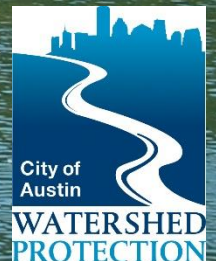
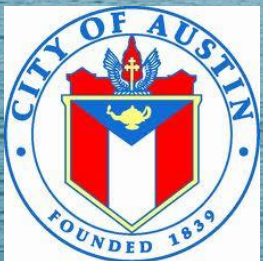


Environmental Considerations for Austin's Lakes

Presented to:
Board of Adjustment
August 17, 2021

Liz Johnston, Deputy Environmental Officer



LAKE AUSTIN - Finding the Balance

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



Environmental Issues

Zebra Mussels



Bank Erosion



Shoreline Erosion



Poor Shoreline Habitat



Non-Complying Structures

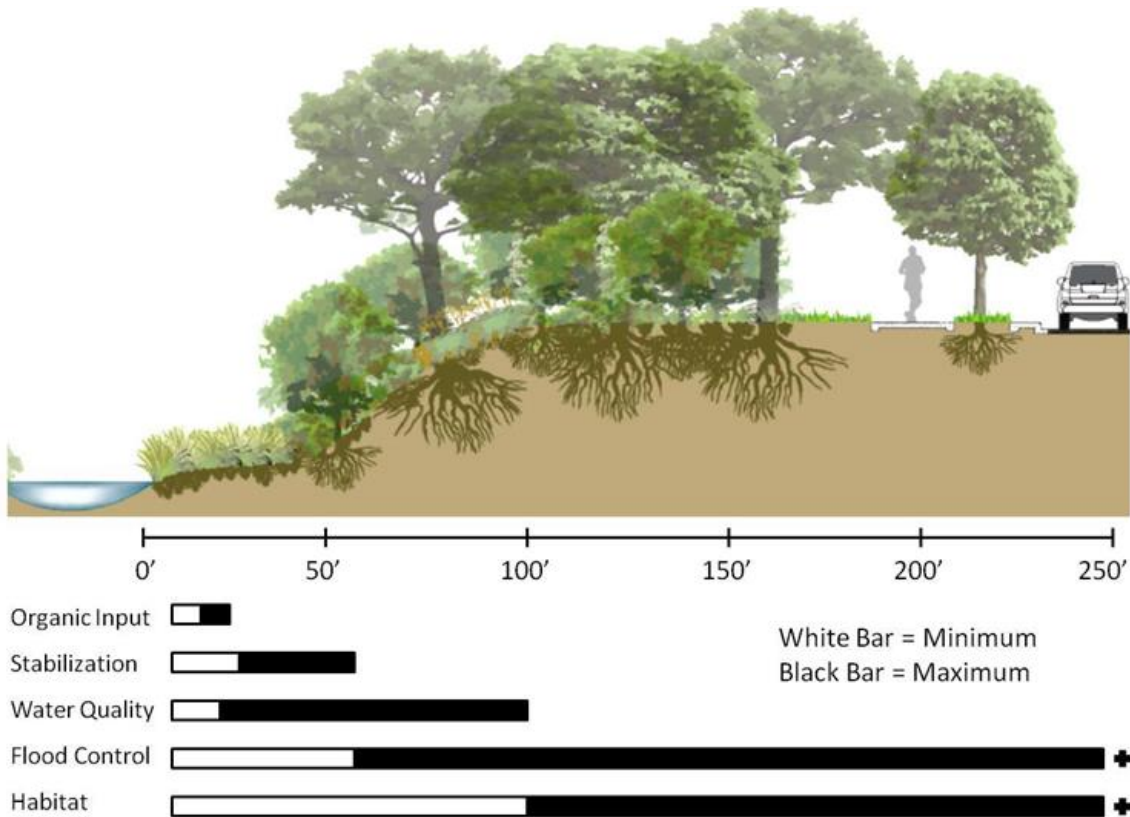


Compliance/Work Without Permits

