Appendix L: April 26, 2010 Meeting

Agenda

Minutes

Presentation: Status of Phase 2 Work by David Harkins

Handouts: Timeline for Phase 2 Work

STUDY COMMISSION ON REGION C WATER SUPPLY

OPEN PUBLIC MEETING

Monday, April 26, 2010
12:00 P.M.
The Meeting will be held at:

Texarkana College
Truman Arnold Center
Great Room
2500 North Robison Road
Texarkana, Texas 75599

AGENDA

I. Call to Order

II. Welcome/Introduction

III. Action Items for Consideration

a. Approval of Minutes of March 11, 2010, Meeting

IV. Discussion Items

a. Phase 2 Scope of Work (SOW) Tasks – Wright Patman Lake

i. Discuss SOW Task 1.1 – Estimate what volume of water is available from Wright Patman after giving consideration to existing water rights holders, anticipated local needs over the term of a contract period, unexpected local need and retained local surplus supply for drought protection.

ii. Discuss SOW Task 1.2 – Estimate how much water is available from existing water rights holders for sale or contract. Identify which parties would be selling or contracting water.

iii. Discuss SOW Task 1.3 – Determine of what operating level of Wright Patman is reasonable due to the White Oak Creek Wildlife Management Area and determine how operations could be modified.

iv. Discuss SOW Task 1.4 - Estimate what is the expected yield of Wright Patman under the most reasonably achievable operating scenarios.

v. Discuss SOW Task 1.5 – Estimate for each operating scenario considered what additional information must be gathered to allow consideration of this strategy as a reasonably equivalent alternative to Marvin Nichols.

b. Phase 2 Scope of Work (SOW) Tasks – Lake O' the Pines

i. Discuss SOW 1.7 – Estimate what volume of water is available from Lake O' the Pines including permitted water that has not been contracted below 228.5 feet msl.

ii. Discuss SOW 1.8 – Determine if there are any other considerations for existing water rights holders (including contracts that may not be fully utilized), anticipated local needs over the term of a contract period, unexpected local need, and retained local surplus supply for drought protection.

iii. Discuss SOW 1.10 – Determine if there is additional flood storage over the elevation of 228.5 feet that could be reallocated to water supply.

iv. Discuss SOW 1.11 – Determine if congressional approval is needed and describe the process involved.

V. Review Study Commission Timeline for completing requirements for Senate Bill (SB) 3

VI. Discussion/Selection of Date, Time, and Location of Next Meeting

VII. Public Comment

VIII. Adjourn

STUDY COMMISSION ON REGION C WATER SUPPLY

OPEN PUBLIC MEETING

MONDAY, APRIL 26, 2010
12:00 P.M.
MINUTES OF MEETING

The Study Commission on Region C Water Supply (Study Commission) met in an open public meeting on Monday, April 26, 2010, at 12:00 P.M. The meeting was held in the Truman Arnold Center, Great Room, at the Texarkana College in Texarkana, Texas. Notice of the meeting was legally posted.

I. Call to Order

Stephen Frost called meeting to order at 12:10 p.m. All members were present.

II. Welcome/Introduction

Each member introduced themselves. Stephen Frost thanked Texarkana College for coordinating event. The registration lists signed by guests in attendance are attached.

III. Action Items for Consideration

a. Approval of Minutes of March 11, 2010, Meeting

Upon a motion by Senator Shapiro and a second by Tom Duckert, the Study Commission members approved the Minutes for the March 11, 2010, meeting.

IV. Discussion Items

a. Phase 2 Scope of Work (SOW) Tasks – Wright Patman Lake

Dr. David Harkins with Espey Consultants presented a summary of Phase 2, Scope of Work. A copy of the PowerPoint presentation used by Dr. Harkins is attached.

i. Discuss SOW Task 1.1 – Estimate what volume of water is available from Wright Patman after giving consideration to existing water rights holders, anticipated local needs over the term of a contract period, unexpected local need and retained local surplus supply for drought protection.

Discussions with the Study Commission members and consultant included questions regarding the:

- USACE Storage Contract with the City of Texarkana for Lake Wright Patman and the need to activate the Contract;
- Necessity to change the operating protocol for Lake Wright Patman to gain access to the current water rights granted to the City of Texarkana

ii. Discuss SOW Task 1.2 – Estimate how much water is available from existing water rights holders for sale or contract. Identify which parties would be selling or contracting water.

John Jarvis discussed Millwood Lake and mentioned the sedimentation and alligator weed infestations.

iii. Discuss SOW Task 1.3 – Determine of what operating level of Wright Patman is reasonable due to the White Oak Creek Wildflife Management Area and determine how operations could be modified.

Dr. Harkins noted that elevation increases to 230' msl could have minimal effects on White Oak Creek Mitigation Area (WOCMA). Elevation levels at 235' msl could have infrastructure impacts and 240' msl expects significant impacts. Harkins went over interim curve storage profile and explained how different target elevations result in different yields.

iv. Discuss SOW Task 1.4 – Estimate what is the expected yield of Wright Patman under the most reasonably achievable operating scenarios.

Yield at different elevations:

- 230' – 514,505 afpy (includes 180,000 afpy for Texarkana)
- 235' – 671,800 afpy (includes Texarkana)
- 240' – 790,800 afpy (includes Texarkana)
- 228.6' – 180,000 (additional yield available)
- 230' – 335,000 (additional yield available)
- 235' – 490,000 (additional yield available)
- 240' – 610,000 (additional yield available)

Possible effects of implementing environmental flows were discussed, as well as the consequence of priorities of water right dates.

Luke Baker, Area Manager for the WOCMA, addressed questions regarding the impact on the WOCMA.

v. Discuss SOW Task 1.5 – Estimate for each operating scenario considered what additional information must be gathered to allow consideration of this strategy as a reasonably equivalent alternative to Marvin Nichols.

Discussion ensued about how to get answers to remaining information. Dr. Harkins suggested that further feasibility studies could procure much of the needed information. Dr. Harkins went over Task 1.5 and received guidance from Senator Shapiro and other voting members for improving the draft list.

It was acknowledged that the required steps for a further evaluation study would be multi-year in its completion. Dr. Harkins outlined Federal steps and State steps involved in accessing the information.

b. Phase 2 Scope of Work (SOW) Tasks – Lake O' the Pines

i. Discuss SOW 1.7 – Estimate what volume of water is available from Lake O' the Pines including permitted water that has not been contracted below 228.5 ft. msl.

Dr. Harkins discussed possible volumes for Lake O' the Pines.

ii. Discuss SOW 1.8 – Determine if there are any other considerations for existing water rights holders (including contracts that may not be fully utilized)., anticipated local needs over the term of a contract period, unexpected local need, and retained local surplus supply for drought protection.

iii. Discuss SOW 1.10 – Determine if there is additional flood storage over the elevation of 228.5 feet that could be reallocated to water supply.

iv. Discuss SOW 1.11 – Determine if congressional approval is needed, and describe the process involved.

V. Review Study Commission Timeline for Completing Requirements for Senate Bill (SB) 3

Jim Parks discussed the timing of the work and provided a recap of the summary timeline and items remaining.

It was requested that economic topics be covered at the next meeting. Jim identified the remaining topics within the Scope that needs to be addressed.

VI. Discussion/Selection of Date, Time, and Location of Next Meeting

The group expressed an intent to try to meet either the last week of May or first week of June.

VII. Public Comment

Public comments were received from the following individuals:

- John McConnell
- Darryl Holcomb
- Nancy Clements
- Red Birdsong
- Mike Russell
- Dickie Dalby
- Billie Scoggins Lindsey
- Ron Hufford
- Gary Cheatwood
- Mary Catherine Grant
- Nathan Drake
- Molly Berridge
- Joe Frost

VIII. Adjourn

There being no further business, the meeting of the Study Commission on Region C Water Supply adjourned at approximately 2:45 P.M.

