CESWF-OD-R

3 May 04
Pivonka/Wiese/bw/1577

MEMORANDUM FOR CESWF-OD

SUBJECT: Master Plan Supplement No. 1, Lewisville Lake Master Plan, Design Memorandum No. 1C, June 1985

1. References:

a. Chapter 2, EP 1130-2-540, 15 November 1996, Environmental Stewardship Operations and Maintenance Guidance and Procedures.

b. Chapter 2, ER 1130-2-540, 15 November 1996, Environmental Stewardship Operations and Maintenance Policies.

c. Chapter 3, ER 1130-2-550, 15 November 1996, Recreation Operations and Maintenance Policies.

d. Chapter 3, EP 1130-2-550, 15 November 1996, Recreation Operations and Maintenance Guidance and Procedures.

e. CESWF Appointment Memo #97-08, 29 April 1997, Appointment of Authorized Representative.

2. In accordance with references above, with your approval, the enclosed Master Plan Supplement will be incorporated in the Lewisville Lake Master Plan.

3. Background: Please refer to the Executive Summary and Chapter 1 of the enclosed supplement for background discussion. The significant rate of growth in the region's population has resulted in a considerable increase in the types and numbers of land use requests from various entities around the lake to utilize Federal lands. This document incorporates information about planned future recreational and other development from various entities around the lake. Proposed work items and other associated actions have been documented in a series of NEPA actions that are explained in the Executive Summary.

4. Purpose and Objectives: For a complete description of the purpose and objectives of this supplement, refer to Chapter 1, paragraph 1-02. The major purposes served by this document are:

a. Update of a Facilities Development Plan

b. Update of the Land Use Allocation Plan

c. Update Natural Resources Mitigation

d. Develop Common Utility Corridors.

CESWF-OD-R
SUBJECT: Master Plan Supplement No. 1, Lewisville Lake Master Plan, Design Memorandum No. 1C, June 1985

5. Staffing: Recommend review and concurrence by the following staff elements and approval by Chief, Operations Division.

Encl

WILLIAM H. COLLINS
Chief, Natural Resources
and Recreation Branch

CESWF-OD-EF concur (✓) nonconcur ( ) Date 12 May 04

CESWF-RE-M concur (✓) nonconcur ( ) Date 17 MAY 04

CESWF-RE concur (✓) nonconcur ( ) Date 17 May 04

CESWF-OD Approved (✓) Disapproved ( ) Date 5-19-04

KENNETH M. HOWELL
Chief, Operations Division

CF (w/encl):
CESWF-RE-M
CESWD-CMO-R
CECW-CO
CESWF-OD-EF

TRINITY RIVER BASIN, TEXAS
SUPPLEMENT #1 TO DESIGN MEMORANDUM NO. 1C

MASTER PLAN
FOR
LEWISVILLE LAKE
ELM FORK, TRINITY RIVER, TEXAS

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EXECUTIVE SUMMARY

This document is intended to supplement the most recent version of the Lewisville Lake Master Plan, Design Memorandum No. 1C, that was published in June 1985. Due to the increase of the conservation pool elevation at Lewisville Lake in 1988 as a result of construction of Ray Roberts Lake and the tremendous growth in the region's population in recent years, there has been a considerable increase in the variety and number of requests from entities around the lake desiring to utilize Federal lands. These factors put pressure on the U.S. Army Corps of Engineers (USACE) to reevaluate and supplement the current Lewisville Lake Master Plan. Supplementation of the current Master Plan requires consideration of the cumulative environmental effects of the proposed activities in accordance with the provisions set forth in the National Environmental Policy Act (NEPA) and other pertinent implementing regulations.

NEPA is the primary legislation which sets forth the regulations for the consideration of environmental consequences in the decision-making process of proposed major Federal actions. Title II of this act created the Council on Environmental Quality (CEQ) in 1978. The CEQ issued regulations (40 CFR Parts 1500-1508), which established statutes for implementing the provisions of NEPA. Although an Environmental Assessment (EA) or Environmental Impact Statement (EIS) may be required for an individual action by a Federal agency, where Federal programs involve a multiplicity of individual projects, the CEQ has endorsed the concept of a Programmatic Environmental Assessment (PEA). The Lewisville Lake PEA was completed August 1999. An additional Environmental Assessment (EA) for the Water-Related Recreation Development, dated July 2000 was tiered to the PEA and summarized the results of the carrying capacity for Lewisville Lake. The conclusions of the study found a Finding of No Significant Impact (FONSI) and was signed 20 December 2000. This EA established the boat carrying capacity for the Lake.

Additionally another tier to the PEA was added, entitled Environmental Assessment-Master Plan Supplement at Lewisville Lake, Denton County, Texas dated September 2001. This EA addressed the land use classification changes and the establishment of utility corridors. The EA resulted in a Finding of No Significant Impact (FONSI) and was signed 6 December 2001.

This document contains supplements to sections of the 1985 Master Plan pertaining to natural resources and mitigation, facilities development plans, and land use allocations, with corresponding plates illustrating changes. The Table of Contents sequencing refers to the 1985 Master Plan Document.

CHAPTER 1
INTRODUCTION

1-01 BACKGROUND

The city of Dallas constructed the original lake, Lake Dallas, in the 1920s. The Garza Dam on the Elm Fork of the Trinity River was completed in 1927 and water storage began in 1928. The original dam was 10,890 feet long and was of earthen dike construction, protected on the upstream face with stone paving. The north dike was 5,240 feet long and the south dike was 5,083 feet long, separated by a 567-feet long service spillway. The height of the dam was approximately 50 feet and was set at an elevation of 540 feet above mean sea level (msl). Normal pool elevation was 515 feet above msl. The top width of the dam was approximately 24 feet. Because the water storage capacity of the original Lake Dallas was reduced significantly by siltation, the USACE began construction of the Lewisville Dam in 1948. Lewisville Lake was created by the completion of Lewisville Dam in 1955. The 28,980-acre lake serves to fulfill a variety of local and regional needs. The lake, which is operated and maintained by the USACE, is one of 25 lakes under the supervision of the District Engineer, USACE, Fort Worth District. The Lewisville Lake dam is 32,888 feet long and is constructed of selected soils placed in six-inch compacted layers. The top of the dam is 125 feet above the original streambed. During dam construction, a 16-foot diameter flood release conduit and two 60-inch municipal water supply release conduits were installed. Gates are located at the opening to each conduit to allow controlled releases of water.

The primary purposes of the lake are flood control and water conservation. Associated purposes include fish and wildlife management, recreation, and hydroelectric power generation. The operation of Lewisville Lake was modified in 1988 as part of the construction of Ray Roberts Lake, upstream of Lewisville Lake, resulting in a permanent increase of the conservation pool elevation from 515 feet above msl to the current 522 feet above msl.

The USACE has responsibilities pursuant to Federal laws to preserve, maintain, manage, and develop the project lands, waters, and associated resources consistent with these laws. The USACE accomplishes these requirements through the development of Master Plans for USACE reservoirs such as Lewisville Lake. The master plan is the basic document providing this direction and authority for project development and use. As such, it is a vital tool for the responsible stewardship of project resources. According to the enacting regulation for master plan development, Engineering Regulation (ER) 1130-2-550, a master plan must incorporate environmental considerations and focus on three primary components: (1) regional and ecosystem needs, (2) project resource capabilities and suitability, and (3) expressed public interests and desires. Specific guidance for implementing this regulation is contained in EP 1130-2-550. This guidance calls for periodic reevaluation of lake master plans by an interdisciplinary team to assess the extent to which the document serves its intended purpose, is up-to-date, is responsive to current and foreseeable regional needs, public interests and desires, and communicates direction and intent for use by project management personnel and provides for supplementation of master plans in need of only minor revisions and modifications.

The tremendous growth in the region's population in recent years has resulted in a

considerable increase in the types and numbers of land use requests from entities around the lake to utilize Federal lands. These requests have put pressure on the USACE to reevaluate and supplement the current Lewisville Lake Master Plan. The Master Plan, dated 1985 was prepared in anticipation for the increased conservation pool from 515 to 522 MSL due to the construction of Ray Roberts Lake.

1-02 PURPOSE AND OBJECTIVES

The USACE has determined a need to supplement the Lewisville Lake Master Plan, Design Memorandum No. 1C, June 1985 to accomplish the following objectives.

a. Update Facilities Development Plan. Update exhibits in Section 7 of the Lewisville Lake Master Plan, Design Memorandum No. 1C, June 1985, in accordance with the proposed facility development plans in the Lewisville Lake Programmatic Environmental Assessment – Resource Document. The updates will include both the current activity and land use at each park indicating the proposed and future development. Text, as proposed by participants in the Lewisville Lake Programmatic Environmental Assessment, will be used to update the descriptions for each facility.

b. Update Land Use Allocation Plan. Update Land use allocation plans in Section 6 of the Lewisville Lake Master Plan, Design Memorandum No. 1C, June 1985, according to appropriate land use classifications, and update corresponding plates. Land use categories are to be coded by color on the plates. The Geographic Information System program, ArcView 3.2, was used to accomplish this task.

c. Update Natural Resources (Mitigation). Update Section 2 of the Lewisville Lake Master Plan, Design Memorandum No. 1C, June 1985, with the mitigation plan as defined in the Lewisville Lake Programmatic Environmental Assessment (dated August 1999).

d. Develop Common Utility Corridors. Develop common utility corridors that use existing/approved corridors (i.e., bridge crossings) to accommodate utility lines.

This change to the Lewisville Lake Master Plan, Design Memorandum No. 1C, June 1985, provides guidance in the direction and authority for project development and use. **Table 1-1** lists the pages from this Supplement which correspond to existing pages within the1985 master plan.

TABLE 1-1
SUPPLEMENT PAGES AND PLATES FOR THE LEWISVILLE LAKE MASTER PLAN

CHAPTER	1985 MASTER PLAN PAGES	SUPPLEMENT PAGES
2	---	II-7a thru II-7d
6	VI thru VI-12	VI-13 thru VI-24
6	Plate 6-1	Plates 6-3 thru 6-4
7	VII-1 thru VII-94	VII-1 thru VII-68
7	Plates 7-1 thru 7-20	Plates 7-1a thru 7-20c

CHAPTER 2
MITIGATION

2-17 INTRODUCTION

The information in this chapter is intended to serve as a supplement to Chapter 2 of the Lewisville Lake Master Plan, Design Memorandum No. 1C, June 1985. This chapter includes guidelines for minimizing impacts to the natural environment at Lewisville Lake.

2-18 MITIGATION

a. General. The Council on Environmental Quality (CEQ) has defined mitigation in its regulations at 40 CFR 1508.20 to include: avoiding impacts, minimizing impacts, rectifying impacts, reducing impacts over time, and compensating for impacts. Section 404(b)(1) Guidelines under the Clean Water Act establish environmental criteria, which must be met for activities to be permitted under Section 404. The types of mitigation enumerated by CEQ are compatible with the requirements of the Guidelines; however, as a practical matter, they can be combined to form three general types: avoidance, minimization, and compensatory mitigation.

All development projects should strive to avoid impacts to the natural environment including wetlands and sensitive habitat. Where impacts cannot be avoided, the project should be designed to minimize adverse impacts to the maximum extent practicable. Finally, where impacts remain after all avoidance and minimization efforts have been implemented, compensatory mitigation should be undertaken. Mitigation ratios presented in section 2-18 of this supplement were deemed acceptable at the time of this publication. These mitigation ratios are based on previous projects involving mitigation, and it is anticipated that these ratios will continue to be used, however, actions occurring on the project property are subject to review by other agencies which could result in different mitigation ratios.

On requests that result in mitigation, the applicant would be required to provide an annual report by a qualified specialist (a wildlife biologist, ecologist, forester, range scientist, landscape architect, or other specialist in natural resource mitigation) to the USACE documenting the results of the implementation of the proposed action. This report would include; but would not be limited to, the condition of the mitigation measure enacted, a survivability analysis, condition and assessment of best management practices utilized, and the compliance with any other terms and conditions of the Real Estate Instrument. Any non-compliance issues reported would be accompanied with a written plan and timeline to ensure the USACE that compliance would be immediately initiated.

(1) Utility Corridors. There are numerous utility lines (e.g., electrical, water and sewer) being proposed and existing around the lake, many of which would and do cross the lake, and it is anticipated that numerous others would be proposed in the future. Permanent utility easements of appropriate widths are established at strategic locations either on or adjacent to existing easements at Lewisville Lake (see chapter 6, section 6-05 of this supplement). These corridors should be utilized to place as many utilities within these easements as possible, thus

(2) reducing environmental impacts to these corridors and minimizing future fragmentation of the natural resources. All natural resources impacts would be either avoided, minimized, or require compensatory mitigation per Sections 6-18 a. (3) wetlands and 6-18 a. (4) vegetation/habitat impact. These future requests would also require the applicant to provide all required Federal and state permits as part of their submittals.

These corridors have been coordinated with the appropriate regulatory agencies and are mapped in Plate 6-3, Sheets 1 - 5. Placement of future utilities within these corridors would then be reviewed for consideration for a categorical exclusion "Real Estate grants for rights of way which involve only minor disturbances to earth air or water." Changes of environmental laws and regulations or additions to the endangered species list affecting these lands may require additional environmental review.

(2) Water Quality. The USACE water quality objectives will be achieved by requiring applicants to include in their final design plans best management practices (BMP's) including silt fence, rock check dams, detention basins, retention basins, velocity dissipaters, infiltration devices, etc. Properly designed and implemented, these practices reduce the levels of sediments, nutrients, heavy metals, toxic materials, floatable materials, oil and grease, etc.

Structural BMP's are considered to be "end of pipe" or treatment BMP's. These management practices include wet ponds, vegetated treatment ponds, vegetated swales and strips, detention basins, media filtration, oil/water separators, and infiltration devices. No single BMP would provide complete surface runoff treatment, however, a combination of these BMP's would effectively reduce or eliminate these target constituents prior to release into receiving waters. Wet ponds provide a high level of particulate and some dissolved contaminant removal. Wet ponds are typically designed to detain water for a period of 14 days to achieve maximum contaminant removal. Vegetated treatment ponds provide similar treatment to wet ponds, however, they can provide more effective removal of nutrients and oxygen demanding substances depending on the vegetation selected for the pond. Vegetated swales and strips provide treatment effectiveness similar to wet ponds, however, they require less area within a development and do not hold water for extended periods of time. Detention basins provide effective treatment and are especially effective with regards to removal of sediments and floatables (including oils) from surface runoff. These detention basins are designed such that they are dry between storm events and drain down over a period of 24 to 40 hours following a storm event. Media filtration consists of a settling basin followed by a filter. The most common filter media is sand, however, some filters may also use a sand/peat mixture. This treatment control specifically removes sediments, floatable materials, and oxygen demanding substances. Oil/water separators specifically remove petroleum compounds and grease that will be required for all roadways and parking lots draining into a waterway. As a side benefit of their design, they are also effective at removing floatables from surface runoff. Infiltration systems are applied with the intention of recharging ground water reserves utilizing surface water runoff. Infiltration systems include: ponds, vaults, trenches, dry wells, porous pavement, and concrete grids. (Source: BMP Manual Storm Water Quality Best

Management Practices for Industrial Activities, North Central Texas Council of Governments).

BMPs can also include a variety of activities and design practices. Alteration of common design and daily activities to promote an awareness of their possible impacts on receiving waters are considered source control BMP's. These source control BMP's consist of basic design considerations when developing a site and operational methods when performing everyday tasks on a site. Examples of source control BMP's include recognizing that only surface runoff from areas not likely to be contaminated should be routed to receiving creeks and lakes. Surface runoff likely to have been contaminated should be treated prior to release either through a wastewater treatment plant or an oil and water separator. This applies to interior floor drains, vehicle and equipment fueling, washing, cleaning, maintenance, repair, storage areas, parking lots and roadways. The type of materials to be stored should be considered when determining where it should be stored. The location of waste bins based on the types of waste to be handled should also be considered. Awareness programs implemented by property owners that inform people of issues such as storm drains that are directly connected to creeks and lakes are also considered to be source control BMP's. These BMP's control point source pollution at their origin. This management practice is considered to be very effective in point source control. Parties owning NPDES discharges to the lake shall be responsible for normal maintenance and clearing of BMP's to ensure proper operation.

The BMP manual, "Storm Water Quality Best Management Practices for Industrial Activities," produced and distributed by the North Central Texas Council of Governments should be referenced for removal efficiencies and design constraints associated with each management practice. These methods are also effective in reducing peak flows, delaying time of concentration and maintaining the pre-development flow regime in receiving waters. Application of these BMP's would also be required at points where concentrated flows from off-site developments discharge onto Lewisville Lake fee and flowage easement lands.

During construction and subsequent operation, water surface and subsurface structures may constrict floodwaters resulting in increased flow velocities and the potential increase in scour and erosion immediately downstream. These adverse impacts will be minimized by requiring that flow velocities remain at predevelopment levels or per the FEMA's guidelines for channel modification resulting in a flow of less than 5 feet per second.

(3) Wetlands. The wetland compensatory mitigation table shown on Table 2-15 provides typical recommended USACE mitigation ratios for guidance purposes only. Each project will be assessed individually and final wetland mitigation ratios may vary up or down. Each applicant will be required to monitor the mitigation site for a typical duration of 2 to 3 years to ensure the specified success rate, which is typically 80 percent. However, as with final wetland mitigation ratios, actual monitoring duration and success rates may also vary. Mitigation ratios could be

further modified for on-site/in-kind versus off-site/out-of-kind. The latter could result in a higher mitigation ratio.

Table 2-15

Typical Compensatory Mitigation Ratios for Loss of Jurisdictional Waters

Class			Wetlands	
Conditions	Open Water	Stream	Non-Forested	Forested
Low	1:1	2:1	3:1	4:1
Medium	2:1	3:1	4:1	5:1
High	3:1	4:1	5:1	6:1

(4) Vegetation/Habitat. The vegetation/habitat mitigation shown on Table 2-16 provides an example, for guidance purposes only, of typical USACE compensatory mitigation ratios. This table is provided to show an example of mitigation ratios considering habitat condition in relationship to the lake flood frequencies. Each project will be assessed individually and final habitat mitigation ratios may vary up or down. For example, mature bottomland hardwoods are often given a resource category 2 habitat designation by the USFWS with a mitigation goal of "no net loss" of in-kind habitat value. Therefore, if impacts are not avoidable, the USFWS could potentially require higher mitigation values. Each applicant will be required to monitor the mitigation site for a typical duration of 2 to 5 years to ensure the specified success rate, which is typically 80 percent. However, as with final habitat mitigation ratios, actual monitoring duration and success rate may also vary. Mitigation ratios could be further modified for on-site/in-kind versus off-site/out-of-kind. The latter could result in a higher mitigation ratio.

Table 2-16
Typical Compensatory Mitigation Ratios for Loss of Vegetation/Habitat

Flood Event Frequencies	Vegetation/Habitat Condition		
	Poor	Good	Excellent
< 5 Year (528' msl)	1:1	2:1	3:1
5 -10 Year (530.8' msl)	2:1	3:1	4:1
10 - 50 Year (535.2' msl)	3:1	4:1	5:1
50 - 100 Year (537' msl)	4:1	5:1	6:1

CHAPTER 6
LAND USE ALLOCATION PLAN

6-01 INTRODUCTION

The information presented in this chapter is intended to serve as a supplement to Chapter 6 of the Lewisville Lake Master Plan, Design Memorandum No. 1C, June 1985. This chapter sets forth classification of project lands, and resource use objectives for Lewisville Lake in accordance with EP 1130-2-550. Resource use objectives are defined as objectives to guide future design, development and management of the resource base, natural and man-made, to obtain the greatest possible benefit through meeting the needs of the public and protecting and enhancing environmental quality. The primary focus of these resource use objectives is to insure incorporation of the USACE environmental stewardship mission in the future management and development of Lewisville Lake.

6-02 ALLOCATION OF PROJECT LANDS

Project fee lands totaling 16,843 acres are classified within the overall land use allocation/classification system prescribed in EP 1130-2-550 and as defined below. Table 6-1 presents a summary of land use allocation acreages. Plate 6-1 (sheets 1 through 5) depicts the overall land use allocation/classification system.

A. Parks and Recreation. Facilities have been or will be provided to accommodate the recreation needs of visitors in concentrated numbers including adjacent or associated lands without facilities as required for open space purposes to make a whole and desirable recreation unit. Private or long-term exclusive group use of these lands will be discouraged. Management practices leading to habitat improvement for the benefit of wildlife are encouraged. No licenses, permits or easements will be issued for such non-compatible man-made intrusions as underground or exposed pipelines, cables, overhead transmission lines, or non-project roads. Exceptions to this restriction may be made where necessary to serve a demonstrated public need in those instances where no reasonable alternative is available. No hunting or agricultural uses are permitted on this land.

   Future intensive recreation use classifications have been assigned to areas where such use is planned. These lands should be managed in the interim for low-density recreation/fish and wildlife management purposes.

B. Fish and Wildlife Management. Fish and wildlife management lands are designated as habitat for fish and wildlife or for propagation of such species and where fish and wildlife habitat maintenance or improvement is appropriate. Private or exclusive group use of these lands will not be permitted. Vehicles will not be allowed, nor any structures not directly related to access or control of access through the area. Licenses, permits or easements will not be issued for such man-made intrusions as underground or exposed pipelines, cables, overhead transmission lines, or non-project roads. Such requests may be granted within the common utility corridors to alleviate the fracturing of fish and wildlife habitat. Fish and wildlife management lands are generally available for selected low-density recreation activities such as hiking, hunting, fishing, nature study, nature photography, wildlife observation, and

other related activities. Public access to wildlife management lands may be restricted at certain critical periods when wildlife would otherwise be adversely affected, such as during critical breeding, nesting and spawning periods. Wildlife habitat improvements that exceed the natural capability of the land are not permissible offsets. Exceptions to this restriction may be made where necessary to serve a demonstrated public need in those instances where no reasonable alternative is available.

1) Common Utility Corridors. Utility corridors are defined as areas where utilities could be or have been placed. These corridors were designed to be as unobtrusive as possible on surrounding habitat and to follow existing roads or utility easements where possible. There are numerous utility lines (e.g., electrical, water and sewer) existing and being proposed around the lake, many of which would and do cross the lake, and it is anticipated that numerous others would be proposed in the future. Permanent corridors at strategic locations either on or adjacent to existing easements at Lewisville Lake were established so that future utilities may be placed in these corridors, thus reducing environmental impacts and minimizing future fragmentation of the natural resources. All natural resources impacts would be either avoided, minimized or require compensatory mitigation per the guidelines outlined in Sections 2-17 (3) wetlands and 2-17 (4) vegetation/habitat of this supplement. Future requests will require the applicant to provide all required Federal and state permits as part of their submittals. All future requests for utility easements should try to utilize these proposed corridors whenever possible. Any future utility easements that fall outside these corridors would be examined on an individual basis and would require additional NEPA review. Future changes to environmental laws and regulations, or additions to the endangered species list affecting these lands may require additional environmental review.

2) Environmentally Sensitive Areas (ESA). ESA are lands having scientific, ecological, cultural, archaeological, historical, paleontological resources or aesthetic features. These lands are managed to preserve and protect rare, unique, or sensitive species of flora and fauna. These areas include:

    i. mature, native vegetation in a climax or near climax status;
    ii. vegetation exhibiting rich species diversity;
    iii. areas valued for resting, nesting, feeding or roosting for important and sensitive wildlife species;
    iv. areas with aesthetic function (i.e., visual buffer, wildflower viewing area);
    v. areas which serve an important water quality function.

    These areas must be considered by management to ensure the sensitive areas are not adversely impacted. Limited or no development of public use is contemplated on land in this classification. Vehicles are not allowed, nor are structures not directly related to access or control of access through the area. No licenses, permits, or easements will be issued for such non-compatible man-made intrusions such as underground or exposed pipelines, cables, overhead transmission lines, non-project roads, etc. Pedestrian access for

hunting and fishing is appropriate use as well as low impact trail use by hikers and equestrian users.

C. Project Operations. Lands designated to provide for safe, efficient operation of the project for those authorized purposes other than recreation and fish and wildlife. This includes, but is not limited to, the land on which project operational structures are located in Table 6-1.

Table 6-1
Summary of Land Use Allocations

Land Use Allocations	Acres
Recreation	8,935
Fish and Wildlife Management	6,738
Project Operation	1,170
Total Fee Lands	16,843
Flowage Easement	5,213
Conservation Easement	500
Total Easement Lands	5,713

6-03 WATER USE PLAN

Water areas are designated to minimize safety hazards while allowing maximum utilization of all the water areas available. Due to the frequent and prolonged drawdowns, the water areas will be marked with buoys according to corresponding uses, restrictions and rules. A description of these areas is presented below.

A. Swimming. Project signs and buoys will identify all authorized swimming areas. Only swimming and related activities will be allowed in those areas. Areas of high boating activity such as boat ramps and marinas will be located far enough from swimming areas so as to reduce the effects of boating wakes and oil and gas pollution.

B. Outlet and Intake Structures. Water areas within 300 feet of USACE outlet and intake structures and 200 feet of other intake structures are restricted from public use and will be so marked.

C. Low Speed Boating Areas. Congested areas, such as boat ramps, marina moorings, and beaches, where high speed boating and the associated wakes create a potential for accidents or property damage will be designated as low speed boating areas.

D. Uncleared Areas. Uncleared (timbered) areas exist where surface and subsurface debris create a hazard to any type of boating activity. A substantial boating hazard exists in many uncleared areas of Lewisville Lake. Areas left uncleared will be identified so that the boating public will be aware of potential hazards.

E. Boat Channel. Boats and vessels will not be allowed to anchor in the travel portion of any channel so as to prevent, impede or interfere with the safe passage of any other boat.

F. Shallow Areas at 522 MSL conservation pool. Areas that are intermittent with shallow and deep water will be managed as shallow water areas in the interests of public safety. Buoys advising the public of these areas will be maintained at the entrance or perimeter of the areas, whichever conditions warrant. Further delineation and mapping of these areas is in the Operational Management Plan.

G. Low Pool Hazards. Low pool hazards are subsurface structures such as old bridges, embankments, etc. which become hazardous to boaters at elevations lower than normal pool. Appropriate markers will identify these areas. Further delineation and mapping of these areas is in the Operational Management Plan.

H. City of Denton Water Intake Cove. The area restricted from public use around city of Denton Water Intake structure was erroneously limited to 300 feet in the Lewisville Lake Master Plan, Design memorandum No. 1C, June 1985 (see plate 6-02 of the 1985 Master Plan). The intent was to restrict public use of the entire cove (see plate 6-1, sheet 4, of this supplement).

6-04 RESOURCE USE OBJECTIVES

The primary focus of these resource objectives is to insure incorporation of the USACE environmental stewardship mission in the future management and development of Lewisville Lake. The objectives are grouped under the headings of general, natural resources, and recreation.

A. General.

(1) Coordinated Planning with Responsible Federal, State, and Local Citizen Interests. Emphasis should be placed on establishing collaborative and administrative procedures with outside interest to assure the effective and orderly development, protection, and management of recreational, cultural, scenic, and natural resources of Lewisville Lake.

