

ORDINANCE AMENDMENT REVIEW SHEET

Amendment: C20-2022-005a, Land Development Code Amendments

Description: Consider an ordinance regarding amendments to Title 25 related to environmental protection and landscape requirements.

Proposed Language: Draft language is included as Attachment A.

Summary of proposed code changes: A summary of the proposed code changes is included as Attachment B.

Background: This ordinance responds to Council Resolution No. 20220609-061, which initiated Land Development Code amendments related to environmental, drainage, and landscape requirements. The resolution directed staff to present most of the initiated amendments to Council for consideration by September 15, 2022. The initiated code amendments and a summary of the staff proposal is provided below:

1. Establish criteria that prioritize when green stormwater methods should be required or incentivized over conventional stormwater controls;

The proposed code amendments would require most sites to use green stormwater infrastructure, or GSI, to meet water quality treatment requirements. This amendment was previously proposed and reviewed as part of the Land Development Code (LDC) Revision.

Under current code, many sites meet water quality treatment requirements by building a sedimentation/filtration pond. Sedimentation/filtration devices provide some water quality benefits by filtering polluted runoff and helping control stream-channel erosion, but they do not significantly address other important ancillary goals such as supporting on-site vegetation, increasing rainwater infiltration, and reducing potable water consumption. Requiring most sites to use GSI instead of conventional grey stormwater infrastructure will provide myriad benefits, including stormwater infiltration, soil health, wildlife habitat, urban heat island mitigation, water conservation, aesthetic value, and other ecosystem services. GSI also provides enhanced water quality benefits compared to sedimentation/filtration devices, including better removal of nutrients from stormwater and further reductions in erosive flows.

The proposed code amendments would allow developments to choose from a variety of green stormwater controls, including biofiltration ponds, rain gardens, rainwater harvesting systems, porous pavement, and retention-irrigation systems (which can be built in conjunction with green roofs). All of these systems beneficially use rainwater to infiltrate and/or offset potable water. Staff also proposes to increase the beneficial use benefits of these controls over time through improvements to the design criteria in the Environmental Criteria Manual.

The proposed code amendments provide some exceptions from the GSI requirement, allowing conventional controls to be used for sites with more than 90 percent impervious cover, regional ponds, difficult site conditions, and “hot-spot” land uses with highly contaminated runoff (e.g., auto repair facilities).

In addition to the requirement that most sites to provide water quality treatment using GSI, the ordinance includes several additional provisions that encourage or enable the use of green stormwater controls. First, rain gardens and biofiltration ponds can be integrated into landscaped areas to simultaneously meet water quality and Functional Green landscaping requirements. Second, the ordinance includes a new administrative variance to allow voluntary green stormwater infrastructure retrofits within the inner half of the critical water quality zone. Third, the ordinance exempts rainwater harvesting tanks from impervious cover calculations to promote greater use.

2. Require surface parking lot stormwater to enter pervious parking lot islands, landscaped medians, and perimeter landscapes as a method of water quality and require that pavement be graded to allow runoff to enter planting areas;

The proposed amendments would allow stormwater to enter parking lot landscape areas by removing an existing requirement that all parking lot landscape areas be protected by a 6-inch curb and requiring applicants to drain stormwater to landscape areas where possible. Staff do not recommend requiring that all parking lot landscape areas serve as water quality controls that comply with water quality treatment requirements. However, these amendments would increase the infiltration and beneficial use of stormwater and provide an incentive for sites to integrate rain gardens into landscaped areas. Staff is also proposing that the amendments replace an existing requirement to irrigate 50 percent of a site’s required landscape area with stormwater, which has proven difficult to implement and can be cumbersome to demonstrate compliance with on landscape plans.

3. Implement Functional Green requirements for properties with more than 80% allowable impervious cover;

The proposed amendments implement the Functional Green Landscape requirements previously proposed in the LDC Revision, with minor formatting edits to improve clarity and fit the requirements into the appropriate location within Title 25. Functional Green Landscape is based on the ecosystem service value created by landscape areas. It is intended to improve ecological balance, replenish native vegetation, and enhance public health, safety, and welfare for development projects that are more urban in context rather than the suburban or greenfield development projects to which the existing landscape code is more applicable.

Functional Green Landscape requirements would apply to sites with total allowable impervious cover greater than 80 percent gross site area, including downtown properties zoned Central Business District (CBD) and Downtown Mixed-Use (DMU). Sites would be required to provide landscaping elements that achieve a Functional Green Score of at least 0.3. The Functional Green Score measures the total amount of ecosystem services provided by the landscape

elements proposed on a site. The scoring is based on the assigned value per square foot of each landscape element in relation to the area of the site.

4. Require that all subdivisions and site plans in Urban Watersheds meet steep slope protections;

The Council resolution directed staff to engage stakeholders about this proposed amendment and to return to Council for consideration in November. Therefore, no code amendments are proposed at this time and will instead be proposed at a later date.

5. Allow cisterns to be sized beyond the required storm capture amount and remove requirement for stormwater release so that they can supply irrigation needs throughout the year;

The Land Development Code and Environmental Criteria Manual currently allow cisterns to be sized beyond the required storm capture amount, and there is no requirement that the additional volume be released in 48 to 72 hours. The additional volume can therefore supply irrigation needs throughout the year.

Since code currently allows for rainwater harvesting systems that provide redundant functions, staff does not recommend code amendments at this time. However, the recommended next step is to move towards allowing systems that can use one volume to take credit for providing dual functions (potable water offset and stormwater quality treatment). To this end, Austin Water and the Watershed Protection Department will work together to update the Environmental Criteria Manual to provide technical guidance on the design of rainwater harvesting systems that can provide potable water offset and receive a credit towards the stormwater quality volume. This change will be enacted by December 2023, when the rainwater harvesting mandate for large developments will go into effect.

6. Require new and redeveloped projects to use greenfield conditions as a baseline when calculating drainage requirements;

The Council resolution directed staff to engage stakeholders about this proposed amendment and to return to Council for consideration in November. Therefore, no code amendments are proposed at this time and will instead be proposed at a later date.

7. Prohibit in-channel detention ponds, except for capital projects or private/public partnerships where no other alternative is feasible;

Under current code, in-channel detention basins and in-channel wet ponds are only allowed in the critical water quality zone if they do not create additional erosion or sedimentation downstream. A development must perform complex modeling to prove that it meets this standard, so in-channel detention ponds and in-channel wet ponds are relatively rare. However, the in-channel ponds that have been built have had significant negative impacts on the creek and riparian habitat. The proposed amendment prohibits in-channel detention ponds and in-channel wet ponds unless they are proposed as part of a public capital improvement project or

public-private partnership and no alternative location outside of the channel is feasible. This preserves the ability for Watershed Protection Department to achieve its regional flood reduction goals by allowing in-channel detention ponds when no alternative is feasible.

8. Require projects to relocate replaced or upsized wastewater pipes outside of the inner half of the critical water quality zone;

The proposed code amendments clarify that the requirements for utility lines also apply to major replacements of existing utility lines. New lines and major replacements that cross into or through the critical water quality zone must follow the most direct path to minimize disturbance, unless the line will be installed by boring or tunneling. New utility lines and major replacements that run parallel to a creek must be located in the outer half of the critical water quality zone. This code change is a clarification of existing policy; however, further conversations will be necessary to ensure that there is interdepartmental clarity between the Watershed Protection Department and Austin Water so that the determination of what constitutes a major replacement is clear.

9. Provide wetland protections and buffers equally along Lady Bird Lake to help to stabilize and prevent erosion along the shoreline;

Under current code, wetlands associated with the shores of Lake Bird Lake are not protected in the downtown area, between Lamar Boulevard and I-35. The proposed amendments remove this exception and ensure that all wetlands along the shores of Lady Bird Lake are protected. (The proposed amendments retain the existing exemption for any wetlands located along creeks within the downtown area, which are also exempt from critical water quality zone requirements.)

10. Require utility easements to meet the same standards as utility pipes within the creeks and creek buffers; and

The proposed code amendments clarify that the requirements for utility lines also apply to utility easements. Utility easements that cross into or through the critical water quality zone must follow the most direct path to minimize disturbance, unless the utility line will be installed by boring or tunneling. Utility easements that run parallel to a creek must be located in the outer half of the critical water quality zone.

11. Address current environmental code inconsistencies and other minor code revisions in Chapters 25-7 and 25-8 that staff have previously identified and reviewed as part of the Code Next and the Land Development Code revision processes.

Staff are proposing a variety of minor code amendments that were previously included in the LDC Revision. A summary of all the proposed code amendments is included in Attachment B.

In addition to initiating the above code amendments, Council Resolution No. 20220609-061 provided the following direction:

The initiated ordinances will ensure that, for the same environmental impact as a single-family home, the City does not disincentivize small-scale missing middle housing projects.

Under the current code, most of the existing water quality regulations in Chapter 25-8, Subchapter A are written such that they apply to all types of development, whether that be a single-family house, a downtown tower, or a 500-acre residential subdivision. However, in practice there has long been a significant difference in review process between residential building permits and site plans or subdivisions. This has created two problems for small-scale residential development. First, one- to two-unit residential projects are not reviewed for all environmental/water quality regulations, which leads to confusion about code applicability, inconsistent enforcement, and occasionally poor environmental outcomes. Second, the development cost, submittal requirements, and review time needed to comply with all the existing regulations are a deterrent for small-scale missing middle housing. While new residential subdivisions are reviewed for environmental requirements, and therefore single-family residential building permits should in theory not need any additional environmental review, there is significant gray area for previously platted single-family homes that fall under previous regulations. Additionally, some environmental regulations are enforced with single-family residential permits in the field, including erosion and sedimentation controls.

To address these issues and respond to Council’s direction to not disincentivize small-scale missing middle housing, this ordinance establishes a set of scaled and streamlined water quality requirements that apply to all one- to two-unit residential development and some small-scale missing middle development. To qualify for the modified regulations, the missing middle development must meet the following requirements:

- It can only include a maximum of 11 units. If the project is participating in the Affordability Unlocked program, the unit cap is raised to 12 or 16 units for Type 1 or Type 2 projects, respectively.
- It must be located on a platted residential lot (i.e., a lot that was originally part of a single-family residential subdivision). This requirement does not supersede any zoning requirements and does not change the number of units that can be constructed on a lot; see the explanation below for additional information.
- It must comply with the lot’s zoning impervious cover limit, but may not exceed 55 percent impervious cover.
- It is not subject to Article 13, Save Our Springs Initiative.

The unit cap and impervious cover limit ensure that the missing middle development that is eligible for the streamlined regulations resembles one- to two-unit projects in scale. Limiting the eligibility to projects on residentially platted lots is important because applicable water quality requirements would have been applied at the time of subdivision. It establishes regulatory parity between the missing middle development and the one- to two-unit residential development that would otherwise be located on the lot. Establishing a uniform set of regulations that apply to both single-family and small-scale missing middle development ensures that projects of very similar scale, with the same potential for environmental and

drainage impacts, are subject to the same requirements. This level playing field helps eliminate an incentive to build one or two large units on a residentially platted lot instead of several smaller units.

One- and two-unit residential development and three- to 11-unit residential development (or 12–16-unit Affordability Unlocked projects) that meets the above conditions will be required to comply with the following water quality regulations in Chapter 25-8, Subchapter A:

- Critical Water Quality Zone and floodplain modification requirements, for legal tracts or lots platted on or after May 18, 1986 and for development associated with boat docks, shoreline access, or shoreline modifications;
- Erosion and sedimentation control and overland flow standards;
- Cut and fill standards (applicable to properties outside of Urban watersheds);
- Requirements for clearing of vegetation, temporary storage, and topsoil protection;
- Requirements for development along Lake Austin, Lady Bird Lake, and Lake Water E. Long;
- Save Our Springs (SOS) requirements, as applicable (SOS applies in the Barton Springs Zone but includes some existing exemptions for one- and two-unit development); and
- Applicable municipal regulatory restrictions on a recorded plat or covenant.

The proposed amendments only modify the applicability of requirements in Chapter 25-8, Subchapter A, Water Quality. All other requirements that currently apply to one- and two-unit development or three- to 11-unit development would continue to apply, including drainage requirements in Chapter 25-7 and tree protection standards in Chapter 25-8, Subchapter B. However, the proposed amendments would allow qualifying three- to 11-unit development to go through a more streamlined review process as a “small project” site plan. The small project site plan designation allows the Development Services Department to waive submittal requirements, does not require notice to be sent to neighboring properties, and has lower fees and a faster review time than a standard site plan. Additionally, the “small project” site plan already exists as a process and therefore review disciplines can already be included in the review as needed without inventing a new process that does not have an existing application or established review fees.

The proposed code amendments are similar to the residential development regulations included in the LDC Revision. The maximum number of units (11, or 12/16 for Affordability Unlocked projects) is the same, but the maximum impervious cover is slightly lower (55 percent instead of 60 percent). The most significant difference is that this ordinance does not modify any drainage regulations for three to 11-unit development.

The City Council directs the City Manager to evaluate the effectiveness of existing Critical Water Quality Zone and Erosion Hazard Zone buffers on the Colorado River downstream of the Longhorn Dam and to propose protections that will provide adequate protections to the

river that will ensure a healthy riparian corridor to stabilize the riverbank and protect property from erosion.

Under current code, the critical water quality zone (CWQZ) for the Colorado River is 200 to 400 feet wide, depending on the width of the 100-year floodplain. Erosion hazard zone analysis is required for any development within 100 feet of the Ordinary High Water Mark (OHWM) of the river. However, the banks of the Colorado River downstream of Longhorn Dam are very sandy and erosive. The critical water quality zone and erosion hazard zone analysis buffer are therefore not sufficiently protective to stabilize the riverbank and protect property from erosion.

Staff proposes to expand the CWQZ to a consistent width of 400 feet from the OHWM of the Colorado River downstream of Longhorn Dam. Staff also proposes to expand the erosion hazard zone analysis buffer to 400 feet from the OHWM. This means that if any development is proposed within the CWQZ, the applicant will also need to analyze the erosive potential of the banks and either relocate the proposed development or provide protective works if needed to ensure that it is protected from erosion. Additionally, staff proposes to limit the amount of stormwater discharge points directly to the Colorado River by requiring applicants to locate drainage outfalls upstream of the main stem of the Colorado River whenever possible.

Next Steps

If Council adopts the proposed code amendments, staff will make any necessary updates to the supporting technical criteria in the Environmental Criteria Manual. The only criteria changes that must go into effect immediately are the criteria for Functional Green, which are proposed to be adopted as an emergency rule concurrently with the code amendments. Most of the other criteria changes will either repeat or provide additional detail about how to apply the adopted code amendments. However, as mentioned above, staff plans to undertake a more comprehensive update of the criteria for green stormwater controls currently located in section 1.6.7 of the Environmental Criteria Manual. Examples of potential updates including requiring a saturated zone for biofiltration ponds and filtration-only rain gardens, which would increase stormwater infiltration, and modifying the planting requirements to increase plant survival and reduce maintenance costs. As mentioned above, the Watershed Protection Department (WPD) and Austin Water will also work together to develop criteria to allow a dual-function rainwater harvesting system that can provide potable water offset and receive a credit towards the water quality treatment volume.

In addition to criteria updates, WPD staff will work with partner departments on policy guidance for some of the code amendments. For example, WPD will work with Austin Water to formalize a shared understanding of what constitutes a “major replacement” of a water or wastewater line, and under what conditions WPD staff could support a variance to allow a new or major replacement of a water or wastewater line in the inner half of the critical water quality zone.

Staff have also identified the need for additional clean up edits to the Landscape requirements, which are located in LDC Chapter 25-2 - Zoning. The recommendation from Law Department staff is that ultimately all Landscape requirements should be moved from Zoning into a new subchapter located in Chapter 25-8 - Environment. Staff propose that the new Functional Green requirements be located in this new subchapter and request direction from Council to return with a future code amendment to consolidate the remainder of the landscape code into the new subchapter.

Finally, staff will also be returning to Council with the additional items requested in Resolution No. 20220609-061. First, staff is preparing a memo to Mayor and Council regarding a proposed approach for the water quality monitoring and coordination on the repair of leaking wastewater pipes. This memo is scheduled to be released by September 15, as directed in the resolution. Second, staff is currently working on two additional code amendments initiated by the resolution – relating to drainage requirements for redevelopment and steep slope protections in Urban watersheds – which will return to Council at a later date. Finally, WPD is currently in the process of creating *Rain to River*, our department’s new strategic plan. Staff will prepare a memo to Mayor and Council in November with information about the planning process and how *Rain to River* will address the equitable protection of the environmental throughout Austin.

Staff Recommendation: Staff recommends approval of the proposed code amendments. Staff also recommends that either Planning Commission or City Council initiate code amendments that would allow staff to bring forth an ordinance to remove existing landscape requirements from Chapter 25-2 - Zoning and consolidate those requirements in a new Subchapter C in Chapter 25-8 - Environment along with the new Functional Green requirements. Additionally, Tier 2 Planned Unit Development superiority elements that are outlined in Title 25 Chapter 2 - Zoning should be updated in the near future to reflect updated GSI requirements and current best practices related to innovative design, climate resiliency, environmental justice, and other potential superiority elements that provide a more wholistic view of environmental superiority.

Board and Commission Actions:

August 17, 2022: The Codes and Ordinances Joint Committee discussed the proposed ordinance and took no action.

September 7, 2022: Scheduled to go before the Environmental Commission.

September 13, 2022: Scheduled to go before the Planning Commission.

Council Action:

June 9, 2022: City Council approved Resolution No. 20220609-061, initiating amendments to Title 25 related to environmental, drainage, and landscape requirements.

Ordinance Number: N/A

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Attachments:

- A Draft of Proposed Code Amendments
- B Summary of Proposed Code Amendments
- C *Affordability Impact Statement – in progress as of 9/1/22*
- D Fiscal Impact Analysis
- E Watershed Protection Department Equity Review, Summary, and Recommendations

CHAPTER 25-2. ZONING.

ARTICLE 9. LANDSCAPING

§ 25-2-981 - APPLICABILITY; EXCEPTIONS.

