

**RECOMMENDATION FOR CODE AND CRITERIA CHANGES REGARDING
ACCESS TO SHORELINE (TRAMS) AND SHORELINE MODIFICATIONS
City Council December 9, 2010 Backup Material**

Description:

This Code amendment proposes to amend Chapter 25-2, Subchapter C, Article 13 for shoreline access (i.e. trams or incline elevators) and modify shoreline protection requirements to include the prevention of vertical bulkheads, promotion of stable and environmentally-functional shorelines that provide wave abatement, and provide additional guidance to protect the integrity, water quality and safety of Lake Austin, Lady Bird Lake, and Lake Walter E. Long as requested by the Parks Board, Environmental Board and Planning Commission. Amendments to Chapter 25-5-2 (Site Plan Exemption) will clarify related site plan exemptions for maintenance. Amendments to Chapter 25-8-92 will provide clarification that the inundated areas of the lakes are part of the Critical Water Quality Zone. A new section of the ECM has been developed to support the amended code. This new section will be vetted through the stakeholder process for the 1st quarter 2010/2011 rules posting.

Recent Action:

In response to Council direction on October 28, 2010 and following stakeholder input from a November 10, 2010 public meeting, the draft ordinance presented on October 28, 2010 has been modified to reflect the following provisions:

- **Provision 1). New regulations should not apply to “pre-existing non-complying bulkheads and docks” using “rules currently in place” for noncomplying structures.**
Action: A new subsection (D) has been inserted into Section 25-2-963 (*Modification and Maintenance of Noncomplying Structures*) which provides a provision to repair, reinforcement or maintain a noncomplying dock, bulkhead or shoreline access. This subsection uses analogous rules currently in place for other noncomplying structures but made it specifically applicable to bulkhead, dock, and shoreline access.
- **Provision 2). Site plan exemption should apply for repair and maintenance.**
Action: A new subsection (L)(5) has been inserted into Section 25-5-2 (*Site Plan Exemptions*) which includes language to exempt from site plan work authorized under noncomplying structure sections (see Provision 1 above).
- **Provision 3). Recapture section should allow owners to make repairs that extend into the water to protect vegetation and stabilize property.**
Action: A new subsection (D) has been inserted into Section 25-2-1174 (*Structural Requirements*) that allows recapture only if required to restore land to the subdivided lot line or to the shoreline as it existed 10 years before application, whichever is less. Guidance for determining and documenting the historical location of the shoreline will be provided in the Environmental Criteria Manual and vetted by stakeholders.

Background:

There has been an increase in permitting requests for incline elevators (trams) as a means of providing access to the lakeshore over cliffs or slopes. While traditional methods of access such as footpaths, stairs or sidewalks are addressed in the code, additional requirements are needed to regulate incline elevators and protect Critical Environmental Features.

Vertical bulkheads currently compose approximately one-half of the shoreline of Lake Austin and typically do not support the environmental, water quality and wave abating benefits that naturally sloped and vegetated shorelines provide. The First National Lakes Assessment by the EPA “shows that poor habitat condition along the shoreline is the most significant stressor in lakes” and that “local, state and national initiatives should center on protecting shoreline habitats.” Current code language prohibiting “smooth, vertical bulkheads” has led to problematic interpretations. Attempts in 2005 to provide clarification without code amendments has not resulted in a substantive change in the typical development practices. WPD Environmental Resource Management Division has provided a webpage summarizing the disadvantages of vertical bulkheads, benefits of sloped and vegetated shorelines, alternatives to vertical bulkheads, guidance resources and proposed draft code/criteria amendments. http://www.ci.austin.tx.us/watershed/bulkhead_shoreline.htm.

Summary of Proposed Changes to the LDC presented at October 28, 2010 Council:

LDC 25-2 Article 13 (Boat Docks)

- Change Article 13 title to “Docks, Bulkheads and Shoreline Access”
- Replace “Town Lake” with “Lady Bird Lake” to reflect current name.
- Prohibit new boat ramps
- Prohibit storage of toxic or hazardous materials over water (fuel, herbicides, insecticides, etc)
- Include definitions for bulkhead and shoreline access (trams)
- Require site plan and building permit for shoreline access (trams)
- Require a licensed third-party inspection for trams (to meet State regulations)
- Construction of shoreline access must minimize disturbance to vegetation, preserve canopy, replace herbaceous ground cover and be screened from view with vegetation
- Shoreline stabilization to minimize wave action and wave return, demonstrate design guidelines and materials as specified in ECM (forthcoming), no bulkhead or revetment slopes greater than 45 degrees (unless in narrow man-made channels)
- Prohibit capturing or recapturing of land

LDC 25-8-92 (CWQZ)

- Clearly establish that inundated areas are part of the CWQZ

LDC 25-2-1066 (Screening Requirements)

- Trams must be screened from the view of property that is in an urban residence (SF-5) or more restrictive zoning district by providing vegetation and tree canopy as prescribed by rule.