(2) Minimize the Number of Easements Granted On or Through Project Lands. Easement request for utilities, roads, pipelines, etc. should be closely evaluated and granted only when there is no practical altemative to routing across Federal land. When no practical alternative exists, easements should be located where they have the least environmental and visual impact. In all cases, consideration should be given to routing proposed easements adjacent to and parallel with, existing easements. Appropriate mitigation for damage or loss of natural resources should be negotiated prior to granting any easement. Areas classified as Environmentally Sensitive Areas should be avoided as well as key facility locations within areas classified for recreation development.

(3) Administer Project Lands to Avoid Exclusive Use of Federal Lands and Facilities. Future leasing of project lands for any activity that is not available for general public use will not be allowed.

(4) Improve Control of Project Lands Through Boundary Delineation Using Various Fencing Techniques. To prevent encroachments, off-road vehicle traffic, trash dumping, and similar problems, the project boundary should be delineated with a type of fence that is compatible with adjacent private land. Where allowed by the Shoreline Management Plan, gates or openings in the fence should be permitted to accommodate pedestrian traffic.

B. Natural Resources Objectives

(1) Protection of Environmentally Sensitive Areas (ESA). All project lands shall be examined for areas having scientific, ecological, cultural, or aesthetic features of high value. Such areas shall be identified and protected as ESAs. Examples of such areas would include areas dominated by climax or near-climax vegetation, areas where vegetation has been planted for mitigation for loss of natural resources, cultural sites eligible for or listed on the National Register of Historic Places, riparian areas, wetlands and other high-value aquatic sites, areas where natural vegetation or topography serves as important visual and noise buffers, and areas having exceptional aesthetic qualities such as large expanses of wildflowers. Limited or no development of public use is contemplated on land designated as an ESA, even if the ESA is located in a designated recreation area.

(2) Seek Opportunities for Environmental Education, Research and Restoration on Project Lands. Through partnerships with other governmental entities and private organizations, or through direct action by the USACE, project lands should be used for environmental education and research. Project lands degraded by past land use should be restored to provide benefits for fish and wildlife or improved water quality. All project lands classified as Wildlife Management are ideally suited for meeting this resource objective.

(3) Stewardship of Wildlife Habitat. Through consultation with state and federal wildlife agencies, animal and plant species of high, regional importance shall be identified, and habitat for those species shall be developed or improved. In accordance with EP 1130-2-540, "special status species and/or their critical habitat", which includes species listed as endangered, threatened, candidate, or sensitive by the U.S. Fish and Wildlife Service or by the state of Texas, shall be given priority in management decisions.

(4) Management of Woodlands and Grasslands. In the absence of special habitat needs, as described in the above paragraph, woodlands and grasslands located on lands classified as wildlife management, low-density recreation, and environmentally sensitive areas at Lewisville Lake shall be managed to eventually reach a climax stage of vegetation typical of the Cross Timbers and Prairies ecological region of Texas. A possible exception would be areas where maintenance of expansive stands of wildflowers is considered a desirable management goal, thereby requiring maintenance of the vegetation in a sub-climax status. Woodlands and grasslands in intensive recreation areas should also be managed to achieve climax status to the extent possible while continuing to meet recreational needs.

(5) Management of Aquatic Habitats. Aquatic habitats shall be improved and restored through a variety of techniques such as strategic placement of brush

shelters and other fish attractors, construction of spawning beds, and establishment of native aquatic vegetation. Lake conditions shall be monitored for the presence of harmful aquatic weeds such as Hydrilla. When aquatic weeds are discovered control efforts should be initiated.

(6) Maintain Public Hunting. For many years, public hunting opportunities have been available at Lewisville Lake in Wildlife Management Areas. Waterfowl hunting has been the primary activity. With a limited hunting area, the number of hunters is controlled through a permit system to increase hunter safety and enjoyment. Hunting opportunities should continue to be provided and managed through a permit system. Cooperative implementation of wildlife habitat improvements should ensure that public hunting opportunities continue to be a viable recreational opportunity at Lewisville Lake.

C. Recreation Objectives.

(1) Carrying Capacity. For the purposes of this document, Water-Related Recreation Development consists of three activities -marinas, boat launch ramps, and dry stacked storage -which have potential to affect the carrying capacity on Lewisville Lake. Marinas impact vessel carrying capacity at a rate of one vessel on the water for every 10 stored either in wet slips or in dry stacked storage. Boat launch ramps with their associated parking lots have been determined to impact vessel carrying capacity at a rate of one vessel per vehicle and trailer parking spot. As part of the WRRUS (1999), Lewisville Lake was divided into three zones -Zone A, Zone B, and Zone C (see Plate 6-4). Based on data collected as part of the WRRUS, the Lewisville Lake Future Water- Related Development Policy dated February 1999 established carrying capacities (capacity limits) for each of the zones in terms of the number of vessels (any boat motorized or non-motorized) it could be expected to accommodate while maintaining a reasonable level of resource protection, safety, water quality and user satisfaction. The following table depicts the carrying capacity of each zone per vessel as described in the proposed requests per zone at the time of the PEA and the proposed requests currently.

Table 6-2. Zone Carrying Capacity (per vessels)

Zone	Carrying Capacity
A	**631**
B	**192**
C	**289**
Total	**1112**

(2) Consolidate Public Use Areas. Wherever possible, consolidate park facilities to create larger, more functional parks. Consolidation will minimize O&M costs for roads and utilities, and day-to-day park operations will be more efficiently and economically accomplished. Emphasize operation, maintenance, facility designs and management programs which produce a family atmosphere, return visits and increased revenue. Constantly monitor for effects of user impact in park areas and take measures to stabilize and protect the resources where necessary.

(3) Separation of uses. Eliminate conflicts between day use and overnight use by physically separating areas for these specific uses.

(4) Facility Rehabilitation. Evaluate all parks and prioritize rehabilitation needs. Implement and follow through on efforts to improve the quality and functionality of recreation areas to include adding new facilities, improving park road circulation patterns, providing erosion and compaction-resistant surfaces at high-use camping and picnic sites, replacing outdated cinder block restrooms, and establishing and conforming with a lake-wide architectural theme.

(5) Park and Recreation Leases. Lake and District staff should encourage lessees to implement new designs and facility rehabilitation efforts where needed. Lessees should be monitored for proper operation and maintenance of facilities as required.

(6) Safety Programs. Visitor safety, on land and water, should be continuously emphasized and programmed at all times. Proper Safety information signage, buoys, hazard identification, safe facility design and education programs are a must.

(7) Recreational Trends. Lake and District staff should stay informed and be sensitive to new trends in outdoor recreational activities, and take the initiative to enable the development of such opportunities.

(8) Universal Accessibility. All new/rehabilitated facilities should be designed and constructed for accessibility by persons with disabilities. As funds permit, existing facilities should be retrofitted for ADA compliance, placing emphasis on those facilities which are most important such as restrooms and camp/picnic sites.

(9) Aesthetics. A continued effort to improve the general aesthetics of parks and other land areas should be maintained. Recommended actions include landscaping with native plant materials, improved grounds maintenance, architecturally attractive facilities, and architectural themes. Also to be considered: confine vehicular traffic to designated roads, establish vegetative screening between closely spaced sites and screen unsightly areas as needed.

(10) Trails. Existing hike/bike/equestrian trails serve a significant segment of the public at Lewisville Lake. Every effort should be employed to adequately maintain and, where possible, improve and expand for increased use of these recreational trails.

D. Future Trail Maintenance and Development

Although this master plan supplement is not intended to revise the recreation development design concepts set forth in the 1985 Lewisville Lake Master Plan, there was almost unanimous interest from the planning team in the future of trail development. The planning team recommended that the supplement contain general guidance on the type of trail development that would be appropriate for the various land classifications. The following paragraphs set forth that guidance with the understanding that each trail proposal is unique and is often constructed and maintained entirely through donations and volunteer effort. Therefore, each trail

proposal requires considerable flexibility in design and choice of materials that will protect resources and serve the public.

(1) Low Intensity Use Trails. In general terms, the consensus of the planning team defined low intensity use trails as trails with a natural earth surface. Minor use of natural reinforcement materials such as gravel, wood chips or crushed granite would be acceptable to control erosion or improve trail safety. Use of geotextiles or comparable materials, or limited use of concrete paving blocks, may be acceptable for use in sensitive locations such as stream crossings or wetlands. With proper planning to protect areas classified as Environmentally Sensitive Areas and Wildlife Management Areas, low intensity use trails are acceptable in all land classifications. However, trailheads, which normally require a vehicle parking area and associated facilities, should be located only in areas classified for Parks and Recreation or Wildlife Management. On the outside boundaries and not to include the interior areas (all trail routes shall be restrict into the Wildlife Management Areas) to avoid disturbing good to excellent animal habitat areas. Also trailheads will not be located in Environmentally Sensitive Areas.

(2) High Intensity Use Trails. High intensity use trails are generally defined as trails with a hardened surface such as concrete, asphalt, soil cement, or extensive use of crushed granite or gravel. These trails are intended for high traffic situations and are generally appropriate only in areas classified for high intensity recreation development; recognizing, of course, that in a few locations existing high intensity use trails are located in Environmentally Sensitive Areas.

6-05 COMMON UTILITY CORRIDORS

A. General. The location of 42 known corridors is shown on plate 6-3 (sheets 1 through 5). All of these corridors follow existing roads or utilities with the exception of Corridors 19, 20, 25, 27, and 37. While the 42 known corridors represent the vast majority of possible corridors, there are additional existing utility easements that may be designated as future corridors if such designation would reduce proliferation of utility easements on federal land. The 42 designated corridors are described as follows.

Corridor Number	Description
1	This corridor is restricted to a 20-foot wide strip of federal land lying parallel to the north and south right-of-way limits of Farm-to-Market Road FM 428 where it crosses the Ray Roberts Green Belt Corridor. The highway right-of-way is not under federal ownership. Therefore, the USACE does not have direct control of utilities that might be placed in the right-of-way.

2	This corridor follows the route of an existing underground natural gas pipeline. Future use of this corridor would be restricted to underground utilities placed within or as close as possible to the limits of the existing easement. Any future utility crossing of the Elm Fork of the Trinity River along this corridor would be installed by sub-surface boring in order to protect the riparian vegetation along the Elm Fork.
3	This corridor follows the Government property boundary where it parallels Collins Road. The federal land in this area is leased to the city of Denton and is designated by the city as the Clear Fork Natural Heritage Center. Use of this corridor in this sensitive area would be restricted to underground utilities placed within a 15-foot wide strip along Collins Road.
4	This corridor parallels an existing railroad track and an existing high-voltage electric transmission line. The existing railroad track and transmission line run roughly parallel to each other separated by a distance varying from only a few feet on the east end to several hundred feet on the west end. Future utilities in this corridor must be placed on the south side of the railroad track within the existing easement for the railroad or be located completely within the existing easement for the transmission line.
5	This corridor runs parallel to Rock Hill Road where the road runs across or adjacent to federal land. Future utility installations should be placed within the existing road right-of-way if possible. The maximum width of the corridor extends 20 feet outside the existing right-of-way line for Rock Hill Road.
6	This corridor runs parallel to Highway 380 where it crosses federal land. Future utility installations may be placed on either side of the highway within 20 feet of the highway right-of-way.
7	This corridor runs parallel to Trinity Boulevard where it crosses or runs adjacent to federal land. Future utilities should be located with 15 feet of the existing road right-of-way.
8, 9, 10, 11, 17, 23	These corridors run parallel to several city streets and/or county roads which cross federal land for relatively short distances. The roads include Mosley Road, Key Lane, Mill Creek Road, and Naylor Road. Corridors 8, 9, 10, 11, and 17 are located in Environmentally Sensitive Areas. Therefore, future utilities in these five corridors must be located within 15 feet of the existing road right-of-way.
12	This corridor follows the route of a large water pipeline which spans the entire Elm Fork arm of Lewisville Lake. Future use of this corridor would be limited to subsurface utilities placed within 15 feet of the existing easement for the water pipeline.

13, 14, 24	These corridors run parallel to Shady Shores Road where the road crosses or is adjacent to federal land. Future use of these corridors should be within or as close as possible to the existing road right-of-way.
15 and 15a	Corridor 15 follows the route of an existing high voltage electric transmission line. Future use of the corridor shall be within or as close as possible to the existing easement for the transmission line. Corridor 15a follows the route of Fish Trap Road where it crosses Little Elm Creek. Future use of the corridor should be parallel to and as close as possible to the active and closed portions of Fish Trap Road.
16, 18	These corridors run parallel to Highway 380 where it crosses federal land at Little Elm Creek and Doe Branch. The highway right-of-way at this location is not under federal ownership. Therefore, the USACE does not have direct control over use of the highway right-of-way. Future use of corridors 16 and 18 shall be restricted to an area as close as possible to the north and south right-or-way lines for Highway 380.
19, 20	This corridor follows one of the proposed routes for a highway to be constructed by the North Texas Tollway Authority (NTTA). Should the route not be selected, this corridor will not be used. If the route is selected, the use of the corridor will be confined to the right-of-way of the proposed road.
21	This corridor follows the route of the existing Highway 720 where it crosses the Little Elm arm of Lewisville Lake. Use of this corridor would be confined to the width of the existing right-of-way for Highway 720.
22, 23, 35	These corridors run parallel to Rose Lane and Hackberry Road where they cross federal land. Use of these corridors shall be within or as close as possible to the existing road right-of-way.
25	This corridor runs parallel to the proposed route of a bridge to be constructed by the North Texas Tollway Authority over the Elm Fork arm of Lewisville Lake. Use of this corridor will be within or as close as possible to the proposed right-of-way.
26	This corridor runs parallel to Interstate Highway 35E and a railroad trestle where the highway and railroad cross the Hickory Creek arm of Lewisville Lake. Use of this corridor shall be within or as close as possible to the existing rights-of-way.
27	This corridor runs within and parallel to the proposed route for the extension of FM 2499 from FM 407 to FM 2181. Should this proposed route eventually be approved, the entire route across federal land shall be used as a utility corridor. Future utilities would be required to be placed within the road easement.

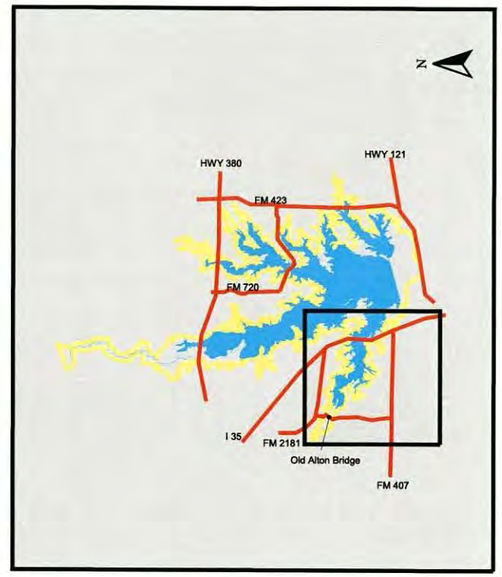
28	This corridor follows the route of an existing underground pipeline which traverses the Hickory Creek arm of Lewisville Lake. Future use of this corridor shall be placed underground and within 15 feet of the existing right-of-way for the underground pipeline.
29	This corridor runs parallel to the south right-of-way line of FM 2181 where it crosses an unnamed tributary to Lewisville Lake. Future use of this corridor shall be as close as possible to the south right-of-way line of FM 2181.
30, 33, 34	These corridors run parallel to three separate high voltage electric transmission lines, all of which are located in the upper end of the Hickory Creek arm of Lewisville Lake. Future use of these corridors shall be within 20 feet of either side of the existing rights-of-way for the transmission lines.
31	This corridor runs parallel to Old Alton Road where it crosses the Hickory Creek arm of Lewisville Lake. Future use of this corridor shall be restricted to underground utilities within 30 feet of the west right-of-way for Old Alton Road. Existing utilities already located in this corridor include an underground natural gas pipeline and a sewer line operated by the Upper Trinity Regional Water District.
32	This corridor is parallel or adjacent to a railroad track which crosses, or is adjacent to, Federal land at Lewisville Lake. Future use of this corridor should be within or as close as possible to the existing right-of way for the railroad.
36, 38	These corridors run parallel to the route of FM 423 where it crosses federal land. Future use of this corridor shall be within or as close as possible to the existing right-of-way for FM 423.
37	This corridor crosses Stewart Creek at the approximate location of an old ranch road crossing where Federal land is only about 200 feet wide. Because no utilities currently exist in this corridor, the width of the corridor shall be as small as possible to accommodate the first proposed use, but in no case shall exceed 100 feet. Future use of this corridor shall be restricted to underground utilities.
39	This corridor follows the route of a sewer line which is currently being constructed by the city of Lewisville. Future use of this corridor would require coordination with the Lewisville Lake Environmental Learning Area and would be restricted to underground utilities within the existing right-of-way for the sewer line

40 This corridor follows the route of Fish Hatchery Road. Future use of this corridor would require coordination with the Lewisville Lake Environmental Learning Area and would be within 40 feet either side of the centerline of Fish Hatchery Road.

41 This corridor runs parallel to the north right-of-way line of State Highway 121 where it is adjacent to federal land. Future use of this corridor would require coordination with the Lewisville Lake Environmental Learning Area and would be as close as possible to the right-of-way for SH 121.

42 This corridor runs parallel to a railroad track which completely traverses the large tract of federal land below Lewisville Lake dam. Future use of this corridor would require coordination with the Lewisville Lake Environmental Learning Area and would be restricted to a 30-feet wide strip of land adjacent to the existing south right-of-way line for the railroad track. Utilities currently located within this corridor include pipelines operated by the Upper Trinity Regional Water District.

Westlake Park
Oakland Park
Arrowhead Access
Willow Grove Park
Point Vista Area
Hickory Creek Park
Harbor Lane Area
Sycamore Bend Park
Pilot Knoll Park
Copperas Branch Access Area (Tower Bay)
Copperas Branch Park
YMCA Camp
Copperas Branch Park
Copperas Branch Park
35E
35E
N
0
4000
8000 Feet



LEGEND

Property Boundary
Elm Fork Trinity River

Allocations

Project Operation
Recreation
Fish and Wildlife

Environmentally Sensitive Area
Conservation Easement

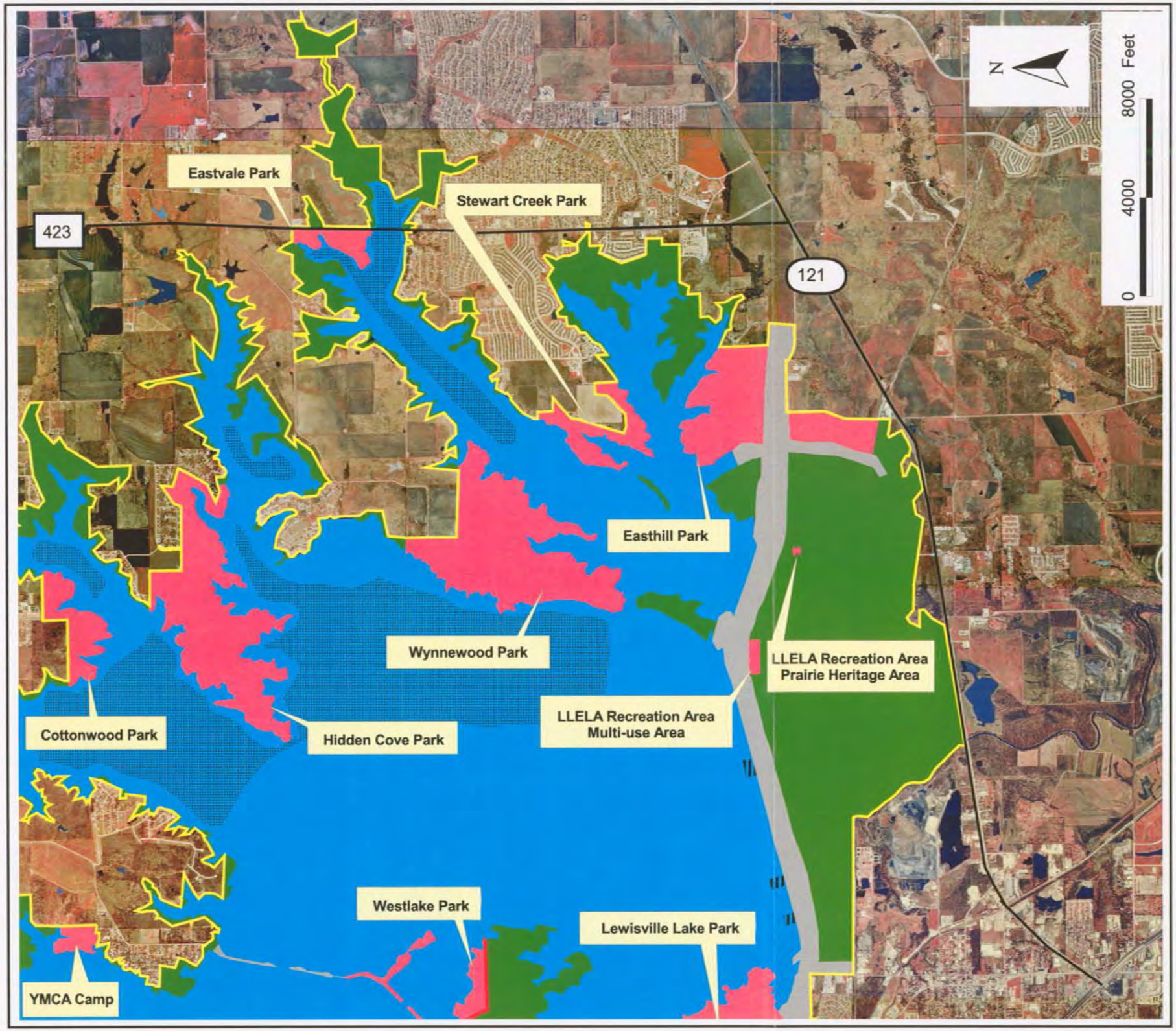
Lewisville Lake
Master Plan Supplement

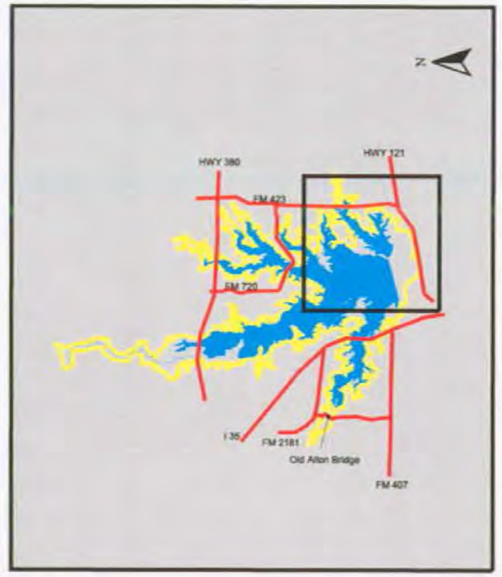
Land Use Allocations

Carter::Burgess

U.S. Army Corps of Engineers
Fort Worth District

Scale		
1:48,000	Plate 6-1	Sheet 1 of 5





LEGEND

Property Boundary
Elm Fork Trinity River

Allocations

- Project Operation
- Recreation
- Fish and Wildlife

Environmentally Sensitive Area
Conservation Easement

Lewisville Lake
Master Plan Supplement

Land Use Allocations

Carter::Burgess

U.S. Army Corps of Engineers
Fort Worth District

Scale		
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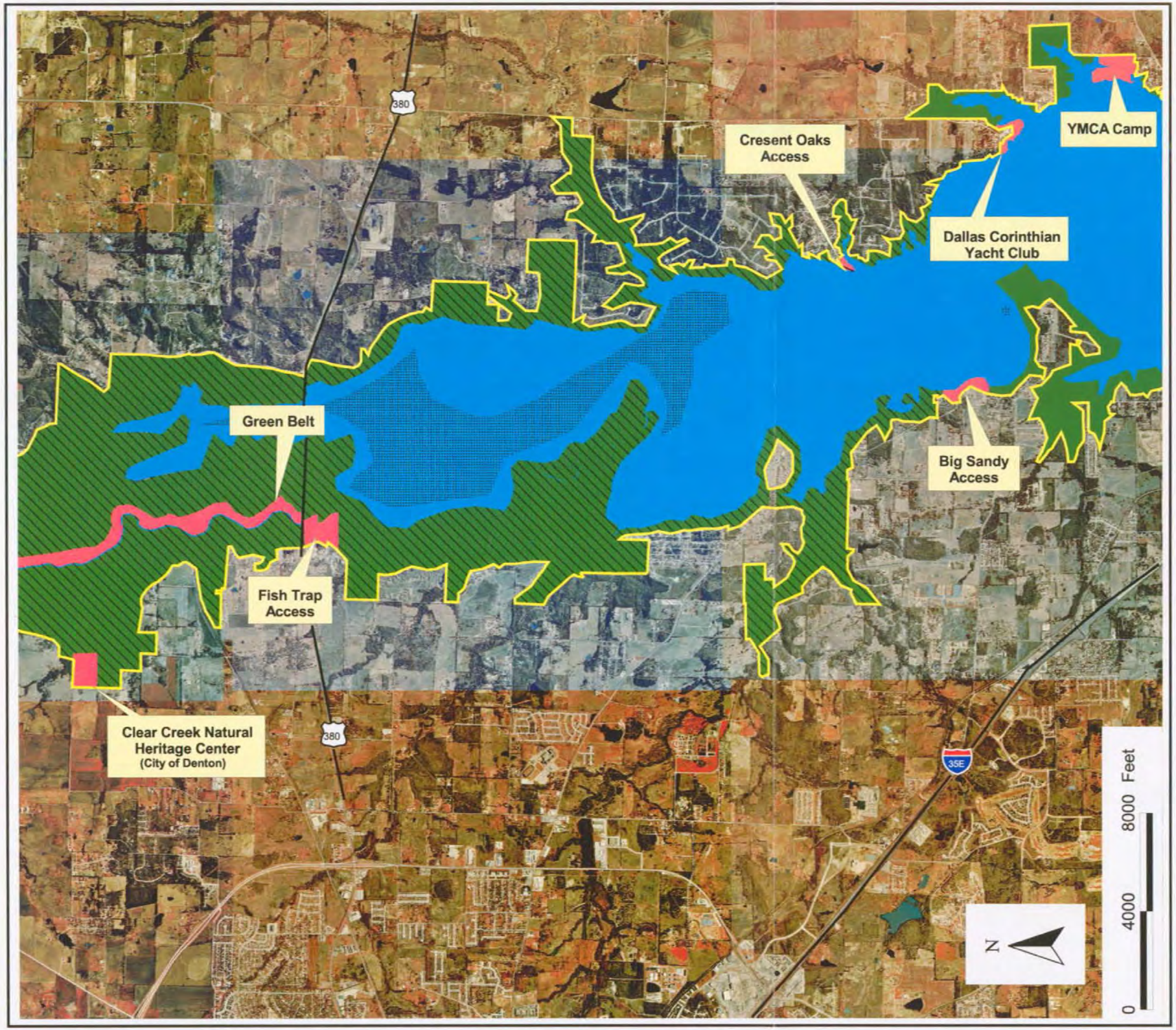