- (A) Except as provided in Subsection (B), this article applies in the city's zoning jurisdiction.
- (B) Division 2 (*Requirements for a Site Plan*) and Division 3 (*Additional Site Plan Requirements in Hill Country Roadway Corridors*) do not apply to:
- (1) property zoned central business district or downtown mixed use district, **except** for **(Functional Green)**;
 - (2) a lot containing one single-family residence;
 - (3) a lot containing one duplex residence, unless the residence exceeds 4,000 square feet of gross floor area or has more than six bedrooms;
 - (4) a two-family residential use;
 - (5) a secondary apartment special use;
 - (6) substantial restoration of a building within one year after the building is damaged;
 - (7) restoration of a building designated as a historic landmark; or
 - (8) interior or facade remodeling, if the front and side exterior walls of the building remain in the same location.
- (C) Developed property, or property with an approved site plan, that is affected by right-of-way condemnation may be developed without compliance with this article, as provided by this subsection.
- (1) After condemnation, improvements shown on the remainder of an approved site plan may be constructed, and only the landscaping on the remainder of the approved site plan is required.
 - (2) Improvements on developed properties that are lost through condemnation may be replaced. Only the area within the limits of construction for the replaced improvements must comply with this article, except an owner is not required to provide more landscaping than was in existence before the condemnation.

Division 2. Requirements for a Site Plan.

§ 25-2-1007 PARKING LOTS.

- (A) For each 12 parking spaces in a parking lot that is in a landscape yard, a minimum of 90 square feet of landscaped area are required within the parking lot.
- (B) For each 12 parking spaces in a parking lot that is not in a landscape yard, a minimum of 60 square feet of landscaped area are required within the parking lot.
- (C) A parking lot must have end islands landscaped with trees in accordance with the Environmental Criteria Manual.
- (D) Except as provided in Subsection (E), a parking space may not be located more than 50 feet from a landscaped area, or more than 50 feet from a tree.
- (E) In a parking lot that has more than three distinct modules for the parking of vehicles:
- (1) a landscaped median at least 10 feet wide and at least the length of the parking module is required for every second parking module for the parking of vehicles;
 - (2) a tree must be located within 25 feet of each parking space adjacent to a median; and
 - (3) end islands with trees are required.
- (F) A landscaped area that is required by this section:
- (1) may consist of non-contiguous portions, and may be in the form of features commonly referred to as medians, peninsulas, and islands;
 - (2) must be evenly distributed throughout a parking lot, except that the distribution and location of landscaped area may accommodate existing trees or other natural features if the total area requirement is satisfied; **and**
 - (3) may count toward compliance with Section 25-2-1003(A) (*General Requirements*); **and**

- (4) must have an edge-of-pavement treatment that allows overland flow of stormwater runoff across the landscape area except:
- (a) for perimeter landscape areas that are not required to drain to a required stormwater control measure; and
- (b) for sites located within the Edwards Aquifer Recharge Zone.

§ 25-2-1008 IRRIGATION REQUIREMENTS.

- ~~(A) An area equal to at least 50% of the total required landscaped area on a project must:~~
 - ~~(1) be undisturbed natural area(s) or undisturbed existing trees with no potable irrigation; or~~
 - ~~(2) be irrigated by stormwater runoff conveyed from impervious surfaces on the site using one or more of the following methods:~~
 - ~~(a) overland flow;~~
 - ~~(b) storm drains;~~
 - ~~(c) downspouts;~~
 - ~~(d) rainwater harvesting;~~
 - ~~(e) retention irrigation; or~~
 - ~~(f) other methods of conveyance as prescribed by rule.~~
- ~~(B) The drainage area used to irrigate under Subsection (A) must be calculated to provide sufficient water for the landscaped area, as prescribed by rule.~~
- ~~(C) Unless the landscaped area under Subsection (A) is being designed as a water quality control under Section 25-8-211, the drainage area used to irrigate the landscaped area that is the source of the overland flow:~~
 - ~~(1) may not include impervious areas on which the land use or activities may generate highly contaminated runoff, as prescribed by rule; and~~
 - ~~(2) may not include impervious areas used for parking or driving of vehicles if located within the Edwards Aquifer Recharge Zone as defined in Section 25-8-2.~~
- (AD) No permanent irrigation is required for all or a portion of a required landscaped area that consists of:
 - (1) undisturbed natural area; or
 - (2) undisturbed existing trees;
- (BE) ~~In addition to irrigation meeting the requirements of Subsection (A),~~ supplemental irrigation using irrigation methods described in Subsection ~~(CF)~~ is required:
 - (1) for the first two growing seasons for all or a portion of a newly planted required landscaped area without permanent irrigation;
 - (2) permanently for all newly planted trees in a required landscape area; and
 - (3) as prescribed by rule for all newly planted required landscaping located in medians, islands, or peninsulas.
- (CF) Irrigation required under subsection (BE) may be provided only by one or more of the methods described below:
 - (1) an automatic irrigation system;
 - (2) a hose attachment, if:
 - (a) the hose attachment is within 100 feet of the landscaped area or plant; and
 - (b) there is not a road or parking pavement between the hose attachment and the landscaped area or plant; or
 - (3) a temporary, above ground automatic irrigation system, if the system complies with the water conservation requirements in the Environmental Criteria Manual.
- (DG) An irrigation method must:
 - (1) provide a moisture level adequate to sustain growth of the plant materials on a permanent basis;
 - (2) unless fiscal security is provided to the City for the installation of the system, be operational at the time of the final landscape inspection; and
 - (3) be maintained and kept operational.
- (EH) A site plan must show:
 - (1) the drainage area(s) used to irrigate under Subsection (A), including notation of the land uses on impervious areas within the drainage area(s);
 - (2) the nature and location of an irrigation system; and

- (3) that there is no disturbance to the critical root zone of an existing tree.
- (F)** The director may grant an administrative variance to the requirements in this Section. An applicant for a variance must demonstrate that:
- (1) strict compliance with this Section is infeasible due to unique site conditions including but not limited to topography, size, shape, and location of existing features such as trees or previous development; and
 - (2) the proposed irrigation plan is the minimal departure from the requirements of this Section.

Functional Green.

(A) Applicability.

(1) This division/article applies

- (a) In an Urban watershed, for a site with an impervious cover limit greater than 80% as allowed in Chapter 25-2 (Zoning); and**
- (b) In a watershed other than Urban, for a site with total allowable impervious cover greater than 80% gross site area as per Chapter 25-8 (Environment).**

(B) The Functional Green score shall be calculated as follows:

- (1) Identify all proposed landscape elements, sorted into the categories presented in Table A.**
- (2) Multiply the square feet, or equivalent square footage where applicable, of each landscape element by the multiplier provided in Table A, according to the following provisions:**
 - (a) If multiple elements listed on Table A occupy the same area (for example, groundcover under a tree), count the full square footage or equivalent square footage of each element.**
 - (b) Landscaping elements in the right-of-way between the lot line and the roadway may be counted.**
 - (c) Elements listed in Table A that are provided to satisfy any other requirements of another City of Austin regulation or rule may be counted.**
 - (d) Ensure that Functional Green landscapes provide a variety of ecosystem services by providing a minimum of 3 different Functional Green Landscape Elements, 2 of which must be living elements; trees and shrubs/ornamental grasses of different sizes may count independently as different elements.**
- 3. Add together all the products calculated under Table A to determine the Functional Green numerator.**
- 4. Divide the Functional Green numerator by the lot area (excluding the ROW area) to determine the Functional Green score.**

TABLE No. TBD

	<u>Landscape element</u>	<u>Multiplier</u>
	<u>PLANTED AREA</u>	
<u>A</u>	<u>Existing tree</u>	<u>0.8</u>
<u>B.1</u>	<u>Large, newly planted tree (mature width 40' or greater)</u>	<u>0.6</u>
<u>B.2</u>	<u>Medium, newly planted tree (mature width 20-39')</u>	<u>0.5</u>
<u>B.3</u>	<u>Small, newly planted tree (mature width 10- 19')</u>	<u>0.4</u>
<u>C.1</u>	<u>Large shrubs, ornamental grasses, or perennial forbs</u>	<u>0.3</u>
<u>C.2</u>	<u>Small shrubs, ornamental grasses, or perennial forbs</u>	<u>0.3</u>
<u>D</u>	<u>Groundcover</u>	<u>0.2</u>

<u>E</u>	<u>Turf</u>	<u>0.1</u>
<u>F</u>	<u>Vegetated wall</u>	<u>0.5</u>
	<u>SPECIALIZED MEDIA</u>	
<u>G</u>	<u>Intensive vegetated (green) roof media (depth 12 inches or greater)</u>	<u>0.6</u>
<u>H.1</u>	<u>Extensive vegetated (green) roof media (depth 6-11.9 inches)</u>	<u>0.5</u>
<u>H.2</u>	<u>Rain garden Media</u>	<u>0.3</u>
	<u>ADDITIONAL ELEMENTS</u>	
<u>I</u>	<u>Irrigation with alternative water source</u>	<u>0.2</u>
<u>J</u>	<u>Porous pavement</u>	<u>0.2</u>
<u>K</u>	<u>Suspended pavement system</u>	<u>0.2</u>
	<u>BONUS OPTIONS</u>	
<u>L</u>	<u>Bonus: Pollinator resources</u>	<u>0.1</u>
<u>M</u>	<u>Bonus: Publicly Accessible Green</u>	<u>0.1</u>

(C) Requirements.

A Functional Green Landscape plan is required to:

1. **Meet or exceed the minimum Functional Green Score of 0.3.**
2. **Except for property zoned central business district or downtown mixed use district, comply with landscape requirements for a site plan, per Chapter 25-2, Subchapter C, Article 9 and the Environmental Criteria Manual.**
3. **Provide 100 percent of plant selections, as prescribed by the Environmental Criteria Manual**
4. **Provide 100 percent drought tolerant plants, as prescribed by the Environmental Criteria Manual.**
5. **Add the following note to the landscape plan: "This landscape plan uses the Functional Green scoring system. A site plan revision is required to modify the landscape plan."**

ARTICLE 13. - DOCKS, BULKHEADS, AND SHORELINE ACCESS.

§ 25-2-1179 ENVIRONMENTAL PROTECTION.

- (A) In addition to other applicable requirements of this title, a dock, bulkhead, or shoreline access must be designed, constructed, and maintained in accordance with the applicable requirements of this subsection.
- ~~(B) A retaining wall, bulkhead, or other erosion protection device must be designed and constructed to minimize wave return and wave action in accordance with the Environmental Criteria Manual.~~
- ~~(B)~~ (C) A marine fuel facility or service station must comply with the requirements of Chapter 6-2 (*Hazardous Materials*) and shall be designed, maintained, and operated in a manner that prevents the spilling or leaking of fuel or petroleum products into the water.
- ~~(C)~~ (D) The maintenance and repair of watercraft shall be performed in a manner that prevents discharge of fuel, oil, or other pollutants into the water.
- ~~(D)~~ (E) Containers of hazardous materials, fuel, oil, herbicides, insecticides, fertilizers or other pollutants may not be stored on docks extending into or above Lake Austin, Lady Bird Lake, or Lake Walter E. Long.
- ~~(E)~~ (F) Construction of shoreline access structures must minimize disturbance to woody and herbaceous vegetation, preserve the tree canopy, and replace herbaceous ground cover to the extent practicable.

- (FG)** A marina or marine fuel service facility or service station must provide adequate fire protection approved by the Fire Chief of the Austin Fire Department in accordance with the Fire Code and National Fire Protection Association standards for marinas and boatyards.

CHAPTER 25-5. SITE PLANS

§ 25-5-3 SMALL PROJECTS.

- (A) The director shall determine whether a project is a small project described in this section.
- (B) The following are small projects:
- (1) construction of a building or parking area if the proposed construction:
 - (a) does not require a variance from a water quality regulation;
 - (b) does not exceed 5,000 square feet of impervious cover; and
 - (c) the construction site does not exceed 10,000 square feet, including the following areas:
 - (i) construction;
 - (ii) clearing;
 - (iii) grading;
 - (iv) construction equipment access;
 - (v) driveway reconstruction;
 - (vi) temporary installations, including portable buildings, construction trailers, storage areas for building materials, spoil disposal areas, erosion and sedimentation controls, and construction entrances;
 - (vii) landscaping; and
 - (viii) other areas that the director determines are part of the construction site;
 - (2) construction of a storm sewer not more than 30 inches in diameter that is entirely in a public right-of-way or an easement;
 - (3) construction of a utility line not more than eight inches in diameter that is entirely in a public right-of-way;
 - (4) construction of a left turn lane on a divided arterial street;
 - (5) construction of street intersection improvements;
 - (6) widening a public street to provide a deceleration lane if additional right-of-way is not required;
 - (7) depositing less than two feet of earth fill, if the site is not in a 100 year floodplain and the fill is not to be deposited within the dripline of a protected tree;
 - (8) construction of a boat dock as an accessory use to a single-family residential use, duplex residential use, two-family residential use, or secondary apartment special use if shoreline modification or dredging of not more than 25 cubic yards is not required; or
 - (9) construction of a retaining wall, if the wall is less than 100 feet in length and less than eight feet in height, and the back fill does not reclaim a substantial amount of land except land that has eroded because of the failure of an existing retaining wall;
 - (10) minor development that the director determines is similar to that described in Subsections (B)(1) through (9) of this section;
 - (11) the replacement of development that is removed as a result of right-of-way condemnation; ~~and~~
 - (12) the construction of a telecommunications tower described in Subsection 25-2-839(F) or (G) (Telecommunication Towers); ~~and-~~
 - (13) construction of a multi-family residential project of up to 11 units on a platted residential lot, unless an additional number of units is allowed for a qualifying development participating in the Affordability Unlocked Bonus Program (Chapter 25-1, Article 15, Division 4), that:**
 - (a) is not subject to Article 13 Save Our Springs;
 - (b) does not exceed 55% impervious cover;
 - (c) is located on a lot that was originally part of a single family residential subdivision; and
 - (d) is located on a site of less than half an acre.

- (C) Notwithstanding any other provisions in this Section, construction of Shoreline Access, as defined in Section 25-2-1172, that exceeds 50 feet in length and is constructed on slopes exceeding 35% gradient does not constitute a small project.
- (D) For a small project, the director may waive a submittal requirement that the director determines is not essential to demonstrate compliance with this title. The director shall maintain a record of submittal requirements that are waived under this subsection.

CHAPTER 25-7. DRAINAGE

§ 25-7-32 DIRECTOR AUTHORIZED TO REQUIRE EROSION HAZARD ZONE ANALYSIS.

- (A) The director may require the owner of real property to provide, at the owner's expense and as a condition for development application approval, an analysis to establish the erosion hazard zone if the proposed development is:
 - (1) within 100 feet of the centerline of a waterway with a drainage area of 64 acres or greater; or
 - (2) within ~~100~~ 400 feet of the ordinary high water mark of the Colorado River downstream from Longhorn Dam, as defined by Code of Federal Regulations Title 33, Section 328.3 (*Definitions*), unless additional distance is required as determined by the Director; or
 - (3) located where significant erosion is present **as determined by the director.**
- (B) The erosion hazard zone analysis must be in accordance with the Drainage Criteria Manual.
- (C) If an erosion hazard zone analysis is required under this section, the City may not accept for review a development application for any portion of the proposed development until the director has received the required erosion hazard zone analysis.

CHAPTER 25-8 SUBCHAPTER A. WATER QUALITY.

§ 25-8-1 DEFINITIONS.

In this subchapter:

- (1) BARTON SPRINGS means the springs that comprise the Barton Springs complex associated with Barton Springs Pool, and includes Upper Barton, Old Mill, Eliza, and Parthenia springs.
- (2) BLUFF means a vertical change in elevation of more than 40 feet and an average gradient greater than 400 percent.
- (3) CANYON RIMROCK means a rock substrate that:
 - (a) has a gradient that exceeds 60 percent for a vertical distance of at least four feet; and
 - (b) is exposed for at least 50 feet horizontally along the rim of the canyon.
- (4) COMMERCIAL DEVELOPMENT means all development other than open space and residential development.
- (5) CLUSTER HOUSING means a residential housing development that maximizes common open space by grouping housing units to minimize individual yards and has a maximum lot area of fifteen thousand (15,000) square feet for detached residential development.
- (6) CRITICAL ENVIRONMENTAL FEATURES means features that are of critical importance to the protection of environmental resources, and includes bluffs, canyon rimrocks, caves, faults and fractures, seeps, sinkholes, springs, and wetlands.
- (7) DIRECTOR, when used without a qualifier, means the director of the **Planning and Development Review-Watershed Protection** Department, or the director's designee.
- (8) EROSION HAZARD ZONE means an area where future stream channel erosion is predicted to result in damage to or loss of property, buildings, infrastructure, utilities, or other valued resources.
- (9) FAULTS AND FRACTURES means significant fissures or cracks in rock that may permit infiltration of surface water to underground cavities or channels.

- (10) FLOODPLAIN MODIFICATION means development that results in any vertical or horizontal change in the cross section of the 100-year floodplain as determined under Section 25-7-6 (*Determination of the 100-Year Floodplain*).
- (11) IMPERVIOUS COVER means the total area of any surface that prevents the infiltration of water into the ground, such as roads, parking areas, concrete, and buildings.
- (12) MULTI-USE TRAIL means a facility designated for the use of pedestrians, bicycles, and/or other non-motorized users and associated bridges.
- (13) OPEN SPACE means a public or private park, multi-use trail, golf cart path, the portions of a golf course left in a natural state, and an area intended for outdoor activities which does not significantly alter the existing natural vegetation, drainage patterns, or increase erosion. OPEN SPACE does not include parking lots.
- (14) OWNER includes a lessee.
- (15) POINT RECHARGE FEATURE means a cave, sinkhole, fault, joint, or other natural feature that lies over the Edwards Aquifer recharge zone and that may transmit a significant amount of surface water into the subsurface strata.
- (16) WATER QUALITY CONTROL means a structure, system, or feature that provides water quality benefits by treating stormwater run-off.
- (17) WETLAND means a transitional land between terrestrial and aquatic systems where the water table is usually at or near the surface or the land is covered by shallow water, and conforms to the Army Corps of Engineers' definition.

