The Great Trinity Forest Management Plan

Volume 1
Introduction

The Great Trinity Forest Management Plan

A sustainable multiple-use study.

2008

A management plan addressing the wildlife habitat, recreational, and forest management needs of the City of Dallas' Great Trinity Forest.

Introduction

Executive Summary and Descriptive Documentation

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EXECUTIVE SUMMARY

The Great Trinity Forest is approximately 6,000 acres of land along the Trinity River in Dallas, Texas. The Great Trinity Forest is being restored by the City of Dallas for flood control, water quality, recreation, wildlife, aesthetics and carbon sequestration. The Great Trinity Forest Management Plan was completed in order to provide the forest manager with guidelines on how to restore the hardwood forest and estimates on costs of restoration and management. The plan outlines the management schedule and condition of the forest for 100 years into the future.

Management Units

- Due to the heavy clay content of the soil and frequent flooding, it was determined that only 1,000 acres, divided into two acre sites, should be replanted. These two acre sites, called Management Units, were chosen based on elevation, soil and current vegetation. On average, 40 acres per year will be treated.

- Prior to management, a forester will mark the boundary and flag any desirable trees or areas of preexisting desirable regeneration that are not to be treated with herbicide. The forester should also make any necessary adjustments to the planting mix based on the hydrology and topography of the site.

- The undesirable mature trees in these Management Units will be treated with herbicide in the late summer or fall by injection, basal bark treatment or foliar spray, depending on the size of the trees. Due to the high cost of removal and the excellent wildlife habitat they will provide, these trees will be left to naturally decay.

- During early winter or early spring, the Management Unit will be planted in a 10 by 10 foot grid in order to achieve a density of 430 seedlings per acre. The trees on the planting list include bur oak (*Quercus macrocarpa*), pecan (*Carya illinoensis*), black walnut (*Juglans nigra*) common persimmon (*Diospyros virginiana*), shumard oak (*Q. shumardii*), blackjack oak (*Q. marilandica*), chinkapin (*Q. muehlenbergii*) and post oak (*Q. stellata*).

- Once the area is planted, it should be inspected to ensure it was done correctly. At this time, three 1/100th acre (11.8 foot radius) survival plots should be established and checked for 2 years. If the mortality rate of the seedlings falls below 30% then it may be reconsidered for replanting, but only after it is evaluated by the forest manager.

- Once canopy closure occurs, at approximately 10 years of age, then understory trees such as red mulberry (*Morus rubra*), roughleaf dogwood (*Cornus drummondii*) and Mexican plum (*Prunus mexicana*) will be planted to improve wildlife habitat and species diversity.

Mitigation Units

These are areas which will be planted and managed by the U.S. Army Corps of Engineers and will be transferred to the City of Dallas in 2025. By this time the units will have a minimum of 5 heavy mast

producing species per acre. If more trees are desired then herbicide will be used to reduce competition. If this does not produce enough desirable species then herbicides will be used to create openings so seedlings can be planted and managed in the same manner as the Management Units.

Wilderness

3,442.2 acres of the forested portion of the Great Trinity Forest will be designated as Wilderness. These areas will not be replanted but the forester or forest manager may need to perform maintenance, such as removal of invasive species, in these areas.

Habitat Aesthetic Improvement Areas

These are 100 foot buffers along roads, trails, utility right of ways, and recreational areas in which invasive species will be removed and shrubs or trees will be planted. The budget allows for 300 acres to be treated every year.

The Use of This Management Plan

This management plan is living document that should be reviewed and amended periodically to remain effective as a guiding document. This plan provides managers with an instruction manual for accomplishing the goals set forth by the stakeholders. It does not attempt to be an all inclusive document for decision making on the forest. Managers and personnel trained in the biological sciences are necessary to address inconsistencies that may be encountered during the plan's implementation.

PURPOSE

A forest management plan is an instruction, or operator's, manual that provides a detailed set of instructions on how to care for the forest. These instructions are developed based on the landowners' long and short-term goals and the intent to provide a healthy, multiple use forest. A plan does this by providing a detailed year by year work schedule, a detailed budget, and specific scientific information necessary to provide current, state-of-the-art forest and wildlife management.

The purpose of this management plan is to renovate the 5,200 acre Great Trinity Forest and transform it into a healthy multiple-use forest which will provide recreational opportunities as well as providing habitat for wildlife.

As with all management plans, this plan is intended to guide and direct management decisions in the future. Although diligent and thorough, it cannot feasibly address every potential situation that forest managers will encounter in the future. This plan should be reviewed and amended periodically by managers in order for it to remain effective.

OBJECTIVES

The objective of this plan is to manage the Great Trinity Forest to provide a healthy and diverse forest that will:

- Enhance aesthetics
- Provide a wide variety of recreation activities for the citizens of the Dallas area.
- Improve water quality
- Improved air quality by carbon sequestration and removing other gaseous air pollutants
- Improve habitat for a wide diversity of wildlife species, with a special emphasis on eastern cottontail (*Sylvilagus floridanus*), barred owl (*Strix varia*), eastern meadowlark (*Sturnella magna*), fox squirrel (*Sciurus niger*), hairy woodpecker (*Picoides villosus*), raccoon (*Procyon lotor*), red-tailed hawk (*Buteo jamaicensis*), wood duck (*Aix sponsa*) and Carolina chickadee (*Poecile carolinensis*).

GOALS AND OBJECTIVES OF EACH RESOURCE

Wildlife

- Improve the habitat for a wide diversity of wildlife species, with a special emphasis on eastern cottontail (*Sylvilagus floridanus*), barred owl (*Strix varia*), eastern meadowlark (*Sturnella magna*), fox squirrel (*Sciurus niger*), hairy woodpecker (*Picoides villosus*), raccoon (*Procyon lotor*), red-tailed hawk (*Buteo jamaicensis*), wood duck (*Aix sponsa*) and Carolina chickadee (*Poecile carolinensis*).
- Improve the diversity of species within the Great Trinity Forest by creating an all-aged forest.
- Create habitat by planting mast producing trees and by providing cover in the form of snags, brush piles and nest boxes.

Recreation

- Provide a wide variety of recreational activities for the citizens of Dallas, such as hiking, biking, canoeing, camping, family outings, and bird watching.
- To attract a wide diversity of wildlife species for viewing.
- Protect water quality to encourage healthy aquatic communities and provide safe areas for water activities.

Aesthetics

- To improve aesthetics by creating an all-aged forest.
- Protect aesthetics around high traffic areas such as trails and parks by leaving a zone of trees around these areas.
- Plant trees to create a diverse and attractive hardwood forest.

Water

- To protect the water quality of the streams, lakes, ponds and wetlands in the Great Trinity Forest, Best Management Practices of the State of Texas will be followed.

MULTIPLE-USE MANAGEMENT AND ISSUE IDENTIFICATION

Multiple-use management is a method for managing resources that can potentially produce a variety of desirable products and benefits. It is a balanced management approach that seeks to provide the greatest good for the greatest number of stakeholders. When implementing a multiple-use management plan it is essential to identify all participating and concerned parties. These individuals and organizations, in turn, provide their input into developing the plan. The plan's developers synthesize this information with available science and experience to find compromises. They then weigh the impacts of individual actions against the combined goals to determine which combination of management actions yields the greatest good.

To implement a multiple-use management plan for the Great Trinity Forest, meetings were conducted to identify potential stakeholders and their concerns regarding the forest. In addition to the public stakeholder meetings, individual organizations and agencies were also contacted to for input. These included the Dallas City Council, The Trinity River City Council Committee, Dallas Urban Forestry Advisory Committee, U.S. Army Corps of Engineers, and the City of Dallas Parks and Recreation Department. Once the input process was completed it was evident which issues were the most sensitive to the interested parties.

Key issues identified by participants:

- Wildlife habitat improvement
- Recreational development
- Preservation of natural areas
- Invasive plants
- Troublesome wildlife
- Impact of forest management
- Economic impact of management
- Flood conveyance
- Projected expenditures

From a management standpoint there were multiple potential users and uses of the Great Trinity Forest that had to be considered when the plan was developed. For instance, actions taken to improve wildlife habitat could be detrimental to recreational users and vice versa, access trails to conduct forest improvement operations could be converted to foot and bicycle paths, and spine trails could be routed down existing utility right of ways to minimize habitat fragmentation. This forest management plan has considered the input provided by the public and governing agencies. It is a document whose recommendations are based on multiple-use management.

COMMON QUESTIONS AND ANSWERS REGARDING THIS PLANNING DOCUMENT

1. How can a plan address every area of the forest and every situation that could arise?

    a. It cannot and has not. The plan is a guidance document and reference for the managers of the forest. It cannot feasibly address management on a tree by tree or acre by acre scale. Ultimately the individual on the ground must make the most appropriate decision. This is known as "Forester's Choice". The foresters or forest manager is trained in forestry and forest management and should use their own judgment to address issues such as which trees to remove, what to plant and where, and whether planting is feasible in a certain location or during a dry year.

2. How does the plan improve wildlife habitat?

    a. The plan increases habitat diversity by manipulating forest structure and composition in areas known as "management units" and by improving understory tree species in other areas.

3. How does the plan address the recreational needs of the City of Dallas.

    a. The plan proposes an option of converting a section of the Roosevelt Heights area into a campground. It also suggests the location of trails, trail heads, and gateway parks. Improving wildlife habitat and forest diversity will make the forest more appealing as a recreational opportunity.

4. Have invasive plants been considered?

    a. Yes, there is an entire section devoted to invasive plant management. Invasive plants will undoubtedly spread and become naturalized throughout the forest. The plan does include budgeting for invasive plant eradication on approximately 800 acres annually.

5. Will herbicides be used?

    a. Because of the large amount of vegetation management that is to take place annually, forest herbicides have been recommended to reduce operational costs. (See the forest herbicide section.)

6. Why isn't the entire forest receiving habitat improvement treatments?

    a. Some areas of the forest will remain "wilderness" or unmanaged. Other areas are more sensitive and were excluded from active management to preserve them as natural areas. The forester may determine that it is necessary to perform minor work in these areas to control invasive species, etc., but no major treatments were scheduled.

7. If some areas are to undergo overstory removal and planting, why do recreational trails pass through them?

a. The primary role of the trails is to provide access to the stands needing treatment. Instead of laying out the stand access trails and recreational trails independently, they were designed to serve as dual use trails to minimize the human presence within the forest.

8. The forest management stands are strange in shape, why is that?

    a. To determine which areas were suitable for planting, an analysis considering soils, elevation, and current vegetation was conducted. The theory was that planting success would increase on areas of higher elevation, soils that were coarser and better drained, and with vegetation that was less flood tolerant. The analysis ranked areas based on these three traits and the boundaries were broken into areas of roughly two acres. Because of the combination of factors that determined a location's ranking, the shape could be irregular.

9. How is the forester supposed to find the stands?

    a. The City of Dallas will receive a geodatabase containing the geographic data used to create the management plan. This data can be loaded into a Geographic Information System (GIS) to create additional maps, or onto a Global Positioning System (GPS) for use in the field. The stand locations are tentative and based on remotely sensed data; therefore, the forester will navigate to the approximate center of the stand. From there the forester will designate approximately two acres of plantable ground that is to receive treatment.

10. Some areas are called units and stands and some units are called "Management Units" and others "Mitigation Units", what is the difference?

    a. A stand is a group of trees with similar qualities. In the Great Trinity Forest a stand is an area that has had trees injected with herbicide and then has been planted. A group of stands that receive the same treatment in a given year is called a "Management Unit". Operations within the Corps of Engineers' mitigation land are tentative and depend largely on the success of the Corps' habitat improvement efforts. Therefore, it was decided to maintain mitigation lands as a separate entity, "Mitigation Units".

11. How will removing trees in the management units affect the wildlife?

    a. In order to minimize habitat disturbance, each management unit is only two acres and the trees will be left on site to decay naturally. Not only will this approach minimize soil disturbance but it will provide snags which are used by wildlife for foraging, nesting and perching.

12. How were the tree species that are going to be planted selected?

a. The tree species were selected based on their natural range, availability from commercial retailers, and the quality of wildlife habitat they provide.

13. Why are some wildlife species considered a nuisance and how will they be dealt with?

    a. Some species can severely damage a habitat or create conflicts with people or other wildlife species if their populations are not controlled. This management plan provides information on controlling common nuisance species but it is the forester's or wildlife specialist's job to identify nuisance species and to develop and implement a wildlife damage plan.

14. There is a section on Wildland Fire and other sections that mention prescribed fire. Does this plan recommend the use of prescribed fire?

    a. Not necessarily. The forest's location in relation to urban and residential areas does not lend itself to regular use of prescribed fire. Air quality and smoke management are the primary reasons for not recommending its use. Fire is a natural component of many ecosystems and it is necessary to describe the functions that fire performs in an ecosystem in order to present a reasonable management prescription. In the case of the Great Trinity Forest, it is felt that the functions performed historically by fire can sufficiently be substituted with mechanical and chemical management practives. The use of prescribed fire should not be completely ruled out as a management tool. If managed by experienced and qualified personnel who follow a predetermined and diligent fire management plan, it is possible to effectively and safely apply prescribed fire to the Great Trinity Forest.

PROJECT RISKS

Wilderness

- Fire

Should prescribed fire be applied to the forest, there would be some risk of a negative impact on air quality due to smoke. However, this is minor and can be minimized by using prescribe fire in Habitat Management Units when weather conditions will result in low production of smoke and rapid smoke dispersal. Water quality near burned areas may be affected by increased runoff but this will generally be mild. Any risks to the health of the public or forestry workers from smoke or herbicide residues in smoke are low and can be minimized by using prescribed fire in Habitat Management Units when weather conditions will result in the low production of smoke and rapid smoke dispersal

- Herbicide

There is very little risk of damage to these areas from herbicides except in areas adjacent to Habitat Management Units. Risks to these adjacent areas have only a minor risk of drift damage since the herbicides will be applied directly to the treated trees. Damage to soil and water also will be minor because any herbicide that comes in contact with soil is immobile and degrades quickly. Plants with root grafts to treated trees may be damaged but this will only occur in tree on the edge of the wilderness.

Habitat Management Units

- Herbicide
    - **Air**- By removing the mature overstory trees the air quality will be affected since these trees will no longer be removing gaseous air pollutants. Young and vigorous seedlings that will be planted will mitigate any negative impacts and may even increase the amount of air pollutants removed since the resulting forest will consist of young and healthy trees. There is no risk of drift or inhalation by the public since the mature trees will be removed by applying herbicides directly to the tree. Applying herbicides on hot days may cause volatilization.
    - **Soil**- Negative impacts from herbicides will be minor since the herbicide will be applied directly to the tree. However, some herbicide may be released from the roots of the treated trees into the soil. But any negative impacts from this process will be minor since most herbicides are rapidly degraded by natural processes such as microbial breakdown and there are many herbicides available which are immobile in the soil. Therefore, only the area immediately around the roots will be affected. By using this method instead of heavy equipment, there will be no disturbance to the soil which can lower site productivity or cause erosion.

- **Water**- The risk of herbicides contaminating water sources is minor since herbicides will not be used within 50 feet of streams, rivers or other bodies of water. The risk of herbicides entering any bodies of water by runoff or drift is minimal since herbicides will be applied directly to the tree. Most herbicides are not very mobile in the soil and the herbicides that will be employed degrade quickly in nature.
- **Wildlife**- Herbicides will have an insignificant impact on wildlife given that most have a low toxicity and are rapidly excreted from animal systems. Some structures ,such as cavities and roost sites, may be lost but these operations will create snags which are used by many species for cavities and/or perch sites.
- **Plants**- Injuries from herbicides will be minor but may occur due to root grafts between treated and untreated trees or from herbicide coming in contact with desirable trees by human error.
- **People**-The risk to the public will be insignificant since herbicides will only be applied directly to trees and will not be used within 50 feet of any bodies of water. There is a possibility that falling debris from the dead trees may cause harm but this can be minimized by closing the area to the public and by removing hazard trees near trails, roads and other public structures. Also, any personnel in the area should be aware of the danger from falling limbs and wear the appropriate safety equipment.

- Seedlings
  - Some areas may need to be replanted with seedlings more than once due to high predation, fire, improper planting, poor quality seedlings, high competition from other plant species, flooding, drought or other extreme weather conditions. Competition can be reduced by controlling competition with chemical or mechanical means. Predation can be controlled by trapping predators and making the area inaccessible to predators.
  - Though replanting is undesirable due to cost and labor, it is not detrimental to wildlife. In fact, openings in forests actually are beneficially to many wildlife species since these "areas provide a variety of food and cover types which may not occur on forested sites" (Establishing and Maintaining Wildlife Food Sources).
- Fire (Not recommended, but could potentially be used)
  - **Air**-Any smoke from a wild or prescribe fire in the area will affect air quality and reduce visibility. Therefore, prescribed fires should be used only when weather conditions will result in low smoke production and rapid smoke dispersal.
  - **Soil**-Periodic, low intense fires are beneficial for a forest by reducing the hazard of wild fires and releasing nutrients from the litter layer. However, using fire improperly or when the site and weather conditions are not optimum can damage the soil by exposing soil to erosion or changing the soil structure or chemistry or cause a fire to develop into a damaging wildfire. The risk of damage to the soil from fire can be minimized by using trained professionals and by using fire only when conditions are appropriate.
  - **Water**- Fire can increase runoff which can carry sediment and other materials into nearby bodies of water. This can be minimized by using properly planned and conducted burns.

- **Wildlife**-Effects on wildlife are generally minor but may consist of loss of snags and nesting sites. This can be minimized by not using fire during the nesting season. Fire can cause mortality but a fire can be planned so abundant escape routes are available. Fire can damage aquatic habitat by decreasing water quality or removing shade; however, the impact on aquatic habitat can be minimized by not using fire within 50 feet of any bodies of water.
- **Plants**- Removing trees using herbicide will result in an increase in dead material which could catch fire. However, these areas are relatively small and snags generally deteriorate quickly. Fire can also damage or kill desirable trees, but this can be minimized by using fire properly and only when conditions will result in a low intensity fire.
- **People**- Occasional exposure to low concentrations of smoke present a small risk to the health of the public. But high concentrations of smoke, especially to citizens with respiratory illnesses or healthcare facilities, are a concern. To minimize this risk, prescribed fire should be used only when weather conditions will result in the low production of smoke and will result in quick smoke dispersal. Any herbicides residues that may be present in smoke are minute and pose no risk to the public or forestry workers.

ETHICAL CONSTRAINTS

Best Management Practices (BMP) are voluntary in Texas. But to ensure water quality, future stand productivity and ethical forestry we have followed these guidelines in this management plan. To ensure that all forest practices in the Great Trinity Forest follow these guidelines, the complete BMP manual is included in this plan.

The Sustainable Forestry Initiative (SFI) is also voluntary. However, these guidelines were followed by not performing stand operations on areas larger than 120 acres and by separating adjacent management units by more than 3 years of age.

ENVIRONMENTAL IMPACTS

Air

There will be minor impacts on air quality from prescribed fire smoke but these effects will be minimized by only using prescribed fire when weather conditions allow for low production of smoke and quick smoke dispersal. Herbicides also have the potential to impact air quality from volatilization which can occur if it is applied during hot weather. However, by removing the older trees and planting young and healthy saplings the amount of gaseous air pollutants removed will increase.

Soil

Negative impacts to the soil will be minimized but compaction, erosion and rutting may occur if heavy equipment is used. Extensive soil disturbance can occur where roads and trails are constructed. Even low intensity prescribed fire may also cause erosion because of the exposure of bare mineral soil; and a high intensity wildfire can damage the soil by changing its structure or chemistry. Herbicides released by treated plants or spills can enter the soil but its effects on the soil will be minor since most herbicides are immobile in the soil and break down rapidly. Of course, all negative impacts to the soil will be minimized by following the Best Management Practices and only using prescribed fire when weather conditions are optimum.

Water

Water quality may be negatively affected by erosion caused by prescribed fire, heavy equipment or the installation of roads and trails. This will be minimized by using Streamside Management Zones around each body of water, by following Best Management Practices, and by planning and conducting prescribed burns properly.

Wildlife

Some habitat will be lost due to construction of roads and trails, prescribed fire and herbicides. However, prescribed fire and herbicides are necessary to create new habitat and improve the existing habitat. In fact, the openings in the forest which are created by these activities benefit many wildlife species by providing food and cover that do not occur in forested areas. Some individuals may be killed or injured from wildfires or prescribed fires but this will be minimized by leaving abundant escape routes and avoiding using fire during the nesting season.

Plants

Some trees will be removed in order to plant seedlings or to construct roads and trails. Trees may also be unintentionally damaged by prescribed fire or herbicides, but the number of trees affected will be insignificant. Some areas may need to be replanted with seedlings more than once due to factors such as extreme weather conditions.

PAST, PRESENT, AND FUTURE LAND USE

Introduction

Land use governs the evolution of a forest. This section is intended to address the affects that land use has and will have on the forest in regards to three major areas: Landscape and Vegetation, Wildlife, and Recreational opportunities.

Landscape and Vegetation

As was described in the history of the area, the Great Trinity Forest has been an area of much disturbance and uses over the past centuries. This is evident in the current shape of the landscape and the vegetation occurring on it. Historically the Dallas County area of the Trinity River Basin was an area dominated by an Elm, Ash, and Hackberry forest. This forest type is largely considered as the climax forest of the region. Studies have been conducted to document the historic vegetative composition of these types of forests in the area (Barry and Kroll, 1999). These studies further indicate that these sites were dominated by sugar hackberry (Texas sugarberry) *Celtis laevigata*, green ash *Fraxinus pennsylvanica*, eastern cottonwood *Populus deltoides*, bur oak *Quercus macrocarpa*, American elm *Ulmus americana*, cedar elm *Ulmus crassifolia*, and slippery elm *Ulmus rubra*. Understory trees included species of hawthorn *Crataegus spp*., box elder *Acer negundo*, Eve's necklace *Sophora affinis*, and Osage-orange (Bois d'arc) *Maclura pomifera*. This coincides with the current vegetation observed by Trinity River Corridor Project forester Bryan Kilburn and U.S. Army Corps of Engineers observers as occurring within the Great Trinity Forest. Other notable species occurring within the forest include eastern redcedar *Juniperus virginiana*, black walnut *Juglans nigra*, pecan *Carya illinoinensis*, post oak *Quercus stellata,* and Texas buckeye *Aesculus glabra var. arguta*.

In the past, the forest was an area heavily exploited for agriculture (See Past Land Use map), gravel deposits, and urban waste disposal. These activities left much of the forest area barren of trees. Subsequently it has re-seeded with early successional tree species such as ash and elm. Although these species comprised the climax forest type of the area, the most significant disruption past land use has had on the vegetation is the decline of less flood tolerant and heavy seeded species such as the oaks and pecans. Mining, urban development, and landfill activities have also changed the site's hydrology, soils, and topography. Flooding is more frequent and severe due to the construction of levees and increased storm runoff from parking lots and streets. Water is retained in depressions left from mining activities. Topsoil has been removed or relocated to allow for gravel mining. Areas affected by landfills have and will remain as open grassland. To coincide with development, invasive plants have entered the forest and will naturalize over time.

The implementation of the forest management plan will change the forest to a more primitive setting. Openings will be created within the forest to allow for the reestablishment of species that once occurred on the less frequently flooded sites. These openings will create a mosaic of forest structure across the landscape and restore diversity and abundance in both plant and wildlife species. Efforts will be made to slow the encroachment of invasive species and maintain sensitive areas as free from invasives. As the forest matures, the affects of active management will become increasingly difficult to discern from the

untouched forest. In the future one of the most detrimental factors to forest vegetation will be the increase in the frequency and intensity of flooding due to urban development. Initially it will become difficult to regenerate areas of the forest that were once out of the floodplain of more frequent flood events. Tree species composition in these areas will change to more flood tolerant species such as green ash. To mitigate this affect, preferred tree species will be established in these areas early in the planning horizon to ensure adequate recruitment.

Wildlife

Since this area has been intensively modified by humans, the remaining forest is dominated by only a few light-seeded tree species. While these species are native and beneficial to some wildlife species, they do not provide the basic needs for all the species that live in the forest. Therefore, this management plan will create openings in the forest where native, heavy seeded trees will be planted. By creating openings we will allow sunlight to reach the forest floor where grasses and forbs will flourish. These plants provide seed and browse for many species such as rabbits, white-tailed deer and various birds. Once the trees mature, they will provide abundant and high quality seeds as well as shelter. This mosaic of tree species and ages will provide the maximum habitat for the maximum number of wildlife species.

SITE DESCRIPTION

The Great Trinity Forest contains 5,200 acres which is located “within a highly developed metropolitan area” and has been extensively altered by activities such as gravel mining, development, row-crop agriculture and livestock grazing.

The site consists of bottomland hardwoods, wetlands, open water ponds and open grasslands. This extensive forest is divided into 4 sections which have been further divided into Habitat Management Units.

The site is located in the Blackland Prairie vegetative ecoregion which is dominated by grasses such as little bluestem (*Schizachyrium scoparium*) while tree species such as elm (*Ulmus sp.*) and pecan (*Carya illinoensis*) occur in the bottomland hardwoods found along streams and rivers. Presently, the major tree species consist of green ash (*Fraxinus pennsylvanica*), cottonwood (*Populus deltoids*), American elm (*U. americana*), cedar elm (*U. crassifolia*) and sugarberry (*Celtis laevigata*)

The area is dominated by the frequently flooded Trinity Clay which usually floods from February to May and has a very high shrink swell potential (soil survey and envir. Resources). “The topography is gently rolling to nearly level and elevations are approximately 400 feet above sea level.” Average rainfall per year (over 30 years) is 33.7 inches while the average temperature is 65.8˚F (with temperatures ranging from -1˚F to 115˚F).

Some species of threatened and endangered species which are known to migrate through Dallas County, Texas are the whooping crane (*Grus americana*), piping plover (*Charadrius melodus*), interior least tern (*Sterna antillarum*) and black-capped vireo (*Vireo atricapillus*). Two of these species, the interior least tern and black-capped vireo, have even been documented nesting in Dallas County. Three other species that may occur in the area, but have recently been taken off the threatened and endangered list, are the American peregrine falcon (*Falco peregrines anatum*), Arctic peregrine falcon (*Falco peregrines tundrius*) and the bald eagle (*Haliaeetus leucocephalus*).

STATISTICS

Table 1. Great Trinity Forest area summary.

	Acres
Total Project Footprint (Includes Mitigation Land)	**7,558**
Mitigation Land	**1,043**
Forested (Includes Mitigation Land)	4,678
Wilderness	3,443
Forest Improvement Stands	1,235
Non-forested (Includes Mitigation Land)	2,880
Grassland	1,410
Landfill	373
Constructed Wetland	167
Surface Water	565
Other	365

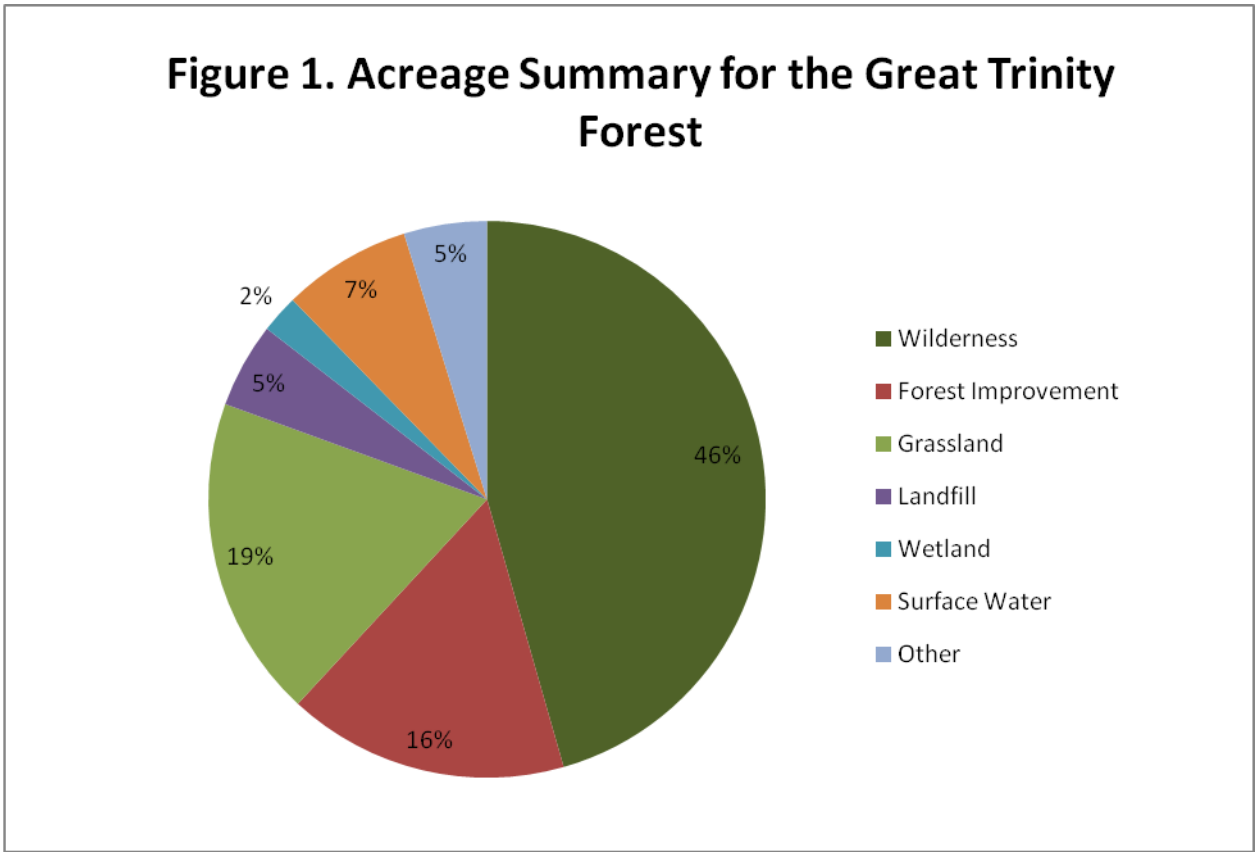


Figure 1. Acreage Summary for the Great Trinity Forest
46%
16%
19%
5%
2%
7%
5%
Wilderness
Forest Improvement
Grassland
Landfill
Wetland
Surface Water
Other

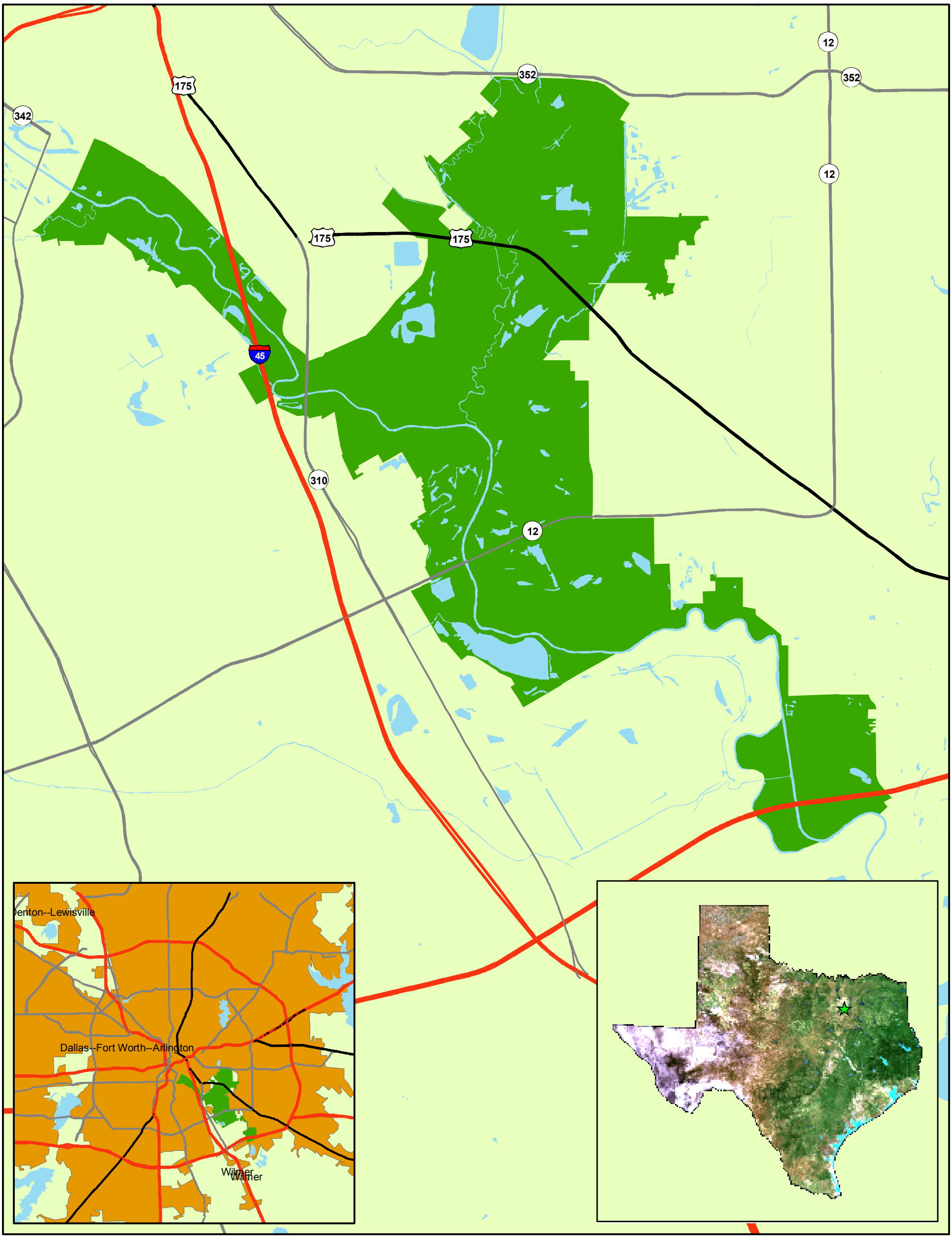
Table 2. Linear features of the Great Trinity Forest

Feature		Length in Miles
Streams and Rivers		22.5
Established Trail		3.0
	Sante Fe Trestle Trail	1.2
	Buckeye Trail	1.8
Proposed Trail		41.0
	Total Spine	28.4
	Spine Trail Original	20.8
	Recommended Additional	7.6
	Bike Trail	12.6
Total Spine Trail		28.4
Total Minor and Bike Trails		15.6
Total of Trails		**44.0**

Table 3. Detailed forest management statistics for the Great Trinity Forest.