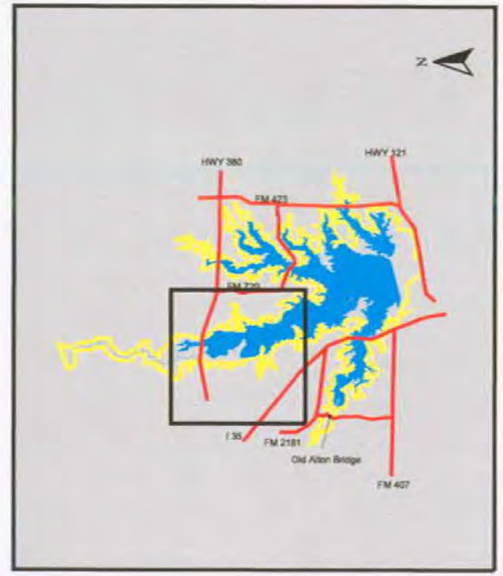

LEGEND

Property Boundary
Elm Fork Trinity River

Allocations

- Project Operation
- Recreation
- Fish and Wildlife
- Environmentally Sensitive Area
- Conservation Easement

Lewisville Lake
Master Plan Supplement

Land Use Allocations

Carter Burgess

U.S. Army Corps of Engineers
Fort Worth District

Scale		
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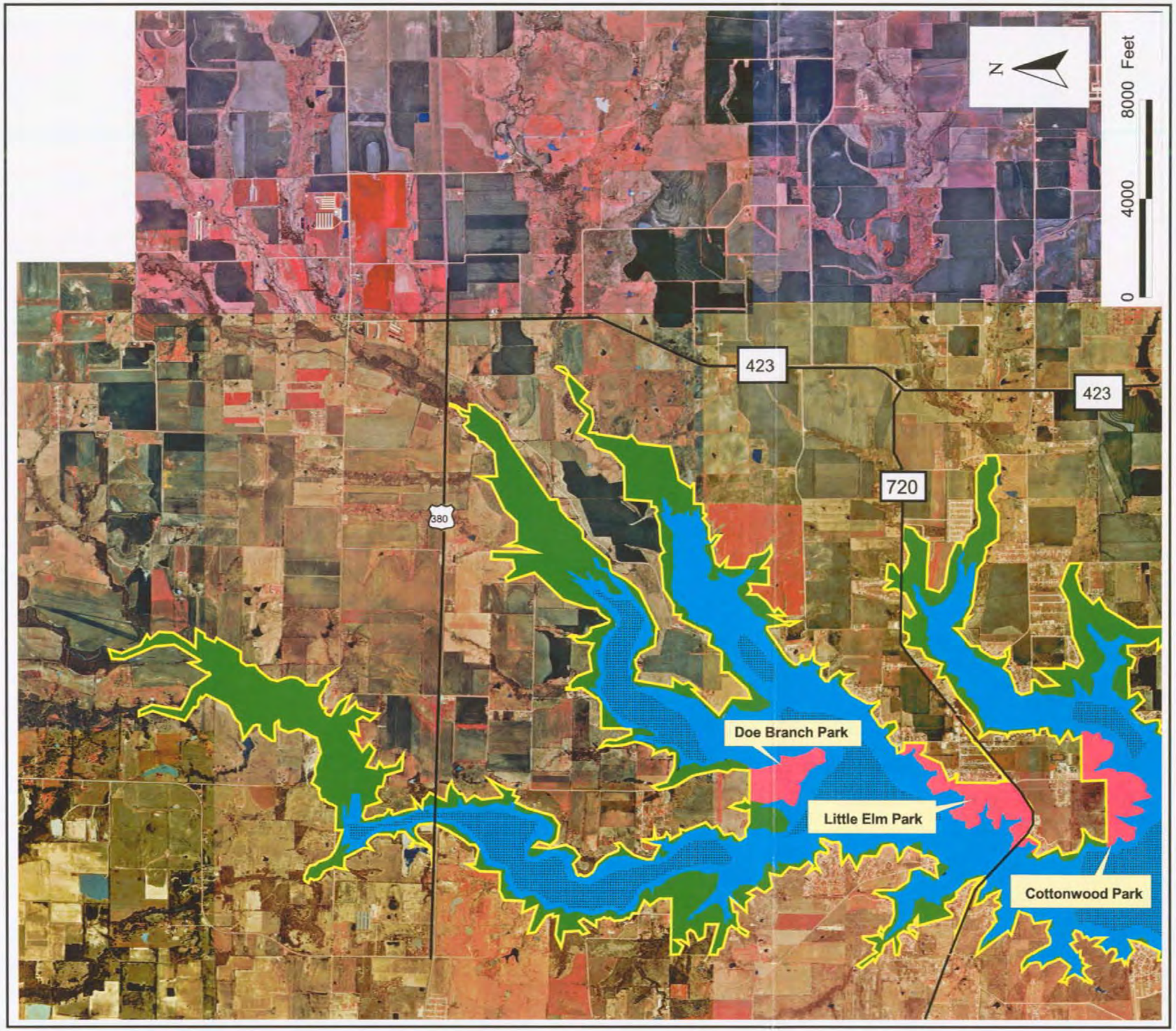

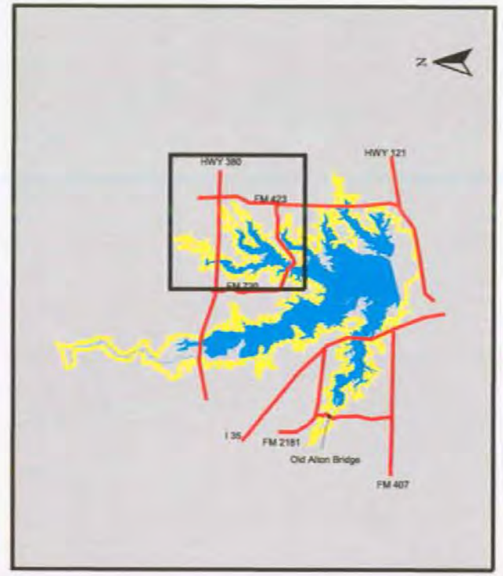

LEGEND

Property Boundary
Elm Fork Trinity River

Allocations

- Project Operation
- Recreation
- Fish and Wildlife
- Environmentally Sensitive Area
- Conservation Easement

Lewisville Lake
Master Plan Supplement

Land Use Allocations

Carter=Burgess

U.S. Army Corps of Engineers
Fort Worth District

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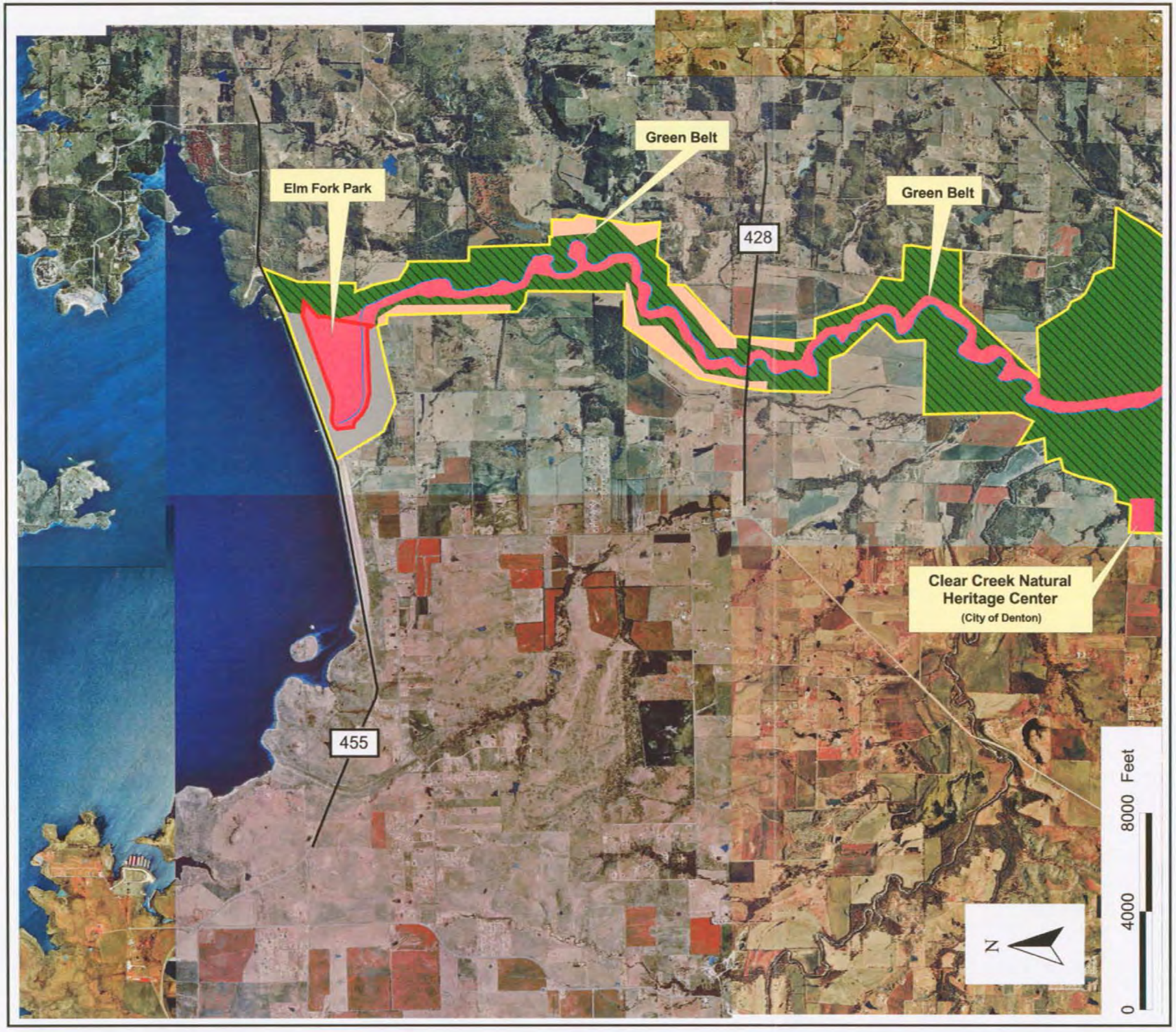

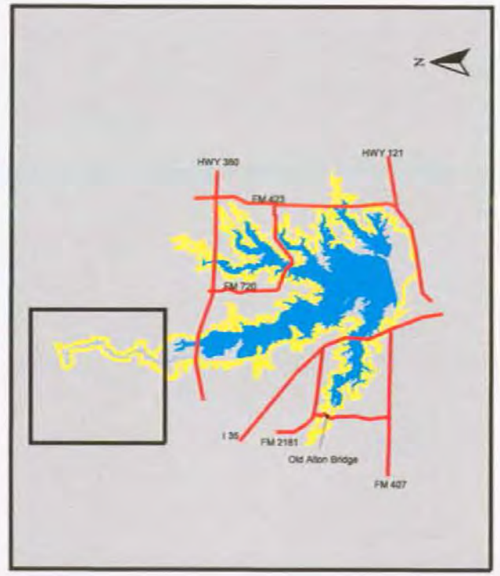

LEGEND

Property Boundary
Elm Fork Trinity River

Allocations

- Project Operation
- Recreation
- Fish and Wildlife
- Environmentally Sensitive Area
- Conservation Easement

Lewisville Lake
Master Plan Supplement

Land Use Allocations

Carter=Burgess

U.S. Army Corps
of Engineers
Fort Worth District

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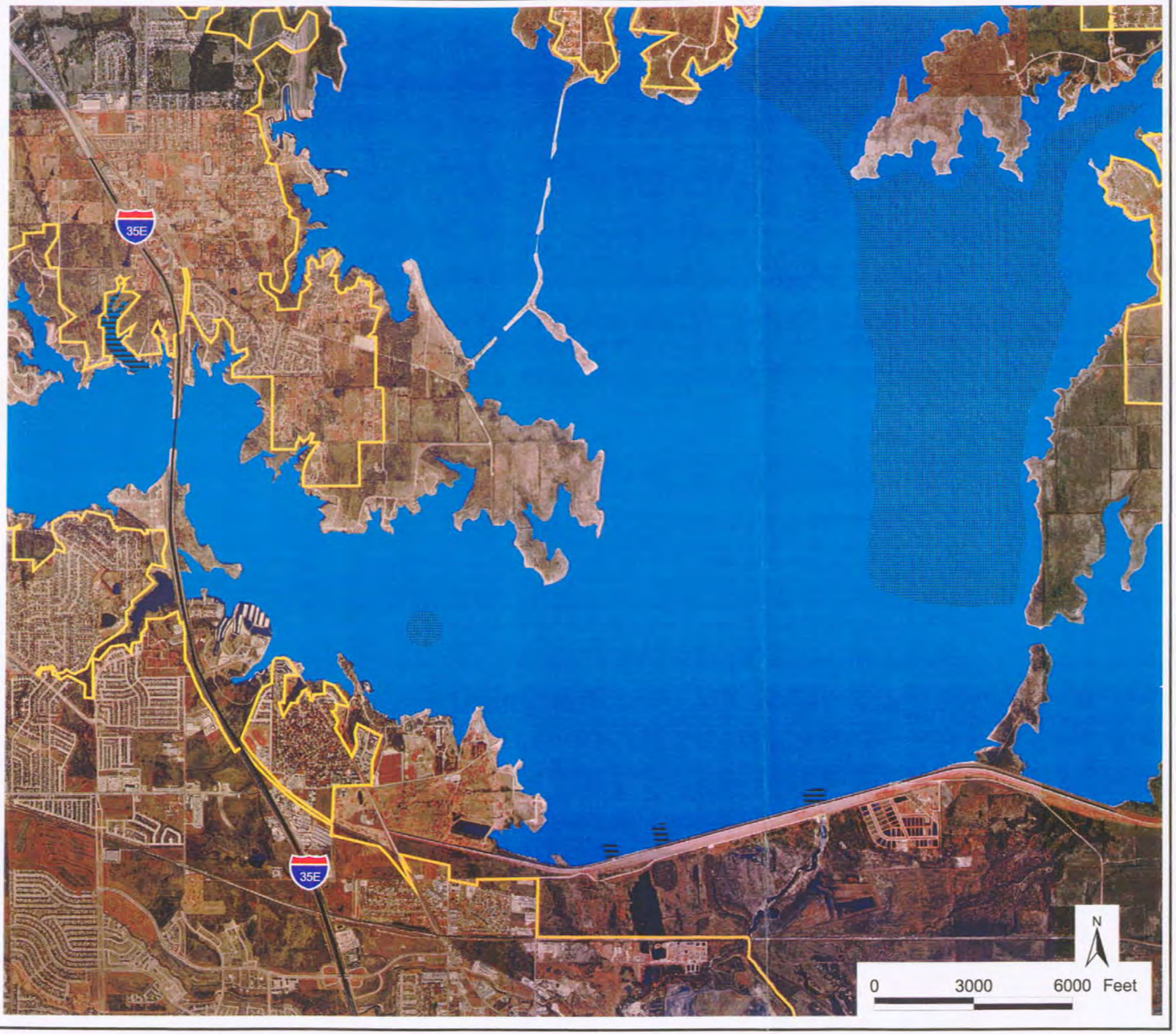

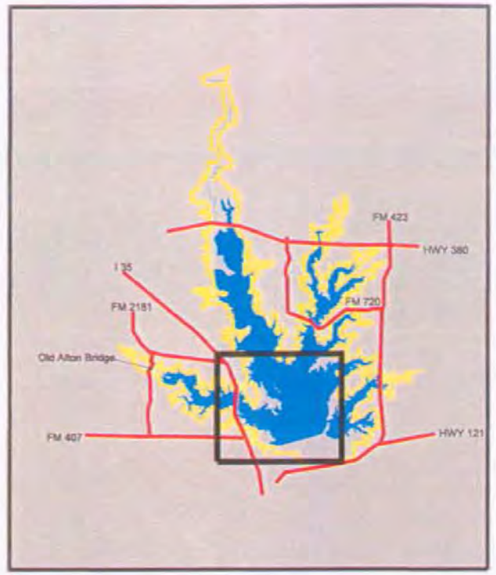

LEGEND

Property Boundary
Elm Fork Trinity River
Lewisville Lake (Conservation Pool)

Water Use Restrictions

Restricted Area
Water Hazards

Lewisville Lake
Master Plan Supplement

Water Use Plan Supplement

Carter-Burgess

U.S. Army Corps of Engineers
Fort Worth District

Scale		
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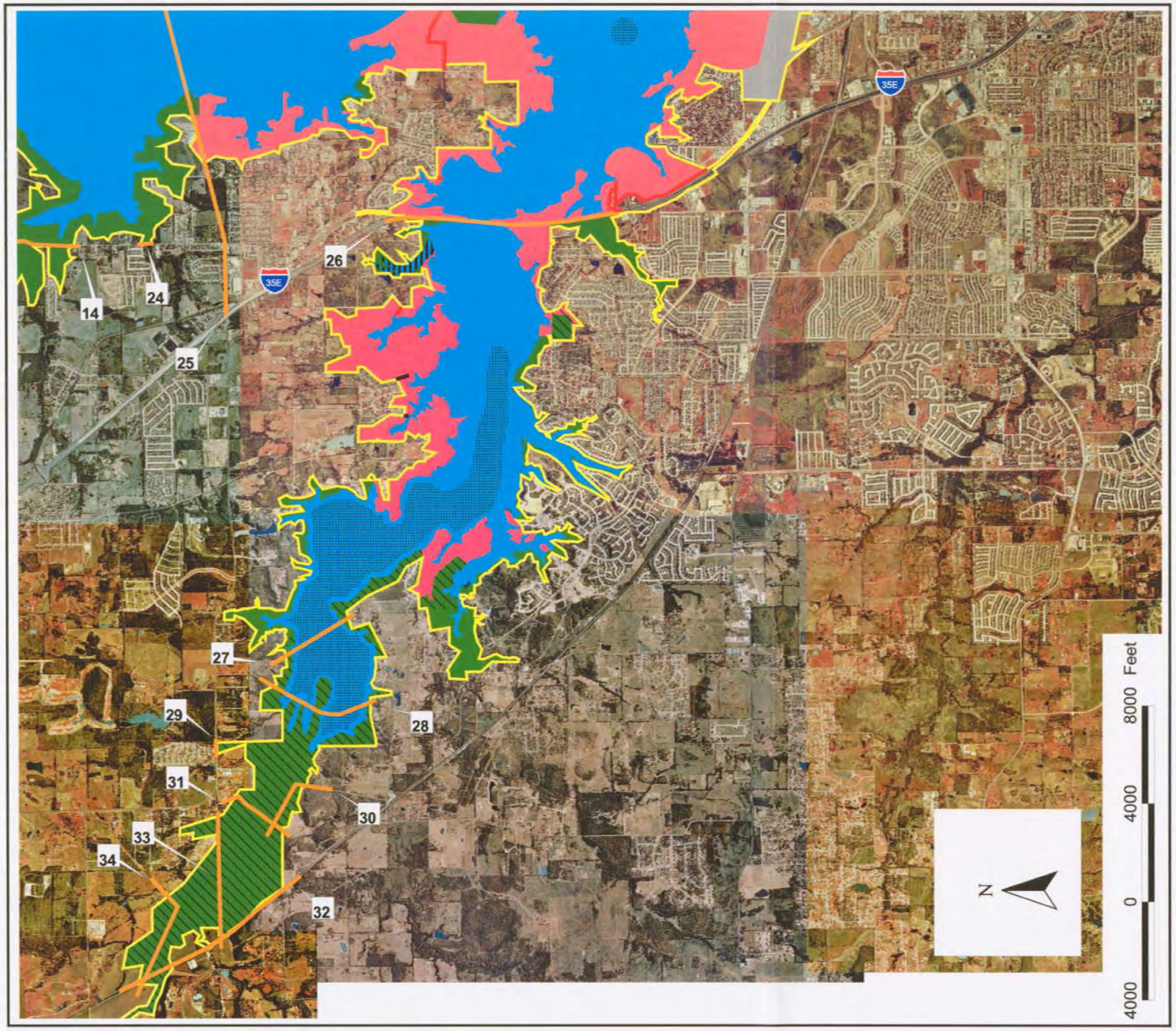

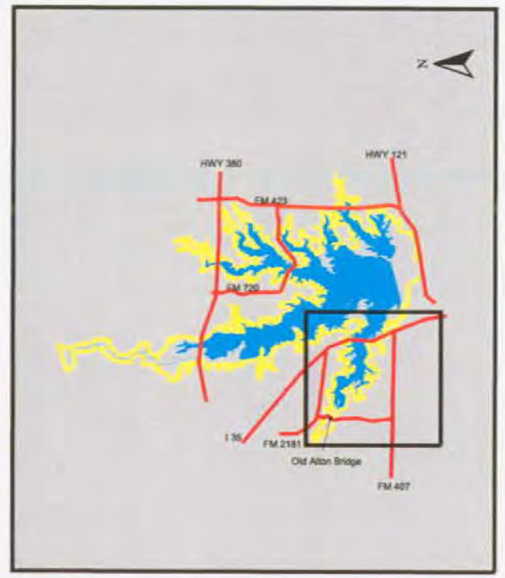

LEGEND

- Property Boundary
- Elm Fork Trinity River
- Common Utility Corridors

Allocations

- Project Operation
- Recreation
- Fish and Wildlife
- Environmentally Sensitive Area
- Conservation Easement
- Restricted Area

Lewisville Lake

Master Plan Supplement

Common Utility Corridors

Carter=Burgess

U.S. Army Corps of Engineers
Fort Worth District

Scale		
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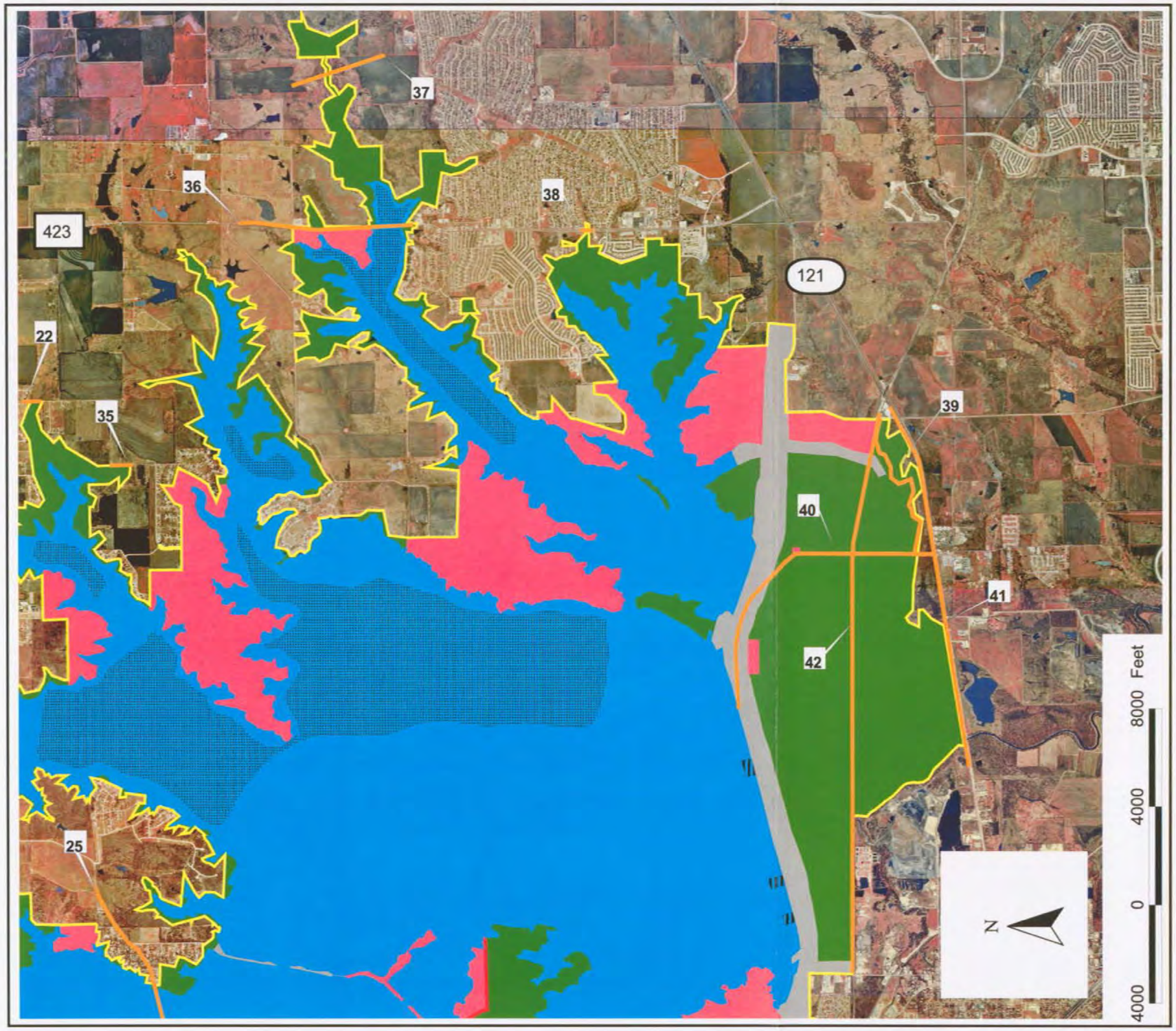

