



# CHAPTER SIX

## Environmental Overview

### INTRODUCTION

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The purpose of this chapter is to provide a review of existing environmental conditions and a preliminary assessment of potential environmental impacts of planned development at Tyler Pounds Regional Airport (TYR). This overview does not constitute an Environmental Assessment (EA), as defined by the Federal Aviation Administration (FAA) Order 5050.4A. The analysis in this chapter is conducted according to the guidelines set forth in the FAA Order, entitled Environmental Handbook. Under this document, 20 categories have been determined as potential areas of impact and must be addressed. These categories are:

1. Noise
2. Land Use
3. Social Impacts
4. Induced Socio-Economic Impacts
5. Air Quality
6. Water Quality
7. Department of Transportation Act, Section 303(c)
8. Historical, Architectural, Archaeological, and Cultural Resources
9. Biotic Communities
10. Endangered and Threatened Species
11. Wetlands
12. Floodplains
13. Coastal Zone Management Program
14. Coastal Barriers
15. Wild and Scenic Rivers
16. Farmland
17. Energy Supply and Natural Resources
18. Light Emissions
19. Solid Waste Impact
20. Construction Impacts

For the purpose of this overview, these environmental categories will only be addressed if they apply specifically to TYR. This environmental overview identifies potential environmental impacts that may require a more detailed analysis in a formal EA for the preferred development alternative.

The proposed projects listed in the Master Plan are not anticipated to impact the following:

1. Land Use
2. Social Impacts
3. Induced Socio-Economic Impacts
4. Air Quality
5. Department of Transportation Act, Section 303(c)
6. Historical, Architectural, Archaeological, and Cultural Resources
7. Floodplains
8. Coastal Zone Management Program



9. Coastal Barriers
10. Wild and Scenic Rivers
11. Farmland
12. Energy Supply and Natural Resources
13. Light Emissions
14. Solid Waste Impact
15. Construction Impacts

However, the categories that are anticipated to or have the potential to have some impacts are discussed in the following paragraphs.

## **NOISE**

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An updated aircraft noise study was conducted as part of the master planning process using standard FAA methodologies and procedures. The noise study included noise modeling and the estimation of noise exposure in terms of affected land area and associated land use. The analysis used the Day-Night Average Sound Level ( $L_{dn}$  or DNL) noise metrics as a descriptor of cumulative aircraft noise exposure.

Noise contours generated by the FAA Integrated Noise Model (INM), version 6.1, do not depict a strict demarcation of where the noise levels end or begin but rather describe the general expected noise exposure. INM noise modeling requires the input of several variables. The noise contours represent average annual conditions rather than single event occurrences. Noise exposure on any one day may be greater or less than that of the average day. The noise model is useful for comparison of noise impacts and can provide a reasonable basis for performing airport noise compatibility planning. The noise exposure contours presented in this report do not consider operational noise abatement measures that could reduce projected noise impacts.

### **Assumptions**

The noise environment for TYR was modeled to determine the existing and future noise impacts on neighboring properties. Noise Exposure Maps were modeled for the Base Year 2004 and Future Year 2024 conditions. The noise model generated noise contours for the 65, 70 and 75 DNL.

To perform a noise analysis and generate the noise exposure maps, various input variables were required. These variables include the following:

- The number of aircraft operations by time of day and aircraft type for an average day
- Operational information, including the use of each runway end
- Departure, arrival and touch-& go flight profiles.

The fleet mix at Tyler Pounds Regional Airport consists of commercial and general aviation turbine and piston aircraft and helicopters. **Tables 6-1** and **6-2**, depict the average aircraft operations per aircraft type used in INM model for the base year and final year the planning period.



**TABLE 6-1  
YEAR 2004 AVERAGE DAILY OPERATIONS**

**General Aviation Operations - (No military, touch and go, or commercial)**

Runway	Utilization %	Total Operations	Ops per Runway	SEP	MEP	MET	MEJ
<b>4</b>	0.27	31,648	8,545	0.72	0.09	0.09	0.1
Arrival/Departure Split			4,272				
Daily Ops ((split/365)*.8)			9.364	6.74	0.84	0.84	0.94
Night / Eve Ops ((split/365)*.1)			1.171	0.843	0.105	0.105	0.117
<b>22</b>	0.18	31,648	5,697				
Arrival/Departure Split			2,848				
Daily Ops ((split/365)*.8)			6.243	4.495	0.562	0.562	0.624
Night / Eve Ops ((split/365)*.1)			1.561	1.124	0.140	0.140	0.156
<b>13</b>	0.33	31,648	10,444				
Arrival/Departure Split			5,222				
Daily Ops ((split/365)*.8)			11.445	8.241	1.030	1.030	1.145
Night / Eve Ops ((split/365)*.1)			1.431	1.030	0.129	0.129	0.143
<b>31</b>	0.22	31,648	6,963				
Arrival/Departure Split			3481				
Daily Ops ((split/365)*.8)			7.630	5.494	0.687	0.687	0.763
Night / Eve Ops ((split/365)*.1)			0.954	0.687	0.086	0.086	0.095