	Forest Management Units	Mitigation Management Units
Units	27	9
Stands	400	15
Acres	1,000.0	235.3

Great Trinity Forest - Location



Forest Boundary
Water Bodies

Roads

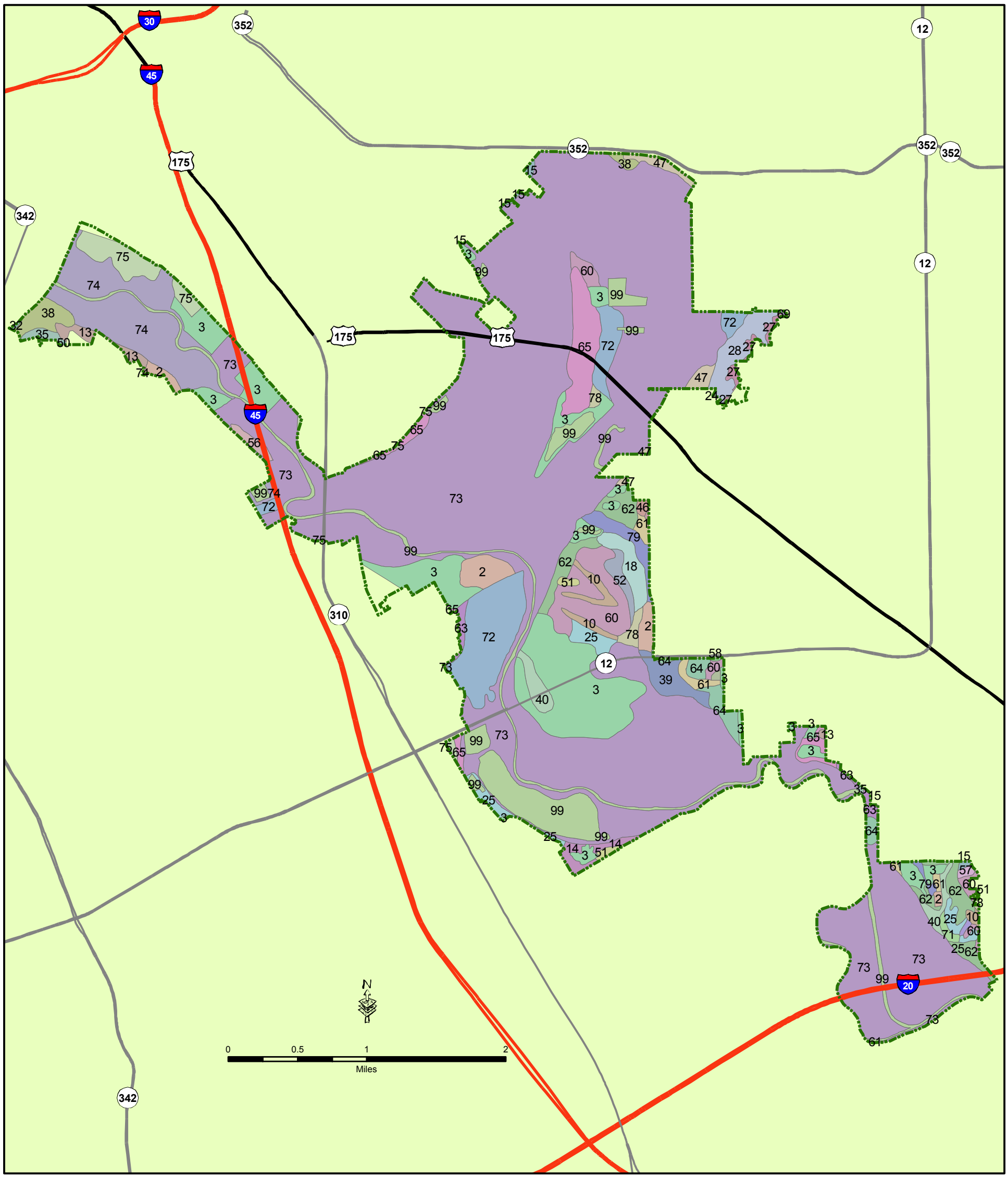
US
Interstate
State

N

0 0.5 1 2

Miles

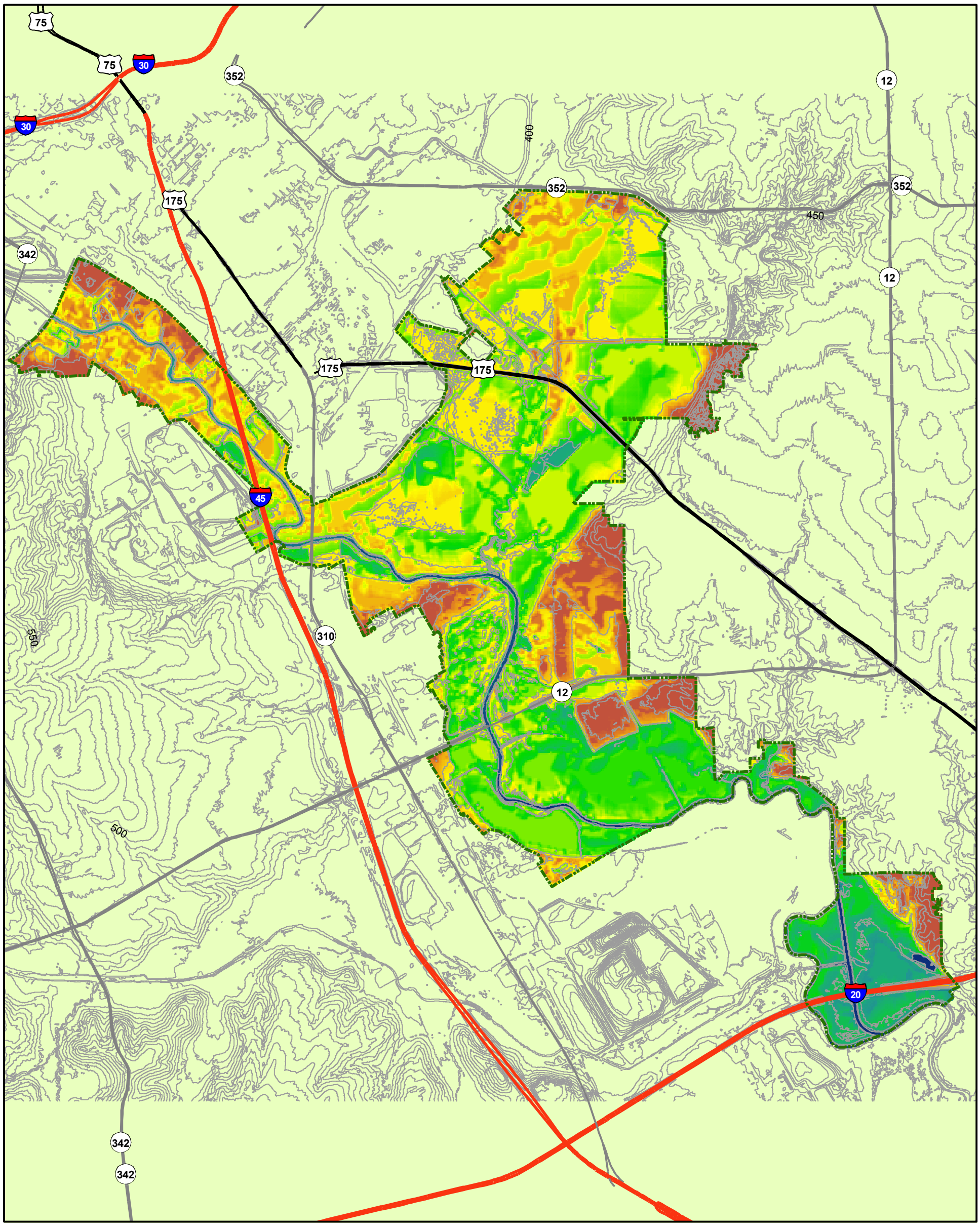
Great Trinity Forest - Soils



Soil Types

- 2, Arents, loamy, gently undulating
- 3, Arents, loamy, hilly
- 10, Axtell fine sandy loam, 0 to 1 percent slopes
- 11, Axtell fine sandy loam, 1 to 3 percent slopes
- 13, Axtell-Urban land complex, 1 to 5 percent slopes
- 14, Bastsil fine sandy loam, 0 to 3 percent slopes
- 15, Bastsil-Urban land complex, 0 to 2 percent slopes
- 18, Burleson clay, 0 to 1 percent slopes
- 24, Dalco-Urban land complex, 0 to 3 percent slopes
- 25, Dutek loamy fine sand, 1 to 5 percent slopes
- 27, Eddy clay loam, 3 to 8 percent slopes
- 28, Eddy-Brackett complex, 8 to 20 percent slopes
- 32, Eddy-Urban land complex, 4 to 8 percent slopes
- 35, Ferris-Urban land complex, 5 to 12 percent slopes
- 38, Frio-Urban Land Complex, --
- 39, Gowen loam, occasionally flooded
- 40, Gowen loam, frequently flooded
- 41, Heiden clay, 1 to 3 percent slopes
- 46, Lewisville silty clay, 1 to 3 percent slopes
- 47, Lewisville silty clay, 3 to 5 percent slopes
- 50, Lewisville-Urban land complex, 4 to 8 percent slopes
- 51, Mabank fine sandy loam, 0 to 1 percent slopes
- 52, Mabank fine sandy loam, 1 to 3 percent slopes
- 56, Pits and Dumps, --
- 57, Rader-Mabank complex, 0 to 2 percent slopes
- 58, Rader-Urban land complex, 0 to 2 percent slopes
- 60, Silwa fine sandy loam, 1 to 3 percent slopes
- 61, Silwa fine sandy loam, 3 to 8 percent slopes
- 62, Silwa fine sandy loam, 2 to 8 percent slopes, eroded
- 63, Silwa-Urban land complex, 2 to 6 percent slopes
- 64, Silstid loamy fine sand, 0 to 3 percent slopes
- 65, Silstid-Uraban land complex, 0 to 6 percent slopes
- 69, Stephen-Urban land complex, 1 to 4 percent slopes
- 71, Sunev clay loam, 1 to 3 percent slopes
- 72, Trinity clay, occasionally flooded
- 73, Trinity clay, frequently flooded
- 74, Trinity-Urban land complex, --
- 75, Urban land, --
- 78, Wilson clay loam, 0 to 1 percent slopes
- 79, Wilson clay loam, 1 to 3 percent slopes
- 99, Water, --

Great Trinity Forest - Topography



Forest Boundary

10-ft Contours

Elevation (ft)

High : 489.114

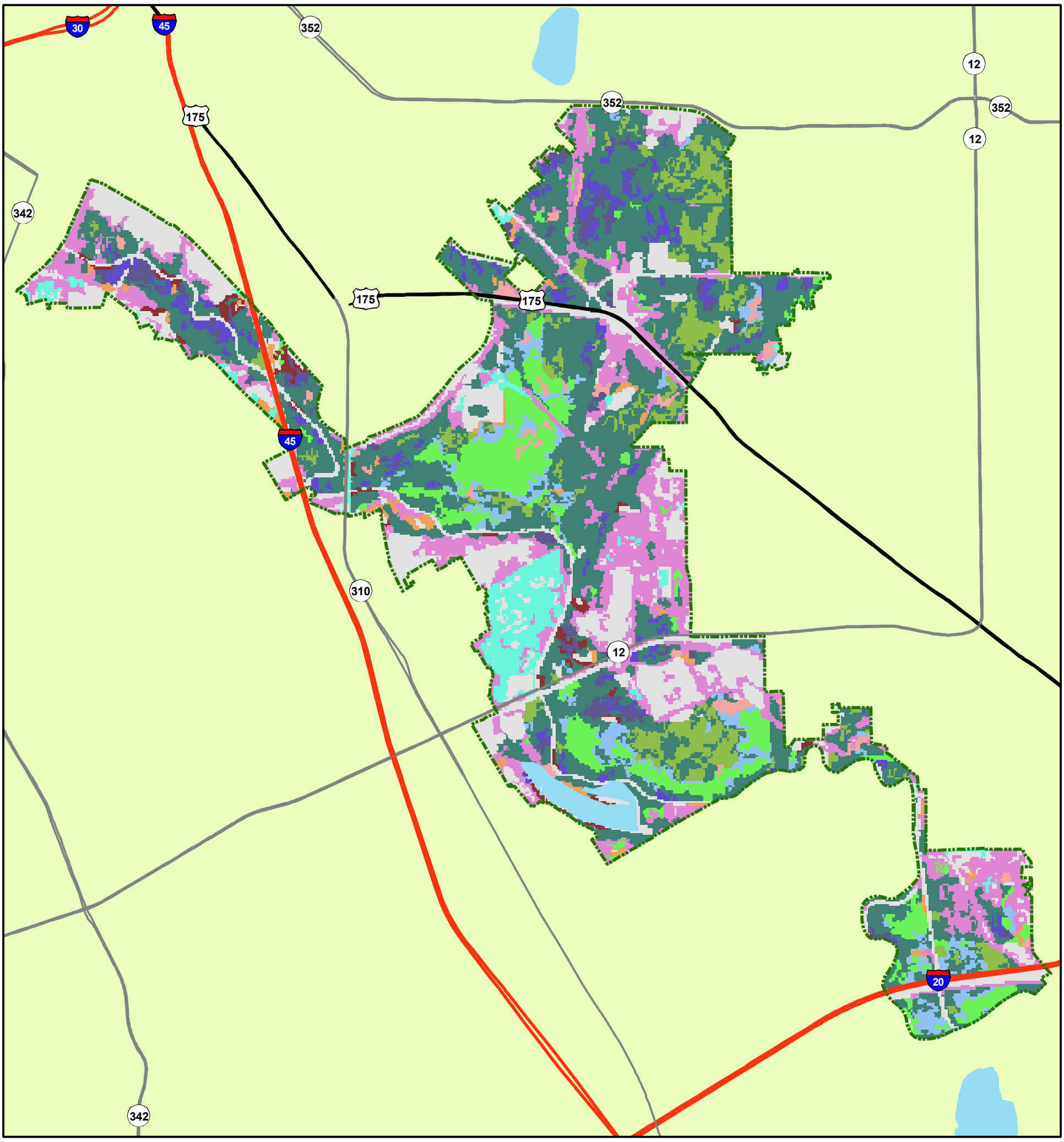
Low : 358

N

0 0.5 1 2

Miles

Great Trinity Forest - Vegetation



Vegetation Types

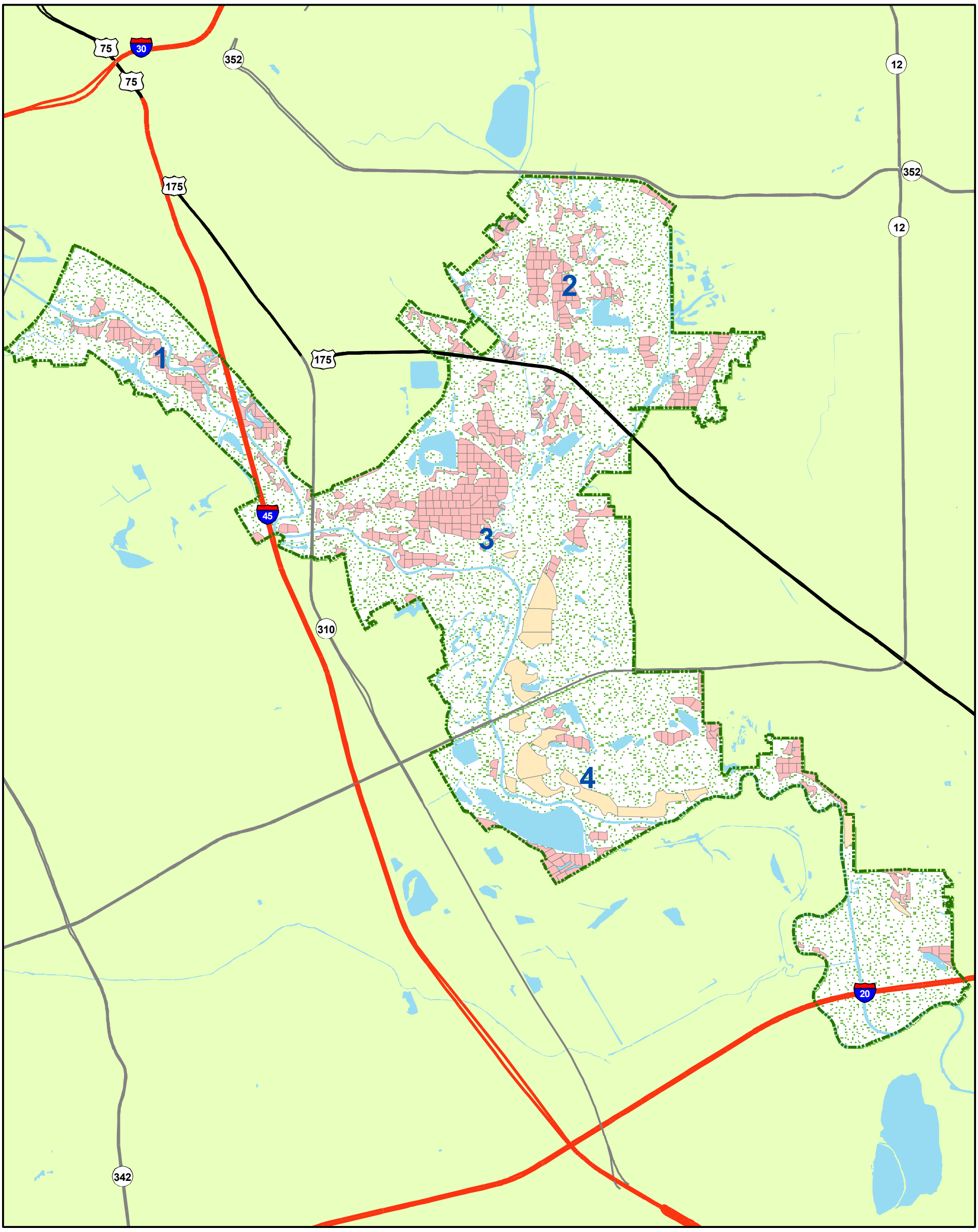
- Non-vegetated
- Ash
- Bottomland Mix: Ash, Cottonwood
- Bottomland Mix: Ash, Cottonwood, Pecan
- Bottomland Mix: Ash, Elm
- Bottomland Mix: Ash, Elm, Hackberry
- Giant Ragweed, Mixed Weeds
- Improved Grass
- Mixed Ash
- Mixed Cottonwood
- Mixed Elm
- Transition Mix: Eastern Red Cedar, Ash, Elm

N

0 0.5 1 2

Miles

Great Trinity Forest - Restoration



Forest Boundary

Roads

Interstate

US

State

Units

Management

Mitigation

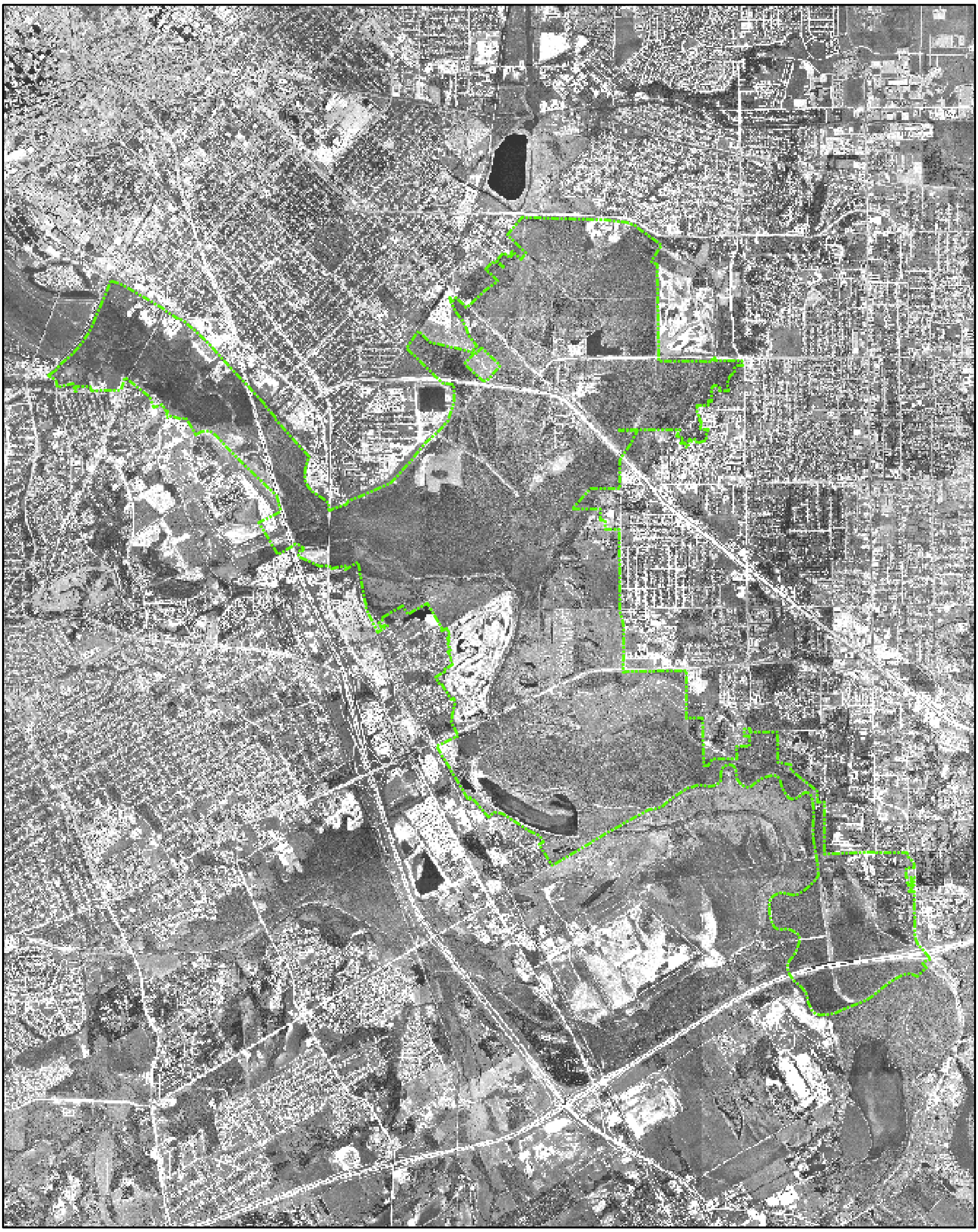
Management Sectors

N

0 0.5 1 2

Miles

Great Trinity Forest - Land Use 1994



Forest Boundary

N

0 0.5 1 2

Miles

Great Trinity Forest - Land Use 2007

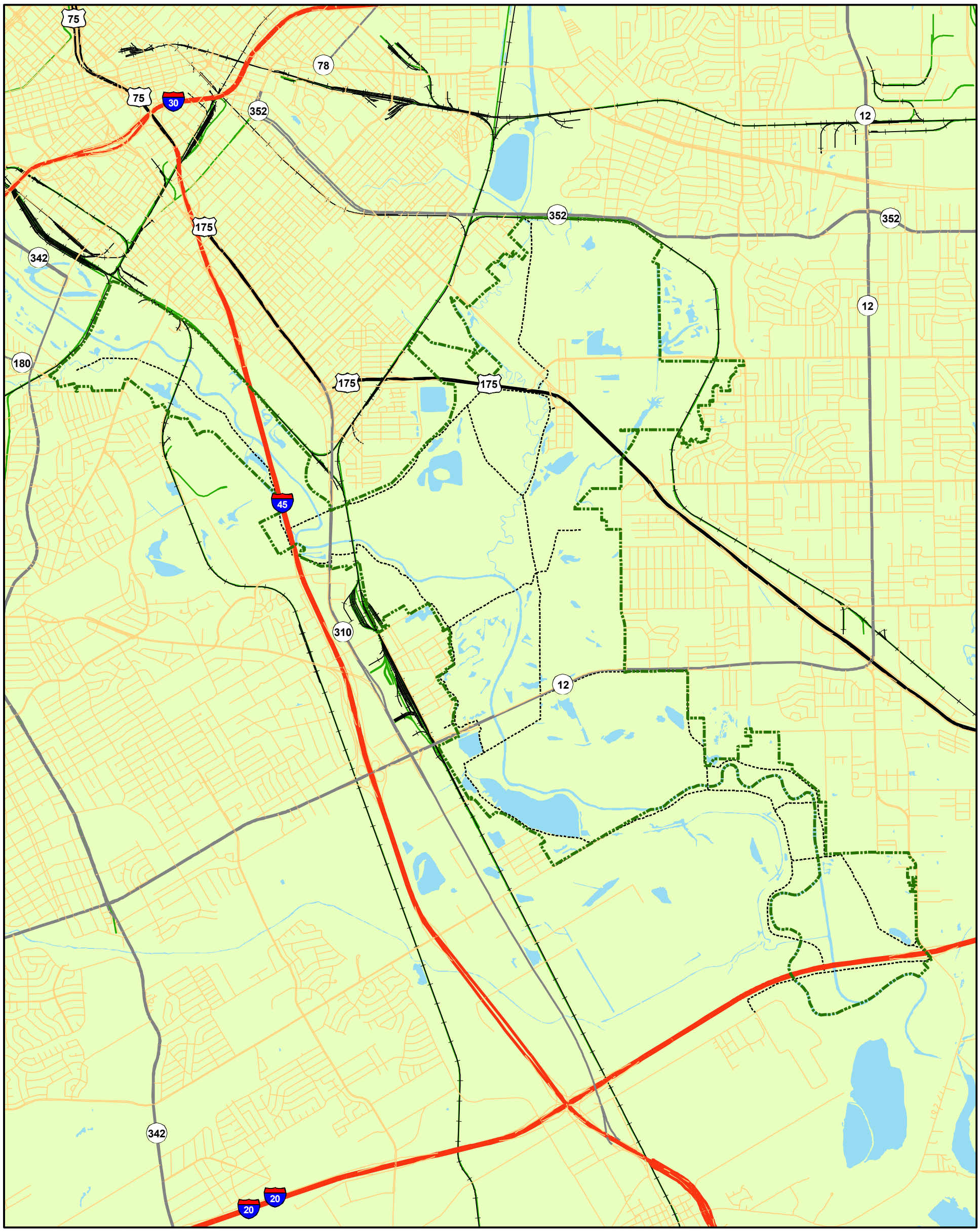
Forest Boundary

N

0 0.5 1 2

Miles

Great Trinity Forest - Transportation



Forest Boundary
Railroad
Spine Trail (proposed)

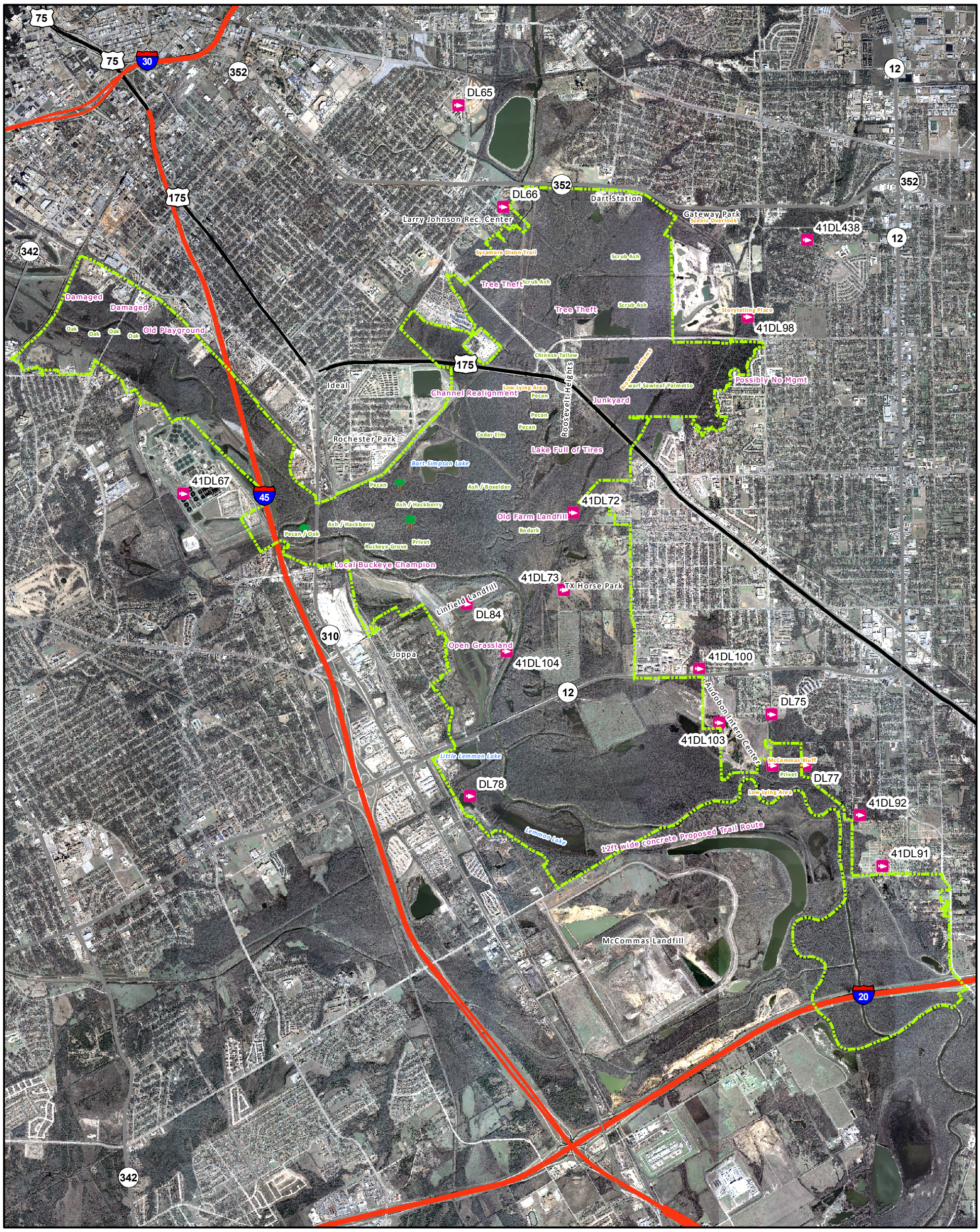
Roads

Others
Interstate
US
State

N

0 0.5 1 2
Miles

Great Trinity Forest - Special Features



Roads

- Interstate
- US
- State

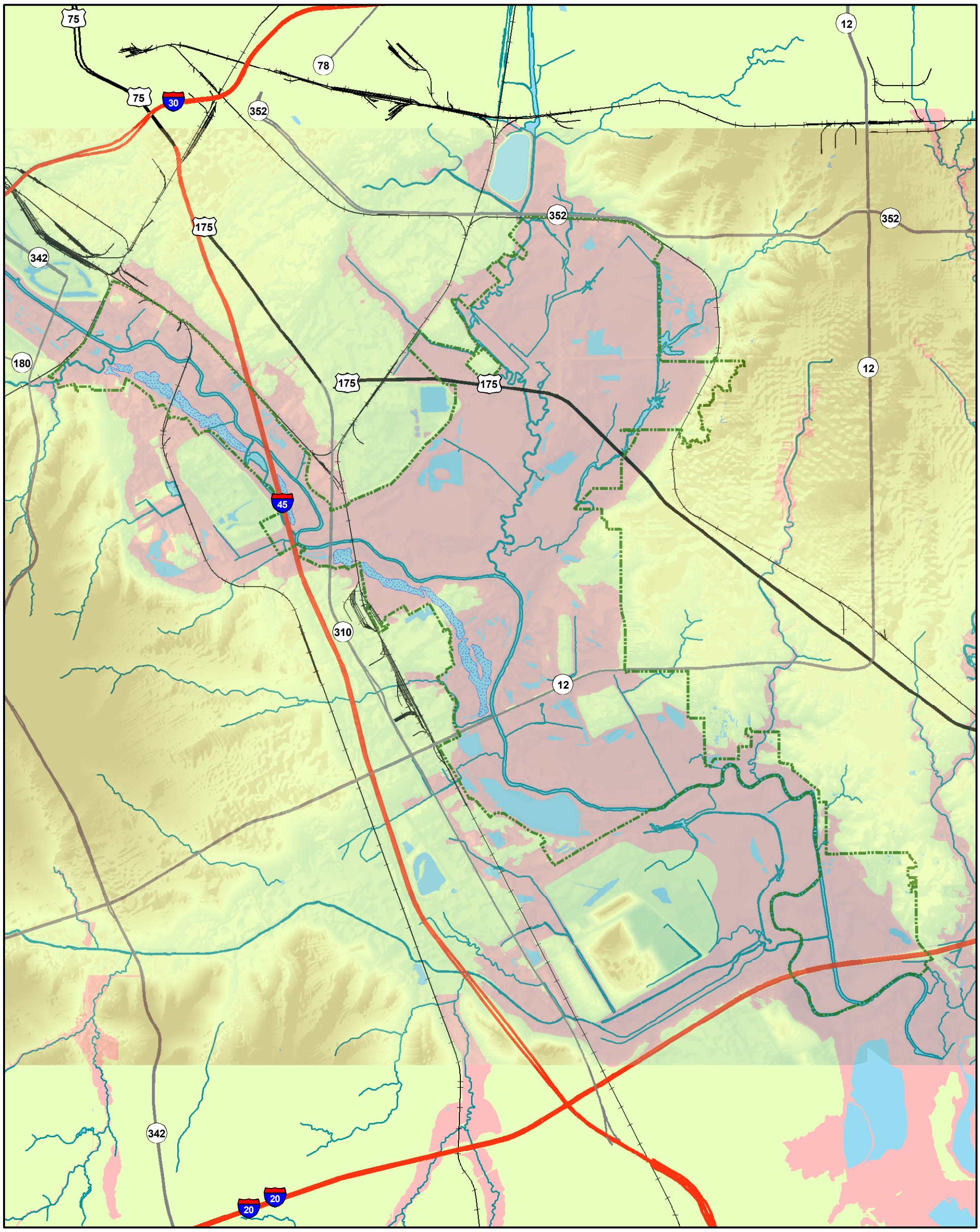
- Forest Boundary
- Archeological Sites
- Wolfpack Trees

N

0 0.5 1 2

Miles

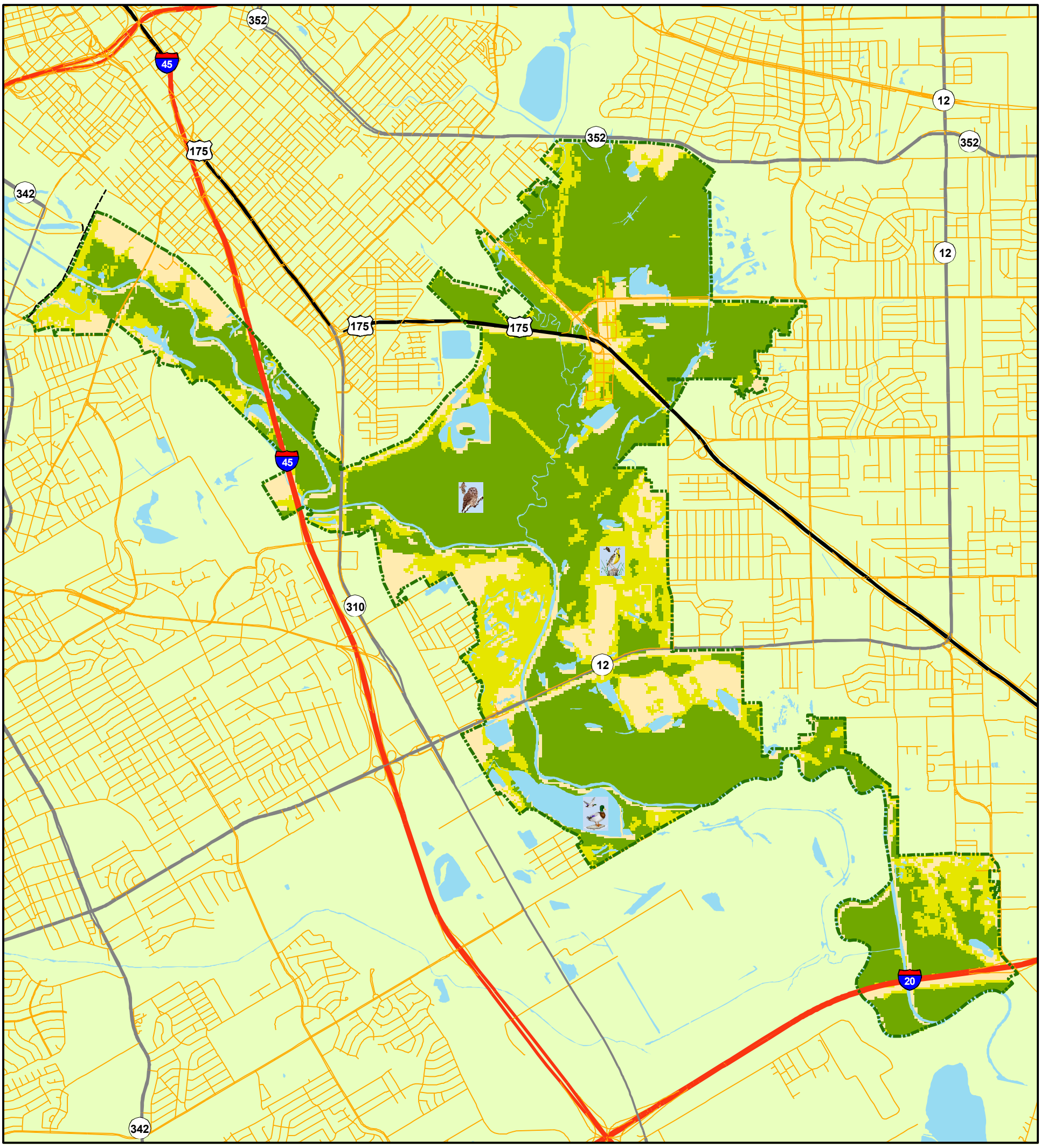
Great Trinity Forest - Hydrology



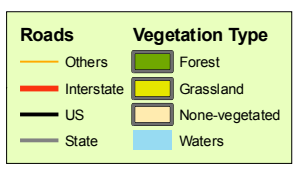
Forest Boundary
Roads
Interstate
US
State
Railroad
Streams
Water Bodies
Wetlands
100 Yr Flood Plain
Elevation (ft)
High : 620
Low : 358

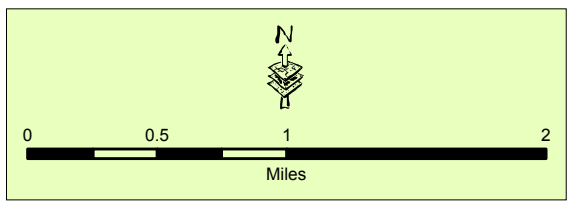
N
0 0.5 1 2
Miles

Great Trinity Forest - Wildlife

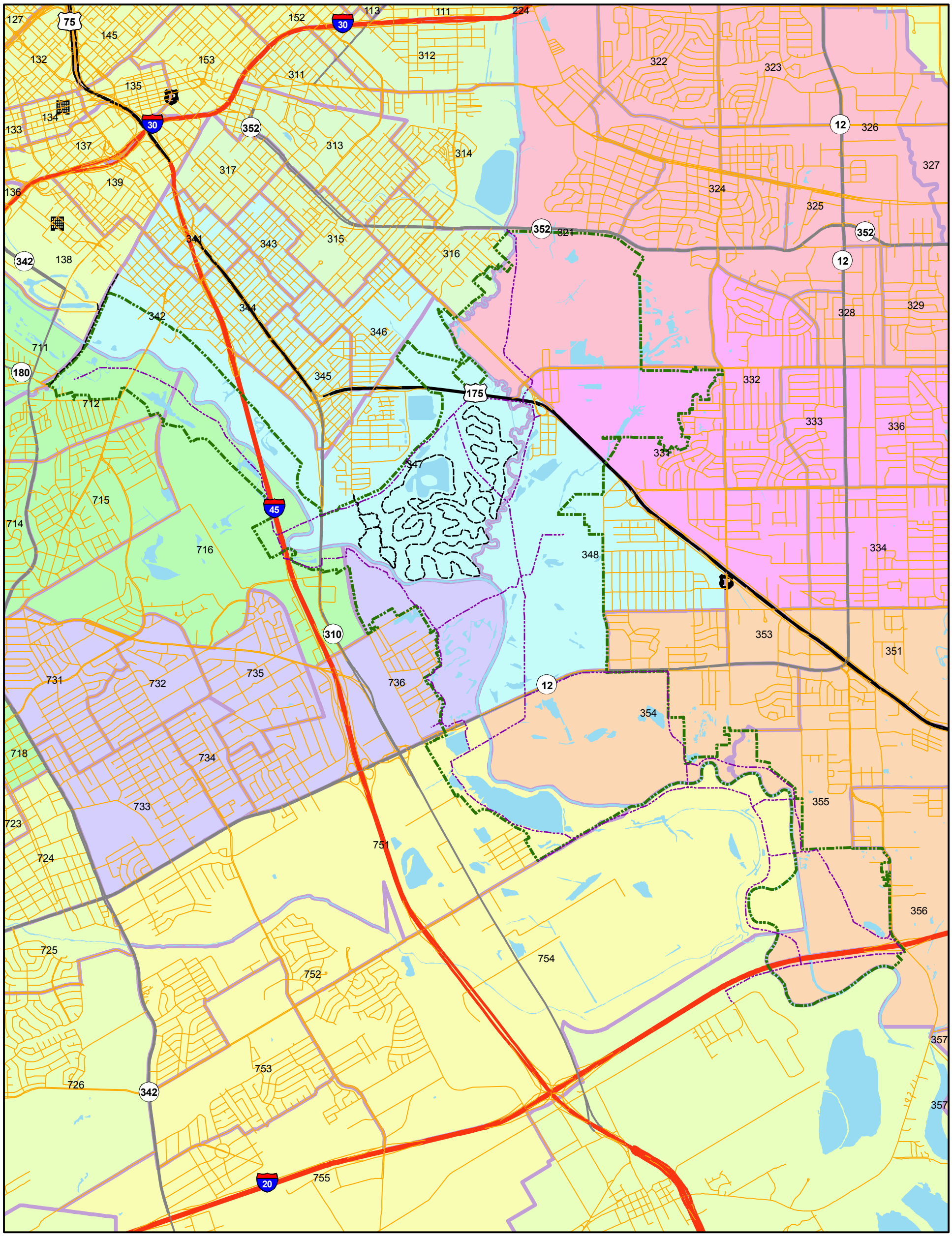


Forest	Grassland	Wetland/River/Lake
Barred owl	American kestrel	American beaver
Big brown bat	Bobolink	American white pelican
Carolina wren	Deer mouse	American wigeon
Common gray fox	Dickcissel	Belted kingfisher
Eastern flying squirrel	Eastern cottontail	Cattle egret
Eastern gray squirrel	Eastern meadowlark	Common muskrat
Eastern phoebe	Grasshopper sparrow	Forester's tern
Eastern red bat	Hispid cotton rat	Gadwall
Eastern wood-pewee	Hispid pocket mouse	Great blue heron
Ground skink	Horned lark	Great egret
Hairy woodpecker	Lark bunting	Green-winged teal
Hermit thrush	Lark sparrow	Least sandpiper
Hoary bat	Le conte's sparrow	Lesser scaup
Northern flicker	Northern harrier	Little blue heron
Northern green anole	Prairie kingsnake	Mallard
Red-eyed vireo	Prairie vole	Northern pintail
Southern short tailed shrew	Red-tailed hawk	Northern shoveler
Summer tanager	Savannah sparrow	Nutria
Texas brown snake	Scissor-tailed flycatcher	Pied-billed grebe
Tufted titmouse	Sedge wren	River otter
Virginia opossum	Short-eared owl	Spotted sandpiper
White-footed mouse	Sprague's pipit	Texas river cooter
White-tailed deer	Thirteen-lined ground squirrel	Western cottonmouth
Yellow-bellied sapsucker	Upland sandpiper	Western lesser siren
Yellow-billed cuckoo	Vesper sparrow	White ibis
Yellow-rumped warbler	Western slender glass lizard	Yellow-crowned night heron