§ 25-8-2 DESCRIPTIONS OF REGULATED AREAS.

- (A) This section describes the watersheds, aquifers, and **other** water **quality protection** zones that are regulated by this subchapter. A map of these areas **is shall be** maintained by the Watershed Protection Department and **made** available for **reference inspection online and** at the offices of **the Planning and Development Review Development Services** Department.
- (B) The director **of the Watershed Protection Department** shall determine the boundaries of the areas described in Subsection (D).
- (C) The director **of the Watershed Protection Department** may require an applicant to verify the boundary of an area described in Subsection (D). For property within 1,500 feet of an Edwards Aquifer recharge zone boundary, the director of the Watershed Protection Department may require that an applicant provide a certified report from a geologist or hydrologist verifying the boundary location.
- (D) In this subchapter:
 - (1) BARTON SPRINGS ZONE means the Barton Creek watershed and all watersheds that contribute recharge to Barton Springs, including those portions of the Williamson, Slaughter, Onion, Bear and Little Bear Creek watersheds located in the Edwards Aquifer recharge or contributing zones.
 - (2) BARTON CREEK WATERSHED means the land area that drains to Barton Creek, including Little Barton Creek watershed.
 - (3) EDWARDS AQUIFER is the water-bearing substrata that includes the stratigraphic rock units known as the Edwards Group and Georgetown Formation.
 - (4) EDWARDS AQUIFER CONTRIBUTING ZONE means all land generally to the west and upstream of the Edwards Aquifer recharge zone that provides drainage into the Edwards Aquifer recharge zone.
 - (5) EDWARDS AQUIFER RECHARGE ZONE means all land over the Edwards Aquifer that recharges the aquifer, as determined by the surface exposure of the geologic units comprising the Edwards Aquifer, including the areas overlain with quaternary terrace deposits.
 - (6) SOUTH EDWARDS AQUIFER RECHARGE ZONE means the portion of the Edwards Aquifer recharge zone that is located south of the Colorado River and north of the Blanco River.
 - (7) SUBURBAN WATERSHEDS include all watersheds not otherwise classified as urban, water supply suburban, or water supply rural watersheds, and include:

- (a) the Brushy, Buttercup, Carson, Cedar, Cottonmouth, Country Club East, Country Club West, Decker, Dry Creek East, Elm Creek, Elm Creek South, Gilleland, Harris Branch, Lake, Lockwood, Maha, Marble, North Fork Dry, Plum, Rattan, Rinard, South Boggy, South Fork Dry, South Brushy, Walnut, and Wilbarger creek watersheds;
 - (b) the Colorado River watershed downstream of U.S. 183; and
 - (c) those portions of the Onion, Bear, Little Bear, Slaughter, and Williamson creek watersheds not located in the Edwards Aquifer recharge or contributing zones.
- (8) URBAN WATERSHEDS include:
- (a) the Blunn, Buttermilk, Boggy, East Bouldin, Fort, Harper Branch, Johnson, Little Walnut, Shoal, Tannehill, Waller, and West Bouldin creek watersheds;
 - (b) the north side of the Colorado River watershed from Johnson Creek to U.S. 183; and
 - (c) the south side of the Colorado River watershed from Barton Creek to U.S. 183.
- (9) WATER SUPPLY RURAL WATERSHEDS include:
- (a) the Lake Travis watershed;
 - (b) the Lake Austin watershed, excluding the Bull Creek watershed and the area to the south of Bull Creek and the east of Lake Austin; and
 - (c) the Bear West, Bee, Bohl's Hollow, Cedar Hollow, Coldwater, Commons Ford, Connors, Cuernavaca, Harrison Hollow, Hog Pen, Honey, Little Bee, Panther Hollow, Running Deer, St. Stephens, Steiner, and Turkey Creek watersheds.
- (10) WATER SUPPLY SUBURBAN WATERSHEDS include:
- (a) the Bull, Eanes, Dry Creek North, Huck's Slough, Taylor Slough North, Taylor Slough South, and West Bull creek watersheds;
 - (b) the Lady Bird Lake watershed on the south side of Lady Bird Lake from Barton Creek to Tom Miller Dam;
 - (c) the Lady Bird Lake watershed on the north side of Lady Bird Lake from Johnson Creek to Tom Miller Dam; and
 - (d) the Lake Austin watershed on the east side of Lake Austin from Tom Miller Dam to Bull Creek.

Division 2. Applicability; Exemptions; Exceptions.

§ 25-8-21 APPLICABILITY.

- (A) Except as provided in Subsections **(B) and (C)**, this subchapter applies in the planning jurisdiction.
- (B) For a preliminary plan, final plat, or subdivision construction plan in the portion of the city's extraterritorial jurisdiction that is within Travis County:
 - (1) this subchapter does not apply; and
 - (2) Title 30 (*Austin/Travis County Subdivision Regulations*) governs.
- (C) The following requirements of this subchapter apply to residential construction of one to eleven units;**
 - (1) 25-8-261 Critical Water Quality Zone Restrictions, for a legal tract or a lot platted on or after May 18, 1986, and for development associated with boat docks, shoreline access, or shoreline modifications including bulkheads and bank stabilization;**
 - (2) 25-8-63 Impervious Cover Calculations;**
 - (3) 25-8 Article 2 Waterways Classified; Zones Established for a legal tract or a lot platted on or after May 18, 1986, and for development associated with boat docks, shoreline access, or shoreline modifications including bulkheads and bank stabilization;**
 - (4) 25-8 Article 5 Erosion and Sedimentation Control; Overland Flow;**
 - (5) 25-8-321 Clearing of Vegetation;**
 - (6) 25-8-323 Temporary Storage Areas; Topsoil Protection**
 - (7) 25-8-341 Cut Requirements;**

- ~~(8) 25-8-342 Fill Requirements;~~
- ~~(9) 25-8-364 Floodplain Modifications for a legal tract or a lot platted on or after May 18, 1986, and for development associated with boat docks, shoreline access, or shoreline modifications including bulkheads and bank stabilization;~~
- ~~(10) 25-8-368 Restrictions on Development Impacting Lake Austin, Lady Bird Lake, and Lake Walter E Long;~~
- ~~(11) Article 13 Save Our Springs~~
- ~~(D) Compliance with municipal regulatory restrictions on a recorded plat or covenant is required, to the extent the director determines that the restrictions are applicable.~~

§ 25-8-25 REDEVELOPMENT EXCEPTION IN URBAN AND SUBURBAN WATERSHEDS.

- (A) This section applies to property located in an urban or suburban watershed that has existing development if:
- (1) ~~no unpermitted development occurred on the site after January 1, 1992, and Any development constructed without a permit after January 1, 1992 will be removed from the site and the area restored to pre-development conditions; and~~
 - (2) ~~the property owner files a site plan application and an election for the property to be governed by this section. The applicant files a site plan application or concurrent subdivision and site plan applications and elects for the property to be governed by this section.~~
- ~~(B) The requirements of this subchapter do not apply to the subdivision of property if at the time of redevelopment under this section subdivision and site plan applications are filed concurrently.~~
- ~~(CB)~~ The requirements of this subchapter do not apply to the redevelopment of the property if the redevelopment:
- (1) does not increase the existing amount of impervious cover on the site;
 - ~~(2) removes existing impervious cover from within 50 feet of the centerline of a classified waterway, or 50' from the shoreline of a lake, or 100' from the Ordinary High Water Mark of the Colorado River, and revegetates the area as prescribed in the Environmental Criteria Manual;~~
 - ~~(23) provides the level of water quality treatment prescribed by current regulations for the redeveloped area or an equivalent area on the site;~~
 - ~~(3) does not generate more than 2,000 vehicle trips a day above the estimated traffic level based on the most recent authorized use on the property;~~
 - ~~(4) is consistent with the neighborhood plan adopted by council, if any;~~
 - ~~(54) does not increase non-compliance, if any, with Article 7, Division 1 (Critical Water Quality Zone Restrictions), Section 25-8-281 (Critical Environmental Features), or Section 25-8-282 (Wetland Protection); and~~
 - ~~(5) complies with Article 3 (Environmental Resource Inventory; Pollutant Attenuation Plan) and all construction phase environmental standards in effect at the time of construction, including Article 5 (Erosion and Sedimentation Control; Overland Flow); and~~
 - (6) does not place redevelopment within the Erosion Hazard Zone, unless protective works are provided as prescribed in the Drainage Criteria Manual.
- ~~(D) The redevelopment must comply with Section 25-8-121 (Environmental Resource Inventory Requirement) and all construction phase environmental requirements in effect at the time of construction, including Chapter 25-8, Article 5 (Erosion and Sedimentation Control; Overland Flow).~~

§ 25-8-26 REDEVELOPMENT EXCEPTION IN THE BARTON SPRINGS ZONE.

- (A) This section applies to property located in the Barton Springs Zone that has existing commercial development if:
- (1) no unpermitted development occurred on the site after January 1, 1992, and
 - (2) the property owner files a site plan application and an election for the property to be governed by this section.

- (B) For property governed by this section, this section supersedes Article 13 (*Save Our Springs Initiative*), to the extent of conflict.
- (C) In this section:
- (1) ~~SEDIMENTATION/FILTRATION POND STANDARD POND~~ means water quality controls that comply with Section 25-8-213 (*Water Quality Control Standards*) or are approved under Section 25-8-151 (*Innovative Management Practices*); and
 - (2) SOS POND means water quality controls that comply with all requirements of Section 25-8-213 (*Water Quality Control Standards*) and the pollutant removal requirements of Section 25-8-514(A) (*Pollution Prevention Required*).
- (D) The requirements of this subchapter do not apply to the subdivision of property if at the time of redevelopment under this section subdivision and site plan applications are filed concurrently.
- (E) The requirements of this subchapter do not apply to the redevelopment of property if the redevelopment meets all of the following conditions:
- (1) The redevelopment may not increase the existing amount of impervious cover on the site.
 - (2) The redevelopment may not increase non-compliance, if any, with Article 7, Division 1 (*Critical Water Quality Zone Restrictions*), Section 25-8-281 (*Critical Environmental Features*), Section 25-8-282 (*Wetland Protection*), or Section 25-8-482 (*Water Quality Transition Zone*).
 - (3) The redevelopment must comply with ~~Section 25-8-121~~ **Article 3** (*Environmental Resource Inventory Requirement; Pollution Attenuation Plan*) and all construction phase environmental requirements in effect at the time of construction, including Chapter 25-8, Article 5 (*Erosion and Sedimentation Control; Overland Flow*) and Section 25-8-234 (*Fiscal Security in the Barton Springs Zone*).
 - (4) The water quality controls on the redevelopment site must provide a level of water quality treatment that is equal to or greater than that which was previously provided.
 - (5) For a commercial or multifamily redevelopment, the owner or operator must obtain a permit under Section 25-8-233 (*Barton Springs Zone Operating Permit*) for both ~~sedimentation/filtration standard~~ ponds and SOS ponds.
 - (6) For a site with more than 40 percent net site area impervious cover, the redevelopment must have:
 - (a) ~~sedimentation/filtration standard~~ ponds for the entire site; or
 - (b) SOS ponds for a portion of the site, and ~~sedimentation/filtration standard~~ ponds for the remainder of the redeveloped site.
 - (7) For a site with 40 percent or less net site area impervious cover, the redevelopment must have SOS ponds for the entire site.
 - (8) The property owner must mitigate the effects of the redevelopment, if required by and in accordance with Subsection (H).
 - (9) Redevelopment may not be located within the Erosion Hazard Zone, unless protective works are provided as prescribed in the Drainage Criteria Manual.
- (F) City Council approval of a redevelopment in accordance with Subsection (G) is required if the redevelopment:
- (1) includes more than 25 dwelling units;
 - (2) is located outside the City's zoning jurisdiction;
 - (3) is proposed on property with an existing industrial or civic use;
 - (4) is inconsistent with a neighborhood plan; or
 - (5) will generate more than 2,000 vehicle trips a day above the estimated traffic level based on the most recent authorized use on the property.
- (G) City Council shall consider the following factors in determining whether to approve a proposed redevelopment:
- (1) benefits of the redevelopment to the community;

- (2) whether the proposed mitigation or manner of development offsets the potential environmental impact of the redevelopment;
 - (3) the effects of offsite infrastructure requirements of the redevelopment; and
 - (4) compatibility with the City's comprehensive plan.
- (H) Redevelopment of property under this section requires the purchase or restriction of mitigation land if the site has a sedimentation/filtration pond.
- (1) The combined gross site area impervious cover of the mitigation land and the portion of the redevelopment site treated by sedimentation/filtration ponds may not exceed 20 percent.
 - (2) The mitigation requirement may be satisfied by:
 - (a) paying into the Barton Springs Zone Mitigation Fund a non-refundable amount established by ordinance;
 - (b) transferring to the City in accordance with Paragraph (3) mitigation land approved by the director of the Watershed Protection Department within a watershed that contributes recharge to Barton Springs, either inside or outside the City's jurisdiction;
 - (c) placing restrictions in accordance with Paragraph (3) on mitigation land approved by the director of the Watershed Protection Department within a watershed that contributes recharge to Barton Springs, either inside or outside the City's jurisdiction; or
 - (d) a combination of the mitigation methods described in Subparagraphs (a) - (c), if approved by the director of the Watershed Protection Department.
 - (3) A person redeveloping under this section shall pay all costs of restricting the mitigation land or transferring the mitigation land to the City, including the costs of:
 - (a) an environmental site assessment without any recommendations for further clean-up, certified to the City not earlier than the 120th day before the closing date transferring land to the City;
 - (b) a category 1(a) land title survey, certified to the City and the title company not earlier than the 120th day before the closing date transferring land to the City;
 - (c) a title commitment with copies of all Schedules B and C documents, and an owner's title policy;
 - (d) a fee simple deed, or, for a restriction, a restrictive covenant approved as to form by the city attorney;
 - (e) taxes prorated to the closing date;
 - (f) recording fees; and
 - (g) charges or fees collected by the title company.
- (I) The Watershed Protection Department shall adopt rules to identify criteria for director approval under this section to ensure that the proposed mitigation, manner of development, and water quality controls offset the potential environmental impact of the redevelopment.

§ 25-8-27 REDEVELOPMENT EXCEPTION IN THE WATER SUPPLY RURAL AND WATER SUPPLY SUBURBAN WATERSHEDS.

- (A) This section applies to property located in a water supply rural or water supply suburban watershed that has existing commercial development or existing residential development with greater than two dwelling units per lot if:
- (1) **any development constructed without a permit after January 1, 1992 will be removed from the site and the area restored to pre-development conditions no unpermitted development occurred on the site after January 1, 1992**, and
 - (2) **the applicant files a site plan application or concurrent subdivision and site plan applications and elects for the property to be governed by this section the property owner files a site plan application and an election for the property to be governed by this section.**

- (B) In this section, **SEDIMENTATION/FILTRATION POND STANDARD POND** means water quality controls that comply with Section 25-8-213 (*Water Quality Control Standards*) or are approved under Section 25-8-151 (*Innovative Management Practices*).
- ~~(C) The requirements of this subchapter do not apply to the subdivision of property if at the time of redevelopment under this section subdivision and site plan applications are filed concurrently.~~
- (D) The requirements of this subchapter do not apply to the redevelopment of property if the redevelopment meets all of the following conditions:
- (1) The redevelopment may not increase the existing amount of impervious cover on the site.
 - (2) The redevelopment may not increase non-compliance, if any, with Article 7, Division 1 (*Critical Water Quality Zone Restrictions*), Section 25-8-281 (*Critical Environmental Features*), Section 25-8-282 (*Wetland Protection*), Section 25-8-422 (*Water Quality Transition Zone*), or Section 25-8-452 (*Water Quality Transition Zone*).
 - (2) The redevelopment must remove any existing impervious cover from within 50 feet of the centerline of a classified waterway or 50' from the shoreline of a lake and revegetate the area as prescribed in the Environmental Criteria Manual.**
 - (3) The redevelopment must comply with ~~Section 25-8-121~~**Article 3** (*Environmental Resource Inventory Requirement; Pollutant Attenuation Plan*) and all construction phase environmental requirements in effect at the time of construction, including Chapter 25-8, Article 5 (*Erosion and Sedimentation Control; Overland Flow*).
 - (4) The water quality controls for the redeveloped areas or an equivalent area on the site must provide a level of water quality treatment that is equal to or greater than that which was previously provided. At a minimum, the site must provide **sedimentation/filtration standard** ponds for the redeveloped area or an equivalent area on the site.
 - (5) The ~~property owner~~ **applicant** must mitigate the effects of the redevelopment, if required by and in accordance with Subsection (G).
 - (6) Redevelopment may not be located within the Erosion Hazard Zone, unless protective works are provided as prescribed in the Drainage Criteria Manual.
- ~~(E) City Council approval of a redevelopment in accordance with Subsection (F) is required if the redevelopment:~~
- ~~(1) includes more than 25 additional dwelling units;~~
 - ~~(2) is located outside the City's zoning jurisdiction;~~
 - ~~(3) is proposed on property with an existing industrial use;~~
 - ~~(4) is inconsistent with a neighborhood plan; or~~
 - ~~(5) will generate more than 2,000 vehicle trips a day above the estimated traffic level based on the most recent authorized use on the property.~~
- ~~(F) City Council shall consider the following factors in determining whether to approve a proposed redevelopment:~~
- ~~(1) benefits of the redevelopment to the community;~~
 - ~~(2) whether the proposed mitigation or manner of development offsets the potential environmental impact of the redevelopment;~~
 - ~~(3) the effects of off site infrastructure requirements of the redevelopment; and~~
 - ~~(4) compatibility with the City's comprehensive plan.~~
- (G) Redevelopment of property under this section requires the purchase or restriction of mitigation land.
- (1) The combined impervious cover of the mitigation land and the portion of the redevelopment treated by sedimentation/filtration ponds may not exceed 20 percent of gross site area if in a water supply rural watershed or 40 percent of gross site area if in a water supply suburban watershed.
 - (2) The mitigation requirement may be satisfied by:
 - (a) paying into the Water Supply Mitigation Fund a nonrefundable amount established by ordinance;

- (b) transferring to the City in accordance with Paragraph (3) mitigation land approved by the director of the Watershed Protection Department within a water supply rural or water supply suburban watershed, either inside or outside the City's jurisdiction;
 - (c) placing restrictions in accordance with Paragraph (3) on mitigation land approved by the director of the Watershed Protection Department within a water supply rural or water supply suburban watershed, either inside or outside the City's jurisdiction; or
 - (d) a combination of the mitigation methods described in Subparagraphs (a)—(c), if approved by the director of the Watershed Protection Department.
- (3) **An applicant person** redeveloping under this section shall pay all costs of restricting the mitigation land or transferring the mitigation land to the City, including the costs of:
- (a) an environmental site assessment without any recommendations for further clean-up, certified to the City not earlier than the 120th day before the closing date transferring land to the City;
 - (b) a category 1(a) land title survey, certified to the City and the title company not earlier than the 120th day before the closing date transferring land to the City;
 - (c) a title commitment with copies of all Schedule B and C documents, and an owner's title policy;
 - (d) a fee simple deed, or, for a restriction, a restrictive covenant approved as to form by the City Attorney;
 - (e) taxes prorated to the closing date;
 - (f) recording fees; and
 - (g) charges or fees collected by the title company.
- (H) The Watershed Protection Department shall adopt rules to identify criteria for **director** approval under this section to ensure that the proposed mitigation, manner of development, and water quality controls offset the potential environmental impact of the redevelopment.

