Hydrologically, it is part of the Little Colorado River watershed. The corresponding geologic formation is the Moenkopi formation which generally dates to 240 million years.

The vegetation in the inventoried area included grama grasses, low forbs, cacti, and some juniper trees (Figures 4-5)Vegetation was sparse with ample ground visibility. The soil was primarily desert pavement with decomposing sandstone underlying a thin layer of sandy soil. Gravel inclusions were very frequent and prominent.

Figure 4. Overview Photo at Southeast Corner of Inventoried Area, Looking North.
Photograph by Zachary Nelson on 9/25/2010.

Figure 5. Overview Photo at Northwest Corner of Inventoried Area, Looking Southwest.
Photograph by Zachary Nelson on 9/25/2010.

3.0 FILE SEARCH RESULTS

Zachary Nelson requested a file search from the Arizona State Museum on September 14, 2010. The resulting letter from the Assistant Permits Administrator states:

> A search of the archaeological records retained at the Arizona State Museum (ASM) found that the project area has not been inspected for cultural resources. Nine archaeological inspections have been completed within a mile of the project area between 1985 and 2003. No cultural resources are indentified in the project area; three archaeological sites, including historic SR 77, are indentified within a mile of the project area. A color orthophotograph, enclosed, taken in 2007, depicts a project area composed of a few commercial structures and a paved runway, access roads, possible landscaping, graded areas, and native vegetation growing on unmodified ground.

No previous work has occurred in the project area, and no previously recorded sites occur in the project area. Therefore, no previously recorded sites will be impacted by the planned facility upgrade.

3.1 CULTURAL SETTING

Humans have lived in the American Southwest for several thousand years, and continue to fill its valleys (Figure 6). The periods of occupation can be conceived as distinct "periods" defined initially by archaeological research and further refined by historical records.

Paleo-Indian Period (pre-6000 B.C.)

Few remains dating to this period are found in Little Colorado River watershed. Primarily they consist of fluted projectile points (e.g., Danson 1961, Hesse 1995, Olson 1964). Principally, this period is marked by the change from Pleistocene (Ice Age) to Holocene (Modern) environments. Cultures from this time period subsisted on mega-fauna and then other large game-animals as species became extinct. Gradually other subsistence strategies came into play such as focusing on small game (rabbits) and gathering plants (e.g., goosefoot and prickly pear) (Parry and Smiley 1990). Cultures from this time period include Clovis, Folsom, and Plano.

Archaic Period (6000 B.C. to A.D. 300)

Archaic people adapted to the changing environment around them by continuing hunter-gathering, but with a focus on the remaining smaller game. Seasonal gathering of plant and animal foods were an important part of regional subsistence. Towards the end of this period, during the Late Archaic, pithouses and other evidence for year-round occupation emerges. This seems to have occurred in concert with maize horticulture (e.g., Gilpin 1994, Huckell 1995). An early agricultural village, the Hay Hollow Site, is located about 12 miles east of the Taylor airport. This site dates approximately from 300 B.C. to A.D. 300 and includes evidence of increasing reliance on maize over wild plants (Fritz 1974).

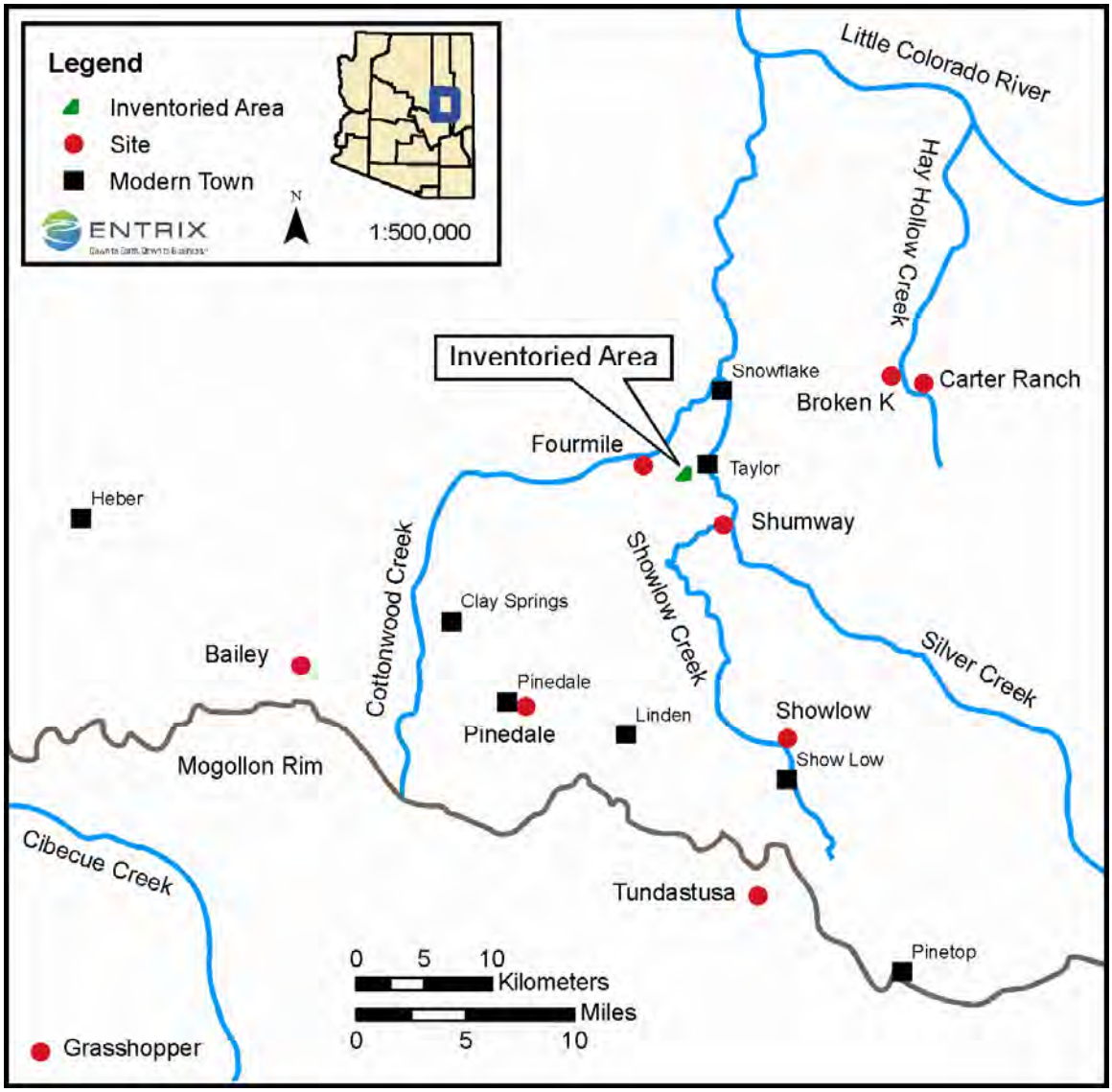


Figure 6. The Inventoried Area and Prominent Nearby Sites.
(Adapted From Duwe and Neff 2007, Fig. 1)

<u>Mogollon/Formative Period (A.D. 300-1450)</u>

The Mogollon period can be characterized by agriculture and sedentism. The seasonal rounds of previous periods are largely curtailed by plant domestication and the corresponding need to protect and water the plants. The Little Colorado River watershed often has sparse rainfall, which necessitates a careful husbanding of resources. Pithouse communities, open campsites, ceramic and lithic scatters, and increasing social networks are all hallmarks of this time period.

These characteristics are demonstrated at the Bluff Site, which is located about 20 miles south of Taylor. This pithouse community with a kiva dates to A.D. 300 (Haury 1985). Brownware and later Lino Gray pottery at the site provides some evidence of cultural

affiliation with Mogollon and Anasazi cultures. By A.D. 900, decorated ceramics become common in the region with Red Mesa Black-on-white, Kiatuthlana Black-on-white, and Kana-a Black-on-white typical of assemblages.