SENATOR FLORENCE SHAPIRO
Co-Presiding Officer

REPRESENTATIVE STEPHEN FROST
Co-Presiding Officer

STUDY COMMISSION ON REGION C WATER SUPPLY

TRUMAN ARNOLD CENTER, TEXARKANA COLLEGE, 2500 NORTH ROBISON ROAD, TEXARKANA, TEXAS 75599

ATTENDANCE ROSTER

April 26, 2010

	PRINTED NAME	REPRESENTING	E-MAIL ADDRESS
1	Darryl V. Holcomb	Darryl & Ya Ann Holcomb	holcombdarryl@yahoo.com
2	David T Neeley	SRBA	dneeleytx@msn.com
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11	John & Mary Sudik	McWhorter Farm	NancyClements Douglasswell
12	Pat McCoy	River Bend Water	PATMCCOY7@hotmail.com
13	Delores McCright	TC	mdmccright@aol.com
14	Thomas F. Duckert	It/Commission	thomas.duckert@ipaper.com
15	Brandy Echevarria	TXK Gazette	
16	Dwayne Hall	Concerned-Citizen.com	dwayne.hall@Yahoo.com
17	Eric Cain	City Rich Hill	eric.cain@mail.house.gov
18			
19			
20			

STUDY COMMISSION ON REGION C WATER SUPPLY

TRUMAN ARNOLD CENTER, TEXARKANA COLLEGE, 2500 NORTH ROBISON ROAD, TEXARKANA, TEXAS 75599

ATTENDANCE ROSTER

April 26, 2010

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3	Walt Sears	NETMWD	netmwd@aol.com
4	Marie Martin	Rep. Stephen Frost	marie.martin@house.state.tx.us
5	Jim Parks	Region C	jparks@ntmwd.com
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7	~~TOM TARVIS~~	RWR	~~TJARVIS@TRINITYWATERRESOURCES.COM~~
8	Dan Hardin	TWDB	dhardin@twdb.state.tx.us
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12		D	Louise Bindseil@yahoo.com
13	CHARLEEN GRANBERRY	Self	NANAberry@windstream.net
14	DAVID GRANBERRY	self	"
15	Shirley Shumake	SOS	HollowayCrossing@AOL.com
16	Molly C. Berridge	self	mollyc97@aol.com
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18	Joe Frost Jr	Self	JOEMR8103@windstream.net
19	Shirley Greenwood	Self	
20	Freda Bennett	Self	1845 East Park Paris Texas

STUDY COMMISSION ON REGION C WATER SUPPLY

TRUMAN ARNOLD CENTER, TEXARKANA COLLEGE, 2500 NORTH ROBISON ROAD, TEXARKANA, TEXAS 75599

ATTENDANCE ROSTER

April 26, 2010

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4	Nancy Clements	Clements Tree Farm	nclements64@yahoo.c
5	Bessie Neal Heath		
6	David A Nabors	ourselves	
7	Sharron Nabors	Ourselves	
8	Billie S. Lindsey	self (Scoggins Ranch)	Red River County
9	John McConnell	McCreary	jdmz@mt-vernon.com
10	Pickie Dalby	Self	DDDalby@AOL.com
11	LARRY TRAYLOR	Self	TRAYLORS@Hughes.net
12	Mary Catherine Grant	Self	Bowie
13	Michael Russell	SRBA	menuss45@wildblue.net
14	GARY W. CULPEPPER	SELF	chcatwood@neto.com
15	DOLORES CULPEPPER	SELF	
16	Kenny Mitchell	Bowie County Tribune	
17	David Harkins	Espey Consultants	
18	BEN FRANKS	Self	bfranks@NATGASATTLE.com
19	Mildred Harris	Self	
20	Hubert Davis	Self	

STUDY COMMISSION ON REGION C WATER SUPPLY

TRUMAN ARNOLD CENTER, TEXARKANA COLLEGE, 2500 NORTH ROBISON ROAD, TEXARKANA, TEXAS 75599

ATTENDANCE ROSTER

April 26, 2010

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3	David H. Frost	Self	
4	JOHN SUDIK	SELF	
5	WAYNE DIAL	CLARKSVILLE, TX	
6	Nathan Drake	Self	
7	Nick Barber	self	Nickb9990@Yahoo.co.
8	Sandy Cosb	UTRWD / self	sbcash@aol.com
9	TRAVIS TRANSOM	SEN. ELIFF	
10	George Marshall JR	Cuthand TX	GeorgeBull1@Gmail.com
11	Travis Lee	Atlanta, TX	Txs Rngr 007@yahoo.com
12	MIKE RICKMAN	NTMWD	
13			
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15			
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REGION C STUDY COMMISSION PHASE II

Prepared for

Region C Study Commission

by

Espey Consultants, Inc

Austin, Texas

April 26, 2010

Task 1.1

Estimate what volume of water is available from Wright Patman after giving consideration to existing water rights holders, anticipated local needs over the term of a contract period, unexpected local need and retained local surplus supply for drought protection.

Local Contact

This will be accomplished through discussions with Texarkana Water Utility, Riverbend Water Resources, International Paper, Texas Parks and Wildlife, USACE Wright Patman, other local entities.

LAKE WRIGHT PATMAN
Permitted and Contracted Water Rights

- **Permitted Water Rights** –
  Water Authorized for Diversion by Owner
- **Contracted Water Rights** –
  Permitted Water Rights that have been sold or "Contracted" by the Owner
- **Un-Contracted Water Rights** –
  Permitted Water Rights that have **NOT** been sold or "Contracted" by the Owner

LAKE WRIGHT PATMAN
Un-contracted Water Rights (afpy)

City of Texarkana Water Rights	Industrial	Municipal	Total
Permitted Water Rights (afpy)	135,000	45,000	180,000
Contracted Water Rights (afpy)	120,000	2,500	122,500
Remaining for Contract (afpy)	15,000	42,500	57,500

Certificate of Adjudication 03-4836

TWDB Study Commission on Region C Water Supply, Phase I Revised Draft Report, 12-08-2009.

Task 1.2 Available Water

Estimate how much water is available from existing water rights holders for sale or contract. Which parties would be contracting the water?

LAKE WRIGHT PATMAN
Potentially Available Water (afpy)
From Existing Water Rights Holders

	Industrial	Municipal	Total
Texarkana Permitted Water Rights	135,000	45,000	180,000
Texarkana Un-contracted Water Rights			57,500
Contracted Water Not Used by International Paper Corporation *	77,000		77,000
Potentially Available Water	**92,000**	**42,500**	**134,500**

* Based on actual use during period 1994 - 2007.
Data provided by International Paper Corporation

LAKE WRIGHT PATMAN
Additional Sources of Water

Additional Yield Gained by System Operation of Lake Wright Patman and Lake Jim Chapman is Estimated to be 108,000 afpy.

Freese and Nichols, Inc., 2003, System Operation Assessment of Lake Wright Patman and Lake Jim Chapman, Volume I Main Report.

Task 1.3
Reasonable Operating Level
(White Oak Creek Wildlife Mgmt Area – WOCWMA)

Determine what operating level of Wright Patman is reasonable due to the White Oak Creek Wildlife Management Area (WOCWMA) and determine how operations could be modified.

WOCWMA Information

- Discussions with Texas Parks and Wildlife Department, and the United States Army Corp of Engineers (January 2009).
- TPWD Letter to Dr. David Harkins, Espey Consultants, Inc., dated August 27, 2009.
- TPWD 2002 Memo from John Jones to Nathan Garner.
- "Elevation **increase to 230 ft could have minimal effects** on WOCWMA"
- "Lowest water control structure in the wetlands is 235.5"

LAKE WRIGHT PATMAN
Reasonable Operating Levels (NGVD29)