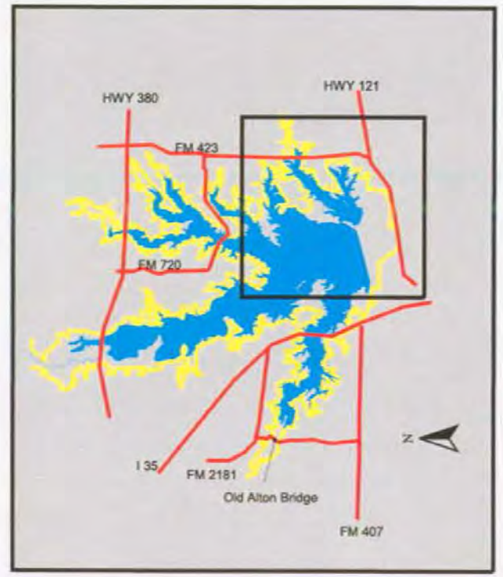

LEGEND

Property Boundary
Elm Fork Trinity River
Common Utility Corridors

Allocations

Project Operation
Recreation
Fish and Wildlife

Environmentally Sensitive Area
Conservation Easement
Restricted Area

Lewisville Lake

Master Plan Supplement

Common Utility Corridors

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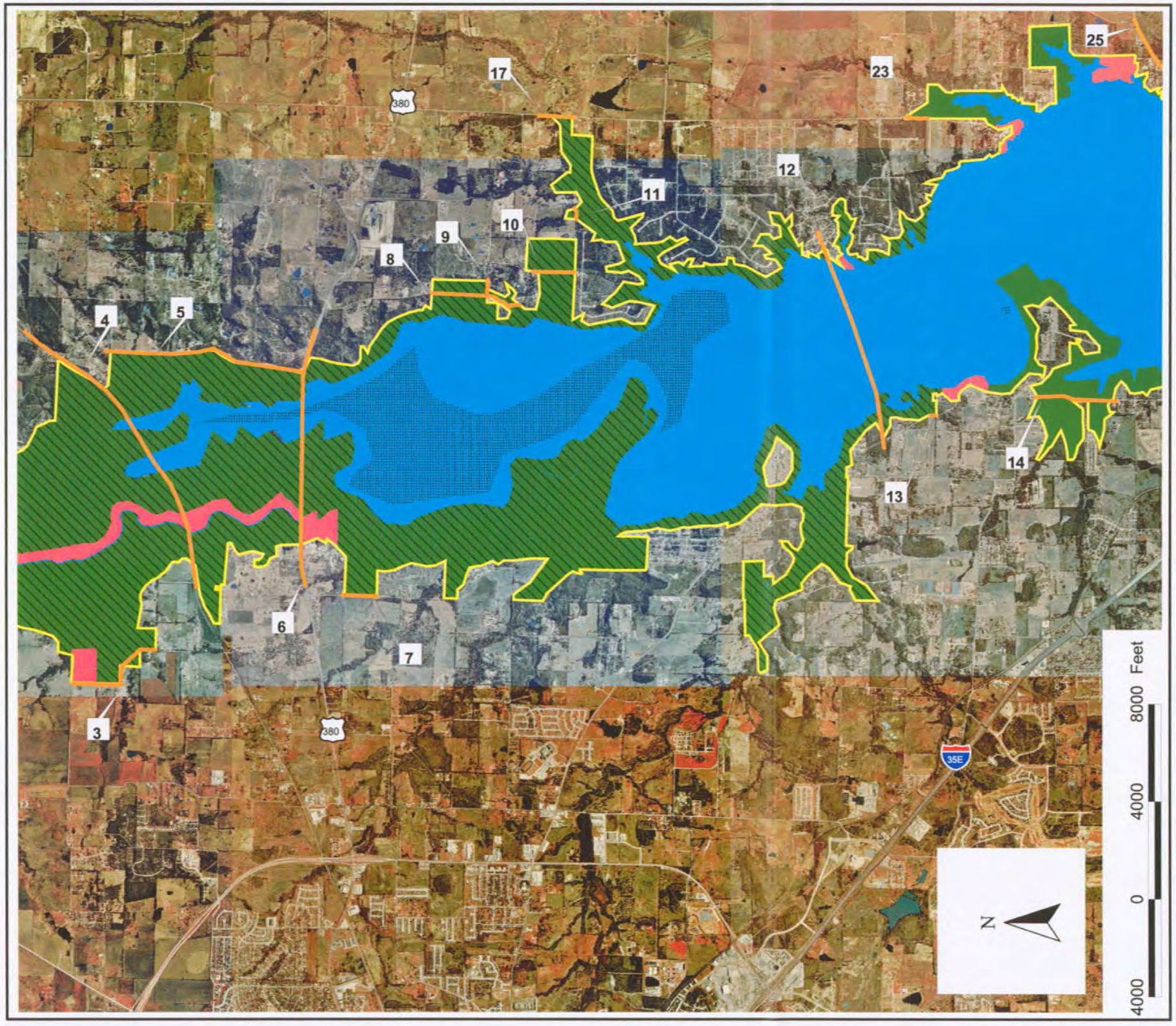
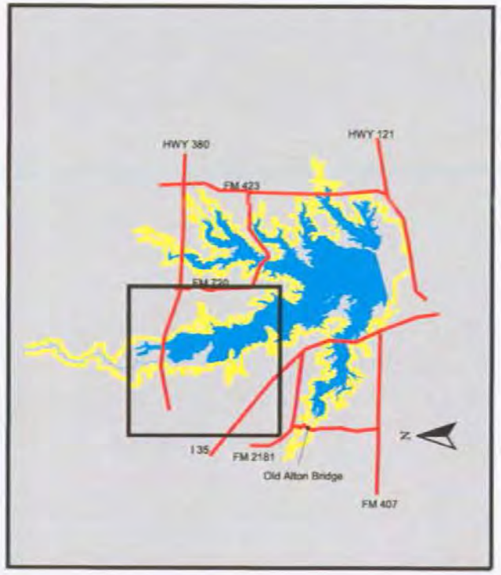
U.S. Army Corps of Engineers
Fort Worth District

Scale		
1:48,000	Plate 6-3	Sheet 2 of 5





LEGEND

Property Boundary
Elm Fork Trinity River
Common Utility Corridors

Allocations

Project Operation
Recreation
Fish and Wildlife

Environmentally Sensitive Area
Conservation Easement
Restricted Area

Lewisville Lake
Master Plan Supplement

Common Utility Corridors

Carter=Burgess

U.S. Army Corps of Engineers
Fort Worth District

Scale		
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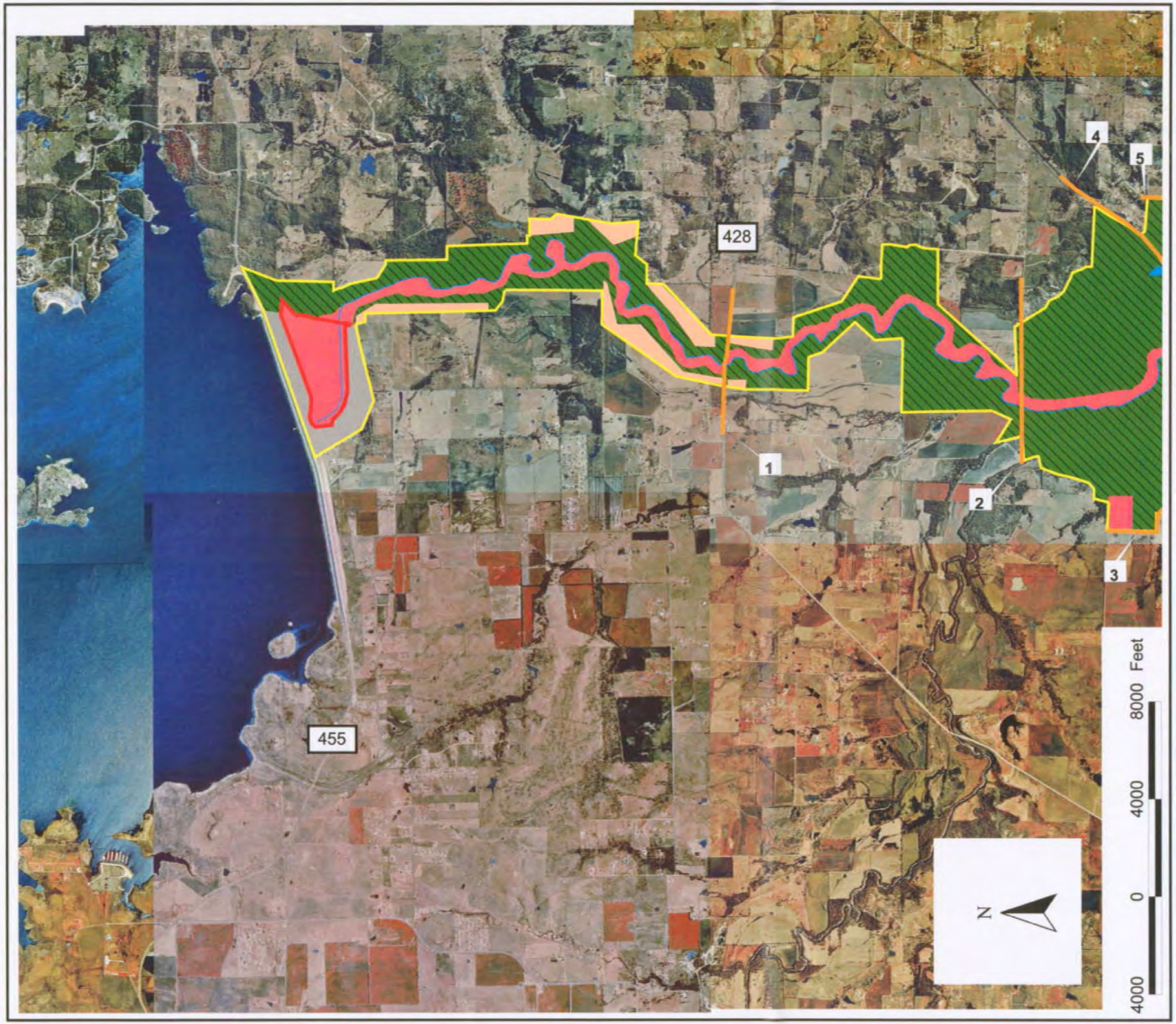
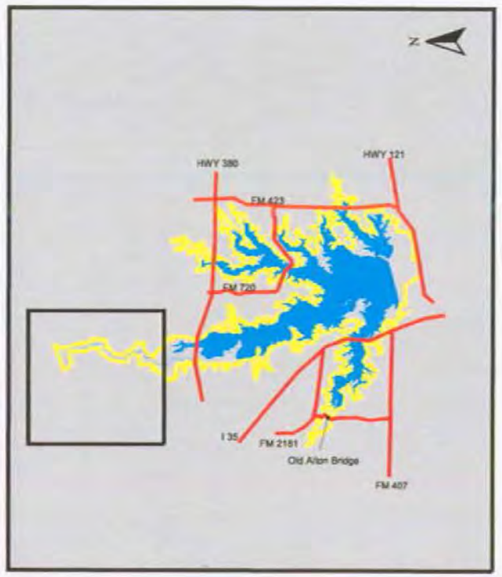




LEGEND

- Property Boundary
- Elm Fork Trinity River
- Common Utility Corridors

Allocations

- Project Operation
- Recreation
- Fish and Wildlife
- Environmentally Sensitive Area
- Conservation Easement
- Restricted Area

Lewisville Lake

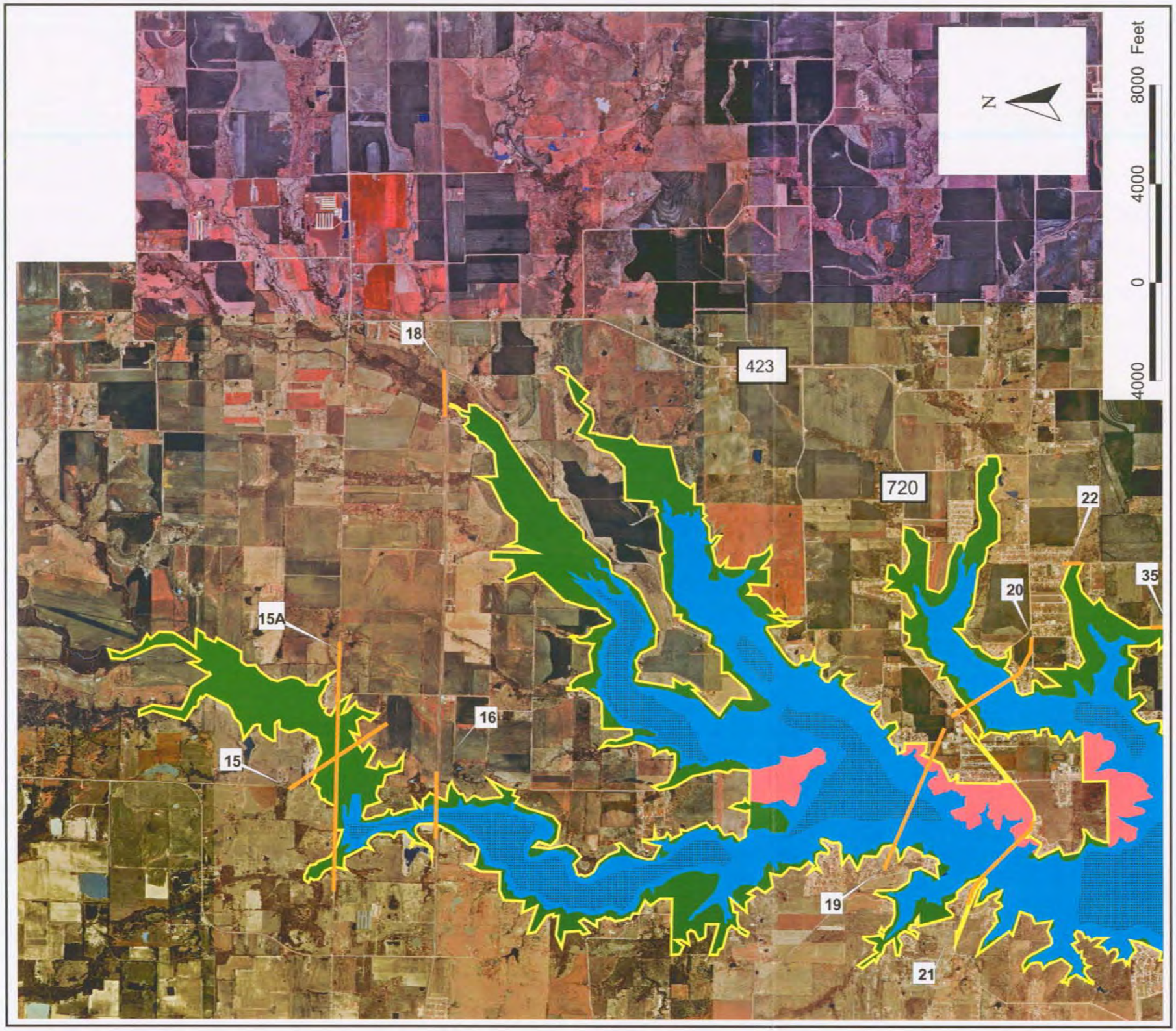
Master Plan Supplement

Common Utility Corridors

Carter=Burgess

U.S. Army Corps of Engineers
Fort Worth District

Scale		
1:48,000	Plate 6-3	Sheet 5 of 5



LEGEND

- Property Boundary
- Elm Fork Trinity River
- Common Utility Corridors

Allocations

- Project Operation
- Recreation
- Fish and Wildlife
- Environmentally Sensitive Area
- Conservation Easement
- Restricted Area

Lewisville Lake

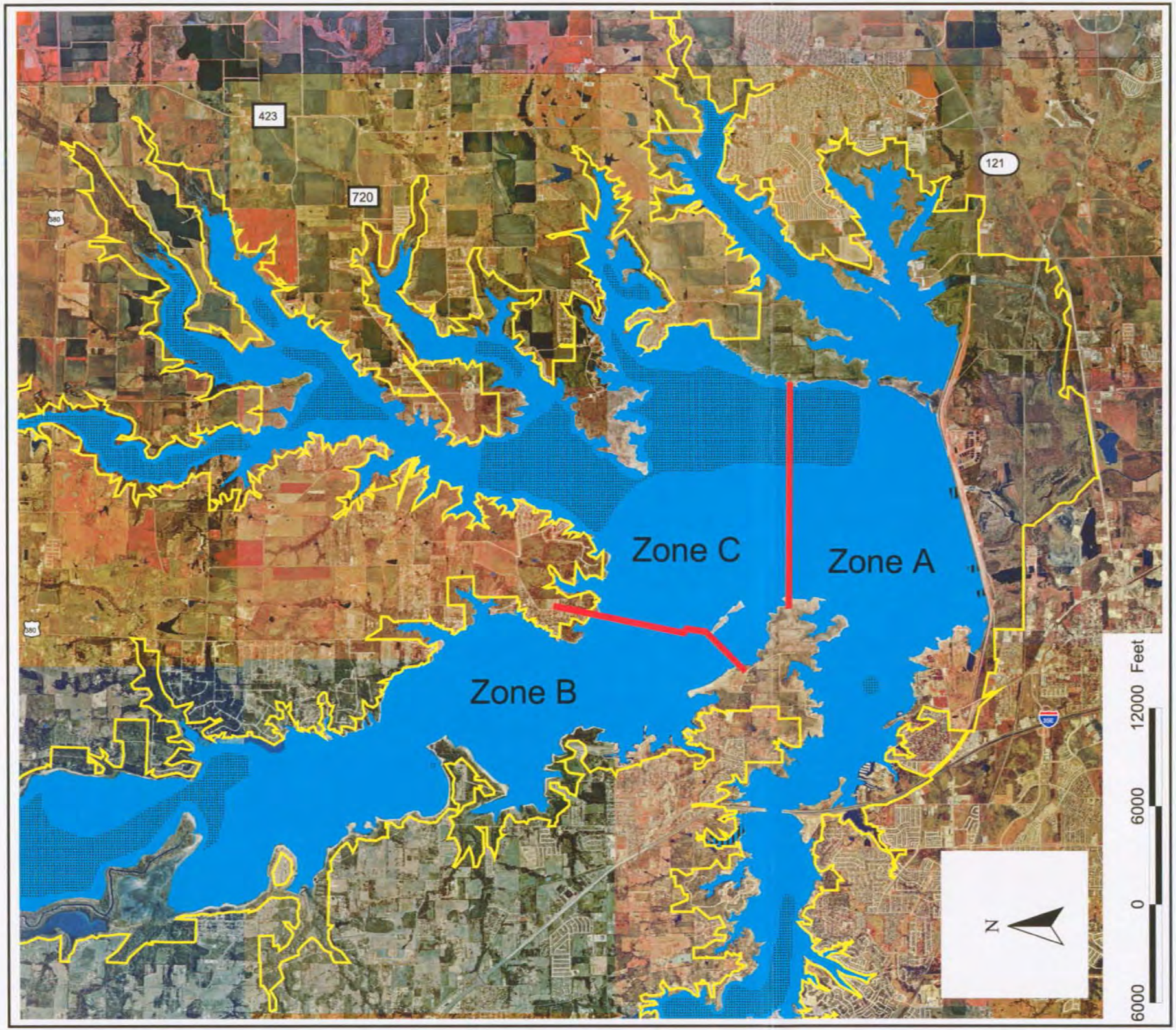
Master Plan Supplement

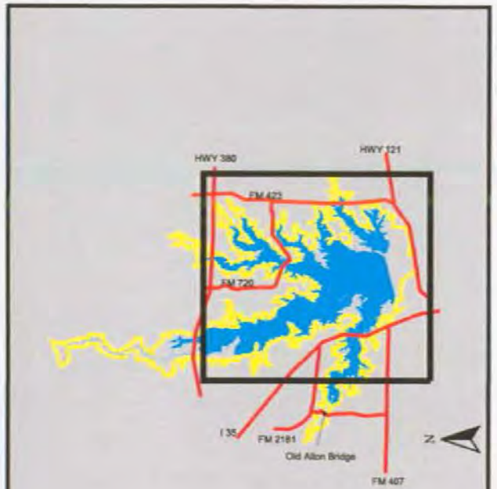
Common Utility Corridors

Carter::Burgess

U.S. Army Corps of Engineers
Fort Worth District

Scale		
1:48,000	Plate 6-3	Sheet 4 of 5





LEGEND

- Property Boundary
- Elm Fork Trinity River
- Carrying Capacity Zone Boundaries
- Lewisville Lake (Conservation Pool)

Water Use Restrictions

- Restricted Area
- Water Hazards

Lewisville Lake
Master Plan Supplement

Carrying Capacity Map

Carter=Burgess

U.S. Army Corps of Engineers
Fort Worth District

Scale		
1:72,000	Plate 6-4	Sheet 1 of 1

CHAPTER 7
FACILITY DEVELOPMENT PLAN

7-01 INTRODUCTION

The information presented in this chapter is intended to serve as a supplement to Chapter 7 of the Lewisville Lake Master Plan, Design Memorandum No. 1C, June 1985. This chapter includes a general description, facility inventory, list of proposed facilities, and brief narrative describing changes to the recreation areas at Lewisville Lake for each recreation area with proposed modifications and/or additions to existing facilities. The development and management recommendations within this plan are intended to improve the quality of the recreational facilities and to increase the potential for visitors to have a quality recreation experience.

7-02 RECREATION AREAS

A. General. There are currently 21 recreation areas at Lewisville Lake and 15 of these areas have proposed modifications and/or additions to existing facilities.

B. Site Plans. Site descriptions are accompanied by a conceptual site plan included as Plates 7-1a thru 7-20c. These site plans are topographic maps intended to show existing land features and developments along with future development plans. Site plans for recreational areas without proposed modifications are included for reference.

C. Facility Inventory. Two facility inventory tables are included for each recreation area. The first facility inventory table is based upon the existing development. The second table lists proposed facilities as described in the Lewisville Lake Programmatic Environmental Assessment, August 1999. The current and proposed facilities are depicted on each topographic plate and labeled as existing or proposed. Although this approach does not provide detailed as-built conditions on the design of each site, it represents an effective way to evaluate the basic conceptual requirements of each area, and the relationship of proposed and existing developments.

D. Facility Description. A brief description of proposed facilities follows the facility inventory tables.

EAST HILL PARK

I. General Description

A. East Hill Park contains approximately 230 acres at conservation pool elevation 522 ft. MSL.

B. The park is located approximately one-half mile north of the east end of the embankment.

C. Access to the park is by a city road, which connects with State Highway 121.

D. The entire park is within the city limits of Lewisville.

E. Park operation is by the Pier 121 Concessionaire.

F. See plates 7-1a and 7-1b for existing and proposed conditions.

II. Site Analysis

General

The site is gently rolling and generally void of tree cover, however, scattered hackberry, cottonwood and willow can be found along the shoreline.

Facilities

1. Past renovations within the park include replacement of vault restroom with new vault restroom/shower facility, resurfacing of all asphalt roads and beach parking areas, and the installation of a control station.

2. The area is very popular – the Pier 121 concessionaire is doing a commendable job of operating and maintaining the facilities.

3. Shoreline configuration in beach area is ideal.

4. Vehicular access roads, circulation roads, and parking for the picnic area are in need of re-design.

TABLE 7-1
EXISTING FACILITIES AT EAST HILL PARK

ITEM	QUANTITY OR DESCRIPTION
Picnic Units	28
Boat Launches	2
Group Pavilion	2
Buoyed Swimming Area	1
Restroom/Shower Facilities	1

The only additional facility proposal consists of the addition of parking area. (see plate 7-1b)

III. Objectives

A. Land Classification

Recreation- Intensive Use

B. Resource Use Objectives

Upgrade and maintain site facilities. Provide additional day-use development as needed.

D. Future Development and Management Measures

The decision to provide additional development rests with the concessionaire. For the immediate future, this area will continue to be operated as a day use area.

CORPS OF ENGINEERS

U.S. ARMY

LAKE

PIER 121 MARINA

BOAT RAMP

PICNIC AREA

SWIMMING AREA

PAVILION

BOAT RAMP

COURTESY DOCK

PARKING

PAVILION

GATE ATTENDANT

PARKING GATE ATTENDANT LOT

COMMERCIAL BUILDING

COMMERCIAL BUILDING

COMMERCIAL BUILDING

522

532

537

522

532

537

LIMITS OF PARK AREA

522

532

537

GOVERNMENT PROPERTY LINE

LIMITS OF LEASE AREA

LIMITS OF PARK AREA

SPILLWAY

N

KEY MAP

EXISTING CONDITIONS

PLATE 7-1a

TRINITY RIVER BASIN TEXAS

LEWISVILLE LAKE

ELM FORK TRINITY RIVER

EAST HILL PARK

200 0 200 400

GRAPHIC SCALE IN FEET

U. S. ARMY ENGINEER DISTRICT, FORT WORTH AUG, 2001

Carter-Burgess

PIER 121 MARINA

I. General Description

A. Area leased to the Marina Concessionaire is approximately 356 acres at conservation pool elevation 522 feet MSL.

B. The area is located within East Hill Park, which is approximately one-half mile north of the east end of the embankment. Access to the area is by a city road, which connects with State Highway 121.

C. See Plate 7-1b for existing and proposed conditions.

II. Site Analysis

A. The principle development constraint is the limited size of the cove where the floating facilities are located. There are few land based development constraints due to flat terrain and limited tree cover.

B. The area offers reasonably good protection from prevailing winds.

C. Vehicular access to the marina is good.

III. Objectives

The concessionaire's long range development plans include many amenities to enhance the base marina operation and add to the overall visitor experience.

TABLE 7-2
EXISTING FACILITIES AT SCOTTS PIER 121 MARINA

ITEM	QUANTITY OR DESCRIPTION
Boat Slips	950
Dry Storage Capacity	555
Ships Store	1
Boat Repair Shop	1
Floating Gas Dock	1
Sewage Pumping Dock	1
Water Supply	Chlorinated well water
Parking	Paved and gravel lot
Boat Sales	1

TABLE 7-3
PROPOSED FACILITIES AT SCOTTS PIER 121 MARINA

ITEM	QUANTITY OR DESCRIPTION
Hotel	1
Cabins	20
Campsites	Unspecified
Boat slips	Unspecified

See Plate 7-1b for overview of proposed facilities

- The Pier 121 Concessionaire is proposing various amenities to their existing marina facility due to expected rapid growth in the surrounding community. Proposed facilities would partially occur on an additional 62 acres of East Hill Park (included in 356 acres, above) that the concessionaire recently added to the lease.

CORPS OF ENGINEERS

U.S. ARMY

LAKE

BOAT HOUSES

BOAT HOUSES

BOAT HOUSES

BOAT RAMP

FUEL

PARKING

PARKING

PICNIC AREA

RESTAURANT

SWIMMING AREA

PAVILION

BOAT RAMP

PARKING

HOTEL

COURTESY DOCK

PAVILION

PARKING

BOAT RENTAL

PARKING

TENNIS COURTS

OFFICE

SWIMMING POOL

MAINTENANCE BUILDING

SEPTIC SYSTEM

TRAIL

PARKING

COMMERCIAL BUILDING

BOAT STORAGE INDOOR\OUTDOOR

522

537

532

COURTESY DOCK 20 BOATS

CONCESSIONS PAVILION RESTROOMS

TRAIL

PADDOCK TACK ROOM STABLES

SEPTIC SYSTEM

LIMITS OF PARK AREA

TRAIL

CAMPING AREA

BASEBALL FIELD

TRAIL

BASKETBALL SOCCER

CABINS

RV PARKING

RV PARKING

PARKING

SPILLWAY

GOVERNMENT PROPERTY LINE

LIMIT OF LEASE AREA

LIMITS OF PARK AREA

N

PIER 121 MARINA

KEY MAP

EXISTING CONDITIONS

FUTURE DEVELOPMENT

PLATE 7-1b

TRINITY RIVER BASIN TEXAS

LEWISVILLE LAKE

ELM FORK TRINITY RIVER

PIER 121 MARINA

AT EAST HILL PARK

200 0 200 400

GRAPHIC SCALE IN FEET

U.S. ARMY ENGINEER DISTRICT, FORT WORTH AUG, 2001

Carter=Burgess

STEWART CREEK PARK

I. General Description

A. This park contains approximately 90 acres at conservation pool elevation 522 MSL.

B. It is located on the east side of the Stewart Creek arm of the lake approximately one mile north of the east end of the dam, and west of the city of The Colony.

C. Access to the park is from Colony Blvd which connects to FM 423.

D. The park is leased to The Colony and is operated as a fee area.

E. See Plate 7-2 for existing and proposed facilities.

II. Site Analysis

A. General

1. Tree cover ranges from sparse to dense, consisting of hackberry, elm, cottonwood and bois d'arc. Ground cover is predominantly Bermuda grass, Johnson grass and buffalo grass.