Sometime around A.D. 1100, pithouses were replaced by surface masonry habitations and puebloan societies emerge. These larger communities still relied on irrigation to fuel their population growth. Ceramics and lithic technologies were well-developed, and a range of other artifacts, often found in caves, provide a general knowledge of their material cultural assemblages.

Larger sites, such as Tla Kii Ruins, have masonry architecture comprising dozens of adjoining rooms with multiple kivas. This architectural style may represent the influx of Anasazi population to the area (Haury 1985). In the Taylor region, several pueblo sites have been excavated: Bailey Ruin (Mills et al. 1994), Broken K Pueblo (Hill 1970), Fourmile Ruin (Fewkes 1904, Haury 1985), Pinedale Ruins (Fewkes 1904, Haury 1985), Pottery Hill (Mills et al. 1994) and Shumway Ruin (Van Keuren 2006). The settlement pattern led Lightfoot (1984) to arguer that Fourmile Ruin was the lead node in a tiered settlement pattern. This view has been critiqued due to the broad dates given by ceramic styles (Kintigh 1996).

Hiatus? (A.D. 1450-1650)

The current archaeological evidence suggests that population decreased dramatically in the area from A.D. 1450-1650. Environmental and social variables probably led to an abandonment of the region for a time. Villages were abandoned, and irrigation networks fell into disarray.

Protohistoric Period (A.D. 1650-1800s)

Into an almost empty land entered Athabaskan populations, such as the Apache. The White Mountain Apache occupied the land around the project area. These nomadic bands followed seasonal resources in the area. Artifacts from this time period include circular stone arrangements often called wichiup circles, and small artifact deposits. Regional sites with Apache affiliation include the Bluff site (Haury 1985), Tundastusa (Hough 1903), and the Willow Creek site (Asch 1960).

Historic Period (A.D. 1800s-1957)

The historic period marks the entrance of Euro-American settlers into the Little Colorado River watershed. Near Taylor, this entrance occurred around the 1860s. Apache camps continue to be occupied during this period, but often have Euro-American artifacts incorporated into the deposit. Traders, miners, and settlers built homes within river valleys. This led to conflicts between the Apache and European settlers which eventually led to the founding of the Fort Apache Indian Reservation in 1871. Taylor was founded by James Pearce in 1878 as part of the Mormon colonization of Arizona.

4.0 FIELD METHODS

The cultural resource inventory mandated an intensive pedestrian inventory of the inventoried area. Transects were spaced 20 meters apart within the parcel. Transects were walked using a Trimble Nomad to maintain distance and bearing. Any cultural artifacts were recorded using the Trimble unit with a custom ENTRIX data dictionary.

Ground visibility across most of the inventoried area was fair. Vegetation in the area consisted of grasses, cacti, agave, and juniper with 60-100% ground visibility. Soil primarily consisted of desert pavement with some weathering into sand and exposing gravel. Weather conditions were sunny and warm with light breezes.

Cultural resources were defined as features and artifacts greater than fifty years of age. Sites were defined as at least 30 artifacts within a 15-m diameter area of a single class; 20 artifacts within a 15-m diameter area of multiple classes; one or more archaeological features in temporal association with any number of artifacts; or two or more temporally associated archaeological features without artifacts (ASM 1993:Letter).

The GPS files were differentially corrected using Pathfinder Office Version 4.00 using base files from the CORS, DUECECLUBSAZ2005 (P015), Arizona Permanent Station. All UTM coordinates used in this report are in NAD27. Digital photographs were taken in the field of cultural materials. No testing was conducted.

Any site identified during the current project would be evaluated according to the criteria of eligibility for inclusion on the National Register of Historic Places (NRHP) as stated in 36 CFR 60.4:

The quality of significance in American history, architecture, archaeology, engineering and culture is present in districts, sites, buildings, structures and objects that possess integrity of location, design, setting, materials, workmanship, feeling and association and:
A) that are associated with events that have made a significant contribution to the broad patterns of our history; or
B) that are associated with lives of persons significant in our past; or
C) that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
D) that have yielded, or may be likely to yield, information important to prehistory or history.

5.0 RESULTS

The cultural resource inventory of the proposed airport upgrade identified no historic or prehistoric sites or isolates. Ground cover was sufficiently sparse to identify any artifacts present on ground surface. The general paucity of remains is consistent with other nearby areas as viewed on the public side of AZSITE. The general area does not seem to have had many prehistoric sites. The historic sites appear to be confined to the town.

6.0 MANAGEMENT SUMMARY

The ENTRIX inventory of the proposed Taylor Municipal Airport expansion did not find any sites or isolates. No prehistoric or historic properties will be affected by this project. Therefore cultural resource clearance is recommended for the project with no special stipulations.

7.0 LITERATURE CITED

Arizona State Museum
1993 *Archaeological Site Recording Manual, Version 1.1*. The University of Arizona.

Asch, C. M.
1960 Post-Pueblo Occupation at the Willow Creek Ruin, Point of Pines. *Kiva* 26 (2):31-42.

Danson, E. B.
1961 Early Man Points from the Vicinity of Sanders, Arizona. *Plateau* 34(1):67-68.

Duwe, S. and H. Neff
2007 Glaze and Slip Pigment Analyses of Pueblo IV Period Ceramics from East-Central Arizona Using Time of Flight-Laser Ablation-Inductively Coupled Plasma-Mass Spectrometry (TOF-LA-ICP-MS). *Journal of Archaeological Science* 34 (2007) 403-414.

Fewkes, J. W.
1904 *Two Summers Work in Pueblo Ruins*. Annual Report of the Bureau of Ethnology No. 22. Smithsonian Institution, Washington, D.C.

Fritz, J. M.
1974 The Hay Hollow Site Subsistence System East Central Arizona. Unpublished Ph.D. dissertation, Department of Anthropology, University of Chicago, Chicago.

Gilpin, D.
1994 Lukachukai and Salinas Springs: Late Archaic/Early Basketmaker Habitation Sites in the Chinle Valley, Northeastern Arizona. *Kiva* 60 (2):203-218.

Haury, E. W.
1985 *Mogollon Culture in the Forestdale Valley East-Central Arizona*. University of Arizona Press, Tucson.

Hesse, I. S.
1995 A Reworked Clovis Point Near Chevelon Ruin. *Kiva* 61 (1):83-88.

Hill, J. N.
1970 *Broken K Pueblo: Prehistoric Social Organization in the American Southwest*. Anthropological Papers No. 18. University of Arizona, Tucson.

Hough, W.
1903 *Archaeological Fieldwork in Northeastern Arizona, The Museum-Gates Expedition of 1901*. In Annual Report of the U.S. National Museum for 1901, pp. 279-358. On file, Washington, D.C.

Huckell, B. B.
1995 *Of Marshes and Maize: Preceramic Agricultural Settlements in the Cienega Valley, Southeastern Arizona*. Anthropological Papers No. 59. University of Arizona Press, Tucson.

Kintigh, K. W.
1996 The Cibola Region in the Post-Chacoan Era. In *The Prehistoric Pueblo World, A.D. 1150-1350*, edited by Michael A. Adler, pp. 131-44. The University of Arizona Press, Tucson.

Lightfoot, K. G.
1984 *Prehistoric Political Dynamics: A Case Study from the American Southwest*. Northern Illinois University Press, De Kalb.

Mills, B. J., S. Herr, E. Kaldahl, J. Newcomb, and S. Van Keuren
1994 *Silver Creek Archaeological Research Project: 1994 Field Report*. Ms. Submitted to Apache-Sitgreaves National Forests. On file, Department of Anthropology, University of Arizona, Tucson.

Olson, A. P.
1964 An Unfinished Clovis Point from Houck, Arizona. *Plateau* 36(3-4):123-124.

Parry , W. J., and F. E. Smiley
1990 Hunter-Gatherer Archaeology in Northeastern Arizona and Southeastern Utah. In *Perspectives in Southwestern Prehistory*, edited by P. E. Minnis and C. Redman, pp. 47-56. Westview Press, Boulder.

Van Keuren, S.
2006 Shumway Ruin and the Late Pre-Hispanic Period in East-Central Arizona. *Contributions in Science*, Number 508, pp. 1–19. Natural History Museum of Los Angeles County.