WOCWMA Infrastructures Affected

230 ft (NGVD29) Operating Level

- No Infrastructures Affected

235 ft (NGVD29) Operating Level

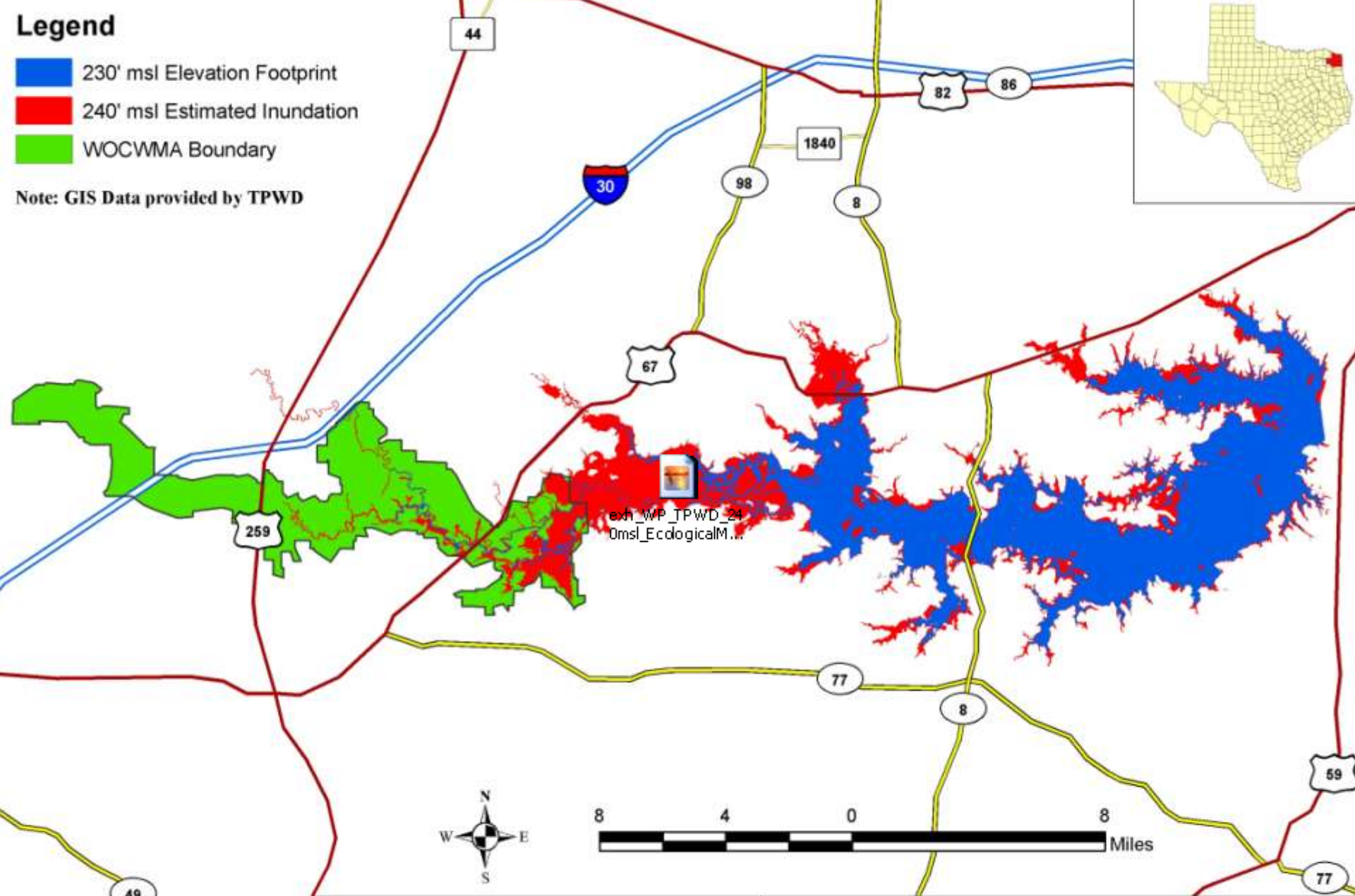
- 2 Water Control Structures
- 3 Managed Wetland Units (480 acres)
- 1 Concrete Bridge

* TPWD Letter to Dr. Harkins, Espey Consultants, Inc., dated March 22,2010

LAKE WRIGHT PATMAN
Reasonable Operating Levels (NGVD29) (Continued)

240 ft (NGVD29) Operating Level

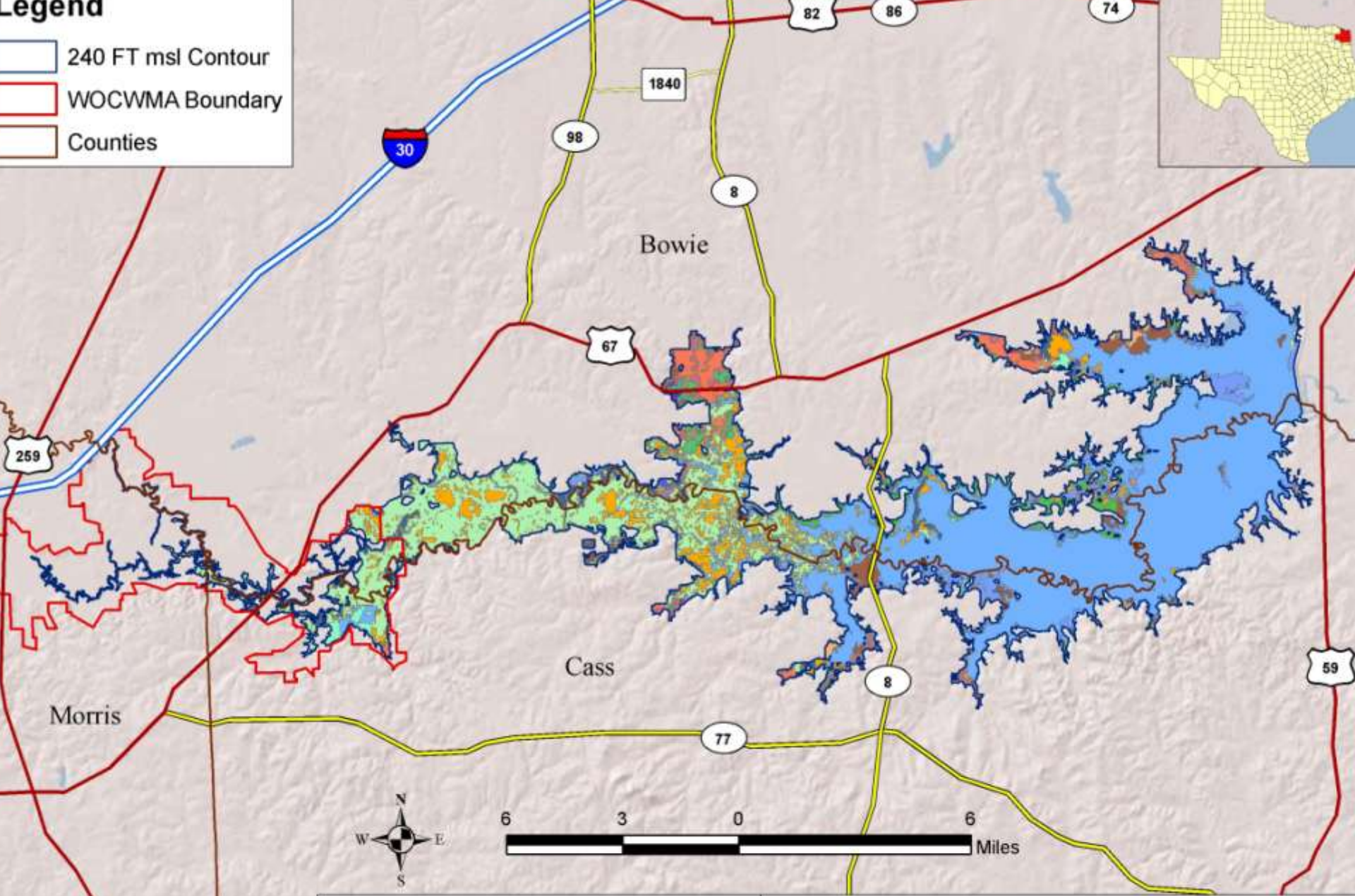
- 10 Water Control Structures
- 1 High Water Bridge
- 7.3 Miles of Levees
- 3,596 acres of Public Hunting Land
- 1.5 Miles of Boundary Lines
- 11.5 Miles of ATV
- 10 Miles of Equestrian Trails



Espey Consultants, Inc.
Environmental & Engineering Services

LAKE WRIGHT PATMAN
WHITE OAK CREEK WILDLIFE MGMT AREA

REGION C STUDY
PHASE II



Espey Consultants, Inc.
Environmental & Engineering Services

LAKE WRIGHT PATMAN
WHITE OAK CREEK WILDLIFE MGMT AREA

TPWD Texas Ecological Classification Systems 2009
REGION C STUDY PHASE II - 240' msl

Legend

Wright Patman 240' msl TPWD Ecological Classification 2009

Common_nam

- Barren
- Native Invasive: Deciduous Shrubland
- Native Invasive: Deciduous Woodland
- Native Invasive: Mesquite Shrubland
- Open Water
- Pine Plantation 1 to 3 meters tall
- Pine Plantation > 3 meters tall
- Pineywoods: Bottomland Baldcypress Swamp
- Pineywoods: Bottomland Deciduous Successional Shrubland
- Pineywoods: Bottomland Herbaceous Wetland
- Pineywoods: Bottomland Seasonally Flooded Hardwood Forest
- Pineywoods: Bottomland Temporarily Flooded Hardwood Forest
- Pineywoods: Bottomland Temporarily Flooded Mixed Pine / Hardwood Forest
- Pineywoods: Bottomland Wet Prairie
- Pineywoods: Disturbance or Tame Grassland
- Pineywoods: Dry Pine / Hardwood Forest or Plantation
- Pineywoods: Dry Pine Forest or Plantation
- Pineywoods: Dry Upland Hardwood Forest
- Pineywoods: Hardwood Flatwoods
- Pineywoods: Herbaceous Flatwoods Pond
- Pineywoods: Herbaceous Seepage Bog
- Pineywoods: Longleaf or Loblolly Pine / Hardwood Flatwoods or Plantation
- Pineywoods: Longleaf or Loblolly Pine Flatwoods or Plantation
- Pineywoods: Northern Mesic Hardwood Forest
- Pineywoods: Northern Mesic Pine / Hardwood Forest
- Pineywoods: Pine / Hardwood Forest or Plantation
- Pineywoods: Pine Forest or Plantation
- Pineywoods: Small Stream and Riparian Baldcypress Swamp
- Pineywoods: Small Stream and Riparian Deciduous Successional Shrubland
- Pineywoods: Small Stream and Riparian Herbaceous Wetland
- Pineywoods: Small Stream and Riparian Seasonally Flooded Hardwood Forest
- Pineywoods: Small Stream and Riparian Temporarily Flooded Hardwood Forest
- Pineywoods: Small Stream and Riparian Temporarily Flooded Mixed Forest
- Pineywoods: Small Stream and Riparian Wet Prairie
- Pineywoods: Upland Hardwood Forest
- Pineywoods: Wet Hardwood Flatwoods
- Post Oak Savanna: Oak / Hardwood Slope Forest
- Post Oak Savanna: Post Oak Motte and Woodland
- Post Oak Savanna: Savanna Grassland
- Row Crops
- Swamp
- Unclassified
- Urban High Intensity
- Urban Low Intensity

