



Environmental Considerations for Austin's Lakes


Presented to:
Board of Adjustment
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LAKE AUSTIN - Finding the Balance

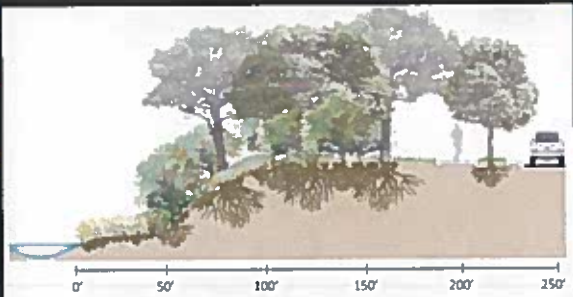
- Drinking Water
- Residential
- Commercial
- Boating/Marina
- Parkland
- Fishing
- Passive Recreation



Environmental Issues

<i>Zebra Mussels</i>	<i>Bank Erosion</i>	<i>Shoreline Erosion</i>	<i>Poor Shoreline Habitat</i>
			
			
<i>Non-Complying Structures</i>	<i>Compliance/Work Without Permits</i>	<i>Wave Impacts</i>	


Riparian Zone Functions




0' 50' 100' 150' 200' 250'

Organic input		White Bar = Minimum
Stabilization		Black Bar = Maximum
Water Quality		
Flood Control		
Habitat		

A robust shoreline vegetative community improves water quality, prevents erosion, and aids in flood control.

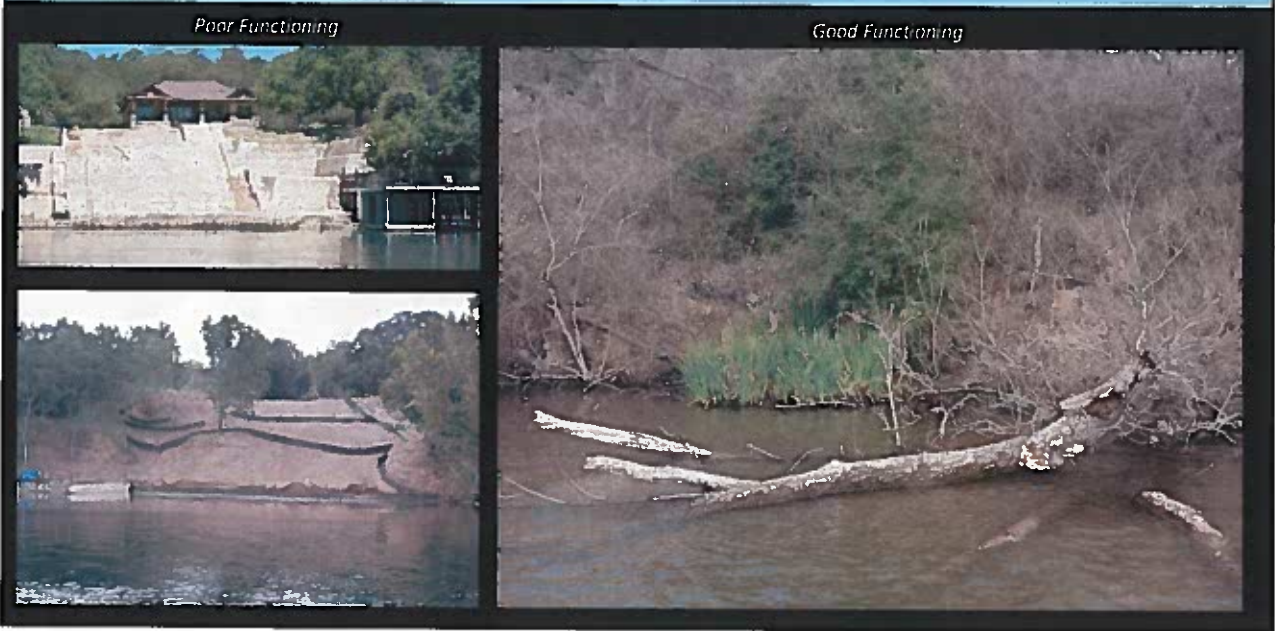


Trees & deep-rooted plants prevent erosion.