FINAL

Updated Biological Resources Report

Taylor Airport

February 2015

Prepared For

Armstrong Consultants, Inc.

Updated Biological Resources Report

Taylor Airport

February 2015

Prepared for

Armstrong Consultants
861 Rood Ave, Grand Junction, CO, 81501
Tel 970 242 0101 Fax 970 241 1769

Prepared by

Cardno
1142 West 2320 South, Ste. A
Salt Lake City, UT 84119
Tel 801 256 3800 Fax 801 973 1095
www.cardno.com

Table of Contents

Executive Summary ii

Chapter 1 Introduction 1-1

Chapter 2 Methods 2-1

Chapter 3 Results and Discussion 3-1

Chapter 4 Conclusion and Recommendations 4-1

Chapter 5 References 5-1

5.1 Reference Lists 5-1

5.2 Personal Communications 5-2

Appendices

Appendix A Figures

Appendix B Soils Description

Appendix C Site Photos

Tables

Table 1 Summary of USFWS TECP species and their Likelihood of Occurrence within the Project Area in Navajo County, Arizona 2-1

Table 2 Plants Observed During the Site Survey of the Project Area in Navajo County, Arizona 3-2

Table 3 Wildlife Species Observed or Inferred During the Taylor Airport Field Survey 3-3

Figures

Figure 1 Location Map A-1

Figure 2 Topographic Map A-2

Figure 3 NWI Wetlands A-3

Figure 4 Soils Map A-4

Executive Summary

Cardno Inc., (Cardno) conducted a protected biological resources review and jurisdictional wetlands determination of the approximately 63 acre Taylor Airport Project Area in Taylor (Navajo County), Arizona, under the direction of Armstrong Consultants, Inc. The review included researching background information on and completing field surveys for: U.S. Fish and Wildlife Service listed threatened, endangered, candidate, and proposed plant and animal species; habitat capable of supporting U.S. Fish and Wildlife Service listed species; identification of active raptor nests and potential nesting habitats; and U.S. Army Corps of Engineers jurisdictional features including wetlands and waters of the US.

Based upon the results of this data review and field survey, the Taylor Airport Project Area does not support U.S. Fish and Wildlife Service listed species, habitat capable of supporting U.S. Fish and Wildlife Service listed species, nesting raptors, or U.S. Army Corps of Engineers jurisdictional features. It therefore our conclusion that expansion within the Taylor Airport Project Area would not result in negative impacts to U.S. Fish and Wildlife Service listed species, U.S. Fish and Wildlife Service listed species' habitat, or U.S. Army Corps of Engineers jurisdictional features.

No active avian nests were observed during the 2010 field survey; however habitat capable of supporting raptor and non-raptor avian species protected under the Bald and Golden Eagle Protection Act and Migratory Bird Treaty Act occurs within and around the Taylor Airport Project Area. It is our conclusion that expansion within the Project Area would have no negative impacts to protected avian species, if construction and ground-disturbing activities are timed to occur after the respective species' nesting seasons. If construction were timed to occur during the active avian nesting season, a pre-construction clearance to identify active nests is advised. If active nests were identified within the Project Area, active nests should be avoided until after nesting is completed and young have fledged the nest to reduce the likelihood of a violation to the Bald and Golden Eagle Protection Act or Migratory Bird Treaty Act.

Chapter 1

Introduction

Cardno has performed a protected biological resources survey of the Taylor Airport in Taylor (Navajo County), Arizona, at the request of Armstrong Consultants, Inc. (Armstrong) (**Figure 1**). The Project parcel is approximately 63 acres in size, and wraps around the existing airport on the west, north, and east sides. The Project Area is located in southeast quarter and section 4, SESE of the southwest quarter, section 3, township 12 north, and Range 21 east at an elevation of approximately 5,700 feet above sea level. Its location is shown on the U.S. Geological Survey (USGS) Taylor, 1998, 7.5' quadrangle map (**Figure 2**).

The review included researching background information and follow-up field surveys to identify: the presence of U.S. Fish and Wildlife Service (Service) plant and animal species listed threatened, endangered, candidate, and proposed (TECP); habitats capable of supporting TECP species (**Table 1**); raptor nests and potential nesting habitats; and presence of U.S. Army Corps of Engineers jurisdictional features including wetlands and waters of the U.S. (WOUS).

At the request of Armstrong, this report, its content, and conclusions were revalidated in early 2015. This revised report includes results of the 2010 data review/field survey and a revalidation of U.S. Fish and Wildlife Service species listed TECP and habitat capable of supporting TECP species within the Project Area.

Chapter 2

Methods

In an effort to identify protected resources which may occur within the Project Area Cardno reviewed: the Service's lists of TECP species found in Navajo County, Arizona through the Service's Information, Planning, and Conservation System (IPaC) (Completed *February 2, 2015*; **Table 1**); identification of TECP species expected to occur within the Project Area and ~3.0 mile-buffer using the Arizona Game and Fish Department's (AZGF) Arizona Environmental Online Review Tool Reporting (Completed *February 2, 2015*); the Service's National Wetland Inventory (NWI) map to identify potential jurisdictional wetlands and traditional navigable WOUS in the Project Area; review of topographic maps; and review of aerial imagery . Note that candidate species are not offered protection under the Endangered Species Act (ESA), although the Service recommends species protections where possible to avoid future listing of candidate species. Site habitat and current species ranges were reviewed to determine the likelihood of occurrence within the Project Area.

A site visit and intensive field survey was conducted on September 25, 2010, which included a survey for TECP species and their habitats within the Project Area including a buffer extending 100 feet around the Project Area. Pedestrian transects were completed within the Project Area and buffer to ensure that 100 percent of the Project Area was surveyed to identify the presence of TECP species and habitat capable of supporting TECP species.

Identification of raptor nests and potential nesting habitat was conducted by completing pedestrian surveys within the Project and within 100 ft. of the perimeter of the Project Area on September 25, 2010.

Field surveys to identify U.S. Army Corps of Engineers jurisdictional wetlands and WOUS was conducted on September 25, 2010 following the 1987 U.S. Army Corps of Engineers Delineation Manual and 2008 Arid West Regional Supplement.

Revalidation of this report included a desktop review of information on TECP species documented or expected to occur within the Project Area as of February 2, 2015 (USFWS 2015, AZGF 2015), their habitats (USFWS 2015), and documented occurrence data on TECP species (AZGF 2015). No field surveys were completed for the 2015 revalidation.

Table 1 Summary of USFWS TECP species and their Likelihood of Occurrence within the Project Area in Navajo County, Arizona

Species	USFWS (Service) Designation	Habitat Description	Likelihood of Occurrence
Mammals			
Mexican Gray Wolf (*Canis lupus baileyi*)	E	Chaparral, woodland, and forested areas. May cross desert areas.	None: no suitable habitat.