Espey Consultants, Inc.
Environmental & Engineering Services

LAKE WRIGHT PATMAN
WHITE OAK CREEK WILDLIFE MGMT AREA

TPWD Texas Ecological Classification Systems 2009
REGION C STUDY PHASE II - 240' msl

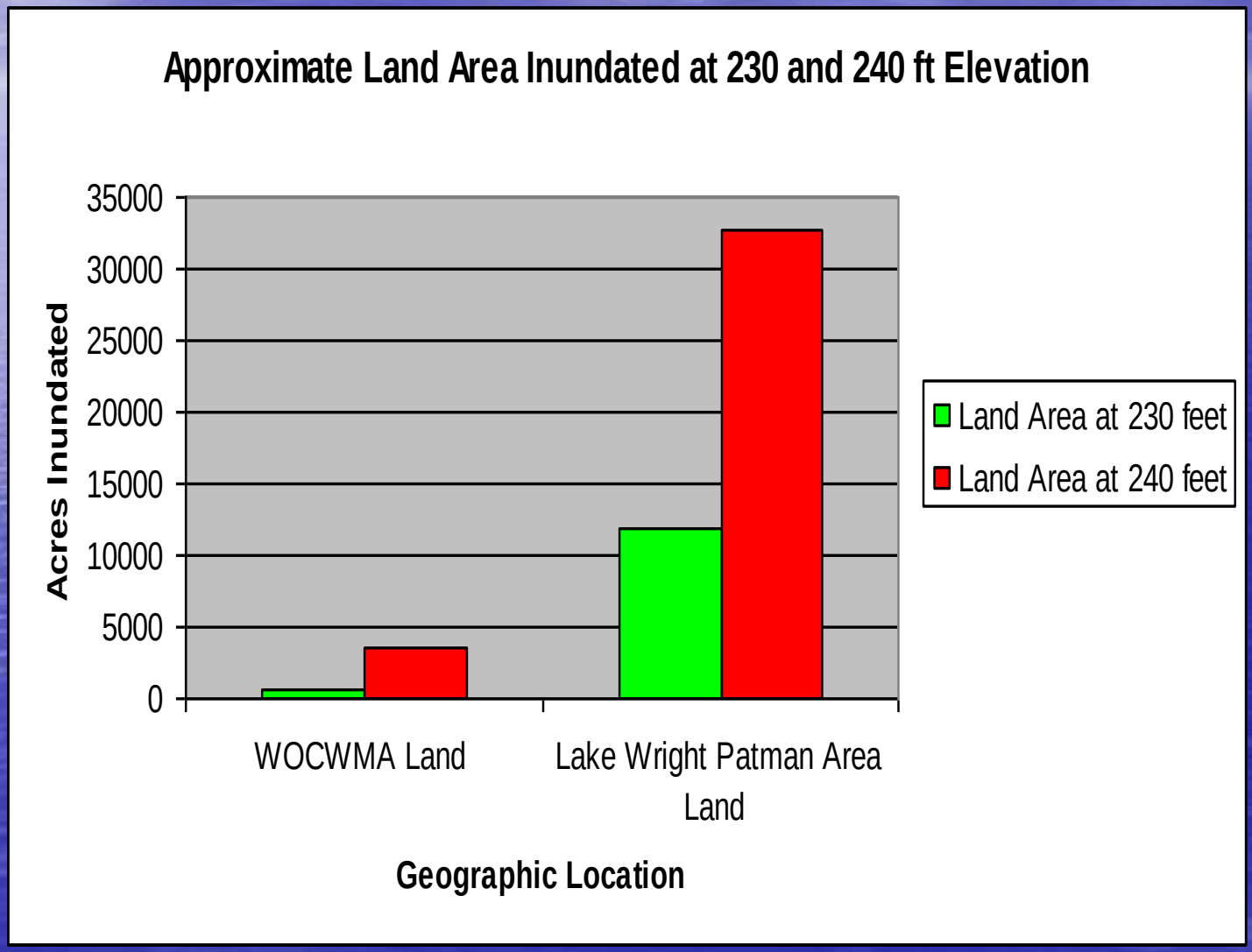
LAKE WRIGHT PATMAN
Land Area Inundated

Approximate Land Area Inundated at 230 and 240 ft (NGVD29) *

	WOCWMA Land (acres)	Lake Wright Patman Area-Wide (acres)
Land Area Inundated at 230 feet	521	11,961
Land Area Inundated at 240 feet	3,596	32,666

* TPWD Letter to Dr. Harkins, Espey Consultants, Inc., dated March 22,2010

LAKE WRIGHT PATMAN



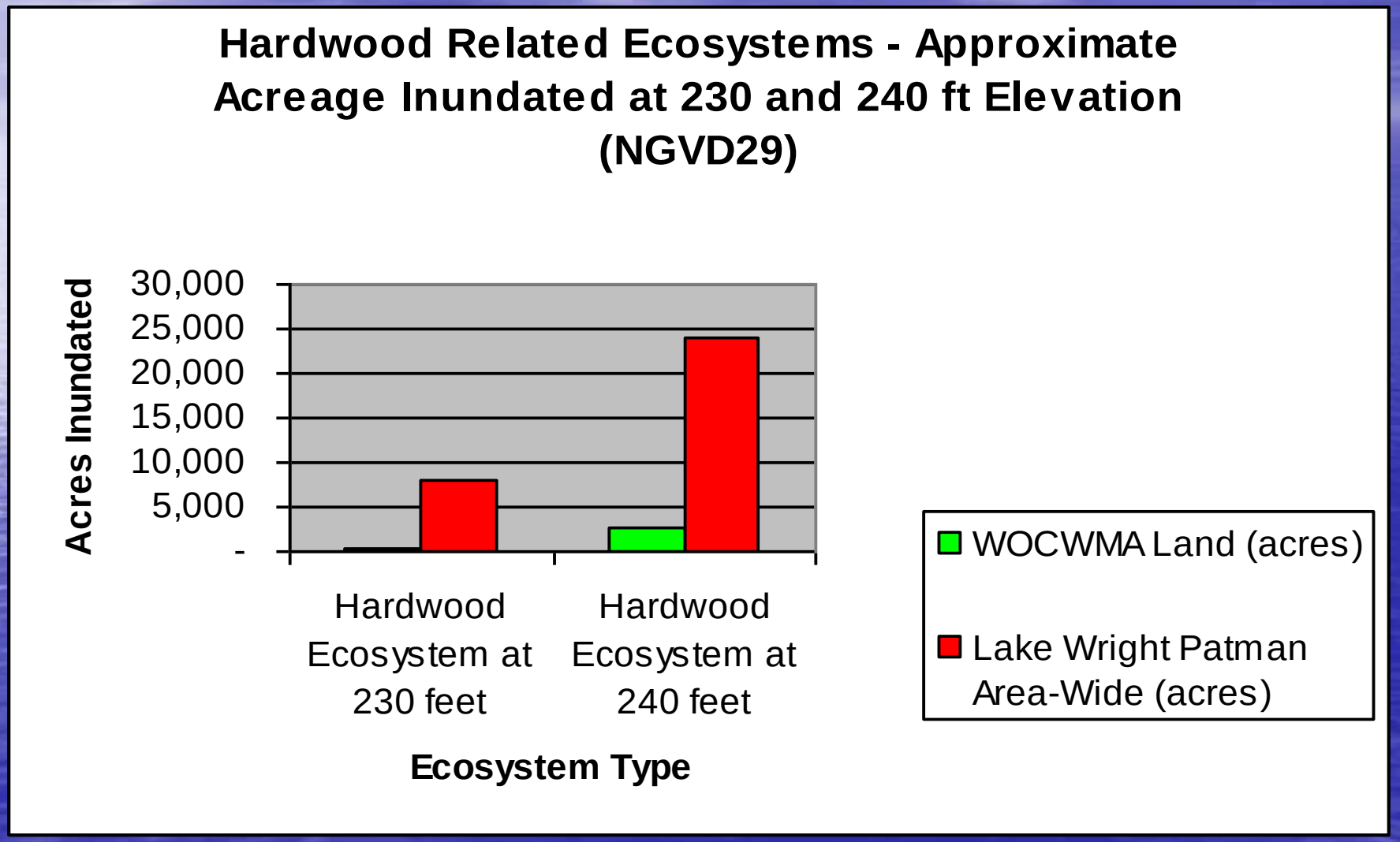
LAKE WRIGHT PATMAN
Ecosystem Area Inundated