**Commercial Operations - (No military, touch and go, or general aviation)**

Runway	Utilization %	Total Operations	Ops per Runway	Saab 340	ATR 42	EMB 120
<b>4</b>	0.6	10,143	6,085.8	1.02%	47.69%	51.29%
Arrival/Departure Split			3,043			
Daily Ops ((split/365)*.8)			6.669	0.068	3.181	3.421
Night / Eve Ops ((split/365)*.1)			0.834	0.009	0.398	0.428
<b>22</b>	0.4	10,143	4,057.2			
Arrival/Departure Split			2,029			
Daily Ops ((split/365)*.8)			4.446	0.045	2.120	2.280
Night / Eve Ops ((split/365)*.1)			0.556	0.006	0.265	0.285



**TABLE 6-1  
YEAR 2004 AVERAGE DAILY OPERATIONS**

Military Operations					
Runway	Utilization %	Total Operations	Ops per Runway	C130	Trainer
<b>4</b>	0.6	551	330.6	50.00%	50.00%
Arrival/Departure Split			165		
Daily Ops ((split/365)*.8)			0.362	0.181	0.181
Night / Eve Ops ((split/365)*.1)			0.045	0.023	0.023
<b>22</b>	0.4	551	220.4		
Arrival/Departure Split			110		
Daily Ops ((split/365)*.8)			0.242	0.121	0.121
Night / Eve Ops ((split/365)*.1)			0.030	0.015	0.015
Touch and go Operations - Runway 17-35					
Runway	Utilization %	Total Operations	Ops per Runway	SEP	MEP
<b>17</b>	0.5	21099	10549.5	0.9	0.1
Arrival/Departure Split			5275		
Daily Ops ((total/365)*.8)			11.561	10.405	1.156
Night / Eve Ops ((total/365)*.2)			1.445	1.301	0.145
<b>35</b>	0.5	21099	10549.5		
Arrival/Departure Split			5275		
Daily Ops ((total/365)*.8)			11.561	10.405	1.156
Night / Eve Ops ((total/365)*.2)			1.445	1.301	0.145

Source: THE LPA GROUP INCORPORATED, 2006



**TABLE 6-2  
YEAR 2024 AVERAGE DAILY OPERATIONS**

**General Aviation Operations - (No military, touch and go, or commercial)**

Runway	Utilization %	Total Operations	Ops per Runway	SEP	MEP	MET	MEJ
<b>4</b>	0.33	46629	15388	0.7	0.07	0.07	0.16
Arrival/Departure Split			7694				
Daily Ops ((split/365)*.8)			16.863	11.80	1.18	1.18	2.70
Night / Eve Ops ((split/365)*.1)			2.108	1.476	0.148	0.148	0.337
<b>22</b>	0.22	46629	10258				
Arrival/Departure Split			5129				
Daily Ops ((split/365)*.8)			11.242	7.869	0.787	0.787	1.799
Night / Eve Ops ((split/365)*.1)			2.811	1.967	0.197	0.197	0.450
<b>13</b>	0.27	46629	12590				
Arrival/Departure Split			6295				
Daily Ops ((split/365)*.8)			13.797	9.658	0.966	0.966	2.208
Night / Eve Ops ((split/365)*.1)			1.725	1.207	0.121	0.121	0.276
<b>31</b>	0.18	46629	8393				
Arrival/Departure Split			4197				
Daily Ops ((split/365)*.8)			9.198	6.439	0.644	0.644	1.472
Night / Eve Ops ((split/365)*.1)			1.150	0.805	0.080	0.080	0.184

**Commercial Operations - (No military, touch and go, or general aviation)**

Runway	Utilization %	Total Operations	Ops per Runway	CRJ 50	EMB 120
<b>4</b>	0.6	14859	8915.4	50.00%	50.00%
Arrival/Departure Split			4458		
Daily Ops ((split/365)*.8)			9.770	4.885	4.885
Night / Eve Ops ((split/365)*.1)			1.221	0.611	0.611
<b>22</b>	0.4	14859	5943.6		
Arrival/Departure Split			2972		
Daily Ops ((split/365)*.8)			6.514	3.257	3.257
Night / Eve Ops ((split/365)*.1)			0.814	0.407	0.407