Division 3. Variances.

§ 25-8-42 ADMINISTRATIVE VARIANCES.

- (A) A variance under this section may not vary the requirements of Article 13 (*Save Our Springs Initiative*) **and may not be granted for development of a property if any portion of the property abuts or is within 500 feet of the shoreline of Lake Austin, measured horizontally.**

- (B) The director of the Watershed Protection Department may grant a variance from a requirement of:

(1) Subsection 25-8-213(C) (Water Quality Control Standards):

- (21)** Section 25-8-261 (*Critical Water Quality Zone Development*), only if:

- (a) necessary to protect public health and safety, or if **it the type of development requiring the variance would directly contributes to provide** a significant, demonstrable environmental benefit, as determined by a functional assessment of floodplain health as prescribed by the Environmental Criteria Manual,
- (b) necessary to allow an athletic field in existence on October 28, 2013, to be maintained, improved, or replaced,
- (c) necessary to allow an athletic field to be located in an area not otherwise allowed under Section 25-8-261(B)(5), or
- (d) necessary to allow a hard surfaced trail to be located in an area not otherwise allowed under Section 25-8-261(B)(3);
- (e) necessary to allow the specified green stormwater infrastructure to be located in an area not otherwise allowed under Section 25-8-261(H);**
- (f) except in the Barton Springs Zone, necessary to allow a private driveway or private street to cross a Critical Water Quality Zone if the crossing is necessary to provide primary access to the right-of-way or the crossing is required to comply with public health and safety requirements**

- (g) necessary to allow residential use of up to 11 units located on an existing single family platted lot**
- (32)** Section 25-8-261 (*Critical Water Quality Zone Development*), for development within an urban watershed, only if the proposed development:
- (a) is located not less than 25 feet from the centerline of a waterway,
 - (b) is located outside the erosion hazard zone, unless protective works are provided as prescribed in the Drainage Criteria Manual,
 - (c) does not increase non-compliance, if any, with Article 7, Division 1 (*Critical Water Quality Zone Restrictions*), Section 25-8-281 (*Critical Environmental Features*) or Section 25-8-282 (*Wetland Protection*), and
 - (d) restores native vegetation and soils if development is removed from the Critical Water Quality Zone;
- (43)** Subsection 25-8-262(B) (*Critical Water Quality Zone Street Crossings*), only outside the Barton Springs Zone;
- (54)** Section 25-8-281 (*Critical Environmental Features*);
- (65)** Section 25-8-322 (*Clearing for a Roadway*);
- (76)** Section 25-8-341 (*Cut Requirements*) or Section 25-8-342 (*Fill Requirements*), for **a cut or fill of not more than eight feet:**
- (a)** in the desired development zone; **and,**
 - (b)** for a public primary or secondary educational facility, ~~**within the desired development zone or the drinking water protection zone; and or**~~
 - (c)** for residential use residential construction of up to 11 units located on an existing single family platted lot.
- (87)** Subsection 25-8-343(A) (*Spoil Disposal*);
- (98)** Section 25-8-365 (*Interbasin Diversion*).
- (109)** Subsection 25-8-392(B)(61 (Uplands Zone), Subsection 25-8-392(C)(61 (Uplands Zone), Subsection 25-8-423(D) (Uplands Zone), or Subsection 25-8-453(E) (Uplands Zone).
- (C) It is the applicant's burden to establish that the findings described in this Section have been met.
- (D) The director of the Watershed Protection Department may grant a variance described in Subsection (B) only after determining that development in accordance with the variance meets the objective of the requirement for which the variance is requested and:
- (1) for property in the Barton Springs Zone, the variance will result in water quality that is at least equal to the water quality achievable without the variance;
 - (2) for a variance from Section 25-8-213(C), that the proposed water quality control is necessitated by unique site conditions, excluding any potential loss of impervious cover entitlements resulting from full compliance;**
 - (3) for a variance from Section 25-8-261 necessary to allow a private driveway or private street to cross a Critical Water Quality Zone the applicant must demonstrate compliance with the following:**
 - a) The crossing must span the active channel or use open bottom culverts as determined by the ;**
 - b) In suburban watersheds, Critical Water Quality Zone buffer averaging must be applied to the extent feasible in order to minimize the area of the private driveway within the Critical Water Quality Zone impacted by the crossing;**
 - c) The location of the crossing must minimize impacts to critical environmental features, protected and heritage trees, slopes greater than 15%, and must minimize the amount of cut or fill necessary for construction; and**
 - d) The construction is not located in the Barton Springs Zone.**
 - (4) for a variance from 25-8-261 necessary to allow residential construction of up to 11 units located on an existing single family platted lot if:**
 - (1) the modification is the minimum deviation necessary to ensure reasonable use and maintenance of the property for an existing nonconforming structure;**

- (2) for new development the director determines that:
- (i) the usable lot area cannot accommodate the assumed square footage of impervious cover established under 25-8-64 Impervious Cover Assumptions, after accounting for all applicable regulations;
- (ii) the total proposed impervious cover does not exceed the assumed square footage of impervious cover established; and
- (iii) the development is the minimum deviation necessary to accommodate the development.
- ~~(52)~~ for a variance from Section 25-8-261(B)(5), that the proposed work on or placement of the athletic field will have no adverse environmental impacts;
- ~~(63)~~ for a variance from Section 25-8-261(H), that the green stormwater infrastructure is:
- (a) not required for regulatory compliance with 25-8-211 Water Quality Requirement.
- (b) designed to capture runoff from existing, untreated impervious cover; and
- (c) proposed in a location that is the minimum necessary departure from the code requirement;
- ~~(74)~~ for a variance from Section 25-8-281, that the proposed ~~measures~~ development does not include mechanized shoreline access and the proposed measures preserve all characteristics of the critical environmental feature;
- ~~(85)~~ for a variance from Section 25-8-341 or Section 25-8-342 the cut or fill is not located on a slope with a gradient of more than 15 percent or within 100 feet of a classified waterway;
- ~~(96)~~ for a variance from Section 25-8-341 or Section 25-8-342 necessary to allow residential construction of up to 11 units located on an existing single family platted lot if:
- (a) for an existing nonconforming structure, the modification is the minimum deviation necessary to ensure reasonable use and maintenance of the property; or
- (b) for new development, the director determines that:
- (i) the usable lot area cannot accommodate the assumed square footage of impervious cover established under 25-8-64 Impervious Cover Assumptions, after accounting for all applicable regulations;
- (ii) the total proposed impervious cover does not exceed the assumed square footage of impervious cover established; and
- (iii) the development is the minimum deviation necessary to accommodate the development.
- ~~(107)~~ for a variance from Section 25-8-343(A), use of the spoil provides a necessary public benefit. Necessary public benefits include:
- (a) roadways;
- (b) stormwater detention facilities;
- (c) public or private park sites; and
- (d) building sites that comply with Section 25-8-341 (*Cut Requirements*), Section 25-8-342 (*Fill Requirements*), and Chapter 25-7 (*Drainage*); and
- ~~(118)~~ for a variance from Section 25-8-365, there are no adverse environmental or drainage impacts.
- ~~(129)~~ or a variance from Subsection 25-8-392(B)(6), Subsection 25-8-392(C)(6), Subsection 25-8-423(D), or Subsection 25-8-453(E), the variance:
- (a) is the minimum deviation needed to provide necessary improvements for a public mobility project in the right-of-way; and
- (b) does not create significant adverse environmental impacts.
- (E) The Watershed Protection Department director shall prepare written findings to support the grant or denial of a variance request under this section.

Division 4. Impervious Cover Determinations.

§ 25-8-62 NET SITE AREA.

- (A) Net site area includes only the portions of a site that lie in an uplands zone and have not been designated for **surface or subsurface** wastewater irrigation.
- (B) For land described in Subsection (A), net site area is the aggregate of:
 - (1) 100 percent of the land with a gradient of 15 percent or less;
 - (2) 40 percent of the land with a gradient of more than 15 percent and not more than 25 percent; and
 - (3) 20 percent of the land with a gradient of more than 25 percent and not more than 35 percent.
- (C) Net site area does not apply in the urban and suburban watersheds.

§ 25-8-63 IMPERVIOUS COVER CALCULATIONS.

- (A) Impervious cover is calculated in accordance with this Section and the Environmental Criteria Manual.
- (B) Impervious cover calculations include:
 - (1) roads;
 - (2) driveways;
 - (3) parking areas;
 - (4) buildings;
 - (5) concrete;
 - (6) impermeable construction covering the natural land surface;
 - (7) for an uncovered wood deck that has drainage spaces between the deck boards and that is located over a pervious surface, 50 percent of the horizontal area of the deck; and
 - (8) the portion of a site used for the storage of scrap and metal salvage, including auto salvage.
- (C) Impervious cover calculations exclude:
 - (1) sidewalks in a public right-of-way or public easement;
 - (2) multi-use trails open to the public and located on public land or in a public easement;
 - (3) water quality controls, excluding subsurface water quality controls;
 - (4) detention basins, excluding subsurface detention basins;
 - (5) ground level rainwater harvesting cisterns, excluding subsurface cisterns;**
 - ~~(56)~~ drainage swales and conveyances;
 - ~~(67)~~ the water surface area of ground level pools, fountains, and ponds;
 - ~~(78)~~ areas with gravel placed over pervious surfaces that are used only for landscaping or by pedestrians and are not constructed with compacted base;
 - ~~(89)~~ porous pavement designed in accordance with the Environmental Criteria Manual, limited to only pedestrian walkways and multi-use trails, and located outside the Edwards Aquifer Recharge Zone;
 - (910)** fire lanes designed as prescribed by the Environmental Criteria Manual, that consist of interlocking pavers, and are restricted from routine vehicle access;
 - ~~(1011)~~ an access ramp for an existing single-family and duplex residential unit if:
 - (a) a person with a disability requires access to a dwelling entrance that meets the requirements of the Residential Code, Section R320.6 (*Visitable dwelling entrance*);
 - (b) the building official determines that the ramp will not pose a threat to public health and safety;
 - (c) the ramp:
 - (i) is no wider than 48 inches, except that any portion of a landing for the ramp required for turns may be no wider than 60 inches; and
 - (ii) may have a hand railing, but may not have a roof or walls; and

- (d) the ramp is located in a manner that utilizes existing impervious cover to the greatest extent possible if:
 - (i) impervious cover on the property is at or above the maximum amount of impervious cover allowed by this title; or
 - (ii) if placement of the ramp would result in the property exceeding the maximum amount of impervious cover allowed by this title; and
- ~~(4112)~~ a subsurface portion of a parking structure if the director of the Watershed Protection Department determines that:
 - (a) the subsurface portion of the structure:
 - (i) is located within an urban or suburban watershed;
 - (ii) is below the grade of the land that existed before construction of the structure;
 - (iii) is covered by soil with a minimum depth of two feet and an average depth of not less than four feet; and
 - (iv) has an area not greater than fifteen percent of the site;
 - (b) the structure is not associated with a use regulated by Section 1.2.2 of Subchapter F of Chapter 25-2 (*Residential Design and Compatibility Standards*);
 - (c) the applicant submits an assessment of the presence and depth of groundwater at the site sufficient to determine whether groundwater will need to be discharged or impounded; and
 - (d) the applicant submits documentation that the discharge or impoundment of groundwater from the structure, if any, will be managed to avoid adverse effects on public health and safety, the environment, and adjacent property.

(13) For purposes of residential building permit review only, no more than two feet of elevated, projecting elements such as eaves, overhangs, cantilevered portions of structures, balconies, awnings, and bay windows. This exemption does not apply to site plans or the calculation of the drainage charge under Section 15-2-5 (Impervious Cover Calculation).

§ 25-8-64 IMPERVIOUS COVER ASSUMPTIONS.

- (A) This section applies to impervious cover calculations for duplex or single-family lots.
- (B) Except as provided in Subsection (C):
 - (1) for each lot greater than three acres in size, 10,000 square feet of impervious cover is assumed;
 - (2) for each lot greater than one acre and not more than three acres in size, 7,000 square feet of impervious cover is assumed;
 - (3) for each lot greater than 15,000 square feet and not more than one acre in size, 5,000 square feet of impervious cover is assumed;
 - (4) for each lot greater than 10,000 square feet and not more than 15,000 square feet in size, 3,500 square feet of impervious cover is assumed; and
 - (5) for each lot not more than 10,000 square feet in size, 2,500 square feet of impervious cover is assumed.
- (C) For a lot that is restricted to a lesser amount of impervious cover than prescribed by this section, the lesser amount of impervious cover is assumed. The manner in which the lot is restricted is subject to the approval of the director.
- (D) Except as provided in Subsection (C), this section does not restrict impervious cover on an individual lot.
- (E) The applicant must demonstrate that all proposed one and two-unit residential lots have usable lot area that can reasonably accommodate the assumed square footage of impervious cover established by Subsection (B). The usable lot area must account for all applicable waterway setbacks, floodplains, steep slopes, critical environmental features, protected trees, on-site sewage facilities, and other relevant code restrictions.**

ARTICLE 2. WATERWAYS CLASSIFIED; ZONES ESTABLISHED.

§ 25-8-92 CRITICAL WATER QUALITY ZONES ESTABLISHED.

- (A) In the water supply rural watersheds, water supply suburban watersheds, and Barton Springs Zone, a critical water quality zone is established along each waterway classified under Section 25-8-91 (*Waterway Classifications*).
- (1) The boundaries of a critical water quality zone coincide with the boundaries of the 100-year flood plain as determined under Section 25-7-6 (Determination of the 100-Year Floodplain), except:
 - (a) for a minor waterway, the boundaries of the critical water quality zone are located not less than 50 feet and not more than 100 feet from the centerline of the waterway;
 - (b) for an intermediate waterway, the boundaries of the critical water quality zone are located not less than 100 feet and not more than 200 feet from the centerline of the waterway;
 - (c) for a major waterway, the boundaries of the critical water quality zone are located not less than 200 feet and not more than 400 feet from the centerline of the waterway; and
 - (d) for the main channel of Barton Creek, the boundaries of the critical water quality zone are located 400 feet from the centerline of the creek.
 - (2) Notwithstanding the provisions of Subsections (A)(1)(a), (b), and (c), a critical water quality zone does not apply to a ~~drainage ditch located parallel and adjacent to previously modified drainage feature serving~~ a railroad or public roadway right-of-way ~~if the ditch: that does not possess any natural and traditional character and cannot reasonably be restored to a natural condition, as prescribed in the Environmental Criteria Manual.~~
 - (a) was designed and constructed primarily to serve the adjacent railroad or public roadway;
 - (b) is not a segment or modification of a natural waterway;
 - (c) does not possess any natural and traditional character; and
 - (d) cannot reasonably be restored to a natural condition due to existing site constraints.
- (B) In the suburban watersheds, a critical water quality zone is established along each waterway classified under Section 25-8-91 (*Waterway Classifications*).
- (1) for a minor waterway, the boundaries of the critical water quality zone are located 100 feet from the centerline of the waterway;
 - (2) for an intermediate waterway, the boundaries of the critical water quality zone are located 200 feet from the centerline of the waterway;
 - (3) for a major waterway, the boundaries of the critical water quality zone are located 300 feet from the centerline of the waterway;
 - (4) the critical water quality zone boundaries may be reduced to not less than 50 feet from the centerline of a minor waterway, 100 feet from the centerline of an intermediate waterway, ~~and~~ 150 feet from the centerline of a major waterway, and 200 feet from the Ordinary High Water Mark of the Colorado River downstream of the Longhorn Dam if the overall surface area of the critical water quality zone is the same or greater than the surface area that would be provided without the reduction, as prescribed in the Environmental Criteria Manual; and
 - (5) notwithstanding the provisions of Subsections (B)(1), (2), and (3), a critical water quality zone does not apply to a ~~drainage ditch located parallel and adjacent to previously modified drainage feature serving~~ a railroad or public roadway right-of-way ~~if the ditch: that does not possess any natural and traditional character and cannot reasonably be restored to a natural condition.~~
 - (a) was designed and constructed primarily to serve the adjacent railroad or public roadway;
 - (b) is not a segment or modification of a natural waterway;
 - (c) does not possess any natural and traditional character; and
 - (d) cannot reasonably be restored to a natural condition due to existing site constraints.