Approximate Ecosystem Acreage Inundated at 230 and 240 ft Elevation (NGVD29) *

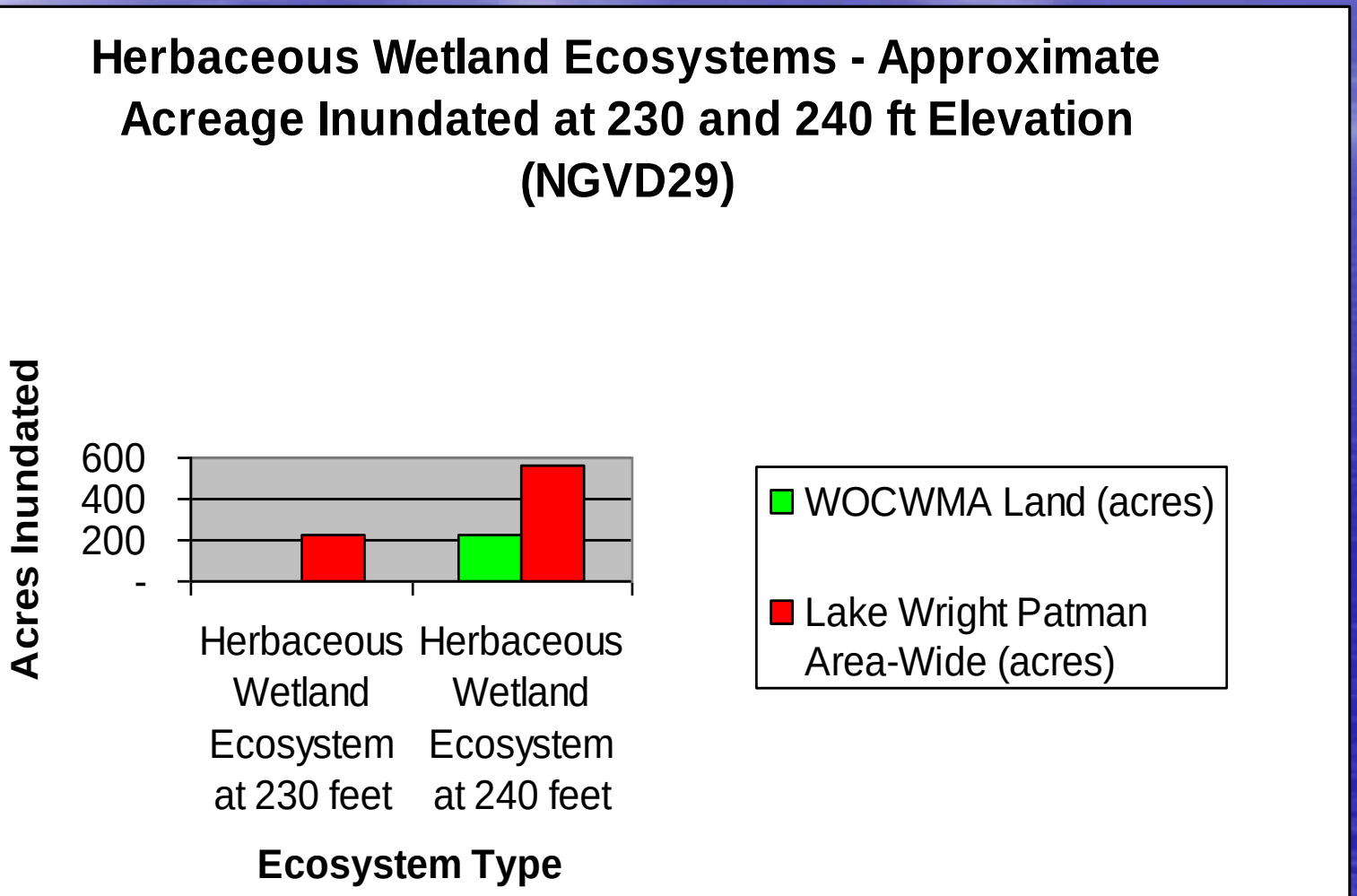
	WOCWMA Land (acres)	Lake Wright Patman Area Wide (acres)
Hardwood Ecosystem Inundated at 230'	349	8,101
Herbaceous Wetland Ecosystem at 230'	0	221
Hardwood Ecosystem Inundated at 240'	**2,712**	**24,123**
Herbaceous Wetland Ecosystem at 240'	**224**	**557**