Great Trinity Forest - Emergency - Police



Police

- Headquarters
- Station
- ATV Accessible
- All Vehicles Accessible

Roads

- Others
- Interstate
- US
- State
- BEATS

SECTORS

310	350		
320	710		
330	730		
340	750		

N

0 0.5 1 2

Miles

Great Trinity Forest - Emergency - Fire

Hydrant
Fire Station
ATV Accessible
All Vehicles Accessible

Roads
Others
Interstate
US
State

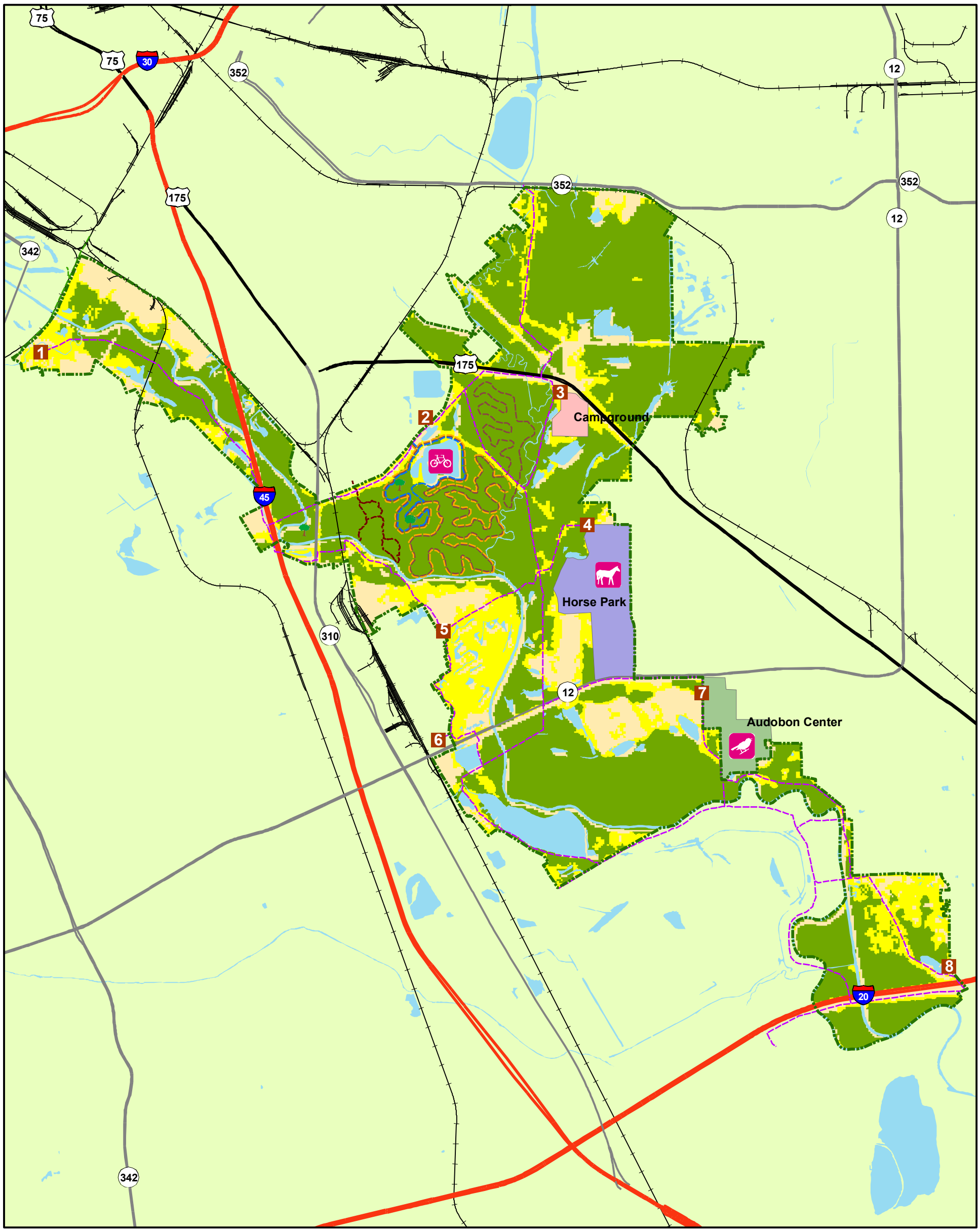
Zoning
Commercial
Residential

Vegetation Type
Forest
Grassland
None-vegetated

N

0 0.5 1 2
Miles

Great Trinity Forest - Recreation



- Wolfpack Trees
- Proposed Trail Heads
- Buckeye Trails (1.8 miles)
- Santafe Trestle Trails (1.2 miles)
- Spine Trails (Proposed, 28.4 miles)

Biking Trails

- Loop 1 (Proposed, 3.0 miles)
- Loop 2 (Proposed, 8.2 miles)
- Loop 3 (Proposed, 12.3 miles)

- Audobon Center
- Horse Park
- Campground (Proposed)

Vegetation Type

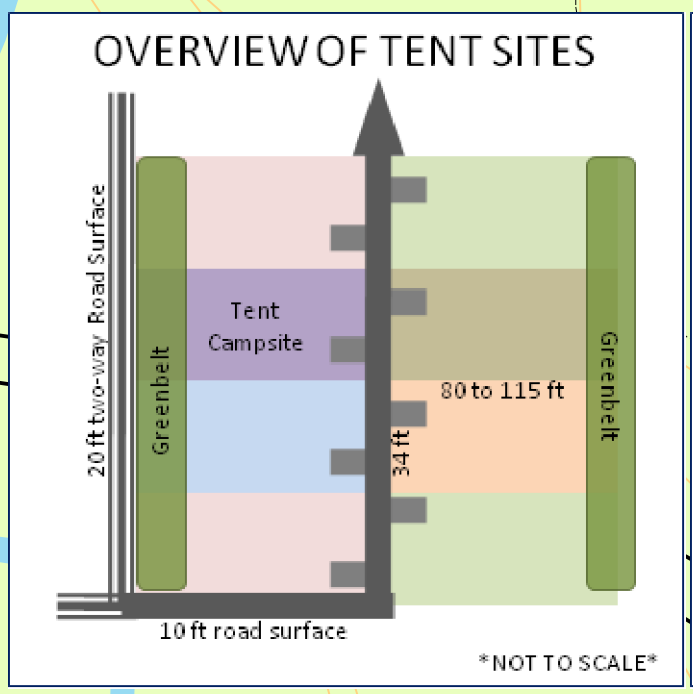
- Forest
- Grassland
- None
- Forest Boundary

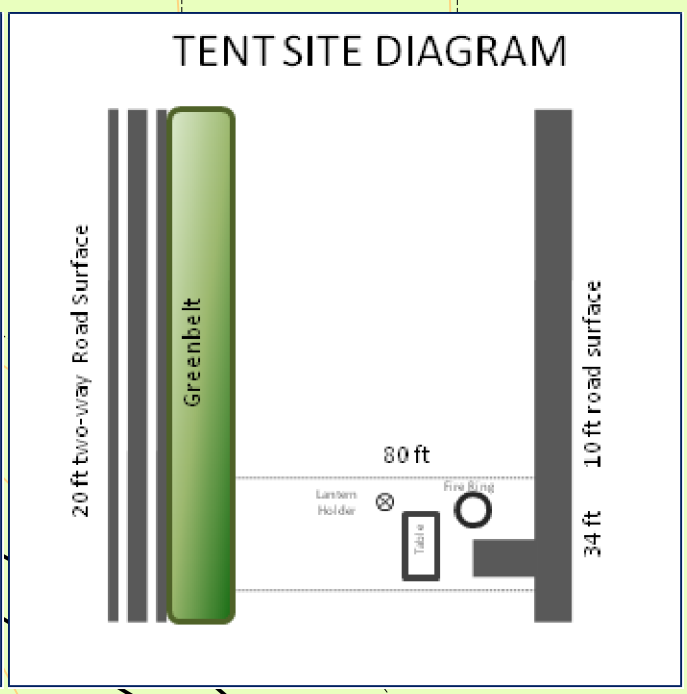
N

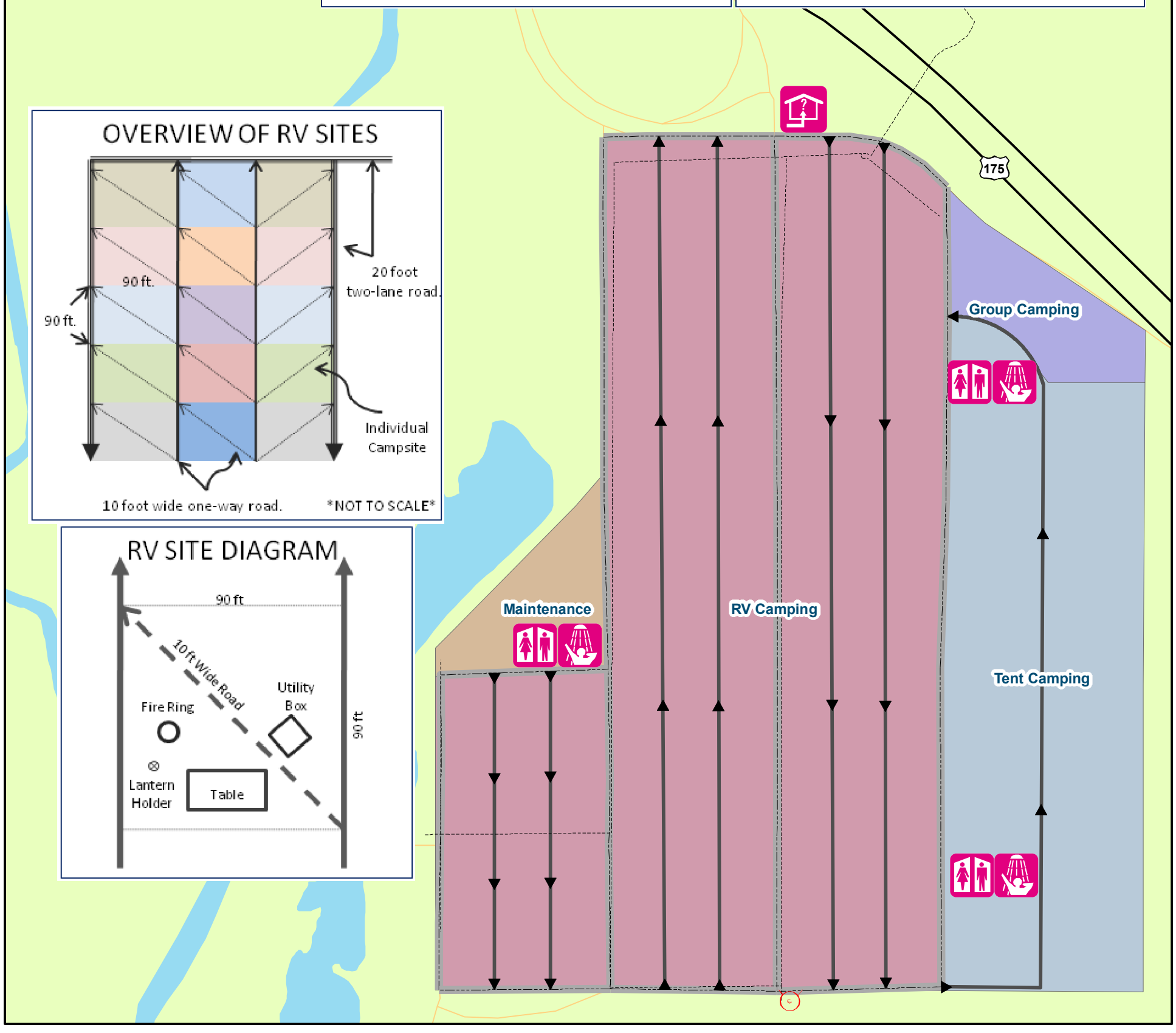
0 0.5 1 2

Miles

Great Trinity Forest - Roosevelt Heights Campground







Campground Traffic

- one-way
- two-way
- Hydrant
- Existing Water Lines

Campground Use

- Group Camping
- Maintenance
- RV Camping
- Tent Camping

N

0 50 100 200 300 400 500

Feet

Current Vegetation Descriptions

Descriptions of the 11 major vegetation classes found within the Great Trinity Forest.

Description of the Vegetation Classification

In 2001 a vegetation classification of the forest was conducted using satellite imagery. Non-vegetated areas such as water were removed from the image initially and then a computer analysis of the image fit the remaining cells into 27 classes. These classes were then analyzed to determine their vegetation composition based on 100 field observation points. A forest inventory was then conducted based on this classification. As new field data was acquired, the classes were altered to better reflect the true vegetative cover. In 2004 the final vegetation map of 12 land-cover classes was complete after an analysis that considered more than 600 samples taken in the field over a period of approximately 3 years. The field data was provided to the planning team already summarized to a per acre basis. The data were already separated by individual polygons for each vegetation class. The stand data presented are the means of this inventory data when grouped at different levels (by sector, class, etc.). The following descriptions are presented for each class at the forest level. There is an extra class called "unclassified" that accounts for non-vegetated areas and it is not discussed.

Mixed Elm

Size: 634 acres

Composition:

71% Mixed Elm
29% Mixed Ash

Associated Species:

Mixed Elm associates are sugarberry, green ash, pecan, and eastern redcedar and others to a lesser extent such as osage-orange.

Forest Distribution:

This class is distributed primarily in three major regions of the forest. The largest area is located southeast of Bart Simpson Lake, the second area is east of Little Lemon Lake on the east bank of the Trinity River in the central Corps of Engineers mitigation unit, and the third in the far south end of the forest.

Ecological Distribution:

This class is distributed primarily in three major regions of the forest. The largest area is located southeast of Bart Simpson Lake, the second area is east of Little Lemon Lake on the east bank of the Trinity River in the central Corps of Engineers mitigation unit, and the third in the far south end of the forest.

Forest-wide Class Structure:

Acres	Trees / Acre	Basal Area / Acre	Average DBH	Average Total Height
649	160.9	65.81	6	24

Wildlife:

Elm: *Ulmus* spp. are attacked by more than 125 insect species which provides ample food for insect eating wildlife species. The twigs and leaves are browsed by deer and rabbits but deer will also strip bark off of saplings or pole-sized trees, especially on slippery elm (*U. rubra*). Fire may damage the tree which will allow heart rot fungi to enter and create cavities. Squirrels eat the flowers, flower buds and fruit while the seeds are eaten by a wide variety of birds and small mammals. Slippery elm, American elm (*U. Americana*) and winged elm (*U. alata*) fruit ripens during in spring; however, cedar elm (*U.*

crassifolia) fruit ripens from September to October and this species can have a second flowering and fruiting in October and November. (Burns and Barbara 1990)

Ash: Young trees provide browse for deer and rabbit species while the seeds are eaten by a variety of animal and bird species. These seeds are usually produced annually by trees that are 8 to 10 cm (3 to 4 inches) in d.b.h. and 20 to 25 ft tall. The seeds ripen late September or early October and are dropped into the winter. These species also produce food in the form of insects such as carpenterworm *(Prionoxystus robiniae,)* brownheaded ash sawfly *(Tomostethus multicinctus),* and the ash borer *(Podosesia syringae).* (Burns and Barbara 1990)

Management Considerations:

Based on the inventory data from the City of Dallas, areas of this vegetative type would be candidates for wildlife habitat improvement. Any areas that have pecan present should be noted and managed for pecan regeneration. Eastern redcedar should also be promoted as small groups of trees, but not allowing it to choke any heavy mast producers, or become dominant in large areas. This would provide a patchwork of both food and cover for wildlife.

Bottom Mix: Ash, Elm, Sugarberry

Size: 215 acres

Composition:

33% Pure Ash
33% Mixed Elm
33% Mixed Sugarberry

Associated Species:

In order of dominance: Ash, Elm, and sugarberry.

Forest Distribution:

This is a widely scattered vegetation class. It typically occurs in small areas of about 1/3 acre.

Ecological Distribution:

This class is associated with the edges of non-forested areas and areas recovering from disturbance.

Forest-wide Class Structure:

Acres	Trees / Acre	Basal Area / Acre	Average DBH	Average Total Height
215	97.7	46.65	4	28

Wildlife:

Ash: Young trees provide browse for deer and rabbit species while the seeds are eaten by a variety of animal and bird species. These seeds are usually produced annually by trees that are 8 to 10 cm (3 to 4 inches) in d.b.h. and 20 to 25 ft tall. The seeds ripen late September or early October and are dropped into the winter. These species also produce food in the form of insects such as carpenterworm *(Prionoxystus robiniae,)* brownheaded ash sawfly *(Tomostethus multicinctus),* and the ash borer *(Podosesia syringae).* (Burns and Barbara 1990)

Elm: *Ulmus* spp. are attacked by more than 125 insect species which provides ample food for insect eating wildlife species. The twigs and leaves are browsed by deer and rabbits but deer will also strip bark off of saplings or pole-sized trees, especially on slippery elm (*U. rubra*). Fire may damage the tree which will allow heart rot fungi to enter and create cavities. Squirrels eat the flowers, flower buds and fruit while the seeds are eaten by a wide variety of birds and small mammals. Slippery elm, American

elm (*U. Americana*) and winged elm (*U. alata*) fruit ripens during in spring; however, cedar elm (*U. crassifolia*) fruit ripens from September to October and this species can have a second flowering and fruiting in October and November. (Burns and Barbara 1990)

Sugarberry: This species produces spherical drupes which are eaten by numerous wildlife species. The fruit is produced on trees that are at least 15 years old but the optimum seed-bearing age is 30 to 70 years old. The fruit ripens in September and October and good seed crops occur in most years. This species can also be easily damaged by fire and ice, which allows rot-causing fungi to enter and create cavities. These cavities can then be used by a wide variety of wildlife species as den or roosting sites. (Burns and Barbara 1990)

Management Considerations:

Due to the size and distribution of this type it will probably not receive a specific management recommendation. Its overall abundance across the forest will likely remain unchanged due to its early successional nature.

Bottom Mix: Ash, Cottonwood, Pecan

Size: 173 acres

Composition:

33% Mixed Ash
33% Mixed Cottonwood
33% Mixed Pecan

Associated Species:

In order of dominance: Ash, Cottonwood, and Pecan.

Forest Distribution:

This is a widely scattered vegetation class. It typically occurs in small areas of about 1/3 acre.

Ecological Distribution:

This class is associated with waterways in the forest, primarily along the edge of the Trinity River. In this area it likely occurs on the natural levee at the river's edge. Although this area is frequently flooded the duration of inundation is much less than surrounding areas allowing the less flood tolerant species to survive.

Forest-wide Class Structure:

Acres	Trees / Acre	Basal Area / Acre	Average DBH	Average Total Height
173	165	98.66	6	33

Wildlife:

Ash: Young trees provide browse for deer and rabbit species while the seeds are eaten by a variety of animal and bird species. These seeds are usually produced annually by trees that are 8 to 10 cm (3 to 4 inches) in d.b.h. and 20 to 25 ft tall. The seeds ripen late September or early October and are dropped into the winter. These species also produce food in the form of insects such as carpenterworm *(Prionoxystus robiniae,)* brownheaded ash sawfly *(Tomostethus multicinctus),* and the ash borer *(Podosesia syringae).* (Burns and Barbara 1990)

Cottonwood: Young seedlings and saplings of this tree species is browsed by rabbits, deer and domestic stock while beavers will use sapling and pole-size trees for dam construction. Many species of insects, such as the cottonwood leaf beetle (*Chrysomela scripta),* also attack this species which provides food for insect eating wildlife species. (Burns and Barbara 1990)

Pecan: Saplings and lower branches of older trees are used as browse by white-tailed deer while many other species use pecans for cover. A wide variety of insects attack the leaves, nuts, twigs, wood and roots of this species, which provides food for insect eating wildlife species. Pecan nuts are eaten by many wildlife species such as squirrels, opossums, raccoons and a variety of birds. Pecans may start producing nuts as early as 2 years old but it may take up to 20 years in natural stands. The nuts ripen in September and October and good crops occur every 1 to 3 years and. (Burns and Barbara 1990, Moore and Hurteau 2006)

Management Considerations:

This vegetation type indicates areas of higher and better drained soils that would be well suited to wildlife habitat improvement planting. A selective removal of undesirable species could be adequate enough to facilitate natural regeneration and forego planting.

Transition Mix: Eastern redcedar, Ash, & Elm

Size: 166 acres

Composition:

25% Mixed Ash
25% Mixed Elm
50% Eastern redcedar

Associated Species:

In order of dominance: Eastern redcedar, Ash, and Elm.

Forest Distribution:

This is a widely scattered vegetation class. It typically occurs in small areas of about 1/3 acre, although there is one area of approximately 10 acres in the mid southeast portion of the forest.

Ecological Distribution:

This class is associated with transitional areas to drier uplands.

Forest-wide Class Structure:

Acres	Trees / Acre	Basal Area / Acre	Average DBH	Average Total Height
166	197	56.75	5	23

Wildlife:

Ash: Young trees provide browse for deer and rabbit species while the seeds are eaten by a variety of animal and bird species. These seeds are usually produced annually by trees that are 8 to 10 cm (3 to 4 inches) in d.b.h. and 20 to 25 ft tall. The seeds ripen late September or early October and are dropped into the winter. These species also produce food in the form of insects such as carpenterworm *(Prionoxystus robiniae,)* brownheaded ash sawfly *(Tomostethus multicinctus),* and the ash borer *(Podosesia syringae).* (Burns and Barbara 1990)

Elm: *Ulmus* spp. are attacked by more than 125 insect species which provides ample food for insect eating wildlife species. The twigs and leaves are browsed by deer and rabbits but deer will also strip

bark off of saplings or pole-sized trees, especially on slippery elm (*U. rubra*). Fire may damage the tree which will allow heart rot fungi to enter and create cavities. Squirrels eat the flowers, flower buds and fruit while the seeds are eaten by a wide variety of birds and small mammals. Slippery elm, American elm (*U. Americana*) and winged elm (*U. alata*) fruit ripens during in spring; however, cedar elm (*U. crassifolia*) fruit ripens from September to October and this species can have a second flowering and fruiting in October and November. (Burns and Barbara 1990)

Eastern redcedar: This is an evergreen species that provides year round cover, roosting and nesting sites for many species, such as chipping sparrow, robin, mockingbird and junco. The twigs and foliage of this species are also used as browse by white tailed deer. Even more important is the fleshy berry-like fruit which are a vital food source for many wildlife species. These cones are produced every 2 to 3 years once the tree is 10 years old and ripen from September to October. (Steven et al 2005)

Management Considerations:

This vegetation class is valuable for identifying suitable habitat management areas. The presence of redcedar indicates soil and hydrological conditions suitable to heavy mast producers such as pecan. Management efforts will be likely be centered on these areas.

Bottom Mix: Ash, Elm

Size: 365 acres

Composition:

4% Pure Ash
4% Swamp Privet
2% Mixed Cottonwood
8% Mixed Hackberry
44% Mixed Ash
38% Mixed Elm

Associated Species:

In order of dominance: Ash, Elm and the presence of cottonwood, sugarberry, and swamp privet.

Forest Distribution:

This class consists of many scattered areas averaging ½ acre in size. The largest areas are located southeast of Bart Simpson Lake and east of Little Lemon Lake on the east bank of the Trinity River in the area of the central Corps of Engineers mitigation unit.

Ecological Distribution:

This class is associated with the transition areas between the Mixed Ash and Mixed Elm classes.

Forest-wide Class Structure:

Acres	Trees / Acre	Basal Area / Acre	Average DBH	Average Total Height
365	232.2	92.31	7	24

Wildlife:

Ash: Young trees provide browse for deer and rabbit species while the seeds are eaten by a variety of animal and bird species. These seeds are usually produced annually by trees that are 8 to 10 cm (3 to 4 inches) in d.b.h. and 20 to 25 ft tall. The seeds ripen late September or early October and are dropped into the winter. These species also produce food in the form of insects such as carpenterworm *(Prionoxystus robiniae,)* brownheaded ash sawfly *(Tomostethus multicinctus),* and the ash borer *(Podosesia syringae).* (Burns and Barbara 1990)

Swamp privet: This species grows in wet areas such as bottomland forest and produces 8 to 12 mm long drupes during the summer which are eaten by a variety of wildlife species. (Connor 2003)

Cottonwood: Young seedlings and saplings of this tree species is browsed by rabbits, deer and domestic stock while beavers will use sapling and pole-size trees for dam construction. Many species of insects, such as the cottonwood leaf beetle (*Chrysomela scripta),* also attack this species which provides food for insect eating wildlife species. (Burns and Barbara 1990)

Sugarberry: This species produces spherical drupes which are eaten by numerous wildlife species. The fruit is produced on trees that are at least 15 years old but the optimum seed-bearing age is 30 to 70 years old. The fruit ripens in September and October and good seed crops occur in most years. This species can also be easily damaged by fire and ice, which allows rot-causing fungi to enter and create cavities. These cavities can then be used by a wide variety of wildlife species as den or roosting sites. (Burns and Barbara 1990)

Elm: *Ulmus* spp. are attacked by more than 125 insect species which provides ample food for insect eating wildlife species. The twigs and leaves are browsed by deer and rabbits but deer will also strip bark off of saplings or pole-sized trees, especially on slippery elm (*U. rubra*). Fire may damage the tree which will allow heart rot fungi to enter and create cavities. Squirrels eat the flowers, flower buds and fruit while the seeds are eaten by a wide variety of birds and small mammals. Slippery elm, American elm (*U. Americana*) and winged elm (*U. alata*) fruit ripens during in spring; however, cedar elm (*U. crassifolia*) fruit ripens from September to October and this species can have a second flowering and fruiting in October and November. (Burns and Barbara 1990)

Management Considerations:

This class will affected by the management of its larger associate, Mixed Elm. The Mixed Elm class likely occurs at a higher relative elevation than the Bottom Mix: Ash, Elm and therefore the risk to wildlife habitat improvement operations would be greater in the Bottom Mix: Ash, Elm areas due to an increased likelihood of inundation.

Mixed Ash

Size: 2,043 acres

Composition:

1% Swamp Privet
1% Mixed Willow
3% Mixed Hackberry
3% Mixed Pecan
4% Eastern redcedar
6% Mixed Elm
9% Pure Ash
9% Mixed Cottonwood
60% Mixed Ash

Associated Species:

Green ash dominates with the presence of the above listed species.

Forest Distribution:

This is the most dominant vegetation type in the forest and it can be found abundantly in all sectors.

Ecological Distribution:

Mixed ash is found in the wetter areas of the forest where small topographic uplifts allow other species to survive.

Forest-wide Class Structure:

Acres	Trees / Acre	Basal Area / Acre	Average DBH	Average Total Height
2,043	241.4	82.73	6	24

Wildlife:

Swamp privet: This species grows in wet areas such as bottomland forest and produces 8 to 12 mm long drupes during the summer which are eaten by a variety of wildlife species. (Connor 2003)

Willow: This species provides cover for many bird and animal species and it is a source of sap for the yellow-bellied sapsucker. Many insects, such as the forest tent caterpillar *(Malacosoma disstria),* the cottonwood leaf beetle *(Chrysomela scripta)* and the willow-branch borer *(Oberea ferruginea),* attack this species and serve as food for insect eating wildlife species. Fire can easily damage the truck and

allow wood rotting fungi to enter, which will create cavities for wildlife species. (Burns and Barbara 1990)

Sugarberry: This species produces spherical drupes which are eaten by numerous wildlife species. The fruit is produced on trees that are at least 15 years old but the optimum seed-bearing age is 30 to 70 years old. The fruit ripens in September and October and good seed crops occur in most years. This species can also be easily damaged by fire and ice, which allows rot-causing fungi to enter and create cavities. These cavities can then be used by a wide variety of wildlife species as den or roosting sites. (Burns and Barbara 1990)

Pecan: Saplings and lower branches of older trees are used as browse by white-tailed deer while many other species use pecans for cover. A wide variety of insects attack the leaves, nuts, twigs, wood and roots of this species, which provides food for insect eating wildlife species. Pecan nuts are eaten by many wildlife species such as squirrels, opossums, raccoons and a variety of birds. Pecans may start producing nuts as early as 2 years old but it may take up to 20 years in natural stands. The nuts ripen in September and October and good crops occur every 1 to 3 years and. (Burns and Barbara 1990, Moore and Hurteau 2006)

Eastern redcedar: This is an evergreen species that provides year round cover, roosting and nesting sites for many species, such as chipping sparrow, robin, mockingbird and junco. The twigs and foliage of this species are also used as browse by white tailed deer. Even more important is the fleshy berry-like fruit which are a vital food source for many wildlife species. These cones are produced every 2 to 3 years once the tree is 10 years old and ripen from September to October. (Steven et al 2005)

Elm: *Ulmus* spp. are attacked by more than 125 insect species which provides ample food for insect eating wildlife species. The twigs and leaves are browsed by deer and rabbits but deer will also strip bark off of saplings or pole-sized trees, especially on slippery elm (*U. rubra*). Fire may damage the tree which will allow heart rot fungi to enter and create cavities. Squirrels eat the flowers, flower buds and fruit while the seeds are eaten by a wide variety of birds and small mammals. Slippery elm, American elm (*U. Americana*) and winged elm (*U. alata*) fruit ripens during in spring; however, cedar elm (*U. crassifolia*) fruit ripens from September to October and this species can have a second flowering and fruiting in October and November. (Burns and Barbara 1990)

Cottonwood: Young seedlings and saplings of this tree species is browsed by rabbits, deer and domestic stock while beavers will use sapling and pole-size trees for dam construction. Many species of insects, such as the cottonwood leaf beetle (*Chrysomela scripta),* also attack this species which provides food for insect eating wildlife species. (Burns and Barbara 1990)

Ash: Young trees provide browse for deer and rabbit species while the seeds are eaten by a variety of animal and bird species. These seeds are usually produced annually by trees that are 8 to 10 cm (3 to 4 inches) in d.b.h. and 20 to 25 ft tall. The seeds ripen late September or early October and are dropped into the winter. These species also produce food in the form of insects such as carpenterworm *(Prionoxystus robiniae,)* brownheaded ash sawfly *(Tomostethus multicinctus),* and the ash borer *(Podosesia syringae).* (Burns and Barbara 1990)

Management Considerations:

Management in these areas will be very limited beyond the control of invasive species. Areas that do not remain inundated most of the year could foster heavy mast producers over time but they will not be directly targeted for planting. Some herbicide improvement work could be conducted to improve species diversity in these areas.

Bottom Mix: Ash, Cottonwood

Size: 318 acres

Composition:

3% Mixed Willow
3% Eastern Redcedar
10% Mixed Pecan
32% Mixed Cottonwood
45% Mixed Ash

Associated Species:

In order of dominance: Ash, cottonwood, pecan, willow, eastern redcedar

Forest Distribution:

Bottom Mix: Ash, Cottonwood is one of the most dominant of the Bottom Mix types. It is more common in Sector 1 and 2.

Ecological Distribution:

This class occurs in the transitional area from Mixed Ash to Mixed Cottonwood. The soils and hydrology of these areas allow cottonwood to maintain its foothold against the green ash. If no management is applied to these areas it will likely become Mixed Ash.

Forest-wide Class Structure:

Acres	Trees / Acre	Basal Area / Acre	Average DBH	Average Total Height
318	245.5	104.01	7	27

Wildlife:

Willow: This species provides cover for many bird and animal species and it is a source of sap for the yellow-bellied sapsucker. Many insects, such as the forest tent caterpillar *(Malacosoma disstria),* the cottonwood leaf beetle *(Chrysomela scripta)* and the willow-branch borer *(Oberea ferruginea),* attack this species and serve as food for insect eating wildlife species. Fire can easily damage the truck and allow wood rotting fungi to enter, which will create cavities for wildlife species. (Burns and Barbara 1990)

Eastern redcedar: This is an evergreen species that provides year round cover, roosting and nesting sites for many species, such as chipping sparrow, robin, mockingbird and junco. The twigs and foliage of this

species are also used as browse by white tailed deer. Even more important is the fleshy berry-like fruit which are a vital food source for many wildlife species. These cones are produced every 2 to 3 years once the tree is 10 years old and ripen from September to October. (Steven et al 2005)

Pecan: Saplings and lower branches of older trees are used as browse by white-tailed deer while many other species use pecans for cover. A wide variety of insects attack the leaves, nuts, twigs, wood and roots of this species, which provides food for insect eating wildlife species. Pecan nuts are eaten by many wildlife species such as squirrels, opossums, raccoons and a variety of birds. Pecans may start producing nuts as early as 2 years old but it may take up to 20 years in natural stands. The nuts ripen in September and October and good crops occur every 1 to 3 years and. (Burns and Barbara 1990, Moore and Hurteau 2006)

Cottonwood: Young seedlings and saplings of this tree species is browsed by rabbits, deer and domestic stock while beavers will use sapling and pole-size trees for dam construction. Many species of insects, such as the cottonwood leaf beetle (*Chrysomela scripta),* also attack this species which provides food for insect eating wildlife species. (Burns and Barbara 1990)

Ash: Young trees provide browse for deer and rabbit species while the seeds are eaten by a variety of animal and bird species. These seeds are usually produced annually by trees that are 8 to 10 cm (3 to 4 inches) in d.b.h. and 20 to 25 ft tall. The seeds ripen late September or early October and are dropped into the winter. These species also produce food in the form of insects such as carpenterworm *(Prionoxystus robiniae,)* brownheaded ash sawfly *(Tomostethus multicinctus),* and the ash borer *(Podosesia syringae).* (Burns and Barbara 1990)

Management Considerations:

When planting in this vegetation type the hydrology should be taken into consideration. Only higher areas that will not hold water for long periods should be planted. Injected herbicides should be used to create a diverse mix of species.

Mixed Cottonwood

Size: 244 acres

Composition:

20% Mixed Willow
20% Mixed Ash
60% Mixed Cottonwood

Associated Species:

In order of dominance: Cottonwood, black willow, green ash

Forest Distribution:

Located primarily in Sector 1 and 2.

Ecological Distribution:

Mixed Cottonwood dominates coarse well drained soils near water and not prone to long periods of inundation. It is commonly found on the edge of the river and areas with abundant light.

Forest-wide Class Structure:

Acres	Trees / Acre	Basal Area / Acre	Average DBH	Average Total Height
244	238.3	85.8	6	25

Wildlife:

Willow: This species provides cover for many bird and animal species and it is a source of sap for the yellow-bellied sapsucker. Many insects, such as the forest tent caterpillar *(Malacosoma disstria),* the cottonwood leaf beetle *(Chrysomela scripta)* and the willow-branch borer *(Oberea ferruginea),* attack this species and serve as food for insect eating wildlife species. Fire can easily damage the truck and allow wood rotting fungi to enter, which will create cavities for wildlife species. (Burns and Barbara 1990)

Ash: Young trees provide browse for deer and rabbit species while the seeds are eaten by a variety of animal and bird species. These seeds are usually produced annually by trees that are 8 to 10 cm (3 to 4 inches) in d.b.h. and 20 to 25 ft tall. The seeds ripen late September or early October and are dropped into the winter. These species also produce food in the form of insects such as carpenterworm *(Prionoxystus robiniae,)* brownheaded ash sawfly *(Tomostethus multicinctus),* and the ash borer *(Podosesia syringae).* (Burns and Barbara 1990)

Cottonwood: Young seedlings and saplings of this tree species is browsed by rabbits, deer and domestic stock while beavers will use sapling and pole-size trees for dam construction. Many species of insects, such as the cottonwood leaf beetle (*Chrysomela scripta),* also attack this species which provides food for insect eating wildlife species. (Burns and Barbara 1990)

Management Considerations:

These areas would be good candidates for habitat improvement work. Any oaks or pecan in these areas should be favored, but the force and frequent occurrence of floodwaters could damage regeneration.

Ash

Size: 516 acres

Composition:

2% Mixed Willow
4% Mixed Cottonwood
12% Mixed Elm
21% Pure Ash
60% Mixed Ash

Associated Species:

In order of dominance: Green ash, mixed elm, cottonwood, black willow

Forest Distribution:

This class is common in Sector 2 and the central USACE mitigation unit.

Ecological Distribution:

Ash is located in the wet areas of the forest especially where water backs up and remains for long periods of time.

Forest-wide Class Structure:

Acres	Trees / Acre	Basal Area / Acre	Average DBH	Average Total Height
516	278.3	101.25	6	23

Wildlife:

Willow: This species provides cover for many bird and animal species and it is a source of sap for the yellow-bellied sapsucker. Many insects, such as the forest tent caterpillar *(Malacosoma disstria),* the cottonwood leaf beetle *(Chrysomela scripta)* and the willow-branch borer *(Oberea ferruginea),* attack this species and serve as food for insect eating wildlife species. Fire can easily damage the truck and allow wood rotting fungi to enter, which will create cavities for wildlife species. (Burns and Barbara 1990)

Cottonwood: Young seedlings and saplings of this tree species is browsed by rabbits, deer and domestic stock while beavers will use sapling and pole-size trees for dam construction. Many species of insects, such as the cottonwood leaf beetle (*Chrysomela scripta),* also attack this species which provides food for insect eating wildlife species. (Burns and Barbara 1990)

Elm: *Ulmus* spp. are attacked by more than 125 insect species which provides ample food for insect eating wildlife species. The twigs and leaves are browsed by deer and rabbits but deer will also strip bark off of saplings or pole-sized trees, especially on slippery elm (*U. rubra*). Fire may damage the tree which will allow heart rot fungi to enter and create cavities. Squirrels eat the flowers, flower buds and fruit while the seeds are eaten by a wide variety of birds and small mammals. Slippery elm, American elm (*U. Americana*) and winged elm (*U. alata*) fruit ripens during in spring; however, cedar elm (*U. crassifolia*) fruit ripens from September to October and this species can have a second flowering and fruiting in October and November. (Burns and Barbara 1990)

Ash: Young trees provide browse for deer and rabbit species while the seeds are eaten by a variety of animal and bird species. These seeds are usually produced annually by trees that are 8 to 10 cm (3 to 4 inches) in d.b.h. and 20 to 25 ft tall. The seeds ripen late September or early October and are dropped into the winter. These species also produce food in the form of insects such as carpenterworm *(Prionoxystus robiniae,)* brownheaded ash sawfly *(Tomostethus multicinctus),* and the ash borer *(Podosesia syringae).* (Burns and Barbara 1990)

Management Considerations:

Areas of pure ash have limited potential for response from management. Any planting in these areas will likely have very poor survival, so management will be limited to invasive plant control. Injected herbicides should be used to improve species diversity.

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GREAT TRINITY FOREST

Dallas Area Historical Overview

(From Appendix H of the Dallas Floodway Extension, General Reevaluation Report)

PREHISTORIC CHRONOLOGICAL FRAMEWORK

Although the chronological framework for the Upper Trinity River Basin is not well developed, the available data allow the delineation of a generalized chronology (Table 1). Investigations at Joe Pool Lake (Peter and McGregor 1988) have provided evidence for a refinement of the chronology for the Late Prehistoric period, but the overall regional applicability of the phases recognized at Joe Pool Lake remains to be demonstrated. Prikryl (1990) has presented a chronological sequence of six periods. Unfortunately, his sequence relies almost entirely on diagnostic artifacts from surface contexts and comparisons to dated contexts distant from the Upper Trinity River Basin. The generalized chronology presented here reflects the present state of knowledge as interpreted from the Joe Pool Lake investigations. A brief summary of the adaptations associated with these periods is presented below.

Table 1. Chronological Framework for the Upper Trinity River Basin (after Peter and McGregor 1988).

CULTURAL STAGE	TIME PERIOD
Paleo-Indian	ca, 11,000 - 6,000 B.C.
Archaic	6,000 B.C. - A.D. 700
Late Prehistoric	A.D. 700 - A.D. 1600
Protohistoric	A.D. 1600 – A.D. 1800

The Paleo-Indian occupation of the Upper Trinity River Basin is known primarily through diagnostic projectile points from surface collections or from stratigraphically mixed contexts. The Field Ranch site (X41 C01 0) (Jensen 1968) along the upper Elm Fork is a primary example of typical site contexts. Clovis and Plainview points are commonly found along both Denton and Clear creeks in the Cross Timbers. Until recently, the Lewisville Lake site (Crook and Harris 1957, 1958, 1961) was the best known Paleo-Indian site within the region. While the original radiocarbon dates (ca. 37,000 B.P,) contributed to the significance of the site, more recent work (Stanford 1981) has resolved the controversy concerning the date of the occupation. It appears that the presence of naturally-occurring lignite as either a fuel in these hearths or an inadvertent inclusion contaminated the radiocarbon samples. Consequently, the usually accepted date of 12,500-10,000 BP, for Clovis-period occupations is probably a reasonable estimate for the first human occupation of North Central Texas. Our knowledge of the settlement-subsistence strategies used by these early occupants is extremely limited. However, recent important excavations at the Aubrey site (41DN479), a well-preserved Clovis-period occupation in Denton County, have indicated that subsistence efforts did not focus on big game animals alone. Rather, the entire range of prairie and forest species was used (Ferring 1989). Whether this pattern of a more generalized foraging subsistence system is characteristic of Clovis adaptations in the Eastern Woodlands and the focus on now extinct, big game species is more characteristic of a Plains adaptation remains to be documented. Furthermore, the situation of the Aubrey site, buried about 7-8 m below surface in the flood plain of the Elm Fork (Ferring 1990), suggests that well-preserved Paleo-Indian sites in this area will only be found by penetrating more recent Holocene alluvium in modern flood plain situations.