2. The predominate view from the park is of the Pier 121 marina on the opposite side of the Stewart Creek arm of the lake. During periods of lake level drawdown, marina slips are moved toward the center of the cove which magnifies the visual presence of the marina from most areas of Stewart Creek Park.

B. Facilities

1. The city is doing a good job of operating and maintaining the park facilities.

2. Grass and tree cover is good in areas of low levels of traffic.

3. Access to the park is direct and well maintained.

4. A nine-hole, par three golf course and driving range is located in the northern half of the park.

III. Objectives

A. Land Classification

Recreation - Intensive Use

B. Resource Use Objectives.

Work with park lessee to develop a plan to upgrade existing facilities and reduce conflicts between different activities.

C. Future Development and Management Measures

1. Upgrade picnic units by preparing delineated impact areas for each site.

2. Provide delineated parking areas for existing and future development areas.

3. Initiate a landscape planting program to improve appearance, screen, and provide shade to existing and proposed development areas.

TABLE 7-4
EXISTING FACILITIES AT STEWART CREEK PARK

ITEM	QUANTITY AND DESCRIPTION
Picnic Units	28
Launching Areas	2
Courtesy Dock	1
Restroom	1
Buoyed Swimming Area	1
Pavilion	1
Dump Station	1
Water Supply	Chlorinated well water
Parking	Paved Boat Use, Gravel Day-Use
9-hold Golf Course	1

TABLE 7-5
PROPOSED FACILITIES AT STEWART CREEK PARK

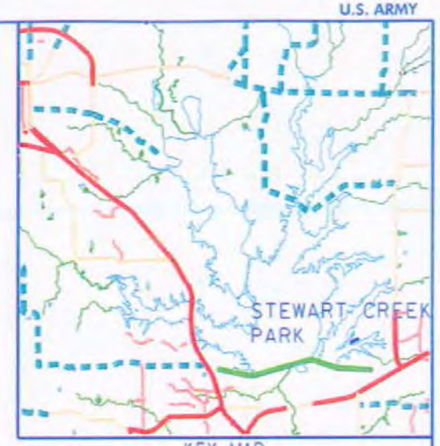
ITEM	QUANTITY AND DESCRIPTION
Parking	Expand existing paved parking
A.D.A. camping site	1
Pavilion	1
Swim / beach area	Expand existing swim / beach area
Basketball court	1
Fishing pier	1
Playground	1
Gazebo	1
Camping / picnic tables	15
Courtesy dock	Extend existing courtesy dock
Bathrooms	2
Tent camping	10
Walking trail	Expansion of existing trail
Park host trailer pad	1
Cabins	10

- Existing parking will be expanded 24,000 square feet.
- An A.D.A. accessible campsite will be constructed including a concrete slab, picnic table, and accessible grill and lantern holder.
- A 1,400 square feet pavilion with an associated gravel entrance and 5,000 square feet parking lot will be constructed to encourage increased use of the park and its existing facilities by offering a convenient place to have meetings, reunions, weddings, parties, etc.
- A 30,000 square feet beach area with white sand and 31,500 square feet swimming area will be added to the existing swimming area with a 44' X 60' area being designated for sand volleyball.
- A 55' X 70' X 5" concrete basketball court with a goal will be constructed.
- A 4' X 150' fishing pier will be constructed north east of the old boat ramp to encourage increased use of the park and its facilities by offering a convenient method of fishing.
- A 2,500-square foot playground area with play elements is proposed.
- A 14' X 20' gazebo will be constructed with an associated parking lot to encourage park use.
- Fifteen picnic tables on concrete slabs with roofs, fire rings and barbeque grills are proposed.
- The existing courtesy dock will be extended 60 feet to encourage park use by providing a convenient method of entering and exiting boats.

- Two bathroom facilities are proposed with facilities for men and women.
- Ten tent camping areas with designated tent pads, picnic tables, fire rings, and barbeque grill are proposed. These sites will be walk-in sites.
- Mowing an 8-foot wide section for a total length of 1 mile will expand the existing walking trail.
- An additional park host gravel trailer pad with breaker pedestal, fire ring, water and sewage facilities will be developed. These facilities are needed to support a park host to supplement security and gate operations in the park due to increased use.
- Ten 400 square foot rustic cabins are proposed with parking area for two cars, picnic table, fire ring, and barbeque grill.

CORPS OF ENGINEERS

U.S. ARMY



KEY MAP

LIMITS OF PARK AREA

GOVERNMENT PROPERTY LINE

STEWART PENINSULA GOLF COURSE (9-HOLE)

DESIGNATED TENT CAMPING

EXTEND WALKING TRAIL

TO F.M. ROAD 423

GATE

PARKING

PARKING

LIMITS OF PARK AREA

BOAT LAUNCH

EXTEND COURTESY DOCK

COURTESY DOCK

PICNIC TABLES

CAMPING PICNIC TABLES

EXTENDED SWIM BEACH AREA

PICNIC TABLES

SAND VOLLEYBALL

RESTROOM

DUMP STATION

CABINS

RESTROOM

PAVILION

PLAYGROUND

BASKETBALL

GAZEBO

BACKSTOP

EXISTING BEACH

PAVILION

GRAVEL PARKING

FISHING PIER

ADA CAMP SITE

PICNIC TABLES

LAKE

EXISTING CONDITIONS

FUTURE DEVELOPMENT

PLATE 7-2

TRINITY RIVER BASIN TEXAS
LEWISVILLE LAKE
ELM FORK TRINITY RIVER

STEWART CREEK PARK

200 0 200 400
GRAPHIC SCALE IN FEET

U.S. ARMY ENGINEER DISTRICT, FORT WORTH AUG. 2001

Carter-Burgess

EASTVALE PARK

I. General Description

A. This park consists of 70 acres at existing conservation pool elevation 522 ft. msl.

B. The park is located on the eastern side of the lake where FM Road 423 crosses the Stewarts Creek arm of the lake.

C. Access to the park is from FM Road 423, which borders the eastern boundary of the park.

D. The park is leased by the city of The Colony.

E. See plate 7-3 for existing and proposed conditions.

II. Site Analysis

A. General

1. The terrain is moderately sloping with sparse tree cover. Grass cover is fair with the predominate species being bermudagrass, johnsongrass, and buffalograss.

2. There are substantial amounts of standing dead timber in the lake, adjacent to the park shoreline.

3. The overall resource quality (views & vegetative quality) as they relate to recreational activities, are poor to average.

B. Facilities

The city operates this area as a minor access point, with their main focus on provision of athletic fields, a playground and a jogging/walking trail.

III. Objectives

A. Land Classification

Recreation- Intensive Use

B. Resource Use Objectives

Encourage lessee to continue to upgrade and expand existing facilities.

C. Future Development and Management Measures (see Table 7-7)

TABLE 7-6
EXISTING FACILITIES AT EASTVALE PARK

ITEM	QUANTITY / DESCRIPTION
Picnic Units	4
Launching Areas (Lanes)	1
Athletic Fields	3
Restroom	1
Water Supply	Chlorinated well water
Parking	Day and Boat Use

TABLE 7-7
PROPOSED FACILITIES AT EASTVALE PARK

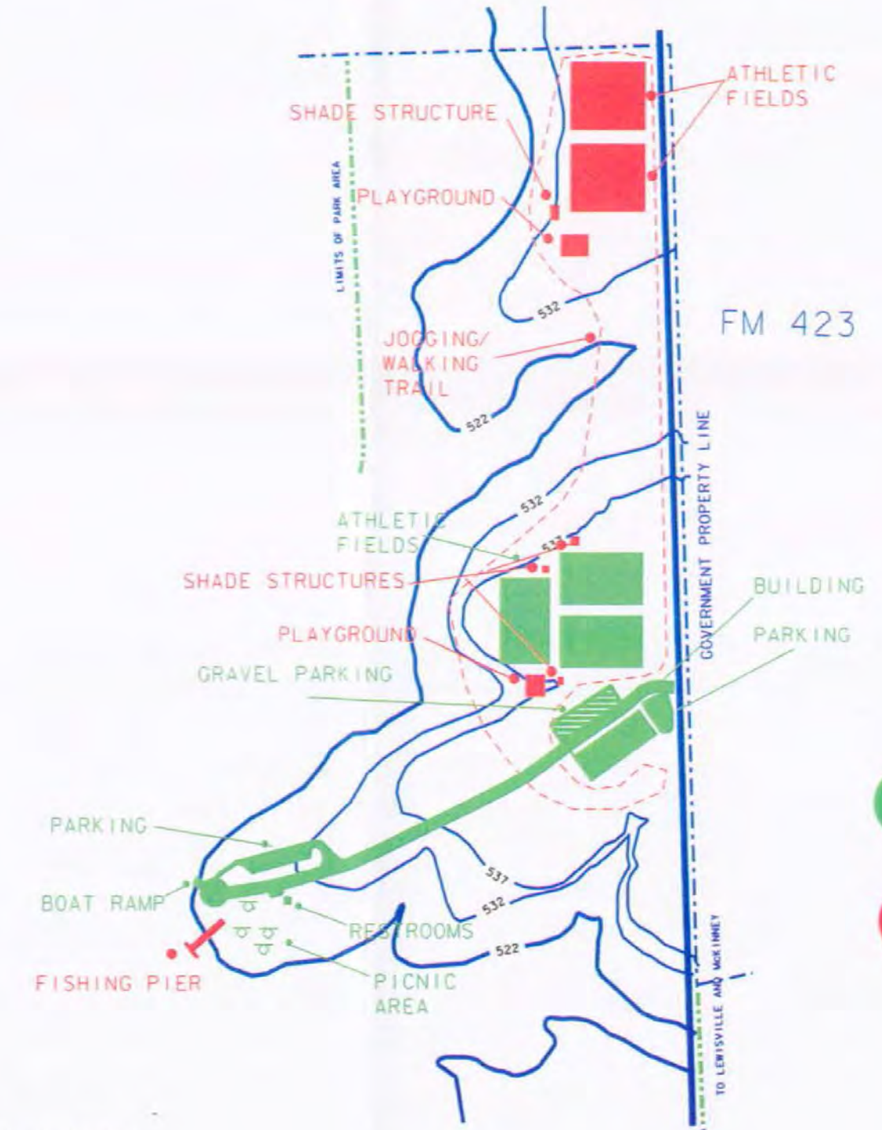
ITEM	QUANTITY / DESCRIPTION
Indoor Soccer Facility	1
Courtesy Dock	1
Athletic Fields	2
Sand Volleyball	1
Fishing Pier	1
Walking / Jogging Path	1
Horseshoe-pitching Pit	1

- An indoor soccer facility with paved parking is proposed within the park to provide additional athletic participation.
- A courtesy dock will be constructed at the boat ramp to provide for easy access into and out of boats.
- Two lighted soccer fields will be located at the north end of the park with parking areas adjacent to them.
- A sand volleyball court will be constructed to encourage park use.
- A fishing pier that is designed for family use will be constructed to provide additional opportunity for family activities.
- A walking / jogging trail will be developed in the park in and around existing facilities and operations.
- A horseshoe pit will be constructed.

CORPS OF ENGINEERS

U.S. ARMY

KEY MAP



LAKE

EXISTING CONDITIONS

FUTURE DEVELOPMENT

PLATE 7-3

TRINITY RIVER BASIN TEXAS
LEWISVILLE LAKE
ELM FORK TRINITY RIVER
EASTVALE PARK

200 0 200 400
GRAPHIC SCALE IN FEET

U.S. ARMY ENGINEER DISTRICT, FORT WORTH AUG, 2001

Carter-Burgess

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WYNNEWOOD PARK

I. General Description

A. This park consists of approximately 650 acres at conservation pool elevation 522 feet MSL.

B. The park's location is on the eastern shore of the lake.

C. Access is from a county road that intersects with FM Road 423.

D. The park is leased to The Colony.

E. See plates 7-4a and 7-4b for existing and proposed conditions.

II. Site Analysis

A. General

1. The park has extensive flat areas which are subject to periodic flooding.

2. Tree cover varies from sparse to dense with the primary species being hackberry, elm, willow and cottonwood. Primary grass species are bermudagrass and johnsongrass.

3. A substantial amount of un-cleared timber is visible offshore.

B. Facilities

The city, through a third party, has developed an 18 hole golf course on the lease.

III. Objectives

A. Land Classification

Recreation -Intensive Use

B. Resource Use Objectives

Encourage The Colony to use best management practices in the operation of the golf course to assure prudent environmental stewardship.

Table 7-8
EXISTING FACILITIES AT WYNNEWOOD PARK

ITEM	QUANTITY / DESCRIPTION
The Tribute Golf Course (18 holes) and Clubhouse	1
Concrete Picnic Units*	16
Vault Restroom*	1
2-lane Boat Ramp*	1
Water Well and Pump-house*	1

(existing facilities to be disposed of)

Table 7-9
PROPOSED FACILITIES AT WYNNEWOOD PARK

ITEM	QUANTITY / DESCRIPTION
Multi-use Athletic Fields	2
Basketball Courts	2
Sand Volleyball	1
Parking Areas	4
Playgrounds	2
Gazebo	1
Resort and Conference Center	1
18-hole Golf Course	1
Marina	1(840 slips)

- Multi-use athletic fields, basketball courts, sand volleyball courts, playgrounds, gazebos, and parking to accommodate users of these features are planned to encourage use of the park.
- The hotel and conference center will be located along the western shore of the peninsula and at the northern edge of public land. A primary attraction of this facility will be its adjacency to the golf course, marina, and lake. The development will include 440 guest rooms, banquet facilities, and one or more restaurants.
- The proposed 18-hole golf course will be adjacent to the existing golf course with several holes located on adjacent private land.
- Marina

CORPS OF ENGINEERS

U.S. ARMY

THE TRIBUTE
GOLF LINKS
18 HOLES

NEW GOLF COURSE
18 HOLES

PARKING

MULTI-USE
ATHLETIC
FIELDS

PARKING

BASKETBALL

PLAYGROUND

SAND
VOLLEYBALL

PLAYGROUND

BASKETBALL

PARKING

PARKING

MULTI-USE
ATHLETIC
FIELDS

GAZEBO

532

522

KEY MAP

N

EXISTING CONDITIONS

FUTURE DEVELOPMENT

LAKE

PLATE 7-4a

TRINITY RIVER BASIN TEXAS
LEWISVILLE LAKE
ELM FORK TRINITY RIVER
WYNNEWOOD PARK
IN 2 SHEETS SHEET No. 1
200 0 200 400
GRAPHIC SCALE IN FEET

U.S. ARMY ENGINEER DISTRICT, FORT WORTH AUG, 2001

Carter-Burgess

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CORPS OF ENGINEERS

U.S. ARMY

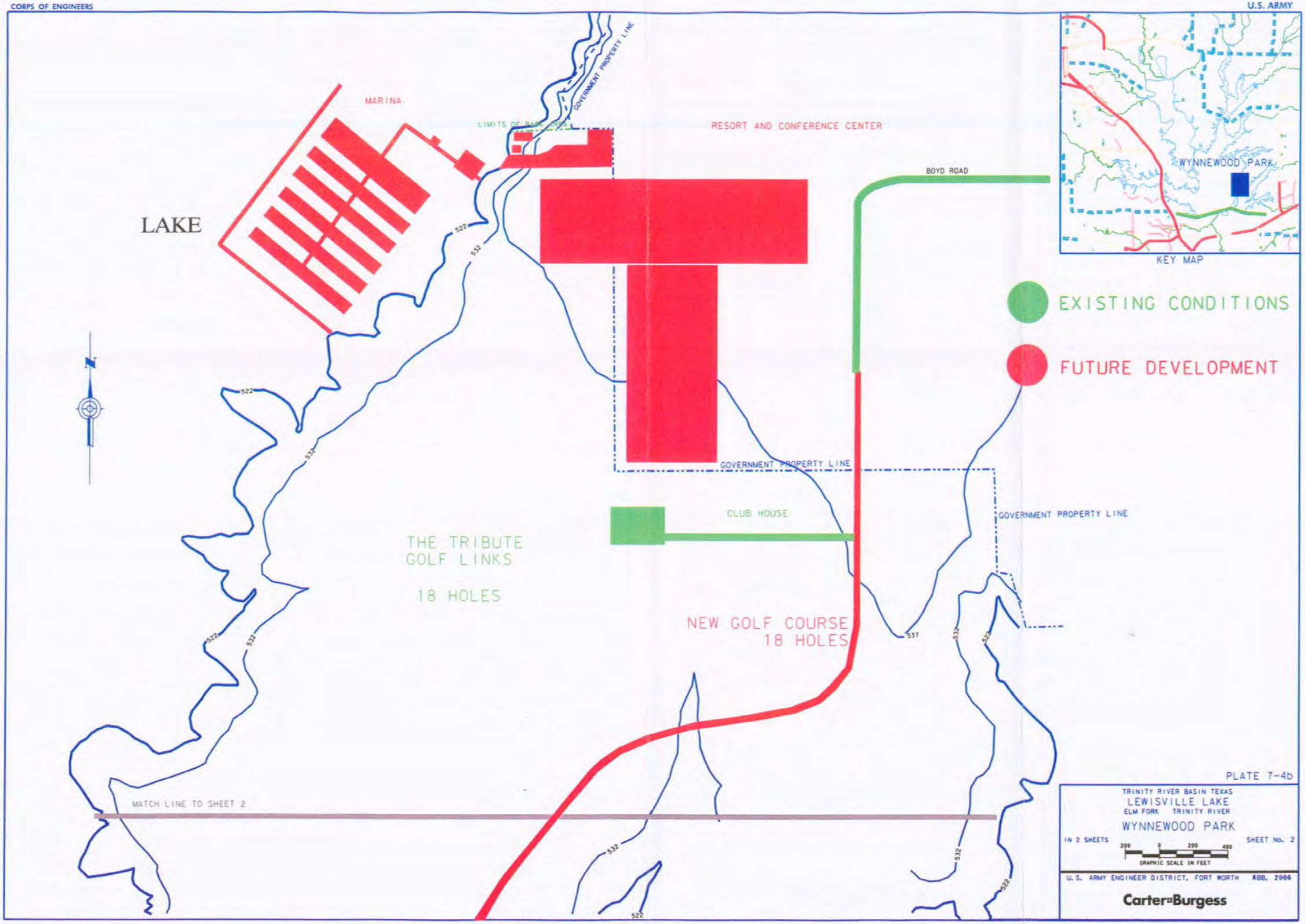

PLATE 7-4b

TRINITY RIVER BASIN TEXAS
LEWISVILLE LAKE
ELM FORK TRINITY RIVER
WYNNEWOOD PARK

IN 2 SHEETS

SHEET No. 2

200 0 200 400
GRAPHIC SCALE IN FEET

U.S. ARMY ENGINEER DISTRICT, FORT WORTH ABB, 2006

Carter-Burgess

HIDDEN COVE PARK

I. General Description

A. This park contains approximately 600 acres at conservation pool elevation 522 ft. MSL.

B. The park is located on the eastern shore of the lake, between Hackberry and Cottonwood creeks.

C. Access to the park is by a county road, which connects with FM Road 423.

D. The park is operated by the city of The Colony.

E. See Plates 7-5a and 7-5b for existing and proposed conditions.

II. Site Analysis

A. General

1. The area is flat to gently sloping with few development limitations.

2. Tree cover varies from dense to sparse. The predominate species are mesquite with cottonwood and willow along the shoreline. The eastern half of the park contains mature tree cover while the western half of the park is primarily 'shrub mesquite'.

3. Grass cover is in many areas quite good. Predominate species are johnsongrass, bermudagrass, and Texas wintergrass.

4. Soils are generally clay and expansive, presenting some building limitations.

5. There is a substantial amount of standing dead timber in the lake which can be viewed from most shoreline areas of the park.

8. There are no areas in the park of exceptionally high resource quality.

B. Facilities

The park currently provides high quality camping and picnicking facilities and includes a group dining hall and screened shelters.

III. Objectives

A. Land Classification

Recreation - Intensive Use

B. Resource Use Objectives

The Colony intends to continue to manage the park for both day and overnight use activities.

TABLE 7-10
EXISTING FACILITIES AT HIDDEN COVE PARK

ITEM	QUANTITY/ DESCRIPTION
Picnic Units	69
Camp Units	50
Screened Shelters	38
Group Pavilions	3
Group Dining Hall	1
Launching Areas	1
Restrooms	4
Staff Residences	2
Maintenance Area	1
Sewage Treatment Plant	1
Water Supply	Chlorinated well water
Parking	Paved Day, Overnight, & Boat Use

Table 7-11
PROPOSED FACILITIES AT HIDDEN COVE PARK

ITEM	QUANTITY / DESCRIPTION
Multi-Use Athletic Field	1
Sand Volleyball Court	3
Basketball Court	2
Playground	2
Gazebo	1
RV Camp Site Area	1
Tent Camp Site Area	1
Group Camp Facilities	1
Bicycle Trail	1
Fishing Pier	3
Courtesy Dock	1
Parking	6
Lodge/Conference Center	1
Lift Station	2
Environmental Bathroom	1
Wastewater Expansion	Existing system expansion
Water Well	1
Water Park/Pool	1
Boat/RV Storage Area	1
Marina (350 wet slips)	1

- Multi-use athletic fields, basketball courts, sand volleyball courts, playgrounds, gazebos, camp areas, swim beaches, bicycle trails, fishing piers, and parking to accommodate users of these features are planned to encourage use of the park.
- An RV, tent, and group camp facility will be constructed for public use.
- Fishing pier and courtesy dock will be constructed to provide easier access to and from boats, and to provide additional fishing opportunities.
- The conference center will be located near the northeastern shore of the peninsula.
- A lift station will be installed to serve the proposed bathroom on the western half of the peninsula.
- The wastewater system will be expanded to accommodate the new facilities built on the subject property.
- A water well will be constructed to meet water demands.
- The water park/pool and boat/RV storage area will be constructed as additional park amenities.
- A marina with 350 wet slips is authorized.

CORPS OF ENGINEERS

U.S. ARMY

LAKE

MOUNTAIN BIKE TRAIL

HIKING TRAIL

MARINA (OPTION 2)

PARKING

ENVIRONMENTAL BATHROOM

TENT CAMPING AREAS

TENT CAMPING

RV CAMPING

MATCH LINE TO SHEET 1

522

530

N

KEY MAP

EXISTING CONDITIONS

FUTURE DEVELOPMENT

PLATE 7-5a

TRINITY RIVER BASIN TEXAS
LEWISVILLE LAKE
ELM FORK TRINITY RIVER
HIDDEN COVE PARK

IN 2 SHEETS SHEET No. 2

200 0 200 400
GRAPHIC SCALE IN FEET

U.S. ARMY ENGINEER DISTRICT, FORT WORTH AUG. 2001

Carter-Burgess

CORPS OF ENGINEERS

U.S. ARMY

LAKE

EXISTING CONDITIONS

FUTURE DEVELOPMENT

HIDDEN COVE PARK

KEY MAP

GOVERNMENT PROPERTY LINE

FISHING PIER

SWIMMING/ BEACH AREA

CABINS

MARINA (OPTION 1)

LODGE/CONFERENCE CENTER

PLAYGROUND

PARKING

BASKETBALL COURT

MULTI-USE ATHLETIC FIELDS

SAND VOLLEYBALL

PARKING

WASTEWATER EXPANSION

BOAT/ RV STORAGE AREA

BUNK HOUSE

WATER TOWER

PARKING

RESIDENCE

MAINTENANCE

RESTROOM

PAVILION

PLAYGROUND

MOUNTAIN BIKE TRAIL

WATER WELL

PARKING

DUMP STATION

RV CAMPING

HACKBERRY ROAD

PARK ENTRANCE HEAD QUARTERS

PARKING

RESIDENCE

PARKING

PICNIC AREA

SAND VOLLEYBALL

CABINS

PICNIC AREA

SWIMMING/ BEACH AREA

CONCESSION AREA CONVERSION

LIFT STATION

HIKING TRAIL

CABINS

PLAYGROUND

RESTROOM

PARKING

GAZEBO

PARKING

RESTROOMS

PLAYGROUND

LIMITS OF PARK AREA

RV CAMPING

TENT CAMPING

FISHING PIER

PAVILION

FISHING PIER

PARKING

PAVILION

SAND VOLLEYBALL

WATER PARK/ POOL RESTROOMS ACTIVITY CENTER MINIATURE GOLF BASKETBALL

COURTESY DOCK

BOAT LAUNCH

CONCESSION AREA

CONFERENCE CENTER

CABINS

MATCH TO SHEET NO 2

ENVIRONMENTAL RESTROOM

LAKE

PLATE 7-5b

TRINITY RIVER BASIN TEXAS

LEWISVILLE LAKE

ELM FORK TRINITY RIVER

HIDDEN COVE PARK

IN 2 SHEETS

200 0 200 400

GRAPHIC SCALE IN FEET

SHEET NO 1

U.S. ARMY ENGINEER DISTRICT, FORT WORTH AUG, 2001

Carter-Burgess

COTTONWOOD PARK

I. General Description

A. Cottonwood Park contains approximately 140 acres at conservation pool elevation 522 ft. MSL.

B. The park is located on the north shore of the Cottonwood creek arm of the lake, south of the town of Little Elm.

C. Access to the park is by a county road, which connects with FM 720.

D. The park is leased to the city of Little Elm. (See plate 7-6 for existing and proposed facilities)

II. Site Analysis

A. General

1. Tree cover is sparse with scattered hackberry, elm, cottonwood and willow along the shoreline. Ground cover consists primarily of bermudagrass and buffalograss.

2. The park's topographical features are gently sloping to flat.

3. The area has average aesthetic appeal

B. Facilities

Historically, this park has served as a minor access point with a boat ramp and meager picnicking facilities and was closed for several years prior to being leased to the town of Little Elm.

III. Objectives

A. Land Classification

Recreation -Intensive Use

B. Resource Use Objectives

Develop day-use facilities and a marina.

C. Future Development and Management Measures

1. Construct marina facilities as depicted on Plate 7-6 and operate as a full service marina.

2. Maintain vehicular control within the park area.

TABLE 7-12
EXISTING FACILITIES AT COTTONWOOD PARK

ITEM	QUANTITY / DESCRIPTION
Picnic Units	9
Restroom	1
Launching Area	1
Parking	Gravel-Boat and Day Use

TABLE 7-13
PROPOSED FACILITIES AT COTTONWOOD PARK

ITEM	QUANTITY / DESCRIPTION
Marina	1
Rental Slips	250 open and covered slips*
Retail Business Center	1
Repair Maintenance Facility	1
Restaurant/Club Facility	1
Boat Rental	1
Yacht Sales Dock	1
Floating Breakwater	1
Earth and Rock Breakwater	1

(All floating structures will be anchored by telescoping anchors or winch and cable anchorage systems.)
* Maximum authorization of 840 wet slips

- Additional facilities and improvements to existing facilities will include 2 above-ground storage tanks for fuel (one for gasoline and one for diesel fuel), shower and restroom facilities, dry boat storage, a service hoist, a night watchman residence, an electrical service, storage facilities, a sewage system, a gate house, improved roadways and new parking spaces, an improved boat ramp, and an RV park with holding tank pump out facilities.
- A Retail Business Center will be located on a single floating platform and will house the Ship's Store, offices, fuel dock, pump out facility, and restrooms. The offices will be for day-to-day operations, bookkeeping, accounting, etc. The business of leasing slips will also take place in these offices. The store will sell boating accessories, fuel, and groceries to the public. Showers, restrooms, and holding tank pump out system also will be located on the Ship's Store platform and will be open to the public.
- The Repair Maintenance Facility is to be constructed next to the Retail Business Center platform and will provide service and maintenance for the boats moored at Lake Lewisville.
- The Restaurant/Club Facility will be located on its own separate platform that will include courtesy slips to accommodate the boating public and will conform to all applicable regulations and restrictions.

