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# Revising Mowing and Underbrushing Guidelines at Highly Urbanized Lakes

## A Case History Lewisville and Grapevine Lakes Fort Worth District May 2003 – May 2005

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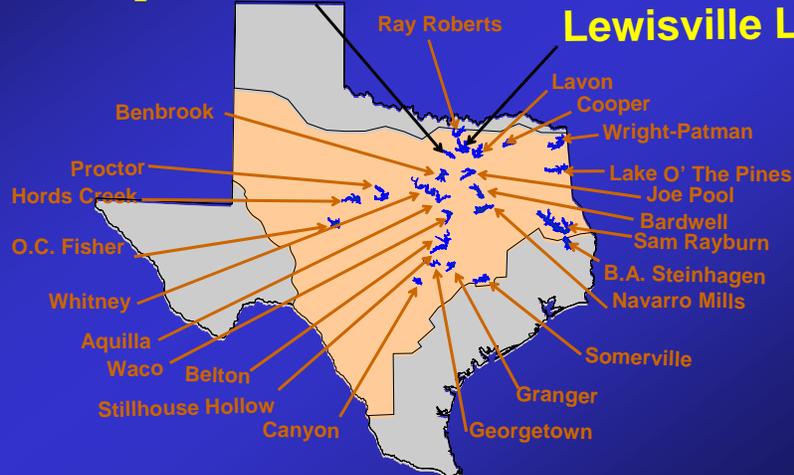


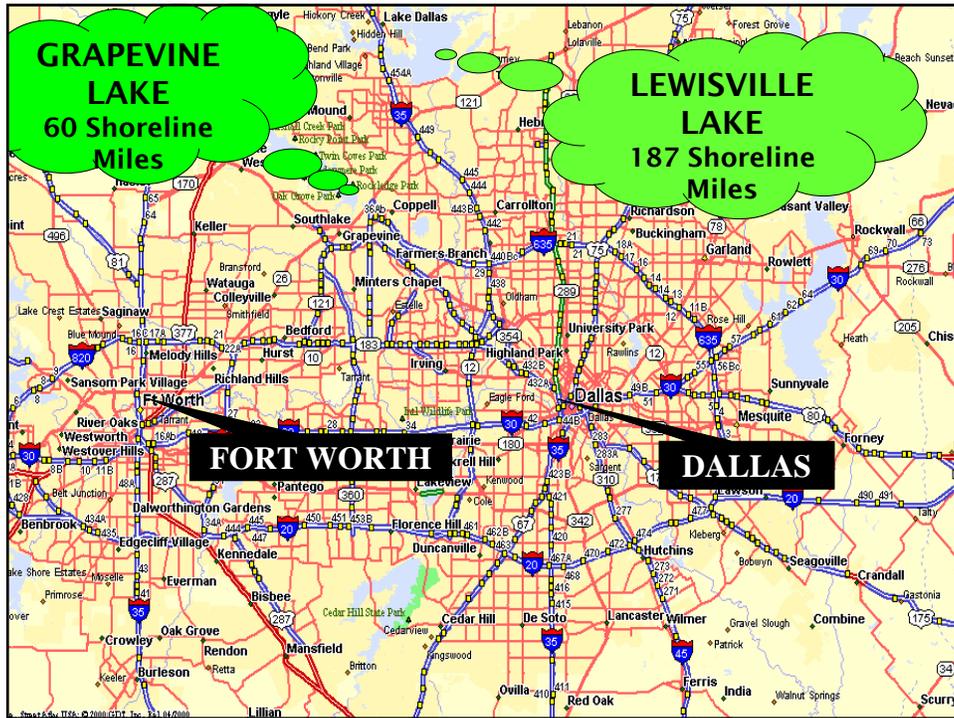
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# Fort Worth District Lakes

## Grapevine Lake

## Lewisville Lake







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## WHY WAS REVISION NEEDED ?