Our knowledge of the Archaic period in the Upper Trinity River drainage is limited by a lack of data from major excavations. This is particularly true for the Early and Middle Archaic periods. Recent investigations along the West Fork (Peter and McGregor 1988; Yates and Ferring 1986) indicate that primary contexts for Early and Middle Archaic sites will probably be found deeply buried within flood

plain alluvium. Artifacts from these periods are present on terrace surfaces, but they are frequently mixed with later materials. In fact, the initial treatment of the Archaic period in North Central Texas (Crook and Harris 1952, 1954), which defined the Carrollton and Elam foci, was based upon materials from such mixed terrace contexts. Consequently, these time-space constructs are no longer recognized as being acceptable for this area of Texas (Peter and McGregor 1988; Prikry11990; Yates and Ferring 1986).

Recent investigations at Joe Pool Lake (Peter and McGregor 1988) and at Lake Ray Roberts indicate that remains of the Late Archaic period are characterized by assemblages apparently left by small bands of foraging hunters and gatherers who occupied a locality for a limited time period and then moved to another locality. These sites were apparently reoccupied numerous times on a seasonal basis. Deer and numerous small mammals were the primary food resources. The documentation of large pits associated with Late Archaic period sites in the Richland Creek and Chambers Creek drainages (Bruseth and Martin 1987) suggests that important sociopolitical changes may have been occurring during this time period. Unfortunately, the significance of these pits remains an enigma despite their excellent documentation.

The beginning of the Late Prehistoric period in the Upper Trinity River Basin is marked by the initial appearance of arrow points. A lower date of A.D. 700 for this period is based upon dated contexts for similar material in the Brazos River drainage to the west. Lynott (1977) suggests that the Late Prehistoric period may be divided into an early and a late phase. The early phase is characterized by sand- and grog-tempered ceramics, Scallorn and Alba arrow points, and a continuation of the foraging subsistence system of the preceding Late Archaic period. The late phase reflects Southern Plains influences, with the appearance of Nocona Plain ceramics of the Henrietta focus, various unstemmed triangular points (e.g., Fresno, Harrell, Washita), and the Perdiz point. Evidence of horticulture and the procurement of bison also appear in sites of this period (Harris and Harris 1970; Morris and Morris 1970). Prikryl's (1990) recent assessment of the Late Prehistoric period largely follows that of Lynott (1977).

Recent investigations at the Cobb-Pool site at Joe Pool Lake (Peter and McGregor 1988) have resulted in a reformulation of the Late Prehistoric period. The Cobb-Pool site has yielded house structures, roasting pits, Alba points, grog-tempered ceramics, and charred corn cupules. Radiocarbon dates from several features indicate the site was occupied during the late twelfth or early thirteenth century. Present evidence suggests that the site does not represent an intrusive Caddoan occupation; consequently, a significant adaptive change appears to have occurred during a middle phase of the Late Prehistoric period. It is also likely that ceramics were not introduced to the region before this time. Whether the Cobb-Pool site merely represents a local experiment or reflects a regional adaptive change remains to be fully documented, but a small grouping of disturbed human remains recovered from the Harbor Pointe site (41 DL369) suggests that various prehistoric groups in the Dallas County area may *have* been pursuing radically different adaptive strategies at this time. This site, located on Rowlett Creek (a tributary of the East Fork of the Trinity River) yielded remains of at least four individuals dated by radiocarbon dating of bone collagen to cal A.D. 1010 (1035) 1165. No pottery was recovered with these remains, although shell beads and a shell gorget, were present; and a carbon isotope ratio of -21.6% suggests that the group's diet was not high in maize (Cliff et al. 1996).

Historical documentation and archeological evidence are very sparse for the Protohistoric period in the Upper Trinity River Basin. Numerous historic groups, including Tonkawa, Wichita, Caddo, and Comanche, all are likely to have traversed the area. However, exact locations of their sites and detailed ethnohistoric data are almost nonexistent. Although European trade items (Sollberger 1953) appear on

a limited number of sites, no protohistoric site has been thoroughly investigated and characterizations of the Native American adaptations during this time period are conjectural at best. A lack of documentary evidence, together with a lack of interest among ethnologists and archeologists, has contributed to this situation.

HISTORIC BACKGROUND

The first documented presence of Europeans in North Central Texas may have occurred in 1542, when the remnants of the de Soto expedition, led by Luis de Moscoso de *Alvorado,* entered modern Texas in an effort to find a land route to New Spain. Some researchers believe that the expedition crossed North Central Texas (Lebo and Brown 1990:61), although others place the route much farther to the east and south (Bruseth and Kenmotsu 1991; Chipman 1992; Hudson 1986; Schambach 1989; Weber 1992). A consistent presence in the region did not occur until the early 1700s, when French traders from Louisiana began to move west along the Red River. The Spanish considered this French incursion to be a threat to the security of New Spain, and they responded by redoubling efforts to counterbalance the French influence with the Native Americans in East and North Central Texas. These efforts continued until 1763, when France ceded Louisiana to Spain under the Treaty of Paris. This reduced the perceived threat to the security of New Spain and resulted in a reduction in Spanish investment in eastern and northern Texas. More important from the Native American viewpoint, was the severe military defeat inflicted on the Spanish by Wichita and allied tribes at Spanish Fort on the Red River in 1758. It has been argued that this defeat put an end to Spanish military and missionary expansion to the north (Weddle 1964, 1965).

The first North Americans to settle in the region were primarily from Arkansas Territory. The first permanent settlement in the Dallas area was Bird's Fort in present-day Tarrant County, established in 1840. Also in 1840, John Neely Bryan reconnoitered the Dallas area to determine its suitability for a trading post. By the time Bryan returned in 1842, troops of the Republic of Texas had removed the Native American groups with whom he had intended trading. As a result, Bryan determined to found a settlement in the same area where downtown Dallas is today. To further this goal, Bryan invited the residents of Bird's Fort to join him in his new settlement. Five individuals-John and James Beeman, Captain Mabel Gilbert, Tom Keenan, and Isaac B. Webb-and their families decided to answer Bryan's call. Prior to this, in 1841, the Republic of Texas had contracted with the Texan Emigration Land Company to establish 600 families on a land grant encompassing portions of the modern Dallas, Denton, Cooke, Collin, Grayson, Ellis, and Wise counties. This land grant became known as the Peter's Colony. The majority of the Peter's Colony settlers held property north of Dallas. The Peter's Colony continued until 1852, when disputes about land title between the Texan Emigration Land Company and the settlers came to a head and some of the settlers rose up in arms to defend their title to the land they had settled. Dallas County was organized from Roberson County in 1846, with Dallas serving as the county seat (Works Progress Administration [WPA] 1992:38-50).

Texas was annexed by the United States in 1846 and some Dallas area residents joined the American army facing the Mexicans. The California gold rush in 1849 affected Dallas in two ways. First, it was near a major trail for the "49ers" that utilized a ford across the Trinity River about seven miles north of Dallas. Second, many Dallas area residents were struck with gold fever. Some, including John Neely, trekked to California, while others explored the nearby Wichita Mountains for gold (WPA 1992:46-47).

In 1855, another major colonizing venture was begun in the Dallas area when 200 French, Belgian, and Swiss immigrants arrived to found the utopian settlement of La Reunion, about three miles west of Dallas along the West Fork of the Trinity River. La Reunion was well funded, with an initial capital of $600,000, but the residents did not adapt well to frontier conditions and the colony never really prospered. Gradually the members of the colony drifted away, with many becoming residents of Dallas. The colony officially dissolved in 1867 (WPA 1992:286-290).

Although present, slavery did not loom as large in the economy of the Dallas area as it did farther to the east. In 1846, there were 45 slaves in Dallas County, a number that grew to 207 by 1850 (Prince 1993:10). In the 1860 census, Dallas County had a total population of 8,655 people, of whom 1,074 were slaves (Prince 1993:16). Most of the white residents of the county were southerners by birth and supported the pro-slavery side of the abolition question. As passions grew during the election of 1860, a fire swept through the Dallas business district, destroying all but one building. This was immediately assumed to be an abolitionist plot, resulting in the hanging of three African-Americans, the flogging of the remaining African Americans in the county, and the whipping and banishment of two white preachers from Iowa (WPA 1992:53-54).

Following the presidential election of 1860, Texas, in common with the rest of the South, began to consider secession. In a February 23, 1861, referendum on the issue, Dallas County voted 741 to 237 in favor of secession. Many county residents joined Confederate military units and, after a 516 to 3 vote on the issue, Dallas County donated $5,000 in gold to the Confederate cause. The Dallas area provided foodstuffs to the Confederate army, and in 1862 a small arms and ammunition factory opened in Lancaster, south of Dallas. Although the fighting never reached North Central Texas, the region was gradually impoverished by the war. Many of the commodities that were imported to the region became difficult to obtain and expensive, while the price of food had risen between two and four times it's 1861 levels by September 1863. The *Dallas Herald* was forced to cease publication between September 30, 1863, and July 2, 1864, due to a lack of newsprint. Following Lee's surrender, the Federal Army occupied Texas and announced the emancipation of Texas' slaves on June 19, 1865 (WPA 1992:55-58).

Although the Dallas area suffered economically in the aftermath of the Civil War, it was not as badly affected as other areas of the former Confederacy. This greater economic vitality was fueled in part by streams of immigrants from the rest of the country, who were hoping to make a fresh start in the as yet unsettled West. Other elements in the economy included Dallas' location near one of the cattle trails to Kansas and its role as a center of the buffalo hide market. In 1872, the Dallas economy received a major boost when the Houston & Texas Central Railroad reached the city from the south, while, in 1873, the Texas & Pacific Railway provided important access to points east. After the arrival of the railroads, Dallas began to acquire many of the trappings of a major city, including the beginning of a water distribution system (1873), gas lighting (1874), a private telegraph company (1875), the telephone (1880), and electricity (1882) (WPA 1992: 60-70).

An early dream of the Dallas business community was to gain water transport along the Trinity River. The problems associated with this effort included the seasonal fluctuations in the level of the Trinity River, as well as the many snags and rafts that had to be removed. The first effort in this respect occurred in 1866, when the state legislature chartered the Trinity Slack Water Navigation Company to provide the improvements required for navigation from Galveston to Dallas. Under the terms of the charter, the company was to receive 5,000 acres of public land for every lock and dam completed; unfortunately, the company never started work on the project. In 1867, Captain J.M. McGarvey agreed to bring his *Job Boat No. 1* from Galveston to Dallas. The journey required seven months, with much of

the time being spent removing obstructions from the river channel. Although Captain McGarvey claimed that the Upper Trinity was superior to both the upper Red River and the upper Mississippi River, his proposal to provide regular service to Dallas did not prove practical. Following his arrival, construction began in Dallas on the steamer *Sallie Haynes,* which made three trips down river before being sunk; there are no records, however, of the *Sallie Haynes* making the voyage all the way to Galveston.

After the railroads arrived in Dallas, interest in river navigation began to wane, although several small steamers continued to ply the Trinity, some of which are thought to have made the trip from Galveston to Dallas. In 1881, the state government was asked for $75,000 to remove obstructions from the river. During the 1890s interest in Trinity River navigation revived, and the Trinity River Navigation Company was formed in 1891. The company built two steamers, *Dallas* and *The Dallas,* and purchased the *H.A. Harvey Jr.,* in New Orleans. The *Harvey* made its way up the river in 1893, arriving in Dallas on May 13. A dam was built at McCommas Bluff to provide sufficient water for the steamer, and it spent the next few years carrying cargo between Dallas and the dam. In 1898, the *Harvey* and the remains of *Dallas* were sold to a Galveston firm, and the *Harvey* made a four-month voyage downriver to Galveston.

In 1899, the U.s. Army Corps of Engineers submitted a plan to construct 37 locks and dams between Dallas and the Gulf of Mexico, permitting navigation of the Trinity River for eight months of each year. The plan went on to suggest that if a series of artesian wells were to be dug along the river channel, adding to the water flow, year-round navigation would be possible. In 1902, Congress appropriated $750,000 to improve the Trinity River, with another $500,000 being appropriated in 1904-1905. In addition, the citizens of Dallas contributed $66,000 for the construction of a dam at Parson's Slough, 26 miles below the city. Nine locks were built before the beginning of World War I. In 1916 the project was reevaluated, with a new estimate of another $13 million and 15 years being required to complete the project. Finally, in 1921, the Corps of Engineers recommended that any efforts to make the Trinity navigable above Liberty were impractical and should be abandoned.

In 1930, renewed interest in river navigation led to the creation of the Trinity River Canal Association, which in turn sponsored the creation of the Trinity Watershed Soil Conservation and ·Flood Control Association in 1936. These two organizations later merged to become the Trinity Improvement Authority (TIA). In 1955, the State of Texas created the Trinity River Authority (TRA). Lobbying on the part of the TIA and TRA led to passage of the Trinity River Basin Bill in 1963; however, the bill merely authorized the project and contained no funding. Due to the huge backlog of river and harbor improvement projects approved by congress, no funding was ever appropriated for the project. The dream of a navigable Trinity River once again died in 1979, when the Corps of Engineers again determined that navigation of the Trinity River upstream of Liberty was not economically feasible (Jadrosich 1996; McElhaney 1995; Saunders 1991).

The history of Dallas is punctuated with several severe floods, with the floods of 1844, 1858, 1866, 1871, 1890, 1908, and 1913 being particularly memorable. Following the 1908 flood, the City of Dallas determined to try to reduce the impact of Trinity River flooding. This led to the construction of the Houston Street Viaduct, a 5,106-foot long concrete bridge constructed to ensure communication between Dallas and Oak Cliff even in the event of a major flood. A series of severe floods in the early 1920s led to renewed interest in flood control projects on the part of the local government. In 1926, the Dallas County Commissioners created the City and County of Dallas Levee Improvement District, which formulated the Ulrickson Plan for flood control. This plan called for the construction of levees, straightening and moving the river channel, additional viaducts, storm water drainage, and other

improvements. Funds in excess of $15,000,000 dollars were provided for the project by the Levee Improvement District, The City and County of Dallas, and affected utilities and railroads. Among these improvements were the Cadiz Street Viaduct (completed in 1932), the Corinth Street Viaduct (completed in 1933), and the Lamar-McKinney Viaduct (completed in 1934) (Skinner, Whorton, and Trask 1996:18; WPA 1992:85, 94-96, 154-156).

By 1900, Dallas had become a major commercial and manufacturing center and, with a population of 42,638, was the third largest city in Texas. In 1908, a devastating flood occurred along the Trinity River, with the river cresting at 51.3 feet. The flood caused tremendous property loss, estimated at $2,500,000, and left 4,000 people homeless. The flood shut down the Dallas and Oak Cliff water systems and caused the collapse the Texas and Pacific Railroad trestle across the Trinity, as well as threatening several other bridges. During World War I, Dallas served as a training base for aviators, with Love Field and Camp Dick (at the State Fairground) being used for training. During the 1920s, the Ku Klux Klan became a factor in local politics, achieving particular importance between 1921 and 1924. Dallas' first radio station, WRR, was established in 1921, originally as a means of broadcasting emergency messages to the fire department. By 1927, WRR had become a commercial station. Beginning in 1930, Dallas began to be severely impacted by the Great Depression (WPA 1992:80-97, 266-267).

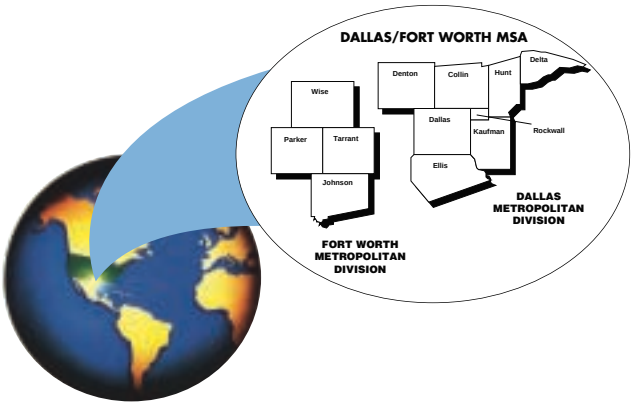
The economy of Dallas, and of the nation as a whole, did not begin to recover from the Depression until the mobilization for World War II began. After the war, the Dallas economy continued to grow along with the rest of the nation. Dallas' image was shattered by the Kennedy assassination on November 22, 1963, and it took many years to recover from this blow. A major economic downturn occurred in the late 1980s, when a drop in oil prices and the collapse of the real estate market dealt a severe blow to the Texas economy. This forced the Dallas region to diversify economically, investing heavily in the modern high-tech industries.

Dallas Metroplex Overview

Compilation of documents describing the current demographics and condition of the Dallas Metroplex.

This document contains information obtained from the Greater Dallas Chamber of Commerce www.dallaschamber.org.

Location & Access



Location

• The DFW Metropolitan Statistical Area (MSA) is comprised of two Metropolitan Divisions, Dallas on the east and Fort Worth on the west.

DFW Total Population

Fort Worth Metropolitan Division	
County Name	*Population*
Johnson	155,900
Parker	116,200
Tarrant	1,745,050
Wise	63,050
Metro Division Total	2,080,200
Dallas Metropolitan Division	
County Name	*Population*
Collin	724,900
Dallas	2,417,650
Delta*	5,237
Denton	599,350
Ellis	144,500
Hunt	90,150
Kaufman	98,350
Rockwall*	73,500
Metro Division Total	4,153,727
Total MSA Population	**6,233,927**

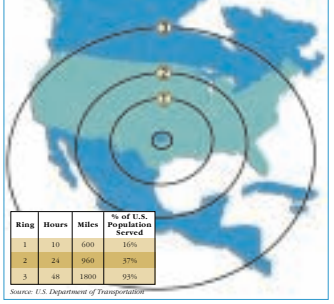
Sources: North Central Texas Council of Governments, Texas State Data Center
**Estimate*

• DFW's central U.S. location is equally close to North America's five largest business centers: New York, Chicago, Los Angeles, Mexico City and Toronto.

• The region's central time zone location, one hour behind the east coast and two hours ahead of the west, extends the working day for companies doing business on both coasts.

• More than 50 million people can be reached from DFW overnight by truck or rail and 98 percent of the U.S. population can be reached within 48 hours. (*DFW Airport*)

Transit Time and U.S. Population Served from DFW



Air Service

• Direct flight time from DFW to nearly any city in the continental U.S. takes four hours or less. (*DFW Airport*)

Travel Times by Air From DFW

City	*Miles/km*	*Travel Time*
New York, NY (NYC)	1371mi / 2205km	3 hrs. 15 min.
Los Angeles, CA (LAX)	1247mi / 2006km	2 hrs. 56 min.
Toronto, ON, Canada (YTO)	1202mi / 1934km	2 hrs. 50 min.
Mexico City, Mexico (MEX)	931mi / 1497km	2 hrs. 32 min.
Paris, France (PAR)	4926mi / 7925km	9 hrs. 30 min.
Tokyo, Japan (TYO)	6455mi / 10386km	14 hrs. 25 min.

Source: OAG North America Executive Flight Guide

• The Dallas region is served by 12 international and 22 domestic airlines, including DFW International based American Airlines and Dallas Love Field based Southwest Airlines. (DFW Airport)

Top 5 U.S. Airports Total Operations 2006

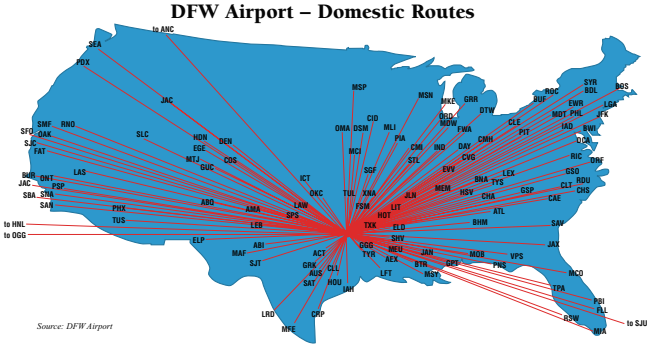
Atlanta (ATL)	976,447
Chicago (ORD)	958,643
Dallas/Fort Worth (DFW)	**699,773**
Los Angeles (LAX)	656,842
Las Vegas (LAS)	619,486

Source: www.airports.org

• DFW International Airport is the 3rd busiest airport in the United States and has nonstop service to 168 international (35) and domestic (133) destinations. (DFW Airport)

DFW Airport – International Routes

DFW Airport – Domestic Routes



• DFW International Airport has an annual impact on the North Texas economy of more than $14.3 billion and supports nearly 268,500 jobs. (*DFW Airport*)

2007 DFW Detail

Commercial Airports					
Airport	Runways		Total Operations		
	Number	Lengths (feet)	2006	2005	% Change
DFW International	7	8,500; 11,400; 13,400; 11,400; 11,400; 9,000; 9,300	700,409	711,878	-1.61%
Dallas Love Field	3	8,800; 7,750; 6,145	NA	236,518	NA
Alliance Airport	2	9,600; 8,200	NA	92,966	NA

Sources: DFW, Dallas Love Field and Alliance Airports

• Dallas/Fort Worth (DFW) International Airport is the third largest in passenger activity in the world. DFW airport handled over 699,773 total operations in 2006 transporting over 834,643 tons of cargo and serving over 60 million passengers. (*DFW Airport*)

• The Capital Development Program at DFW International has invested $2.7 billion into the Airport's infrastructure over a five-year time frame. This investment will generate an additional $34 billion in economic impact on the DFW regional economy and another 77,000 new jobs over the next 15 years. (*DFW Airport*)

• Dallas Love Field, conveniently located three miles from downtown Dallas, is a central hub for regional business and commuter travel. The Wright Amendment of 1979 originally limited most nonstop flights leaving Love Field to destinations within Texas and contiguous neighboring states. Additional flights were added in 1997 and 2005, and a law repealing the amendment was enacted in October 2006 that effectively removes long-haul flight restrictions on Love Field by 2014. (*Dallas Love Field*)

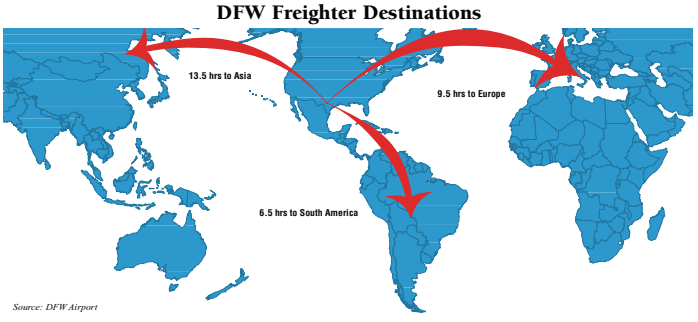
• Fort Worth Alliance Airport, located in North Tarrant County, is a major industrial airport designed to meet air cargo needs.

• DFW International Airport has almost 3 million square feet of cargo facilities on site and 18 air cargo carriers. (*DFW Airport*)

• Almost 65 percent of all international cargo in Texas is handled at DFW, some 834,643 tons in 2006. (*DFW Airport*)

• An excellence survey administered in 2005 by Air Cargo World Magazine rated DFW International Airport as the top airport in North America. Airports were rated on performance, value, facilities and operations. (*Air Cargo World, 2005*)

DFW Freighter Destinations



Approved New DFW International Service		
Carrier	Serving	Start Date
Air France Cargo	Paris, France	June 2006
Airchina Cargo	Beijing, China	June 2006
Frontier Airlines	Mazatlan, Mexico	June 2007

Source: www.dfwairport.com

• In addition to DFW International, Love Field and Alliance Airports, the region claims 12 reliever airports in the area. (*North Central Texas Council of Governments*)

Reliever Airports	
Addison Airport	Meacham International Airport
Arlington Municipal Airport	Fort Worth Alliance Airport
Collin County Regional Airport	Grand Prairie Municipal Airport
Dallas Executive Airport	Lancaster Municipal Airport
Denton Municipal Airport	Mesquite Metro Airport
Fort Worth Spinks Airport	Terrell Municipal Airport

Source: Dallas Business Journal Book of Lists 2006

Roadways

• Six interstate and seven other U.S. highways as well as numerous state highways serve the DFW region.

Major Highways	
Type	ID
Interstate	IH 20, IH 30, IH 35E, IH 45, IH35W, IH635
US	HWY 75, HWY 67, HWY 80, HWY 175, HWY 287, HWY 377, HWY 380

• The NAFTA Superhighway (IH 35) extends from the Texas-Mexico border to northern Minnesota and serves both the Fort Worth and Dallas Central Business Districts.

• Fort Worth Alliance Airport an industrial facility designed to handle air cargo, offers access to three major highways, including the "NAFTA" Interstate Highway 35, trunk lines to two trans-continental rail carriers and one of the largest intermodal facilities in the country. (*Fort Worth Alliance Airport*)

• Average commute time is 26.5 minutes in DFW. (*U.S. Census Bureau*)

DFW Average Commute Times 2005	
Total Commuters	2,761,543
Mean Travel Time	26.5

Source: U.S. Census Bureau, American Community Survey, 2005

• Known as the nation's largest inland port, DFW is a principal trucking and freight distribution center with over 600 motor/trucking carriers and 100 freight forwarders. (*North Central Texas Council of Governments*)

Railways

• All of the nation's largest rail lines serve DFW and coordinate with motor and truck carriers at four intermodal freight centers. (*North Central Texas Council of Governments*)

• Dallas is a junction point on hundreds of rail through-routes. While most of the nation's railroads are regional in nature, the establishment of joint rates and routes by the carriers provides the continued movement of freight when more than one carrier is required to transport a shipment. Because of these agreements, the Dallas shipper is assured of delivery to any point in the U.S.

Rail Carriers		
Type of Service	*Name*	*Phone Number*
Major Railroads	Burlington Northern Santa Fe Railway	(888) 428-2673
	Kansas City Southern Railway	(816) 983-1303
	Union Pacific Railroad Company	(402) 544-5000
Shortline Railroads	Dallas, Garland & Northeastern Railroad	(972) 808-9800
	Fort Worth & Western Railroad Company	(817) 763-8297
Passenger Service	Amtrak	(800) 872-7245
Mass Transit	Dallas Area Rapid Transit (DART)	(214) 979-1111
	Fort Worth Transit Authority (The-T)	(817) 215-8600
	Trinity Railway Express (Dallas-Fort Worth)	(972) 399-0244

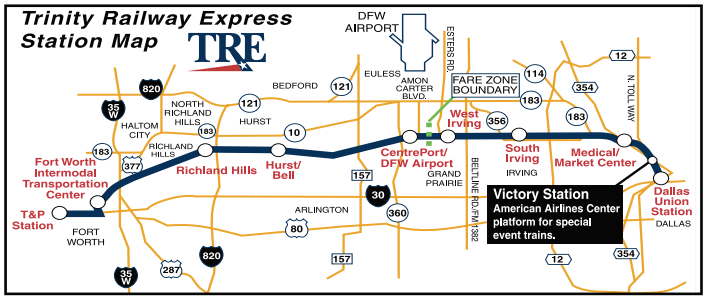
Source: U.S. Department of Transportation, Federal Railroad Administration Office of Safety

Public Transportation

• Dallas Area Rapid Transit (*DART*) provides a network covering 700-square-miles in Dallas and 13 surrounding suburban communities, serving 200,000 passengers per day. (*DART*)

• By 2013, DART plans to have more than 90 miles of light rail and open at least 60 stations. (*DART*)

• The Fort Worth Transportation Authority (The "T") provides bus, rail and trolley services to a 302 square mile area. This includes the Trinity Railway Express that connects Fort Worth and downtown Dallas. (*Fort Worth Transportation Authority*)



Residents

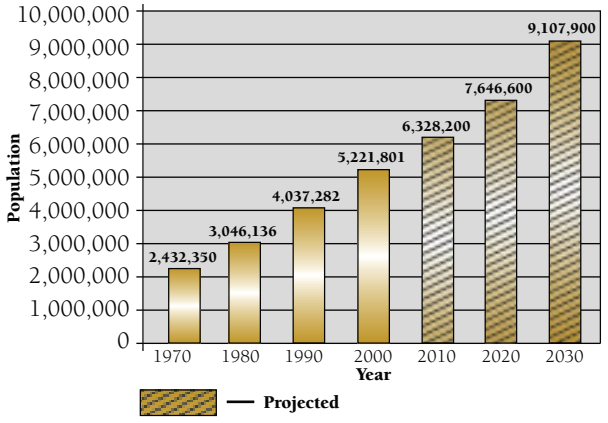
• The Dallas/Fort Worth Metropolitan Statistical Area (MSA) reported 5.7 million residents in the U.S. Census 2005 American Community Survey, making it the largest metropolitan area in Texas, the fourth largest metro in the country and larger than 35 U.S. states. (*U.S. Census Bureau, U.S. Census Bureau: American Community Survey*)

Rank	Metropolitan Statistical Area (MSA)	Population Estimate
1	New York-Northern New Jersey-Long Island, NY-NJ-PA Metropolitan Statistical Area	18,351,099
2	Los Angeles-Long Beach-Santa Ana, CA Metropolitan Statistical Area	12,703,423
3	Chicago-Naperville-Joliet, IL-IN-WI Metropolitan Statistical Area	9,272,117
4	**Dallas-Fort Worth-Arlington, TX Metropolitan Statistical Area**	**5,727,391**
5	Philadelphia-Camden-Wilmington, PA-NJ-DE-MD Metropolitan Statistical Area	5,644,383

Source: U.S. Census Bureau, American Community Survey 2005

• DFW added just under 1.2 million residents, more than 325 persons each day, between 1990 and 2000, fueling a growth rate of 29 percent. This marked the second consecutive decade in which growth bordered on 1 million or more new residents for the Metroplex. (*U.S. Census Bureau*)

DFW Population Trends 1970-2030



Sources: U.S. Census Bureau (1970–2000) & North Central Texas Council of Government 2030 Demographic Forecast (2010–2030)

• Only the great urban regions of Los Angeles and New York, with base populations approaching 15 to 20 million people, added more residents than DFW in the 1990s. (*U.S. Census Bureau*)

• Record employment expansion drove population growth in DFW in the "roaring '90s" when one-half of all new residents were either domestic or foreign migrants to the area. (*U.S. Bureaus of the Census and U.S. Bureau of Labor Statistics*)

DFW Components of Growth			
	1990-2004	1990-2000	2000-2006
Natural Increase	773,065	505,595	335,032
Migration	943,897	672,655	339,403
Domestic	58.0%	70.3%	28.4%
Foreign	42.0%	29.7%	71.6%
	1,716,962	1,178,250	674,435

Source: U.S. Census Bureau

• The rapid influx of residents since 1990 has created a very young and diverse population. In 2005, the median age in DFW was 32.9 compared to the U.S. average of 36 and 25.8 percent of DFW residents were Hispanic compared to 13.9 of the total U.S. population. (*U.S. Census Bureau*)

• Dallas is ranked as one of the top five cities for Hispanics and African Americans (*Hispanic Magazine, August 2006 & Black Enterprise Magazine, 2004*)

DFW Demographic Profile

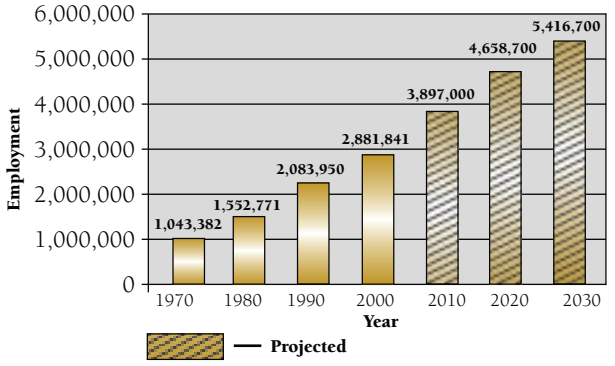
	Estimate
Total Population	**100.0%**
Male	50.1%
Female	49.9%
Age	
0-19 Years	30.6%
20-34 Years	22.9%
35-54 Years	30.0%
55-74 Years	13.4%
75+ Years	3.1%
Median Age	32.9
Foreign Born	17.7%
Education (25 Years & Older)	
Less than 9th Grade	8.5%
9th to 12th grade, no diploma	9.5%
High School Graduate/GED	23.6%
Some College No Degree	21.9%
Associate Degree	6.4%
Bachelor's Degree	20.5%
Graduate/Professional Degree	9.5%
Race/Ethnicity	
White	54.0%
Hispanic	25.8%
Black or African American	13.6%
Asian	4.6%
One or more other Races	2.0%
Households	
Average Household Size	2.81
DFW Household Income (Nominal)	
0 - $34,999	34.8%
$35,000 - $74,999	34.4%
$75,000 - $149,999	23.2%
$150,000 +	7.5%
Median Household Income	$49,740
Labor Force (Persons 16+)	**71.2%**

Source: Source: U.S. Census Bureau, American Community Survey, 2005

Local Economy

• DFW ranked first in the nation for employment growth in the 1990s, adding a total of 760,600 net new jobs. Second ranked Atlanta was nearly 100,000 jobs behind with growth of 671,700 and the widely reported San Francisco Bay area, including San Jose, did not even break the 600,000 mark. (*U.S. Bureau of Labor Statistics*)

DFW Employment Trends



Sources: Bureau of Economic Analysis (1970-2000), North Central Texas Council of Governments: 2030 Demographic Forecast (2010-2030)

• DFW claims 26 percent of the state's population, 27 percent of the labor force, 28 percent of all wage and salary jobs and produces 33 percent of the state's total product as measured by Gross Domestic Product (GDP). (*Economy.com*)

• Total GDP for the DFW metro reached $311.1 billion in 2006. If DFW were a nation, its Gross Domestic Product would place it among small European countries. (*United States Conference of Mayors & Global Insight & Perryman Group*)

DFW Key Economic Indicators 1990-2006

	1990	*2000*	*2006*
	($ Billions)		
Real Gross Area Product	$132.1	$240.0	$311.1
Real Personal Income	$100.0	$162.9	$203.4
DFW CPI (Base: 1982-84=100)	125.1	164.7	190.1

Source: Perryman Group/BLS/economy.com

DFW Long-Term Forecast 2005-2030 CAGR*

	DFW	*Texas*	*United States*
Employment	1.62%	1.54%	1.29%
Population	1.79%	1.70%	0.89%
Real Gross Product	3.97%	3.81%	3.49%

Source: The Perryman Economic Outlook, 2005-2030
** Compound Annual Growth Rate*

• *Business 2.0* Magazine ranked Dallas in the top 10 "Hot Cities for Job Growth." (*May 2006*)

• Dallas ranked among the "Best Performing Cities: Where America's Jobs are Created and Sustained" in 2005. (*Milken Institute*)

• Texas is the No. 2 state and DFW is the No. 4 metro for relocations in 2006. (*Site Selection Magazine*)

Top 2006 Relocations & Expansions by Employment

Company	City	County	Type	Industry/Service	Jobs
Countrywide Financial	Richardson	Dallas	Office	Mortgage Loans and Services	2,500
EMC Mortgage Corporation	Lewisville	Denton	Office (HQ)	Mortgage Loans and Services	2,000
Countrywide Financial	Fort Worth	Tarrant	Office(HQ)	Mortgage Loans and Services	1,500
Hunt Oil Company	Dallas	Dallas	Office (HQ)	Oil and Gas Exploration	1,200
Home Depot	Addison	Dallas	Call Center	Home Improvement Retail	1,000
AmerisourceBergen Specialty Group	Frisco	Collin	Office (HQ)	Pharmaceutical	1,000
Texas Instruments	Plano	Collin	Manufacturing	Chip manufacturing plant	1,000
Erickson Retirement	Plano	Collin	Office	Assisted living and nursing homes/health care	783
CUNA Mutual Group	Fort Worth	Tarrant	Call Center	Customer Operations Center	700
Bell Helicopter	Fort Worth	Tarrant	Manufacturing	Helicopters	700

Source: Compiled by the Greater Dallas Chamber from surveys of local economic development agencies, local newspaper articles and other publications.

• Dallas Market Center (DMC), is comprised of four buildings containing 5 million square feet, making it the largest wholesale merchandise mart in the world. (*Dallas Market Center*)

• Trade, Transportation and Utilities is the largest employment sector in the Dallas/Fort Worth regional economy, accounting for approximately 21.7 percent of all jobs. (*U.S. Bureau of Labor Statistics*)

• In 2005, the Texas Workforce Commission reported 5,422 layoffs, down 50 percent from the 10,648 layoffs in 2004. (*Texas Workforce Commission, WARN Reports*)

DFW Layoffs 2006

Industry	Total Layoffs
Agriculture, Forestry, Fishing and Hunting	-
Mining	-
Utilities	-
Construction	-
Manufacturing	2,746
Wholesale Trade	-
Retail Trade	51
Transportation & Warehousing	105
Information	367
Finance & Insurance	248
Real Estate and Rental and Leasing	-
Professional, Scientific, and Technical Services	153
Management of Companies & Enterprises	-
Administrative and Support and Waste Management and Remediation	139
Educational Services	-
Health Care and Social Assistance	75
Arts, Entertainment & Recreation	71
Accommodation and Food Services	52
Other Services	59
Public Administration	142
Annual Total	**4,208**

Source: Texas Workforce Commission, WARN Reports

Education, Training & Workforce

• DFW enrollment in both public and private four-year institutions is over 150,000. The DFW area is home to five community college districts, several of which offer multiple campuses, enrolling just under 135,000 students. (*Texas Higher Education Coordinating Board*)

Four-Year Colleges, Universities and Professional Schools

Name	Undergraduate		Graduate		Total
	Part Time	Full Time	Part Time	Full Time	
Public Institutions					
Texas A&M University (TAMU) -Commerce	1,233	4,022	4,383	3,839	13,477
Texas Woman's University (TWU)	1,712	4,554	3,529	1,549	11,344
Texas A&M Health Science Center - Baylor College of Dentistry	360	11,465	256	958	13,039
The University of Texas at Arlington (UTA)	5,654	13,995	3,228	2,555	25,432
The University of Texas at Dallas (UTD)	2,799	6,613	2,867	2,201	14,480
The University of Texas Southwestern Medical Center at Dallas (UTSW)*	NA	2,149	NA	124	2,273
University of North Texas (UNT)	5,478	19,830	2,217	4,522	32,047
University of North Texas (UNT) Health Science Center at Fort Worth	NA	NA	134	915	1,049
Public Subtotal	17,236	62,628	16,614	16,663	113,141
Private Institutions					
Amberton University	302	285	702	415	1,704
Dallas Baptist University (DBU)	1,467	2,100	1,079	342	4,988
Devry University	1,039	662	246	56	2,003
Northwood University	NA	NA	NA	NA	1,061
Paul Quinn College*	125	841	0	0	966
Southwestern Adventist University	138	736	14	6	894
Southwestern Assemblies of God University	250	1,181	140	88	1,659
Southern Methodist University (SMU)	363	6,126	2,486	980	9,955
Texas Christian University (TCU)	453	6,718	960	618	8,749
Texas Wesleyan University	390	985	435	868	2,678
University of Dallas (UD)	96	1,070	1,409	446	3,021
Private Subtotal	4,623	20,704	7,471	3,819	37,678
Total Public and Private	**21,859**	**83,332**	**24,085**	**20,482**	**150,819**

Sources: Individual institutions, Fall 2005
** Indicates Fall 2004 data*

• DFW's public universities led key competing metro areas by substantial margins in the production of Business and Management doctorates as well as in Arts and Music PhDs. They ranked second only to Silicon Valley schools in the number of Computer Science PhDs granted in the 1990s. (*National Science Foundation as reported by SRI*)

• Dallas/Fort Worth offers the largest number of college and high school educated residents of any metro in the state of Texas and among the highest in the nation. According to the Census Bureau, 2.9 million residents in DFW hold high school diplomas and more than 1 million have completed at least four years of college. (*U.S. Census Bureau, American Community Survey 2005*)

• *U.S. News and World Report* (2004) ranked seven graduate programs at local public universities among the top 50 in their fields: TWU Occupational Therapy (8th), UNT City Management & Urban Policy (10th), UTD Audiology (12th), TWU Physical Therapy (13th), UTSWMC Biology (14th), UTSWMC Medicine - Research (17th), UTD Speech Language Pathology (26th), UNTHSC Medicine - Primary Care (39th).