- (C) In an urban watershed, a critical water quality zone is established along each waterway with a drainage area of at least 64 acres. This does not apply in the area bounded by IH-35, Riverside Drive, Barton Springs Road, Lamar Boulevard, and 15th Street.
- (1) The boundaries of the critical water quality zone coincide with the boundaries of the 100-year floodplain as determined under Section 25-7-6 (*Determination of the 100-Year Floodplain*), provided that the boundary is not less than 50 feet and not more than 400 feet from the centerline of the waterway.
- (2) Notwithstanding the provisions of Subsection (C)(1), a critical water quality zone does not apply ~~to a previously modified drainage feature serving drainage ditch located parallel and adjacent to~~ a railroad or public roadway right-of-way ~~if the ditch: that does not possess any natural and traditional character and cannot reasonably be restored to a natural condition.~~
- ~~(a) was designed and constructed primarily to serve the adjacent railroad or public roadway;~~
~~(b) is not a segment or modification of a natural waterway;~~
~~(c) does not possess any natural and traditional character; and~~
~~(d) cannot reasonably be restored to a natural condition due to existing site constraints.~~
- (D) Critical water quality zones are established to include the inundated areas that constitute Lake Walter E. Long, Lake Austin, Lady Bird Lake, and the Colorado River downstream of Lady Bird Lake.
- (E) Critical water quality zones are established along and parallel to the shorelines of Lake Travis, Lake Austin, Lady Bird Lake, and Lake Walter E. Long.
- (1) The shoreline boundary of a critical water quality zone:
- (a) for Lake Travis, coincides with the 681.0 foot contour line;
- (b) for Lake Austin, coincides with the 492.8 foot contour line;
- (c) for Lady Bird Lake, coincides with the 429.0 foot contour line; and
- (d) for Lake Walter E. Long, coincides with the 554.5 foot contour line.
- (2) The width of a critical water quality zone, measured horizontally inland, is:
- (a) 100 feet; or
- (b) for a detached single-family residential use, 75 feet.
- (F) Critical water quality zones are established along and parallel to the shorelines of the Colorado River downstream of Lady Bird Lake.
- (1) The shoreline boundary of a critical water quality zone coincides with the river's ordinary high water mark, as defined by Code of Federal Regulations Title 33, Section 328.3 (*Definitions*).
- (2) ~~The width of a critical water quality zone, measured horizontally inland, is 400 feet. The inland boundary of a critical water quality zone coincides with the boundary of the 100-year floodplain as determined under Section 25-7-6 (*Determination of the 100-Year Floodplain*) except that the width of the critical water quality zone, measured horizontally inland, is not less than 200 feet and not more than 400 feet.~~

ARTICLE 3. ENVIRONMENTAL RESOURCE INVENTORY; POLLUTANT ATTENUATION PLAN.

§ 25-8-121 ENVIRONMENTAL RESOURCE INVENTORY REQUIREMENT.

- (A) An applicant shall file an environmental resource inventory with the director for proposed development located on a tract:
- (1) within the Edwards Aquifer recharge ~~or contributing~~ zone;
- ~~(2) within the Drinking Water Protection Zone;~~
- ~~(3) containing a water quality transition zone;~~
- (24) containing a critical water quality zone; ~~or~~
- ~~(35) with a gradient of more than 15 percent; or~~

(4) containing, or within 150 feet of, a potential or verified wetland feature as identified in a map maintained by the Watershed Protection Department and made available for reference online and at the offices of Development Services Department.

- (B) An environmental resource inventory must:
- (1) identify critical environmental features and propose protection measures for the features;
 - (2) provide an environmental justification for spoil disposal locations or roadway alignments;
 - (3) propose methods to achieve overland flow;
 - (4) describe proposed industrial uses and the pollution abatement program; and
 - (5) be completed as prescribed by the Environmental Criteria Manual.
- (C) An environmental resource inventory must include:
- (1) a hydrogeologic report in accordance with Section 25-8-122 (*Hydrogeologic Report*);
 - (2) a vegetation report in accordance with Section 25-8-123 (*Vegetation Report*); and
 - (3) a wastewater report in accordance with Section 25-8-124 (*Wastewater Report*).
- (D) The director of the Watershed Protection Department may permit an applicant to exclude from an environmental resource inventory information required by this section after determining that the information is unnecessary because of the scope and nature of the proposed development.

ARTICLE 5. EROSION AND SEDIMENTATION CONTROL; OVERLAND FLOW.

§ 25-8-182 DEVELOPMENT COMPLETION.

- (A) Development is not completed until:
- (1) permanent revegetation is established; and
 - (2) the ~~director Planning and Development Review Department:~~
 - (a) receives the engineer's concurrence letter; and
 - (b) certifies installation of the vegetation for acceptance.
- (B) Development must be completed under Subsection (A) before the City may accept maintenance responsibility for streets, drainage facilities, or utilities, or issue a certificate of occupancy or compliance, unless the City and the applicant enter into an agreement to ensure completion of the revegetation within a named period.

§ 25-8-184 ADDITIONAL EROSION AND SEDIMENTATION CONTROL REQUIREMENTS IN THE BARTON SPRINGS ZONE.

- (A) This section provides additional erosion and sedimentation control requirements for development in the Barton Springs Zone.
- (B) A temporary erosion and sedimentation control plan and a water quality plan certified by a registered professional engineer and approved by the ~~Planning and Development Review Department~~ director is required.
- (1) The plans must describe the temporary structural controls, site management practices, or other approved methods that will be used to control of off-site sedimentation until permanent revegetation is certified as completed under Section 25-8-182 (*Development Completion*).
 - (2) The temporary erosion control plan must be phased to be effective at all stages of construction. Each temporary erosion control method must be adjusted, maintained, and repaired as necessary.
- (C) The ~~director Planning and Development Review Department~~ may require a modification of the temporary erosion control plan after determining that the plan does not adequately control off-site sedimentation from the development. Approval by the Planning and Development Review Department and the engineer who certified the plan is required for a major modification of the plan.

- (D) The owner shall designate a project manager who is responsible for compliance with the erosion and sedimentation control and water quality plan requirements during development.
- (E) The length of time between clearing and final revegetation of development may not exceed 18 months, unless extended by the director.
- (F) If an applicant does not comply with the deadline in Subsection (E), or does not adequately maintain the temporary erosion and sedimentation controls, the director shall notify the applicant in writing that the City will repair the controls or revegetate the disturbed area at the applicant's expense unless the work is completed or revegetation is begun not later than the 15th day after the date of the notice.
- (G) A person commits an offense if the person allows sediment from a construction site to enter a waterway by failing to maintain erosion controls or failing to follow the approved sequence of construction.

§ 25-8-185 OVERLAND FLOW.

- (A) Drainage patterns must be designed to:
 - (1) prevent erosion;
 - (2) maintain infiltration and recharge of local seeps, ~~and~~ springs, ~~and waterways~~;
 - (3) attenuate the harm of contaminants collected and transported by stormwater; ~~and~~
 - (4) where possible, maintain and restore overland sheet flow, maintain natural drainage features and patterns, and disperse runoff back to sheet flow; ~~and~~
 - (5) where feasible, direct stormwater to landscape areas including islands, medians, peninsulas, and other similar areas. Exceptions to this requirement include:
 - (a) impervious areas on which the land use or activities may generate highly contaminated runoff, as prescribed by rule; and
 - (b) impervious areas used for parking or driving of vehicles if located within the Edwards Aquifer Recharge Zone as defined in Section 25-8-2
- (B) The applicant shall design an enclosed storm drain to mitigate potential adverse impacts on water quality by using methods to prevent erosion and dissipate discharges from outlets. Applicant shall locate discharges to maximize overland flow through buffer zones or grass-lined swales wherever practicable.

ARTICLE 6. WATER QUALITY CONTROLS.

§ 25-8-213 WATER QUALITY CONTROL STANDARDS.

- (A) A water quality control must be designed in accordance with the Environmental Criteria Manual.
 - (1) The control must ~~provide at least the treatment level of a sedimentation/filtration system under the~~ achieve the load reduction standards prescribed in the Environmental Criteria Manual.
 - (2) An impervious liner is required for structural water quality controls over the Edwards Aquifer Recharge Zone in an area where there is surface runoff to groundwater conductivity. If a liner is required and ~~controls are located in series there are multiple controls in series,~~ liners are only required for the first control in the series not required for the second or later in the series following sedimentation, extended detention, or sedimentation/filtration.
 - (3) The control must be accessible for maintenance and inspection as prescribed in the Environmental Criteria Manual.
- (B) A water quality control must capture and treat the water draining to the control from the contributing area. The required capture volume is:
 - (1) the first one-half inch of runoff; and
 - (2) for each 10 percent increase in impervious cover over 20 percent of gross site area, an additional one-tenth of an inch of runoff.

(C) The required water quality treatment must be provided using green stormwater control measures, as prescribed in the Environmental Criteria Manual.

(D) Notwithstanding Subsection (C), all or part of the required water quality treatment may be provided using other water quality controls for:

- (1) areas with land uses or activities that may generate highly contaminated runoff, as described in the Environmental Criteria Manual;**
- (2) a project that provides water quality treatment for currently untreated, developed off-site areas of at least 10 acres in size; or**
- (3) sites with greater than 90 percent gross site area impervious cover.**

(EE) The location of a water quality control:

- (1) must avoid recharge features to the greatest extent possible;
- (2) must be shown on the slope map, preliminary plan, site plan, or subdivision construction plan, as applicable; and
- (3) in a water supply rural watershed, may not be in the 40 percent buffer zone, unless the control disturbs less than 50% of the buffer, and is located to maximize overland flow and recharge in the undisturbed remainder of the 40 percent buffer zone.

(FD) This subsection provides additional requirements for the Barton Springs Zone.

- (1) Approval by the Watershed Protection Department is required for a proposed water quality control that is not described in the Environmental Criteria Manual. The applicant must substantiate the pollutant removal efficiency of the proposed control with published literature or a verifiable engineering study.
- (2) Water quality controls must be placed in sequence if necessary to remove the required amount of pollutant. The sequence of controls must be:
 - (a) based on the Environmental Criteria Manual or generally accepted engineering principles; and
 - (b) designed to minimize maintenance requirements.

§ 25-8-214 OPTIONAL PAYMENT INSTEAD OF STRUCTURAL CONTROLS IN URBAN WATERSHEDS.

- (A) The director of the Watershed Protection Department shall identify and prioritize water quality control facilities for the urban watersheds in an Urban Watersheds Structural Control Plan. The Environmental **Board Commission** shall review the plan **in January of each year annually.**
- (B) An Urban Watersheds Structural Control Fund is established for use in the design and construction of water quality control facilities in the urban watersheds.
- (C) Instead of providing the water quality controls required under Section 25-8-211 (*Water Quality Control Requirement*), in an urban watershed an applicant may request approval to deposit with the City a nonrefundable cash payment, based on a formula established by the council. The director shall review the request and accept or deny the request based on the standards in the Environmental Criteria Manual.
- (D) The director shall deposit a payment made under Subsection (C) in the Urban Watersheds Structural Control Fund.
- (E) A Suburban and Water Supply Watersheds Structural Control Fund is established for use in the design and construction of water quality control facilities.
- (F) For a public mobility project in the right-of-way that is located in a suburban, water supply suburban, or water supply rural watershed, an applicant may request approval to deposit a nonrefundable cash payment, based on a formula established by the council, with the City instead of providing the water quality controls required under Section 25-8-211 (*Water Quality Control Requirement*). The director shall review the request and accept or deny the request based on the standards in the Environmental Criteria Manual.
- (G) The director shall deposit a payment made under Subsection (F) in the Suburban and Water Supply Watersheds Structural Control Fund.

Division 2. Maintenance and Inspection.

§ 25-8-232 DEDICATED FUND.

- (A) The director of the Finance Department shall establish a dedicated fund to:
 - (1) monitor water quality controls; and
 - (2) maintain water quality controls for single-family and duplex residential development.
- (B) An applicant shall pay the required fee into the fund:
 - (1) for development that does not require a site plan, when the applicant posts fiscal security for the subdivision or requests that the director **of the Development Services Department** record the subdivision plat, whichever occurs first; or
 - (2) for development that requires a site plan, when the site plan is approved.
- (C) The director of the Watershed Protection Department shall administer the fund, allocate the fund for appropriate projects, and report annually to the council regarding the status of the fund and the monitoring and maintenance program described in this section.

§ 25-8-233 BARTON SPRINGS ZONE OPERATING PERMIT.

- (A) In the Barton Springs Zone, the owner or operator of a commercial or multifamily development is required to obtain an annual operating permit for the required water quality controls.
- (B) To obtain an annual operating permit, an applicant must:
 - (1) provide the **director Planning and Development Review Department** with:
 - (a) a maintenance plan; and
 - (b) the information necessary to verify that the water quality controls are in proper operating condition; and
 - (2) pay the required, nonrefundable fee.
- (C) The **director Planning and Development Review Department** may verify that a water quality control is in proper operating condition by either inspecting the water quality control or accepting a report from a registered engineer.
- (D) The **director Planning and Development Review Department** shall issue an operating permit after determining that:
 - (1) the applicant has complied with the requirements of Subsection (B); and
 - (2) the water quality controls are in proper operating condition.
- (E) The **director Planning and Development Review Department** shall transfer an operating permit to a new owner or operator if, not later than 30 days after a change in ownership or operation, the new owner or operator:
 - (1) signs the operating permit;
 - (2) accepts responsibility for the water quality controls; and
 - (3) documents the transfer on a form provided by the **director Planning and Development Review Department**.

ARTICLE 7. REQUIREMENTS IN ALL WATERSHEDS.

Division 1. ~~Critical Water Quality Zone Restrictions~~ Waterway and Floodplain Protection.

§ 25-8-261 CRITICAL WATER QUALITY ZONE DEVELOPMENT.

In all watersheds, development is prohibited in a critical water quality zone except as provided in this Division. Development allowed in the critical water quality zone under this Division shall be revegetated and restored within the limits of construction as prescribed by the Environmental Criteria Manual.

- (A) A fence that does not obstruct flood flows is permitted in a critical water quality zone.
- (B) Open space is permitted in a critical water quality zone if a program of fertilizer, pesticide, and herbicide use is approved by the Watershed Protection Department, subject to the conditions in this Subsection.
 - (1) In a water supply rural watershed, water supply suburban, or the Barton Springs Zone, open space is limited to sustainable urban agriculture or a community garden if the requirements in subsection (B)(4) are met, multi-use trails, picnic facilities, and outdoor facilities, excluding stables, corrals for animals and athletic fields.
 - (2) A ~~park with a council-adopted plan~~ master-planned park that is approved by the council may include recreational development other than that described in Subsection (B)(1).
 - (3) A hard surfaced trail may cross the critical water quality zone pursuant to Section 25-8-262 (*Critical Water Quality Zone Street Crossings*). A hard surfaced trail that does not cross the critical water quality zone may be located within the critical water quality zone only if:
 - (a) designed in accordance with the Environmental Criteria Manual;
 - (b) located outside the erosion hazard zone unless protective works are provided as prescribed in the Drainage Criteria Manual;
 - (c) limited to 12 feet in width plus one-foot compacted sub-grade shoulders, unless a wider trail is designated in a Council-adopted plan;
 - (d) located not less than 25 feet from the centerline of a waterway if within an urban watershed;
 - (e) located not less than 50 feet from the centerline of a minor waterway, 100 feet from the centerline of an intermediate waterway, and 150 feet from the centerline of a major waterway if within a watershed other than an urban watershed;
 - (f) located not less than 50 feet from the shoreline of Lake Travis, Lake Austin, Lady Bird Lake, and Lake Walter E. Long, as defined in Section 25-8-92; and
 - (g) located not less than ~~100~~ 200 feet from the ordinary high water mark of the Colorado River downstream from Longhorn Dam.
 - (4) Open space may include sustainable urban agriculture or a community garden only if:
 - (a) in an urban watershed and located not less than 25 feet from the centerline of a waterway, or in a watershed other than an urban watershed and located not less than 50 feet from the centerline of a minor waterway, 100 feet from the centerline of an intermediate waterway, and 150 feet from the centerline of a major waterway;
 - (b) located not less than 50 feet from the shoreline of Lake Travis, Lake Austin, Lady Bird Lake, and Lake Walter E. Long, as defined in Section 25-8-92;
 - (c) located not less than ~~100~~ 200 feet from the ordinary high water mark of the Colorado River downstream from Longhorn Dam;
 - (d) designed in accordance with the Environmental Criteria Manual; and
 - (e) limited to garden plots and paths, with no storage facilities or other structures over 500 square feet.
 - (5) In a suburban or urban watershed, open space may include an athletic field only if:

- (a) in an urban watershed and located not less than 25 feet from the centerline of a waterway, or in a suburban watershed and located not less than 50 feet from the centerline of a minor waterway, 100 feet from the centerline of an intermediate waterway, and 150 feet from the centerline of a major waterway;
 - (b) located not less than 50 feet from the shoreline of Lady Bird Lake and Lake Walter E. Long, as defined in Section 25-8-92;
 - (c) located not less than ~~100~~ **200** feet from the ordinary high water mark of the Colorado River downstream from Longhorn Dam; and
 - (d) the owner of the athletic field submits to the Watershed Protection Department a maintenance plan to keep the athletic field well vegetated and minimize compaction, as prescribed in the Environmental Criteria Manual.
- (C) The requirements of this subsection apply along Lake Travis, Lake Austin, **Lake Walter E Long** or Lady Bird Lake.
- (1) A dock, public boat ramp, 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*). For a single-family residential use, necessary access may not exceed the minimum area of land disturbance required to construct a single means of access from the shoreline to a dock.
 - (2) Disturbed areas must be restored in accordance with the Environmental Criteria Manual and the following requirements:
 - (a) Within a lakefront critical water quality zone, or an equivalent area within 25 feet of a shoreline, restoration must include:
 - (i) at least one native shade tree and one native understory tree, per 500 square feet of disturbed area; and
 - (ii) one native shrub per 150 square feet of disturbed area; and
 - (b) Remaining disturbed areas must be restored per standard specifications for native restoration.
 - (3) Within the shoreline setback area defined by Section 25-2-551 (*Lake Austin (LA) District Regulations*) and within the overlay established by Section 25-2-180 (*Lake Austin (LA) Overlay District*), no more than 30 percent of the total number of shade trees of 8 inches or greater, as designated in the Environmental Criteria Manual, may be removed.
 - (4) Before a building permit may be issued or a site plan released, approval by the Watershed Protection Department is required for chemicals used to treat building materials that will be submerged in water.
 - (5) Bank erosion above the 100-year-flood plain may be stabilized within a lakefront critical water quality zone if the restoration meets the requirements of Subsection (B) (2) of this section.
 - (6) A retaining wall, bulkhead, or other erosion protection device must be designed and constructed to minimize wave return and wave action in compliance with the Environmental Criteria Manual. A shoreline modification within the wave action zone with a greater than 45 degree vertical slope for any portion greater than one foot in height is not allowed on or adjacent to the shoreline of a lake, unless the shoreline modification is located within an existing man-made channel.**
 - (7) 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:**
 - (a) the shoreline as it existed 10 years prior to the date of application, with documentation as prescribed by the Environmental Criteria Manual; or**
 - (b) the lakeside boundary of the subdivided lot line.**