Dense shoreline development degrades shoreline health.

Poor Riparian Function VS Good Riparian Function



Costs of Degraded Water Quality

- Water treatment costs due to suspended sediment
- Poor fishery
- Lowered Austin Lake Index scores in
 - Habitat
 - Invertebrates
 - Vegetation



Submerged Aquatic Vegetation Helps

SAV Exclosures to prevent herbivory



American water willow helps absorb wave energy and doesn't need a cage

§ 25-8-261 Critical Water Quality Zone

CWQZ on all Lakes:

- 75' from shoreline (492.8 msl) for single family
- 100' for all other uses

(1) A dock, bulkhead or marina, and necessary access and appurtenances, are permitted in a critical water quality zone subject to compliance with Chapter 25-2, Subchapter C, Article 12 (Docks, Bulkheads, and Shoreline Access)



Trams



Stairs



Gangways

§ 25-8-281(C) Critical Environmental Features

Canyon Rimrock and 150' CEF Buffer



Canyon Rimrock



Wetland



Seep



Spring



§ 25-8-652 – Restrictions on Development Impacting Lakes

Unpermitted fill in Lake



(A) The requirements of this section apply to development on or adjacent to Lake Austin, Lady Bird Lake, or Lake Walter E. Long

(B) Except as otherwise provided by this section, placing fill or dredging in a lake is prohibited.

(C) A retaining wall, bulkhead, or other erosion protection device may not capture or recapture land from a lake unless doing so is required to restore the shoreline to whichever of the following boundaries would encroach the least into the lake:

- (1) the shoreline as it existed 10 years prior to the date of application, with documentation as prescribed by the Environmental Criteria Manual; or
- (2) the lakeside boundary of the subdivided lot line.

(D) A bulkhead may be replaced in front of an existing bulkhead once, if:

- (1) the existing bulkhead was legally constructed; and
- (2) construction of the replacement bulkhead does not change the location of the shoreline by more than 6 inches; and
- (3) the director of the Watershed Protection Department determines that there is no reasonable alternative to replacement of the bulkhead in the location of the existing bulkhead.

(E) The director may approve less than 25 cubic yards of dredging in a lake if the dredging is necessary for navigation safety.

Land Use Commission Variances § 25-8

Land Use Commission Variance Findings (paraphrase of 25-8-41)

- Requirement will deprive the applicant of a privilege given to owners of other similarly situated properties with approx. contemporaneous development;
- Variance is not necessitated by scale, layout, construction method, or other design decision made by the applicant, unless the design provides greater environmental protection;
- Minimum deviation necessary to allow a reasonable use of the property;
- No significant probability of harmful environmental consequences;
- No harm to water quality;
- Additional findings for Critical Water Quality Zone variances:
 - Requirement prevents a reasonable, economic use of the entire property;
 - Minimum deviation necessary to allow a reasonable, economic use of the entire property.

Board of Adjustment Variance Findings (paraphrase of 25-2-474)

- Requirement does not allow for a reasonable use;
- Hardship is unique/not characteristic of the area;
- Development does not
 - Alter character of area,
 - Impair use of adjacent property,
 - Impair the purpose of the regulation;



Situations Involving Both EV Commission and BoA

Tram in Setback or Slopes /Rimrocks



- Construction in a CEF buffer Versus Mechanized access on slopes greater than 35% or in LA shoreline setback
- EV Commission reviews impact of construction on CEF only
 - BoA can consider area character in addition to hardship and reasonable use

Dock Extension/Dredging



- Dredging greater than 25 cy Versus Extending the dock greater than 30'
- EV Commission reviews impact of dredging on water quality
 - BoA reviews hardship, reasonable use, and area character of dock extension (navigation safety)