Species	USFWS (Service) Designation	Habitat Description	Likelihood of Occurrence
Black-Footed Ferret (*Mustela nigripes*)	EP-NE	Grassland plains generally found in association with prairie dogs. Project Area in predicted range of this species (AZGF 2015). Identified as potentially occurring in Project (USFWS IPaC 2015)	None: no suitable habitat.
New Mexico Jumping Mouse (*Zapus hudsonius luteus*)	E	Sedge-forb-willow zones along permanent streams in the Jemez and Sacramento mountain ranges, large wet meadows within river flood plains and narrow riparian zones along irrigation ditches.	None: no suitable habitat.
Birds			
California Condor (*Gymnogyps californianus*)	EP-NE	Live in rocky shrubland, coniferous forest, and oak savannas. Often found occupying areas and nesting near cliffs or large trees. Individuals have been documented to range up to 150 miles away from home territories. Species is listed as EP-NE in these areas of Arizona.	None: no suitable habitat.
Southwestern Willow Flycatcher (*Empidonax traillii extimus*)	E	Cottonwood/willow and tamarisk vegetation communities along rivers and streams. Project Area in predicted range of this species (AZGF 2015). Identified as potentially occurring in Project (USFWS IPaC 2015)	None: no suitable habitat.
Yellow-billed Cuckoo (*Coccyzus americanus*)	T	Large blocks of riparian woodlands (cottonwood, willow, or tamarisk galleries). Project Area in predicted range of this species (AZGF 2015). Identified as potentially occurring in Project (USFWS IPaC 2015)	None: no suitable habitat.
Mexican Spotted Owl (*Strix occidentalis lucida*)	T	Nests in canyons and dense forests with multilayered foliage structure. Project Area in predicted range of this species (AZGF 2015). Identified as potentially occurring in Project (USFWS IPaC 2015)	None: no suitable habitat.
Fish			
Apache (Arizona) Trout (*Oncorhynchus gilae apache*)	T	Streams and rivers above 6,000 ft. elevation with adequate stream flow and shading; temperature below 77 degrees F; and substrate of boulders, rocks, gravel and sand/silt.	None: no suitable habitat.
Gila trout (*Oncorhynchus gilae*)	T	Clear, cold intermittent mountain streams in arid regions.	None: no suitable habitat.
Little Colorado Spinedace (*Lepidomeda vittata*)	T	Moderate to small streams; found in pools and riffles with water flowing over fine gravel and silt substrate (AZGF documented within 3.0 miles of Project Area, AZGF 2015). Identified as potentially occurring in Project (USFWS IPaC 2015)	None: no suitable habitat.
Roundtail Chub (*Gila robusta*)	C	Cool to warm waters of rivers and streams, often occupy the deepest pools and eddies of large streams. Identified as potentially occurring in Project (USFWS IPaC 2015)	None: no suitable habitat.
Loach Minnow (*Tiaroga cobitis*)	E	Benthic species of small to large perennial streams with swift shallow water over cobble and gravel. Recurrent flooding and natural hydrograph important.	None: no situable habitat.
Plants			
Navajo Sedge (*Carex specuicola*)	T	Silty soils at shady seeps and springs.	None: no suitable habitat.

Species	USFWS (Service) Designation	Habitat Description	Likelihood of Occurrence
Peebles Navajo Cactus (*Pediocactus peeblesianus var. peeblesianus*)	E	Gravely soils of the Shinarump conglomerate of the Chinle Formation. This cacius is known from only a few locations in Navajo County, Arizona, occupying a very small geographic area (7miles by 1 miles) extending northwest to southeast within the immediate vicinity of Joseph City to Holbrook, AZ.	None: no suitable habitat; Project Area is outside this species known range and ~32 miles south of known populations; site was surveyed and no Peebles Navajo Cactus were found.
Welsh's Milkweed (*Asclepias welshii*)	T	Occurs in natural unstable drifting dunes of the Coral Pink Sand Dunes. Dunes occur in sagebrush, juniper, and ponderosa pine communities at or near 5,400 to 6,100 feet.	None: no suitable habitat.
Reptiles			
Chiricahua Leopard Frog (*Lithobates [Rana] chiricahuensis*)	T	Streams, rivers, backwaters, ponds, and stock tanks that is mostly free from introduced fish, crayfish, and bullfrogs. Identified as potentially occurring in Project (USFWS IPaC 2015)	None: no situable habitat.
Northern Mexican Gartersnake (*Thamnophis eques megalops*)	T	Cienegas, stock tanks, large-river riparian woodlands and forests, streamside gallery forests. Identified as potentially occurring in Project (USFWS IPaC 2015)	None: no situable habitat.
USFWS Designation T-Threatened, E-Endangered ; C-Candidate, P-Proposed, D-Delisted, SC- Species of Concern, EP-NE-Experimental Population, Non-Essential .			

Chapter 3

Results and Discussion

The Project Area consists of previously disturbed and undisturbed native habitat directly adjacent to the existing Taylor Airport. Previous disturbance within the Project Area includes paved runways and access roads, airport facilities, and areas which have been bladed and cleared of native vegetation. Undisturbed areas consisted of sandy to rocky soils supporting sparse (50-60 percent cover) native and non-native vegetation including a variety of grasses, forbs, and trees. A list of plant species observed in the Project Area during the field survey is included in **Table 2**.

Wildlife habitats within the Project Area are limited to relatively flat xeric grassland/non-native vegetation communities and small numbers of native and non-native trees adjacent to existing airport facilities. Given the proximity to adjacent development, it is expected that wildlife species occupying the Project Area would largely consist of common varieties of avian, reptilian, and mammalian species acclimated to the presence of humans and partially disturbed vegetation communities. A list of wildlife species observed or identified as recently occurring by the evidence of sign (tracks, scat, etc.) during the Taylor Airport field survey is included in **Table 3**. No cliffs, aquatic resources, wetlands, riparian communities, sand dunes, or other specialized habitats occur within the Project Area.

Raptor nesting habitat includes undisturbed grassland and trees around the facilities; however, no raptors nests were observed within the Project Area or within 100 foot buffer of the Project Area during the 2010 field survey. Cliff and wooded riparian habitat capable of supporting bald eagles and golden eagles protected under the Bald and Golden Eagle Protection Act (BGEPA) does not occur within the Project Area; however the Project Area does support habitat capable of supporting nesting activities for avian species protected under the Migratory Bird Treaty Act (MBTA).

Land topography of the Project Area is generally flat and slopes from southwest to northeast. The Natural Resources Conservation Services (NRCS) soils map for Custom Soil Resource Report Navajo County Area, Arizona, Central Part was examined for soil types, and descriptions reviewed prior to site visit. The following soil types were found to occur within the Project Area: Kech-Rock outcrop complex, 1-20 % slopes; Padilla-Cerrillos complex, 1-10 % slopes; Springerville clay, 0-3 % slopes; and Ustollic Haplargids association, 1-30 % slopes (**Appendix B**).

No U.S. Fish and Wildlife species listed as TECP, or habitat capable of supporting TECP species, was identified within the Project Area. Based upon existing site conditions, no TECP species are expected to occur within the Project Area.

No U.S. Army Corps of Engineers jurisdictional wetlands or traditional navigable WOUS were observed in the Project Area during the 2010 field survey.

Representative photos were taken of the site (**Appendix C**).

Table 2 Plants Observed During the 2010 Site Survey of the Project Area in Navajo County, Arizona

Scientific Name	Common Name	Wetland Indicator Status
Achnaterum hymenoides	Indian ricegrass	FACU
Agropyron elongatum	tall wheatgrass	UPL
Artemisia tridentata	big sagebrush	UPL
Chrysothamnus nauseosus	rubber rabbitrush	UPL
Cirsium vulgare	bull thistle	FACU
Convulvus arvensis	field bindweed	UPL
Cornus sericea ssp. sericea	redosier dogwood	FACW
Distichlis spicata	inland saltgrass	FACW
Elaeagnus angustifolia	Russian olive	FACW
Encelia farinosa	brittlebush	UPL
Erodium cicutarium	redstem stork's bill	UPL
Halogeton glomeratus	halogeton	UPL
Helianthus annuus	common sunflower	FAC
Heterotheca subaxillaris	camphorweed	UPL
Hordeum jubatum	foxtail barley	FACW
Hordeum vulgare	common barley	UPL
Kochia scoparia	Mexican summer-cypress	FACU
Lactuca tatarica var. pulchella	Blue lettuce	FAC
Lupinus wyethii	wyeth lupine	FACU
Medicago sativa	alfalfa	UPL
Melilotus officinalis	yellow sweetclover	FACU
Opuntia clavata	club cholla	UPL
Opuntia engelmannii	Englemann's prickly pear	UPL
Pinus edulis	pinyon pine	UPL
Populus fremontii	fremont cottonwood	FACW
Ribes aureum	golden currant	FACW
Salix exigua	Coyote willow	OBL
Salsola kali	Russian thistle	FACU
Sonchus oleraceus	common sowthistle	UPL
Sphaeralcea munroana	Munro's globemallow	UPL
Tamarix ramosissima	saltcedar	NI
Tragopogon dubius	western salsify	UPL
Typha latifolia	broadleaf cattail	OBL
Ulmus pumila	Siberian elm	FACU
Xanthium strumarium	common cocklebur	FAC