- The boat rental will possibly be operated out of existing slips in the marina complex.
- The yacht sales dock's purpose will be to moor, display, and demonstrate boats for sale that are too large to be kept on a trailer efficiently. Initially, and probably permanently, the yacht dock will be located within the existing marina facility.
- A floating breakwater is necessary to protect the marina from wind or boat-generated waves. The earth and rock breakwater will be constructed in the event that the floating breakwater fails.

CORPS OF ENGINEERS

U.S. ARMY

KEY MAP

STATE FM 270

TO F.M. ROAD 720

LOBO ROAD

GATEHOUSE

LIMITS OF PARK AREA

GOVERNMENT PROPERTY LINE

LIMITS OF PARK AREA

537

532

522

FLOATING BREAKWATER

RESTAURANT
BOAT SLIPS
BOAT RENTAL
STORE
FUEL DOCK AND RESTROOMS
REPAIR FACILITY
YACHT SALES DOCK

RESTROOM AND
SHOWER FACILITIES

RESTROOM

10 COVERED TABLES

BOAT RAMP

FLOATING BREAKWATER

EARTH AND ROCK
BREAKWATER

EXISTING CONDITIONS

FUTURE DEVELOPMENT

LAKE

PLATE 7-6

TRINITY RIVER BASIN TEXAS
LEWISVILLE LAKE
ELM FORK TRINITY RIVER
COTTONWOOD PARK

200 0 200 400
GRAPHIC SCALE IN FEET

U.S. ARMY ENGINEER DISTRICT, FORT WORTH AUG. 2001

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LITTLE ELM PARK

I. General Description

A. Little Elm Park (formally Frisco Park) consists of approximately 125 acres at conservation pool elevation 522 ft. MSL.

B. The park is located on the east side of Little Elm Creek in the northeast portion of the project.

C. Access to the park is available via FM Road 720, which borders the southern portion of the park.

D. The city limits of Little Elm border the eastern limits of the park.

E. The park is operated and maintained by the city of Little Elm.

F. See plate 7-7 for existing and proposed facilities.

II. Site Analysis

A. General

1. The terrain varies from gently rolling to flat.

2. Tree cover is sparse in most areas with small groves of pecan, hackberry, and elm. In undisturbed areas, grass cover is dense with johnsongrass, bermudagrass and buffalograss being the predominate species.

B. Facilities

1. The town is doing a good job of operating and maintaining the park. From a resource standpoint, this park has the potential to become a quality recreation area. Vegetation, topographic relief, access, and abundant bird life are all positive features of the park.

III. Objectives

A. Land Classification

Recreation - Intensive Use

B. Resource Use Objectives

Upgrade and maintain site facilities. Provide additional day-use facilities.

C. Future Development and Management Measures

Future facility development concepts are shown on Plate 7-7.

TABLE 7-14
EXISTING FACILITIES AT LITTLE ELM PARK

ITEM	QUANTITY / DESCRIPTION
Picnic Units	9
Camp Units	1
Baseball Fields	2
Group Pavilions	1
Launching Area	1
Restrooms	1
Water Supply	Municipal (town of Little Elm)
Parking	Gravel-Boat and Day Use

TABLE 7-15
PROPOSED FACILITIES AT LITTLE ELM PARK

ITEM	QUANTITY / DESCRIPTION
Baseball Field	1
Soccer/Football Field	4
Tennis Court	2
Camp site	Not specified
Lodge	1
Nature Trail	1
Electric System	Improve existing
Water/Sanitary Sewer Facilities	Improve existing
Parking	Improve existing

- In addition to the two baseball fields and two volleyball courts that presently exist, the town will develop an additional little league ball field, four combination soccer/football fields, and two tennis courts. These facilities will provide for a variety of athletic activities to accommodate different interests of the general public. Additional and improved parking for facilities will be built where they now exist.
- An area for overnight campers including primitive campsites, screened shelters, and RV camp sites will be developed at the north end of the park. The RV campsites will be provided with complete hook-ups. A playground area and showers/restrooms are to be located at the center of the camping areas.
- The lodge is to be constructed near the north end of the park. It shall be constructed with a rustic wood exterior and metal roof. Construction will also include a 3,000 square foot main room, approximately 25' X 30' full kitchen, restroom facilities for men and women, and two additional 1,000 square foot meeting rooms. Parking will be provided for 75 vehicles.

- A nature trail will be developed that follows along the shoreline connecting the amenities of the park. It will cross over the footbridge to be located across the north slew.
- To service all facilities, an improved electric system and water/sanitary sewer facility will be constructed.

CORPS OF ENGINEERS

U.S. ARMY

KEY MAP

LAKE

LIMITS OF PARK AREA

GOVERNMENT PROPERTY LINE

N

CABIN AREA

PLAYGROUND

SHOWERS

LODGE
RESTAURANT
GAME ROOM

PARKING

FOOTBALL
SOCCER

TENNIS COURTS

PARKING

FOOTBALL
SOCCER

SAND VOLLEYBALL

PLAYGROUND

GRAVEL PARKING

PARKING

CONTROL
STATION

PARKING

BASEBALL
FIELDS

PARKING

LITTLE LEAGUE
FIELD

CONCESSION STAND

STATE F.M. NO. 720

LIMITS OF PARK AREA

MAIN STREET

GOVERNMENT PROPERTY LINE

PICNIC AREA

FOOT BRIDGE

PAVILLIONS

BOAT LAUNCH

BOAT LAUNCH

COURTESY DOCK

PARKING

PICNIC AREA

CHANGING
ROOMS

FOOT PATH

PARKING

532

533

LAKE

EXISTING CONDITIONS

FUTURE DEVELOPMENT

PLATE 7-7

TRINITY RIVER BASIN TEXAS
LEWISVILLE LAKE
ELM FORK TRINITY RIVER

LITTLE ELM PARK

200 0 200 400
GRAPHIC SCALE IN FEET

U.S. ARMY ENGINEER DISTRICT, FORT WORTH AUG. 2001

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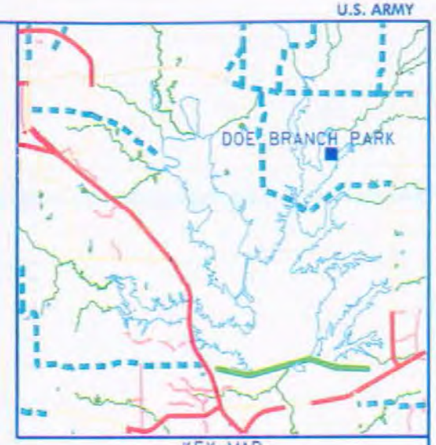
CORPS OF ENGINEERS

U.S. ARMY



KEY MAP

EXISTING CONDITIONS

Plate 7-8

TRINITY RIVER BASIN TEXAS
LEWISVILLE LAKE
ELM FORK TRINITY RIVER
DOE BRANCH PARK

200 0 200 400
GRAPHIC SCALE IN FEET

U. S. ARMY ENGINEER DISTRICT, FORT WORTH AUG. 2001

Carter Burgess

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DOE BRANCH PARK

I. General Description

A. This park is currently undeveloped.

B. The park consists of approximately 110 acres at the new conservation pool (522 ft. msl).

C. Location of the park is west of the Doe Branch arm of the lake in the northeastern portion of the project.

D. Access to the area is by several county roads which connect with U.S. Highway 380.

E. The area is currently designated as an open hunting area.

II. Site Analysis

A. General

1. The topography of the area is relatively flat to moderately sloping.

2. The majority of the area was at one time leased and under bermudagrass cultivation. Vegetation is currently in a transitional (old field) stage.

3. The park's location is remote with access limited by unimproved county roads.

4. Current use is primarily by local hunters and fishermen.

5. The park is currently open to vehicular use which has resulted in the creation of numerous volunteer roads through the park area.

6. The park is well suited to the types of use it currently receiving. These uses are primarily low volume hunting (rabbit, quail, squirrel, and water fowl), fishermen access, and nature walks.

III. Objectives

A. Land Classification

Low Density Recreation

B. Resource Use Objectives

Continue to manage and operate as a minor access point

C. Future Development and Management Measures

1. Fence all areas as necessary to control human encroachment and off-road vehicle use. Disk and reseed damaged areas once vehicular control is gained.
2. Construct trails to increase shoreline accessibility and hunter access while maintaining vegetative and scenic quality.
3. Maintain and improve wildlife habitat to increase carrying capacity for resident and migratory waterfowl.

Table 7-16
FACILITIES – DOE BRANCH PARK

ITEM	QUANTITY / DESCRIPTION
Launching Areas (Lanes)	1 (1)

NARROW LAKE PARK

I. General

A. This park is currently undeveloped.

B. The area consists of approximately 218 acres at conservation pool elevation 522 ft. msl.

C. Due to the park's limited size and subsequent development limitations, it has been deleted from park status.

YMCA OF METROPOLITAN DALLAS

I. General Description

A. The leased area consists of approximately 24 acres.

B. The YMCA camp is located on the eastern side of old Lake Dallas.

C. Access to the area is by a county road which connects with FM Road 720.

D. The lease was awarded on 1 February 1985 and will expire on 31 January 2010.

E. The area was leased previously by the Boys Club of Dallas.

II. Site Analysis

A. General

1. The terrain is moderately sloping to steep. The western shoreline is particularly steep and shows signs of erosion.

2. The predominate tree species is oak with some willow and cottonwood on the shoreline. Grass cover is good with major species being bermudagrass, johnsongrass and buffalograss.

3. The area has a high degree of aesthetic appeal.

4. There is some standing dead timber above the conservation pool elevation which resulted from 1981 flooding.

5. Utility lines crossing a cove to the north of the leased area have been raised to comply with minimum clearance requirements.

B. Facilities

The leased area is operated on a seasonal basis (May through September) for summer camp activities. The area is essentially closed during the fall and winter months of the year. The YMCA discourages any use of the area by the general public.

III. Objectives

A. Land Classification

Recreation- Intensive Use

B. Resource Use Objectives

Continue to maintain facilities and resources in leased area.

C. Future Development and Management Measures

Future plans call for the development of a floating dock and swimming area, additional shower/restroom facility, archery and BB gun ranges.

TABLE 7-17

FACILITIES - YMCA OF METROPOLITAN DALLAS

ITEM	QUANTITY / DESCRIPTION
Cabins	5
Restroom /shower Facility	1
Caretaker's Residence	1

DALLAS CORINTHIAN YACHT CLUB

I. General Description

A. The leased area consists of approximately 4.5 acres.

B. The yacht club is located on the eastern shore of old Lake Dallas.

C. Access to the area is by a county road connecting to FM Road 720.

II. Site Analysis

A. The yacht club is located in an area of gently sloping terrain with moderate tree cover.

B. The area is well maintained.

C. Mooring facilities are located in the old Lake Dallas portion of Lewisville Lake which has become heavily silted in over the years. This has been an ongoing problem in the mooring area.

D. There is a man-made earth fill breakwater which is in need of some repair.

E. Moorings are primarily for sailboats.

III. Objectives

A. Land Use Classification

Recreation – Intensive Use

B. Resource Use Objectives

The yacht club is managing the area for quasi-public use in an appropriate manner.

C. Future Development and Management Measures

See Table 7-19

TABLE 7-18
EXISTING FACILITIES AT DALLAS CORINTHIAN YACHT CLUB

ITEM	QUANTITY / DESCRIPTION
Boat Slips	164
Clubhouse (on private property)	1
Caretaker's House (on private property)	1
Picnic Tables	12
Swimming Pool (on private property)	1
Launching Area (Lanes)	1

TABLE 7-19

PROPOSED FACILITIES AT DALLAS CORINTHIAN YACHT CLUB

ITEM	QUANTITY / DESCRIPTION
Boat Dock	1
Launch Ramp	1
Earthfill and Rock Breakwater	Modify existing
Seawall	Modify existing
Crane Pedestal Concrete Pad	Modify existing
Rock Material Breakwater	1
Wet Slips	100

- A small boat dock or float is to be constructed to accommodate approximately 25 boats to provide easier storage for users. Additional slips can be attached to the outboard ends of docks and also to existing docks. Possible reconstruction of existing docks to a concrete decking.
- The addition of a high water concrete launch ramp is proposed in order to solve the current ramp's flooding problem. The new ramp would be situated next to the present concrete launching ramp that could be raised using dredged material to improve its usability.
- Dredge area starting at present docks 3, 4, 5, and 6, back 50 feet towards the shore. Dredge material brought up would be used to raise the shore 1-3 feet and then the raised area would be rocked for parking and roads.
- Modifying the existing breakwater, seawall and crane pedestal concrete pad would help to preserve the harbor area and keep it safe for public use.
- In order to reduce shore erosion and protect the harbor opening from wave action, a rock material breakwater has been proposed for construction.

FISH TRAP ACCESS AREA

I. General Description

A. Fish Trap Access Area (formerly Fish Trap Park) consists of approximately 10 acres.

C. Its location is on the north end of the project on the Elm Fork arm of the lake and adjacent to the south side of U.S. Highway 380.

C. Access to the area is from U.S. Highway 380.

D. The area is presently undeveloped, however, it is used extensively by fishermen to access the Elm Fork of the Trinity River.

E. See plate 7-9 for existing facilities.

II. Site Analysis

A. The terrain is relatively flat.

B. Tree cover is dense with cottonwood, willow and oak being the predominate species. Grass cover is mainly bermudagrass.

C. The area is presently accessed by a dirt road.

D. The area is often used for illegal trash dumping.

E. The adjacent Elm Fork of the Trinity River is characterized by steep banks and slow-moving water. Backwater from Lewisville Lake will extend approximately 2/3 of the way to the Ray Roberts Dam. Water depth in this area is generally in excess of 10 feet.

F. The area is heavily used by fishermen during periods of White Bass spawning runs in the spring.

III. Objectives

A. Land Classification

Recreation -Low Density

B. Resource Use Objectives

Develop and operate the area for launching canoes and jon boats, and fisherman access to the river bank.

C. Future Development and Management Measures

The Texas Parks and Wildlife Department currently intends to lease and operate the area in conjunction with their overall operation of the proposed Green Valley Greenbelt Corridor between Lewisville and Ray Roberts Lakes.

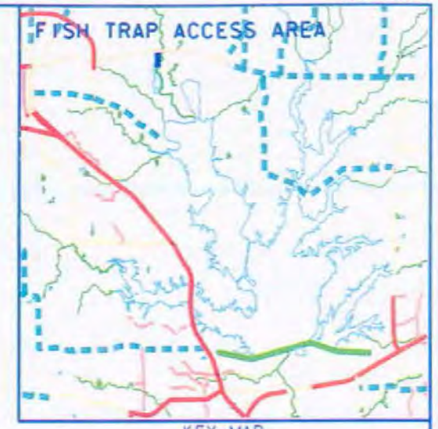
TABLE 7-20
EXISTING FACILITIES AT FISH TRAP ACCESS AREA

ITEM	QUANTITY / DESCRIPTION
Canoe/Jon Boat Launch	1
Parking	Gravel

- The Canoe/Jon Boat launch and gravel parking area will be phased out from this area. This area will be utilized as a minor access point with no facilities.

CORPS OF ENGINEERS

U.S. ARMY



KEY MAP

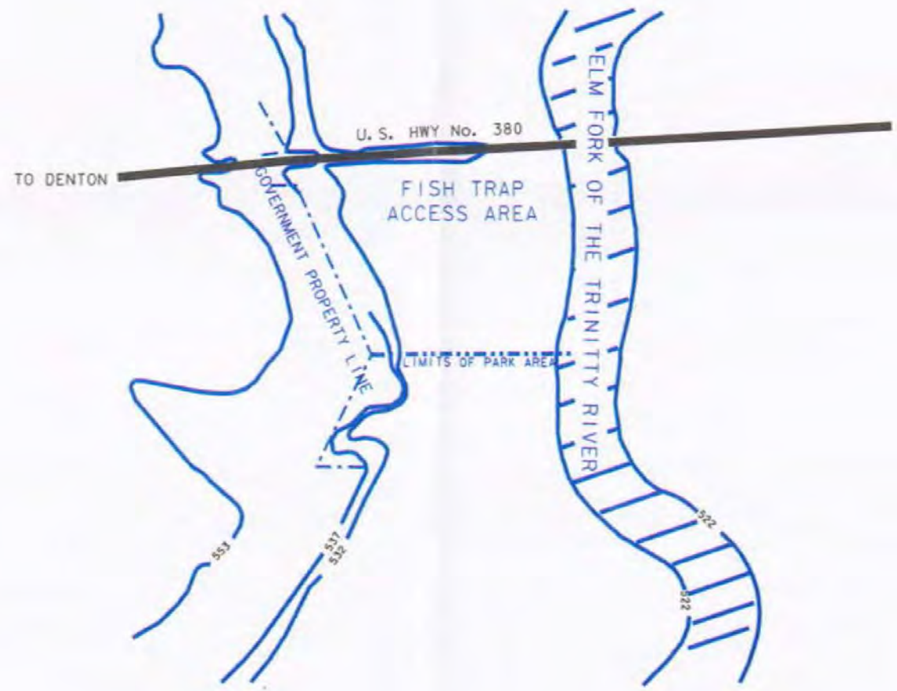


PLATE 7-9

TRINITY RIVER BASIN TEXAS
LEWISVILLE LAKE
ELM FORK TRINITY RIVER

FISH TRAP ACCESS AREA

200 0 200 400
GRAPHIC SCALE IN FEET

U. S. ARMY ENGINEER DISTRICT, FORT WORTH AUG. 2001

Carter-Burgess

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BIG SANDY ACCESS AREA
(formerly Big Sandy Park)

I. General Description

A. The majority of the park does not lend itself to development. Because of this, the area has been taken out of park status and reclassified as a boat launch access area.

B. The former park area consists of approximately 80 acres at conservation pool elevation 522 ft. msl. The reclassified Big Sandy Access Area will consist of approximately 10 acres at conservation pool elevation 522 ft. msl.

C. Big Sandy Access Area is located at the northern end of the former Big Sandy Park. The area is on the west shore of the Elm Fork on the western side of the project.

D. Access to the area is available over county roads which ultimately connect with Interstate Highway 35E.

E. The access area is within the city limits of Shady Shores.

F. The park is currently in a partial closure status.

G. The area is operated by the Corps of Engineers as a non-fee area.

II. Site Analysis

A. General

The terrain is moderately sloping with areas of dense tree cover. Predominate tree species are oak, cottonwood and willow. Major grasses are bermudagrass, lovegrass and paspalum.

B. Facilities

1. Since the partial park closure in the early 1980's, the major use of the area is for boat launching activities. Users are primarily local due to awkward accessibility into the area from the major highways.

2. The existing boat ramp shows signs of being undermined by shoreline erosion.

3. Parking area for the boat ramp is poorly defined.

III. Objectives

Maintain the area as a minor access point.

A. Land Classification

Recreation - Intensive Use

B. Resource Use Objectives

The area will be developed and managed for fishermen and boater access.

C. Future Development and Management Measures

None

TABLE 7-21
FACILITIES - BIG SANDY ACCESS AREA

ITEM	QUANTITY / DESCRIPTION
Launching Areas (Lanes)	1 (2)
Parking	Paved Boat Ramp Parking

Picnic units removed from this area under the Park Closure Program were redeveloped in Hickory Creek Park.

CORPS OF ENGINEERS

U.S. ARMY

KEY MAP

EXISTING CONDITIONS

BOAT LAUNCH

PARKING

LIMITS OF PARK AREA

GOVERNMENT PROPERTY LINE

LAKE

522

532

537

GOVERNMENT PROPERTY LINE

Plate 7-10

TRINITY RIVER BASIN TEXAS

LEWISVILLE LAKE

ELM FORK TRINITY RIVER

BIG SANDY ACCESS

200 0 200 400

GRAPHIC SCALE IN FEET

U.S. ARMY ENGINEER DISTRICT, FORT WORTH AUG, 2001

Carter-Burgess

WILLOW GROVE PARK

I. General Description

A. This park consists of approximately 60 acres at conservation pool elevation 522 ft. MSL.

B. The park's location is on the west shore of the Elm Fork arm of the lake.

C. Access to the area is by city and county roads connecting with Interstate Highway 35E.

D. The area is used primarily for day-use activities.

E. See plates 7-11a and 7-11b for existing and proposed facilities.

F. This park is leased to the City of Lake Dallas.

II. Site Analysis

A. General

1. The area topography is gently sloping.

2. Tree cover is very good in most areas and ranges from dense to sparse with predominate species being oak, willow and cottonwood. Grass cover is primarily bermudagrass.

3. Access to the park is awkward and poorly marked.

4. The isolated location of the park tends to favor local use.

5. Adjacent land uses are lower income housing to the west and a marina to the north. (See Lakeview Marina)

B. Facilities

The city of Lake Dallas manages the area primarily as a day use picnic area with athletic fields.

III. Objectives

A. Land Classification

Recreation- Intensive Use

B. Resource Use Objectives

Upgrade and maintain site facilities. Provide additional facilities as needed.

C. Future Development and Management Measures

Planned future development efforts by the city of Lake Dallas are shown on Plate 7-11a and 7-11b.

TABLE 7-22
EXISTING FACILITIES AT WILLOW GROVE PARK

ITEM	QUANTITY / DESCRIPTION
Picnic Units	6
Athletic Fields	2
Vault Restroom	1
Water	Municipal (Lake Dallas)

TABLE 7-23
PROPOSED FACILITIES AT WILLOW GROVE PARK

ITEM	QUANTITY / DESCRIPTION
Boardwalk	1
Parking	Extend existing
Road	Modify existing
Pavilion	1
Picnic Units	Not specified
Multi-Use Athletic Field	2
Trail	Modify existing
Boat Ramp	1
Swimming Area	1
Concessions	1 Portable
Vault Restroom	2
Playground	1
Water Fountains	3

- A boardwalk will be built over the existing marshy area to allow viewing of wildlife and some fishing.
- To prepare for anticipated increased use of the park, more parking and paved roads will be added.
- Existing damaged picnic units will be replaced and new units will be installed near the older units at the southern end of the park near the Lakebridge subdivision. Fire rings and grills would be added at these units.

- A large pavilion is proposed to be constructed where a current concrete pad (27 feet by 30 feet) is located. An additional concrete pad of the same size may be added to the existing one to allow for a larger pavilion.
- To improve the recreational features of the park, multi-use athletic fields, trails, boat ramps, a playground, and a swimming area are proposed.
- A portable/temporary building will be placed at the south end of the oval to serve as a watercraft rental and limited concession stand.
- In order to offer more amenities to the park visitors, additional restrooms and water fountains are proposed.

CORPS OF ENGINEERS

U.S. ARMY

KEY MAP

LAKEVIEW MARINA

LAKE

LIMITS OF PARK AREA

MATCH LINE TO SHEET 1

PICNIC AREA

TRAIL

PARKING

GOVERNMENT PROPERTY LINE

TRAIL

HUNDLEY DRIVE

522

532

537

553

EXISTING CONDITIONS

FUTURE DEVELOPMENT

PLATE 7-11a

TRINITY RIVER BASIN TEXAS
LEWISVILLE LAKE
ELM FORK TRINITY RIVER

WILLOW GROVE PARK

IN 2 SHEETS 200 0 200 400 SHEET NO 1
GRAPHIC SCALE IN FEET

U.S. ARMY ENGINEER DISTRICT, FORT WORTH AUG. 2001

Carter-Burgess

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LAKEVIEW MARINA

I. General Description

A. This leased area consists of approximately 72 acres at conservation pool elevation 522 ft. MSL.

B. The marina's location is on the west shore of the Elm Fork arm of the lake and is adjacent to the north boundary of Willow Grove Park.

C. Access to the area is by city and county roads connecting with Interstate Highway 35E. (See plate 7-11b for existing and proposed facilities)

II. Site Analysis

A. This is one of the older and more established marinas on the lake.

B. The marina's location offers very good protection from prevailing winds.

C. Future expansion potential is limited to a small area along the southeast portion of the cove.

D. Vehicular access to the marina is difficult due to poorly maintained county roads and indirect routing through an older residential area of the city of Lake Dallas.

E. There is a small airfield and hangers on private lands adjacent to the government property line north of the marina. A major portion of the runway is within the leased area and subleased to the airfield by the marina operator.

F. Floating marina facilities are generally old and have little visual quality.

G. Access roads within the marina are paved in some areas. All roads, paved and unpaved, are in poor condition.

H. Parking areas are undelineated. In many instances, it is difficult to determine parking areas from roadways.

III. Objectives

A. The marina is currently developed to near capacity on the water surface, however, the concessionaire could employ many options in developing the land area.

B. The concessionaire should be encouraged to improve the overall aesthetic quality of the floating and land based facilities at the marina.

C. Roads and parking areas should be clearly delineated.

TABLE 7-24
EXISTING FACILITIES AT LAKEVIEW MARINA

ITEM	QUANTITY / DESCRIPTION
Boat Slips	565
Ships Store	1
Boat Repair Shop	1
Floating Gas Dock	1
Sewage Pumping Dock	1

TABLE 7-25
PROPOSED FACILITIES AT LAKEVIEW MARINA

ITEM	QUANTITY / DESCRIPTION
Boat Ramp	1
Parking	Not specified
Camp Site Area	1
Boat Storage (Wet Slips)	250 units
Recreation Area	1

- The addition of a public boat ramp and parking area with 25 to 30 parking spaces is planned
- The lessee is proposing to add a campsite area with approximately 20 RV hook-ups.
- A dry boat storage facility will be built. In addition, a fenced trailer storage area with a locking gate is proposed.
- The lessee will develop a recreation area with a 9-hole golf course, driving range and batting cages.

- A floating breakwater, floating restrooms and shower facilities, and floating restaurant will be added.
- A marine travel lift will be added.
- On-land restroom and shower facilities will be added.