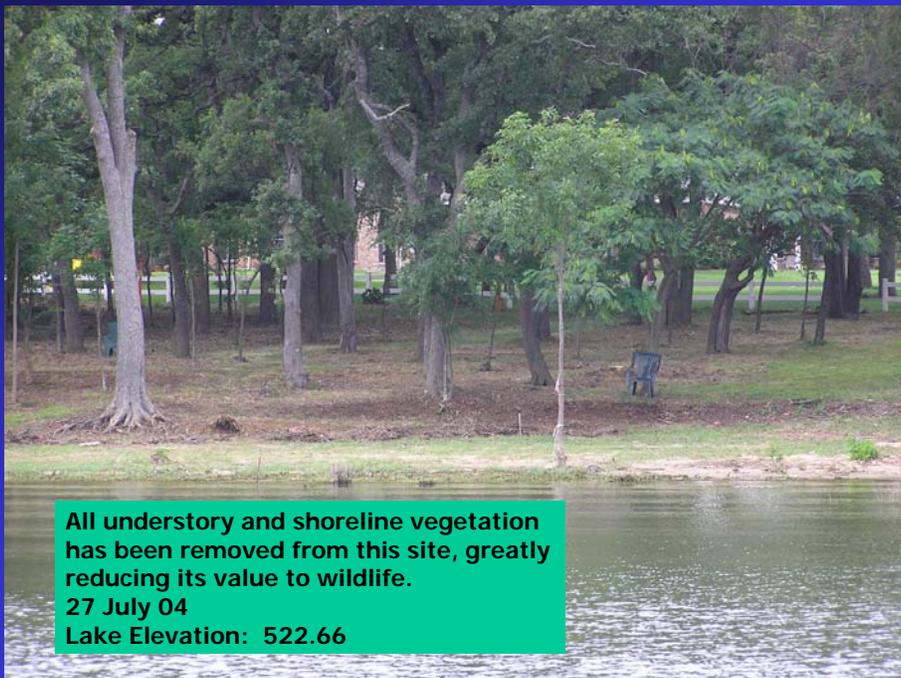
- Primarily at Lewisville Lake, it had become next to impossible to keep up with the growing number of neighbors (more neighbors, more duties, but same number of rangers)
- Strong temptation to mow and underbrush to improve sales appeal (high turnover rate).
- Perception of inconsistent enforcement of allowable mowing guidelines (25 feet at Grapevine and 50 feet at Lewisville)



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## Ranger Perspective: " The Corps is Losing Control and Good Habitat is Being Destroyed"

- Let's get back to basics
- ER 1130-2-406...The Corps must balance permitted private uses of Federal land with resource protection for general public use
- Corps land must not look like private land



All understory and shoreline vegetation  
has been removed from this site, greatly  
reducing its value to wildlife.  
27 July 04  
Lake Elevation: 522.66



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## Initial Plan of Action "We Stumbled"

- Initial plan called for two changes
  - Reduce allowable mowing to 15 feet at both lakes (from 25' at Grapevine and 50' at Lewisville)
  - No permit required (to reduce admin effort)
  - These changes would be within our existing authority
- Not enough public relations work
- Immediate rejection by many neighbors
- USFWS didn't like the idea
- New Congressman and District Engineer – bad timing



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## Results of Stumble

- Homeowners Shoreline Alliance organized into non-profit group, hired environmental attorney, created a web-site soliciting \$1,000 donations for their cause
- Congressman nervous, District Engineer even more nervous
- USFWS wants decision to be addressed in an Environmental Assessment
- PDT formed to tackle the problem



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## Revised Plan of Action

- Aggressive public outreach campaign to inform and gather comment
- Develop mowing, underbrushing, and path alternatives to be assessed in an Environmental Assessment (EA)
- Prepare Ecosystem-based Vegetation Management Prescriptions
- Prepare EA on Alternatives and Prescriptions (UNT Serving as Contractor)