• Schools exclusively devoted to higher education in the health sciences include Baylor College of Dentistry, Baylor University School of Nursing, Texas College of Osteopathic Medicine, UNT Health Science Center and the University of Southwestern Medical Center at Dallas.

• The University of Texas Southwestern Medical Center ranks 41 among the top American Research Universities, while its faculty ranks number 50 in the nation for faculty awards. (*The Center 2004*)

DFW Community Colleges

Institution	*Part-time*	*Full-time*	*Total*
Collin County Community College District	**10,172**	**9,186**	**19,358**
Central Park Campus	1,433	1,279	2,712
Courtyard	100	105	205
Preston Ridge	2,409	2,058	4,467
Spring Creek	6,230	5,744	11,974
Dallas County Community College District	**42,943**	**18,198**	**61,141**
Brookhaven College	7,609	2,764	10,373
Cedar Valley College	2,831	1,595	4,426
Eastfield College	6,923	3,088	10,011
El Centro College	4,615	1,551	6,166
Mountain View College	4,678	1,818	6,496
North Lake College	6,305	2,964	9,269
Richland College	9,982	4,418	14,400
Tarrant County College District	**25,530**	**14,363**	**39,893**
Northeast Campus	8,247	4,640	12,887
Northwest Campus	4,795	2,698	7,493
South Campus	6,501	3,657	10,158
Southeast Campus	5,987	3,368	9,355
Trinity Valley Community College*	**3,176**	**2,394**	**5,570**
North Central Texas College	**NA**	**NA**	**4,373**
Weatherford College	**2,265**	**2,287**	**4,552**
DFW Total Community College Students	**84,086**	**46,428**	**134,887**

Sources: Individual institutions (telephone and internet survey), Fall 2005
**Indicates Fall 2004 data*

DFW Key Programs Enrollments
Four-Year and Graduate Institutions

Institution	*Engineering & Math*	*Medical/ Dental*	*MIS-Computer Science*	*Business*	*Chemistry*	*Biology & Botany*	*Physics*	*Total*
Amberton	NA	NA	NA	NA	NA	NA	NA	NA
Dallas Baptist University (DBU)	25	65	167	1,543	0	126	0	1,926
DeVry University	416	73	450	1,046	0	9	0	1,994
Northwood University	NA	NA	NA	NA	NA	NA	NA	NA
Paul Quinn*	13	160	35	112	0	81	0	401
Southern Methodist University (SMU)	1,413	0	484	2,605	59	264	39	4,864
Southwestern Adventist University	10	176	26	116	6	89	1	424
Texas A&M University (TAMU) -Commerce	1,731	0	655	647	573	1,374	81	5,061
Texas Christian University	196	701	50	1,958	63	362	43	3,373
Texas Wesleyan University	0	0	13	409	7	60	0	489
Texas Woman's University (TWU)*	211	150	172	721	57	338	57	1,706
University of Dallas (UD)	19	0	40	1,534	26	96	22	1,737
University of North Texas	1,251	0	0	4,842	99	1,024	54	7,270
UNT Health Science Center	NA	746	219	0	0	0	84	1,049
Texas A&M Health Science Center - Baylor College of Dentistry	356	495	24	811	50	37	22	1,795
The University of Texas at Arlington (UTA)*	4,066	1,763	1,244	4,751	196	1,555	71	13,646
The University of Texas at Dallas (UTD)	1,736	0	1,242	4,668	174	1,081	162	9,063
The University of Texas Southwestern Medical Center at Dallas (UTSW)*	NA	884	319	NA	NA	611	0	1,814
Total DFW	**11,443**	**5,213**	**5,140**	**25,763**	**1,310**	**7,107**	**636**	**56,612**

Sources: Individual institutions, Fall 2005
** Indicates Fall 2004 data*

Engineering Doctorates Awarded by Major Field

Institution	Total	Chemical	Civil	Electrical	Mechanical	Other Engineering
Southern Methodist University	15	0	1	7	3	4
Texas Christian University	0	0	0	0	0	0
Texas A&M University Commerce	0	0	0	0	0	0
Texas Woman's University	0	0	0	0	0	0
University of North Texas	4	0	0	0	0	4
UNT Health Science Ctr. Fort Worth	0	0	0	0	0	0
University of Texas at Arlington	28	0	1	7	3	17
University of Texas at Dallas	21	0	0	20	0	1
University of Dallas	0	0	0	0	0	0
UT Southwestern Medical Ctr. Dallas	0	0	0	0	0	3
Dallas Theological Seminary	0	0	0	0	0	0
DFW Total	68	0	2	34	6	26
Texas Total	488	81	66	141	64	136

Sources: Science Resources Statistics/National Science Foundation, 2005

Science Doctorates Awarded by Major Field

	Physical Sciences		Agricultural & Biological Sciences				
Institution	Physics & Astronomy	Chemistry	Earth Sciences	Biological Sciences	Mathematics	Computer Sciences	Total
Southern Methodist University	0	0	2	2	6	2	12
Texas Christian University	1	3	0	0	0	0	4
Texas A&M University Commerce	0	0	0	0	0	0	0
Texas Woman's University	0	0	0	6	0	0	6
University of Dallas	0	0	0	0	0	0	0
University of North Texas	2	5	0	9	2	8	26
UNT Health Science Ctr. Fort Worth	0	0	0	8	0	0	8
University of Texas at Arlington	2	3	0	8	4	8	25
University of Texas at Dallas	6	5	1	10	5	13	40
UT Southwestern Medical Ctr. Dallas	0	0	0	57	0	0	57
Dallas Theological Seminary	0	0	0	0	0	0	0
DFW Total	11	16	3	100	17	31	178
Texas Total	81	110	56	454	80	62	843

Sources: Science Resources Statistics/National Science Foundation, 2005

DFW Nobel Laureates

Dallas/Fort Worth claims five of the eleven Texas Nobel Prize winners, the largest such gathering in the state. All five DFW Laureates are associated with the University of Texas (UT) System: three with UT Southwestern Medical Center and two with UT Dallas.

UT Southwestern Medical Center

Michael Brown and Joseph L. Goldstein – Physiology or Medicine (1985)
Johann Deisenhofer – Chemistry (1988)
Alfred G. Gilman – Physiology or Medicine (1994)

University of Texas at Dallas

Alan G. MacDiarmid – Chemistry (2001)
Dr. Russell A. Hulse – Physics (1993)

DFW 2006 Labor Force

Average Annual	
Civilian Labor Force	3,106,035
Total Employed	2,957,849
Total Unemployed	148,186
Unemployment Rate	4.8%

Source: Texas Workforce Commission

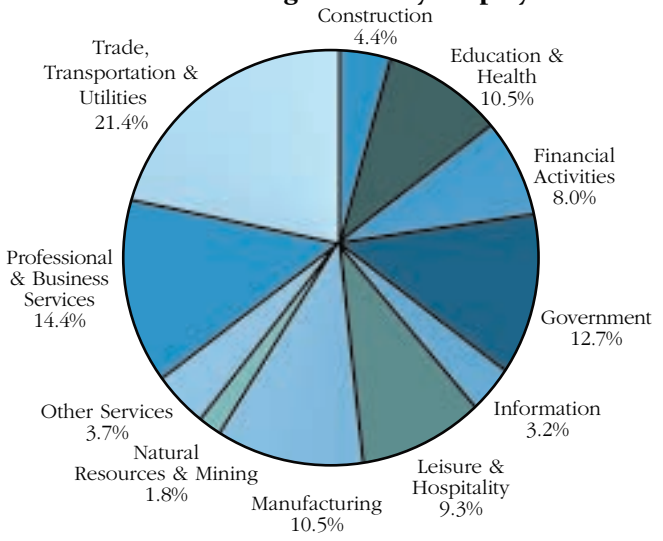
DFW Labor Force Participation Rate

	Total #	# In Labor Force	# In Labor Force
Total Population 16 years and over	4,277,989	3,051,183	71.3%
Males 16 years and over	2,128,110	1,703,833	80.1%
Females 16 years and over	2,149,879	1,347,350	62.7%

Source: U.S. Census Bureau, American Community Survey, 2005

• DFW has one of the most diverse economies in the nation, reporting between 3 and 22 percent of the workforce in each of the major industrial sectors. (*U.S. Bureau of Labor Statistics*)

DFW Nonfarm Wage & Salary Employment



Source: Bureau of Labor Statistics

DFW Wage and Salary Employment

NAICS Sector	Current and Forecast: Employment Counts (1000s)			Share of Total Employment (%)		
	2001	2006	2011	2001	2006	2011
Agriculture	4.4	3.6	3.8	0.2%	0.1%	0.1%
Mining	14.6	14.4	15.0	0.5%	0.5%	0.5%
Construction	165.1	168.2	173.8	5.7%	5.7%	5.3%
Total Manufacturing	339.9	304.8	324.6	11.8%	10.2%	10.0%
Total Trade	514.0	503.7	542.9	17.8%	16.9%	16.7%
Transportation, Warehousing, and Utilities	142.9	140.2	157.7	42.5%	37.1%	37.2%
Information	122.9	95.5	104.4	4.3%	3.2%	3.2%
Finance, Insurance, Real Estate	221.0	239.8	260.6	7.6%	8.1%	8.0%
Total Services	1,029.0	1,125.2	1,266.5	35.6%	37.8%	39.0%
Government	336.4	378.3	407.9	11.6%	12.7%	12.5%
Total All Industries	**2,890.2**	**2,973.7**	**3,251.2**	**100.0%**	**100.0%**	**100.0%**

Source: The Perryman Group

DFW Average Wages by Major Occupation Groups

SOC Code	Occupation	Total Workers	Annual Salary	Hourly Wage
00-0000	All Occupations	2,808,880	$39,930	$19.20
11-0000	Management	142,910	$95,660	$45.99
13-0000	Business & Financial Operations	138,230	$60,330	$29.00
15-0000	Computer & Mathematical Science	95,880	$70,810	$34.04
17-0000	Architecture & Engineering	63,870	$69,520	$33.42
19-0000	Life, Physical & Social Science	20,470	$59,500	$28.60
21-0000	Community & Social Services	17,760	$39,360	$18.92
23-0000	Legal	22,870	$87,070	$41.86
25-0000	Education, Training & Library	154,820	$40,430	$19.44
27-0000	Arts, Design, Entertainment, Sports & Media	35,230	$45,160	$21.71
29-0000	Healthcare Practitioner & Technical	116,110	$64,250	$30.89
31-0000	Healthcare Support	51,450	$24,390	$11.73
33-0000	Protective Service	57,080	$36,600	$17.60
35-0000	Food Preparation & Serving Related	223,240	$16,920	$8.14
37-0000	Building & Grounds Cleaning & Maintenance	77,100	$20,140	$9.68
39-0000	Personal Care & Service	61,280	$25,380	$12.20
41-0000	Sales & Related	323,110	$37,480	$18.02
43-0000	Office & Administrative Support	538,040	$30,940	$14.87
45-0000	Farming, Fishing, & Forestry	2,000	$19,350	$9.30
47-0000	Construction & Extraction	119,500	$30,780	$14.80
49-0000	Installation, Maintenance & Repair	119,360	$38,110	$18.32
51-0000	Production	211,920	$28,240	$13.58
53-0000	Transportation & Material Moving	216,640	$29,970	$14.41

Source: U.S. Bureau of Labor Statistics, Occupational Wages, 2006

Key Occupations in DFW Target Industries

SOC Code	Occupation	Total Workers	Hourly Wage
11-3021	Computer and Information System Managers	6,190	$ 52.60
11-3031	Financial Managers	9,730	$ 50.26
13-2072	Loan Officers	7,710	$ 33.69
15-1021	Computer Programmers	16,080	$ 35.97
15-1031	Computer Software Engineers, Applications	12,540	$ 37.54
15-1032	Computer Software Engineers, Systems Software	14,570	$ 41.49
15-1041	Computer Support Specialists	14,480	$ 21.17
15-1051	Computer Systems Analysts	15,840	$ 36.09
17-3023	Electrical and Electronic Engineering Technicians	6,440	$ 26.64
41-3031	Securities, Commodities & Financial Services Sales Agents	6,110	$ 41.51
43-1011	First-Line Supervisors/Managers of Office and Administrative Support Workers	35,390	$ 22.66
43-3011	Bill and Account Collectors	14,790	$ 15.11
43-4051	Customer Service Representatives	73,630	$ 14.70
43-4131	Loan Interviewers and Clerks	7,240	$ 17.45
43-6011	Executive Secretaries and Administrative Assistants	42,080	$ 18.65
43-9061	Office Clerks, General	53,310	$ 11.65
51-1011	First-Line Supervisors/Managers of Production & Operating Workers	15,140	$ 23.57
51-2022	Electrical and Electronic Equipment Assemblers	6,360	$ 14.79
51-2092	Team Assemblers	22,920	$ 10.76
51-9061	Inspectors, Testers, Sorters, Samplers and Weighers	10,230	$ 14.62
51-9141	Semiconductor Processors	3,170	$ 14.32

Source: U.S. Bureau of Labor Statistics, Occupational Wages, 2006

Business Community

• The 2006 top 200 public and private employers in the DFW region comprise less than half of one percent of all firms (111,185) in the region, accounting for 29 percent of the region's employment or some 762,292 jobs. (*Texas Workforce Commission – Quarterly Employment & Wages and Greater Dallas Chamber Consolidated Business Survey*)

DFW Major Employers
Top 3 by NAICS Sector

Company	*2006 Employees*	*Headquarters*
Extraction and Construction		
Centex Corp.	**3,428**	**Dallas, TX**
Texas Industries (TXI)	**2,700**	**Dallas, TX**
Hanson Building Products North America	**1,800**	**Dallas, TX**
Manufacturing		
Raytheon Co.	16,250	Lexington, MA
Lockheed Martin Aeronautics Company	15,000	Bethesda, MD
Texas Instruments Inc.	**9,700**	**Dallas, TX**
Transportation and Utilities		
AMR Corp.	**25,000**	**Fort Worth, TX**
TXU Corp.	**7,615**	**Dallas, TX**
FedEX Corp.	6,681	Memphis, TN
Trade		
Wal-Mart Stores Inc.	29,237	Bentonville, AR
Albertsons Inc.	12,240	Boise ID
Kroger Co.	11,500	Cincinnati, OH
Information		
Verizon Communications Inc.	15,900	New York, NY
AT&T	12,500	San Antonio, TX
Nortel Networks	**3,800**	**Richardson, TX**
Financial Activities		
Countrywide Home Loans	11,798	Calabasas, CA
Citigroup Inc.	10,635	New York, NY
Bank of America Corp.	7,500	Charlotte, NC
Professional and Business Services		
Perot Systems Corp.	**3,200**	**Plano, TX**
ACS Inc.	**2,800**	**Dallas, TX**
Medical Edge Healthcare Group Inc.	**1,450**	**Dallas, TX**
Education and Health Care Services		
Dallas Independent School District	**19,359**	**Dallas, TX**
Texas Health Resources	**17,000**	**Arlington, TX**
Baylor Health Care System	**14,572**	**Dallas, TX**
Leisure & Hospitality		
Brinker International Inc.	**10,283**	**Dallas, TX**
Consolidated Restaurant Operations	**3,800**	**Dallas, TX**
CG Management LLC	**3,600**	**Irving, TX**

Sources: Dallas Morning News 2006 Top 200, Dallas Business Journal: 2006 Book of Lists, Fort Worth Business Press: Book of Lists, and Greater Dallas Chamber 2006 Consolidated Survey.

Notes: Bold entries indicate companies headquartered in the DFW area.

• *Chief Executive* Magazine ranked the state of Texas at the top of the list for "Best States for Business" (*Chief Executive* Magazine, *January 2006*)
• Twenty-four *Fortune* 500 headquarters called DFW home in 2007. (*Fortune* Magazine)

DFW 2007 Fortune 500 Companies

Company	*Fortune 500 Rank*	*Revenues ($ Millions)*	*City*
Exxon Mobil Corp.	2	$347,254	Irving
AMR Corp./American Airlines	101	$22,563	Fort Worth
Electronic Data Systems, Corp.	111	$21,377	Plano
J.C. Penney Company, Inc.	116	$19,903	Plano
Kimberly-Clark Corp.	137	$16,746	Irving
Centex Corp.	153	$15,465	Dallas
D.R. Horton	155	$15,051	Fort Worth
Burlington No. Santa Fe	157	$14,985	Fort Worth
Texas Instruments	162	$14,630	Dallas
Fluor Corp.	174	$14,078	Irving
TXU Corp.	234	$10,856	Dallas
Dean Foods	246	$10,339	Dallas
Tenet Healthcare Corp.	258	$9,622	Dallas
Southwest Airlines	276	$9,086	Dallas
Energy Transfer Equity	306	$7,859	Dallas
Commercial Metals Co.	316	$7,555	Irving
Celanese	346	$6,668	Dallas
Atmos Energy Corp.	372	$6,152	Dallas
Blockbuster Inc.	410	$5,611	Dallas
Triad Hospitals, Inc.	417	$5,537	Plano
Affiliated Computer Svcs. Inc.	424	$5,353	Dallas
GameStop	426	$5,318	Grapevine
RadioShack Corp.	466	$4,777	Fort Worth
XTO Energy	482	$4,576	Fort Worth

Source: Fortune Magazine, *April 2007*

• Seven of the year 2006 Global 500 companies are headquartered in the Dallas/Fort Worth area. (*Fortune* Magazine)

DFW 2006 Global 500

Company	*Global Rank*	*Revenues ($ Millions)*	*City*
Exxon Mobil	1	$339,938	Irving
AMR	312	$20,712	Fort Worth
Electronic Data Systems	316	$20,537	Plano
J.C. Penney	339	$18,968	Plano
Kimberly-Clark	425	$15,903	Irving
Centex	435	$15,465	Dallas
D.R. Horton	496	$13,864	Fort Worth

Source: Fortune Magazine, *July 2006*

• There are over 100,000 business firms in the Dallas/Fort Worth area and more than 1,500 regional and corporate headquarters operations. (*Texas Workforce Commission*)

DFW Top 10 Corporate Headquarters

Company Name	*City*	*DFW Employment*	*Total Employment*
AMR Corp.	Fort Worth	25,000	92,100
Texas Instruments Inc.	Dallas	9,700	35,472
Brinker International Inc.	Dallas	10,283	96,600
Electronic Data Systems (EDS) Corp.	Plano	7,100	117,000
J.C. Penney Co.	Plano	7,100	151,000
Southwest Airlines Co.	Dallas	5,452	30,974
Blockbuster Inc.	Dallas	4,500	84,300
RadioShack Corp.	Fort Worth	4,000	42,000
Burlington Northern Santa Fe Corp.	Fort Worth	3,100	40,000
Perot Systems Corp.	Plano	3,200	13,500

Sources: Dallas Morning News 2006 Top 200, Dallas Business Journal: 2006 Book of Lists, Fort Worth Business Press: Book of Lists, and Greater Dallas Chamber 2006 Consolidated Survey.
**Ranked by DFW Employment*

• Between 1997 and 2006, the Center for Women's Business Research estimated that the number of privately held, 50 percent or more women-owned firms in Dallas increased by 17.7 percent, employment grew by 29.8 percent, and sales increased by 43.6 percent. (*Center for Women's Business Research*)

DFW Top Local Revenue Generating Women-Owned Companies

Name	*Nature of Business*	*Local Revenue ($ Millions)*
Frank Kent Motor Co.	Automobile sales	$190.21
Levenson & Hill Inc.	Advertising; public relations	$104.09
Lucky Lady Oil Co.	Wholesale	$100.00
Pinnacle Technical Resources Inc.	IT services, solutions	$41.00
Business Interiors	Retail Trade	$40.00
All-Tex Pipe & Supply	Wholesale Trade	$39.52
Karlee	Sheet metal and machine shop fabrication manufacturing	$38.00
Fast-Trak Construction LP	General Contractors	$34.52
Ricochet Fuel Distributors Inc.	Wholesale diesel, gasoline, and oil	$34.15
BKM Total Office of Texas LP	Retail Trade	$33.00
Arta Travel	Travel Agency	$25.19

Source: Dallas Business Journal: 2007 Book of Lists

DFW Top Local Revenue Generating Minority Owned

Name	*Minority Group*	*Nature of Business*	*Local Revenue ($ Millions)*
Thomas S. Byrne Ltd.	Hispanic	Construction	$185.00
CG Management	Hispanic	Manages franchise restaurants	$120.90
Adea Solutions Inc.	Indo American	Information Technology	$106.00
MasTec North America Inc.	Hispanic	Comm. Utility Infrastructure	$54.85
Wilson Office Interiors	African American	Retail Trade	$50.00
The Azteca Group	Hispanic	Construction	$49.00
Stephens Automotive Group	African American	Automotive Sales	$45.19
Pinnacle Technical Resources Inc.	Hispanic	Information Technology	$42.00
On-Target Supplies & Logistics Ltd.	African American	Logistics Management	$36.60
El Fenix Mexican Restaurants	Hispanic	Food Services	$35.50

Source: Dallas Business Journal: 2007 Book of Lists

Business Costs

• Dallas ranks 19th and Fort Worth ranks 20th among major metros in the nation as the best places for business and careers in 2005. (*Forbes* Magazine)

• Texas is a right-to-work state with approximately 6.6 percent of all workers covered by union or similar employee contracts in 2005. Dallas/Fort Worth has 5.9 percent of all area workers unionized. (*Union Membership and Coverage Database from Current Population Survey by Barry T. Hirsch and David A. Macpherson © 2005*)

DFW 2005 Unionized Workers

Sector	*Employer Sample Size*	*Wage & Salary Employment*	*Union Members*	*% Members*	*% Covered*
Total	**2,409**	**2,766,846**	**164,102**	**5.9**	**6.6**
Private	2,125	2,444,172	91,716	3.8	4.1
Public	284	322,673	72,387	22.4	25.7

Notes: Employer sample size is the number of firms sampled in the Current Population Survey study.
Source: Union Membership and Coverage Database from the Current Population Survey by Barry T. Hirsch and David A. Macpherson © 2005 (www.unionstats.com)

Workers Comp and Unemployment Insurance

Workers Compensation	
Average Rate for Office Workers (8810)	$0.46
Maximum Weekly Benefit	$674
Unemployment Insurance	
Taxable Base	$9,000
Average Among Existing Employers	4-7.64%
Average Among New Employers	2.70%
Maximum Weekly Benefit	$364

Sources: Texas Workers' Compensation Rate Guide (January 2006), Texas Department of Insurance; Texas Workers' Compensation Commission System Data Report (Dec. 2003); All States Tax Handbook 2006

• Texas has one of the nation's lowest unemployment insurance tax liabilities. For new employers, the unemployment insurance rate is 2.7 percent for the first $9,000 of gross earnings per employee per year with a maximum of $350 per employee annually. (*Texas Workers' Compensation Rate Guide, January 2006*)

• Dallas ranks fourth nationwide in existing office and fourth in existing industrial space in 2005. (*CB Richard Ellis*)

• Approximately 3.2 million square feet of multi-tenant office space was under construction in the third quarter 2005. At the same time, industrial markets saw about 2.8 million square feet in construction. (*CB Richard Ellis*)

• DFW experienced office vacancies of 21 percent in third quarter 2005. Industrial vacancies were less than 10 percent. (*CB Richard Ellis*)

• The state of Texas levies local property taxes by counties, municipalities and independent school districts (IDS). These political subdivisions may impose ad valorem taxes on real and personal property.

DFW Communities Property Tax Sample

2006 Rate Per $100 of Taxable Valuation

City		*County*		*School District*	*Other*	*Total*
Plano	$0.45350	Collin	$0.25000	$1.7334	.09065 CCD	$2.52755
Dallas	$0.72920	Dallas	$0.21390	$1.5026	$0.005034 SET $0.25400 HD $0.081 CCD	$2.78573
Denton	$0.62652	Denton	$0.23192	$1.7640	NA	$2.62244
Fort Worth	$0.86000	Tarrant	$0.27150	$1.5140	$0.02 WD $0.235397 HD $0.139380 CCD	$3.04028

CCD=Community College District, SET=School Equalization Tax, HD=Hospital District, WD=Water District

Sources: Collin, Dallas, Denton and Tarrant County Appraisal Districts

• The backbone of the state's revenue structure is the state sales tax of 6.25 percent, which applies to the sales of tangible personal property, with exemptions for items such as grocery food, utilities, raw materials and manufacturing equipment. Municipalities in Texas may also levy in conjunction with sales tax a city sales tax of 1 percent and certain mass transit authorities may levy a sales tax not to exceed 1 percent. (*Texas Comptroller of Public Accounts*)

• Commercial rents for office and industrial space are among the most attractive in the nation for tenants. In 2006 DFW industrial vacancy rates were only 10.4 percent and DFW office market vacancy rates were 17.3 percent. (*Texas A&M Real Estate Center*)

DFW Communities Sales Taxes Sample

2006 Rates per $1.00

City Name	*State Rate*	*City Rate*	*Other Rates*	*Total Rate*
Plano	$0.0625	$0.010	$0.010 MTA	$0.0825
Dallas	$0.0625	$0.010	$0.010 MTA	$0.0825
Denton	$0.0625	$0.015	$0.005 MTA	$0.0825
Fort Worth	$0.0625	$0.010	$0.005 MTA $0.005 CCD	$0.0825

Notes: MTA=Metropolitan Transit Authorities, CCD=Crime Control District

Source: Texas Comptroller of Public Accounts

State and Local Income Taxes: None

Sources: Collin County Appraisal District, Dallas County Appraisal District, Denton County Appraisal District, and Tarrant County Appraisal District

DFW Office Market Statistics
1st Quarter 2007

					Average Asking Lease Rate	
Market	Net Rentable Area	Direct Vacancy SF (All Bldgs.)	Direct Vacancy Rate (%)	Total Vacancy Rate (%)	Industrial	Net Absorption
Central Expressway	11,454,951	1,924,532	16.80%	18.17%	$18.64	155,428
Dallas CBD	26,119,409	6,347,022	24.30%	26.07%	$18.13	225,880
East Dallas	4,310,349	530,014	12.30%	12.52%	$13.47	18,379
Far North Dallas	29,251,358	5,411,540	18.50%	20.56%	$19.60	202,545
Fort Worth CBD	7,632,857	333,422	4.37%	4.83%	$17.00	7,995
Las Colinas	20,200,659	4,610,529	22.82%	24.63%	$20.25	72,902
LBJ Freeway	20,207,093	5,000,315	24.75%	26.11%	$16.26	207,388
Lewisville/Denton	4,239,262	1,165,541	27.49%	28.36%	$16.10	6,758
Mid Cities	13,145,159	2,238,029	17.03%	17.92%	$17.80	10,391
North Fort Worth	2,296,663	263,996	11.49%	11.71%	$17.25	22,111
NE Fort Worth	1,550,980	233,412	15.05%	15.05%	$15.75	3,010
Preston Center	3,714,446	342,951	9.23%	10.99%	$26.05	20,378
Richardson/Plano	12,392,466	3,227,811	26.05%	27.22%	$18.32	17,472
South Fort Worth	3,946,625	351,184	8.90%	10.19%	$16.65	10,011
SW Dallas	1,328,831	212,153	15.97%	15.97%	$15.28	4,032
Stemmons Freeway	9,267,805	3,349,032	36.14%	36.80%	$14.72	34,386
Uptown/Turtle Creek	8,411,707	788,614	9.38%	9.96%	$24.87	28,109
Total	**179,470,620**	**36,330,097**	**20.24%**	**21.60%**	**$18.43**	**391,259**

Source: CB Richard Ellis - Market View Dallas Office 1st Q 2007

DFW Industrial Market Statistics
1st Quarter 2007

					Average Asking Lease Rate		
Market	Net Rentable Area SF	Direct Vacancy SF	Direct Vacancy Rate	Total Vacancy Rate	Industrial	Flex	Net Absorption
DFW Airport Ind	56,698,497	7,427,607	13.1%	14.7%	$4.12	$7.70	48,047
East Dallas Ind	37,457,669	1,855,320	5.0%	5.1%	$3.78	$5.62	199,758
Great SW/Arlington Ind	83,321,947	8,245,943	9.9%	10.8%	$3.37	$6.87	441,149
North Fort Worth Ind	57,787,339	1,913,688	3.3%	3.8%	$3.40	$9.24	655,559
Northeast Dallas Ind	92,359,781	10,836,753	11.7%	12.6%	$4.31	$5.99	803,802
Northwest Dallas Ind	92,023,051	10,080,295	11.0%	12.8%	$4.33	$7.85	692,516
South Dallas Ind	33,753,870	1,976,827	5.9%	6.3%	$4.14	$5.25	44,472
South Fort Worth Ind	67,974,151	4,640,856	6.8%	7.0%	$3.07	$6.21	662,456
South Stemmons Ind	124,313,041	8,717,349	7.0%	7.5%	$3.85	$7.70	837,485
Market Totals	**645,689,346**	**55,694,638**	**8.6%**	**9.5%**	**$3.83**	**$6.99**	**4,289,150**

Source: CB Richard Ellis - Market View Dallas Industrial 1st Q 2007

Water, Electricity & Air Quality

• The Electric Reliability Council of Texas (ERCOT) is the organization entrusted to keep electric power flowing to approximately 20 million Texas customers—representing 85 percent of the state's electric load and about 75 percent of the Texas land area. As the Independent System Operator for its region, ERCOT manages the scheduling of power on an electric grid consisting of 70,000 megawatts of active generation capacity and 38,000 miles of transmission lines. (*ERCOT*)

• ERCOT worked with TXU and the Texas Municipal Power Authority to identify short-term transmission improvements for 2006 that will reduce congestion for cost savings of $19 million annually in the Dallas/Fort Worth area. (*ERCOT – 2005 Annual Report*)

Texas Regional Electricity Demand and Capacity

Texas Region: ERCOT Interconnection	*Net Internal Demand (MW)*	*Planned Capacity Resources (MW)*	*Reserve Margins (% of Net Internal Demand)*	*Capacity Margins (% of Capacity Resources)*
Summer 2007	62,072	70,384	13.5%	11.9%
Winter 2007/2008	44,184	72,642	72.2%	41.9%
Summer 2011	67,884	70,330	11.3%	10.1%
Winter 2011/2012	48,115	72,785	61.3%	38.0%

Source: Table 2: Demand and Capacity as Reported by the North American Electric Reliability Council (NERC) Regions

DFW Permit Contact Information

Air, Water and Hazardous Waste
Texas Commission on Environmental Quality
2301 Gravel Drive
Fort Worth, TX 76118-6951
(817) 588 - 5800
Average permit approval time varies significantly

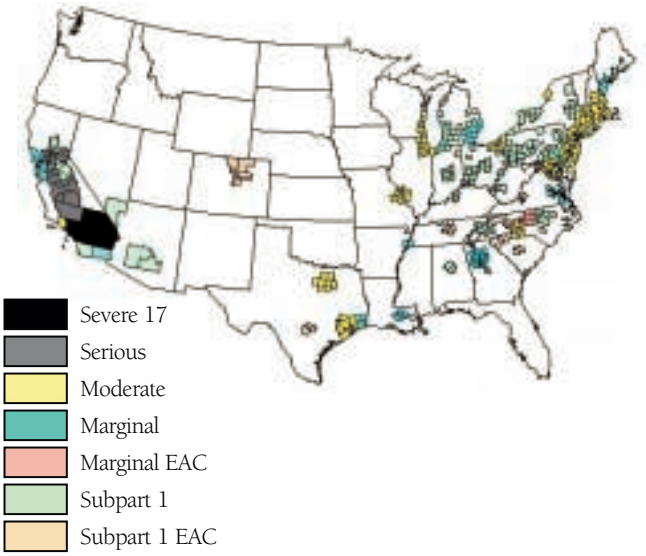
• DFW along with seven other top 10 U.S. metropolitan areas is classified as a moderate nonattainment site for U.S. air quality standards. Los Angeles is the only metro in the U.S. classified as severe and Miami is currently the only metro in the top 10 classified as marginal. (*EPA Green Book*)

DFW Air Pollution Attainment Status

Pollutant	*Yes*	*No*	*Classification/ Affected Counties*
Ozone			
8-Hour Standard		X	**Moderate**/Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, Tarrant
Carbon Monoxide	X		NA
Particular Matter	X		NA
Lead	X		NA
Sulfur Dioxide	X		NA
Nitrogen Dioxide	X		NA

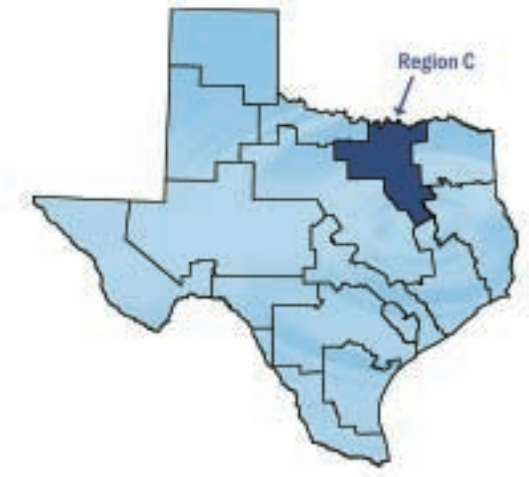
Source: Criteria Pollutant Area Summary Report, Green Book, EPA http://www.eps.gov/air/oaqps/greenbk/cindex.html

Counties Designated Nonattainment for 8-hour Ozone



Classification colors are shown for whole counties and denote the highest area classification that the county is in.