- (8) A bulkhead may be replaced in front of an existing bulkhead once, if:**
- (a) the existing bulkhead was legally constructed; and**
 - (b) construction of the replacement bulkhead does not change the location of the shoreline by more than 6 inches; and**
 - (c) the director determines that there is no reasonable alternative to replacement of the bulkhead in the location of the existing bulkhead.**
- (9) Dredging is prohibited unless:**
- (a) the area of dredging is less than 25 cubic yards; and**
 - (b) the dredging is necessary for navigation safety.**
- (D) A **new utility line or major replacement of an existing** utility line, including a storm drain, **or a utility easement associated with planned infrastructure,** is prohibited in the critical water quality zone, except as provided in subsection (E) or for a necessary crossing. A necessary utility crossing may cross into or through a critical water quality zone only if:
- (1) the utility line follows the most direct path into or across the critical water quality zone to minimize disturbance, **unless boring or tunneling is the proposed method of installation for the entire crossing and all bore pits are located outside of the Critical Water Quality Zone;**
 - (2) the depth of the utility line and location of associated access shafts are not located within an erosion hazard zone, unless protective works are provided as prescribed in the Drainage Criteria Manual; **and**
 - (3) **stormwater outfalls must minimize disturbance to the bank of the Colorado River by locating outfalls in upstream drainages where feasible; and**
 - ~~(4)~~ in the Barton Springs Zone, **the crossing** is approved by the director of the Watershed Protection Department.
- (E) In the urban and suburban watersheds, a **new utility line or major replacement of an existing** utility line may be located parallel to and within the critical water quality zone if:
- (1) in an urban watershed and located not less than 50 feet from the centerline of a waterway, or in a watershed other than urban and located not less than 50 feet from the centerline of a minor waterway, 100 feet from the centerline of an intermediate waterway, and 150 feet from the centerline of a major waterway;
 - (2) located not less than 50 feet from the shoreline of Lady Bird Lake and Lake Walter E. Long, as defined in Section 25-8-92;
 - (3) located not less than ~~100~~ **200** feet from the ordinary high water mark of the Colorado River downstream from Longhorn Dam;
 - (4) designed in accordance with the Environmental Criteria Manual;
 - (5) located outside the erosion hazard zone, unless protective works are provided as prescribed in the Drainage Criteria Manual; and
 - (6) the project includes either riparian restoration of an area within the critical water quality zone equal in size to the area of disturbance in accordance with the Environmental Criteria Manual, or payment into the Riparian Zone Mitigation Fund of a non-refundable amount established by ordinance.
- (F) In-channel detention basins and in-channel wet ponds are allowed in the critical water quality zone only if:
- (1) proposed as part of a public capital improvement project or public private partnership;**
 - (2) no alternative location is feasible; and**
 - (3) designed in accordance with the Environmental Criteria Manual.**
- (G) Floodplain modifications ~~are~~ **is** prohibited in the critical water quality zone unless **the modification proposed:**

- (1) ~~the floodplain modifications proposed are~~ **is** necessary to address an existing threat to public health and safety, as determined by the director of the Watershed Protection Department;
 - (2) ~~the floodplain modifications proposed would provide a significant, demonstrable environmental benefit, is designed solely to improve floodplain health~~ as determined by a functional assessment of floodplain health as prescribed by the Environmental Criteria Manual; or
 - (3) ~~the floodplain modifications proposed are~~ **is the minimum** necessary for development allowed in the critical water quality zone under Section 25-8-261 (*Critical Water Quality Zone Development*), Section 25-8-262 (*Critical Water Quality Zone Mobility Crossings*), or Section 25-8-367 (*Restrictions on Development Impacting Lake Austin, Lady Bird Lake, and Lake Walter E. Long*) **as prescribed in the Environmental Criteria Manual.**
- (H) In the urban and suburban watersheds, vegetative filter strips, rain gardens, biofiltration ponds, areas used for irrigation or infiltration of stormwater, or other controls as prescribed by rule are allowed in the critical water quality zone if:
- (1) in an urban watershed and located not less than 50 feet from the centerline of a waterway, or in a watershed other than urban and located no less than 50 feet from the centerline of a minor waterway, no less than 100 feet from the centerline of an intermediate waterway, and no less than 150 feet from the centerline of a major waterway;
 - (2) located not less than 50 feet from the shoreline of Lady Bird Lake and Lake Walter E. Long, as defined in Section 25-8-92;
 - (3) located not less than ~~100~~ **200** feet from the ordinary high water mark of the Colorado River downstream from Longhorn Dam;
 - (4) located outside the 100-year floodplain; and
 - (5) located outside the erosion hazard zone, unless protective works are provided as prescribed in the Drainage Criteria Manual.
- (I) Development associated with power generation, transmission, or distribution at the Decker Creek Power Station is allowed in the critical water quality zone.
- (J) A residential lot that is 5,750 square feet or less in size may not include any portion of a critical water quality zone.

§ 25-8-262 CRITICAL WATER QUALITY ZONE MOBILITY CROSSINGS.

- (A) In an urban watershed, an arterial street, collector street, residential street, or rail line may cross a critical water quality zone of any waterway.
- (B) This subsection applies in a watershed other than an urban watershed.
- (1) A major waterway critical water quality zone may be crossed by ~~an arterial street~~ **a Level 3, 4, or 5 street** or rail line identified in the Transportation Plan.
 - (2) An intermediate waterway critical water quality zone may be crossed by ~~an a Level 2, 3, 4, or 5 street arterial street, collector street~~ or rail line except:
 - (a) a ~~Level 2 collector~~ street crossing must be at least 2,500 feet, **measured in creek miles**, from a ~~Level 2, collector or Level-3, 4, or 5 street arterial street~~ crossing on the same waterway; or
 - (b) in a water supply suburban or water supply rural watershed, or the Barton Springs Zone, a ~~Level 2 collector~~ street crossing must be at least one mile, **measured in creek miles**, from a ~~collector or Level 2, 3, 4, or 5 street arterial street~~ crossing on the same waterway.
 - (3) A minor waterway critical water quality zone may be crossed by ~~an a Level 2, 3, 4, or 5 street arterial street, collector street,~~ or rail line except:
 - (a) a ~~collector Level 2~~ street crossing must be at least 900 feet, **measured in creek miles**, from a ~~collector or Level 2, 3, 4, or 5 street arterial~~ street crossing on the same waterway; or

- (b) in a water supply suburban or water supply rural watershed, or the Barton Springs Zone, a Level 2 collector street crossing must be at least 2,000 feet, measured in creek miles, from a collector or Level 2, 3, 4, or 5 arterial street crossing on the same waterway.
- (4) A minor waterway critical water quality zone may be crossed by a residential Level 1 or 2 commercial street if necessary to provide access to property that cannot otherwise be safely accessed.
- (C) In all watersheds, multi-use trails may cross a critical water quality zone of any waterway if:
(1) designed in compliance with the Environmental Criteria Manual; and
(2) the development demonstrates no additional adverse impact from flood or erosion potential.
- (D) Notwithstanding subsections (A) and (B) and except in the Barton Springs Zone, a street or driveway may cross the critical water quality zone if the street or driveway is located in a center or corridor as identified on the growth concept map of the Imagine Austin Comprehensive Plan, as adopted by Ordinance No. 20120614-058, and if the proposed crossing:
 - (1) is necessary to facilitate the development or redevelopment of a designated corridor or center as recommended in the Imagine Austin Comprehensive Plan, Chapter 4 (*Shaping Austin: Building the Complete Community*), growth concept map and related definitions; and
 - (2) maintains the quality and quantity of recharge if located in a center or corridor designated as a sensitive environmental area in the Edwards Aquifer recharge zone, Edwards Aquifer contributing zone, or the South Edwards Aquifer recharge zone, as determined by the director of the Watershed Protection Department .

§ 25-8-263 FLOODPLAIN MODIFICATION.

- (A) ~~Floodplain modification within a critical water quality zone is prohibited except as allowed under Section 25-8-261 (Critical Water Quality Zone Development).~~ All floodplain modifications must:
 - (1) be designed to accommodate existing and fully-vegetated hydraulic conditions;
 - (2) apply sound engineering and ecological practices, prevent and reduce degradation of water quality, and demonstrate the stability and integrity of floodplains and waterways, as prescribed in the Environmental Criteria Manual;
 - (3) restore floodplain health, or provide mitigation if restoration is infeasible, to support natural functions and processes as prescribed in the floodplain modification criteria in the Environmental Criteria Manual; and
 - (4) comply with the requirements of Chapter 25-7 (Drainage), the Drainage Criteria Manual, and the Environmental Criteria Manual.
- (B) ~~Floodplain modification within a critical water quality zone is prohibited except as allowed under Section 25-8-261 (Critical Water Quality Zone Development). Floodplain modification outside a critical water quality zone is allowed only if the modification proposed:~~
 - ~~(1) is necessary to protect public health and safety by addressing an existing threat, as determined by the director of the Watershed Protection Department;~~
 - ~~(2) would provide a significant, demonstrable environmental benefit, as determined by a functional assessment of floodplain health as prescribed by the Environmental Criteria Manual;~~
 - ~~(3) is located within a floodplain area classified as in fair or poor condition, as determined by a functional assessment of floodplain health, prescribed by the Environmental Criteria Manual; or~~
 - ~~(4) is necessary for development allowed under Section 25-8-261 (Critical Water Quality Development) or 25-8-262 (Critical Water Quality Zone Street Crossings).~~
- (C) ~~All floodplain modifications must:~~
 - ~~(1) be designed to accommodate existing and fully-vegetated conditions;~~

~~(2) encourage sound engineering and ecological practices, prevent and reduce degradation of water quality, and encourage the stability and integrity of floodplains and waterways, as prescribed in the floodplain modification criteria in the Environmental Criteria Manual;~~

~~(3) restore floodplain health, or provide mitigation if restoration is infeasible, to support natural functions and processes as prescribed in the floodplain modification criteria in the Environmental Criteria Manual; and~~

~~(4) comply with the requirements of Chapter 25-7 (Drainage), the Drainage Criteria Manual, and the Environmental Criteria Manual.~~

Floodplain modification outside a critical water quality zone is allowed only if the modification proposed:

(1) is necessary to protect public health and safety by addressing an existing threat, as determined by the director;

(2) is designed solely to improve floodplain health, as determined by a functional assessment of floodplain health as prescribed by the Environmental Criteria Manual;

(3) is located within a floodplain area classified as in fair or poor condition, as determined by a functional assessment of floodplain health, and provides restoration or mitigation in accordance with the ratios and specifications prescribed in the Environmental Criteria Manual.; or

(4) is the minimum modification necessary for development allowed under Section 25-8-261 (Critical Water Quality Development) or 25-8-262 (Critical Water Quality Zone Mobility Crossings).

(D) If on-site restoration, as prescribed in the Environmental Criteria Manual, is infeasible and mitigation is required under this Section, it may be satisfied by:

(1) paying into the Riparian Zone Mitigation Fund a nonrefundable amount established by ordinance;

(2) transferring in fee simple or placing restrictions on mitigation land approved by the director ~~of the Watershed Protection Department~~ and meeting the following conditions:

(a) located within the same watershed classification;

(b) in accordance with the procedures in Section 25-8-26 (*Redevelopment Exception in the Barton Springs Zone*), Subsection (H) (3);

(c) dedicated to or restricted for the benefit of the City or another entity approved by the director and which the City or other approved entity accepts;

(d) an amount proportionate to the amount of area within the existing floodplain that is proposed to be modified, as prescribed in the Environmental Criteria Manual; or

(3) a combination of the mitigation methods described in Subparagraphs (1) and (2), if approved by the director ~~of the Watershed Protection Department~~.

Division 2. Protection for Special Features.

§ 25-8-281 CRITICAL ENVIRONMENTAL FEATURES.

(A) Drainage patterns for proposed development must be designed to protect critical environmental features from the effects of runoff from developed areas, and to maintain the catchment areas of recharge features in a natural state. Special controls must be used where necessary to avoid the effects of erosion, or sedimentation, or high rates of flow.

(B) A residential lot may not include a critical environmental feature ~~or be located within 50 feet of a critical environmental feature~~ a critical environmental feature buffer zone and may not be located within 50 feet of a critical environmental feature.

(C) This subsection prescribes the requirements for critical environmental feature buffer zones.

(1) A buffer zone is established around each critical environmental feature described in this subchapter.

(a) Except as provided in Subsection (C)(1)(b), the width of the buffer zone is 150 feet from the edge of the critical environmental feature.

- (b) For a point recharge feature, the buffer zone coincides with the topographically defined catchment basin, except that the width of the buffer zone from the edge of the critical environmental feature is:
 - (i) not less than 150 feet;
 - (ii) not more than 300 feet; and
 - (iii) calculated in accordance with the Environmental Criteria Manual.
- (2) Within a buffer zone described in this subsection:
 - (a) the natural vegetative cover must be retained to the maximum extent practicable;
 - (b) construction is prohibited; and
 - (c) wastewater disposal or irrigation is prohibited.
- (3) If located at least 50 feet from the edge of the critical environmental feature, the prohibition of Subsection (C)(2)(b) does not apply to:
 - (a) ~~a yard or a~~ hiking trail; ~~or~~
 - (b) a recharge basin approved under Section 25-8-213 (*Water Quality Control Standards*) that discharges to a point recharge feature; ~~or~~
 - (c) an innovative runoff management practice approved under Section 25-8-151 (*Innovative Management Practices*) **that is designed to address the standards of this section, enhance the recharge of groundwater and the discharge of springs, and maintain the function of critical environmental features.**
- (4) Perimeter fencing with not less than one access gate must be installed at the outer edge of the buffer zone for all point recharge features. The fencing must comply with the Standard Specifications Manual.
- (5) The owner must maintain the buffer zone in accordance with standards in the Environmental Criteria Manual to preserve the water quality function of the buffer.
- (6) All critical environmental feature locations and required setbacks must be shown on preliminary subdivision plans, site plans, and other permits as determined by the director.**
- (7) All critical environmental feature locations must be shown on final plats.**
- (D) When voids in the rock substrate are uncovered during development, the following protocol must be followed:
 - (1) construction in the area of the void must cease while the applicant conducts a preliminary investigation of the void as prescribed by the Environmental Criteria Manual.
 - (2) The applicant shall contact a City of Austin Environmental Inspector to schedule further investigation by the City of the void as prescribed by the Environmental Criteria Manual if the preliminary investigation indicates that the void:
 - (a) is at least one square foot in total area;
 - (b) blows air from within the substrate;
 - (c) consistently receives water during any rain event; or
 - (d) potentially transmits groundwater.
 - (3) Construction may only proceed after mitigation measures are reviewed and approved by the Watershed Protection Department.

§ 25-8-282 WETLAND PROTECTION.

- (A) Wetlands must be protected in all watersheds, except **in for wetlands located within the area** bounded by Interstate 35, Riverside Drive, Barton Springs Road, Lamar Boulevard, and 15th **Street that are not associated with the critical water quality zone of Lady Bird Lake.**
- (B) Protection methods for wetlands include:
 - (1) appropriate setbacks that preserve the wetlands or wetland functions;
 - (2) wetland mitigation, including wetland replacement; **or**

- (3) wetland restoration or enhancement; ~~or~~
 - ~~(4) use of a wetlands for water quality controls.~~
- (C) The director ~~of the Watershed Protection Department~~ may approve the proposed protection methods.:
- ~~(1) the removal and replacement of a wetland; or~~
 - ~~(2) the elimination of setbacks from a wetland that is proposed to be used as a water quality control.~~

Division 4. Clearing.

§ 25-8-323 TEMPORARY STORAGE AREAS; TOPSOIL PROTECTION.

- (A) The site plan or subdivision construction plan must designate the areas to be cleared for temporary storage of spoils or construction equipment. Areas cleared for temporary storage must be located and restored in accordance with the Environmental Criteria Manual.
- (B) During and after site grading operations, the topsoil must be protected and vegetation left in place to the maximum extent practicable;
- (C) For areas on the site that are to remain pervious post-development, any soils that are compacted during site grading and construction operations must be decompacted in compliance with the Environmental Criteria Manual and the Standard Specifications Manual.**

Division 5. Cut, Fill, and Spoil.

§ 25-8-341 CUT REQUIREMENTS.