* TPWD Letter to Dr. Harkins, Espey Consultants, Inc., dated March 22,2010

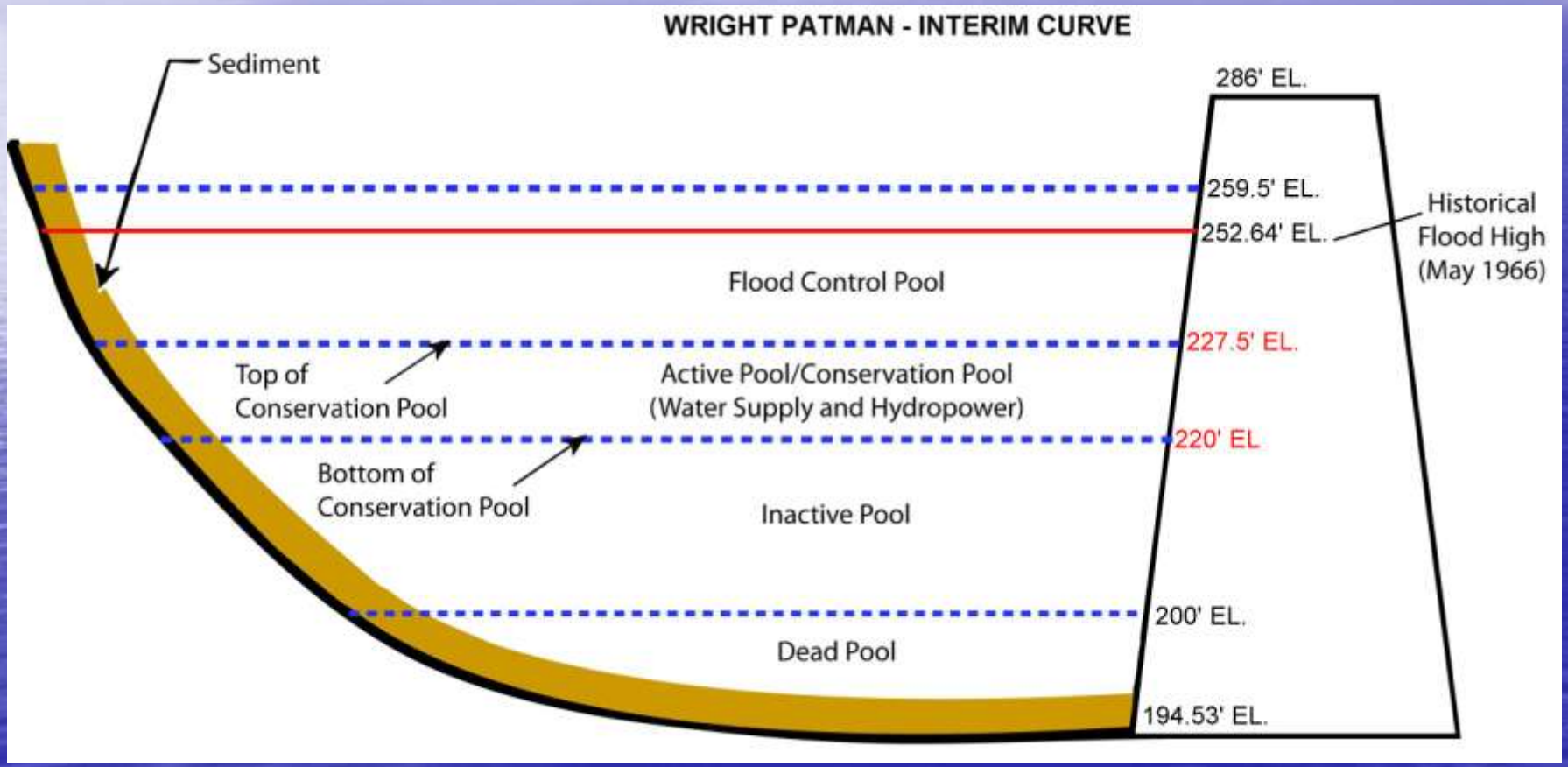
Lake Wright Patman



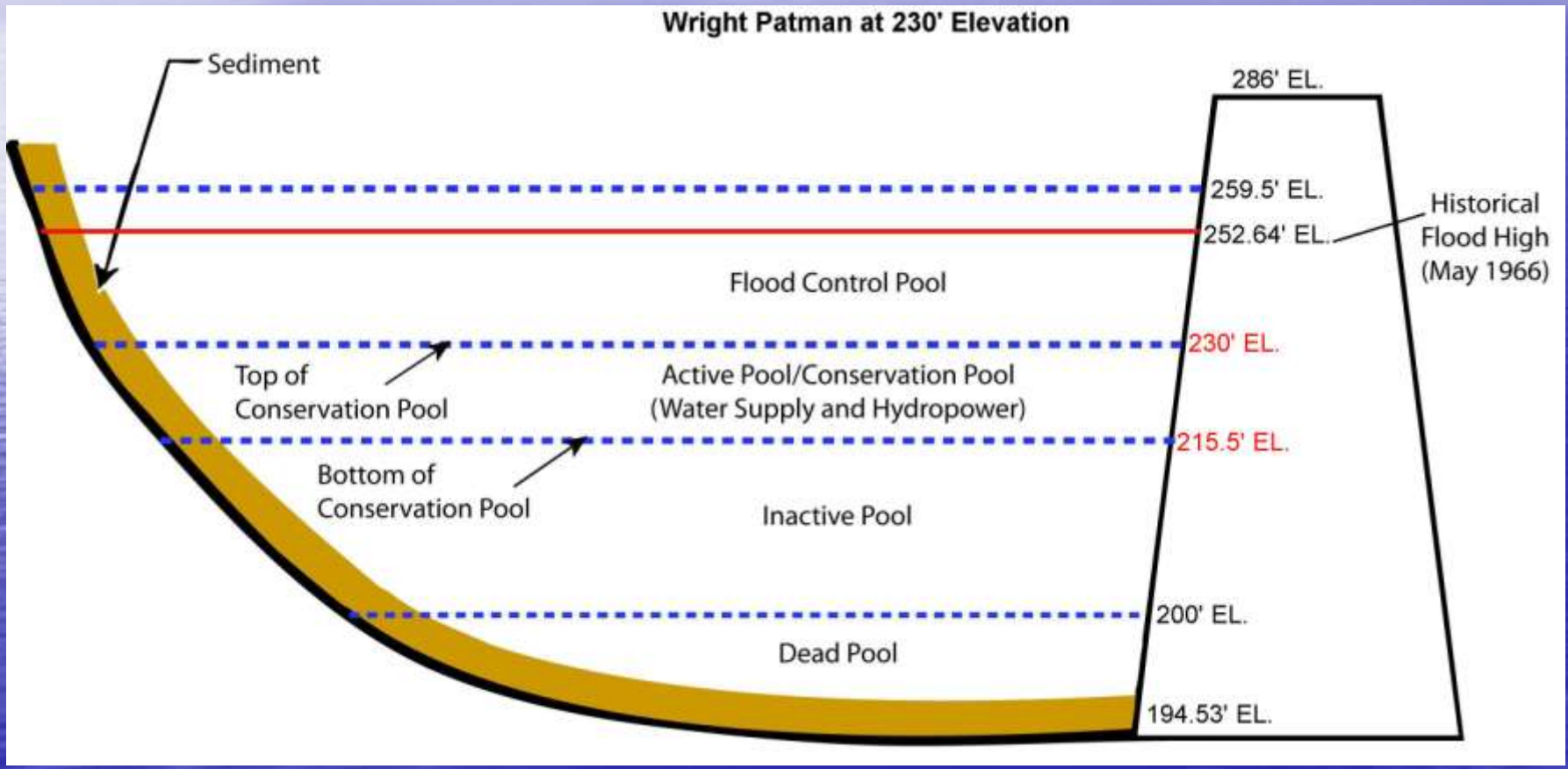
Lake Wright Patman



LAKE WRIGHT PATMAN
Interim Curve Storage Profile



LAKE WRIGHT PATMAN
230’ Flat Curve Storage Profile



Task 1.4

Estimated Yield (afpy) at Different Elevations

Estimate what is the expected yield of Wright Patman under the most reasonably achievable operating scenarios. The additional yield analysis will be performed utilizing the approved water availability model (WAM). Additionally, discussions with Texarkana, TPWD, USACE, and others will be part of this task.

LAKE WRIGHT PATMAN

Estimated Yield Scenario – 230’

LAKE WRIGHT PATMAN AT 230 FT ELEVATION

ESTIMATED TOTAL FIRM YIELD - 514,505 afpy

Modeling and Reservoir Operations Criteria

- 230' Upper Conservation Pool (Flat) Operation Curve
- 215.5' Lower Conservation Pool Elevation
- Priority Date set at December 31,2009
- Area Capacity Modification

LAKE WRIGHT PATMAN

Estimated Yield Scenario – 235’

LAKE WRIGHT PATMAN AT 235 FT ELEVATION
ESTIMATED TOTAL FIRM YIELD - 671,800 afpy

Modeling and Reservoir Operations Criteria

- 235' Upper Conservation Pool (Flat) Operation Curve
- 215.5' Lower Conservation Pool Elevation
- Priority Date set at December 31,2009
- Area Capacity Modification

LAKE WRIGHT PATMAN
Estimated Yield Scenario – 240’

LAKE WRIGHT PATMAN AT 240 FT ELEVATION
ESTIMATED TOTAL FIRM YIELD - 790,800 afpy

Modeling and Reservoir Operations Criteria

- 240' Upper Conservation Pool (Flat) Operation Curve
- 215.5' Lower Conservation Pool Elevation
- Priority Date set at December 31,2009
- Area Capacity Modification

LAKE WRIGHT PATMAN

Expected Yield (afpy) Summary

Top Elev./Bottom Elev.	Total	Available [a]
228.64 Max (flat) / 215.5 Min	363,717 [b]	183,717
230 Max (flat) / 215.5 Min	514,505	334,505
235 Max (flat) / 215.5 Min	671,800	491,800
240 Max (flat) / 215.5 Min	790,800	610,800
Estimated Yield Marvin Nichols	620,000	496,000 [c]

[a] Available Yield of Wright Patman after current 180,000 afpy of Texarkana Water Rights are removed.
[b] Freese and Nichols, Inc., 2003, System Operation Assessment of Lake Wright Patman and Lake Jim Chapman, Volume I.
[c] 80 % of total Marvin Nichols Yield

Task 1.5
ADDITIONAL INFORMATION NEEDED

Estimate for each operating scenario considered what additional information must be gathered to allow consideration of this strategy as a reasonably equivalent alternative to Marvin Nichols.

What are the implications of these equivalent alternatives (amount of yield available, associated costs for pipeline, mitigation acreage, mitigation costs, etc)? What other alternatives are available in conjunction with Wright Patman (Lake O' the Pines)? How do the combination of those alternatives compare to the equivalent to Marvin Nichols?

Task 1.5
ADDITIONAL INFORMATION NEEDED

Additional Information	Addressed by Basin Wide Study
Mitigation Ratios	Yes
WOCWMA Operations and Impact	Yes
Effects on Downstream Flooding	Yes
Assessment of Cultural and Archaeological Sites	Yes
USACE and State Reallocation Requirements	Partially
Water Right Ownership / Contract	
Instream Flow / Environmental Assessment	Yes
IP Discharge and Impact on Receiving Waters	
Funding	
Others	

Task 1.7 and 1.8 LAKE O' THE PINES Estimated Available Water (afpy)

Estimate what volume of water is available from Lake O' the Pines including permitted water that has not been contracted below 228.5 feet msl. This will be accomplished through discussions with Northeast Texas Municipal Water District (NETMWD).