Table 3 Wildlife Species Observed or Inferred During the Taylor Airport Field Survey

Common Name	Scientific Name	Classification
Mammals		
Golden-mantled Ground Squirrel	*Spermophilus lateralis*	Mammal
Mule Deer	*Odocoileus hemionus*	Mammal
Prairie Dog	*Cynomys parvidens*	Mammal
Raccoon	Procyon Lotor	Mammal
Coyotes	*Canis latrans*	Mammal
Jack Rabbit	*Lepus californicus*	Mammal
Eastern Cottontail Rabbit	Sylvilagus *floridanus*	Mammal
Birds		
Common Ground-Dove	*Columbina passerina*	Songbird
Broad-billed Hummingbird	*Cynanthus latirostris*	Songbird
Northern Cardinal	*Cardinalis cardinalis*	Songbird
House Finch	*Carpodacus mexicanus*	Songbird
Common Rosefinch	*Carpodacus erythrinus*	Songbird
Cassin's Finch	*Carpodacus cassinii*	Songbird
Ground Sparrow	*Melozone leucotis*	Songbird
Savannah Sparrow	*Passerculus sandwichensis*	Songbird
Western Meadowlark	*Sturnella neglecta*	Songbird
Black-billed Magpie	*Pica pica*	Songbird
American Robin	*Turdus migratorius*	Songbird
European Starling	*Sturnus vulgaris*	Songbird
American Crow	*Corvus brachyrhynchos*	Songbird
Mourning Dove	*Zenaida macroura*	Game bird
Reptiles		
Western Hognose Snake	Heterodon nasicus	Reptile
Gopher Snake	*Pituophis catenifer*	Reptile
Garter Snake	*Thamnophis sirtalis*	Reptile
Western Rattlesnake	*Crotalus viridis*	Reptile

Chapter 4

Conclusion and Recommendations

The protected biological resources survey within the approximately 63 acre expansion area around the existing Taylor Airport in Navajo County, Arizona was completed in 2010 and revalidated in February 2015. This included evaluation of: U.S. Fish and Wildlife Service TECP species, nesting raptors, and U.S. Army Corps of Engineers jurisdictional wetlands and WOUS. Based upon the results of the 2010 data review/field survey and 2015 revalidation, no U.S. Fish and Wildlife Service TECP species, TECP species habitat, or U.S. Army Corps of Engineers jurisdictional features occur within the Project Area. No negative impacts to U.S. Fish and Wildlife Service TECP species or U.S. Army Corps of Engineers jurisdictional features would occur as a result of ground disturbing activities within the Project Area. In order to complete any expansion activities within the Project Area, no permitting with U.S. Fish and Wildlife Service or U.S. Army Corps of Engineers will be required.

No nests for raptors or avian species protected under the BGEPA/MBTA were observed within the Project Area or within the 100 foot buffer around the Project Area in 2010. No habitat capable of supporting nesting activities of species protected under the BGEPA was identified within the Project Area, but these species may use transmission and distribution structures or man-made structures in the Project Area and vicinity for nesting. Habitat capable of supporting shrub, ground, and tree nesting species protected under the MBTA was identified within the Project. In the event non-raptor avian species would be identified nesting in the Project, all potential negative impacts to these species' breeding and nesting activities could be avoided by conducting construction activities outside the generally recognized avian breeding and nesting season (April 1 to July 15), or after nesting is completed and young have fledged active nesting locations. If raptor species, including species protected under the BGEPA, were identified nesting near the Project, all potential negative impacts to these species' breeding and nesting activities could be avoided by following seasonal and spatial buffers identified by the 2002 *Utah Field Office Guidelines for Raptor Protection From Human and Land Use Disturbances* (Romin and Muck 2002 or other agency approved document), or after nesting is completed and young have fledged active nesting locations. If species protected under the BGEPA and MBTA were encountered as foraging visitors outside the active breeding and nesting season, it is expected that these species would flee the immediate areas during ground disturbing activities and return to the immediate areas unaffected following Project construction. It is our conclusion that expansion within the Project Area would have no negative impacts to those species protected under the BGEPA and MBTA, if construction and ground-disturbing activities are timed to occur after the respective species' nesting seasons. If Project construction were timed to occur during the active avian nesting season, a pre-construction clearance to identify active nests is advised. If active nests were identified within the Project, active nests should be avoided until after nesting is completed and young have fledged the nest to reduce the likelihood of a violation to the MBTA or BGEPA.

Chapter 5

References

5.1 Reference Lists

Arizona Game and Fish Department. Managing Today for Wildlife Tomorrow. http://www.azgfd.gov/w_c/blackfooted_ferret.shtml. November 2, 2010.

Arizona Game and Fish Department. Managing Today for Wildlife Tomorrow. Apache Trout Recovery: A Wildlife Success Story. www.azgfd.gov/. November 2, 2010.

Arizona Game and Fish Department. Managing Today for Wildlife Tomorrow. 2009. California Condor Recovery. /www.azgfd.gov/. November 3, 2010.

Arizona Game and Fish Department. Managing Today for Wildlife Tomorrow. 2009. Mexican Spotted Owl Inventory on Camp Navajo. http://www.azgfd.gov/. November 3, 2010.

Arizona Game and Fish Department. Heritage Data Management System. 1988. Classification, Nomenclature, Description, Range. Northern Mexican Garter snake.

Arizona Game and Fish Department. Arizona Environmental Online Review Tool Report. 2015. Project Area Submitted and Evaluated. Project ID HGIS-00523. Available at http://www.azgfd.gov/hgis/. Accessed on [February 2, 2015]. Report on file at Cardno Salt Lake City, UT office.

Environmental Defense. Endangered Species Back from the Brink. Southwestern Willow Flycatcher. www.environmentaldefense.org. November 2, 2010.

Howell, J.T. 2004. Arizona Game and Fish Department. Heritage Data Management System. Classification, Nomenclature, Description, Range of Navajo Sedge. Leaflets of Western Botany 5 (9): 148-149. 1949.

Nature Serve. Nature Serve Explorer. 2015. Species profiles. Available at: http://explorer.natureserve.org/index.htm. Accessed [February 2, 2015].

U.S. Fish and Wildlife Service. Arizona Ecological Services. June 2010. Little Colorado Spinedace. www.fws.gov/southwest/es/arizona/Little.htm. November 3, 2010.

U.S. Fish and Wildlife Service. Arizona Ecological Services. October 2010. Loach Minnow. www.fws.gov/southwest/es/arizona/Loach.htm. November 3, 2010.

U.S. Fish and Wildlife Service. Arizona Ecological Services. June 2010: Chiricahua Leopard Frog. www.fws.gov/southwest/es/arizona/CLF.htm. November 3, 2010.

U.S. Fish and Wildlife Service. Arizona Ecological Services Field Office. July 2009. Fish and Wildlife Service Finds Roundtail Chub Warrants Protection. www.fws.gov/southwest/es/arizona/ November 3, 2010.

U.S. Fish and Wildlife Service. Arizona Ecological Services. July 2010. Mountain Plover. www.fws.gov/southwest/es/arizona/Mtn_Plover.htm. November 3, 2010.

U.S. Fish and Wildlife Service. Arizona Ecological Services, Phoenix, Arizona. 1991. Peebles Navajo Cactus (*Pediocactus peeblesianus var. peeblesianus*). Five-year Review: Summary and Evaluation.

U.S. Fish and Wildlife Service. Arizona Ecological Services, Phoenix, Arizona. 2008. Peebles Navajo Cactus (*Pediocactus peeblesianus var. peeblesianus*). Five-year Review: Summary and Evaluation.

U.S. Fish and Wildlife Service. Arizona Ecological Services. Threatened and endangered Species. Navajo County. *Updated July 8, 2010*. http://www.fws.gov/southwest/es/arizona/Threatened.htm. November 3, 2010.

U.S. Fish and Wildlife Service. The Mexican Wolf Recovery Program. June 2010. Welcome to the Mexican Gray Wolf recovery Program. http://www.fws.gov/southwest/es/mexicanwolf/ November 3, 2010.