• The Texas Water Development Board (TWDB) defined 16 regional water-planning areas in the state and established planning groups that are charged with developing regional water plans. The TWDB is required to review and update the planning area boundaries at least once every five-years. Region C is responsible for North Texas water planning and is located in the upper portion of the Trinity River Basin, with smaller parks in the Red, Brazos, Sulphur, and Sabine River Basins. (*Texas Water Development Board – Water for Texas 2002*)



• Region C's 2006 water plan includes water management strategies to develop 2.7 million acre-feet per year of new supplies, for a total available supply of 4.05 million acre-feet per year by 2060. The supply is about 20 percent greater than the projected demand, leaving a reasonable reserve to provide for difficulties: developing strategies in a timely manner, droughts worse than the drought of record and greater-than-expected growth. (*Region C Water Planning for North Texas – 2006 Water Plan*)

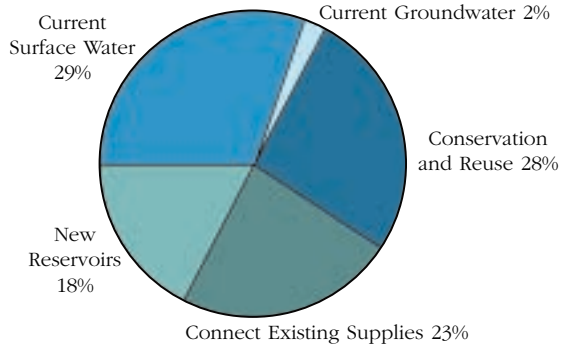
2060 Supplies for the Largest Wholesale Water Providers in Region C

Wholesale Water Provider	2060 Supplies (Acre-Feet per Year)			% of Total Supply from Conservation and Reuse	Cost of Strategies (Millions)
	Currently Available	New Strategies	Total		
Dallas Water Utilities	422,647	758,328	1,180,975	26.2%	$2,811
Tarrant Regional Water District	394,049	698,558	1,092,607	24.6%	$3,562
North Texas Municipal Water District	254,020	792,355	1,046,375	25.7%	$3,848
City of Fort Worth	249,483	429,987	679,470	24.1%	$783
Trinity River Authority	96,060	225,076	321,136	59.1%	$340
Upper Trinity Regional Water District	41,265	155,413	196,678	27.2%	$858
Total					**$12,202**

Source: Region C Water Planning for North Texas–2006 Water Plan

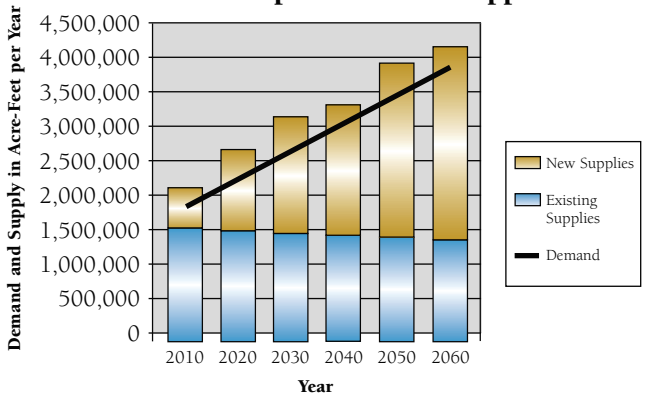
Notes: Supplies do not total because of overlaps. For example, Tarrant Region Water District supplies Fort Worth and the Trinity River Authority, Dallas Water Utilities supplies Upper Trinity Regional Water District, etc

Sources of Water Available to Region C as of 2060



Source: Region C Water Planning for North Texas–2006 Water Plan

Supply and Demand for Region C with the Development of New Supplies



Sources: Region C Water Planning for North Texas–2006 Water Plan

Active Landfills
North Texas Region

Landfill Name	Owner/Operator
McCommas Bluff Landfill	Dallas, City of
Turkey Creek Landfill	Turkey Creek Landfill TX, LP
Garland Landfill-Castle Drive	Garland, City of
Weatherford Landfill	Weatherford, City of
Irving Hunter-Ferrell Landfill	Irving, City of
Arlington Landfill	Arlington, City of
Grand Prairie Sanitary Landfill	Grand Prairie, City of
Fort Worth Southeast Landfill	Fort Worth, City of
Trinity Lewisville	BFI Waste Systems of N. America, Inc.
WMI Fort Worth Westside Landfill	Waste Management of North America, Inc.
Denton Landfill	Denton, City of
McKinney Landfill	NTMWD
Camelot Landfill	Farmers Branch; Camelot Landfill TX, LP
Corsicana Landfill	Corsicana, City of
WMI DFW Landfill	Waste Management of North America, Inc.
WMI Skyline Landfill	Waste Management of North America, Inc.
ECD Landfill, Inc.	Ellis County Landfill TX, LP
Trinity-Itasca Landfill	BFI Waste Systems of N. America, Inc.
Republic CSC	Republic Waste Industries
Maxwell Creek	NTMWD
Stephenville Landfill	Stephenville, City of
Fort Worth C & D Landfill	Independent Environmental Services, Inc.
Republic Maloy Landfill	Republic Maloy
B & B Equipment Company	Waste Management
Cleburne Landfill	Cleburne, City of
WMI Hillside Sanitary Landfill	Waste Management

Source: Environmental Resource Department, North Central Texas Council of Governments

Incentives

State Incentives

• Texas has no personal or corporate income tax and no state property or unitary state tax. (*Texas Comptroller of Public Accounts*)

• The Texas Linked Deposit Program encourages lending to historically underutilized businesses, childcare providers, non-profit corporations, and/or small or medium-sized businesses located in an Enterprise Zone. Proceeds may be used for working capital or the purchase, construction, or lease of capital assets. (*Office of the Governor – Economic Development & Tourism*)

• The Skills Development Fund program supports customized job-training projects for businesses and trade unions in Texas. During Fiscal Year 2005 the Texas Workforce Commission awarded 23 such grants totaling $8,562,419, which served 95 businesses, generated 3,351 new jobs and upgraded the skills of 8,896 workers in existing jobs (*Texas Workforce Commission*)

• Texas Legislature appropriated $40 million for Skills Development Fund grants to be used during 2005-06. (*Office of the Governor – Economic Development & Tourism*)

• In 2005, the Texas legislature enacted the Emerging Technology Fund (ETF) to improve research at Texas Universities, help start-up technology firms, and facilitate commercialization. Emerging technology projects are eligible for funding if they will result in the creation of high quality new jobs in Texas or have the potential to result in a medical or scientific breakthrough. (*North Texas Regional Center for Innovation and Commercialization – NTXRCIC*)

• The Texas Enterprise Fund can be used for infrastructure development, community development, job training programs and business incentives. To be eligible for Texas Enterprise Fund, projects must demonstrate significant returns on the state's investment, have strong local support and unanimous support from the Governor, Lieutenant Governor and Speaker. (*Office of the Governor – Economic Development & Tourism*)

• The Texas Industrial Revenue Bond Program provides tax exempt financing for land and depreciable property for industrial and manufacturing projects. (*Texas Comptroller of Public Accounts*)

• The Economic Development and Diversification Program is a tax incentive that offers an in-state tuition waiver for family members who have relocated their company to Texas. (*Office of the Governor – Economic Development & Tourism*)

Local Incentives

• Tax abatements are offered by individual cities in DFW and are available to eligible properties to encourage businesses to invest and/or expand. Individual city taxing boards grant a taxpayer a stay of paying a tax for a short or long term, for a total or percentage of the tax. (*Office of the Governor – Economic Development & Tourism*)

• Texas Enterprise Zones are designated by the state of Texas as any area that has a poverty level of 20 percent or greater. The federal government also may designate enterprise zones as a renewal community. Many localities offer additional incentives within enterprise zones including tax abatements, local tax refunds, reduced utilities, and development participation. (*Office of the Governor – Economic Development & Tourism*)

• DFW has four Foreign Trade Zones (FTZs) that provide duty-free or deferred payments of goods processed at plants engaged in international trade (*Foreign Trade Zone Commission*)

Foreign Trade Zones

Zone No. 39
Grantee/Operator: Dallas/Fort Worth International Airport Board
P.O. Drawer 619428, DFW Airport, TX 75261-9428
Michael Pyles mpyles@dfwairport.com
Phone: (972) 574-3214 Fax: (972)574-8069

Zone No. 113
Operator: Trade Zone Operations, Inc.
Grantee: Midlothian Trade Zone Operations
1500 North Service Road, Highway 67, Midlothian, TX 76065
Mark Nichols nicholsm@belserv.com
1 (800) 235-7378

Zone No. 168
Operator: Foreign Trade Zone Operating Company of Texas
Grantee: Metroplex International Trade Development Corporation
P.O. Box 742916, Dallas, TX 75374-2916
(Ms.) Lou Thomas Lou@worldtradesolutions.com
Phone: (972) 915-0083 Fax: (972) 929-7228

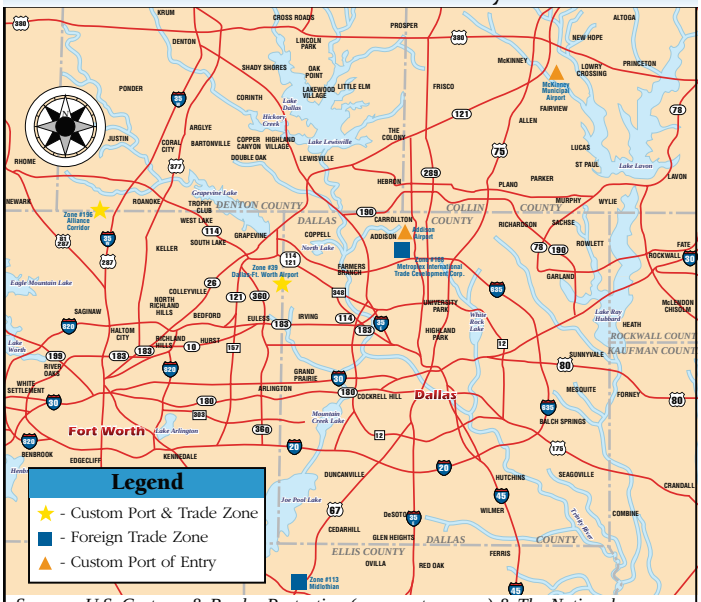
Zone No. 196
Grantee/Operator: Alliance Corridor, Inc.
c/o Hillwood Development Corporation
13600 Heritage Parkway, Suite 200, Fort Worth, TX 76177
Tom Harris tom.harris@hillwood.com
Phone: (817) 224-6008 Fax: (817) 224-6060

Custom Ports of Entry

Name/Location	Location Type
Addison Airport	User Fee Airport
Alliance Airport	User Fee Airport
DFW Airport, TX	Service Port
McKinney, TX	User Fee Airport

Sources: U.S. Customs & Boarder Protection (www.customs.gov) and The National Association of Foreign Trade Zones (www.naftz.org)

DFW Foreign Trade Zones & Custom Ports of Entry



Sources: U.S. Customs & Border Protection (www.customs.gov) & The National Association of Foreign Trade Zones (www.naftz.org)

• All cities are eligible to adopt a 4B economic development sales tax that provides a wide range of funding for community development or quality-of-life projects. Cities located in counties of less than 500,000 residents can also adopt a 4A economic development sales tax that is restricted to fund more traditional industrial development projects. A number of cities in the DFW region have both 4A and 4B sales tax bonds, which allows cities to generate more revenue to provide funding for a broader scope of economic development projects. (*Texas Comptroller of Public Accounts*)

• The Capital Access Program (Texas Capital Fund) is available to eligible cities with fewer than 50,000 residents or counties with less than 200,000 residents to assist businesses that employ low-to-moderate-income persons and consists of programs administered by the Texas Department of Agriculture. (*Office of the Governor – Economic Development & Tourism*)

• Cities offer the Freeport exemptions for various types of goods that are detained in Texas for short periods of time. The exemption allows products and goods to be moved through the state without incurring inventory taxes, for products held for less than 175 days. Triple Freeport exemptions, from city, county, and school district property taxes on inventory. (*Office of the Governor – Economic Development & Tourism*)

• The Texas Leverage Fund (TLF) serves as additional source of financing to communities that have adopted the development sales tax. The fund allows communities to leverage future sales tax revenues to provide financing for industry expansion, recruitment, industrial parks establishment, and other community projects. (*Office of the Governor – Economic Development & Tourism*)

• Local Government Loan Funds (chapter 380) provide legislative authority for Texas cities to provide a grant or a loan of city funds or services in order to promote economic development. DFW cities have utilized the provisions to provide a wide array of incentives that have drawn businesses and industries to locales throughout the region.

• Tax increment financing (TIF) is a tool authorized by Texas Tax Code that allows local governments to publicly finance infrastructure improvements within a defined area. (*Texas Tax Code*)

• The County Development District Sales Tax enables counties of less than 45,000 residents to create county assistance districts and to adopt local sales taxes. Eligible counties must not contain a 4A or 4B city or any transit authority territory. (*Texas Comptroller of Public Accounts*)

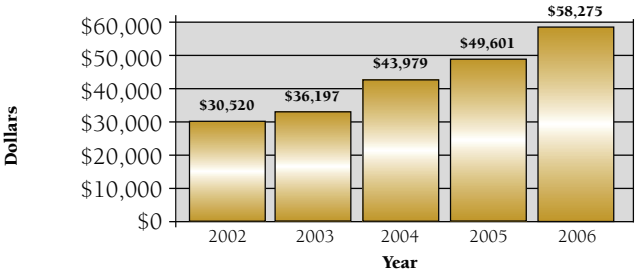
• The Rural Municipal Finance Program was created by the Texas Agricultural Finance Authority (TAFA) to improve or assist in the economic development of rural areas. Eligible applicants include city and county governments, economic development corporations, hospital districts, rail districts, utility districts, special districts, agricultural districts, and well as private water and wastewater corporations (*Texas Department of Agriculture*)

Lead Sectors

International Business

• Total world trade with DFW reached $58.2 billon in 2006, a 90 percent increase since the year 2002 ($30.5 billion). (*U.S.A. Trade Online*)

DFW Total International Trade ($ Millions)



Sources: USA Trade Online – www.usatradeonline.gov

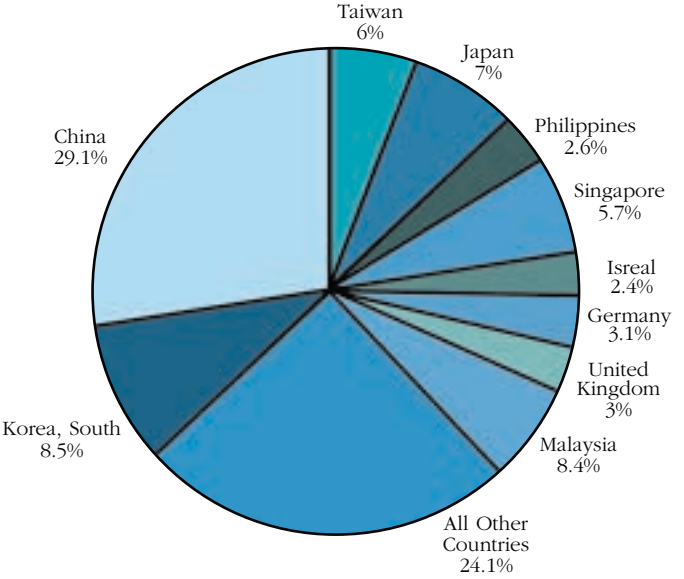
• China was the region's top-trading partner in 2006, with total trade reaching just under $17 billion. (*U.S.A. Trade Online*)

DFW 2006 International Trade

Country	*Exports*	*Imports*	*Total Trade*
Country Total	**$20,644,699,167**	**$37,634,225,320**	**$58,278,924,487**
China	$1,416,945,288	$15,554,039,869	$16,970,985,157
Korea, South	$2,113,367,306	$2,862,310,938	$4,975,678,244
Malaysia	$994,080,606	$3,889,252,907	$4,883,333,513
Japan	$1,712,360,976	$2,366,278,871	$4,078,639,847
Taiwan	$2,169,929,627	$1,313,176,871	$3,483,106,498
Singapore	$1,809,687,935	$1,483,837,805	$3,293,525,740
Federal Republic of Germany	$826,284,604	$996,837,710	$1,823,122,314
United Kingdom	$767,781,650	$997,247,193	$1,765,028,843
Philippines	$1,053,479,047	$489,791,189	$1,543,270,236
Israel	$644,112,844	$766,009,708	$1,410,122,552
Total Top 10 Trading Partners	**$13,508,029,883**	**$30,718,783,061**	**$44,226,812,944**
Top 10 Share of DFW Total	**65.4%**	**81.6%**	**75.9%**

Source: USA Trade Online (Stat-USA and Foreign Trade Division of the U.S. Census Bureau)

DFW 2006 Top 10 International Trading Partner Shares



• DFW's direct trade with North American Free Trade Agreement (NAFTA) countries was $1.3 billion in 2006. (*U.S.A. Trade Online*)

2006 NAFTA/DR-CAFTA Total

Country	*Imports*	*Exports*	*Total Trade*
NAFTA			
Mexico	$302,547,505	$646,384,436	$948,931,941
Canada	$278,364,196	$85,001,036	$363,365,259
Total	**$580,911,701**	**$731,385,499**	**$1,312,297,200**
DR-CAFTA			
Costa Rica	$21,380,350	$9,040,917	$30,421,267
El Salvador	$8,613,266	$379,115	$8,922,381
Honduras	$80,034,041	$526,544	$80,560,585
Guatemala	$36,094,236	$1,379,263	$37,473,499
Nicaragua	$54,059,728	$507,712	$54,567,440
Dominican Republic	$11,605,022	$3,526,898	$15,131,920
Total	**$211,786,643**	**$15,360,449**	**$227,147,092**
NAFTA/DR-CAFTA Total	**$792,698,344**	**$746,745,948**	**$1,539,444,292**

Source: USA Trade Online (Stat-USA and Foreign Trade Division of the U.S. Census Bureau)

• The Dallas/Fort Worth area facilitates international business by offering the services of 24 foreign consulate offices and six foreign trade offices. (*Office of Texas Secretary of State*)

DFW Foreign Consulates
As of January 2007

Belgium*	Italy
Belize*	Japan*
Canada	Luxembourg*
Chile*	Mexico
Costa Rica*	Monaco*
Czech Republic	Peru*
Denmark	Spain*
Ecuador	Switzerland*
El Salvador	Taiwan*
Fiji	Thailand*
Finland	Tunisia*
France*	United Kingdom

Source: Office of the Texas Secretary of State & Individual Consulates
** Honorary Consultant*

DFW Foreign Trade Offices

Name	*Phone*
Dallas, Bahamas Tourist Office	214-560-2280
Canadian Trade Commission	214-922-9806
Mexico Trade Commission	214-688-4095
Guanajuato Trade Office	214-741-6486
Korea Trade Center of Dallas (KOTRA)	972-243-9300
Wechsler Group	972-503-3804 214-325-6261

Source: Individual Agencies

• In 2006, key components of DFW international trade included exports of specialized instruments (optical, medical and surgical) and imports of vehicles (excluding railway and tramway). The top traded DFW commodity of both imports and exports included electrical and heavy machinery along with boilers, fuel elements, reactors and parts. (*U.S.A. Trade Online*)

DFW 2006 Top 5 International Trade by Commodity

Commodity	*Total Commodity ($ Millions)*	*Value (Dollars) Imports*	*Value (Dollars) Exports*
Electric Machinery Etc; Sound Equip; TV Equip; Pts	$27,277,304,847	$18,352,649,171	$8,924,655,676
Reactors, Boilers, Machinery Etc, Parts	$12,998,664,313	$7,118,777,106	$5,879,887,207
Aircraft, Spacecraft, and Parts Thereof	$4,281,457,274	$1,146,400,766	$3,135,056,508
Optic, Photo Etc, Medic or Surgical Instruments Etc	$2,153,337,943	$894,476,338	$1,258,861,605
Special Classification Provisions, Nesoi	$1,495,974,713	$1,345,927,696	$150,047,017

Source: USA Trade Online, www.usatradeonline.gov

• DFW is home to the regional office of the U.S. Department of Commerce, the district office of the U.S. Customs Service and a regional U.S. Export Assistance Center.
• DFW has nearly 200 international organizations that offer business, cultural and educational programming. There are also 14 sister cities in the region. (*DFW International, Dallas Protocol, Fort Worth Sister Cities*)
• The Organization for International Investment ranks Texas third in the nation for the number of employees (341,200) supported by U.S. subsidiaries, which is over 4 percent of Texas' private-sector workforce. (*2006*)

DFW Top 10 Foreign-Owned Subsidiaries

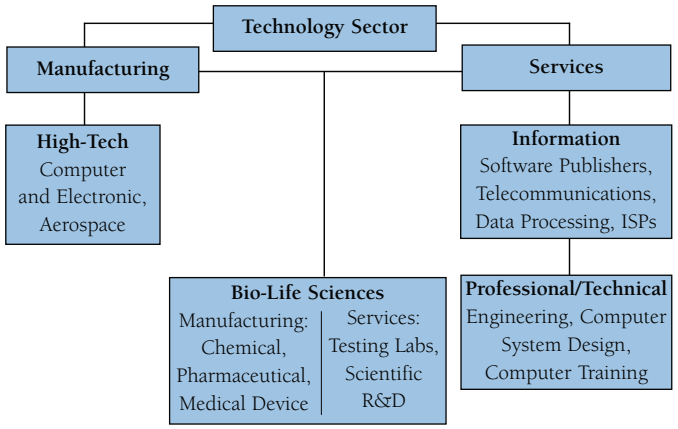
Name	*Ultimate Parent*	*Home Country*	*2006 Local Employment*
Nortel Networks	Nortel Networks Corp.	Canada	3,800
Falcon Pharmaceuticals	Nestle S.A.	Switzerland	3,000
Alcon Laboratories	Nestle S.A.	Switzerland	3,000
Alcatel	Alcatel	France	2,100
CompUSA	Grupo Carso, S.A. de C.V.	Mexico	2,000
Hanson Building Products North America	Hanson PLC	England	1,500
Cadbury Schweppes Americas Beverages	Cadbury Schweppes plc	England	1,500
STMicroelectronics Inc.	StMicroelectronics N.V.	Switzerland	1,500
Accor North America	Accor	France	1,200
Siemens Energy & Automation Inc., Postal Automation Division	Siemens AG Logistics and Assembly	Germany	1,178

Sources: Dallas Morning News 2006 Top 200, Dallas Business Journal: 2006 Book of Lists, Fort Worth Business Press: Book of Lists, and Greater Dallas Chamber 2006 Consolidated Business Survey

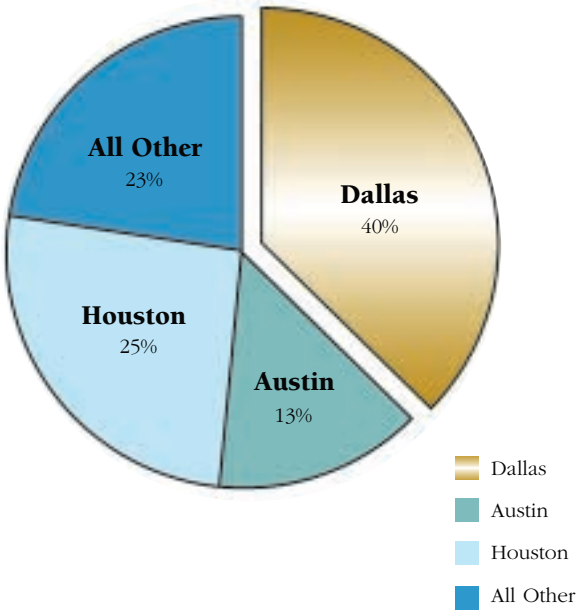
Technology

• The Information Age was born in DFW with Nobel Laureate Jack Kilby's invention of the monolithic integrated circuit—the first microchip—at Texas Instruments in 1958. (*Texas Instruments*)

• DFW's early leadership in the semiconductor industry paved the way for the area to become a world presence in telecommunications, especially with Texas Instruments' introduction of the Digital Signal Processor (DSP) in 1982. (*Texas Instruments*)
• DFW has also been particularly adept in developing key information and data processing giants, beginning with Electronic Data Systems (EDS) in 1962 and continuing with ACS and Perot Systems.
• Latest DFW data shows 14 distinct technology industries in the DFW region. Employment in these industries tops 227,350 workers, 8 percent of the region's total job count. (*Texas Workforce Commission, Quarterly Covered Employment and Wage Data*)
• The many tech industries of Dallas/Fort Worth are best characterized in four core segments: high-tech manufacturing, information activities, professional/technical services and bio-life sciences.



2006 Texas Technology Employment



Source: Texas Workforce Commission, www.tracer2.com

• *EWEEK* Magazine ranked Dallas as one of the top ten "Blooming U.S. Cities for Tech." (*June 2006*)
• The University of Texas System ranks fifth in the nation in terms of total biotech patents issued to universities. The University of California system ranks first, followed by MIT, Stanford, and CalTech. (*Federal Reserve Bank of Dallas*)
• Cyberstates 2006: A State-by-State Overview of the High Technology Industry, dubs Texas the second largest cyberstate in the nation with a total of approximately 460,000 high-tech workers. DFW accounts for nearly one-half of the state's high tech workforce. (*American Electronics Association AeA, Cyberstates*)
• Texas is ranked third for the greatest value of venture capital investments by state. (*Cyberstates, 2006*)

Health & Medicine

• The total health industry for North Texas is greater than the health industry of 31 other states (*Bureau of Labor Statistics, Current Employment Statistics*)
• DFW is a major medical center providing "state-of-the-art" health care supported by aggressive research and education programs. The average cost for a doctor's visit is $64.78. A visit to the optometrist is about $62 and a visit to the dentist will average about $71. (*ACCRA, 1st Quarter 2007*)

Health Care Costs	DFW*
Doctor ($/visit)	$64.78
Optometrist ($/visit)	$61.88
Dentist ($/visit)	$71.16

*Source: ACCRA 1st Q 2007 * Average*

• The DFW area is home to 90 hospitals, with more than 15,000 beds, and over 11,000 physicians, practicing a total of 78 specialties, this includes general and psychiatric hospitals.

DFW Top 10 Largest Hospitals

Facility	*Location*	*Active Doctor*	*Licensed beds*
Baylor University Medical Center at Dallas	Dallas	1,269	997
Parkland Health & Hospital System	Dallas	1,251	983
Presbyterian Hospital of Dallas	Dallas	1,000	866
UT Southwestern Medical Center	Dallas	2,030	702
Harris Methodist Fort Worth Hospital	Fort Worth	954	610
Medical City	Dallas	1,173	592
Baylor All Saints Medical Center at Fort Worth	Fort Worth	870	537
Methodist Dallas Medical center	Dallas	515	478
John Peter Smith Hospital	Fort Worth	400	459
Medical Center of Plano	Plano	934	427

Source: Dallas Business Journal – Book of Lists 2006
Ranked by number of licensed beds in 2004
(American Hospital Association, Texas State Board of Medical Examiners)

• Fifteen members of the National Academy of Sciences and four active Nobel Laureates are on faculty at the University of Texas Southwestern Medical Center at Dallas. (*UTSWMC*)
• The University of Texas Southwestern Medical Center of Dallas (UTSMC) ranked 17th among research medical schools and 23rd among primary care medical schools in the U.S. The Baylor College of Medicine, ranked 13th, in research and 26th in primary care was the only other Texas school named in the top 20. (*U.S. News and World Report, 2005*)
• The Dallas region is an international medical center for burns and trauma care and a leading transplant center of the Southwest. The area also has the largest single-site delivery facility in the nation. In 2006, more than 16,400 babies were born at Parkland Memorial Hospital. (*Parkland Hospital*)
• DFW ranks first in Texas in conducting major surgeries including pediatric heart surgery, percutaneous transluminal coronary angioplasty, coronary artery bypass, and carotid endarterectomy. DFW also ranks second in Texas in performing major operations such as abdominal aortic aneurysm repair and pancreatic resections. (*Texas Health Care Information Council*)
• UT Southwestern Medical Center's Southwestern Center for Minimally Invasive Surgery is one of seven facilities across the United States and Canada, and the only one in Texas, to garner first-time accreditation from the American College of Surgeons for it's $2 million training lab. (*UT Southwestern Medical Center*)
• Two DFW hospitals, Parkland Memorial and Baylor University Medical Center, are ranked among the best in the country. Parkland Memorial Hospital ranks in the top 50 in the fields of gynecology (11th) and kidney disease (43rd). Baylor registers in the fields of digestive disorders (20th), gynecology (37th), heart & heart surgery (44th), kidney disease (34th), neurology & neurosurgery (42nd), orthopedics (22nd) and rehabilitation (20th). UT Southwestern also ranked in the neurology & neurosurgery (29th) field. (*U.S. News and World Reports 2006*)

U.S. News & World Report – Top 2006 DFW Hospitals

Hospital	*Digestive Disorders*	*Endocrinology*	*Gynecology*	*Heart & Heart Surgery*	*Kidney Disease*	*Neurology & Neurosurgery*	*Orthopedics*	*Rehabilitation*
Baylor University Medical Center	20th	40th	37th	44th	34th	42nd	22nd	20th
Parkland Memorial Hospital			11th		43rd			
University of Texas Southwestern Medical Center						29th		

Source: U.S. News & World Report, July 2006

Quality of Life

Climate, Cost of Living & Housing

• The region has a mild year-round climate with an average daily low temperature of 55 degrees and an average daily high temperature of 76 degrees. (*Weatherbase*)

DFW Climate

Average Daily Temperature	*High*	*Low*
January	54	34
April	76	55
July	96	75
October	79	56
Annual Average	76	55
Weather Category	*Annual Average*	
Average No. of Clear or Partly Cloudy Days	232 Days	
Average No. of Rainy Days	79 days	
Average Precipitation	33.3 inches	
Average Snowfall	2.7 inches	
Average Wind Speed	12 mph	

Note: Based on 48 yrs. of recorded data for Dallas, TX.
Source: Weatherbase

• Dallas/Fort Worth has a low cost of living, typically several points below the national average, and considerably lower than major east and west coast cities. (*ACCRA*)

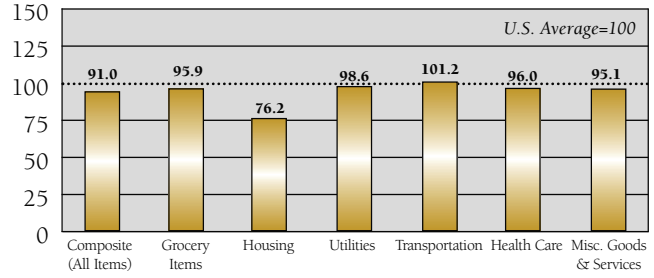
DFW Cost of Living

CONSUMER PRICE INDEX - URBAN (Base 1982-84=100)	*CPI-U 2006*	*CPI-U 2005*	*Annual Inflation*
DFW MSA	190.1	184.7	2.8%
U.S. City Average	201.6	195.3	3.1%

Source: Bureau of Labor Statistics

• ACCRA Cost of Living Index consistently reports that housing in the DFW area is one of the least expensive metropolitan markets in the nation. With a first quarter 2007 score of 76.2, local housing is 23.8 percent below the U.S. average of 100. (*ACCRA, Greater Dallas Chamber*)

DFW ACCRA Cost of Living Index
(1st Quarter 2007)



Sources: ACCRA, (American Chamber of Commerce Researchers Association), Greater Dallas Chamber
Note: DFW figures estimated as a weighted average of Dallas and Fort Worth

• The market reported occupancy at 92.8 percent in the fourth quarter of 2006, up 1 percent from the prior year. (MPF YieldStar)
• As Reported by M/PF YieldStar in fourth quarter of 2006, the average monthly rent for a two bedroom unfurnished apartment in the DFW area was $695. (*M/PF YieldStar Executive Summary, 4th Quarter 2006*)

DFW Home Sales Activity

MLS Board	*2006 Number of Sales*	*Year End Sales Price*	
		Average	*Median*
Collin County	15,753	$239,300	$193,000
Dallas Area	61,876	$209,900	$158,200
Fort Worth	11,944	$137,500	$117,700
Denton County	8,916	$196,200	$161,600
Irving	1,569	$178,600	$125,100
NE Tarrant County	9,876	$218,600	$159,500

Source: Texas A&M Real Estate Center, as of August 2007

• As reported by the Texas A&M Real Estate Center the number of homes sold in 2005 in the Dallas area was 59,471 and the average sale price was $169,800.
• New building permits for single-family homes in 2004 remained level with the same period of 2003 at just over 44,000 units. Multi-family activity, however, grew by about 24 percent, from 5,100 to 6,300 units. (*U.S Census Bureau*)

Arts, Culture, Sports and Recreation

• DFW claims two major arts districts. The Dallas Arts District, with more than 60 acres is anchored by the Dallas Museum of Art, the Morton H. Meyerson Symphony Center and the Nasher Sculpture Garden, is the largest urban arts district in the country. The Fort Worth Cultural District claims several of the top museums in the state, including the Kimball, the Amon Carter, and the Museum of Modern Art. (Arts District Friends, Fort Worth Visitors and Convention Bureau)
• Within 100 miles of DFW there are more than 400 public parks, covering nearly 23,000 acres, and more than 60 lakes and reservoirs, covering approximately 550,000 acres. (*Texas Almanac, Texas Parks & Wildlife*)
• There are approximately 150 private and municipal golf courses in the Dallas/Fort Worth area. (*Dallas and Fort Worth Convention and Visitors Bureaus and Mapsco*)
• In the Dallas metro area, cultural arts contribute more than $57.6 billion to the local economy, which is 30.3 percent of the state total. DFW is also Texas' most "arts intensive" metro area on a per capita basis, with $6,654 expended per person on cultural arts. (*The Perryman Group*).
• Beyond the two central cultural districts, DFW offers more than 175 museums and galleries, more than 50 professional and community theaters, and dozens of local symphony and chamber orchestras, ballet groups and opera associations. (*Dallas and Fort Worth Convention & Visitors Bureaus*)
• Fair Park, just southeast of downtown Dallas, is the site of the State Fair of Texas, the largest annual state fair in the United States and home to a variety of museums and theaters. It is a historic landmark with the largest collection of 1930s art deco architecture collection within the U.S. (*Dallas Convention and Visitors Bureau*)

Major DFW Art & Culture Attractions

Dallas Fair Park
Dallas Museum of Art
Fort Worth Museum of Science & History/Omni Theatre
Kimball Art Museum
Modern Art Museum of Fort Worth
Nasher Sculpture Center
Stockyards Museum
Texas Cowboy Hall of Fame
The Crow Collection of Asian Art
The Sixth Floor Museum at Dealey Plaza
The Women's Museum

• The combined economic impact on North Texas of the Texas State Fair and Texas/OU weekend is about $362 million, with each contributing $350 million and $12 million respectively. (*Marketing Research at the Dallas Convention and Visitors Bureau*)
• DFW has more shopping centers and restaurants per capita than any other United States city and metro. (*Dallas Convention and Visitors Bureau*)

Major DFW Attractions

Dallas Arboretum & Botanical Garden
Dallas Farmers Market
Dallas Galleria
Dallas Zoo
Fort Worth Stock Show & Rodeo
Fort Worth Zoo
Hurricane Harbor
Lone Star Park at Grand Prairie - Horse Racing
Mesquite Championship Rodeo
Six Flags Over Texas
State Fair of Texas
Stockyards Station
Texas Motor Speedway - Auto Racing

• DFW is home to five major league sports teams including NFL Cowboys football, NBA Mavericks basketball, MLB Rangers baseball, NHL Stars hockey, and NSL FC Dallas soccer. (*Dallas Convention and Visitors Bureau*)

DFW Professional Sports

Team	*Sport*
Dallas Cowboys	NFL
Dallas Mavericks	NBA
Dallas Stars	NHL
FC Dallas Soccer	NSL
Texas Rangers	MLB

Public and Private Schools

• Two education service regions serve Dallas/Fort Worth and surrounding counties with more than 1,800 schools in 205 independent school districts (ISDs) enrolling over 1 million students in 2004-05. (*Texas Education Agency*)

• Together Dallas and Fort Worth Independent School districts ranked fifth among the largest school districts in the nation. (*National Center for Education Statistics*)

• More than 240 accredited private and parochial schools are located in the DFW area and enroll more than 100,000 primary and secondary students. (*Texas Private School Accreditation Commission*)

• In 2005, more than 130 public schools in the Dallas/Fort Worth area were recognized as exemplary campuses by the Texas Education Agency. The TEA also recognized more than 300 schools in the DFW area for academic performance.

DFW Public School Districts
2005/2006 Regional Summary

Service Region Composition	*Region 10*	*Region 11*
Counties in Service Region[1]	*Collin, Dallas, Ellis, Kaufman, Hunt, Rockwall,* Fannin, Grayson, Van Zandt	*Denton, Hood, Johnson, Parker, Tarrant,* Cooke, Erath, Palo Pinto, Somervell, *Wise*
Total Number of Districts	114	91
Total Number of Schools	1,058	800
Student Profile		
Total Number of Students	681,520	485,670
Secondary Enrollment (Grades 9-12)	186,727 (27.4%)	136,174 (27.9%)
Career and Technology Education Enrollment	20.0%	18.2%
Gifted and Talented Program Enrollment	8.8%	9.1%
Number of Graduates (Class of 2005)	35,155	25,973
% Graduated (Class of 2005)	84.5%	86.8%
Average Class Size	19-22 students	19-25 students
Number of Students Per Teacher	15.1	15.4
Texas Assessment of Knowledge and Skills (TAKS) 7th Grade Passing Rates		
Reading	81%	83%
Math	73%	76%
Writing	90%	92%
All Tests	67%	70%
Operational Expenses (2004-2005)		
Total Operational Spending Per Pupil	$6,079	$5,948
Instructional Spending Per Pupil	$3,708	$3,622
College Admission Tests – Class of 2005		
Percent Tested	65%	66.4%
Percent At or Above Criterion	32.2%	33.7%
SAT I: Mean Total Score	1,008	1,029
ACT: Mean Composite Score	20.8	21.0

[1] *DFW Metro counties in Italics*

Sources: Texas Education Agency–Snapshot 2005 & AEIS Reports (2005-2006)

DFW FACTS

LOCATION & ACCESS: DFW is a major hub for air and ground transportation...

LOCATION

- √ The DFW Metropolitan Statistical Area (MSA) is comprised of two Metropolitan Divisions, Dallas on the east and Fort Worth on the west.
- √ DFW's central U.S. location is equally close to North America's five largest business centers: New York, Chicago, Los Angeles, Mexico City and Toronto.
- √ The region's central time zone location, one hour behind the east coast and two hours ahead of the west, extends the working day for companies doing business on both coasts.
- √ More than 50 million people can be reached from DFW overnight by truck or rail and 98 percent of the U.S. population can be reached within 48 hours. (*DFW Airport*)

AIR SERVICE

- √ Direct flight time from DFW to nearly any city in the continental U.S. takes four hours or less. (*DFW Airport*)
- √ The Dallas region is served by 12 international and 22 domestic airlines, including DFW International based American Airlines and Dallas Love Field based Southwest Airlines. (*DFW Airport*)
- √ DFW International Airport is the 3rd busiest airport in the United States has nonstop service to 168 international (35) and domestic (133) destinations. (*DFW Airport*)
- √ DFW International Airport has an annual impact on the North Texas economy of more than $14.3 billion and supports nearly 268,500 jobs. (*DFW Airport*)
- √ Dallas/Fort Worth (DFW) International Airport is the third largest in passenger activity in the world. DFW airport handled over 711,878 total operations in 2005 transporting over 818,000 tons of cargo and serving over 59 million passengers. (*DFW Airport*)
- √ DFW International Airport has almost 3 million square feet of cargo facilities on site and 18 air cargo carriers. (*DFW Airport*)
- √ Almost 65 percent of all international cargo in Texas is handled at DFW, some 818,000 tons in 2005. (*DFW Airport*)
- √ An excellence survey administered in 2005 by Air Cargo World Magazine rated DFW International Airport as the top airport in North America. Airports were rated on performance, value, facilities and operations. (*Air Cargo World, 2005*)
- √ The Capital Development Program at DFW International has invested $2.7 billion into the Airport's infrastructure over a five-year time frame. This investment will generate an additional $34 billion in economic impact on the DFW regional economy and another 77,000 new jobs over the next 15 years. (*DFW Airport*)
- √ Dallas Love Field, conveniently located three miles from downtown Dallas, is a central hub for regional business and commuter travel. The Wright Amendment of 1979 orginally limited most nonstop flights leaving Love Field to destinations within Texas and contiguous neighboring states. Additional flights were added in 1997 and 2005, and a law repealing the amendment was enacted in October 2006 that effectively removes long-haul flight restrictions on Love Field by 2014. (*Dallas Love Field*)

- √ Fort Worth Alliance Airport, located in North Tarrant County, is a major industrial airport designed to meet air cargo needs.
- √ In addition to DFW International, Love Field and Alliance Airports, the region claims 12 reliever airports in the area. (*North Central Texas Council of Governments*)

ROADWAYS

- √ Six interstate and seven other U.S. highways as well as numerous state highways serve the DFW region.
- √ The NAFTA Superhighway (IH 35) extends from the Texas-Mexico border to northern Minnesota and serves both the Fort Worth and Dallas Central Business Districts.
- √ Fort Worth Alliance Airport an industrial facility designed to handle air cargo, offers access to three major highways, including the "NAFTA" Interstate Highway 35, trunk lines to two trans-continental rail carriers and one of the largest intermodal facilities in the country. (*Fort Worth Alliance Airport*)
- √ Average commute time is 26.5 minutes in DFW. (*U.S. Census Bureau*)
- √ Known as the nation's largest inland port, DFW is a principal trucking and freight distribution center with over 600 motor/trucking carriers and 100 freight forwarders. (*North Central Texas Council of Governments*)

RAILWAYS

- √ All of the nation's largest rail lines serve DFW and coordinate with motor and truck carriers at four intermodal freight centers. (*North Central Texas Council of Governments*)
- √ Dallas is a junction point on hundreds of rail through routes. While most of the nation's railroads are regional in nature, the establishment of joint rates and routes by the carriers provides the continued movement of freight when more than one carrier is required to transport a shipment. Because of these agreements, the Dallas shipper is assured of delivery to any point in the U.S.

PUBLIC TRANSPORTATION

- √ Dallas Area Rapid Transit (DART) provides a network covering 700-square-miles in Dallas and 13 surrounding suburban communities, serving 200,000 passengers per day. (*DART*)
- √ By 2013, DART plans to have more than 90 miles of light rail and open at least 60 stations. (*DART*)
- √ The Fort Worth Transportation Authority (The "T") provides bus, rail and trolley services to a 302 square mile area. This includes the Trinity Railway Express that connects Fort Worth and downtown Dallas. (*Fort Worth Transportation Authority*)

RESIDENTS: DFW has a young, diverse and growing population and labor market...

- √ The Dallas/Fort Worth Metropolitan Statistical Area (MSA) reported 5.7 million residents in the U.S. Census 2005 American Community Survey, making it the largest metropolitan area in Texas, the fourth largest metro in the country and larger than 35 U.S. states. *(U.S. Census Bureau, U.S. Census Bureau: American Community Survey)*

- √ DFW added just under 1.2 million residents, more than 325 persons each day, between 1990 and 2000, fueling a growth rate of 29 percent. This marked the second consecutive decade in which growth bordered on 1 million or more new residents for the Metroplex. (*U.S. Census Bureau*)
- √ Only the great urban regions of Los Angeles and New York, with base populations approaching 15 to 20 million people, added more residents than DFW in the 1990s. (*U.S. Census Bureau*)
- √ Record employment expansion drove population growth in DFW in the "roaring '90s" when one-half of all new residents were either domestic or foreign migrants to the area. (*U.S. Bureaus of the Census and U.S. Bureau of Labor Statistics*)
- √ The rapid influx of residents since 1990 has created a very young and diverse population. In 2005, the median age in DFW was 32.9 compared to the U.S. average of 36 and 25.8 percent of DFW residents were Hispanic compared to 13.9 of the total U.S. population. (*U.S. Census Bureau*)
- √ Dallas is ranked as one of the top 5 cities for Hispanics and African Americans (*Hispanic Magazine*, *August 2006 & Black Enterprise Magazine, 2004*)

LOCAL ECONOMY: DFW is a focal point for economic activity all over the Southwestern United States...