Estimate volume of water available from existing water right holders (including contracts that may not be fully utilized)

LAKE O' THE PINES
Un-contracted Water

Available and Contracted Water Rights *	Approximate Water Rights (afpy)
Available Water (Total Firm Yield)	182,000
NETMWD Contracted Water	-148,000
Available Un-Contracted Permitted Water	34,000

* Region D Initially Prepared Water Plan. March 2010

LAKE O' THE PINES
Additional Water Estimates

Potentially Available Water From Existing Water Rights Owners

NETMWD Member Cities **	**36,000**
U.S. Steel Corporation **	**31,000**

**** Available through re-negotiated contracts**

Total Estimated Potentially Available Water	**67,000**

LAKE O' THE PINES
Total Additional Water Available (afpy)

Available Contract Water	67,000
Un-contracted Water	34,000
Total	101,000

Task 1.10 LAKE O' THE PINES
Reallocation of Flood Storage

Determine if there is additional flood storage over the elevation of 228.5 feet that could be reallocated to water supply. This will be accomplished through additional discussions with NETMWD and the USACE.

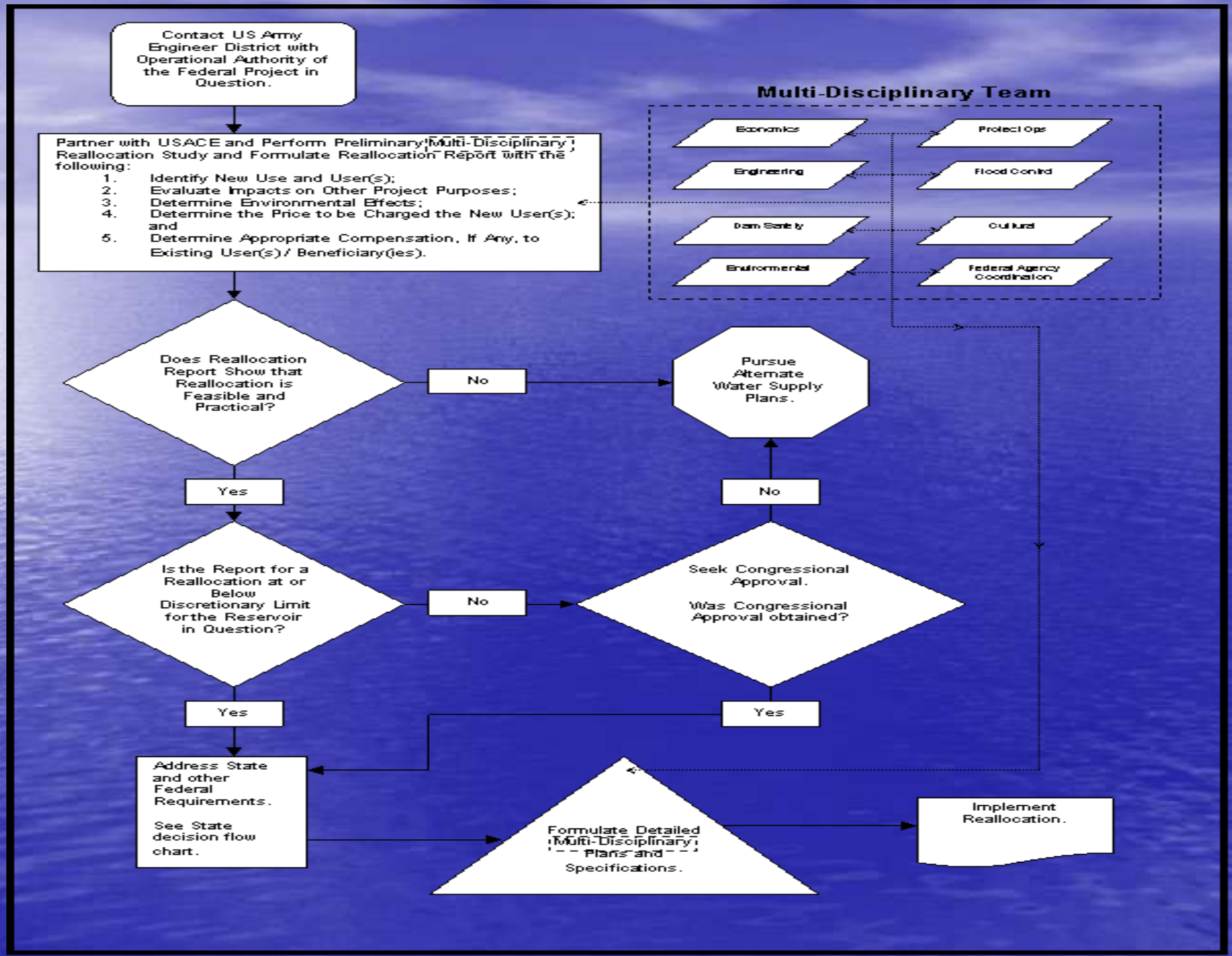
LAKE O' THE PINES
Reallocation Yield Estimate

- LAKE O' THE PINES AT 230.5 FT ELEVATION
- ESTIMATED TOTAL FIRM YIELD – 190,120 afpy
- Modeling and Reservoir Operations Criteria
- 230.5' Upper Conservation Pool (Flat) Operation Curve
- Area Capacity Table Modification

Task 1.11 RESERVOIR REALLOCATION PROCESS

- Congressional Approval is Required to Reallocate Storage Above 50,000 acre-feet or Greater Than 15 Percent of the Total Storage of the Reservoir.
- State And Federal Requirements Apply for Reallocations Greater Than These Limits

FEDERAL REALLOCATION REQUIREMENT FLOW CHART



FEDERAL REALLOCATION REQUIREMENTS

Partner with USACE to Perform a Reallocation Study

- Identify new Use and User(s)
- Evaluate Impacts on Other Project Purposes
- Determine Environmental Effects
- Determine Price to be Charged New User(s)
- Determine Compensation, if any, to Existing Users

Does Study Show Reallocation is Feasible and Practical?

Is Reallocation Volume at or Below USACE Discretionary Limit?

- Less than 50,000 ac-ft
- Less than 15 percent of total reservoir storage

FEDERAL REALLOCATION REQUIREMENTS (cont)

Seek Congressional Approval if Above Discretionary Limit

Address Other Federal Requirements

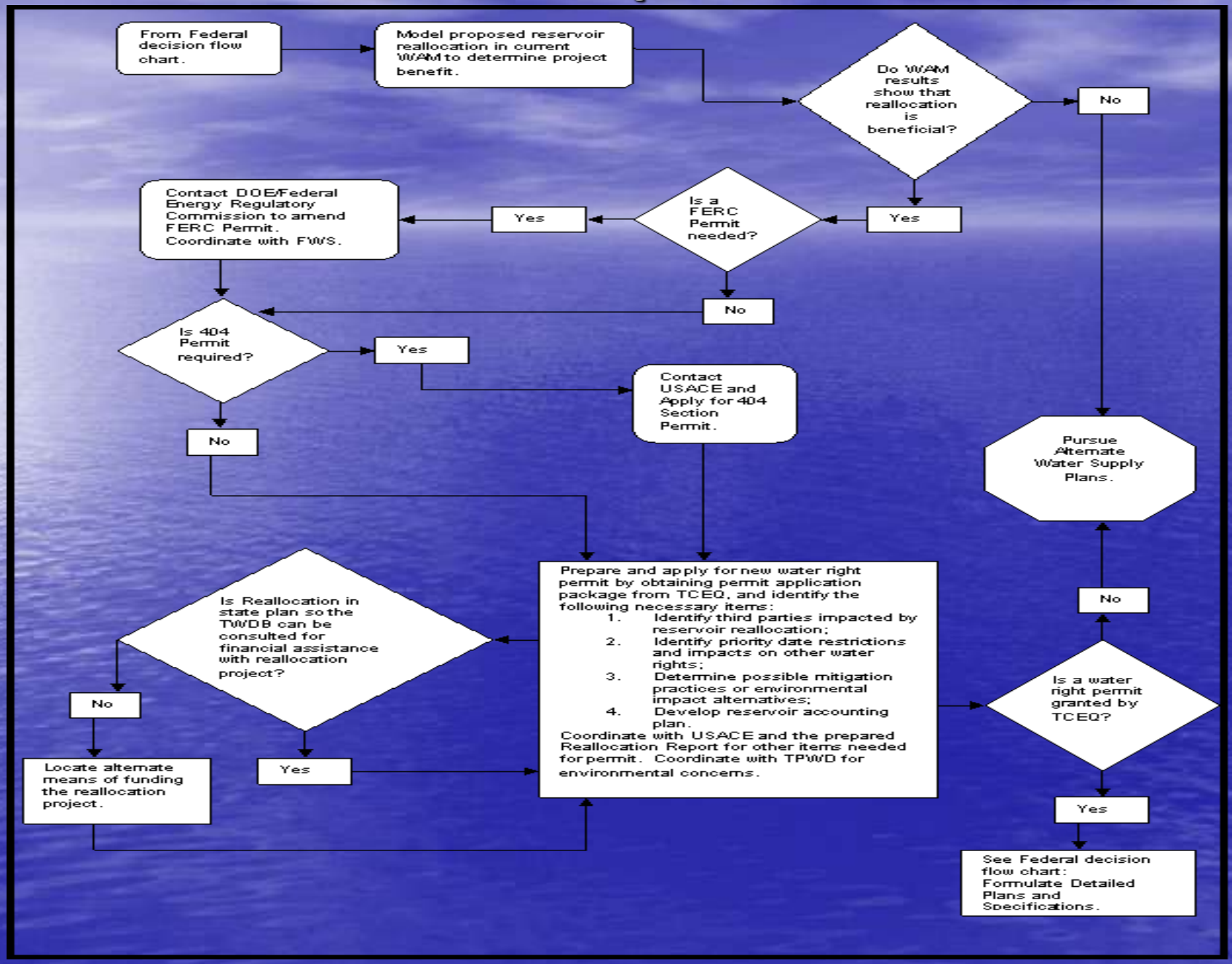
- Environmental Assessment and Possible Environmental Impact Statement
- Section 404 Permit Requirements
- Federal Energy Regulatory Commission (FERC) Requirements
- Mitigation Requirements
- Inventory and Assessment of any Culturally Significant, Historical and Archaeological Sites or Artifacts