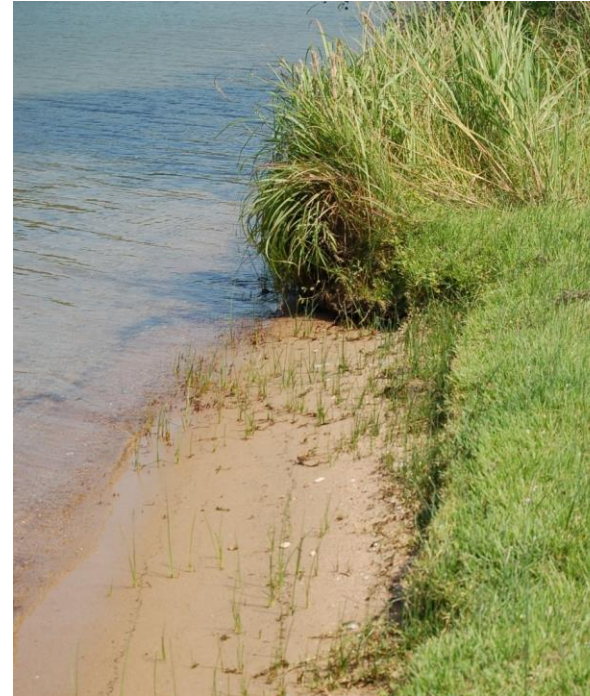


Wave Impacts

Riparian Zone Functions



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

Poor Functioning



Good Functioning

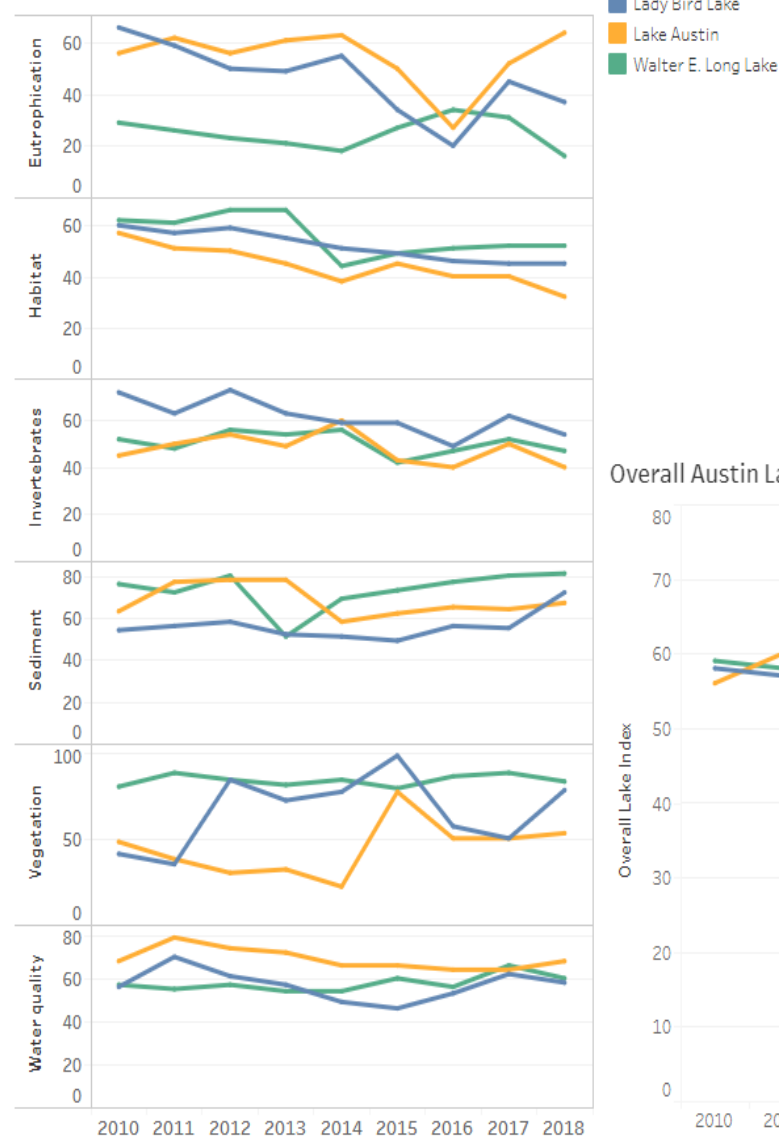


Costs of Degraded Water Quality

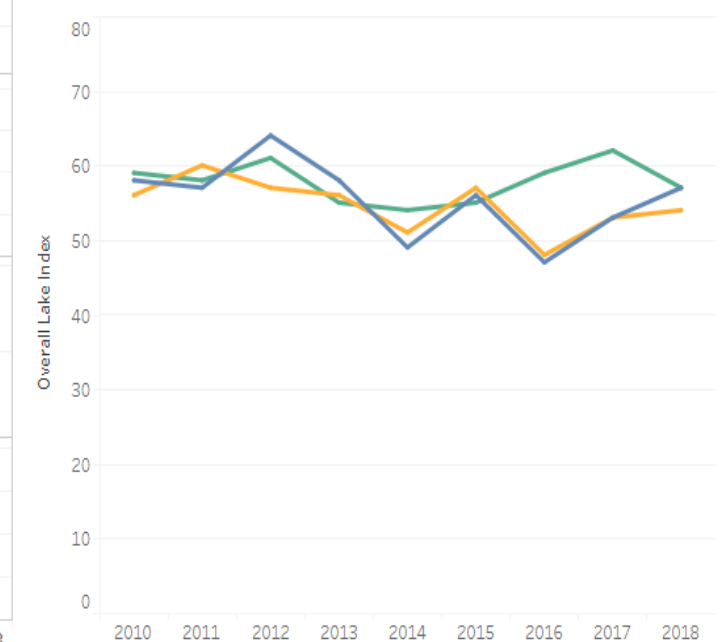
- Water treatment costs due to suspended sediment
- Algae proliferations
- Poor fishery
- Lowered Austin Lake Index scores in
 - Habitat
 - Invertebrates
 - Vegetation



Austin Lakes Index scores from 2010-2018