**TABLE 6-2**  
**YEAR 2024 AVERAGE DAILY OPERATIONS**

Military Operations					
Runway	Utilization %	Total Operations	Ops per Runway	C130	Trainer
<b>4</b>	0.6	571	342.6	50.00%	50.00%
Arrival/Departure Split			171		
Daily Ops ((split/365)*.8)			0.375	0.188	0.188
Night / Eve Ops ((split/365)*.1)			0.047	0.023	0.023
<b>22</b>	0.4	571	228.4		
Arrival/Departure Split			114		
Daily Ops ((split/365)*.8)			0.250	0.125	0.125
Night / Eve Ops ((split/365)*.1)			0.031	0.016	0.016
Touch and go Operations - Runway 17-35					
Runway	Utilization %	Total Operations	Ops per Runway	SEP	MEP
<b>17</b>	0.5	22759	11379.5	0.9	0.1
Arrival/Departure Split			5690		
Daily Ops ((total/365)*.8)			12.471	11.224	1.247
Night / Eve Ops ((total/365)*.2)			1.559	1.403	0.156
<b>35</b>	0.5	22759	11379.5		
Arrival/Departure Split			5690		
Daily Ops ((total/365)*.8)			12.471	11.224	1.247
Night / Eve Ops ((total/365)*.2)			1.559	1.403	0.156

Source: THE LPA GROUP INCORPORATED, 2006

The runway utilization percentage is very important in deriving the noise exposure size and direction. The runway utilization primarily depends on the prevailing wind direction and speed. Runway utilization percentages were obtained from the ATCT, assigned to each runway end and input into the INM.

The flight track data was also obtained from the ATCT at the airport. No specialized departure and arrival procedures were used in this analysis and touch-and-go flight procedures were modeled by FAA standard, left-hand traffic patterns for all runways. The flight tracks, track assignments, and runway utilization percentages remained unchanged throughout the study.



## Existing Noise Contours

The total land area impacted within the 65 DNL during the base year is approximately **224 acres**. As depicted, nearly the entire 65 DNL noise contour resides on airport property with exception of a very small area near Runway 4 that overlays Pleasant Retreat Road. Since roadways are compatible noise areas, no mitigation or land acquisition is required under the current operational scenario. **Figure 6-2** illustrates the noise contour data for the base year, while **Table 6-3** lists the estimated noise impacts.

## Future Year 2024 Noise Contours

The noise exposure map for both the base year and the year 2024 revealed that a majority of the 65 DNL and above contours remain on airport property with the exception of approximately 12 acres of the 65 contour resulting from the extension of Runway 4. This contour crosses Pleasant Retreat Road and then extends beyond the airport parcel to the south. The extension of Runway 4 project includes the relocation of Pleasant Retreat Road along with the acquisition of property including the entire 65 DNL contour and a portion of the adjacent runway protection zone. For this reason, noise mitigation or land acquisition beyond the amount of acquisition planned in the extension project should not be required. Both the existing and future noise contours are depicted in the Airport Land Use Drawing shown in Chapter 7. **Table 6-3** denotes the area of impacts associated with the existing and future noise contours.

**TABLE 6-3**  
**BASE YEAR AND YEAR 2024 SUMMARY OF NOISE EXPOSURE BY LAND USE**

Land Use	Land Area (Acres)					
	Base Year			Year 2024		
	65-69 DNL	70-74 DNL	75+ DNL	65-69 DNL	70-74 DNL	75+ DNL
Airport Property	223.2	115.2	77.0	333.6	179.2	115.2
Residential	0	0	0	0	0	0
Institutional	0	0	0	0	0	0
<b>Total Acreage</b>	224.0	115.2	77.0	345.6	179.2	115.2

*Source: The LPA Group Incorporated, 2006*

## Recommendations

The noise exposure map for both the base year and the year 2024 reveals that the majority of the 65 DNL and above contours remains on airport property. As a result, noise impacts to the areas surrounding the airport are negligible. The future extension of Runway 4 will require additional property acquisition. This acquisition of property should include all areas that lie beneath the 60 DNL noise contour at TYR.



## WATER QUALITY

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### Legislation

The Federal Water Pollution Control Act, as amended by the Clean Water Act provides the authority to establish water control standards, control discharges into surface and subsurface waters, develop waste treatment management plans and practices, and issue permits for discharges and for dredged and filled materials into surface waters. The Fish and Wildlife Coordination Act requires consultation with the United States Fish and Wildlife Service (USFWS) and the Texas Commission on Environmental Quality (TCEQ) formerly Texas National Conservation Commission when any alteration and/or impounding of water resources is expected. The Federal National Pollution Discharge Elimination System (NPDES) provides regulations that govern the quality of stormwater discharge into water resources of the United States.

### Regulatory Agencies

The United States Army Corps of Engineers (COE) and TCEQ have jurisdiction over and regulate activities that alter the landscape and disrupt water flow to waters of the state and the United States. The TCEQ is also responsible for conducting Section 401 certification reviews of the COE 404 permit applications for the discharge of fill material into waters or wetlands of the United States. The wetland section details the regulatory requirement for this permit.