LDC 25-5-2 (Site Plan Exemptions) and 25-5-3 (Small Projects)

- Site plan is not required for maintenance if structure was legally constructed, no variance is required, no board or commission approval required, no change to footprint, and no addition or replacement of piles unless the structure is compliant with current code
- Shoreline access exceeding 50ft and 35% gradient is not considered a small project

Historical Initiatives/Stakeholder Input

- February 1, 2005: Development community meets with the LCRA Lake Austin Advisory Panel (LAAP) to express concerns about the delay in bulkhead approvals by the City
- March 8, 2005: PARD presents City process and goals for shoreline development to LAAP
- August 22 and September 8, 2005: LAAP observes wave action on various shorelines
- October 16 & 20, 2005: LAAP and stakeholders provide bulkhead design recommendations to PARD
- December 2, 2005: City Public Works Department presents PARD with proposed draft criteria and standard details requiring rip-rap, rock gabions or other revetment design to be installed for wave attenuation.

Recent Initiatives/Boards and Commissions:

- Winter 2009: During routine hydrilla management field efforts, ERM Staff observes degraded biological community and lakebed scouring common at shorelines with vertical bulkheads
- Feb 19, 2009: Parks Board resolution to recommend amending the LDC to require review and permitting of trams (incline elevators/shoreline access)
- March 2009: ERM Staff estimates vertical bulkheads compose 42% of Lake Austin shoreline, observes a lack of compliance with recommended methods provided in 2005 by Public Works, and initiates literature review regarding shoreline development methods
- May 20, 2009: ERM presents findings to the Environmental Board
- July 15, 2009: Environmental Board recommends to the Planning Commission to initiate staff development of code and criteria changes as necessary to clarify shoreline protection requirements
- Aug 25, 2009: Parks Board moved to support the Environmental Board resolution
- Oct 27, 2009: Planning Commission initiates staff development of code changes
- April/May 2010: ERM provides status presentations to Parks Board and Environmental Board
- June/July 2010: Environmental Board Subcommittee meetings for code amendments (with stakeholders)
- July 21, 2010: Environmental Board Motion to support draft code amendments
- Aug 24, 2010: Parks Board Motion to support draft code amendments
- September 17, 2010: Environmental Criteria Manual draft provided to stakeholders
- September 28, 2010: Planning Commission recommends draft code amendments
- October 28, 2010: City Council hearing
- November 10, 2010: Public information meeting
- November 18, 2010: City Council postpones hearing

Supporting Material:

The following supporting documents can be accessed at

http://www.ci.austin.tx.us/watershed/bulkhead_new.htm

- Draft Code Amendments - Legislative Copy
- Draft Code Amendments - Full text of affected sections with proposed changes shown
- Draft Environmental Criteria Manual section 1.13 (new)

The additional supporting resources and information can be accessed at:

http://www.ci.austin.tx.us/watershed/bulkhead_resources.htm

- 2005 Propose Criteria and Standard Details (Public Works)
- 2005 Stakeholder recommendations: Sam Crowther (LAAP) and John McIntyre
- Response to stakeholder questions from August 17, 2010 Codes and Ordinances in addition to previous board presentation and subcommittee meetings

Resource Links - The following list presents an abbreviated list of resources on shoreline stabilization provided by federal, regional, state and municipal entities. Included resources include a literature review, handbooks for landowners, alternative method recommendations and technical guidance. A more thorough list of resources can be provided upon request. The *Shoreline Stabilization Handbook* provides a thorough comparison of different methods and issues related to the topic.

Shoreline Stabilization Handbook for Lake Champlain & Other Inland Lakes

(Northwest Regional Planning Commission and NOAA)

<http://nsgd.gso.uri.edu/lcsg/lcsg04001.pdf>

First National Lakes Assessment Released

(EPA)

<http://www.epa.gov/owow/info/NewsNotes/pdf/89issue.pdf>

The Construction, Aesthetics, and Effects of Lakeshore Development: A Literature Review

(Wisconsin Department of Natural Resources)

http://dnr.wi.gov/org/es/science/publications/PUBL_SS_577_99.pdf

Green Shorelines Report

(City of Seattle)

http://www.cityofseattle.net/dpd/static/Green_Shorelines_Final_LatestReleased_DPDS015777.pdf

Shore Erosion Control, the Natural Approach

(NRCS, NOAA, Maryland DNR)

ftp://ftp-fc.sc.egov.usda.gov/MD/web_documents/programs/rcd/shore_esrcd.pdf

Streambank and Shoreline Stabilization Guidance

(Georgia DNR)

http://www.gaepd.org/Files_PDF/techguide/wpb/Streambank_and_Shoreline_Stabilization_Guidance.pdf

Understanding, Living With, and Controlling Shoreline Erosion: A Guidebook for Shoreline Property Owners

(Tip of the Mitt Watershed Council)

<http://www.watershedcouncil.org/resources%20and%20publications/files/Shoreline%20Erosion%203rd%20Edition.pdf>

Erosion Control: Non-Structural Alternatives. A Shorefront Property Owner's Guide

(North Carolina Coastal Federation)

www.nccoast.org/newsroom/images-pdfs/guides/ErosionBro.pdf

Engineering Field Handbook: Chapter 16 – Streambank and Shoreline Protection

(USDA Natural Resource Conservation Service)

<ftp://ftp-nhq.sc.egov.usda.gov/NHQ/pub/outgoing/jbernard/CED-Directives/efh/EFH-Ch16.pdf>

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