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## Public Involvement

- News Release in Jan 04 announced initiative.....15 July news release extended schedule for EA completion to Sep-Oct 04
- Letters mailed directly to 39 HOA's and to District ENRAC mailing list on 7 May 04 with offer to meet with any HOA



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## Public Involvement

- Conducted the following workshops:
  - Met with City representatives from both lakes....7 April 04
  - Crossroads Community ...3 June 04
  - Wynnewood Peninsula HOA...28 June 04
  - Homeowner's Shoreline Alliance...29 July 04
  - Redbud Point HOA.....13 Aug 04
  - Denton Co. Master Naturalists.....9 Sep 04
- Boat tour with H.S.A reps on 13 Aug 04



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## Alternatives Identified and Assessed in EA

1. No Action.....status quo, 25'at GR and 50'at LE
2. Fire Safety Mowing and Underbrushing....25' at both lakes
3. No mowing or underbrushing
4. Minimum Habitat Buffer....status quo except reserve a 25' unmowed buffer at water's edge
5. Expanded Mowing and Underbrushing....50'at GR and 100' at LE
6. No limit to mowing / underbrushing
7. **Status quo but with variance allowed in narrow shoreline areas (this is the preferred alternative)**



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## Establishing the "Zones"

In response to the challenge that Corps lands are nothing more than a public nuisance, a dangerous, trash-laden, unmanaged jungle, we defined the following zones:

- Mowing and Underbrushing Zone (MUZ)
- Habitat Management Zone (HMZ)



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## Understanding the "Zones"

- Start at the Government Boundary Line
- Mowing and Underbrushing Zone (MUZ) is a strip of Corps land that adjoins the boundary line (25' wide at Grapevine and 50' wide at Lewisville)
- Habitat Management Zone (HMZ) is immediately below the MUZ and extends to the water
- Narrow Shoreline Variance Areas are segments of shoreline that include portions of the HMZ

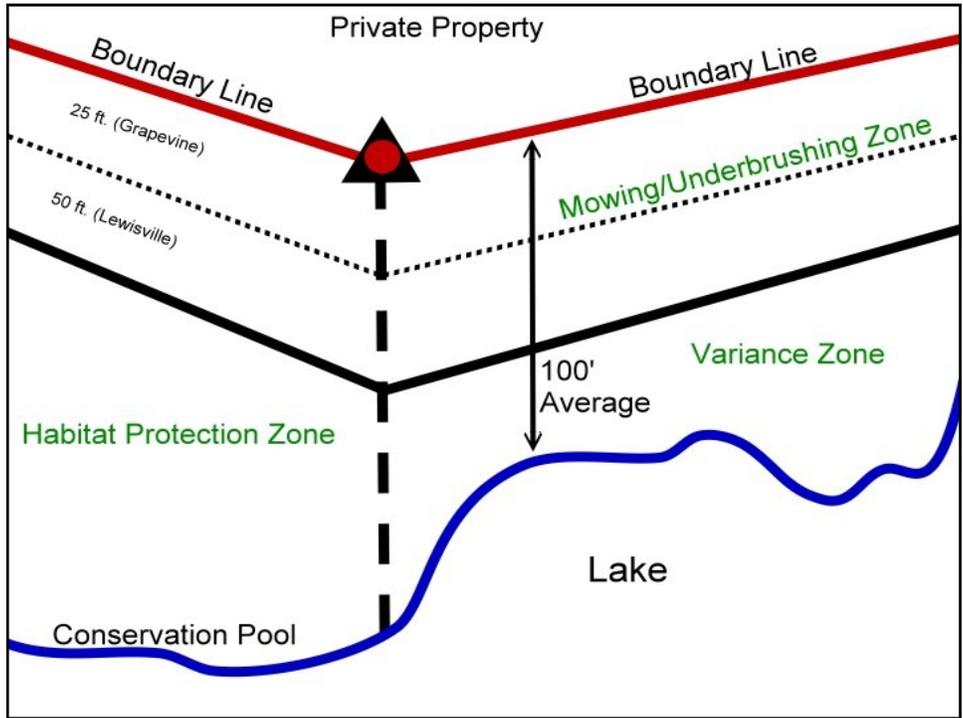


Table 4-1. Acreage and percent of study area within mowing/underbrushing zone and habitat zone for each alternative.