U.S. Fish and Wildlife Service. Species Profile. 2006. Post-Delisting Monitoring Results for the American Peregrine Falcon (*Falco peregrinus anatus*).

U.S. Fish and Wildlife Service. Information, Planning, and Conservation System (IPaC). 2015. Project Scoping for Navajo County and Taylor Airport. Available at http://ecos.fws.gov/ipac/. Accessed [February 2, 2015].

5.2 Personal Communications

Ray Webber. September 27, 2010. Taylor Airport Manager. Taylor, Arizona. Telephone Interview. Telephone (928) 536-4811.

Keith and Inez Nichols. September 25, 2010. Land Owners. Personal Interview. Telephone (928) 536-6720.

Jeremy Peters. September 27, 2010. Taylor City Sewer Water District; Airport Onsite Manager. Telephone Interview. Telephone (602) 615-5066.

Teri Reedhead. November 3, 2010. Reed Sand and Rock/Land Owner. Taylor, Arizona. Telephone Interview. Telephone (928) 358-0075.

Appendix A

List of Figures

Figure 1 Location Map

Figure 2 Topographic Map

Figure 3 NWI Wetlands

Figure 4 Soils Map

Appendix B

Soils Description

Appendix C

Site Photos

Photo 1 Overlooking Project Area at southeast corner. View looking west

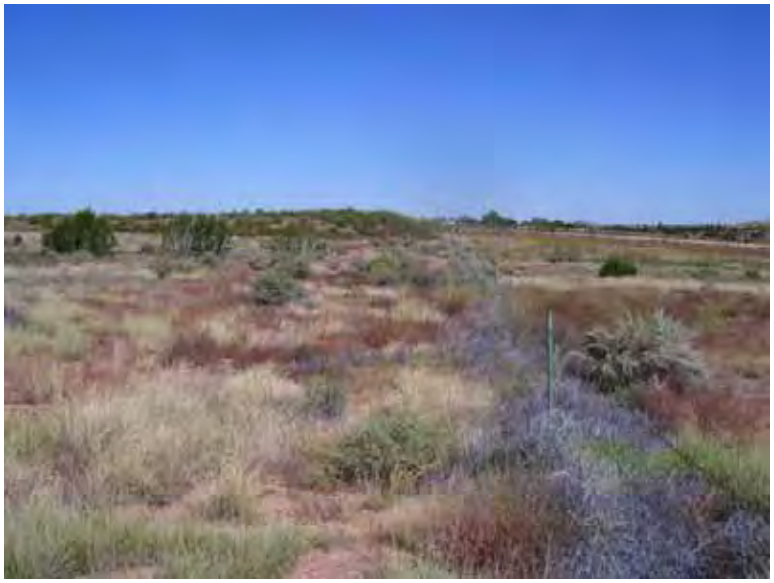


Photo 2 Overlooking Project Area at southeast corner. View looking north.

Photo 3 **Overlooking Project Area at southeast corner. View looking northwest**

Photo 4 **Overlooking Project Area at northeast corner. View looking south.**

Photo 5 Overlooking Project Area at northeast corner. View looking west.

Photo 6 Overlooking Project Area at northeast corner. View looking southwest.

Photo 7 Overlooking Project Area at northwest corner. View looking southwest.

Photo 8 Overlooking Project Area at northwest corner. View looking southeast.

Photo 9 Overlooking Project Area at northwest corner. View looking east.

Photo 10 Overlooking Project Area at southwest corner. View looking northeast.

Photo 11 Overlooking Project Area at southwest corner. View looking southeast.

Cardno ENTRIX

Shaping the Future

Shaping the.
Future™

Toll-free 800 368 7511
www.cardno.com
www.cardno.com

Australia • Belgium • Canada • Ecuador • Indonesia • Kenya • New Zealand • Papua New Guinea
Peru • United Arab Emirates • United Kingdom • United States • Operations in 70 countries

APPENDIX E

AIR QUALITY EMISSIONS INVENTORY

TAYLOR MUNICIPAL AIRPORT
ENVIRONMENTAL ASSESSMENT

TAYLOR MUNICIPAL AIRPORT

GREENHOUSE GAS EMISSIONS INVENTORY

PREPARED FOR:

TOWN OF TAYLOR

PREPARED BY:
ARMSTRONG CONSULTANTS, INC.
861 ROOD AVENUE
GRAND JUNCTION, CO 81501

DECEMBER, 2010

TABLE OF CONTENTS

GREENHOUSE GAS EMISSIONS INVENTORY PAGE

INTRODUCTION 1
METHODS USED TO QUANTIFY GREENHOUSE GAS (GHG) EMISSIONS 1
AIRCRAFT EMISSIONS 1
GROUND ACCESS VEHICLES (GAV) 4
FACILITIES/STATIONARY SOURCES 6
EMISSIONS SUMMARY 7

TABLES PAGE

1 CO2 EMISSION FACTORS 1
2 2025 PROJECTED FUEL SALES BASED ON AIRCRAFT TYPE 2
3 TOTAL FUEL SALES FOR NO ACTION AND PROPOSED ACTION ALTERNATIVES 2
4 SUMMARY OF GREENHOUSE GAS EMISSIONS ASSOCIATED WITH THE TAYLOR MUNICIPAL AIRPORT IN 2009 7
5 DISCLOSURE OF PROPOSED ACTIONS EFFECTS ON GREENHOUSE GAS EMISSIONS 7

GREENHOUSE GAS (GHG) EMISSIONS INVENTORY

INTRODUCTION

As part of the Environmental Assessment for the Proposed Action, a Greenhouse Gas (GHG) Emission Inventory was prepared to quantify GHG emissions for existing airport operations and that of the Proposed Action at the Taylor Municipal Airport. Once documented, GHG emissions of the Proposed Action can be applied to that of the No Action alternative to determine whether or not the Proposed Action would have a significant impact on air quality. The Transportation Research Board Guidebook on Preparing Greenhouse Gas (GHG) Emissions was utilized to quantify existing GHG emissions at the Taylor Municipal Airport and to compare the emissions of the No Action with that of the Proposed Action.

Based on available data, pollutants most commonly evaluated as part of a Level 2 GHG emission inventory include those of Carbon dioxide (CO2), Methane (CH4), Nitrous Oxide (N2O), Sulfur hexafluoride (SF6), Hydrofluorocarbons (HFC) and Perfluorocarbons (PFC), also known as the six Kyoto pollutants. For the purposes of this study, only CO2 emissions are reflected in this GHG emissions inventory as emission factors for the other Greenhouse Gas Emissions were not available for all six Kyoto pollutants. Table 1 contains a list of the conversion factors used to calculate CO2 emissions.

TABLE 1 CO2 EMISSION FACTORS

Emission Source	CO2 Emission Factor
Aircraft: Jet-A	21.095 CO2/gal fuel
Aircraft: AvGas (100LL)	18.355 CO2/gal fuel
Ground Access Vehicles (GAV): Motor/Auto Gasoline	19.564lbs CO2/gal fuel

Source: Guidebook on Preparing Airport Greenhouse Gas Emissions Inventories 2009

METHODS USED TO QUANTIFY GREENHOUSE GAS (GHG) EMISSIONS

Emissions were quantified for the following three sources at the Taylor Municipal Airport:

- **Aircraft Emissions**
- **Ground Access Vehicles (GAV)**
- **Facilities/Stationary Sources**

Emissions for Ground Service Equipment (GSE) were not incorporated into the emissions inventory as there is no airport owned GSE. GSE services, such as snow removal is currently provided by the Town of Taylor. Therefore, GSE related emissions are currently allocated to the Town of Taylor.

Aircraft Emissions

Aircraft emissions are generally one of the largest producers of GHG emissions at an airport due to the quantity of fuel consumed for air travel. Aircraft emissions generally include jet and propeller driven aircraft, as well as those emissions generated by auxiliary power units (APUs). An APU generates electricity and compressed air to operate jet aircraft instruments, lights, ventilation, and other equipment and for starting the aircraft main engines. If ground-based power or air is not available, the APU may be operated for extended periods when the aircraft is on the ground with its engines shut down.