- (A) Cuts on a tract of land may not exceed four feet of depth, except:
 - (1) in an urban watershed;
 - (2) in a roadway right-of-way or rail line right-of-way;
 - (3) for construction of a building foundation or swimming pool, excluding the surrounding pool deck;
 - (4) for construction of a water quality control or detention facility and appurtenances for conveyance such as swales, drainage ditches, and diversion berms, if:
 - (a) the design and location of the facility within the site minimize the amount of cut over four feet;
 - (b) the cut is the minimum necessary for the appropriate functioning of the facility; and
 - (c) the cut is not located on a slope with a gradient of more than 15 percent or within 100 feet of a classified waterway;
 - (5) for utility construction or a wastewater drain field, if the area is restored to natural grade;
 - (6) in a state-permitted sanitary landfill or a sand or gravel excavation located in the extraterritorial jurisdiction, if:
 - (a) the cut is not in a critical water quality zone;
 - (b) the cut does not alter a 100-year floodplain;
 - (c) the landfill or excavation has an erosion and restoration plan approved by the City; and
 - (d) all other applicable City Code provisions are met; ~~;~~
 - (7) for any cut associated with construction of a multi-use trail, if:
 - (a) the cut is not located on a slope with a gradient of more than 15 percent or within 100 feet of a classified waterway;
 - (b) the cut is limited to no more than eight feet in depth;
 - (c) the cut is located in a public right-of-way or public easement; and
 - (d) the trail is designed in accordance with the Environmental Criteria Manual; ~~;~~ **and**
 - (8) for construction of a street or driveway necessary to provide primary access if:**
 - (a) the construction complies with Division 3 (Construction on Slopes) of this article;**
 - (b) the cut is not within a critical water quality zone;**
 - (c) the cut is limited to no more than eight feet in depth;**

- (d) the cut over four feet is the minimum amount necessary to comply with safety access requirements and the horizontal and vertical curve requirements of the Transportation Criteria Manual; and
- (e) there is no other feasible alternative for the street or driveway location.

§ 25-8-342 FILL REQUIREMENTS.

- (A) Fill on a tract of land may not exceed four feet of depth, except:
- (1) in an urban watershed;
 - (2) in a roadway right-of-way or rail line right-of-way;
 - (3) under a foundation with sides perpendicular to the ground, or with pier and beam construction;
 - (4) for construction of a water quality control or detention facility and appurtenances for conveyance such as swales, drainage ditches, and diversion berms, if:
 - (a) the design and location of the facility within the site minimize the amount of fill over four feet;
 - (b) the fill is the minimum necessary for the appropriate functioning of the facility; and
 - (c) the fill is not located on a slope with a gradient of more than 15 percent or within 100 feet of a classified waterway;
 - (5) for utility construction or a wastewater drain field;
 - (6) in a state-permitted sanitary landfill located in the extraterritorial jurisdiction, if:
 - (a) the fill is derived from the landfill operation;
 - (b) the fill is not placed in a critical water quality zone or a 100-year floodplain;
 - (c) the landfill operation has an erosion and restoration plan approved by the City; and
 - (d) all other applicable City Code provisions are met; ~~or~~
 - (7) for fill associated with construction of a multi-use trail, if:
 - (a) the fill is not located on a slope with a gradient of more than 15 percent or within 100 feet of a classified waterway;
 - (b) the fill is limited to no more than eight feet in depth;
 - (c) the fill is located in a public right-of-way or public easement; and
 - (d) the trail is designed in accordance with the Environmental Criteria Manual; ~~or~~
- (8) for construction of a street or driveway necessary to provide primary access if:
- (a) the construction complies with Division 3 (Construction on Slopes) of this article;
 - (b) the fill is not in a critical water quality zone;
 - (c) the fill is limited to no more than eight feet in depth;
 - (d) the fill over four feet is the minimum amount necessary to comply with safety access requirements and the horizontal and vertical curve requirements of the Transportation Criteria Manual; and
 - (e) there is no other feasible alternative for driveway location.
- (B) A fill area must be restored and stabilized.
- (C) Fill for a roadway must be contained within the roadway clearing width described in Section 25-8-322 (Clearing For A Roadway).

Division 6. Other Restrictions.

~~§ 25-8-364 FLOODPLAIN MODIFICATION.~~

- ~~(A) Floodplain modification within a critical water quality zone is prohibited except as allowed under Section 25-8-261 (Critical Water Quality Zone Development).~~
- ~~(B) Floodplain modification outside a critical water quality zone is allowed only if the modification proposed:~~
- ~~(1) is necessary to protect public health and safety by addressing an existing threat, as determined by the director of the Watershed Protection Department;~~

- ~~(2) would provide a significant, demonstrable environmental benefit, as determined by a functional assessment of floodplain health as prescribed by the Environmental Criteria Manual;~~
- ~~(3) is located within a floodplain area classified as in fair or poor condition, as determined by a functional assessment of floodplain health, prescribed by the Environmental Criteria Manual; or~~
- ~~(4) is necessary for development allowed under Section 25-8-261 (Critical Water Quality Development) or 25-8-262 (Critical Water Quality Zone Street Crossings).~~

~~(C) All floodplain modifications must:~~

- ~~(1) be designed to accommodate existing and fully vegetated conditions;~~
- ~~(2) encourage sound engineering and ecological practices, prevent and reduce degradation of water quality, and encourage the stability and integrity of floodplains and waterways, as prescribed in the floodplain modification criteria in the Environmental Criteria Manual;~~
- ~~(3) restore floodplain health, or provide mitigation if restoration is infeasible, to support natural functions and processes as prescribed in the floodplain modification criteria in the Environmental Criteria Manual; and~~
- ~~(4) comply with the requirements of Chapter 25-7 (Drainage), the Drainage Criteria Manual, and the Environmental Criteria Manual.~~

~~(D) If mitigation is required under this Section, it may be satisfied by:~~

- ~~(1) paying into the Riparian Zone Mitigation Fund a nonrefundable amount established by ordinance;~~
- ~~(2) transferring in fee simple or placing restrictions on mitigation land approved by the director of the Watershed Protection Department and meeting the following conditions:
 - ~~(a) located within the same watershed classification;~~
 - ~~(b) in accordance with the procedures in Section 25-8-26 (Redevelopment Exception in the Barton Springs Zone), Subsection (H) (3);~~
 - ~~(c) dedicated to or restricted for the benefit of the City or another entity approved by the Watershed Protection Department director and which the City or other approved entity accepts;~~
 - ~~(d) an amount proportionate to the amount of area within the existing floodplain that is proposed to be modified, as prescribed in the Environmental Criteria Manual; or~~~~
- ~~(3) a combination of the mitigation methods described in Subparagraphs (1) and (2), if approved by the director of the Watershed Protection Department.~~

Division 7. Shoreline Relocation and Lakefill.

§ 25-8-367 RELOCATION OF SHORELINE BETWEEN TOM MILLER DAM AND LONGHORN DAM.

~~(A) This section applies:~~

- ~~(1) along the Colorado River;~~
- ~~(2) between Tom Miller Dam and Longhorn Dam; and~~
- ~~(3) below a contour elevation of 435 feet above mean sea level.~~

~~(B) City council approval is required to relocate existing earth material in the area described in Subsection (A).~~

~~(C) A person may request approval under this section by filing an application with the council that includes a plan showing the proposed layout of the relocation and a legal description of the property.~~

~~(D) The applicant must demonstrate to the council that:~~

- ~~(1) approving the application will not:
 - ~~(a) endanger a water supply, water supply system, storm or sanitary sewer facility, or other public utility facility;~~
 - ~~(b) create a hazard to navigation or swimming;~~~~

- ~~(c) create a hazard to the safety, maintenance and operation of a dam, bridge, or other structure not owned by the applicant; and~~
- ~~(d) materially and adversely affect the use and enjoyment of other property on the Colorado River between the Tom Miller Dam and Longhorn Dam; and~~
- ~~(2) if similar applications were granted for all similarly situated properties, the water storage or flood capacity of the Colorado River basin would not be materially reduced.~~

~~§ 25-8-368 RESTRICTIONS ON DEVELOPMENT IMPACTING LAKE AUSTIN, LADY BIRD LAKE, AND LAKE WALTER E. LONG.~~

- ~~(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.~~

CHAPTER 25-8 SUBCHAPTER B. ~~ARTICLE 2. ENDANGERED SPECIES.~~ Threatened or Endangered Species Notification

~~§ 25-8-691 THREATENED OR ENDANGERED SPECIES NOTIFICATION~~ APPLICABILITY.

- ~~(A) This section applies in areas of the planning jurisdiction that may contain habitat for federally listed threatened or endangered species identified in the map maintained by the City online or available for inspection in the office of the Development Services Department. Except as provided in Subsection (B), this article applies to development in the areas of the planning jurisdiction described in Sections 25-8-693 (Birds And Plants), 25-8-694 (Cave Species), and 25-8-695 (Salamander Species).~~
- ~~(B) On submission of an application for a subdivision or site plan in an area described in Subsection (A), the applicant must give notice of the application to the appropriate authority, including:
 - ~~(1) United States Fish and Wildlife Service;~~
 - ~~(2) Balcones Canyonlands Conservation Plan Coordinating Committee Secretary; and~~
 - ~~(3) Travis or Williamson County, as applicable depending on project location.~~~~
- ~~(C) The notice must include a statement that the development could cause the loss of threatened or endangered species habitat.~~

~~This article does not apply to development of:~~

- ~~(1) a subdivision for which a preliminary plan or final plat was approved before August 27, 1989;~~
- ~~(2) a site for which a site plan or site development permit was approved before August 27, 1989; or~~
- ~~(3) a tract of land containing not more than ten acres, if the tract:
 - ~~(a) is legally platted; or~~~~

~~(b) existed in its current configuration when it became subject to City subdivision regulations.~~

~~§ 25-8-692 THREATENED OR ENDANGERED SPECIES.~~

~~In this article, "threatened or endangered species" means:~~

- ~~(1) black capped vireo;~~
- ~~(2) golden-cheeked warbler;~~
- ~~(3) Tooth Cave pseudoscorpion;~~
- ~~(4) Tooth Cave spider;~~
- ~~(5) Bee Creek Cave harvestman;~~
- ~~(6) Tooth Cave ground beetle;~~
- ~~(7) Kretschmarr Cave mold beetle;~~
- ~~(8) Jollyville Plateau salamander;~~
- ~~(9) a species included in the Balcones Canyonland Conservation Plan; or~~
- ~~(10) a species classified as threatened or endangered by the United States Fish and Wildlife Service.~~

~~Source: Section 13-7-73; Ord. 990225-70; Ord. 031211-11; Ord. No. 20170615-102, Pt. 30, 6-15-17.~~

~~§ 25-8-693 BIRDS AND PLANTS.~~

~~For an endangered bird or plant species, the requirements of Section 25-8-696 (Notice) apply west of a line bounded by U. S. 183 North at the City's extraterritorial boundary limit, then southeast to Loop 1, then south along Loop 1 to U.S. 290 West, then west on U. S. 290 to R.M. 1826, and then south to the City's extraterritorial boundary limit.~~

~~Source: Section 13-7-72(a)(1), and (b); Ord. 990225-70; Ord. 031211-11; Ord. 20131017-046.~~

~~§ 25-8-694 CAVE SPECIES.~~

~~For an endangered cave species, the requirements of Section 25-8-696 (Notice) apply in the Edwards Aquifer Recharge Zone as defined by Section 25-8-2 (Description of Regulated Areas).~~

~~Source: Section 13-7-72(a)(2) and (b); Ord. 990225-70; Ord. 031211-11; Ord. 20131017-046.~~

~~§ 25-8-695 SALAMANDER SPECIES.~~

~~For a threatened or endangered salamander species, the requirements of Section 25-8-696 (Notice) apply in the areas included in the salamander habitat map maintained by the Watershed Protection Department.~~

~~Source: Ord. 20131017-046; Ord. No. 20170615-102, Pt. 31, 6-15-17.~~

~~§ 25-8-696 NOTICE.~~

~~(A) On submission of an application for subdivision or site plan approval in an area described in Section 25-8-693 (Birds and Plants), 25-8-694 (Cave Species), or 25-8-695 (Salamander Species) Subsection (A), the applicant shall give notice of the application to the appropriate authority, including:~~

- ~~(1) United States Fish and Wildlife Service;~~
- ~~(2) Texas Parks and Wildlife Department;~~
- ~~(3) Balcones Canyonlands Conservation Plan Coordinating Committee Secretary; and~~
- ~~(4) Travis or Williamson County, as applicable.~~

~~(B) The notice must include a statement that the development could cause the loss of threatened or endangered species habitat.~~

Summary of Proposed Code Amendments Related to Resolution No. 20220609-061

Code Section		Type of Change	Current Status/Concern	Proposed Improvement	Benefits
Chapter 25-2, Zoning - Article 9, Landscaping					
1	25-2-981 Applicability; Exceptions	Policy	Existing landscaping requirements do not apply to lots zoned Central Business District (CBD) or Downtown Mixed Use (DMU).	Require that lots zoned CBD or DMU meet the new Functional Green requirements (described below).	Additional ecosystem services brought to downtown projects.
2	25-2-1007 Parking Lots	Policy	Parking lot islands are typically surrounded by a 6" curb that prevents stormwater from flowing into the landscape area.	Require parking lot islands to have an edge-of-pavement treatment that allows overland flow of stormwater into the landscape area. Allow exceptions for areas that are not required to drain to a stormwater control and sites located in the Edwards Aquifer Recharge Zone.	Increases beneficial use of stormwater and reduces irrigation needs by directing stormwater into areas that are typically required to provide on-site irrigation.
3	25-2-1008 Irrigation Requirements	Policy	The existing requirement to irrigate 50% of the required landscape area with stormwater has proven problematic and difficult to implement.	Remove existing irrigation requirements and replace with simplified requirement to remove barriers to overland flow into parking lot islands (described above).	Simplified design requirements and reduced cost.
4	Functional Green	Policy	Sites with high impervious cover have few landscape requirements and therefore provide minimal ecosystem services.	Create a new approach to landscape requirements to provide ecosystem services in highly urbanized locations.	Landscape requirements are calibrated to provide ecosystem services in highly urbanized locations.

Summary of Proposed Code Amendments Related to Resolution No. 20220609-061

Code Section		Type of Change	Current Status/Concern	Proposed Improvement	Benefits
Chapter 25-2, Zoning - Article 13, Docks, Bulkheads, and Shoreline Access					
5	25-2-1179 Environmental Protection	Clarification	Bulkhead wave abatement requirements are currently located in the zoning chapter of the Land Development Code, which is inappropriate.	Move bulkhead construction requirements to Chapter 25-8, Subchapter A, Water Quality.	Improves review process and clarifies intent of regulations.
Chapter 25-5, Site Plans					
6	25-5-3 Small Projects	Policy	Small-scale multifamily residential projects must go through a longer, more expensive permitting process than single-family residential projects with the same percent impervious cover.	Allow multifamily residential projects with up to 11 units, or more if allowed under a qualifying Affordability Unlocked project, to follow the Small Project site plan process if they meet certain conditions.	Fewer review fees, faster review times, and no neighborhood notice requirement for qualifying small-scale multifamily residential projects.
Chapter 25-7, Drainage					
7	25-7-32 Director Authorized to Require Erosion Hazard Zone Analysis	Policy & Clarification	The current requirement to analyze the erosion hazard zone within 100' of the Colorado River downstream of Longhorn Dam is not sufficiently protective given the erodibility of the river bank.	Require erosion hazard zone analysis for development within 400' of the Colorado River downstream of Longhorn Dam. Clarify the WPD director's role in determining additional areas where an erosion hazard zone analysis must be performed.	Protects public infrastructure and private development from being damaged or destroyed by erosion.

Summary of Proposed Code Amendments Related to Resolution No. 20220609-061

Code Section		Type of Change	Current Status/Concern	Proposed Improvement	Benefits
Chapter 25-8, Environment					
8	25-8-1 Definitions	Clarification	Code sections that refer to the director of Planning and Development Review do not accurately reflect the role of the Environmental Officer, who is housed in the Watershed Protection Department (WPD) and works on behalf of the Director of WPD.	Change the default director reference from the Planning and Development Review Department to the Watershed Protection Department.	Reflects the Environmental Officer's role and current alignment within the Watershed Protection Department.
9	25-8-2 Description of Regulated Areas	Clarification	Existing language is not clear and does not reflect current status of online resources available to the public.	Clarify language to reflect where the public can find reference maps and reflect the change to the definition of director.	Clarity.
10	25-8-21 Applicability	Policy	Although many environmental regulations technically apply to single-family residential construction, they have not been consistently applied during the building permit process. Small-scale multifamily residential projects are subject to more regulations than single-family residential projects with similar impacts.	Clarify which environmental regulations apply to single-family residential construction and apply only those regulations to qualifying small-scale multifamily projects.	Staff will be able to provide clear guidance to residential owners and homebuilders regarding applicability of environmental regulations to their projects. Small-scale multifamily projects will be subject to the same requirements as single-family residential projects with similar impacts.

Summary of Proposed Code Amendments Related to Resolution No. 20220609-061

	Code Section	Type of Change	Current Status/Concern	Proposed Improvement	Benefits
11	25-8-25 Redevelopment Exception in Urban and Suburban Watersheds	Policy & Clarifications	Current redevelopment exception standards are too restrictive regarding unpermitted development and too permissive regarding existing disturbance adjacent to waterways. Requirements related to vehicle trips and land use create barriers to projects that would otherwise be allowed by zoning.	Align language with the LDC Revision proposal. Require unpermitted development to be removed. Require existing impervious cover within a certain distance of a protected waterway to be removed and the area restored. Remove the vehicle trip limit and reference to a neighborhood plan. Reorganize and clarify language.	More projects would be able to use the redevelopment exception, which would result in improved water quality. Removing impervious cover immediately adjacent to a waterway would improve riparian habitat and water quality. Reorganization and wording changes improve clarity.
12	25-8-26 Redevelopment Exception in the Barton Springs Zone	Clarification	Current code uses the term "sedimentation/filtration pond" to refer to any water quality control that complies with Section 25-8-213.	Change the defined term from "sedimentation/filtration pond" to "standard pond" to clarify that green stormwater infrastructure can meet this requirement.	Clarity.