Address State of Texas Requirements

Formulate Multi-Disciplinary Plans and Specifications

Implement Reallocation

STATE REALLOCATION REQUIREMENT FLOW CHART



STATE REALLOCATION REQUIREMENTS

Model Reservoir Reallocation in Current WAM

Do WAM Results Demonstrate Reallocation is Beneficial?

Apply for Water Right Permit with TCEQ

- Identify Third Parties Impacted by Reallocation
- Identify Priority Date Restrictions and Impacts on Other Water Rights
- Determine Possible Mitigation or Environmental Impact Alternatives
- Develop Reservoir Accounting Plan

Coordinate With TPWD for Environmental Concerns

Coordinate With USACE and the Prepared Reallocation Report

Obtain Financial Assistance for Reallocation Project

- If Reallocation is in State Plan then Consult with TWDB for Financial Assistance

If Water Right Permit Granted by TCEQ

- Formulate Detailed Plans and Specifications

QUESTIONS ?

Phase II Draft Timeline

2010

TASK DESCRIPTION	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
SB - 3 Section 4.04. Study Commission on Region C Water Supply: (e) The study commission shall:												
(1) review the water supply alternatives available to the Region C Regional Water Planning Area, including obtaining additional water supply from Wright Patman Lake, Toledo Bend Reservoir, Lake Texoma, Lake O' the Pines, other existing and proposed reservoirs, and groundwater,												
1.1. WPL - Determine what volume of water is available from Wright Patman after giving consideration to existing water rights holders, anticipated local needs over the term of a contract period, unexpected local need and retained local surplus supply for drought protection.					X							
1.2. WPL - Determine how much water is available from existing water rights holders for sale or contract. Identify which parties would be selling or contracting water.					X							
1.3. WPL - Determine what operating level of Wright Patman is reasonable due to the White Oak Mitigation facility and determine how operations could be modified.					X							
1.4. WPL - Determine what is the expected yield of Wright Patman under the most reasonably achievable operating scenarios.					X							
1.5. WPL - Determine for each operating scenario considered what additional information must be gathered to allow consideration of this strategy as a reasonably equivalent alternative to Marvin Nichols.					X							
1.6. WPL - Prepare cost estimates (pipeline, intake structure and pump station, mitigation, permitting, etc.)					X							
1.7. Lake O' the Pines - Determine what volume of water is available from LOP including permitted water that has not been contracted below 228.5 feet msl.					X							
1.8. Lake O' the Pines - Determine if there are any other consideration for existing water rights holders (including contracts that may not be fully utilized), anticipated local needs over the term of a contract period, unexpected local need and retained local surplus supply for drought protection.					X							
1.9. Lake O' the Pines - Prepare cost estimates (pipeline, intake structure and pump station, mitigation, permitting, etc.)					X							
1.10. Lake O' the Pines - Determine if there is additional flood storage over the elevation of 228.5 feet that could be reallocated to water supply.					X							
1.11. Lake O' the Pines - Determine if congressional approval is needed and describe the process involved.					X							
1.12. Groundwater - Review the groundwater availability modeling and desired future conditions included in the 2010 version of the Region C and Region D Water Plans. Identify how much of the current and future water demand can be met by groundwater.					X							

Phase II Draft Timeline

2010

TASK DESCRIPTION	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
(2) in connection with the review under Subdivision (1) of this subsection, analyze the socioeconomic effect on the area where the water supply is located that would result from the use of the water to meet the water needs of the Region C Regional Water Planning Area, including: (A) the effects on landowners, agricultural and natural resources, businesses, industries, and taxing entities of different water management strategies; and (B) in connection with the use by the Region C Regional Water Planning Area of water from Wright Patman Lake, the effect on water availability in that lake and the effect on industries relying on that water availability;												
2.A. the effects on landowners, agricultural and natural resources, businesses, industries, and taxing entities of different water management strategies; and					X							
2.B. In connection with the use by the Region C Regional Water Planning Area of water from Wright Patman Lake, the effect on water availability in that lake and the effect on industries relying on that water availability; 1. What industries rely on WPL and which, if any, will be affected, e.g. International Paper, if that water is used by Region C.					X							
(3) determine whether water demand in the Region C Regional Water Planning Area may be reduced through additional conservation and reuse measures so as to postpone the need for additional water supplies;												
3.1. Provide information to Study Commission on results of study completed for Phase 1 of the 2011 Regional Water Planning cycle, "Region C Water Conservation and Reuse Study", focusing on current conservation efforts, issues related to measurement of effectiveness of specific measures and implementation rates, and recommendations for ongoing planning efforts.			X									
3.2. Provide information to Study Commission on results study to determine the volume of water expected to be saved through conservation and reuse strategies to be implemented by municipal Water User Groups in Region C.			X									
3.3. Determine the remaining water demand for municipal WUGs which would be anticipated to be met from traditional ground and/or surface water sources, and calculate an equivalent gallons per capita per day (GPCD) demand for water from those "freshwater" sources.			X									
3.4. Determine any additional demand reductions which would be necessary to further reduce the Region C freshwater GPCD to levels equivalent to the state average GPCD and to the Region D average GPCD.			X									
3.5. Analyze the volumes of demand reduction calculated in (4) above in relation to volumes associated with recommended and alternate strategies proposed to develop additional water supplies.			X									
(4) evaluate measures that would need to be taken to comply with the mitigation requirements of the United States Army Corps of Engineers in connection with any proposed new reservoirs, including identifying potential mitigation sites;												
4.1. Present information on mitigation regulations including process and timing of decisions related to mitigation plans for water supply projects including reservoirs and transmission facilities.			X									
(5) consider whether the mitigation burden described by Subdivision (4) of this subsection may be shared by the Regions C and D Regional Water Planning Areas in proportion to the allocation to each region of water in any proposed reservoir;												
5.1. Present information on mitigation regulations relating to determination of location of mitigation for water supply projects including reservoirs and transmission facilities.			X									

Phase II Draft Timeline
2010

TASK DESCRIPTION	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
(6) review innovative methods of compensation to affected property owners, including royalties for water stored on acquired properties and annual payments to landowners for properties acquired for the construction of a reservoir to satisfy future water management strategies;												
6.1. Compile and report on methods of compensation to affected property owners that have been considered by the legislature during the 80th and 81st legislative sessions or that are used in other states, if applicable.							X					
(7) evaluate the minimum number of surface acres required for the construction of proposed reservoirs in order to develop adequate water supply; and												
7.1. Present summary of number of surface acres reported in various prior studies as they relate to different dam locations.							X					
(8) identify the locations of proposed reservoir sites and proposed mitigation sites, as applicable, as selected in accordance with existing state and federal law, in the Regions C and D Regional Water Planning Areas using satellite imagery with sufficient resolution to permit land ownership to be determined.												
8.1. Present results of work done by Texas A&M's Blacklands Research Center on areal imagery and elevation data.							X					
8.2. Review and discuss benefits of completing "Sulphur River Basin Feasibility Study."			X									
Review Draft Report									X			
Approve Final Report										X		
Print Final Report											O	
Deliver Final Report												O

Note:

(1) Boxes with "X" indicates task to be discussed at meeting of Study Commission scheduled during month indicated.

(2) Boxes with "O" indicates no meeting of Study Commission is required.