Overall Austin Lakes Index scores



Environmental Review

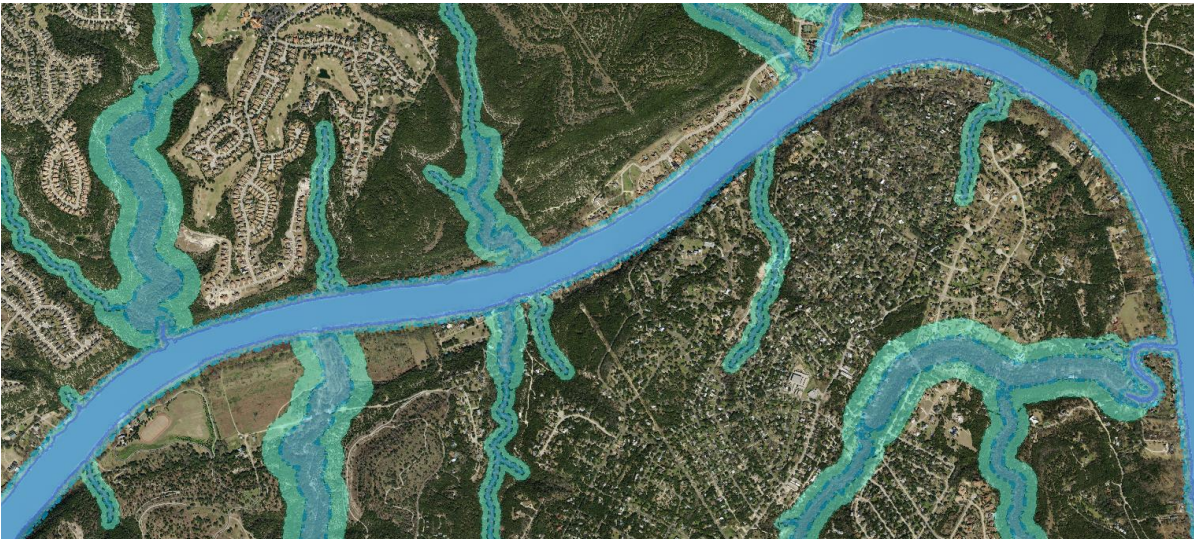
- Site plan & Subdivision compliance with LDC 25-8 Subchapter A
- Boat docks/shoreline modifications/shoreline access require site plans
- DSD environmental review staff
 - CWQZ compliance
 - Erosion controls
 - Restoration
 - Cut/Fill
- WPD environmental review staff
 - CEF setbacks
 - Bulkheads
 - Dredging
 - Land capture/fill in the lake
 - Floodplain modifications & restoration (riparian functioning)