The United States Environmental Protection Agency (EPA) administers the NPDES Program. On September 14, 1998, the EPA authorized Texas to develop and implement the Texas Pollutant Discharge Elimination System (TPDES) Program. The TCEQ administers the TPDES Program and is the stormwater permitting authority for industrial activity, construction activity, and Municipal Separate Storm Sewer Systems (MS4)

Permitting requirements for construction at TYR are specified by the TPDES. Therefore, proposed improvement projects at the TYR that would impact jurisdictional wetlands and surface waters require a TCEQ general permit prior to construction. As part of the permitting process, stormwater runoff has to be treated prior to discharge to any waterbody.

### Existing Conditions

Several wetlands were identified to be in TYR. The wetlands are discussed in detail in the wetlands section.

### Potential Impacts

Proposed development in TYR may potentially impact wetlands and water quality.

### Recommendations

It is recommended that coordination with TCEQ be completed during the environmental review phase of each development project at TYR, to determine potential avoidance or minimization of environmental impacts.

## DEPARTMENT OF TRANSPORTATION ACT, SECTION 303(C)

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### Legislation

United States Code 49, Section 303 (c) is the recodified Section 4(f) of the Department of Transportation Act of 1966. It specifies that the use of publicly owned land from public parks, recreation areas, wildlife and waterfowl refuges, and historic sites shall not be approved unless there is not feasible or prudent alternative to that use and all negative impacts to Section 303 (c) area have been minimized.



## **Regulatory Agencies**

Agencies that have jurisdiction over Section 303 (c) properties include the Advisory Council on Historic Places, the United States Department of Interior (DOI), National Park Service (NPS), COE, and United States Department of Agriculture (USDA). Coordination with these agencies is required when impacting Section 303 (c) properties.

## **Existing Conditions**

According to the Environmental Overview of the Terminal Facility Relocation at TYR (LPA Group, 1999), there are no Section 303(c) properties in the northern, eastern, and western areas of TYR. A review of the southern area of TYR did not identify Section 303 (c) properties within the project study area.

## **Potential Impacts**

There are no anticipated impacts.

# **HISTORICAL, ARCHITECTURAL, ARCHAEOLOGICAL, AND CULTURAL RESOURCES**

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## **Legislation**

The National Historic Preservation Act of 1966 and the Archaeological and Historic Preservation Act of 1974 provide protection against development impacts that would cause change in the historical, architectural, archaeological, or cultural resources. Section 106 of the National Historic Preservation Act, Protection of Historic and Cultural Resources requires federal agencies to consider the effects of their actions on site listed on the National Register of Historic Places (NRHP) and sites that are eligible for listing.

## **Regulatory Agencies**

The Antiquities Code of Texas and Texas Local Government Code, Chapter 318, Historic Preservation by Counties appointed the Texas Historical Commission as the state agency for historic preservation, responsible for preserving Texas' architectural, archaeological, and cultural landmarks.

## **Existing Conditions**

The Texas Historical Commission Historic Site Atlas does not list any historic sites within TYR. A preliminary historic and archaeological reconnaissance was performed during the Environmental Overview of the Terminal Facility Relocation project (LPA Group, 1999) at TYR. This study identified two potential historic sites:

1. A turn of the century rock-lined well or cistern and the remaining undisturbed foundations; and
2. Other World War II features associated with the former Army Corp facility in the western area of TYR, north of Pleasant Retreat Road, east of CR 1184 and west of Runway 17/35.

The Texas Historical Commission did not require further testing near the rock lined well cistern or recording the location of the remaining foundations of the Army Air Corps facility. No other potential historic or archaeological sites were identified during the study.

## **Potential Impacts**

There is low potential for impacts for projects proposed in TYR because the two potential historic sites identified in the preliminary historic and archaeological reconnaissance were determined to be not significant.



## **Recommendations**

A Phase One Cultural Resource Assessment Survey should be performed for each project, in areas where there is a potential for archaeological artifacts to be discovered and where excavation is proposed to avoid or minimize archaeological or historical impacts.

## **BIOTIC COMMUNITIES**

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### **Legislation**

The Fish and Wildlife Coordination Act (48 Statute 401 as amended; 16USC et. Seq.) takes into consideration impacts to habitat and wildlife. Section 2 of this act requires consultation with USFWS, the DOI, and state agencies that regulate wildlife whenever water resources are modified by a federal agency, public or private agency under federal permit of license.

### **Regulatory Agencies**

The USFWS and TCEQ have authority under the act to provide comments and recommendations concerning vegetation and wildlife resources.

### **Existing Conditions**

The Texas Parks and Wildlife Department (TPWD) divided the state into natural regions, ecoregions, and biotic provinces. The classifications were developed to identify physiographic and biological differences of one area from another. TYR is within the Piney region, South Central Plain ecoregion, and Austroriparian province. Piney Woods topography is gently rolling to hill forested land with elevations that vary from 200 to 500 above sea level. Biotic communities that are typically found in the Piney Woods region include native pine-hardwood forests, mixed pine-oak forests, farmland, and pastureland.