	Area, acres		Percent	
	Zone 1: mow zone	Zone 2: habitat zone	Zone 1: mow zone	Zone 2: habitat zone
Alternative 1 No action	1,782	24,413	6.8%	93.2%
Alternative 2 No mow	0	26,195	0.0%	100.0%
Alternative 3 Fire safety	1,063	25,133	4.1%	95.9%
Alternative 4 Minimum buffer	1,742	24,453	6.7%	93.3%
Alternative 5 Expanded mow	3,369	22,826	12.9%	87.1%
Alternative 6 Mow all	26,195	0	100.0%	0.0%
Alternative 7 Narrow shoreline variance	1,926	24,269	7.4%	92.6%



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## Narrow Shoreline Variance

- Narrow shorelines at Lewisville Lake resulted from the effects of land reconveyance in the 1960's and the increase in conservation pool elevation from 515' to 522' in 1988
- These shorelines are, in general, moderately steep and the width of the majority of Federal ownership is less than 100 horizontal feet wide
- Mowing to the shoreline would be allowed with requirement that permittees mitigate for environmental losses associated with mowing within the NSVA.



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## Criteria for Narrow Shoreline Variance Areas

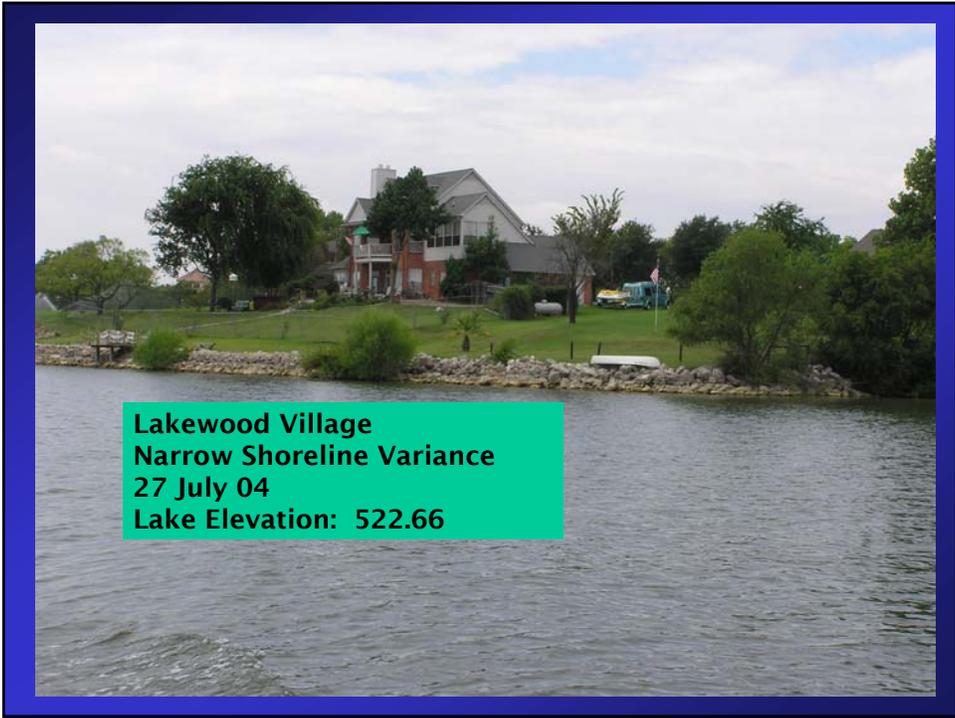
- Substantial segments of shoreline where majority of Federal ownership is less than 100 feet wide
  - Combination of 50-foot MUZ plus 50 additional feet needed for a viable wildlife habitat buffer (in other words, if the available wildlife habitat buffer is less than 50 feet wide, the area qualifies as a narrow shoreline variance and we will permit the area to be mowed)
- Even if narrow by above definition, it must not currently support good habitat