§ 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

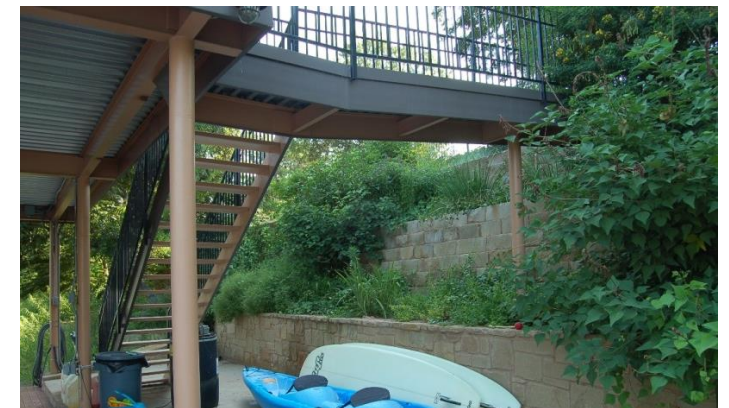
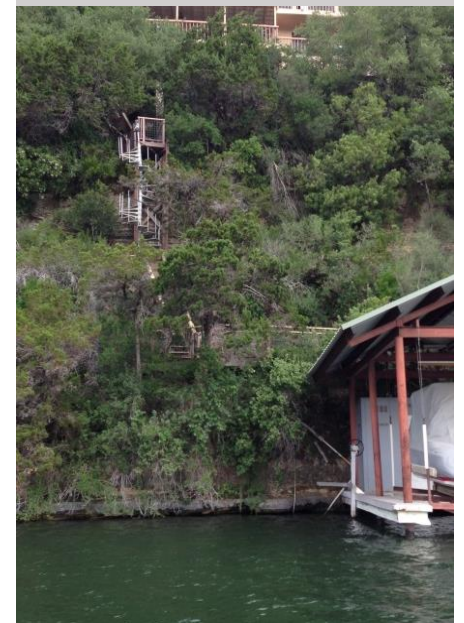
(1) A dock, bulkhead or marina, and necessary access and appurtenances, are permitted in a critical water quality zone subject to compliance with Chapter 25-2, Subchapter C, Article 12 (*Docks, Bulkheads, and Shoreline Access*)



Trams



Stairs



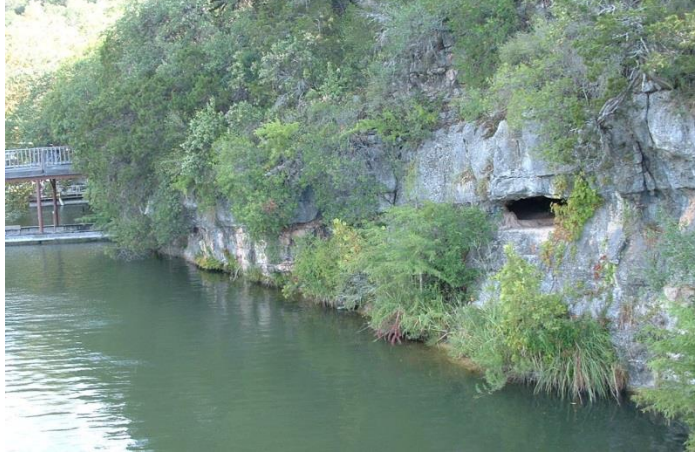
Gangways

§ 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
- BoA can review for broader impacts to the LA zoning district

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)

Questions?