The northern area, south of Highway 64 is the most developed area of TYR with gently sloping topography ranging from approximately 490 feet MSL in the northwest to 520 feet MSL in the south. Aviation related development structures, paved areas, and maintained grass areas are currently located in this area.

The eastern area of TYR, west of Dixie Drive has a developed area with gently sloping terrain ranging in elevation from approximately 510 feet above MSL in the northeast to 550 feet MSL in the southeast. This area consists mainly of maintained grass or undeveloped upland between the intersection of Runways 4/22 and 13/31. The remaining area consists of aviation-based commercial development including building, paved surfaces, and maintained grass areas.

The western area of TYR, west of Runway 4/22 is currently partially developed, with elevations ranging from approximately 470 feet MSL in the west along an intermittent stream to 560 feet MSL in the south. This area consists of young upland, bottomland forest, former borrow areas, and open pastureland. The terminal is located in this area.

The southern area of TYR, north of Pleasant Retreat Road in undeveloped and consist of a forested wetland, former borrow areas, and maintained grass areas. The elevations range from 540 feet MSL from the western section to 490 feet MSL in the south.

### **Potential Impact**

The proposed airport development would impact altered uplands, disturbed uplands, forested uplands, non-forested wetlands, and forested wetlands. Soil types, comparative elevation, and drainage characteristics determine plant community type while dominant vegetation and other environmental factors determine wildlife value and utilization.



Although the biotic communities are disturbed, they provide wildlife habitat to various animals some of which are threatened and endangered species.

## **Recommendations**

A site survey to evaluate specific biotic community types and threatened and endangered species within the boundaries of the proposed development and the potential presence of threatened and endangered species should be completed during the EA and/or Environmental Impact Statement (EIS) for each project. It is recommended that a biotic communities and threatened and endangered species survey be completed in the proposed development areas to determine the potential for the presence of threatened and endangered species.

## **ENDANGERED AND THREATENED SPECIES**

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### **Legislation**

The Endangered Species Act of 1973 (ESA), as amended, requires federal agencies, in consultation with and assisted by the United States Fish and Wildlife Service (USFWS), to ensure that their actions are not likely to jeopardize the continued existence of listed species or result in the destruction or adverse modification of critical habitat of such species. Section 7 of the Act states that federal agencies must review their actions; if those actions will affect a listed species or its habitat they must consult with the USFWS. By federal definition, an endangered species is any species of fish, wildlife, or plant that is in danger of extinction throughout all or a significant portion of its range. A threatened species is any species likely to become endangered within the foreseeable future throughout all or a significant portion of its range. Species identified as in need of protection are placed on the federal list. Any species that is officially proposed for inclusion on the list as threatened or endangered is given the same protection as listed species.

In 1973, the Texas legislature authorized the TPWD to establish a list of endangered animals in the state. Endangered species are those species that the TPWD Executive Director has named as being “threatened statewide with extinction.” Threatened species are those that the Texas Parks and Wildlife Commission has determined are likely to become endangered in the future. Chapters 67 and 68 of the Texas Parks and Wildlife Code and Sections 65.171-65.184 of Title 31 of the Texas Administrative Code contain the laws and regulations that address endangered and threatened animal species.

Texas Administrative Coded Sections 69.01 to 69.14 and Chapter 88 of the TPW Code contains authorizes TPWD to establish a list of threatened and endangered plant species for the state and to administer the laws and regulations pertaining to endangered and threatened plant species.

Both federal and state regulations prohibit the taking, possession, transport, or sale of any animal species designated as endangered or threatened without the issuance of a permit. State laws and regulations prohibit commerce in threatened and endangered plants and the collection of listed plants from public land without a permit from TPWD. Federal laws and regulations also prohibit commerce and the collection of listed plants in federal land without a permit from USFWS.

### **Regulatory Agency**

USFWS and TPWD have jurisdiction over and administer native endangered and threatened species permits for Texas. During the consultation process, the USFWS and TPWD will determine the significance of potential impacts and methods to mitigate and/or avoid them to complete the proposed project.



## Existing Conditions

Available GIS maps and literature were compiled and reviewed to determine the types of plant communities and wildlife occurrences that have been previously documented within the project study area. Data sources used in this evaluation included:

1. TPWD Rare Resources Data for Smith County (2004);
2. TPWD Texas Threatened and Endangered Species (2004);
3. USFWS Threatened and Endangered Species System Listing for Texas (2004);
4. The Nature Conservancy, Texas Conservation Data Center (CDC) Animal Tracking List (2003);
5. CDC Plant Tracking List (2003);
6. CDC Annotated List of G3/T3 and Rarer Plant Taxa of Texas (2004);
7. Texas Organization for Endangered Species Endangered, Threatened, and Watch List of Texas Plants (2004); and
8. Environmental Overview Terminal Facility Relocation of Tyler Pounds Regional Airport (LPA Group, 1999).