- √ DFW ranked first in the nation for employment growth in the 1990s, adding a total of 760,600 net new jobs. Second ranked Atlanta was nearly 100,000 jobs behind with growth of 671,700 and the widely reported San Francisco Bay area, including San Jose, did not even break the 600,000 mark. (*U.S. Bureau of Labor Statistics*)
- √ DFW claims 26 percent of the state's population, 27 percent of the labor force, 28 percent of all wage and salary jobs and produces 33 percent of the state's total product as measured by Gross Domestic Product (GDP). (*Economy.com*)
- √ Total GDP for the DFW metro reached $285.8 billion in 2005. If DFW were a nation, its Gross Domestic Product would place it among small European countries (*United States Conference of Mayors & Global Insight & Perryman Group*)
- √ Texas is the #1 state and DFW is the #2 metro for relocations in 2005. *(Site Selection Magazine)*
- √ Business 2.0 Magazine ranked Dallas in the top 10 "Hot Cities for Job Growth". (*May 2006*)
- √ Dallas ranked among the "Best Performing Cities: Where America's Jobs are Created and Sustained" in 2005. (*Milken Institute*)
- √ Dallas Market Center (DMC), is comprised of four buildings containing 5 million square feet, making it the largest wholesale merchandise mart in the world. (*Dallas Market Center*)
- √ Trade, Transportation and Utilities is the largest employment sector in the Dallas/Fort Worth regional economy, accounting for approximately 21.7 percent of all jobs. (*U.S. Bureau of Labor Statistics*)
- √ In 2005, the Texas Workforce Commission reported 5,422 layoffs, down 50 percent from the 10,648 layoffs in 2004. (*Texas Workforce Commission, WARN Reports*)

EDUCATION, TRAINING & WORKFORCE: The DFW region is home to some of the most exclusive and high quality educational and training institutions in America, providing the area with a highly educated workforce ...

- √ DFW enrollment in both public and private 4-year institutions is over 150,000. The DFW area is home to five community college districts, several of which offer multiple campuses, enrolling just under 135,000 students. (*Texas Higher Education Coordinating Board*)
- √ Dallas/Fort Worth offers the largest number of college and high school educated residents of any metro in the state of Texas and among the highest in the nation. According to the Census Bureau, 2.9 million residents in DFW hold high school diplomas and more than one million have completed at least four years of college. (*U.S. Census Bureau, American Community Survey 2005*)
- √ DFW's public universities led key competing metro areas by substantial margins in the production of Business and Management doctorates as well as in Arts and Music PhDs. They ranked second only to Silicon Valley schools in the number of Computer Science PhDs granted in the 1990s. (*National Science Foundation as reported by SRI*)
- √ *U.S. News and World Report* (2004) ranked 7 graduate programs at local public universities among the top 50 in their fields: TWU Occupational Therapy (8th), UNT City Management & Urban Policy (#10), UTD Audiology (12th), TWU Physical Therapy (13th), UTSWMC Biology (14th), UTSWMC Medicine - Research (17th), UTD Speech Language Pathology (26th), UNTHSC Medicine - Primary Care (39th).
- √ The University of Texas Southwestern Medical Center ranks 41 among the top American Research Universities, while its faculty ranks number 50 in the nation for faculty awards. (*TheCenter 2004*)
- √ Schools exclusively devoted to higher education in the health sciences include Baylor College of Dentistry, Baylor University School of Nursing, Texas College of Osteopathic Medicine, UNT Health Science Center and the University of Southwestern Medical Center at Dallas.
- √ DFW has one of the most diverse economies in the nation, reporting between 3 and 22 percent of the workforce in each of the major industrial sectors. (*U.S. Bureau of Labor Statistics*)

BUSINESS COMMUNITY & COSTS: DFW has a favorable business climate with a pro-business attitude...

- √ Chief Executive Magazine ranked The State of Texas at the top of the list for "Best States for Business" (*Chief Executive Magazine, January 2006*)
- √ Twenty-two Fortune 500 headquarters called DFW home in 2006. (*Fortune Magazine*)
- √ Seven of the year 2006 *Global 500* companies are headquartered in the Dallas/Fort Worth area. (*Fortune Magazine*)
- √ The 2006 top 200 public and private employers in the DFW region comprise less than half of one percent of all firms (111,185) in the region, accounting for 29 percent of the region's employment or some 762,292 jobs. (*Texas Workforce Commission – Quarterly Employment & Wages* and *Greater Dallas Chamber Consolidated Business Survey*)

- √ There are over 100,000 business establishments in the Dallas/Fort Worth area and more than 1,500 regional and corporate headquarters operations. (*Texas Workforce Commission*)
- √ Dallas ranks 19th and Fort Worth ranks 20th among major metros in the nation as the best places for business and careers in 2005. (*Forbes Magazine*)
- √ Texas is a right-to-work state with approximately 6.6 percent of all workers covered by union or similar employee contracts in 2005. Dallas/Fort Worth has 5.9 percent of all area workers unionized. *(Union Membership and Coverage Database from Current Population Survey by Barry T. Hirsch and David A. Macpherson © 2005)*
- √ Dallas ranks fourth nationwide in existing office and fourth in existing industrial space in 2005. *(CB Richard Ellis)*
- √ Approximately 3.2 million square feet of multi-tenant office space was under construction in the 3rd quarter 2005. At the same time, industrial markets saw about 2.8 million square feet in construction. *(CB Richard Ellis)*
- √ DFW experienced office vacancies of 21 percent in third quarter 2005. Industrial vacancies were less than 10 percent. *(CB Richard Ellis)*
- √ Commercial rents for office and industrial space are among the most attractive in the nation for tenants. In 2006 DFW Industrial vacancy rates were only 10.4% and DFW office market vacancy rates were 17.3% (*Texas A&M Real Estate Center*)
- √ Dallas is home to a dynamic community of successful businesswomen. Between 1997 and 2004, the Center for Women's Business Research estimated that the number of privately held, 50 percent or more women-owned firms in Dallas increased by 17.7 percent, employment grew by 29.8 percent, and sales increased by 43.6 percent. (*Center for Women's Business Research*)
- √ DFW along with seven other top ten U.S. Metropolitan Areas is classified as a moderate nonattainment site for U.S. air quality standards. Los Angeles is the only metro in the U.S. classified as severe and Miami is currently the only metro in the top ten classified as marginal. (*EPA Green Book*)
- √ The Texas Water Development Board (TWDB) defined 16 regional water-planning areas in the state and established planning groups that are charged with developing regional water plans. The TWDB is required to review and update the planning area boundaries at least once every 5-years. Region C is responsible for North Texas water planning and is located in the upper portion of the Trinity River Basin, with smaller pars in the Red, Brazos, Sulphur, and Sabine River Basins. (*Texas Water Development Board – Water for Texas 2002*)
- √ Region C's 2006 water plan includes water management strategies to develop 2.7 million acre-feet per year of new supplies, for a total available supply of 4.05 million acre-feet per year by 2060. The supply is about 20 percent greater than the projected demand, leaving a reasonable reserve to provide for difficulties developing strategies in a timely manner, droughts worse than the drought of record and greater-than-expected growth. (*Region C Water Planning for North Texas – 2006 Water Plan*)
- √ The Electric Reliability Council of Texas (ERCOT) is the organization entrusted to keep electric power flowing to approximately 20 million Texas customers – representing 85 percent of the state's electric load and about 75 percent of the Texas land area. As the Independent System Operator for its region, ERCOT manages the

scheduling of power on an electric grid consisting of 70,000 megawatts of active generation capacity and 38,000 miles of transmission lines. (*ERCOT*)

- √ ERCOT worked with TXU and the Texas Municipal Power Authority to identify short-term transmission improvements for 2006 that will reduce congestion for cost savings of $19 million annually in the Dallas/Fort Worth area. (*ERCOT – 2005 Annual Report*)
- √ The backbone of the state's revenue structure is the state sales tax of 6.25 percent, which applies to the sales of tangible personal property, with exemptions for items such as grocery food, utilities, raw materials and manufacturing equipment. Municipalities in Texas may also levy in conjunction with sales tax a city sales tax of 1.00 percent and certain mass transit authorities may levy a sales tax not to exceed 1.00 percent. (*Texas Comptroller of Public Accounts*)
- √ Texas has one of the nation's lowest unemployment insurance tax liabilities. For new employers, the unemployment insurance rate is 2.7 percent for the first $9000 of gross earnings per employee per year with a maximum of $350 per employee annually. (*Texas Workers' Compensation Rate Guide, January 2006*)

INCENTIVES: Financial incentives are available for businesses in the DFW area such as tax abatements, fee rebates, enterprise zones, Freeport tax exemptions, foreign trade zones and expedited permitting…

STATE INCENTIVES

- √ Texas has no personal or corporate income tax and no state property or unitary state tax. (*Texas Comptroller of Public Accounts*)
- √ The Texas Linked Deposit Program encourages lending to historically underutilized businesses, childcare providers, non-profit corporations, and/or small or medium-sized businesses located in an Enterprise Zone. Proceeds may be used for working capital or the purchase, construction, or lease of capital assets. (*Office of the Governor – Economic Development & Tourism*)
- √ The Skills Development Fund program supports customized job-training projects for businesses and trade unions in Texas. During Fiscal Year 2005 the Texas Workforce Commission awarded 23 such grants totaling $8,562,419, which served 95 businesses, generated 3,351 new jobs and upgraded the skills of 8,896 workers in existing jobs *(Texas Workforce Commission)*
- √ Texas Legislature appropriated $40 million for Skills Development Fund grants to be used during 2005-06. *(Office of the Governor – Economic Development & Tourism)*
- √ In 2005, the Texas legislature enacted the Emerging Technology Fund (ETF) to improve research at Texas Universities, help start-up technology firms, and facilitate commercialization. Emerging technology projects are eligible for funding if they will result in the creation of high quality new jobs in Texas or have the potential to result in a medical or scientific breakthrough. (*North Texas Regional Center for Innovation and Commercialization – NTXRCIC)*
- √ The Texas Enterprise Fund can be used for infrastructure development, community development, job training programs and business incentives. To be eligible for Texas

Enterprise Fund, projects must demonstrate significant returns on the state's investment, have strong local support and unanimous support from the Governor, Lieutenant Governor and Speaker. *(Office of the Governor – Economic Development & Tourism)*

- √ The Texas Industrial Revenue Bond Program provides tax exempt financing for land and depreciable property for industrial and manufacturing projects. (*Texas Comptroller of Public Accounts*)
- √ The Economic Development and Diversification Program is a tax incentive that offers an in-state tuition waiver for family members who have relocated their company to Texas. *(Office of the Governor – Economic Development & Tourism)*

LOCAL INCENTIVES

- √ Tax abatements are offered by individual cities in DFW and are available to eligible properties to encourage businesses to invest and/or expand. Individual city taxing boards grant a taxpayer a stay of paying a tax for a short or long term, for a total or percentage of the tax. *(Office of the Governor – Economic Development & Tourism)*
- √ Texas Enterprise Zones are designated by the State of Texas as any area that has a poverty level of 20 percent or greater. The federal government also may designate enterprise zones as a renewal community. Many localities offer additional incentives within enterprise zones including tax abatements, local tax refunds, reduced utilities, and development participation. *(Office of the Governor – Economic Development & Tourism)*
- √ The Capital Access Program (Texas Capital Fund) is available to eligible cities with fewer than 50,000 residents or counties with less than 200,000 residents to assist businesses that employ low-to-moderate-income persons and consists of programs administered by the Texas Department of Agriculture. (*Office of the Governor – Economic Development & Tourism*)
- √ Cities offer the Freeport exemptions for various types of goods that are detained in Texas for short periods of time. The exemption allows products and goods to be moved through the state without incurring inventory taxes, for products held for less than 175 days. Triple Freeport exemptions, from city, county, and school district property taxes on inventory. (*Office of the Governor – Economic Development & Tourism)*
- √ DFW has four Foreign Trade Zones (FTZs) that provide duty-free or deferred payments of goods processed at plants engaged in international trade (*Foreign Trade Zone Commission)*
- √ All cities are eligible to adopt a 4B economic development sales tax that provides a wide range of funding for community development or quality of life projects. Cities located in counties of less than 500,000 residents can also adopt a 4A economic development sales tax that is restricted to fund more traditional industrial development projects. A number of cities in the DFW region have both 4A and 4B sales tax bonds, which allows cities to generate more revenue to provide funding for a broader scope of economic development projects. (*Texas Comptroller of Public Accounts*)
- √ The Texas Leverage Fund (TLF) serves as additional source of financing to communities that have adopted the development sales tax. The Fund allows communities to leverage future sales tax revenues to provide financing for industry

expansion, recruitment, industrial parks establishment, and other community projects. (*Office of the Governor – Economic Development & Tourism*)

- √ Local Government Loan Funds (chapter 380) provide legislative authority for Texas cities to provide a grant or a loan of city funds or services in order to promote economic development. DFW cities have utilized the provisions to provide a wide array of incentives that have drawn businesses and industries to locales throughout the region.
- √ Tax increment financing (TIF) is a tool authorized by Texas Tax Code that allows local governments to publicly finance infrastructure improvements within a defined area. (*Texas Tax Code*)
- √ The County Development District Sales Tax enables counties of less than 45,000 residents to create county assistance districts and to adopt local sales taxes. Eligible counties must not contain a 4A or 4B city or any transit authority territory. (*Texas Comptroller of Public Accounts*)
- √ The Rural Municipal Finance Program was created by the Texas Agricultural Finance Authority (TAFA) to improve or assist in the economic development of rural areas. Eligible applicants include city and county governments, economic development corporations, hospital districts, rail districts, utility districts, special districts, agricultural districts, and well as private water and wastewater corporations (*Texas Department of Agriculture*)

LEAD SECTORS: DFW is known globally as a center for high technology, international business & transportation and health & medicine...

INTERNATIONAL BUSINESS

- √ The Dallas/Fort Worth area facilitates international business by offering the services of 26 foreign consulate offices and 6 foreign trade offices. (*Office of Texas Secretary of State*)
- √ DFW is home to the regional office of the U.S. Department of Commerce, the district office of the U.S. Customs Service and a regional U.S. Export Assistance Center.
- √ DFW has nearly 200 international organizations that offer business, cultural and educational programming. There are also 14 sister cities in the region. (*DFW International, Dallas Protocol, Fort Worth Sister Cities*)
- √ The Organization for International Investment ranks Texas third in the nation for the number of employees (341,200) supported by U.S. subsidiaries, which is over 4 percent of Texas' private-sector workforce. (*2006*)
- √ Total world trade with DFW reached $49.6 billon in 2005, a 67% increase since the year 2001 ($29.7 billion). (*U.S.A. Trade Online*)
- √ DFW's direct trade with North American Free Trade Agreement (NAFTA) countries was $1.4 billion in 2005. (*U.S.A. Trade Online*)
- √ China was the region's top-trading partner in 2005, with total trade reaching just over $13 billion. (*U.S.A. Trade Online*)
- √ In 2005, key components of DFW international trade included exports of specialized instruments (optical, medical and surgical) and imports of vehicles (excluding railway and tramway). The top traded DFW commodity of both imports and exports included

electrical and heavy machinery along with boilers, fuel elements, reactors and parts. (*U.S.A. Trade Online*)

TECHNOLOGY

- √ The Information Age was born in DFW with Nobel Laureate Jack Kilby's invention of the monolithic integrated circuit-the first microchip-at Texas Instruments in 1958. (*Texas Instruments*)
- √ DFW's early leadership in the semiconductor industry paved the way for the area to become a world presence in the telecommunications, especially with Texas Instruments' introduction of the Digital Signal Processor (DSP) in 1982. (*Texas Instruments*)
- √ DFW has also been particularly adept in developing key information and data processing giants, beginning with Electronic Data Systems (EDS) in 1962 and continuing with ACS and the Perot Systems.
- √ Latest DFW data shows 14 distinct technology industries in the DFW region. Employment in these industries tops 225,000 workers, 8.2 percent of the region's total job count. (*Texas Workforce Commission, Quarterly Covered Employment and Wage Data*)
- √ EWEEK Magazine ranked Dallas as one of the top ten "Blooming US Cities for Tech". (*June 2006*)
- √ The University of Texas System ranks fifth in the nation in terms of total biotech patents issued to universities. The University of California system ranks first, followed by MIT, Stanford, and CalTech. (*Federal Reserve Bank of Dallas*)
- √ Cyberstates 2006: A State-by-State Overview of the High Technology Industry, dubs Texas the second largest cyberstate in the nation with a total of approximately 460,000 high-tech workers. DFW accounts for nearly one-half of the State's high tech workforce. (*American Electronics Association AeA, Cyberstates*)
- √ Texas is ranked 3rd for the greatest value of venture capital investments by state (*Cyberstates, 2006*)

HEALTH & MEDICINE

- √ The total health industry for North Texas is greater than the health industry of 31 other states. (*Bureau of Labor Statistics, Current Employment Statistics*)
- √ DFW is a major medical center providing "state-of-the-art" health care supported by aggressive research and education programs. The average cost for a doctor's visit is $68.15. A visit to the Optometrist is about $64 and a visit to the dentist will average about $68. (*ACCRA, 1st Quarter 2006*)
- √ The DFW area is home to 90 hospitals, with more than 15,000 beds, and over 11,000 physicians, practicing a total of 78 specialties, this includes general and psychiatric hospitals. (*American Hospital Association, Texas State Board of Medical Examiners*)
- √ Fifteen members of the National Academy of Sciences and four active Nobel Laureates are on faculty at the University of Texas Southwestern Medical Center at Dallas. (*UTSWMC*)
- √ The University of Texas Southwestern Medical Center of Dallas (UTSMC) ranked 17th among research medical schools and 23rd among primary care medical schools in the U.S. The Baylor College of Medicine, ranked 13th, in research and 26th in primary care

was the only other Texas school named in the top 20. (*U.S. News and World Report, 2005*)

- √ The Dallas region is an international medical center for burns and trauma care and a leading transplant center of the Southwest. The area also has the largest single-site baby delivery facility in the nation. In 2006, 16,489 babies were born at Parkland Memorial Hospital. (*Parkland Hospital*)
- √ DFW ranks first in Texas in conducting major surgeries including: pediatric heart surgery, percustaneous transluminal coronary angioplasty, coronary artery bypass, and carotid endarterectomy. DFW also ranks 2nd in Texas in performing major operations including: abdominal aortic aneurysm repair and pancreatic resections. (*Texas Health Care Information Council*)
- √ UT Southwestern Medical Center's Southwestern Center for Minimally Invasive Surgery is one of seven facilities across the United States and Canada, and the only one in Texas, to garner first-time accreditation from the American College of Surgeons for it's $2 million training lab. (*UT Southwestern Medical Center*)
- √ Two DFW Hospitals, Parkland Memorial and Baylor University Medical Center, are ranked among the best in the country. Parkland Memorial Hospital ranks in the top 50 in the fields of Gynecology (11th), Kidney Disease (43rd). Baylor registers in the fields of Digestive Disorders (20th), Gynecology (37th), Heart & Heart Surgery (44th), Kidney Disease (34th), Neurology & Neurosurgery (42nd), Orthopedics (22nd) and Rehabilitation (20th). UT Southwestern also ranked in the Neurology & Neurosurgery (29th) field. (*U.S. News and World Reports 2006*)

Quality of Life: DFW has a multitude of cultural and recreational amenities . . .

CLIMATE, COST OF LIVING & HOUSING

- √ The region has a mild year-round climate with an average daily low temperature of 55 degrees and an average daily high temperature of 76 degrees. (*Weatherbase*)
- √ Dallas/Fort Worth has a low cost of living, typically several points below the national average, and considerably lower than major east and west coast cities. (*ACCRA*)
- √ As reported by the Texas A&M Real Estate Center the number of homes sold in 2005 in the Dallas area was 59,471 and the average sale price was $169,800.
- √ The market reported occupancy at 92.7 percent in the second quarter of 2006, up 1.6 percent from the prior year. (*MPF YieldStar*)
- √ As Reported by M/PF YieldStar in 4th quarter of 2005, the average monthly rent for a 2 bedroom unfurnished apartment in the DFW area was $689. (*M/PF YieldStar Executive Summary, 4th Quarter 2005)*
- √ New building permits for single-family homes in 2004 remained level with the same period of 2003 at just over 44,000 units. Multi-family activity, however, grew by about 24 percent, from 5,100 to 6,300 units. (*U.S Census Bureau*)
- √ ACCRA Cost of Living Index consistently reports that housing in the DFW area is one of the least expensive metropolitan markets in the nation. With a first quarter 2006 score of 78.6, local housing is 21.4 percent below the U.S. average of 100. (*ACCRA, Greater Dallas Chamber*)

ARTS, CULTURE, SPORTS AND RECREATION

- √ DFW claims two major arts districts. The Dallas Arts District, with over 60 acres is anchored by the Dallas Museum of Art, the Morton H. Meyerson Symphony Center and the Nasher Sculpture Garden, is the largest urban arts district in the country. The Fort Worth Cultural District claims several of the top museums in the state, including the Kimball, the Amon Carter, and the Museum of Modern Art. (*Arts District Friends, Fort Worth Visitors and Convention Bureau*)
- √ In the Dallas metro area, cultural arts contribute over $57.6 billion to the local economy, which is 30.3 percent of the state total. DFW is also Texas' most "arts intensive" metro area on a per capita basis, with $6,654 expended per person on cultural arts. (*The Perryman Group*).
- √ Beyond the two central cultural districts, DFW offers more than 175 museums and galleries, over 50 professional and community theaters, and dozens of local symphony and chamber orchestras, ballet groups and opera associations. (*Dallas and Fort Worth Convention & Visitors Bureaus*)
- √ Within 100 miles of DFW there are more than 400 public parks, covering nearly 23,000 acres, and more than 60 lakes and reservoirs, covering approximately 550,000 acres. (*Texas Almanac, Texas Parks & Wildlife*)
- √ There are approximately 150 private and municipal golf courses in the Dallas/Fort Worth area. (*Dallas and Fort Worth Convention and Visitors Bureaus and Mapsco*)
- √ DFW is home to five major league sports teams including NFL Cowboys football, NBA Mavericks basketball, MLB Rangers baseball, NHL Stars hockey, and NSL FC Dallas soccer. (*Dallas Convention and Visitors Bureau*)
- √ Fair Park, just southeast of downtown Dallas, is the site of the State Fair of Texas, the largest annual state fair in the United States and home to a variety of museums and theaters. It is a historic landmark with the largest collection of 1930s art deco architecture collection within the U.S. (*Dallas Convention and Visitors Bureau*)
- √ The combined economic impact on North Texas of the Texas State Fair and Texas/OU weekend is about $362 million, with each contributing $350 million and $12 million respectively. (*Marketing Research at the Dallas Convention & Visitors Bureau*)
- √ DFW has more shopping centers and restaurants per capita than any other United States city and metro. (*Dallas Convention and Visitors Bureau)*

PUBLIC AND PRIVATE SCHOOLS

- √ Dallas/Fort Worth and surrounding counties are served by two Education Service Regions with more than 1,800 schools in 205 Independent School Districts (ISDs) enrolling over one million students in 2004-05. (*Texas Education Agency*)
- √ Together Dallas and Fort Worth Independent School districts ranked 5th among the largest school districts in the nation. (*National Center for Education Statistics*)
- √ Over 240 accredited private and parochial schools are located in the DFW area enroll more than 100,000 primary and secondary students. (*Texas Private School Accreditation Commission*)
- √ In 2005, over 130 public schools in the Dallas/Fort Worth area were recognized as exemplary campuses by the Texas Education Agency. The TEA also recognized over 300 schools in the DFW area for academic performance.

GREATER DALLAS CHAMBER®

DALLAS/FORT WORTH CITIES BY COUNTY

The Dallas/Fort Worth Metropolitan Statistical Area (MSA) consists of 12 counties surrounding the cities of Dallas and Fort Worth. With the U.S. Census reporting just under six million residents, the region is ranked fourth among U.S. Metro areas and one of the 50 largest metropolitan areas in the world.

Collin County
Allen
Anna
Blue Ridge
Celina
Dallas*
Fairview
Farmersville
Frisco*
Josephine
Lavon
Lowry Crossing
Lucas
McKinney
Melissa
Murphy
Nevada
New Hope
Parker
Plano*
Princeton
Prosper
Richardson*
Royse City*
Sachse*
St. Paul
Weston
Wylie*

Dallas County
Addison
Balch Springs
Carrollton*
Cedar Hill*
Cockrell Hill
Combine*
Coppell*
Dallas*
Desoto
Duncanville
Farmers Branch
Garland
Glenn Heights*
Grand Prairie*
Highland Park
Hutchins
Irving
Lancaster
Mesquite
Ovilla*
Richardson*
Rowlett*
Sachse*
Seagoville
Sunnyvale
University Park
Wilmer
Wylie*

Denton County
Argyle
Aubrey
Bartonville
Carrollton*
Clark
Coppell*
Copper Canyon
Corinth
Corral City
Crossroads
Dallas*
Denton
Double Oak
Flower Mound
Frisco*
Hackberry
Hebron
Hickory Creek
Highland Village
Justin
Krugerville
Krum
Lake Dallas
Lakewood Village
Lewisville
Lincoln Park
Little Elm
Marshall Creek
Northlake
Oak Point
Pilot Point
Plano*
Ponder
Roanoke
Sanger
Shady Shores
Southlake*
The Colony
Trophy Club
Westlake*

Delta County
Cooper
Pecan Gap*

Ellis County
Alma
Bardwell
Cedar Hill*
Ennis
Ferris
Glenn Heights*
Howard
Italy
Maypearl
Midlothian
Milford
Oak Leaf
Ovilla*
Palmer
Pecan Hill
Red Oak
Waxahachie

Hunt County
Caddo Mills
Campbell
Celeste
Commerce
Greenville
Hawk Cove
Lone Oak
Neylandville
Quinlan
West Tawakoni
Wolfe City

Johnson County
Alvarado
Briar Oaks
Burleson*
Cleburne
Cresson*
Cross Timber
Godley
Grandview
Joshua
Keene
Mansfield*
Rio Vista
Venus

Kaufman County
Combine*
Cottonwood
Crandall
Forney
Grays Prairie
Heath*
Kaufman
Mabank*
Oak Grove
Oak Ridge
Post Oak Bend
Rosser
Scurry
Talty
Terrell

Parker County
Annetta
Annetta North
Azle*
Cool
Cresson*
Hudson Oaks
Millsap
Mineral Wells*
Reno
Sanctuary
Springtown
Weatherford
Willow Park

Rockwall County
Fate
Heath*
McLendon-Chisholm
Mobile City
Rockwall
Rowlett*
Royse City*
Wylie*

Tarrant County
Arlington
Azle*
Bedford
Benbrook
Blue Mound
Burleson*
Colleyville
Crowley
Dalworthington Gardens
Edgecliff
Euless
Everman
Forest Hill
Fort Worth
Grand Prairie*
Grapevine
Haltom City
Haslet
Hurst
Keller
Kennedale
Lake Worth
Lakeside
Mansfield*
North Richland Hills
Pantego
Pelican Bay
Richland Hills
River Oaks
Saginaw
Sansom Park
Southlake*
Watauga
Westlake*
Westover Hills
Westworth Village
White Settlement

Wise County
Alvord
Aurora
Boyd
Bridgeport
Chico
Decatur
Lake Bridgeport
New Fairview
Newark
Paradise
Rhome
Runaway Bay
Sunset*

**Split Cities – Represent corporate boundaries that extend into another county.*

GREATER DALLAS CHAMBER®

MONTHLY ECONOMIC INDICATORS

TOTAL POPULATION

DFW MSA	2007	2006	%Chg
	6,233,927	6,076,152	2.6%

Sources: North Texas Council of Governments, Texas State Data Center

CIVILIAN LABOR FORCE

DFW MSA	Sep-07	Sep-06	%Chg
Unemployment Rate	4.3%	4.6%	-6.5%

Source: Federal Reserve Bank of Dallas (seasonally adjusted, benchmarked)

NONFARM WAGE & SALARY EMPLOYMENT

DFW MSA	Sep-07	Sep-06	%Chg
Total Employment	2,956,900	2,888,100	2.4%

Source: Federal Reserve Bank of Dallas (seasonally adjusted, benchmarked)

HOTEL INDUSTRY

DFW Area	Sep-07	Sep-06	%Chg
Room Rate	$104.07	$100.69	3.4%
Occupancy Rate	62.9%	65.3%	-3.7%

Source: PKF Consulting

RESIDENTIAL SALES

North Texas MLS*	Sep-07	Sep-06	%Chg
Total Sales	6,047	7,435	-18.7%
Median Sale Price	$146,500	$142,800	2.6%
Active Listings	48,968	46,966	4.3%
Inventory (mos)	6.5	6.0	8.3%

**Single family houses in the North Texas Multiple Listing Services (MLS) Sources: Texas A&M Real Estate, North Texas Real Estate Information System*

RESIDENTIAL PERMITS

DFW MSA	Sep-07	Sep-06	%Chg
Total Units	2,839	4,197	-32.4%
Single Family	1,932	2,921	-33.9%
Multi-Family	884	1,216	-27.3%

Source: U.S Census Bureau

APARTMENT RATES

DFW Area	3rd Q 07	3rd Q 06	%Chg
Occupancy Rate	94.1%	93.7%	0.4%
Average Monthly Rent	$724	$711	1.8%

Sources: M/PF YieldStar

DFW MSA - Dallas/Fort Worth Metropolitan Statistical Area includes Collin, Dallas, Delta, Denton, Ellis, Hunt, Johnson, Kaufman, Parker, Rockwall, Tarrant and Wise counties.

DFW Area - Typically includes urbanized areas of Collin, Dallas, Denton and Tarrant counties.

COMMERCIAL REAL ESTATE

DFW MSA		3rd Q 07	3rd Q 06	%Chg
Office	Occupancy	77.7%	78.3%	-0.8%
	Rent*	$18.85	$18.09	4.2%
Industrial	Occupancy	90.3%	88.3%	2.3%
	Rent*(WH/Flex)	$4.00/$6.95	$3.96/$7.01	1.0%/-6.0%

** Average asking lease rate per square foot of net leasable area.*
Source: CB Richard Ellis

INTERNATIONAL TRADE

DFW Customs District	Sep-07	Sep-06	%Chg
Imports (millions)	$2,749.93	$3,375.94	-18.5%
Exports (millions)	$1,580.07	$1,585.76	-0.4%

Source: USA Trade Online.

AIRPORT TRAFFIC

Passenger Enplanements	Sep-07	Sep-06	%Chg
Dallas Love Field	306,938	266,281	13.2%
DFW International	2,285,339	2,277,422	0.3%
MetricTons of Cargo	**Aug-07**	**Aug-06**	**%Chg**
Fort Worth Alliance	19,396	20,689	-6.2%
*DFW International	67,867	71,636	-5.3%

Sources: DFW International, Fort Worth Alliance, Dallas Love Field

**DFW International Cargo Reflects April Report*

RETAIL SALES

DFW MSA	2nd Q 07	2nd Q 06	%Chg
Retail Sales (billions)	$20.8	$20.3	2.5%

Source: Texas Comptrollor

CONSUMER PRICE INDEX - URBAN (CPI-U)

Base 1982-84=100	CPI-U Sep-07	CPI-U Sep-06	Inflation Rate
DFW MSA	194.8	191.7	1.6%
U.S. City Average	208.5	202.9	2.8%

Source: Bureau of Labor Statistics

ACCRA COST OF LIVING INDEX

Weighted average used to arrive at DFW MSA figures.

DFW MSA – 3rd Q 07	U.S. Average=100
Composite (All Items)	90.9
Grocery Items	100.2
Housing	69
Utilities	98.3
Transportation	102.6
Health Care	106.0
Misc. Goods & Services	97.9

Sources: C2ER (Council for Community and Economic Research), Greater Dallas Chamber

Note: Comparing numbers between these reports is inaccurate due to possible revisions. Please refer to the source for time series or historical data.

GREATER DALLAS CHAMBER

OUTLOOK 2007

U.S. and Texas

- ✓ U.S. economic expansion is expected to continue through 2007, though at a slower pace.
- ✓ Growth forecasts for national Real Gross Product range from 2.8 to 3.8 percent, year over year, all fractionally below expectations for this year.
- ✓ Housing markets should bottom out in 2007, with residential investment falling by 5% or more.
- ✓ Both oil and natural gas prices should continue to decline, ending the year below $60 per barrel and $7 per MMBtu, respectively.
- ✓ Inflationary expectations have lowered markedly to some 2.5 percent CPI (2.4 percent core CPI) for 2007.
- ✓ Productivity gains will likely remain modest near 2 percent.
- ✓ Employment gains should slow in 2007 to about 1.5 percent or less, somewhat loosening the very tight labor markets of 2006, and compensation growth will fall back to 4.5 percent or so.
- ✓ Both consumer spending and industrial production will decline somewhat to 3 percent or less.
- ✓ Fed funds rates have topped out at 5.25 percent in this cycle and could fall back as far as 4.75 percent in the coming year.
- ✓ Long-term rates may drift towards 5 percent but the yield curve will likely remain inverted well into the year.
- ✓ Texas will likely outperform the nation on all measures by about ½ of a percent.
- ✓ Population growth in the state will fall just below 2 percent, as will total employment gains.
- ✓ Real Gross Product in Texas could tumble by as much as 1.4 percent yet remain notably above 4 percent for the year.

2007 Projections

The Perryman Group, Nov. 2006	US	TX	DFW
	Compound Annual Growth Rates		
Population			
2005-06	1.1%	2.1%	**2.2%**
2006-07	1.0%	1.8%	**1.9%**
Employment			
2005-06	1.7%	2.7%	**2.8%**
2006-07	1.6%	1.9%	**2.0%**
Real Gross Product			
2005-06	4.0%	5.6%	**5.7%**
2006-07	3.8%	4.2%	**4.4%**

Dallas/Fort Worth

- ✓ As with the U.S. economy, DFW will continue to grow in 2007 though at a less heady pace than in 2006.
- ✓ Limited corrections in local housing markets will continue to help DFW outperform the national economy.
- ✓ Total employment gains, currently ranked among the top three metros in the nation, will show the largest drop in 2007.
- ✓ Local job growth, however, will equal or top population gains, holding unemployment rates steady.
- ✓ Real Gross Product growth is expected to reach 4.4 percent, down substantially from 2006 but well above the national rate.
- ✓ Real Product growth leaders will be found in unexpected sectors in 2007: manufacturing at 5 percent and information services at 5.5 percent.
- ✓ Finance, Insurance and Real Estate, which accounts for 1/5 of the DFW's Gross Product, will also outpace other sectors at 4.8 percent growth.

Credits: *All statements about the U.S. economy are interpretations of the National Association of Business Economists and Ray Perryman's November 2006 projections. State and local forecasts are based upon Perryman's November release exclusively.*

Lyssa Jenkens, Chief Economist, Greater Dallas Chamber, 12/1/2006

GREATER DALLAS CHAMBER®

2006 Rankings

Top Gross Domestic Product by US Metro Area

1. New York-N. New Jersey-Long Island, NY-NJ-PA
2. Los Angeles-Long Beach-Santa Ana, CA
3. Chicago-Naperville-Joliet, IL-IN-WI
4. Washington-Arlington-Alexandria, DC-VA-MD-WV
5. **Dallas/Fort Worth-Arlington, TX**
6. Philadelphia-Camden-Wilmington, PA-NJ-DE-MD
7. Boston-Cambridge-Quincy, MA-NH
8. Houston-Sugar Land-Baytown, TX
9. San Francisco-Oakland-Fremont, CA
10. Atlanta-Sandy Springs-Marietta, GA

Source: Global Insight, January 2006

Best States for Business

1. **Texas**
2. Nevada
3. North Carolina
4. Florida
5. Georgia
6. Arizona
7. Virginia
8. Illinois
9. Indiana
10. Colorado

Source: Chief Executive Magazine, January 2006

Top Metros for Business Expansion & Relocation

By 2005 Number of Projects

1. Chicago-Naperville-Joliet, IL-IN-WI
2. **Dallas/Fort Worth-Arlington, TX**
3. Houston-Baytown-Sugar Land, TX
4. Detroit-Warren-Livonia, MI
5. Atlanta-Sandy Springs-Marietta, GA
6. Cincinnati-Middletown, OH-KY-IN
7. New York-Newark-Edison, NY-NJ
8. Cleveland-Elyria-Mentor, OH
9. Charlotte-Gastonia-Concord, NC-SC
10. Minneapolis-St. Paul-Bloomington, MI-WI

Source: Site Selection Magazine, March 2006

Fast Facts

- Total Gross Domestic Product for the DFW metro reached 256 billion in 2004. If DFW were a nation, it would rank 28th in the world in Gross Domestic Product, between Indonesia and Norway. (*United States Conference of Mayors & Global Insight*)
- Twenty-two Fortune 500 headquarters called DFW home in 2006. (*Fortune Magazine*)
- DFW has no personal or corporate income tax and no state property or unitary tax. (*Texas Comptroller of Public Accounts*)
- DFW ranked 22 out of 50 large cities as the best places for entrepreneurs in the Southwest in 2005. (*Entrepreneur Magazine*)

Least Expensive Cities

U.S. Metros with Populations exceeding 1.5 Million

		Index
1.	Atlanta, GA	96.4
2.	Tampa, FL	96.5
3.	Indianapolis, IN	96.6
4.	Northern Virginia (Metro DC), VA	99.8
5.	Portland, OR	100.5
6.	Chicago, IL	100.8
7.	Phoenix, AZ	101.1
8.	**Dallas/Fort Worth-Arlington, TX**	**101.2**
9.	St. Louis, MO	101.9
10.	Providence, RI	102.4

Source: Competitive Alternatives Study – KPMG, March 2006

KPMG created the cost index figures by measuring the combined impact of 27 cost components, which may vary by location. The national average was assigned a cost index of 100.0

Fortune 500 Headquarters Ranked by Metro Area

1. New York-N. New Jersey-Long Island, NY-NJ-PA
2. Chicago-Naperville-Joliet, IL-IN-WI
3. San Francisco-Oakland-Fremont, CA
4. Houston-Sugar Land-Baytown, TX
5. **Dallas/Fort Worth-Arlington, TX**
6. Los Angeles-Long Beach-Santa Ana, CA
7. Minneapolis-St. Paul-Bloomington, MN-WI
8. Atlanta-Sandy Springs-Marietta, GA
9. Detroit-Warren-Livonia, MI
10. Philadelphia-Camden-Wilmington, PA-NJ-DE-MD

Source: Fortune Magazine, April 2006 & Greater Dallas Chamber

GREATER DALLAS CHAMBER®

2006 Rankings

Metros Ranked by Total Employment Growth

1. Phoenix
2. **Dallas/Fort Worth**
3. Greater New York
4. Washington DC
5. Houston
6. Greater Los Angeles
7. Seattle
8. Miami-Fort Lauderdale
9. Atlanta
10. Chicago

Source: Bureau of Labor Statistics, 2006

Hot Cities for Future Job Growth

Based on growth rates through 2015

1. Las Vegas
2. Orlando
3. Riverside
4. Austin
5. Phoenix
6. Jacksonville
7. Tampa
8. **Dallas/Fort Worth**
9. Charlotte
10. Atlanta

Source: Business 2.0 Magazine, May 2006

Fast Facts

- Between 1990 and 2000, DFW added 1.2 million residents, more than 325 persons each day, fueling a growth rate of 29%. (*US Census Bureau*)
- Record employment expansion drove population growth in DFW during the "roaring '90s" when half of all new residents were either domestic or foreign migrants to the area. (*US Bureau of the Census & US Bureau of Labor Statistics*)
- DFW International Airport offers over 2,000 acres of land dedicated for air cargo facilities. The Airport handles over 60 percent of all air cargo in Texas or some 818,000 tons in 2005. (*DFW Airport*)
- Total world trade with DFW reached $49.6 billion in 2005, a 67% increase since the year 2001 ($29.7 billion)
- Dallas ranks as one of the top cities for both Hispanics and African Americans. (*Hispanic Magazine, August 2006 & Black Enterprise, 2004*)

Top Cargo Airports in North America

1. **Dallas/Fort Worth, DFW**
2. Atlanta, ATL
3. Newark, EWR
4. San Francisco, SFO
5. Oakland, OAK
6. Toronto, YYZ
7. Philadelphia, PHL
8. Ontario (CA), ONT

Source: Air Cargo World Magazine, March 2006

Top 10 States with Greatest Number of "Insourcing" Jobs

		Total Insourcing Employment
1.	California	547,000
2.	New York	377,000
3.	**Texas**	**341,200**
4.	Florida	238,400
5.	Illinois	235,600
6.	Pennsylvania	225,600
7.	New Jersey	219,700
8.	Ohio	203,600
9.	Michigan	201,000
10.	North Carolina	198,000

Source: Organization for International Investment, September 2006

Top 10 DFW Trading Partners

1. China
2. South Korea
3. Japan
4. Singapore
5. Malaysia
6. Taiwan
7. Germany
8. Philippines
9. United Kingdom
10. Thailand

Source: USA Trade Online, 2005

GREATER DALLAS CHAMBER®

2006 Rankings

"Beyond the Valley 10 Blooming US Cities for Tech"

1. Seattle
2. Atlanta
3. Boston
4. Washington, DC
5. Dallas
6. Philadelphia
7. Chicago
8. Orlando
9. Los Angeles
10. Charlotte

Source: EWEEK Magazine, June 2006

Greatest Value of Venture Capital Investments by State

1. California
2. Massachusetts
3. **Texas**
4. New York
5. New Jersey
6. Washington
7. Colorado
8. North Carolina
9. Pennsylvania
10. Maryland

Source: Cyberstates 2006

Highest Number of High-Tech Establishments by State

1. California
2. **Texas**
3. Florida
4. New York
5. Illinois
6. New Jersey
7. Virginia
8. Pennsylvania
9. Massachusetts
10. Georgia

Source: Cyberstates 2006

Fast Facts

- In a state-by-state analysis, Texas ranks 2nd in total number of high-tech workers.
- The average high-tech wage in Texas is $72,335, while the average private sector wage is $39,100.
- Texas ranked twelfth in high-tech average wage.
- Texas ranks 26th in Research & Development per capita.
- High-tech firms employ 57 of every 1,000 private sector workers in Texas.
- Twenty-six percent of Texas's international exports are high-tech.