AvGas is currently the only fuel available at the Taylor Municipal Airport. To quantify existing aircraft emissions, the total amount of 2009 fuel sales data for AvGas (9,548 gallons) was obtained from airport management and converted from gallons to CO2 emissions by using accepted emission factors for AvGas (18.355 lbs CO2 per gallon of AvGas).

- Existing AvGas CO2 Emissions (9,548 gal) x (18.355 lbs CO2/gal)

  = 175,253.5 lbs CO2

The total pounds of CO2 emissions were then converted to metric tons (mt) to obtain a total of 79.5 mt of CO2 emitted from aircraft sources in 2009.

- Existing AvGas CO2 Emissions (175,253.5 lbs CO2) x (0.0004536 metric tons/lbs)

  = 79.5 mt CO2

The Proposed Action would include the installation of a new AvGas and Jet-A fuel system. To calculate the CO2 emissions resulting from fuel sales of the No Action and Proposed Action, the 2025 AvGas and Jet-A fuel sales were estimated using the existing ratio of 2.51 gallons of AvGas per AvGas flight operation (9,548 AvGas gallons sold ÷ 3,800 operations = 2.51 gallons per operation) and a conservative estimate of 10 gallons of Jet-A per Jet-A flight operation. These ratios were then applied to the 2005 Taylor Municipal Airport Master Plan forecast of aircraft operations by aircraft for 2025 type as shown in Table 2.

TABLE 2 2025 PROJECTED FUEL SALES BASED ON AIRCRAFT TYPE

Aircraft Type	Aircraft Operations	Fuel Type	Gallons
Single Engine - Piston	5,072	AvGas	12,731
Multi Engine - Piston	429	AvGas	1,077
Multi Engine – Turbo Prop	429	Jet-A	4,290
Turbo Jet	468	Jet-A	4,680
Rotorcraft - Piston	117	AvGas	294
Rotorcraft – Turbine	117	Jet-A	1,170
Experimental & Other – Piston	878	AvGas	2,204
Experimental & Other – Turbo Prop	293	Jet-A	2,930
Total 2025 Projected Fuel Sales			**29,376**

The projected fuel sales were then categorized based on the impacts that the No Action and the Proposed Action would have on fuel sales, since only the Proposed Action would lead to future Jet-A fuel sales (See Table 3).

TABLE 3 TOTAL FUEL SALES FOR NO ACTION AND PROPOSED ACTION ALTERNATIVES

PHASE	Total Aircraft Operations	Jet A Gallons Sold	AvGas Gallons Sold	Total Jet-A and AvGas Gallons Sold
Baseline (2009)	3,800	0	9,548	9,548
Future - No Action (2025)	7,803	0	16,306	16,306
Future - Proposed Action (2025)	7,803	13,070	16,306	29,376

Aircraft emissions for the No Action and Proposed Action alternatives were then calculated using the same formulas used for determining the 2009 CO2 aircraft emissions, resulting in the No Action alternative emitting 135.8 metric tons of CO2 and the Proposed Action emitting 260.9 metric tons of CO2 emissions from aircraft sources.

This method of deriving aircraft emissions is considered to be conservative as it applies all the emissions for fuel uploaded at the airport and does not subtract out cruise emissions that are generated outside of the airports environment.

Calculation of Aircraft CO2 Emissions from the No Action Alternative in 2025

- No Action Jet A CO2 Emissions (0 gal) x (21.095 lbs CO2/gal)

  = 0 lbs CO2

- No Action AvGas CO2 Emissions (16,306 gal) x (18.355 lbs CO2/gal)

  = 299,296.6 lbs CO2

The total pounds of CO2 emissions were then converted to metric tons (mt) to obtain a total of 135.8 mt of CO2 emitted from aircraft sources in 2009.

- No Action Jet A CO2 Emissions (0 lbs CO2) x (0.0004536 metric tons/lbs)

  = 0 mt CO2

- No Action AvGas CO2 Emissions (299,296.6 lbs CO2) x (0.0004536 metric tons/lbs)

  = 135.8 mt CO2

- No Action Jet A (0 mt CO2) + No Action AvGas (135.8 mt CO2)

  = 135.8 mt CO2 from aircraft sources from the No Action alternative in 2025

Calculation of Aircraft CO2 Emissions from the Proposed Action Alternative in 2025

- Proposed Action Jet A CO2 Emissions (13,070 gal) x (21.095 lbs CO2/gal)

  = 275,711.7 lbs CO2

- Proposed Action AvGas CO2 Emissions (16,306 gal) x (18.355 lbs CO2/gal)

  = 299,296.6 lbs CO2

The total pounds of CO2 emissions were then converted to metric tons (mt) to obtain a total of 260.9 mt of CO2 emitted from aircraft sources in 2009.

- Proposed Action Jet A CO2 Emissions (275,711.7 lbs CO2) x (0.0004536 metric tons/lbs)

  = 125.1 mt CO2

- Proposed Action AvGas CO2 Emissions (299,296.6 lbs CO2) x (0.0004536 metric tons/lbs)

  = 135.8 mt CO2

- Proposed Action Jet A (125.1 mt CO_2) + Proposed Action AvGas (135.8 mt CO_2)

  = 260.9 mt CO_2 from aircraft sources from the Proposed Action alternative in 2025

Ground Access Vehicles (GAV)

Ground access vehicles (GAV) encompass all off-airport vehicle trips generated by the users of the airport. GAV include all vehicles traveling to and from, as well as within the airport public roadway system (excluding GSE). For the purposes of this study, GAV includes all off-airport vehicles that are privately-owned and used by airport tenants, passengers and the Town of Taylor for transportation to and from the Taylor Municipal Airport.

The first step in calculating the amount fuel used by GAV was to use the published Transportation Research Board average daily vehicle trip rate of 2.5 vehicle trips per flight per day for general aviation airports and applying it to the airports 3,800 flight operations for 2009 as documented by the Airport Master Record 5010 Form, resulting in 9,500 vehicle trips (2.5 vehicle trips x 3800 flights = 9,500 vehicle trips).

In addition, to account for employee commutes a conservative average of 6 trips were added for each day of the year resulting in an additional 2,190 vehicle trips per year (365 days x 6 trips = 2,190) and for a combined total of 11,690 vehicle trips a year (9,500 tenant trips x 2,190 employee trips = 11,690 total trips). An average commute of 2 miles per vehicle trip was then applied to the 11,690 vehicle trips for a total of 23,380 miles being driven annually (2 miles per trip x 11,690 trips = 23,380 miles).

Total annual miles driven (23,380) were then divided by the national average of 22.9 miles per gallon for a cars fuel economy resulting in a fuel burn of 1,021 gallons over the course of the year by GAV's(23,380 miles ÷ 22.9 miles per gallon = 1,021 gallons).

To quantify GAV CO_2 emissions an estimate of the total amount of 2009 fuel used by GAV vehicles (1,021 gallons) was calculated and converted from gallons to CO_2 emissions by using an accepted emission factor for gasoline engines (19.564 lbs CO_2/gal fuel).

- Existing Gasoline CO_2 Emissions = (1,021 gal) x (19.564 lbs CO_2/gal)

  = 19,974.8 lbs CO_2

The total pounds of CO_2 emissions were then converted to metric tons (mt) to obtain a total of 9.1 mt of CO_2 emissions from GAV sources.

- Existing Gasoline CO_2 Emissions (19,974.8 lbs CO_2) x (0.0004536 metric tons/lbs)

  = 9.1 mt CO_2

Out of the 9.1 metric tons of CO_2, 1.7 metric tons are contributed to employee commutes. To account for employee commutes, a conservative average of 6 trips were added for each day of the year resulting in an additional 2,190 vehicle trips per year (365 days x 6 trips = 2,190). An average commute of 2 miles per vehicle trip was then applied to the 2,190 vehicle trips for a total of 4,380 miles being driven annually (2 miles per trip x 2,190 trips = 4,380 miles).

Total annual miles driven (4,380) were then divided by the national average of 22.9 miles per gallon for a cars fuel economy resulting in a fuel burn of 191 gallons over the course of the year by GAV's (4,380 miles ÷ 22.9 miles per gallon = 191 gallons).