The USFWS maintains the Threatened and Endangered Species System (TESS) that contains information on threatened and endangered wildlife and plants and lists of threatened and endangered species by state including listed species, delisted species, proposed species for listing, and candidate species. In Texas, there are currently 91 listings consisting of 63 animals and 28 plants. There have been 20 delisted species for reasons including recovery, extinction, taxonomic revisions, new information discovered, and erroneous data. There is one proposed species for listing as endangered, a snail (*Pecos assiminea*) and 20 candidate species that consist of 16 animals and 4 plants.

The TPWD maintains a database of rare, threatened, and endangered species, and significant natural communities including known locations. The data for TYR was requested from TPWD and a review of the records indicates the following:

- There are no recorded occurrences of threatened or endangered species at TYR
- The nearest rough stem aster (*Aster scabriculaulis*) is approximately 3.1 miles northeast of TYR;
- The nearest golden wave tickseed (*Coreopsis intermedia*) is approximately 4.5 miles northeast of TYR;
- The nearest bald eagle (*Haliaeetus leucocephalus*) recorded is approximately 6 miles southwest of TYR; and
- The nearest Mohlenbrock's umbrella-sedge (*Cyperus grayoides*) and roughseed flameflower (*Talium rogospermum*) is approximately 3.8 miles of TYR (**Figure 6-4**).

**Table 6-4** lists the potential occurring listed fauna at TYR.

In 1999, the western, northern, and eastern areas of TYR were surveyed to determine the presence of listed species. The survey determined that there is potential habitat for scarlet snake (*Cemophora coccinea*) and timber/canebrake rattlesnake (*Crotalus horridus*). Additionally, TPWD performed an environmental review of the northern, eastern, and western areas of TYR that resulted in a determination that proposed improvements in 1999 would not have anticipated negative impact to rare species or natural communities.

## Recommendations

It is recommended that a protected species survey be completed during the EA or EIS of each project to:

- Update existing protected species data;



- Determine the presence and location of protected species in sections of the project area that were not previously surveyed; and
- Determine the type of mitigation necessary to complete the project.



**Figure 6-4** (TPWD Rare Resources Occurrence Map)



**TABLE 6-4  
LIST OF POTENTIALLY OCCURRING LISTED FAUNA**

SCIENTIFIC NAME	COMMON NAME	STATUS	
		USFWS	TPWD
<i>Cemophora coccinea</i>	Scarlet snake	T	
<i>Crotalus horridus</i>	Timber/canebrake rattlesnake	T	
<i>Macrolemys temminckii</i>	Alligator snapping turtle	T	
<i>Phrynosoma cornutum</i>	Texas horned lizard	T	
<i>Falco peregrinus</i>	American peregrine falcon	E, T	
<i>Falco peregrinus tundris</i>	Arctic peregrine falcon	T	
<i>Haliaeetus leucocephalus</i>	Bald eagle	T	PT
<i>Ursus americanus</i>	Black bear	T	TS
<i>Ursus americanus luteolus</i>	Louisiana black bear	T	T

**LEGEND:**

USFWS = United States Fish and Wildlife Service  
TPWD = Texas Parks and Wildlife Department

E = endangered species  
T = threatened species  
SSC = species of special concern  
P = proposed for delisting  
TS = threatened by similarity in appearance

Sources: *Texas Official Lists of Endangered and Threatened Species in Texas 2004.*  
*Official Lists of Endangered and Threatened Species in Texas 2004*



## WETLANDS

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### Legislation

Executive Order 11990, Protection of Wetlands, mandates that each federal agency take action to minimize the destruction, loss, or degradation of wetlands and preserve and enhance their natural values. This Executive Order and the permitting requirement of the Clean Water Act Section 404 require a permit for dredged and fill material in navigable waters of the United States.

In 1989, the Texas legislature established a single statewide definition for wetlands, “Wetlands means an area (including a swamp, marsh, bog, prairie pothole, or similar area) having a predominance of hydric soils that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support and that under normal circumstances supports the growth and regeneration of hydrophytic vegetation.” In August 17, 2000 as state rule, the Texas Surface Water Quality Standards (TSWQS) further clarified the protection of wetlands as waters in the state. As mentioned in the Water Quality Section, TCEQ implements a tiered system of review of federal permits for compatibility of state requirements as outlined in the “Memorandum of Agreement between the COE and TCEQ on Section 401 Certification Procedures.” The Section 401 Certification Procedure is based upon state water project size and the amount of state water/wetland affected. Tier I projects are those that will directly impact 3 acres or less of waters and/or wetlands in the state or less than 1,500 linear feet of streams. The TCEQ anticipates proposed Tier I projects to result in substantial compliance with state water quality standards and therefore waives certification for Tier I projects. Projects above the threshold and those below the threshold that are not eligible for Tier I processing, such as projects that will impact certain rare or ecologically significant wetlands are considered Tier II. Tier II projects are subject to an individual review by the TCEQ that involves participation in the pre-application process and public comment process.