CORPS OF ENGINEERS

U.S. ARMY

LAKE

KEY MAP

LIMITS OF PARK AREA
PAVED ROAD
GRAVEL PARKING
GRAVEL PARKING
RESTROOM
SWIM BEACH
PAVED ROAD
CONCESSIONS
PLAYGROUND
RESTAURANT
BOAT RAMP
PICNIC AREA
PAVED PARKING
PARKING
BOAT HOUSES
LIMITS OF LEASE AREA
COURTESY DOCK
TRAIL
AIR STRIP (SURFACED)
AIRPLANE HANGER
GRAVEL ROAD
ATHLETIC FIELDS
DRY STORAGE
BOAT HOUSES
BOAT STORAGE
BOAT HOUSES
PARKING TRAIL
GRAVEL ROAD
PARKING
GOVERNMENT PROPERTY LINE
PAVED ROAD
LIMITS OF LEASE AREA
SKI LAKE
DOCK
LIMITS OF LEASE AREA
GOVERNMENT PROPERTY LINE
GATE
PARKING
LAKEVIEW MARINA
BOAT SHOP
PARKING
GRAVEL PARKING
EXISTING CONDITIONS
FUTURE DEVELOPMENT

PLATE 7-11b

TRINITY RIVER BASIN TEXAS
LEWISVILLE LAKE
ELM FORK TRINITY RIVER
WILLOW GROVE PARK

IN 2 SHEETS

SHEET No. 2

200 0 200 400
GRAPHIC SCALE IN FEET

U.S. ARMY ENGINEER DISTRICT, FORT WORTH AUG, 2001

Carter Burgess

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WESTLAKE PARK

I. General Description

A. The majority of Westlake Park is considered unsuitable for recreation development due to its high flooding frequency and general lack of tree cover and topographic relief. Because of these factors, the undeveloped area south of the old Lake Dallas embankment has been taken out of park status and reclassified as a low density recreation area. Additionally, a small northwestern portion of the park has been deleted from park status.

B. The park consists of approximately 140 acres at elevation 522 ft. msl.

C. The remaining portion of Westlake Park is located on the Elm Fork arm of the lake, northwest of the old Lake Dallas embankment.

D. Access to the park is by a county road which connects with Interstate Highway 35E.

E. The area is operated by the Corps of Engineers and is managed as a gate controlled day use area.

II. Site Analysis

A. General

1. The terrain is gently sloping with several areas of dense tree cover consisting of oak, pecan, cottonwood, and willow. The primary ground cover is bermudagrass.

2. There are desirable views to the opposing shoreline.

B. Facilities

1. The swimming beach, the principle attraction in the park, is well sited in regard to slope, however, its northeast orientation is less than desirable for sunbathers.

2. A boat ramp which is located on the northwest end of the park has a potential lake entry hazard to drivers unfamiliar with-the boat ramp location.

3. A control station and gate attendants are used to enforce park regulations and to monitor visitors entering and exiting the park.

III. Objectives

A. Land Classification

Recreation - Intensive Use

B. Resource Use Objectives

Continue to manage the area as a day use area with picnicking and swimming

beach.

C. Future Development and Management Measures

1. Expand swimming and beach area.
2. Construct an additional day-use loop.
3. Provide trails for hiking and access.
4. Construct athletic fields.
5. Expand parking capabilities.
6. Provide additional group picnic opportunities.
7. Remove existing vault restroom.
8. Institute a landscaping program to improve the park's appearance, provide shade and screening, and to improve spacial relationships.

TABLE 7-26
FACILITIES - WESTLAKE PARK

ITEM	QUANTITY / DESCRIPTION
Picnic Units	19
Group Pavilions	2
Launching Areas (Lanes)	1 (2)
Buoyed Swimming Areas	1
Change Shelter	1
Water Municipal (Lake Dallas)	4D
Parking Paved Day-Use and Boat Ramp	

CORPS OF ENGINEERS

U.S. ARMY

LIMITS OF PARK AREA

GOVERNMENT PROPERTY LINE

LAKE

BOAT LAUNCH

PARKING

PICNIC AREA

PAVILION

RESTROOM

PARKING

PICNIC AREA

PAVILION

PARKING

GATE ATTENDANT

GATE

MAIN STREET

MAIN STREET

GOVERNMENT PROPERTY LINE

MATCH LINE TO SHEET 2

522

532

537

LAKE

N

WESTLAKE PARK

KEY MAP

EXISTING CONDITIONS

Plate 7-12a

TRINITY RIVER BASIN TEXAS

LEWISVILLE LAKE

ELM FORK TRINITY RIVER

WESTLAKE PARK

IN 2 SHEETS 200 0 200 400 SHEET NO 1

GRAPHIC SCALE IN FEET

U.S. ARMY ENGINEER DISTRICT, FORT WORTH AUG, 2001

Carter-Burgess

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CORPS OF ENGINEERS

U.S. ARMY

LAKE

KEY MAP

EXISTING CONDITIONS

LIMITS OF PARK AREA

RADIO CONTROLLED
MODEL AIRPLANE FIELD

GRAVEL ROAD

GRAVEL PARKING

MATCH LINE TO SHEET

MAIN STREET

GOVERNMENT PROPERTY LINE

LIMITS OF PARK AREA

522

532

Plate 7-12b

TRINITY RIVER BASIN TEXAS
LEWISVILLE LAKE
ELM FORK TRINITY RIVER
WESTLAKE PARK

IN 2 SHEETS

SHEET NO 2

200 0 200 400
GRAPHIC SCALE IN FEET

U.S. ARMY ENGINEER DISTRICT, FORT WORTH AUG. 2001

Carter-Burgess

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OAKLAND PARK

I. General Description

A. The park consists of approximately 275 acres at conservation pool elevation 522 ft. msl.

B. The park is located on the southwest side of the lake on the Hickory Creek arm.

C. Access to the park is from county roads which connect with Interstate Highway 35E.

D. The area is operated as a fee controlled camping area by the Corps of Engineers.

II. Site Analysis

A. General

1. The terrain is gently rolling to flat. Tree cover consists of oak, cottonwood, and willow and varies from dense to sparse depending on location. Major grass species are bermudagrass, buffalograss and purple three-awn.

2. The park is a popular camping area and receives both local and regional use.

B. Facilities

1. Oakland Park is one of the areas on the lake where efforts have been made to delineate impact resistant user areas on campsites.

3. Many concrete picnic tables, shade shelters, and waist high grills are in need of replacement.

4. A playground is located within the area.

5. Suitable future development is limited to a wooded area on the western end of the park. The area would provide a good camping experience, however, access to this end of the park would be costly, requiring a bridge and possible real estate acquisition.

6. Little attention has been paid to maintaining any set architectural theme within the park. An example of this is three restrooms within the park, all of different design and appearance.

III. Objectives

A. Land Classification

Recreation - Intensive Use

B. Resource Use Objectives

Upgrade existing facilities through the replacement of worn and vandalized equipment, and the reworking of inefficiently designed campsites.

C. Future Development and Management Measures

1. Upgrade campsites where needed by lengthening pullouts to an effective length of 40 feet, replace concrete picnic tables, shelters, delineate impact areas, tent pads and landscaping for privacy and general appearance.

2. To improve fishing opportunities, a fishing pier should be constructed within a cove between Camping Area 1 and the Group Camping Area. Parking and lighting facilities should also be provided.

3. All individual campsites should be brought up to design standards as discussed in Chapter 8.

4. A set architectural theme should be set for the park and followed as facilities are replaced or added.

5. Efforts should be taken to begin phasing out existing concrete picnic tables and metal shade shelters. Each unit should be replaced with wood top, tabular steel frame tables. Additionally, each camp unit should be equipped with a waist-high grill and/or fire ring and grill, trash can, and lantern hanger. See Site Rehabilitation Design Criteria.

TABLE 7-27

FACILITIES - OAKLAND PARK

ITEM	QUANTITY / DESCRIPTION
Camp Units	83
Group Camp Areas	1
Group Pavilions	1
Restroom/Shower Facilities	3
Launching Areas (Lanes)	1 (2)
Water	Municipal (Lake Dallas)
Parking	Individual Camping & Boat Ramp

CORPS OF ENGINEERS

U.S. ARMY

EXISTING CONDITIONS

GOVERNMENT PROPERTY LINE

LIMITS OF PARK AREA

GOVERNMENT PROPERTY LINE

LIMITS OF PARK AREA

RESTROOM

GATE ATTENDANT

GATE

DUMP STATION

RV HOOK UPS

RESTROOM

PAVILION
5 CAMPSITES

RV HOOK UPS

PARKING

RESTROOM

SCREENED SHELTERS

PLAYGROUND

RV HOOK UPS

PARKING
BOAT RAMP

RV HOOK UPS

RV HOOK UPS

LAKE

Plate 7-13

TRINITY RIVER BASIN TEXAS
LEWISVILLE LAKE
ELM FORK TRINITY RIVER
OAKLAND PARK

200 0 200 400
GRAPHIC SCALE IN FEET

U.S. ARMY ENGINEER DISTRICT, FORT WORTH AUG, 2001

Carter Burgess

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ARROWHEAD ACCESS AREA

I. General Description

A. This area has been taken out of park status because of its limited size and development potential. The park is reclassified as an Access Area and will have approximately 35 acres of land at conservation pool level 522 ft. msl.

B. The area is located on the Hickory Creek arm of the lake on the western portion of the project.

C. Access is by Interstate Highway 35 which borders the access area on the west side.

D. The area is operated by the City of Hickory Creek.

II. Site Analysis

A. General

1. The area is relatively steep to moderately sloping.

2. Primary tree species are oak, cottonwood, elm, and willow, forming a sparse to dense cover. Grass vegetation is light due to shallow soils.

B. Facilities

1. All asphalt roads and boat ramp parking areas are in very good condition.

2. There are two boat launching areas.

3. All picnic units have been relocated out of the area as part of the park closure program. A vault restroom services the boat launch areas.

4. There are 6 privately owned boathouses in the vicinity.

III. Objectives

A. Land Classification

Recreation - Intensive Use

B. Resource Use Objectives

Improve vehicular circulation patterns in launch areas and provide adequate car/trailer parking.

C. Future Development and Management Measures

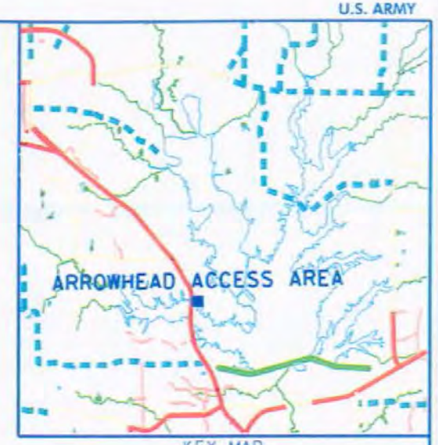
The City of Hickory Creek has no immediate plans for future development.

TABLE 7-28
FACILITIES - ARROWHEAD ACCESS AREA

ITEM	QUANTITY / DESCRIPTION
Launching Areas (Lanes)	2 (2,4)
Vault Restroom	1
Water	Municipal
Parking	Boat Ramps

CORPS OF ENGINEERS

U.S. ARMY



KEY MAP

EXISTING CONDITIONS

LAKE

Plate 7-14

TRINITY RIVER BASIN TEXAS
LEWISVILLE LAKE
ELM FORK TRINITY RIVER

ARROWHEAD ACCESS AREA

200 0 200 400
GRAPHIC SCALE IN FEET

U.S. ARMY ENGINEER DISTRICT, FORT WORTH AUG. 2001

Carter-Burgess

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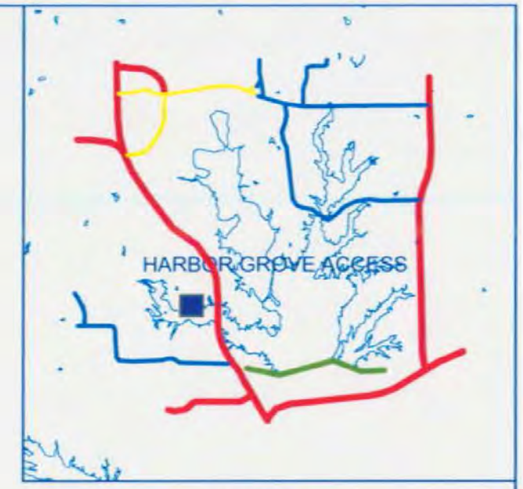
Strait
Briar
Harbor
Hickory
Lone Tree
Park Boundary
Parking Lot
Oaktree
Highland
537
532
Playground
LAKE
EXISTING CONDITIONS



KEY MAP

N

Plate 7-15c

TRINITY RIVER BASIN TEXAS

LEWISVILLE LAKE

ELM FORK TRINITY RIVER

HARBOR GROVE ACCESS

U.S.ARMY ENGINEER DISTRICT, FORT WORTH AUG, 2003

0 50 100 200 300 400 Feet

HARBOR GROVE PARK
(also referred to as Harbor Lane Park and formerly a part of Hickory Creek Park)

I. General Description

A. Harbor Grove Park consists of approximately 35 acres at conservation pool elevation 522 ft. msl. The Town of Hickory Creek operates this area under a park and recreation lease, ending 27 September 2005. The park is used for bank fishing, picnicking, has a playground, and a short hiking trail.

B. The park is located on the north shore of the Hickory Creek arm of the lake.

C. The park has desirable view of the lake and the terrain is favorable towards recreation use.

D. Access to the park is available on county and city roads which connects with Interstate Highway 35E.

II. Site Analysis

A. General

1. Tree cover varies from dense to sparse with Oak, Hickory, Elm, Cottonwood and Willow being the primary species.

2. The area is flat to rolling.

B. Facilities

The park is operated as a day use area for picnicking, fishing, and hiking with a playground, picnic tables, and trail. (Plate7-15c)

III. Objectives

A. Land Classification

Recreation – Intensive Use

B. Resource Use Objectives

Operate the park as a day use area.

C. Future Development and Management Measures

The Town of Hickory Creek has no proposed future plans for this park.

HICKORY CREEK PARK

I. General Description

A. Because of the pool raise, approximately 105 acres in the western portion of the former Hickory Creek Park were transferred to Sycamore Bend Park, and 40 acres deleted from park status.

B. The realigned Hickory Creek Park consists of approximately 240 acres at conservation pool elevation 522 ft. msl.

C. The park is located on the north shore of the Hickory Creek arm of the lake.

D. Access is available on county roads which connect with Interstate Highway 35E.

E. The park is operated by the Corps of Engineers.

II. Site Analysis

A. General

1. The area terrain is flat to rolling.

2. Tree cover varies from dense to sparse. with oak, hickory, elm, cottonwood, and willow being the primary species.

3. Ground cover is primarily bermudagrass and purple three-awn. The park's terrain and vegetation are quite favorable towards recreation development.

4. The park has a desirable view of the opposite Hickory Creek arm shoreline.

B. Facilities

The park is operated as a highly developed fee camping area with many amenities.

III. Objectives

A. Land Classification

Recreation - Intensive Use

B. Resource Use Objectives

Continue to operate and maintain as a major camping park.

C. Development and Management Measures

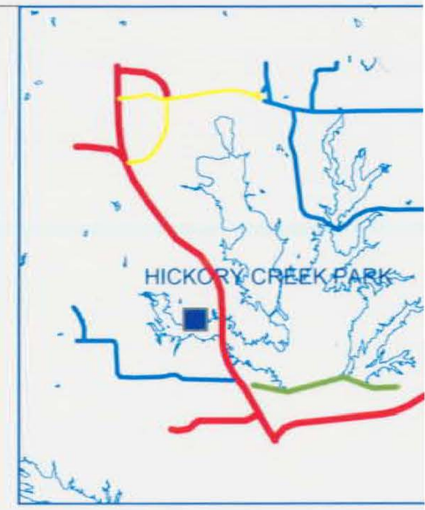
The park is highly developed – future efforts will involve upgrades of existing facilities as needed.

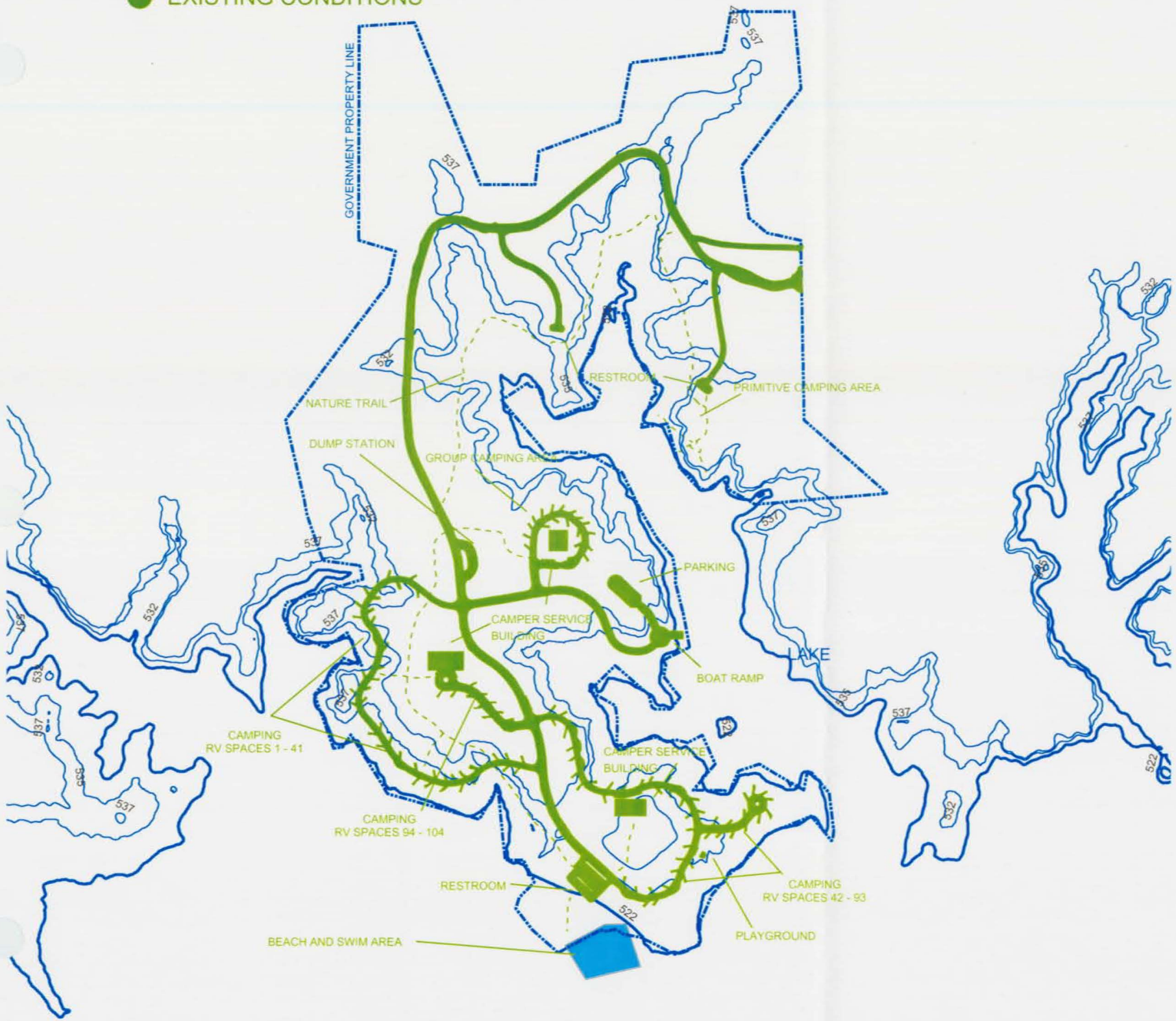
TABLE 7-29

FACILITIES - HICKORY CREEK PARK

ITEM	QUANTITY / DESCRIPTION
Camping Units	137
Group Camping Areas	1
Group Pavilions	2 (overnight use areas)
Buoyed Swimming Area	1
Launching Areas (Lanes)	2 (2,2)
Fee Control Station	1
Waterborne Restrooms	1
Camper Service Buildings	3
Water	Chlorinated well water
Parking	Individual camper pullouts, boat ramps

EXISTING CONDITIONS





TRINITY RIVER BASIN TEXAS

LEWISVILLE LAKE

ELM FORK TRINITY RIVER

HICKORY CREEK PARK

U.S.ARMY ENGINEER DISTRICT, FORT WORTH

0 187.5 375 750 1,125

POINT VISTA BOAT RAMP
(Formerly part of Hickory Creek Park)

I. General Description

A. Point Vista Boat Ramp consists of approximately 4.3 acres at conservation pool elevation 522 ft. msl. The Town of Hickory Creek operates this area under a park and recreation lease, ending 27 September 2005. The area is used for boat launching only.

B. The park is located on the north shore of the Hickory Creek arm of the lake.

C. The park has desirable view of the lake and the terrain is favorable towards recreation use.

D. Access to the park is available on county and city roads which connects with Interstate Highway 35E.

II. Site Analysis

A. General

1. Tree cover is sparse with some Oak, Hickory, Elm, Cottonwood and Willow species present.

2. The area is flat to rolling with a prairie type area south of the ramp.

B. Facilities

The area is used as a boat launch only. There are no day-use or camping facilities present or proposed. (Plate 7-15a)

III. Objectives

A. Land Classification

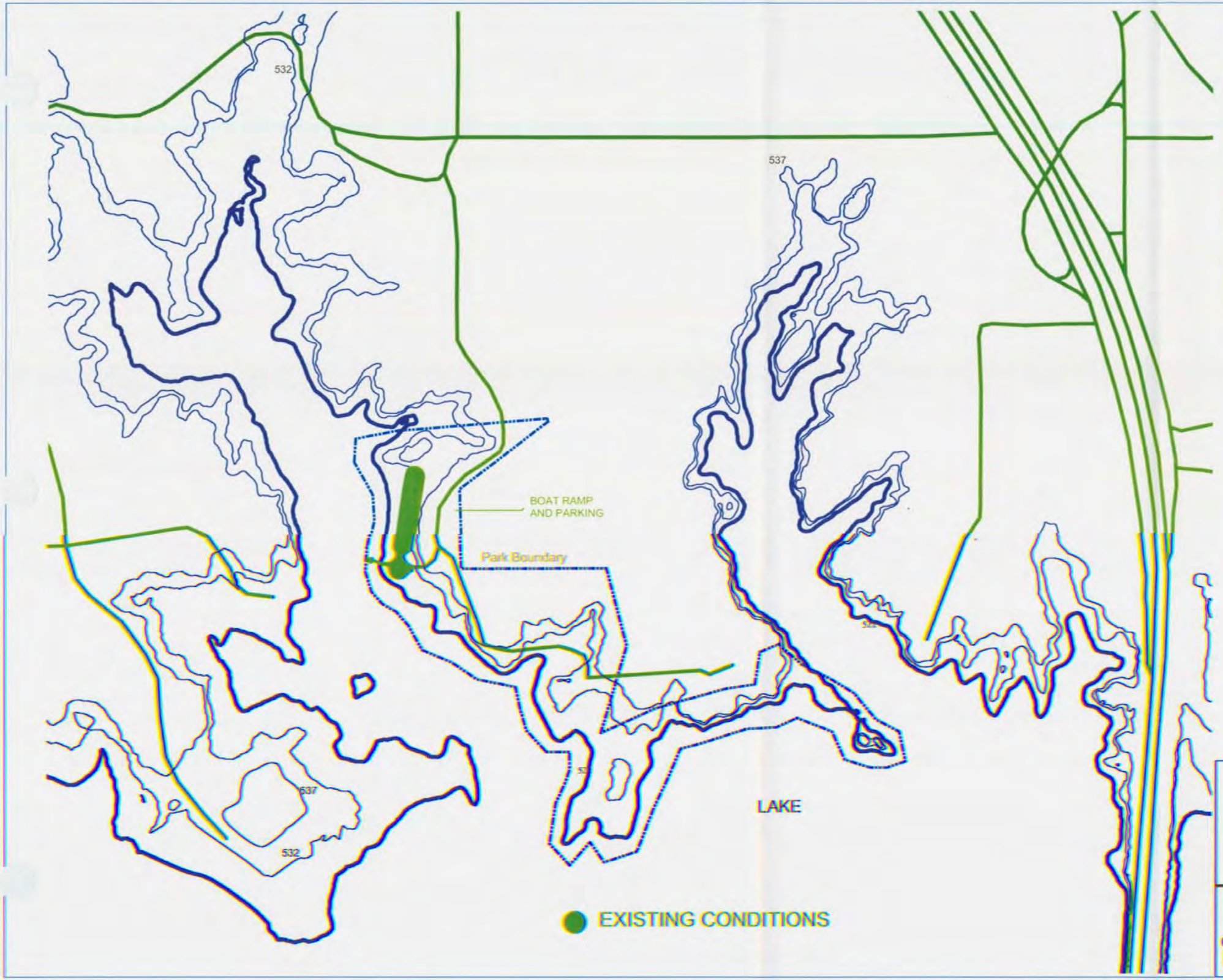
Recreation – Intensive Use

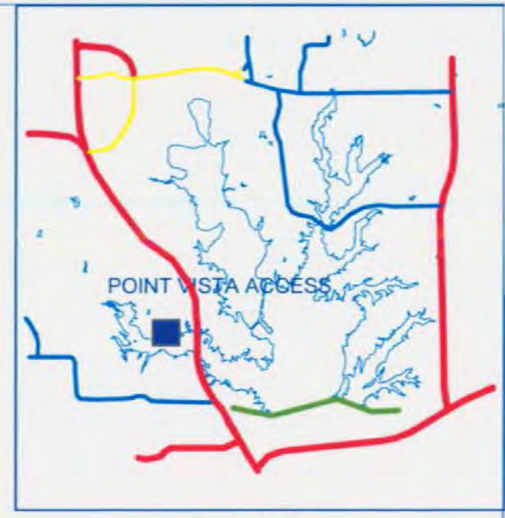
B. Resource Use Objectives

Operate the area as a boat launch and access point.

C. Future Development and Management Measures

The Town of Hickory Creek proposes to install a chemical toilet at this boat ramp.





KEY MAP

N

Plate 7-15a

TRINITY RIVER BASIN TEXAS

LEWISVILLE LAKE

ELM FORK TRINITY RIVER

POINT VISTA ACCESS

U.S.ARMY ENGINEER DISTRICT, FORT WORTH AUG, 2003

0 165 330 660 990 1,320 Feet

SYCAMORE BEND PARK

I. General Description

A. Sycamore Bend Park consists of approximately 170 acres at conservation pool elevation 522 feet MSL.

B. The park is located on the north shore of the Hickory Creek arm of the lake.

C. Access to the park is by county roads which connect to Interstate Highway 35E.

D. The park is currently operated by the Corps of Engineers. (See plate 7-16 for existing and future facilities)

II. Site Analysis

A. General

1. The terrain is moderately sloping.

2. Tree cover is sparse to dense with oak being the dominant species. Other major species are sycamore, cottonwood, and willow. The western third of the park is heavily wooded, while the eastern two thirds are primarily grassland with scattered shoreline trees.

3. Primary grasses are bermudagrass and purple three-awn.

4. The eastern portion of the park is flat and open with few development constraints.

5. The western portion of the park is developed, with concrete picnic tables and a 2-lane boat ramp. This portion of the park has the highest resource quality due to existing tree cover and good shoreline orientation.

6. Most of the park is surrounded by rural subdivisions.

7. Access to the park from I-35E is indirect and quality of roads is less than desirable.

8. A portion of the western end of the park has been closed to vehicular traffic.

B. Facilities

1. Some recreation facilities are vandalized, old, and in need of replacement.

2. Facilities are currently used for both day and overnight use. Free overnight camping is allowed in this park.

III. Objectives

A. Land Classification

Recreation – Intensive Use

B. Resource Use Objectives

Extend the Pilot Knoll equestrian trail through the park area. Upgrade all recreation facilities and provide future development when needed.