<b>Elm Fork Project Shoreline Variance Mitigation Cost Schedule</b>			
Vegetation/Habitat Condition using Stated PEA Flood Elevations	Excellent Condition (3:1 to 6:1) $C \times V \times SF = M$	Good Condition (2:1 to 5:1) $C \times V \times SF = M$	Poor Condition (1:1 to 4:1) $C \times V \times SF = M$
<b>Woodlands</b>			
(522 – 528)	3 x \$ 0.158 x 3,000 = \$ 1,422.00	2 x \$ 0.158 x 3,000 = \$ 948.00	1 x \$ 0.158 x 3,000 = \$ 474.00
(528 – 530.8)	4 x \$ 0.158 x 3,000 = \$ 1,896.00	3 x \$ 0.158 x 3,000 = \$ 1,422.00	2 x \$ 0.158 x 3,000 = \$ 948.00
(530.8 – 535.2)	5 x \$ 0.158 x 3,000 = \$ 2,370.00	4 x \$ 0.158 x 3,000 = \$ 1,896.00	3 x \$ 0.158 x 3,000 = \$ 1,422.00
(535.2 ≥ 537)	6 x \$ 0.158 x 3,000 = \$ 2,844.00	5 x \$ 0.158 x 3,000 = \$ 2,370.00	4 x \$ 0.158 x 3,000 = \$ 1,896.00
<b>Grasslands</b>			
(522 – 528)	3 x \$ 0.057 x 3,000 = \$ 513.00	2 x \$ 0.057 x 3,000 = \$ 342.00	1 x \$ 0.057 x 3,000 = \$ 171.00
(528 – 530.8)	4 x \$ 0.057 x 3,000 = \$ 684.00	3 x \$ 0.057 x 3,000 = \$ 513.00	2 x \$ 0.057 x 3,000 = \$ 342.00
(530.8 – 535.2)	5 x \$ 0.057 x 3,000 = \$ 855.00	4 x \$ 0.057 x 3,000 = \$ 684.00	3 x \$ 0.057 x 3,000 = \$ 513.00
(535.2 ≥ 537)	6 x \$ 0.057 x 3,000 = \$ 1,026.00	5 x \$ 0.057 x 3,000 = \$ 855.00	4 x \$ 0.057 x 3,000 = \$ 684.00
<b>Savannah</b>			
(522 – 528)	3 x \$ 0.142 x 3,000 = \$ 1,278.00	2 x \$ 0.142 x 3,000 = \$ 852.00	1 x \$ 0.142 x 3,000 = \$ 426.00
(528 – 530.8)	4 x \$ 0.142 x 3,000 = \$ 1,704.00	3 x \$ 0.142 x 3,000 = \$ 1,278.00	2 x \$ 0.142 x 3,000 = \$ 852.00
(530.8 – 535.2)	5 x \$ 0.142 x 3,000 = \$ 2,130.00	4 x \$ 0.142 x 3,000 = \$ 1,704.00	3 x \$ 0.142 x 3,000 = \$ 1,278.00
(535.2 ≥ 537)	6 x \$ 0.142 x 3,000 = \$ 2,556.00	5 x \$ 0.142 x 3,000 = \$ 2,130.00	4 x \$ 0.142 x 3,000 = \$ 1,704.00