### Regulatory Agency

The COE, have jurisdiction over and regulate activities that alter the landscape and disrupt water flow to waters of the United States. TCEQ reviews 404 permit applications through the Section 401 Certification Program.

Proposed improvement projects at TYR require a Section 404 permit and a Section 401 Certification prior to construction of projects that would impact jurisdictional wetlands and surface waters. As part of the permitting process, compensatory mitigation for unavoidable wetland impacts would be required.

### Existing Conditions

Available GIS maps and literature were compiled and reviewed to determine the types of wetland systems that have been previously documented within TYR. Data sources used in this evaluation included:

- National Wetlands Inventory wetlands map (**Figure 6-5**);
- National Resource Conservation Service soils survey;
- United States Geological Survey (USGS) topographic map;
- Texas Natural Resources Information System digital, ortho-photo quadrangle aerial map; and
- Environmental Overview for the Terminal Facility Relocation at Tyler Pounds Regional Airport (LPA Group, 1999).



Figure 6-5 (NWI Wetlands Map)



In 1999, The LPA Group Incorporated performed a survey at TYR that identified and delineated several wetlands. Three wetlands were identified in the western area, one intermittent stream in the northern area, and no wetlands were identified in the eastern area. The survey determined that COE jurisdictional wetlands were present in the western area.

A formal COE jurisdictional determination of the three wetlands in the western area of TYR was approved by COE on February 1, 2000. The wetland determination is valid for five years and expires on February 1, 2005. The emergent wetland is approximately 6,000 square feet in size and located west of Runway 4/22 and north of the terminal. The wetland vegetation consists of sweetgum (*Liquidambar styraciflua*), wax myrtle (*Myrica cerifera*), black willow (*Salix nigra*), winged elm (*Ulmus alata*), sedges (*Carex spp.*), Savannah panic grass (*Chanopyrum gymnocarpon*), and southern dewberry (*Rubus trivialis*). The pond located is approximately 0.3 acre in size and is located immediately west of the terminal. A stream approximately 5, 000 square feet in size meanders through the western limits of TYR west of the terminal.

Review of soils, NWI, and aerial maps indicate a potential forested wetland and two ponds in the southern area of TYR.

## **Potential Impacts**

Proposed projects in the southern and western section of TYR will likely impact wetlands that will require mitigation and regulatory permits from COE with review comments from TCEQ.

## **Recommendation**

It is recommended that a formal jurisdictional wetland determination, wetland survey and characterization be completed for wetlands in TYR. The wetland determination will provide the necessary information in determining potential wetland impacts associated with the proposed improvements. This phase maybe completed during the EA or EIS of each project to determine wetland impacts and compensatory mitigation necessary to meet state and federal regulatory requirements.

## **FLOODPLAINS**

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### **Legislation**

Executive Order 11988, "Floodplain Management" defines floodplains as lowland areas adjoining inland and coastal waters, especially those areas subject to one percent or greater chance of flooding in any given year. In September 1, 2001, the 77<sup>th</sup> Legislature of Texas amended Subchapter I, Chapter 16, of the Water Code to authorize all political governing bodies to:

- Adopt more comprehensive floodplain management regulations that the political subdivision determines are necessary for planning and appropriate to protect public health and safety.
- Participate in floodplain management and mitigation initiatives such as the National Flood Insurance Program's Community Rating System. Project Impact or other initiatives developed by federal, state, or local government; and
- Collect reasonable fees to cover administrative costs incurred by the administration of a local floodplain management program.

Additionally, Senate Bill 936 provides for Criminal and Civil Penalties and injunctive relief.



## Regulatory Agencies

The Federal Emergency Management Agency (FEMA) has produced flood insurance rate maps (FIRM) for communities participating in the National Flood Insurance Program. The maps detail the 100-year and 500-year base flood elevations.

The TCEQ is the state coordinating agency for the National Flood Insurance Program. TCEQ staff conducts site visits in communities throughout the state to provide planning assistance and information to local officials. Texas does not have current rules and regulation that require floodplain compensation for floodplain impacts.

## Existing Conditions

A review of the FEMA FIRM (FIRM No. 481185-0255 B) indicates that the 100-year floodplain extends approximately 1,300 feet southward from Highway 64 into the western area of TYR (**Figure 6-6**).

## Potential Impacts

There are no projects currently proposed for the southwestern area of TYR and therefore no anticipated impact.

## Recommendations

None.

# COASTAL ZONE MANAGEMENT PROGRAM

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## Legislation

The Coastal Zone Management Act (CZMA) aims to preserve, protect, develop, and where possible, restore and enhance the resources of the nation's coastal zone. The Texas Coastal Management Program (CMP) is designed to accomplish goals set by the legislature for coastal resource and to meet specific requirements for an approved plan under the federal CZMA.