C. Future Development

Ultimate long range plans for this park are for the development of equestrian camping and amenities, high density day use and overnight facilities.

TABLE 7-30
EXISTING FACILITIES AT SYCAMORE BEND PARK

ITEM	QUANTITY / DESCRIPTION
Picnic units	6
Restroom	1
Launching Area	1
Water	Chlorinated well water
Parking	Paved - Day and Boat Use

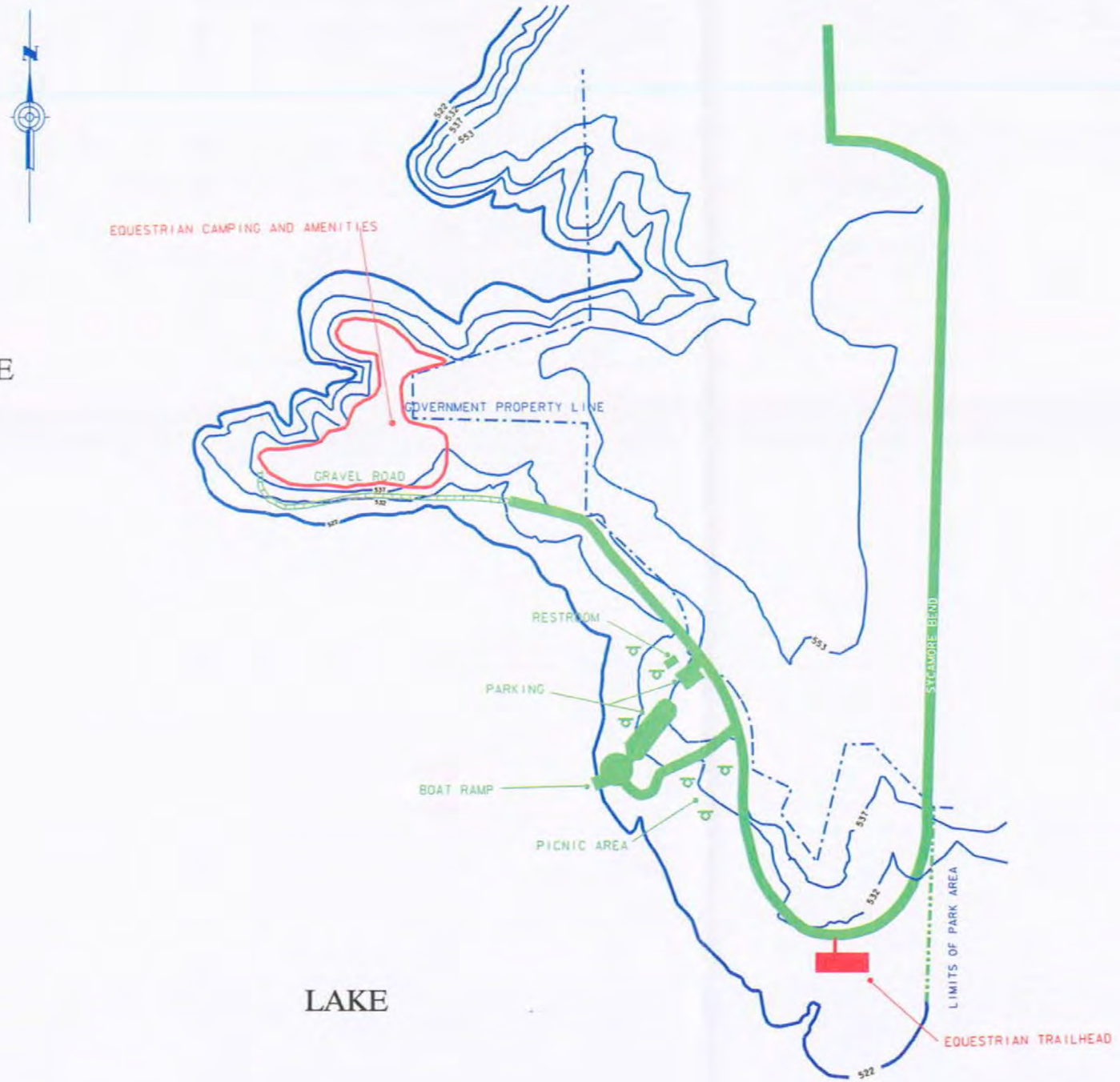
IV. Proposed Facilities

- Add equestrian camping and amenities.
- Renovate restrooms.
- Add trailhead – equestrian and hiking.

CORPS OF ENGINEERS

U.S. ARMY

KEY MAP



FUTURE DEVELOPEMENT

EXISTING CONDITIONS

Plate 7-16

TRINITY RIVER BASIN TEXAS
LEWISVILLE LAKE
ELM FORK TRINITY RIVER

SYCAMORE BEND PARK

200 0 200 400
GRAPHIC SCALE IN FEET

U.S. ARMY ENGINEER DISTRICT, FORT WORTH AUG. 2001

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PILOT KNOLL PARK

I. General Description

A. The park consists of approximately 77 acres at conservation pool elevation 522 feet MSL.

B. The park is located in the upper region of the Hickory Creek arm of the lake.

C. Access to the area is provided by county roads, which connect to FM Roads 1830 and 407.

D. This park is operated by the City of Highland Village.

E. See plate 7-17 for existing facilities.

II. Site Analysis

A. General

1. The topography of the area is moderately sloping to flat.

2. Tree cover is moderate to dense and primarily consists of oak, pecan, cottonwood, and willow.

3. Ground cover consists primarily of bermudagrass.

4. Adjacent land use is primarily middle to upper income ranchette type housing.

5. There is a substantial amount of standing dead timber in the Hickory Creek arm of the lake, just offshore from the park. The cove south of the park has been cleared.

B. Facilities

1. This park provides both camping (including equestrian sites) and day use facilities in separate areas.

2. Trailhead and staging area for the Pilot Knoll Equestrian Trail is located within the park. The trail currently receives primarily local use, but also attracts riders from the surrounding region.

III. Objectives

A.. Land Classification

Recreation - Intensive Use

B. Resource Use Objectives

1. Urge the city to continue to develop and improve camping and day use areas.

2. Promote use of the Pilot Knoll Equestrian Trail.

C. Future Development and Management Measures

The city has no immediate plans for additional facility development.

TABLE 7-31
EXISTING FACILITIES AT PILOT KNOLL PARK

ITEM	QUANTITY / DESCRIPTION
Picnic Sites	36
Campsite	57
Group Pavilions	2
Launching Areas	1
Courtesy Dock	1
Restroom/Shower Facilities	1
Restroom	1
Dump Station	1
Fee Control Station	1
Water	Municipal (Bartonville Rural Water District)
Parking	Individual Camper Pullouts, Boat Ramps, Day Use

No additional facilities are proposed.

CORPS OF ENGINEERS

EXISTING CONDITIONS

LAKE

RV CAMPING WITH WATER AND ELECTRICAL HOOK UPS 1 - 57

LIMITS OF PARK AREA

PAVILI

PARKING

GOVERNMENT PROPERTY LINE

GOVERNMENT PROPERTY LINE

LIMITS OF PARK AREA

COURT

GATE ATTENDANTS LOT

NATURE TRAIL

DUMP STATION

522

532

537

553

U. S. A

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CAMP TSUNGANI

YOUNG MENS CHRISTIAN ASSOCIATION OF DALLAS

I. General Description

A. The YMCA camp is located adjacent to the western end of Copperas Branch Park on the Hickory Creek arm of the lake.

B. The leased area consists of approximately 25 acres at conservation pool elevation 522 ft. msl.

C. Access to the area is by a county road which connects with Interstate Highway 35E.

D. The lease was awarded on 1 January 1969 and will expire on 31 December 2019.

II. Site Analysis

A. General

1. The site is wooded with primary tree species being oak and mesquite.
2. The site is of average aesthetic value.
3. Terrain is largely sloping to level.
4. There are moderate erosion problems in areas of sloping, sandy, rocky, soil.

B. Facilities

Overall condition of facility development is good.

III. Objectives

A. Land Classification

Recreation -Intensive Use

B. Resource Use Objectives

The area will continue to be used by the YMCA as a day and overnight use area for traditional YMCA activities.

C. Future Development and Management Measures

Future development potential is limited due to the restricted size of the leased area.

TABLE 7-32

FACILITIES -CAMP TSUNGANI

ITEM	QUANTITY / DESCRIPTION
Pavilions	2
Chapel/Office	1
Storage Building	1
Group Camping Areas	2
Buoyed Swimming Areas	1
Amphitheater	1
Archery Range	1

COPPERAS BRANCH PARK

I. General Description

A. Copperas Branch Park consists of approximately 80 acres at the current conservation pool elevation 522 ft. MSL.

B. The park is located on the Hickory Creek arm of the lake, adjacent to the eastern side of Interstate Highway 35E.

C. Access to the park is by Interstate Highway 35E.

D. The park is currently leased to the City of Highland Village and operated primarily as a gate controlled day-use area. See plate 7-18 for existing and proposed facilities.

D. Approximately 21 acres of land in Copperas Branch Park has been reclassified from wildlife habitat to Intensive Recreation land and leased to the City of Highland Village for a proposed park area. To compensate for this loss of wildlife habitat, approximately 21 acres in Copperas Branch Park that is currently leased to Highland Village has been reclassified to Wildlife Management lands from Intensive Recreation lands and sub-classified as Environmentally Sensitive Area.

II. Site Analysis

A. General

1. The area is readily accessible and receives both local and regional use.

2. The terrain is moderately sloping.

3. Tree cover varies from sparse to dense and consists of oak on the higher ground and cottonwood and willow by the shoreline.

4. The principle ground cover is bermudagrass.

B. Facilities

The city operates this park as a day use area offering swimming, picnicking and athletic fields as the primary focus.

III. Objectives

A. Land Classification

Recreation - Intensive Use

B. Resource Use Objectives

The city should be urged to improve day-use opportunities in the park by replacing unsightly and damaged equipment and should provide additional recreation facility development as described below.

C. Future Development and Management Measures

See Table 7-34.

TABLE 7-33
EXISTING FACILITIES AT COPPERAS BRANCH PARK

ITEM	QUANTITY /DESCRIPTION
Picnic Units	19
Launching Areas (Lanes)	1
Courtesy Dock	1
Swimming Areas	2
Restrooms	2
Athletic Fields	2
Fee Control Station	1
Water Supply	Municipal (city of Highland Village)
Parking	Individual for day sites, boat ramp parking

TABLE 7-34
PROPOSED FACILITIES AT COPPERAS BRANCH PARK

ITEM	QUANTITY /DESCRIPTION
Picnic Units	Not specified
Sand Volleyball Court	Not specified
Camp Sites	30
RV Dump Station	1
Fish Cleaning Station	1
Multi-Use Athletic Field	Modify existing
Pavilion	1
Roads	Not specified
Trail	Modify existing
9-Hole Golf Course	1

- Construction of additional day use amenities such as picnic units, sand volleyball courts, campsites, and an RV dump station is proposed to increase public use of the park.
- A fish cleaning station will be constructed.

- Multi-purpose lighting will be installed on athletic fields.
- The lessee will construct a picnic pavilion large enough to accommodate 150 people.
- A roadway from the park entrance to Highland Village Road is proposed.
- The lessee will connect the Inland Trail from the park entrance to Highland Village Road.
- A 9-hole golf course in the southwest area of the park is proposed.

CORPS OF ENGINEERS

LAKE

SWIM AREA

PULL THROUGH SLOTS

PARKING

OVERNIGHT CAMPING FACILITIES

PICNIC UNITS

OVERFLOW PARKING

BOAT RAMP

VOLLEYBALL

SWIM AREA

PARKING

COURTESY DOCK

PARKING

NEW ENTRY PARKING

ROW OF CANOPY TREES

GOLF HOLE

BASEBALL FIELDS

CONCESSION / RESTROOMS

GOVERNMENT PROPERTY LINE

BALLOON PORT AREA

GATE ATTENDANT

PARKING

SOCCER FIELDS

LIMITS OF PARK AREA

FISH AND WILDLIFE AREA

GOVERNMENT PROPERTY LINE

LAKE

PARKING

BOAT RAMP

COURTESY DOCK

PARKING

GOVERNMENT PROPERTY LINE

GOVERNMENT PROPERTY LINE

LIMITS OF PARK AREA

N

EXISTING CONDITI

FUTURE DEVELOPME

COPPERAS BRANCH PARI

KEY MAP

TRINITY RIVER BASIN TEXAS

LEWISVILLE LAKE

ELM FORK TRINITY RIVER

COPPERAS BRANCH F

GRAPHIC SCALE IN FEET

U.S. ARMY ENGINEER DISTRICT, FORT WOR

Carter Burgess

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TOWER BAY ACCESS AREA
(formerly Copperas Branch Park East)

I. General

The 7 foot conservation pool raise left the majority of Tower Bay Access Area unsuitable for recreational purposes. Consequently, all park lands north of Tower Bay will be deleted from park status and remaining park lands re-designated as a boat launch access area.

II. General Description

A. Copperas Branch Access Area consists of approximately 10 acres at conservation pool elevation 522 ft. msl.

B. The area is located on the Hickory Creek arm of the lake, adjacent to the western side of Interstate Highway 35E.

C. Access to the area is from 1-35E.

D. The area is operated by the city of Lewisville as a boat launch fee area.

III. Site Analysis

A. General

1. The access area is bordered to the north by permitted boat houses and to the south by a mobile home park located on adjacent private land.

2. The area has little visual quality.

3. Tree cover is sparse and consists primarily of oak.

4. Ground cover is predominately bermudagrass.

B. Facilities

1. Guardpost and cable have been used extensively throughout the park.

2. Parking areas are undefined and undersized. Asphalt roads and boat ramp parking in the access are in good condition.

IV. Objectives

A. Land Classification

Recreation - Intensive Use

B. Resource Use Objectives

Operate the area strictly as a boat launching area.

C. Future Development and Management Measures

Maintain roads and boat launching facilities.

TABLE 7-35

FACILITIES- COPPERAS BRANCH ACCESS AREA

ITEM	QUANTITY / DESCRIPTION
Launching Areas (Lanes)	1 (4)

LEWISVILLE LAKE PARK

I. General Description

A. Lewisville Lake Park contains approximately 475 acres at conservation pool elevation 522 ft. MSL.

B. The park's location is adjacent to the western abutment of the dam.

C. Access to the site is by various city streets connecting with Interstate 35E.

D. The entire park is within the city limits of Lewisville.

E. The city of Lewisville currently leases the park, which is under the administration of their Parks Department.

F. See plates 7-20a and 7-20b for existing and proposed facilities.

II. Site Analysis

A. General

1. Topography is predominately flat to rolling, however, there are areas of moderately steep terrain in the mid and western portions of the park.

2. There is an extensive amount of standing dead timber along the shoreline. Many of these trees are large and pose significant limb breakage danger to park users. The city of Lewisville is currently in the process of removing all standing dead timber within their leased area.

3. Tree cover in the western half of the park is scattered to dense, consisting primarily of oaks and various hardwoods. Tree cover in the eastern half of the park is scattered with cottonwood and willow being the predominate species. Ground cover consists primarily of bermudagrass.

4. This park has had the highest visitation of any area in the project and is developed to near capacity.

B. Facilities

1. Picnic tables at day and overnight use sites are old and in need of replacement or rehabilitation.

2. There is a need for additional restroom facilities in the fee controlled day-use portion of the park.

3. Asphalt roads are in need of resurfacing.

4. Camping area is separated from day-use area and gate controlled. There are electric and water hook-ups at 149 sites. The area is reasonably well maintained.

5. Lake orientated day-use facilities are seasonally fee controlled.

6. Softball and soccer fields are numerous and well maintained.

7. Concessionaire provided services include an 18-hole golf course, miniature golf course, boat rental, fishing barge and marina.

8. The restroom located at the observation shelter is in need of replacement or rehabilitation.

III. Objectives

A. Land Classification

Recreation - Intensive Use

B. Resource Use Objectives

1. The park should continue to serve as both a city park for local residents and as a regional lake-orientated park for day and overnight use activities.

2. Emphasis should be placed on upgrading existing facility development.

C. Future Development and Management Measures

See Plate 7-20a and 20b

TABLE 7-36
EXISTING FACILITIES AT LEWISVILLE LAKE PARK

ITEM	QUANTITY / DESCRIPTION
Picnic Units	51
Camping Units	149
Group Pavilions	1
Launching Areas (Lanes)	2 (3, 4)
Buoyed Swimming Areas	1
Soccer Fields	12
Softball Fields	9
Golf Course	1 (18 holes)
Fishing Barge	1
Fee Control Station	1
Waterborne Restrooms	2
Vault Restrooms	2
Water Supply	Municipal (city of Lewisville)
Parking	Individual camper pullouts, day use and boat ramp parking

TABLE 7-36
PROPOSED FACILITIES AT LEWISVILLE LAKE PARK

ITEM	QUANTITY / DESCRIPTION
Boat Dock	1
Picnic Shelter	1
Restroom	3
Lift Station	1
Kitchen Facility	1
Trails	Not specified
Multi-Use Athletic Complex	Modify existing
Pipe-rail Fencing	Not specified
Camp Sites	35
Playground	1
Parking	Modify existing
Disc Golf Course	1
Entrance	1
Landscaping	Not specified
Shelter	1

- The picnic shelter (25' X 50') will be for general public use and reserved use with parking for 100 cars.
- Three new restrooms are proposed: (1) for the general public to accommodate shelter and other general park uses; (2) a restroom and kitchen facility to replace the existing one at the Conner Pavilion; (3) a restroom for the disc golf course. A lift station will be constructed to service restroom (1).
- Approximately three miles of eight-foot wide hike and bike trails are proposed in the day use area.
- Multi-use athletic complex improvements include: fencing replacements and expansion, restroom enlargement and replacement, paving existing parking and adding 150 more spaces and paving between the fields.
- The city of Lewisville has proposed to add 35 new campsites, a shower facility, sewer hook ups, tent pad sites, group shelters, a playground, and a disc golf course to promote camping and recreational activities.
- To accommodate the anticipated increase in use, existing gravel parking areas will be re-designed and paved. In addition, a new entrance to the day use area, including a new road and control building, will be constructed.

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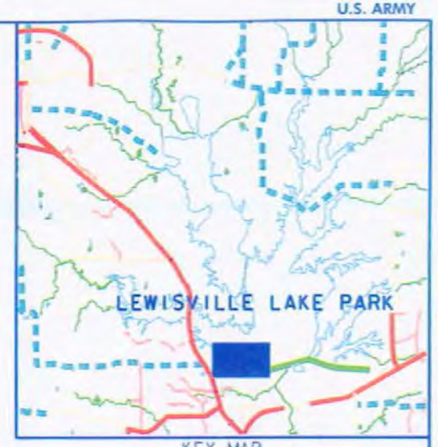

KEY MAP

LAKE

ATHLETIC FIELDS

PICNIC AREA

RESTROOM

PARKING

PAVILION

LAKE

522

EXISTING CONDITIONS

FUTURE DEVELOPMENT

GROUP PICNIC AREA
(RESERVATIONS ONLY)

ROAD CLOSED

SWIM BEACH

TROTLINE ROAD

PARKING

PLAYGROUND

RESTROOM

PICNIC AREA

522

532

DRIVING RANGE

SAND BASS ROAD

PARKING

BOAT RAMP

BOAT RAMP

PICNIC AREA

PARKING

522

SANDY BEACH ROAD

GOLF CLUB HOUSE AND
MAINTENANCE BUILDING

LIMITS OF LEASE AREA

PICNIC AREA

532

LAKE

537

MATCH LINE TO SHEET 2

537

Plate 7-20a

TRINITY RIVER BASIN TEXAS
LEWISVILLE LAKE
ELM FORK TRINITY RIVER

LEWISVILLE LAKE PARK

IN 3 SHEETS 200 0 200 400 SHEET NO 1
GRAPHIC SCALE IN FEET

U. S. ARMY ENGINEER DISTRICT, FORT WORTH AUG, 2001

Carter=Burgess

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CAMPGROUND IMPROVEMENTS
1. Add on shower facility
2. Add 35 new camp sites
3. Provide sewer hook ups
4. Redesign tent pad sites and add sites
5. Replace group shelters
6. Pave gravel parking sites
7. Build entrance gate shack

RESTROOM AND KITCHEN FACILITY
TO REPLACE EXISTING AT CONNER PAVILION

ATHLETIC COMPLEX IMPROVEMENTS
1. Fencing replacements
2. Restroom enlargement at the baseball/football fields
3. Restroom replacement at the soccer complex
4. Parking-paving existing and adding 150 more spaces
5. Expansion of the pipe rail fencing to eliminate cable
6. Paving between the fields

RV CAMPING
SANDY BEACH ROAD
CONNER PAVILION
TENT CAMPING
PARKING
BOAT RAMP
PARKING
GATE
DISC GOLF
FISHING BARGE
PARKING
SANDY BEACH ROAD
BOAT RAMP
PARKING
BASEBALL FIELDS
FOOTBALL FIELD
SOCCER FIELDS
TURTLE TRAIL
RESTROOM
NORTH MILL ROAD
LIMITS OF LEASE AREA
GOLF COURSE
PARKING
LIMITS OF LEASE AREA
ADMINISTRATION BUILDING
PARKING
LAKE PARK ROAD
GOVERNMENT PROPERTY LINE
GOVERNMENT PROPERTY LINE
MATCH LINE TO SHEET 1
MATCH LINE TO SHEET 3
522
532
537

LAKE

LEWISVILLE LAKE PARK
KEY MAP

EXISTING CONDITIONS

FUTURE DEVELOPMENT

Plate 7-20b

TRINITY RIVER BASIN TEXAS
LEWISVILLE LAKE
ELM FORK TRINITY RIVER

LEWISVILLE LAKE PARK

IN 3 SHEETS 200 0 200 400 SHEET NO 2
GRAPHIC SCALE IN FEET

U.S. ARMY ENGINEER DISTRICT, FORT WORTH AUG, 2001

Carter-Burgess

EAGLE POINT MARINA

I. General Description

A. The marina is located within the northwestern portion of Lewisville Lake Park.

B. The site is leased to the city of Lewisville, which has subleased the area to a marina concessionaire.

C. Access to the marina is directly off Interstate Highway 35E.

D. See Plate 7-20c for existing and proposed facilities.

II. Site Analysis

A. General

1. The site is predominately wooded with inter-mixed open areas. Principle tree species is oak.

2. The marina is situated in several coves which are well protected from prevailing winds.

B. Facilities

1. Mooring facilities are old but well maintained.

2. There is a lack of defined parking for marina clientele.

3. Several minor access roads leading to mooring facilities are low and subject to frequent inundation.

4. The marina has limited future expansion potential.

III. Objectives

A. Land Classification

Recreation- Intensive Use

B. Resource Use Objectives

Continue to maintain and improve appearance of marina and support facilities.

C. Future Development and Management Measures

1. Provide adequate parking area to accommodate average weekend use.

2. Clearly delineate parking areas.

3. Upgrade mooring facilities as required.

IV. Comments

The future development of a hotel and restaurant complex has been discussed as a possible development option for the middle peninsula area at Eagle Point Marina. This is currently in the conceptual stage. In principle, the concept appears to have merit in that it would provide opportunities presently unavailable at Lewisville Lake and could also act as a catalyst for future improvements to the Eagle Point Marina area.

TABLE 7-38
EXISTING FACILITIES AT EAGLE POINT MARINA

ITEM	QUANTITY / DESCRIPTION
Dry Boat Slips	246
Wet Boat Slips	762
Floating Gas Dock	1
Boat Repair Ship	1
Ships Store	1
Launching Areas (Lanes)	1

TABLE 7-39
PROPOSED FACILITIES AT EAGLE POINT MARINA

ITEM	QUANTITY / DESCRIPTION
Ship Store	1
Pavilion	1
Boat Slips	76
Restroom or Office Space	1
Parking	Not specified
Service Pads	3
Office/Service Space	Modify existing
Building	1
Fence	1
R/V Camp Site	50
Service Center	1
Road	1

- Ship's store proposed to sell marine products to park visitors.
- Dry boat storage with hard surface paving and security fence will include:
  - 25' to 35' covered, not to exceed 50 units
  - 200 covered dry boat storage
  - 30 - 25' covered dry boat storage units
  - approximately 75 units from 25' to 35'
- A 15,000 square feet pavilion with 20,000 square feet of parking is proposed.
- Construct boat slips:

  - ten 35' covered
  - five 28' covered
  - 20 either open or covered
  - 21 sailboat slips

- A building will be constructed to either accommodate office space or additional restrooms.
- Additional hard surface parking for restaurant and hotel customers is planned.
- Three 14' X 70' concrete boat services pads are to be built for the existing service department.
- A metal building that matches the existing marina and service offices will be constructed.
- A retail boat and R/V sales building will include a showroom and office space. The building will be 20,000 square feet with an additional 30,000 square feet of outside covered hard parking. Security fencing will be placed around this facility and the existing service department yard.
- Approximately 50 RV campsites will be constructed.
- A 10,000 square foot building similar to existing service buildings will be constructed to service both boats and RVs.
- A hard service road will be constructed so customers using House 1 through 4 would not have to drive through the Slalom Shop retail complex.

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LAKE

GOVERNMENT PROPERTY LINE

MATCH LINE TO SHEET 2

EAGLE POINT MARINA AT LEWISVILLE LAKE PARK

KEY MAP

EXISTING CONDITIONS

FUTURE DEVELOPMENT

EAGLE POINT MARINA

BOAT SLIPS

GUNITE SEAWALL

12 STORY HOTEL

BOAT SLIPS

PARKING

GOVERNMENT PROPERTY LINE

SNEAKY PETE'S

BOAT SLIPS

PARKING

BOAT SLIPS

RV CAMPSITES

PARKING GARAGE

RESTROOM

BOAT SLIPS

BOAT SLIPS

GOVERNMENT PROPERTY LINE

PARKING

SAILBOAT SLIPS

PARKING

CONCRETE PADS

HELIPORT

DRY BOAT STORAGE

MARINA OFFICE ADDITION TO MARINA OFFICE

BOAT SLIPS

PARKING

BOAT SLIPS

SERVICE CENTER RETAIL, BOAT AND RV STORAGE

LIMITS OF PARK AREA

DRY BOAT STORAGE

TRAILER STORAGE

PAVILION

PAVED ROAD

DRY BOAT STORAGE

PARKING

DRY BOAT STORAGE

SHIP STORE

CUSTOMER SERVICE CENTER
MAKE READY BUILDING
COVERED DISPLAY

RETAIL

INTERSTATE 35 EAST

INTERSTATE 35 EAST

Plate 7-20c

TRINITY RIVER BASIN TEXAS
LEWISVILLE LAKE
ELM FORK TRINITY RIVER
EAGLE POINT MARINA AT
LEWISVILLE LAKE PARK

IN 3 SHEETS

200 0 200 400
GRAPHIC SCALE IN FEET

SHEET No. 3

U.S. ARMY ENGINEER DISTRICT, FORT WORTH AUG. 2001

Carter-Burgess