To quantify GAV CO2 emissions an estimate of the total amount of 2009 fuel used by GAV vehicles (191 gallons) was calculated and converted from gallons to CO2 emissions by using the accepted emission factor for gasoline engines (19.564 lbs CO2/gal fuel).

- Existing Employee Gasoline CO2 Emissions = (191 gal) x (19.564 lbs CO2/gal)

  = 3,741.9 lbs CO2

The total pounds of CO2 emissions were then converted to metric tons (mt) to obtain a total of 1.7 mt of CO2 emissions from GAV sources.

- Existing Employee Gasoline CO2 Emissions (3,741.9 lbs CO2) x (0.0004536 metric tons/lbs)

  = 1.7 mt CO2

Calculation of GAV CO2 Emissions for both the No Action and Proposed Action Alternative in 2025

To calculate the amount of fuel used by the No Action and Proposed Action Alternative's GAV, the published Transportation Research Board average daily vehicle trip rate of 2.5 vehicle trips per flight per day for general aviation airports was applied it to the airports forecasted 7,803 flight operations for 2025, resulting in 19,508 tenant/public vehicle trips (2.5 vehicle trips x 7,803 flights = 19,508 vehicle trips). Annual City vehicle trips of 2,190 were then added to obtain the total number of annual vehicle trips of 21,698 for the No Action Alternative.

An average commute of 2 miles per vehicle trip was then applied to the 21,698 vehicle trips for a total of 43,395 miles being driven annually (2 miles per trip x 21,698 trips = 43,395 miles).

Total annual miles driven (43,395) were then divided by the national average of 22.9 miles per gallon for a cars fuel economy resulting in a fuel burn of 1,895 gallons over the course of the year by GAV's(43,395 miles ÷ 22.9 miles per gallon = 1,895 gallons).

To quantify GAV CO2 emissions, a estimate of the total amount of fuel used by the No Action and Proposed Action's GAV vehicles (1,895 gallons) was calculated and converted from gallons to CO2 emissions by using an accepted emission factor for gasoline engines (19.564 lbs CO2/gal fuel).

- No Action and Proposed Action Gasoline CO2 Emissions = (1,895 gal) x (19.564 lbs CO2/gal)

  = 37,073.4 lbs CO2

The total pounds of CO2 emissions were then converted to metric tons (mt) to obtain a total of 16.8 mt of CO2 emissions from GAV sources.

- No Action and Proposed Action Gasoline CO2 Emissions (37,073.4 lbs CO2) x (0.0004536 metric tons/lbs)

= 16.8 mt CO2

GAV CO2 emissions for the No Action and Proposed Action alternatives were then quantified by using the aircraft operations in Table 1, while keeping all other factors constant. Since the Proposed Action would have no impact on ground access vehicles both the No Action and the Proposed Action would emit 16.8 metric tons of CO2 emissions from GAV sources in 2025.

Facilities/Stationary Sources

Facilities and stationary sources generally consist of the utilities consumed by airport facilities for lighting, heating, cooling, etc. For the purposes of this study, facilities and stationary sources consist of emissions resulting from the production of electricity and natural gas used by Town and tenant owned airport facilities.

The total electricity used (30,695 Kwh) and natural gas used (1,881 therms) by the airport in 2009 was obtained from the Town and Airport Management. Electricity used was then converted to CO2 emissions by using the Environmental Protection Agency's (EPAs) online Power Profiler (http://www.epa.gov/cleanenergy/energy-and-you/how-clean.html) that calculates electricity emissions based on how the areas power grid generates electricity. Natural gas usage was converted to CO2 emissions based on an accepted emission factor (53.06 kg CO2 per mmBtu of natural gas).

Using the EPA's online Power Profiler the airports zip code (85939) followed by the selection of power grid known as the Arizona Public Services Company and the average monthly electrical usage of 2,558 kwh (30,695 kwh ÷ 12 months = 2,558 kwh per month), was entered into the Power Profiler to produce an estimate of 42,387 pounds of CO2 emissions for the year. The total pounds of CO2 emissions were then converted to metric tons (mt) to obtain a total of 19.2 mt of CO2 emissions resulting from electricity usage.

- Existing 42,387 lbs CO2 x 0.0004536 metric tons/lbs = 19.2 mt CO2

The CO2 emissions resulting from the use of electricity by the No Action and Proposed Action alternatives would remain the same since the Proposed Action does not consist of any projects which would impact existing electricity demand.

To quantify existing emissions from natural gas, the 2009 usage of (1,881 therms) was first converted from Therms to units of one million British Thermal Units (mmBtu) 4,105.5 mmBtu (1,881 therms x .1 therms/per mmBtu = 188 mmBtu) and applied the emission conversion factor (53.06 kg CO2 per mmBtu of natural gas).

- Existing (188 mmBtu) x (53.06 kg CO2/mmBtu) = 9,975 kg CO2

The total pounds of CO2 emissions were then converted to metric tons (mt) to obtain a total of 10.0 mt of CO2 emissions from natural gas.

- Existing (9,975 kg CO2) x (0.001 metric tons/kg) = 10.0 mt CO2

The CO2 emissions resulting from the use of natural gas by the No Action and Proposed Action alternatives would remain the same since the Proposed Action does not consist of any projects which would impact existing natural gas demand.

EMISSIONS SUMMARY

Table 4 provides a summary of 2009 GHG emissions produced from airport facilities and operations at the Taylor Municipal Airport. As noted in Table 4, 117.8 metric tons of CO2 emissions were produced by Taylor Municipal Airport operations in 2009.

In accordance with draft guidance dated February 18, 2010 from the Council of Environmental Quality (CEQ), 25,000 metric tons or more of annual CO2 emissions are considered to be an indicator of a minimum level of GHG emissions for which a quantitative and qualitative assessment may be meaningful to decision makers. Based on this indicator, existing Taylor Municipal Airport operations have little impact on GHG emissions.

TABLE 4 SUMMARY OF GREENHOUSE GAS EMISSIONS ASSOCIATED WITH THE TAYLOR MUNICIPAL AIRPORT IN 2009

User / Source Category	CO2 (metric tons/ per year)	Percent of Total
Aircraft (Based on Fuel Sales)	79.5	67.5%
Ground Access Vehicles (GAV) (On and Off Airport)	9.1	7.7%
Facilities/Stationary Sources	29.2	24.8%
Total CO2 Emissions in 2009 (Metric Tons)	**117.8**	**100.0%**

To quantify the Proposed Actions long-term impact on the Taylor Municipal Airports GHG emissions, the projected increase in CO2 emissions were calculated based on projected increases in based aircraft and flight operations by the year 2025, for the No Action and Proposed Action alternatives. Based on these projections, the annual CO2 emissions for the No Action alternative would result in a total of 174 metric tons of CO2 emissions by the year 2025 and the Proposed Action would result in a total of 299.1 metric tons of CO2 emissions by the year 2025.

Table 5 compares the annual CO2 emissions of the No Action and Proposed Action and identifies that the Proposed Action would result in an additional 125.1 metric tons of annual CO2 emissions. Based on these results and the CEQ's minimum level of 25,000 metric tons for which a quantitative and qualitative assessment may be meaningful to decision makers, the 299.1 metric tons of annual CO2 emissions that the Proposed Action would generate by the 2025 is more than 24,500 metric tons below the minimum level for which a quantitative and qualitative assessment may be meaningful to decision makers. Therefore, the Proposed Actions impact on GHG emissions would be considered to have de minimis impacts on air quality.

TABLE 5 DISCLOSURE OF PROPOSED ACTIONS EFFECTS ON GREENHOUSE GAS EMISSIONS

User / Source Category	Annual CO2 Emissions (metric tons)		
	No Action	Proposed Action	Net Post Project Related Emissions
Aircraft (Based on Fuel Sales)	135.8	260.9	125.1
Ground Access Vehicles (GAV) (On and Off Airport)	9.1	9.1	0
Facilities/Stationary Sources	29.2	29.2	0
Total Metric Tons Project Affected Sources	**174.1**	**299.2**	**125.1**