## Regulatory Agency

The Coastal Coordination Council (CCC) administers the CMP and is chaired by the Commissioner of the General Land Office. The CCC is charged with adopting uniform goals and policies to guide decision-making by all entities regulating or managing resource use within the Texas coastal area. The CCC reviews significant actions taken or authorized by state agencies and other entities that may adversely affect coastal natural resources to determine consistency with the CMP goals and policies. Additionally, the Texas Section 401 Certification Program is a component for protecting coastal wetland resources under the CMP.

## Existing Conditions

Based upon the Bureau of Economic Geology Texas Coastal Hazards map, TYR is not within the coastal zone and the coastal high hazard area.

## Potential Impacts

All proposed structural improvements for this project are consistent with the goals and objectives of the Texas Coastal Management Program. There are no anticipated impacts for the proposed development of TYR.



Figure 6-6 (FEMA Floodplain Map)



## FARMLAND

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### Legislation

The Farmland Protection Policy Act of 1981 requires the evaluation of farmland conversion to non-agricultural areas. Prime farmland is land best suited for producing food, feed, forage, fiber, and oilseed crops. This land has the quality, growing season, and moisture supply necessary to produce sustained crop yields with minimal energy and economic input.

### Regulatory Agencies

The National Resources Conservation Service (NRCS) has jurisdiction and should be consulted if farmland is to be converted to non-agricultural use by a federally funded project. The consultation determines whether the farmland is classified as “prime” or “unique.” If it is, the Farmland Protection Act requires rating the farmland conversion impacts based upon the length of time farmed, amount of farmland remaining in the area, level of local farm support services, and the level of urban land in the area.

### Existing Conditions

Based on the soil survey of Hernando County (NRCS 1977), there are five soil types within the project area (**Figure 6-7**):

- Pits (Px);
- Pickton loamy finesand, 1 to 6 percent slopes (Pkc);
- Tonkawa fine sand, 1 to 6 percent slopes (Toc);
- Wolfpen loamy fine sand, 1 to 6 percent slopes (Woc);
- Wolfpen loamy fine sand, 8 to 15 percent slopes (Woe); and
- Urban land (Ur)

Of these six soil types, urban land is the predominant soil and covers more than 50 percent of TYR (**Figure 6-7**). Urban land consists of areas where 85 to 100 percent of the surface is covered by works or structures such as streets, sidewalks, paved parking lots, office buildings, etc. This soil type has been severely altered and obscured that classification of the soils is not practical. At TYR the areas with urban land are covered with airport related development including taxiways, runways, terminal building, aprons, maintained grass areas and other related structures.

The second most dominant soil type is wolfpen loamy fine sand, 1 to 6 percent slopes covers approximately 25 percent of TYR. This soil type is located at the north area, another area north of the terminal in the western area, and a small portion of the forest at the south area of TYR (**Figure 6-7**). It is a gently sloping soil typically found on broad interstream divides in uplands. This soil is well drained. Surface runoff is slow. Permeability and available water capacity is moderate. The hazard of erosion is slight. The seasonal high water table is at a depth of 4 to 6 feet during winter and spring. This soil is used mainly as pasture, and in small areas as woodland or cropland.

The third dominant soil type is wolfpen loamy fine sand, 8 to 15 percent slopes covers approximately 10 percent of TYR. This soil type is located in the northwest of Runway 4/22 and in a section of the southern area of TYR (**Figure 6-7**). It is a sloping to moderately steep soil on side slopes of drainage ways. This soil is well drained and surface runoff is slow. Permeability and available water capacity are moderate. The hazard of erosion is moderate or severe. The seasonal high water table is at a depth of 4 to 6 feet during winter and spring. This soil type is mainly used as pasture or woodland.



Figure 6-7 (NRCS Soils Map)



Pickton loamy fine sand, 1 to 6 percent slopes is a gently sloping soil typically found in broad interstream divides. This soil type is located at the western area and covers approximately 8 percent of TYR (**Figure 6-7**). This soil is well drained. Surface runoff is very slow. Permeability is moderate and available water capacity is low. The hazard of erosion is slight. During wet periods in winter, the seasonal high water table is at a depth of 4 to 6 feet. This soil is mainly used as pasture with some areas used as woodland and cropland.

Pits consist mainly of sand pits and clay pits and cover approximately 5 percent of TYR. Pits area located north of the terminal, underneath the terminal, and along the south side of Runway 4/22.

Tonkawa fine sand, 1 to 6 percent slope covers approximately 2 percent of TYR and is located in a small section of the southern area. It is a gently sloping soil typically found on broad interstream divides. This soil is excessively drained. Surface runoff is very slow. Permeability is rapid and available water capacity is low. The hazard of erosion is slight. This soil type is mainly used as woodland and some pasture and cropland.

### **Potential Impacts**

The results of the literature review did not identify unique or prime farmland in TYR.

### **Recommendations**

It is recommended that a Farmland Conversion Impact Rating form be prepared and submitted to NRCS to received concurrence of no potential impacts to farmland resulting from the proposed development of TYR.