Source: Cyberstates 2006

Greatest Value of High-Tech Exports by State

1. California
2. **Texas**
3. Florida
4. New York
5. Massachusetts
6. Arizona
7. Minnesota
8. Illinois
9. Oregon
10. Tennessee

Source: Cyberstates 2006

Greatest Value of Research & Development Expenditures by State

1. California
2. Michigan
3. Massachusetts
4. **Texas**
5. New York
6. New Jersey
7. Washington
8. Illinois
9. Maryland
10. Pennsylvania

Source: Cyberstates 2006

GREATER DALLAS CHAMBER®

2006 Rankings

Top Hospitals in Texas

Based on National Ranking Percentile Index

		Index
1.	Baylor Regional Medical Center at Grapevine	99
2.	Harlingen Medical Center	98
3.	Harris Methodist HEB Hospital	98
4.	Citizens Medical Center	98
5.	Baylor Regional Medical Center at Plano	97
6.	Memorial Hermann Memorial City Hospital	95
7.	Baylor Medical Center at Garland	94
8.	Baylor Medical Center at Irving	94
9.	Harris Methodist Fort Worth	93
10.	Brackenridge Hospital	93

Source: HealthInsight, 2006 powered by US Department of Health and Human Services

Fast Facts

- DFW claims 90 hospitals, more than 15,000 beds, & over 11,000 physicians, practicing a total of 78 specialties, including general & psychiatric hospitals. (*American Hospital Association & Texas State Board of Medical Examiners*)
- Schools exclusively devoted to higher education in the health sciences include Baylor College of Dentistry, Baylor University School of Nursing, Texas College of Osteopathic Medicine, UNT Health Science Center and the University of Texas Southwestern Medical Center at Dallas.
- DFW ranks first in Texas in conducting major surgeries including pediatric heart surgery, percustaneous transluminal coronary angioplasty, coronary artery bypass, and carotid endarterectomy. DFW also ranks second in Texas in performing major operations such as abdominal aortic aneurysm repair and pancreatic resections. (*Texas Health Care Information Council*)

U.S. News & World Report - Top 2006 DFW Hospitals

Hospital	Digestive Disorders	Endocrinology	Gynecology	Heart & Heart Surgery	Kidney Disease	Neurology & Neurosurgery	Orthopedics	Rehabilitation
Baylor Medical Center	20th	40th	37th	44th	34th	42nd	22nd	20th
Parkland Memorial Hospital			11th		43rd			
UT Southwestern Medical Center						29th		

C2ER | THE COUNCIL FOR COMMUNITY AND ECONOMIC RESEARCH

PRESS RELEASE - For Immediate Release

ACCRA COST OF LIVING INDEX

Among the 290 urban areas participating in the second quarter 2007 *ACCRA Cost of Living Index*, the after-tax cost for a professional/managerial **standard of living ranged from more than twice the national average in New York (Manhattan) NY to over 20 percent below the national average in Joplin MO.** The *ACCRA Cost of Living Index* is compiled and published quarterly by C2ER – The Council for Community and Economic Research.

The Ten Most and Least Expensive Urban Areas in the ACCRA Cost of Living Index (COLI)

Second Quarter 2007
National Average for 290 Urban Areas = 100

Most Expensive			Least Expensive		
Ranking	Urban Areas	COL Index	Ranking	Urban Areas	COL Index
1	New York (Manhattan) NY	214.7	1	Joplin MO	80.0
2	San Francisco CA	169.2	2	Lancaster SC	81.9
3	Honolulu HI	161.8	3	Harlingen TX	83.6
4	Nassau County NY	157.2	4	Cookeville TN	83.8
5	Orange County CA	156.6	5	McAllen TX	83.8
6	San Jose CA	153.9	6	Douglas GA	84.0
7	New York (Queens) NY	152.4	7	Pryor Creek OK	84.2
8	Stamford CT	149.2	8	Palestine TX	85.1
9	Oakland CA	147.7	9	Salina KS	85.3
10	San Diego CA	140.6	10	Ardmore OK	85.4

The *ACCRA Cost of Living Index* measures regional differences in the cost of consumer goods and services, excluding taxes and non-consumer expenditures, for professional and managerial households in the top income quintile. It is based on more than 50,000 prices covering almost 60 different items for which prices are collected quarterly by chambers of commerce, economic development organizations or university applied economic centers in each participating urban area. Small differences should not be interpreted as showing a measurable difference.

The composite index is based on six components – housing, utilities, grocery items, transportation, health care and miscellaneous goods and services.

Where's the most expensive pizza?

Each quarter, C2ER collects more than 50,000 prices from communities across the US for the COLI. This quarter, C2ER features the communities with the most and least expensive pizza. C2ER collected data on 11'' to 12'' thin crust cheese pizza from Pizza Hut or Pizza Inn.

The Five Most and Least Expensive Places to Buy Pizza
in the ACCRA Cost of Living Index (COLI)
Second Quarter 2007
Average for 290 Urban Areas = $10.48

Most Expensive			**Least Expensive**		
Ranking	Urban Areas	Price	Ranking	Urban Areas	Price
1	Honolulu HI	$15.74	1	Manchester NH	$8.19
2	Glens Falls NY	$13.89	2	Dallas TX	$8.34
3	Gunnison CO	$13.79	3	Fort Smith AR	$8.47
4	Spokane WA	$13.49	4	Joplin MO	$8.49
5	Austin TX	$12.99	5	Brownsville TX	$8.51

A Closer Look at Manchester NH

Manchester is a new urban area that participated in the index. The overall cost of living is 15% above the national average. Here's a snapshot of prices for five selected items:

Quarter 2, 2007	**Tuna** 6 oz. can Startkist or Chicken of the Sea	**Apartment Rent** 2 Bedroom 2 baths, 950 sq. ft.	**Telephone** Residential Line	**Optometrist Visit** Full vision eye exam	**Tennis Balls** Can of three Wilson or Penn
Manchester	$0.98	$1,055.00	$29.99	$82.00	$2.25
National Average	**$0.75**	**$794.00**	**$26.08**	**$78.84**	**$2.32**

The quarterly ACCRA Cost of Living Index is available by subscription for $140 per year (print or PDF version) or $250 per year (electronic version). Send check, payable to C2ER, P.O. Box 100127, Arlington VA 22210-0407, or subscribe on the Internet at www.coli.org.

If you need additional information on the Cost of Living Index, please contact Erol Yildirim at ey@c2er.org or by phone (703) 522-4980.

#

POPULATION GROWTH 2000-2005

Top 50 U.S. Metros (> 1 Million Residents)

Rank	Metropolitan Statistical Area	Estimated 2005	Census 2000	# Change	% Change
1	New York-Northern New Jersey-Long Island, NY-NJ-PA	18,747,320	18,323,002	424,318	2.3%
2	Los Angeles-Long Beach-Santa Ana, CA	12,923,547	12,365,627	557,920	4.5%
3	Chicago-Naperville-Joliet, IL-IN-WI	9,443,356	9,098,316	345,040	3.8%
4	Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	5,823,233	5,687,147	136,086	2.4%
5	**Dallas-Fort Worth-Arlington, TX**	**5,819,475**	**5,161,544**	**657,931**	**12.7%**
6	Miami-Fort Lauderdale-Miami Beach, FL	5,422,200	5,007,564	414,636	8.3%
7	Houston-Sugar Land-Baytown, TX	5,280,077	4,715,407	564,670	12.0%
8	Washington-Arlington-Alexandria, DC-VA-MD-WV	5,214,666	4,796,183	418,483	8.7%
9	Atlanta-Sandy Springs-Marietta, GA	4,917,717	4,247,981	669,736	15.8%
10	Detroit-Warren-Livonia, MI	4,488,335	4,452,557	35,778	0.8%
11	Boston-Camebridge-Quincy, MA-NH	4,411,835	4,391,344	20,491	0.5%
12	San Francisco-Oak Land-Fermont, CA	4,152,688	4,123,740	28,948	0.7%
13	Riverside-San Bernadino-Ontario, CA	3,909,954	3,254,821	655,133	20.1%
14	Phoenix-Mesa-Scottsdale, AZ	3,865,077	3,251,876	613,201	18.9%
15	Seattle-Tacoma-Bellevue, WA	3,203,314	3,043,878	159,436	5.2%
16	Minneapolis-St. Paul-Bloomington, MN-WI	3,142,779	2,968,806	173,973	5.9%
17	San Diego-Carlsbad-San Marcos, CA	2,933,462	2,813,833	119,629	4.3%
18	St. Louis, MO-IL	2,802,450	2,721,491	80,959	3.0%
19	Baltimore-Towson, MD	2,655,675	2,552,994	102,681	4.0%
20	Tampa-St. Petersburg-Clearwater, FL	2,647,658	2,395,997	251,661	10.5%
21	Pittsburg, PA	2,386,074	2,431,087	(45,103)	-1.9%
22	Denver-Aurora, CO	2,359,994	2,157,756	202,238	9.4%
23	Cleveland-Elyria-Mentor, OH	2,126,318	2,148,143	(21,825)	-1.0%
24	Portland-Vancouver-Beaverton, OR-WA	2,095,861	1,927,881	167,980	8.7%
25	Cincinnati-Middletown, OH-KY-IN	2,070,441	2,009,632	60,809	3.0%
26	Sacramento--Arden-Arcade--Roseville, CA	2,042,283	1,796,857	245,426	13.7%
27	Kansas City, MO-KS	1,947,694	1,836,038	111,656	6.1%
28	Orlando-Kissimmee, FL	1,933,255	1,644,561	288,694	17.6%
29	San Antonio, TX	1,889,797	1,711,703	178,094	10.4%
30	San Jose-Sunnyvale-Santa Clara, CA	1,754,988	1,735,819	19,169	1.1%
31	Las Vegas-Paradise, NV	1,710,551	1,375,765	334,786	24.3%
32	Colombus, OH	1,708,625	1,612,694	95,931	5.9%
33	Virginia Beach-Norfolk-Newport News, RI-MA	1,647,346	1,576,370	70,976	4.5%
34	Indianapolis-Carmel, IN	1,640,591	1,525,104	115,487	7.6%
35	Providence-New Bedford-Fall River, RI-MA	1,622,520	1,582,997	39,523	2.5%
36	Charlotte-Gastonia-Concord, NC-SC	1,521,278	1,330,448	190,830	14.3%
37	Milwaukee-Waukesha-West Allis, WI	1,512,855	1,500,741	12,114	0.8%
38	Austin-Round Rock, TX	1,452,529	1,249,763	202,766	16.2%
39	Nashville-Davidson--Murfreesboro, TN	1,422,544	1,311,789	110,755	8.4%
40	New Orleans-Metairie-Kenner, LA	1,319,367	1,316,510	2,857	0.2%
41	Memphis, TN-MS-AR	1,260,905	1,205,204	55,701	4.6%
42	Jacksonville, FL	1,248,371	1,122,750	125,621	11.2%
43	Louisville-Jefferson County, KY-IN	1,208,452	1,161,975	46,477	4.0%
44	Hartford-West Hartford-East Hartford, CT	1,188,241	1,148,618	39,623	3.4%
45	Richmond, VA	1,175,654	1,096,957	78,697	7.2%
46	Oklahoma City, OK	156,812	1,095,421	61,391	5.6%
47	Buffalo-Niagara Falls, NY	1,147,711	1,170,111	(22,400)	-1.9%
48	Birmingham-Hoover, AL	1,090,126	1,052,238	37,888	3.6%
49	Rochester, NY	1,039,028	1,037,831	1,197	0.1%
50	Salt Lake City, UT	1,034,484	968,858	65,626	6.8%

Soruce: U.S. Census Bureau, Population Estimate Program

GREATER DALLAS CHAMBER®

Forty (40) largest U.S. Metropolitan Statistical Areas as defined by the U.S. Census Bureau, ranked by total employment growth over the most current 12-month period.

Rank	Metropolitan Statistical Area	Total Employment (000s)		Annual Change	
		Aug-07	Aug-06	#	%
1	Greater New York	8506.8	8427	79.8	0.9%
2	**Dallas-Fort Worth**	**2951.3**	**2872.5**	**78.8**	**2.7%**
3	Houston	2519	2454.6	64.4	2.6%
4	Seattle	1750	1692.4	57.6	3.4%
5	Altanta	2461	2408.1	52.9	2.2%
6	Phoenix	1945.3	1893.7	51.6	2.7%
7	Riverside	1311.8	1260.5	51.3	4.1%
8	Washington D.C.	3017.2	2969.6	47.6	1.6%
9	Chicago	4592.6	4552.3	40.3	0.9%
10	Greater Los Angeles	5626.7	5587.9	38.8	0.7%
11	Miami-Fort Lauderdale	2440.7	2403.7	37	1.5%
12	Philadelphia	2813.8	2780.8	33	1.2%
13	San Francisco	2036.8	2006.7	30.1	1.5%
14	Orlando	1107.6	1078	29.6	2.7%
15	Austin	749.6	720.1	29.5	4.1%
16	Boston	2468.9	2439.9	29	1.2%
17	St. Louis	1364.7	1343	21.7	1.6%
18	Charlotte	843.3	822.1	21.2	2.6%
19	New Orleans	504.3	486	18.3	3.8%
20	Denver	1242.8	1225.4	17.4	1.4%
21	Minneapolis- St. Paul	1807.5	1791.1	16.4	0.9%
22	Portland	1030.4	1014.9	15.5	1.5%
23	Tampa-St. Petersburg	1324.6	1309.3	15.3	1.2%
24	Indianapolis	917.2	902.3	14.9	1.7%
25	San Antonio	828.8	814.4	14.4	1.8%
26	San Jose	909.2	895.3	13.9	1.6%
27	Las Vegas	931.7	917.8	13.9	1.5%
28	Virginia Beach	784.4	771.7	12.7	1.6%
29	Milwaukee	862	849.5	12.5	1.5%
30	Sacramento	912.2	900.2	12	1.3%
31	Kansas City	1003.9	992.1	11.8	1.2%
32	San Diego	1308.5	1299.3	9.2	0.7%
33	Nashville	763.6	756.3	7.3	1.0%
34	Columbus	940.6	935.3	5.3	0.6%
35	Baltimore	1307.2	1302	5.2	0.4%
36	Pittsburgh	1136.9	1133	3.9	0.3%
37	Providence	584.8	582.5	2.3	0.4%
38	Cleveland	1079.8	1079.4	0.4	0.0%
39	Cincinnati	1044.1	1043.9	0.2	0.0%
40	Detroit	1963.6	1985.6	-22	-1.1%

Sources: U.S. Census Bureau, Bureau of Labor Statistics

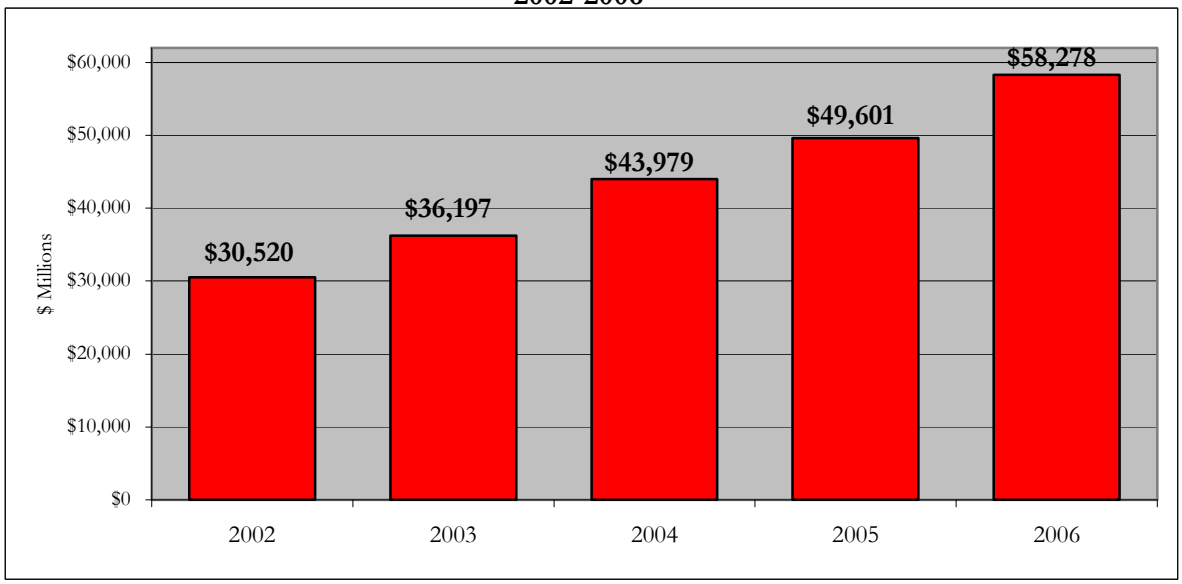
Ranked by total employment growth
Greater Dallas Chamber ©

DFW INTERNATIONAL

Fast Facts

- Total world trade with DFW reached $58.3 billion in 2006, a 91% increase since the year 2002 ($30.5 billion)
- China was the region's top-trading partner in 2006, with total trade just under $17 billion
- DFW's trade with North American Free Trade Agreement (NAFTA) countries was $1.3 billion in 2006

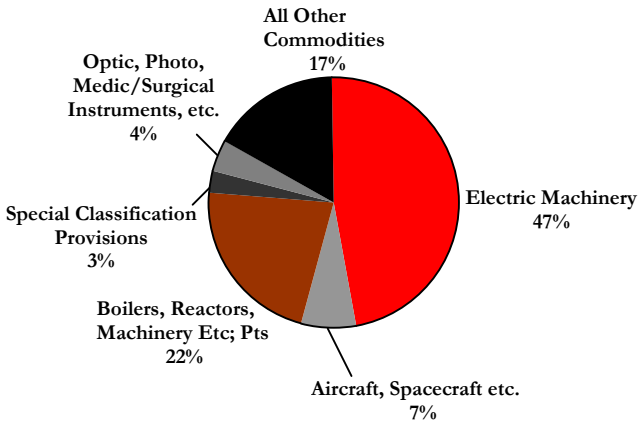
DFW TOTAL INTERNATIONAL TRADE
2002-2006



Source: USA Trade Online

The DFW region is a vibrant international business center. Gross Domestic Product (GDP) for DFW reached $284.5 billion in 2005. The region's level of GDP ranks among small European nations.

DFW 2006 International Trade by Commodity



Source: USA Trade Online

DFW 2006 International Trade

Country	Imports	Exports	Total Trade
Total Trade, All Countries	**$37,634,225,320**	**$20,644,699,167**	**$58,278,924,487**
China	$15,554,039,869	$1,416,945,288	$16,970,985,157
South Korea	$2,862,310,938	$2,113,367,306	$4,975,678,244
Malaysia	$3,889,252,907	$944,080,606	$4,883,333,513
Japan	$2,366,278,871	$1,712,360,976	$4,078,639,847
Taiwan	$1,313,176,871	$2,169,929,627	$3,483,106,498
Singapore	$1,483,837,805	$1,809,687,935	$3,293,525,740
Germany	$996,837,710	$826,284,604	$1,823,122,314
United Kingdom	$997,247,193	$767,781,650	$1,765,028,843
Philippines	$489,791,189	$1,053,479,047	$1,543,270,236
Israel	$766,009,708	$644,112,844	$1,410,122,552
Total Top 10 Trading Partners	**$30,718,783,061**	**$13,508,029,883**	**$44,226,812,944**
Top 10 Share of DFW Total	81.6%	65.4%	75.9%

Source: USA Trade Online

DFW INTERNATIONAL

Top 10 DFW Foreign-Owned Subsidiaries:

Ranked by number of local employees

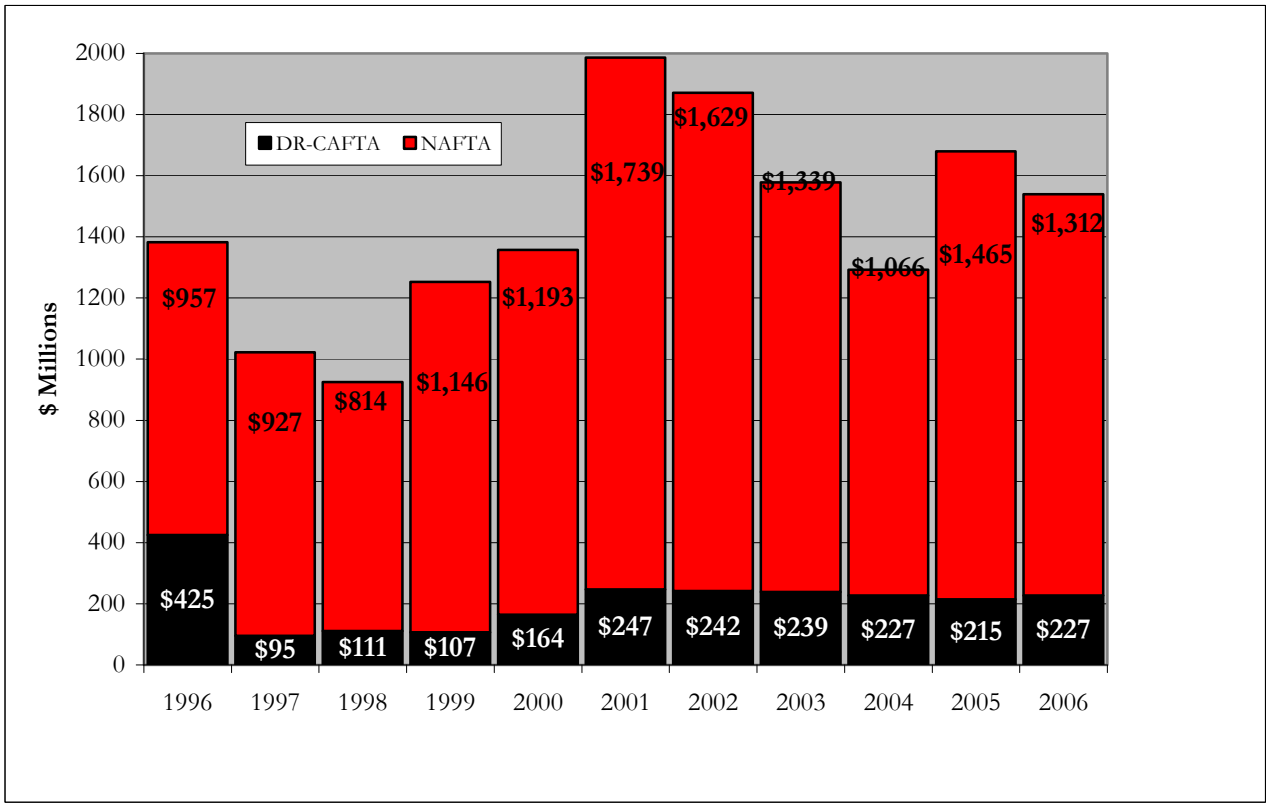
Name	Ultimate Parent Company	Parent Country	DFW Emp
Nortel Networks	Nortel Networks, Corp.	Canada	3,800
Falcon Pharmaceuticals	Nestle S.A.	Switzerland	3,000
Alcon Laboratories	Nestle S.A.	Switzerland	3,000
Alcatel	Alcatel	France	2,100
CompUSA	Grupo Carso, S.A. de C.V.	Mexico	2,000
Hanson Building Products North America	Hanson PLC	England	1,500
Cadbury Schweppes Americas Beverages	Cadbury Schweppes PLC	England	1,500
STMicroelectronics Inc.	StMicroelectronics N.V.	Switzerland	1,500
Accor North America	Accor	France	1,200
Siemens Energy & Automation Inc., Postal Automation Division	Siemens AG Logistics and Assembly	Germany	1,178

Sources: Dallas Morning News 2006 Top 200, Dallas Business Journal: 2006 Book of Lists, Fort Worth Business Press: Book of Lists, and Greater Dallas Chamber 2006 Consolidated Business Survey.

DFW direct trade with DR-CAFTA (Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, and the Dominican Republic) and NAFTA (Mexico & Canada) countries reached $1.5 billion in 2006.

Source: USA Trade Online

DFW Direct Trade with NAFTA & DR-CAFTA Countries 1996-2006

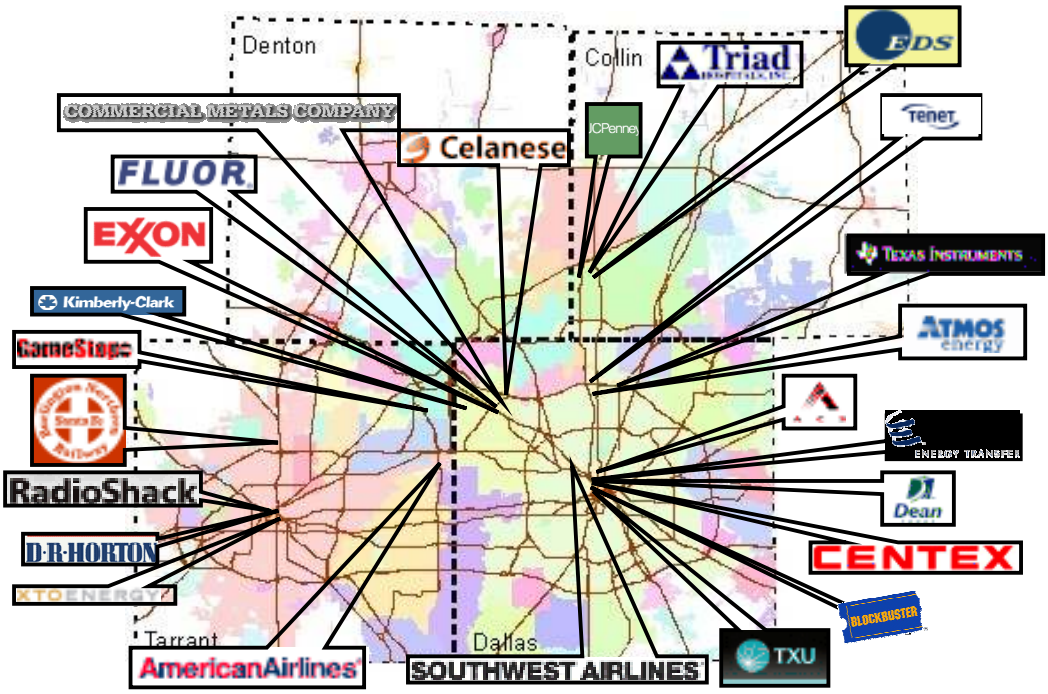


Source: USA Trade Online

DFW BUSINESS LEADERS

- The DFW region claims 24 Fortune 500 companies, 43 percent of all Fortune 500 companies in Texas.
- The DFW area has now moved ahead of Houston into the fourth position (from fifth) among US Metros with the most Fortune 500 companies located within a region.

2007 DFW FORTUNE 500



The DFW region ranks third in US metropolitan areas for revenue generated from Fortune 500 companies.

-Fortune Magazine, April 2007

DFW Rank	State Rank	Company Name	Fortune 500 Rank	Revenues ($ Millions)	City
1	1	Exxon Mobil Corp.	2	347, 254	Irving
2	9	AMR Corp./American Airlines	101	22,563	Fort Worth
3	12	Electronic Data Systems Corp.	111	21,337	Plano
4	13	J.C. Penney Company, Inc.	116	19,903	Plano
5	15	Kimberly-Clark Corp.	137	16,746	Irving
6	16	Centex Corp.	153	15,465	Dallas
7	17	D.R. Horton	155	15,051	Fort Worth
8	18	Burlington No. Santa Fe	157	14,985	Fort Worth
9	19	Texas Instruments	162	14,630	Dallas
10	20	Fluor Corp.	174	14,078	Irving
11	28	TXU Corp.	234	10,856	Dallas
12	29	Dean Foods Company	246	10,339	Dallas
13	30	Tenet Healthcare Corp.	258	9,622	Dallas
14	33	Southwest Airlines	276	9,086	Dallas
15	36	Energy Transfer Equity	306	7,859	Dallas
16	37	Commercial Metals Co.	316	7,555	Irving
17	41	Celanese	346	6,668	Dallas
18	43	Atmos Energy Corp.	372	6,152	Dallas
19	45	Blockbuster Inc.	410	5,611	Dallas
20	48	Triad Hospitals, Inc.	417	5,537	Plano
21	49	ACS	424	5,353	Dallas
22	50	GameStop	426	5,318	Grapevine
23	54	RadioShack Corp.	466	4,777	Fort Worth
24	55	XTO Energy	482	4,576	Fort Worth

Source: Fortune Magazine, April 2007

HEALTH INDUSTRY

Fast Facts

- The health industry has been the largest and fastest growing industry in the DFW area since the early 1990s. (*The Health Industry Council of the Dallas/Fort Worth Region)*
- The DFW area is home to 90 hospitals, with more than 15,000 beds, and over 11,000 physicians, practicing a total of 78 specialties. (*American Hospital Association, Texas State Board of Medical Examiners*)
- DFW ranks first in Texas in conducting major surgeries in: pediatric heart surgery, percustaneous transluminal coronary angioplasty, coronary artery bypass, and carotid endarterectomy. DFW also ranks 2nd in Texas in performing major operations including: abdominal aortic aneurysm repair and pancreatic resections. (*Texas Health Care Information Council*)
- The Dallas region is an international medical center for burns and trauma care and a leading transplant center of the Southwest. The area also has the largest single-site baby delivery facility in the nation. In 1994, more than 15,000 babies were born at Parkland Memorial Hospital. (*Parkland Hospital*)

HEALTH INDUSTRY CORE COMPONENTS

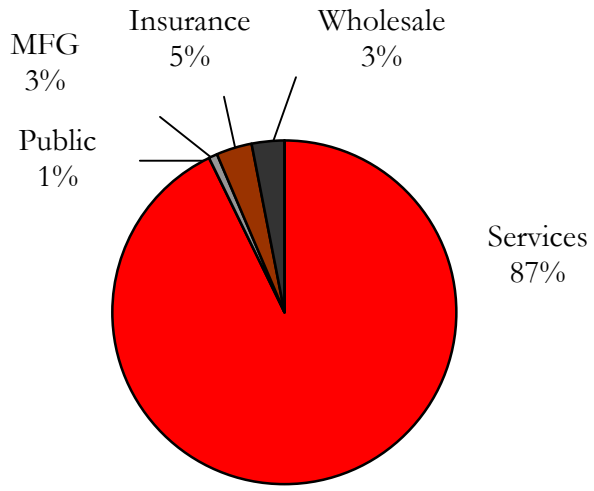
Industry Description	2006 Average Employment
Manufacturing	
Pharmaceutical & Medicine Manufacturing	3,833
Medical Equipment & Supplies	5,651
Wholesale Trade	
Drugs & Druggists' Sundries Wholesalers	8,967
Insurance	
Direct Life and Health Insurance	14,572
Health Services	
Hospitals	85,057
Nursing and Residential Care Facilities	34,621
Social Assistance	32,393
Office of Physicians	46,004
Office of Dentists	14,778
Office of other Health Practitioners	12,350
Outpatient Care Centers	5,854
Medical & Diagnostic Laboratories	5,588
Home Health Care Services	27,600
Home Equipment Rental	493
Other Ambulatory Health Care Services	9,626
Government	
Administration of Public Health Programs	2,559
Total	**309,946**

Source: Texas Workforce Commission

The total health industry for North Texas is greater than the health industry of 31 other states.

-Bureau of Labor Statistics, Current Employment Statistics (CES)

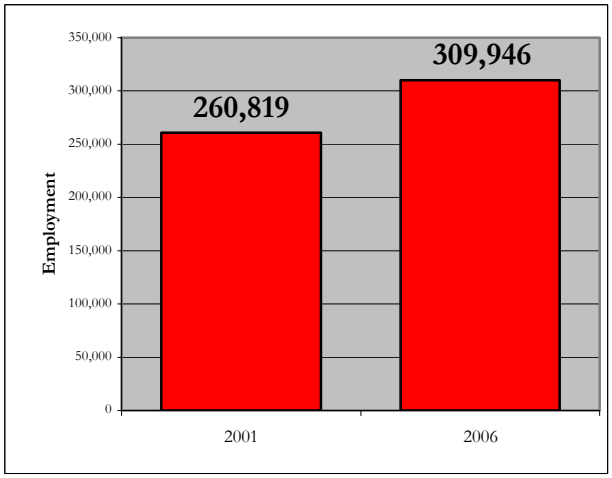
DFW Health Industry Employment Distribution



Source: Texas Workforce Commission

DFW Health Industry Employment Change

2001-2006



Source: Texas Workforce Commission

HEALTH INDUSTRY

DFW Top 10 Largest Health Industry Employers

Rank	Hospital	Beds	Emp
1	Parkland Memorial Hospital	983	7,638
2	Baylor University Medical Center	997	6,412
3	Presbyterian Hospital of Dallas	866	4,527
4	Children's Medical Center Dallas	406	3,999
5	Harris Methodist Fort Worth	610	3,845
6	Cook Children's Medical Center	282	3,650
7	John Peter Smith Hospital	459	3,268
8	Methodist Dallas Medical Center	478	2,204
9	UT Southwestern Medical Center	702	2,132
10	Medical City	592	2,233

Source: Dallas Business Journal: 2006 Book of Lists & Greater Dallas Chamber: 2006 Consolidated Business Survey

Major DFW Health Industry Education Facilities

- UT Southwestern Medical School
- UNT Health Science Center
- Baylor University School of Nursing
- Texas Women's University – Nursing
- University of Texas at Arlington-Nursing
- Texas Christian University – Nursing
- Tarrant County College – Nursing
- Dallas County Community College - Nursing
- Parker College of Chiropractic
- The Texas A&M University System Health Science Center

Major DFW Hospital Construction

Hospital Name	Status
Expansion	
Baylor University Medical Center	Under Construction
Harris Methodist Fort Worth	Under Construction
Arlington Memorial Hospital	Under Construction
Medical Center of McKinney	Under Construction
Baylor All Saints Medical Center of Fort Worth	Under Construction
Medical City Dallas	Under Construction
Denton Regional Medical Center	Under Construction
North Hills Hospital	Under Construction
Centennial Medical Center	Under Construction
Parkland Memorial Hospital	Announced
Presbyterian Hospital of Dallas	Announced
Children's Medical Center Dallas	Announced
New	
Mat-RX Hospital at Southwest Fort Worth	Announced
Richardson Regional Medical Center (New Facility)	Conceptual

Source: North Central Texas Council of Governments: Development Monitoring

Nationally Ranked DFW Hospitals

Hospital	Digestive Disorders	Endocrinology	Gynecology	Heart & Heart Surgery	Kidney Disease	Neurology & Neurosurgery	Orthopedics	Rehabilitation
Baylor Medical Center	20th	40th	37th	44th	34th	42nd	22nd	20th
Parkland Memorial Hospital			11th		43rd			
UT Southwestern Medical Center						29th		

U.S. News & World Report, 2006

Fifteen members of the National Academy of Sciences and four active Nobel Laureates are on faculty at the University of Texas Southwestern Medical Center at Dallas

-UT Southwestern Medical Center

TECHNOLOGY

DFW Technology Sector
Four Core Segments

Technology Sector

Manufacturing

High Technology – 39%
Computer and Electronic, Aerospace

Bio/Life Sciences – 6%
Manufacturing: Chemical, Pharmaceutical, Medical Device
Services: Testing Labs, Scientific R&D

Services

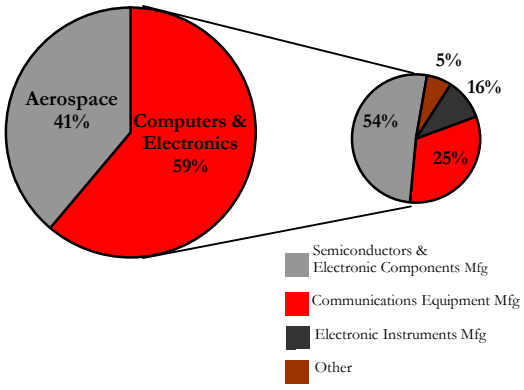
Information – 30%
Software Publishers, Telecommunications, Data Processing, ISPs

Professional/Technical – 25%
Engineering, Computer System Design, Computer Training

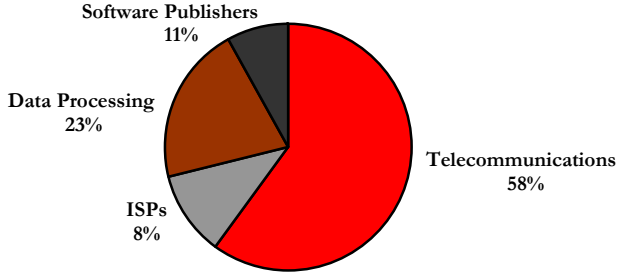
Source: 2006 Quarterly Covered Employment and Wage (QCEW)

DFW Technology Sector
Jobs by Industry

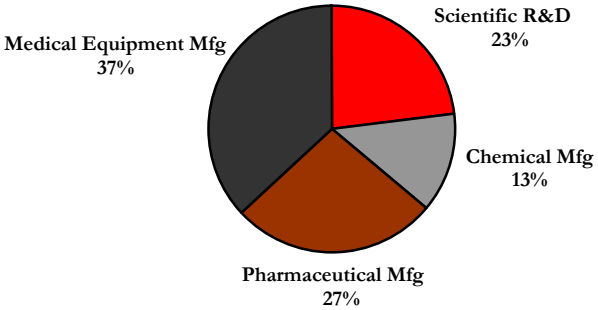
2006 DFW High Technology Manufacturing



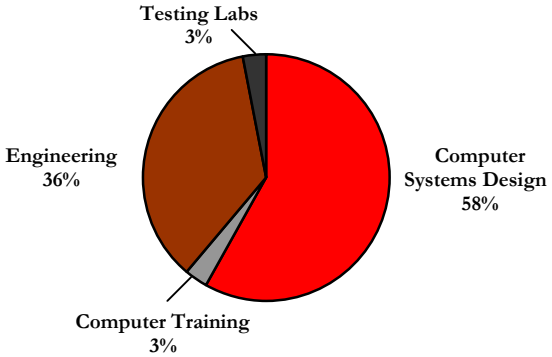
2006 DFW Information Activities



2006 Bio/Life Science



2006 DFW Professional/Technical Services



Source: Texas Workforce Commission