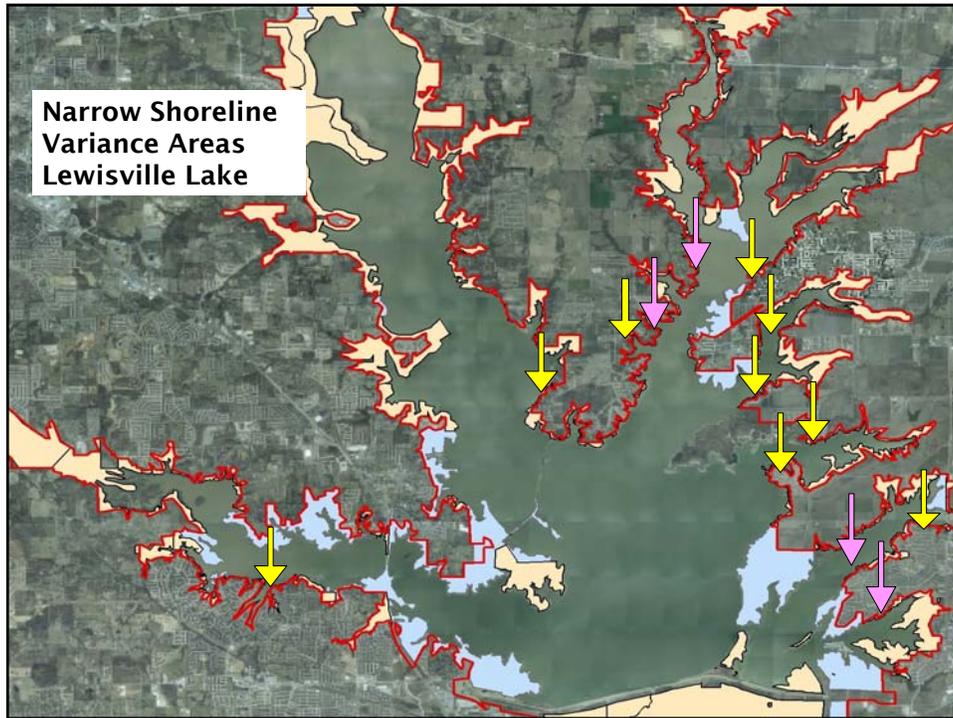
**Footnote:** The 1999 PEA identified mitigation ratios for various habitat conditions / values and location within a range of flood event elevations. For example: Excellent vegetation/habitat conditions are mitigated on ratios ranging from 3:1 to 6:1; Good vegetation/habitat conditions are mitigated on ratios ranging from 2:1 to 5:1; Poor vegetation/habitat conditions are mitigated on ratios ranging from 1:1 to 4:1.











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## Ecosystem-based Vegetation Management

- Goal is to manage toward native, climax vegetation. Wildlife agencies and UNT assisted in preparation
- Will be applied to all lands within the Habitat Management Zone with exception of Narrow Shoreline Variance Areas
- Corps may unilaterally implement, but will first seek to implement through partnerships with cities, conservation groups, or Homeowners Associations, all of which must be led by a Master Naturalist or qualified ecologist.
- Currently mowed areas will be given priority in order to restore lost habitat value



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## Key Guidelines for Mowing Zones

- Regular mowing will be allowed and trees may be pruned to ten feet. Dead trees may be removed
- No trees or shrubs with trunk diameter larger than two inches may be removed with exceptions for mesquite, honey locust, or thicket forming species.
- Beneficial species such as Mexican Plum, redbud, roughleaf dogwood and deciduous holly may not be removed.
- Leaf litter in closed-canopy woods may not be removed
- Permittees may only mow in front of their respective property



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## *Where Are We Now?*

- **The Notice of Availability of draft EA was signed on 3 Nov 04. A public information meeting was held at local high school on 16 Nov 04 to answer any questions about the draft EA**
- **After analyzing public comment, a final meeting was held with the Homeowner's Shoreline Alliance on 18 April 05**
- **FONSI signing anticipated May 05**



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## Implementation Strategy

- Under Development
  - Hope to focus on “group permits”
  - Looking for best way to receive mitigation payments
  - Previously mowed areas not located in Narrow Shorelines will need to be rested for at least one growing season
  - Need to aggressively implement the Ecosystem-based prescriptions.....in the HMZ and in developed parks



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## The End