Summary of Proposed Code Amendments Related to Resolution No. 20220609-061

	Code Section	Type of Change	Current Status/Concern	Proposed Improvement	Benefits
13	25-8-27 Redevelopment Exception in the Water Supply Rural and Water Supply Suburban Watersheds	Policy & Clarifications	Current redevelopment exception standards are too restrictive regarding unpermitted development and too permissive regarding existing disturbance adjacent to waterways. Requirements related to dwelling units, vehicle trips, and land use create barriers to projects that would otherwise be allowed by zoning.	Align language with the LDC Revision proposal. Require unpermitted development to be removed. Require existing impervious cover within a certain distance of a protected waterway to be removed and the area restored. Remove requirement for Council approval based on dwelling units, vehicle trips, and land use.	More projects could use the redevelopment exception, which would result in improved water quality. Removing impervious cover immediately adjacent to a waterway would improve riparian habitat and water quality. Reorganization and wording changes improve clarity.
14	25-8-42 Administrative Variances	Policy & Minor Edits	The code sections allowed to be varied administratively by staff need to be updated for clarity and to reflect other proposed amendments.	Allow administrative variances for properties along Lake Austin. Allow administrative variances to allow a development to use conventional water quality ponds; to allow green stormwater infrastructure in the critical water quality zone (CWQZ); to allow driveways and private streets to cross a CWQZ; to allow residential construction in the CWQZ; and to allow cut or fill up to 8' for residential construction. Provide applicable conditions that must be met in order for staff to grant the proposed administrative variances.	Streamlines the review process and allows reasonable development that minimizes environmental impacts.

Summary of Proposed Code Amendments Related to Resolution No. 20220609-061

Code Section		Type of Change	Current Status/Concern	Proposed Improvement	Benefits
15	25-8-62 Net Site Area	Clarification	Existing language is not clear.	Clarify that net site area excludes areas designated for surface or subsurface wastewater irrigation.	Clarifies existing policy.
16	25-8-63 Impervious Cover Calculations	Minor Edits	Rainwater harvesting cisterns are considered impervious cover. Calculation of impervious cover does not align with residential review processes.	Remove rainwater harvesting cisterns from impervious cover calculations. Clarify when eaves, overhangs, balconies, etc. are considered impervious cover for residential building permits.	Removes disincentive to install rainwater harvesting cisterns. Improves consistencies between review departments.
17	25-8-64 Impervious Cover Assumptions	Clarification	Current code does not clearly require an applicant to demonstrate the buildability of subdivided lots.	Align language with the LDC Revision proposal. Require subdivision applicants to submit a buildability exhibit.	Protects future homebuilders by ensuring that platted lots can be developed in compliance with environmental regulations.
18	25-8-92 Critical Water Quality Zones Established	Policy & Clarification	The width of the critical water quality zone (CWQZ) setback along the Colorado River is not sufficiently protective. Existing language that exempts roadside ditches from CWQZs is not clear.	Increase the width of the CWQZ along the Colorado River downstream of Longhorn Dam from 200-400' to 400'. Clarify language that exempts roadside ditches from CWQZ requirements.	Provides greater protection of the Colorado River downstream of the Longhorn dam. Provides greater clarity regarding the intent of the roadside ditch exemption.
19	25-8-121 Environmental Resource Inventory Requirement	Minor Edits	The current environmental resource inventory (ERI) triggers do not accurately reflect whether Critical Environmental Features (CEFs) are likely to be present on a property.	Remove requirement to prepare ERIs in areas where CEFs are not more likely to be encountered, and require ERIs when they are.	Removes ERI waiver requirement for certain properties and clarifies the need for an ERI when CEFs are more likely to be present.

Summary of Proposed Code Amendments Related to Resolution No. 20220609-061

Code Section		Type of Change	Current Status/Concern	Proposed Improvement	Benefits
20	25-8-182 Development Completion	Clarification	Reference to Planning and Development Review Department does not accurately reflect the current process.	Update reference to the Watershed Protection Department.	Reflects the Environmental Officer's current alignment within the Watershed Protection Department and the change to the definition of director.
21	25-8-184 Additional Erosion and Sedimentation Control Requirements in the Barton Springs Zone	Clarification	Reference to Planning and Development Review Department does not accurately reflect the current process.	Update reference to the Watershed Protection Department.	Reflects the Environmental Officer's current alignment within the Watershed Protection Department and the change to the definition of director.
22	25-8-185 Overland Flow	Policy & Clarification	The intent of the overland flow section is to maintain infiltration and recharge of all waterbodies, not just seeps and springs. Overland flow should be directed to landscaped areas where possible in order to increase infiltration and reduce the need for irrigation of landscape areas.	Require stormwater to be directed to landscape areas when feasible. Update existing requirement to maintain infiltration and recharge to include waterways.	Increases infiltration, recharge, and beneficial use of stormwater. Clarifies the intent behind the need to maintain overland flow.

Summary of Proposed Code Amendments Related to Resolution No. 20220609-061

	Code Section	Type of Change	Current Status/Concern	Proposed Improvement	Benefits
23	25-8-213 Water Quality Control Standards	Policy & Clarification	Development is allowed but generally not required to use green stormwater infrastructure (GSI) to provide water quality treatment.	Require most development to use GSI (e.g., rain gardens, biofiltration, and other green controls prescribed in the ECM) to provide required water quality treatment. Allow exceptions for highly polluting land uses, regional ponds, and sites with more than 90% impervious cover. Clarify existing load reduction standards and liner requirements.	Increases infiltration, recharge, and beneficial use of stormwater. Provides additional ecosystem services and enhanced aesthetic benefits of stormwater control measures so that they can more seamlessly tie into open space areas available to end users.
24	25-8-214 Optional Payment Instead of Structural Controls in Urban Watersheds	Clarification	Language is outdated.	Change Environmental Board to Environmental Commission and update language to match current process.	Clarity.
25	25-8-232 Dedicated Fund	Clarification	Language does not reflect the new definition of director (used without a qualifier).	Add reference to Development Services Department.	Clarity.
26	25-8-233 Barton Springs Zone Operating Permit	Clarification	Reference to Planning and Development Review Department does not accurately reflect the current process.	Update reference to the Watershed Protection Department.	Reflects the Environmental Officer's current alignment within the Watershed Protection Department and the change to the definition of director.

Summary of Proposed Code Amendments Related to Resolution No. 20220609-061

	Code Section	Type of Change	Current Status/Concern	Proposed Improvement	Benefits
27	25-8-261(B), (C), (E), (G), and (H) Critical Water Quality Zone Development	Minor Edits & Clarifications	Lakefront development requirements are not included in the critical water quality zone (CWQZ) code section. The Colorado River is not sufficiently protected. Existing language regarding floodplain modification is not clear.	Consolidate environmental protections that specifically apply to the lakes into the CWQZ section. Include Lake Walter E. Long in code related to lakes. Update the minimum distance some types of development must be from the Colorado River to 200' instead of 100' to reflect the wider CWQZ proposed in Section 25-8-92. Clarify floodplain modification requirements.	Improves clarity and organization. Provides greater protection of the Colorado River downstream of Longhorn Dam.
28	25-8-261(D) and (F) Critical Water Quality Zone Development	Clarification & Policy	Existing requirements related to utilities are not clear. Allowing in-channel detention ponds and wet ponds creates significant disturbance to a creek and existing requirements are not sufficiently protective.	Clarify that requirements for utility lines also apply to utility easements and major replacements of an existing line. Allow additional flexibility if a utility line is installed with boring or tunneling, as currently described in the Environmental Criteria Manual. Require that stormwater outfalls minimize disturbance to the bank of the Colorado River. Only allow in-channel detention basins and in-channel wet ponds proposed as part of a public project or public-private partnership.	Improves clarity and provides greater protection for creeks and the Colorado River.

Summary of Proposed Code Amendments Related to Resolution No. 20220609-061

Code Section		Type of Change	Current Status/Concern	Proposed Improvement	Benefits
29	25-8-364 Floodplain Modification <i>(New section: 25-8-263)</i>	Clarification	Floodplain modification requirements are often confusing.	Relocate the floodplain modification section to follow critical water quality zone requirements, as proposed in the LDC Revision. Rename the division for clarity. Reorganize and reword floodplain modification requirements for clarity.	Clarity.
30	25-8-262 Critical Water Quality Zone Mobility Crossings	Clarification	Existing language does not reflect the new street classifications in the Austin Strategic Mobility Plan (ASMP). Trail crossing requirements are not clear.	Update street classifications to reflect the ASMP. Clarify that multi-use trails must comply with the ECM and existing no adverse impact standards.	Clarity.
31	25-8-281 Critical Environmental Features	Minor Edits & Clarifications	Critical environmental feature (CEF) buffers are not adequately protected on residential lots. Requirements for innovative runoff management practices are not clear. Subdivision requirements are not clear.	Clarify that residential lots may not include a CEF buffer. Clarify what types of innovative runoff management practices are allowed within 50' of a CEF. Clarify when CEF and buffer locations must be shown on development applications.	Improves protection for CEFs and clarity for applicants and staff.

Summary of Proposed Code Amendments Related to Resolution No. 20220609-061

Code Section		Type of Change	Current Status/Concern	Proposed Improvement	Benefits
32	25-8-282 Wetland Protection	Policy & Minor Edit	Wetlands associated with the shores of Lady Bird Lake are not protected in the downtown area. There are no existing design criteria that would allow a wetland to be used as a water quality control.	Protect all wetlands along the shores of Lady Bird Lake, including in the downtown area. Clarify that a wetland cannot be used as a water quality control. Clarify review and approval authority.	Improves water quality of Lady Bird Lake. Clarity.
33	25-8-323 Temporary Storage Areas; Topsoil Protection	Policy	Soils compacted by construction activity do not provide sufficient infiltration of stormwater.	Decompaction requirements added to code requirements. Require areas that are intended to remain pervious to be protected during construction or decompacted after construction.	Improves infiltration of stormwater by ensuring that pervious areas are functioning as intended.
34	25-8-341 Cut Requirements	Minor Edits	Driveways that are allowed to cross slopes pursuant to 25-8-301 typically also require cut over 4'.	Allow cut up to 8' for construction of a street or driveway necessary to provide primary access if the cut is the minimum necessary to comply with safety requirements.	Improves consistency among code requirements. Streamlines the application process by eliminating a common variance request.
35	25-8-342 Fill Requirements	Minor Edits	Driveways that are allowed to cross slopes pursuant to 25-8-301 typically also require fill over 4'.	Allow fill up to 8' for construction of a street or driveway necessary to provide primary access if the fill is the minimum necessary to comply with safety requirements.	Improves consistency among code requirements. Streamlines the application process by eliminating a common variance request.

Summary of Proposed Code Amendments Related to Resolution No. 20220609-061

	Code Section	Type of Change	Current Status/Concern	Proposed Improvement	Benefits
36	25-8-367 Relocation of Shoreline Between Tom Miller Dam and Longhorn Dam	Minor Edits	This section was written to protect drinking water supply, dam operations, and recreation on Lady Bird Lake and is not related to water quality protection. It is no longer necessary.	Remove section.	Removes unnecessary requirements and increases permitting efficiency for some projects.
37	25-8-368 Restrictions on Development Impacting Lake Austin, Lady Bird Lake, and Walter E. Long	Clarification	The location of these requirements is confusing and difficult to find.	Move this section to be adjacent to the critical water quality zone requirements for lakefront development.	Clarity.
38	Chapter 25-8, Subchapter B, Article 2 Endangered Species	Clarification	The endangered species notification requirements are confusing and inefficient.	Streamline and clarify when an applicant must notify other jurisdictions about potential impacts to endangered species habitat.	Clarity.

Fiscal Impact Analysis of Proposed Code Amendments

Background

City Council Resolution No. 20220609-061 initiated Land Development Code amendments related to environmental, drainage, and landscape requirements. The resolution also directed staff to conduct a Fiscal Impact Analysis for each proposed code or process change and to address the potential costs of taking no action, or not adopting the proposed code amendments.

The potential fiscal impact and cost of taking no action for each initiated code amendment is provided below. (For a summary of the proposed amendments, please see the Ordinance Amendment Review Sheet and Attachment B.)

1. Establish criteria that prioritize when green stormwater methods should be required or incentivized over conventional stormwater controls;

Fiscal Impact Analysis

The proposed code amendments would require most sites to use green stormwater infrastructure, or GSI, to meet water quality treatment requirements. The controls that constitute GSI are listed in Section 1.6.7 of the Environmental Criteria Manual, which includes biofiltration systems. This analysis assumes that most private development will choose to comply with the GSI requirement using biofiltration systems, as they are the most cost-effective and space-efficient of the green controls.

Biofiltration systems are similar to sedimentation/filtration systems in design and footprint area, with the primary difference being the inclusion of plants in the filtration basin of the control. These plants enhance the removal of pollutants and provide valuable ecosystem services such as climate change resilience, carbon sequestration, improved air quality, enhanced biodiversity, and urban heat island mitigation. The projected fiscal impact is primarily driven by the need to review, inspect, and maintain these planted systems.

Impact to City Staffing

Stormwater ponds that serve residential subdivisions are inspected and maintained by the City of Austin Watershed Protection Department (WPD). Ponds that serve multifamily and commercial development are inspected by WPD and maintained by the property owner. All ponds maintained by the City of Austin must comply with criteria requiring turf grass or groundcover instead of more intensely planted systems. Residential subdivisions have the option to install more intense plantings but are responsible for all additional vegetation maintenance. This provision limits the impact on WPD Field Operations directly resulting from this proposed code change.

There is, however, a need for WPD to hire at least one additional vegetation maintenance crew, which is comprised of a supervisor and four full-time employees. WPD currently has one vegetation maintenance crew; adding a second is necessary to address existing capacity issues, support future criteria updates, and ensure the continued success of the City's overall GSI program. WPD uses its capital improvement projects as an opportunity to learn best practices about how to build and maintain GSI in a cost-effective manner, which then informs criteria updates for private development. A second vegetation maintenance crew will allow WPD to provide a higher level of service to the GSI controls that the department does maintain, which will help sustain the benefits provided by GSI. Adding a second crew might also enable WPD to support more densely planted controls for residential subdivisions, which would increase the benefits provided by the controls.

WPD is also proposing to create a new position to train staff and external stakeholders on how to maintain green stormwater controls. The planting requirements for GSI require different maintenance practices than conventional controls. In order to increase plant survival and help the development community adapt to this change, this new position would be responsible for sharing best practices with the development community through training and outreach.

Finally, the Development Services Department (DSD) reviews development applications and inspects sites to ensure compliance with City of Austin code and criteria. DSD reviews and inspects all water quality ponds associated with new development and redevelopment. This code change will have an incremental impact on the time required to perform each review and inspection, but it is not expected to increase the staffing needs of the impacted working groups.

While it is likely that private development will choose to comply with this requirement using biofiltration systems, there is a potential for this change to result in a shift to other forms of GSI like rain gardens or rainwater harvesting. It may be necessary to add review and inspection staff in the future, because the use of rain gardens instead of biofiltration tends to result in multiple controls per site. This increase could result from interactions with other code requirements, like Functional Green, that incentivize the use of other types of stormwater controls. It is also possible that certain site conditions will lead applicants to consider more distributed approaches for meeting their water quality requirements.

A shift from sedimentation/filtration systems to rain gardens, rather than biofiltration systems, would increase the total number of controls to be reviewed and inspected. To account for this potential, we have included two impact scenarios in the table below. The ‘Impact of Increased Rain Gardens’ scenario assumes a portion of applicants will choose to use more distributed stormwater controls, like rain gardens, instead of a single biofilter, resulting in a 50 percent increase in the total number of water quality ponds.

Table 1 – Summary of Fiscal Impacts by Work Group

Work Group	Impact of Biofiltration	Impact of Increased Rain Gardens
Watershed Protection		
Field Operations Division	Moderate impact. Propose to create new FTE position responsible for training internal staff and external stakeholders best maintenance practices for GSI.	No Change
Pond Maintenance and Vegetation Crews	Minimal impact. There is minimal difference in the maintenance requirements of biofiltration ponds with turf grass compared to sedimentation/filtration systems. However, there is a large FTE staffing need related to the maintenance of current and future green stormwater controls built as part of the City’s Capital Improvement Program.	No Change

Pond Inspection and Dam Safety	Minimal impact. This change will marginally increase inspection times for planted systems but will not impact overall staffing needs.	Moderate impact. An increase in the number of controls per site will increased the annual volume of inspections since there will be more controls to inspect for each site plan. This will be monitored and staffing needs will continue to be evaluated.
Development Services		
Water Quality Review	Minimal impact. This change will marginally increase review times but will not impact overall staffing needs.	Moderate impact. An increase in the number of controls per site will increased the annual volume of reviews since there will be more controls to review for each site plan. This will be monitored and staffing needs will continue to be evaluated.
DSD Inspections	No impact.	Minimal impact. An increase in the number of controls per site will increased the annual volume of inspections since there will be more controls to inspect for each site plan. This will be monitored and staffing needs will continue to be evaluated.

Impact to City Projects

The City of Austin has been a national leader in incorporation of GSI into its Capital Improvement Program. In 2007, City Council passed a resolution (Resolution No. 20071129-046) requiring City buildings and associated site development to maximize opportunities to include GSI to meet water quality requirements. In 2014, Austin City Council adopted a Complete Streets Policy that directs transportation projects to use green streets practices that "[incorporate] landscape, stormwater controls, and sustainability elements to improve ecological and human health." Since the Complete Streets Policy was adopted, over 25 rain gardens have been installed with mobility projects.

Since the City of Austin has led by example and prioritized the use of GSI in its own projects, the proposed changes will have minimal impact to the cost of City capital improvement projects compared to current conditions. However, as new green stormwater controls continue to be constructed with new City facilities and mobility projects, these controls will need ongoing vegetation and periodic functional maintenance by the Watershed Protection Department or other City departments. For this reason, it is necessary to consider the long-term maintenance needs of the City’s current and future GSI portfolio. (See *Impact to City Staffing*, above.)

Cost of No Action

A wide variety of sources agree that the green controls promoted by this ordinance provide tangible community benefits. Biofiltration systems and other vegetated controls like rain gardens can sequester carbon, mitigate urban heat island effects, and benefit the mental and physical health of our community. Many of these ecosystem benefits are directly related to the intensity of plantings within the control area.

Human Health Benefits

Research has documented benefits of urban greenspace on human health and well-being, including positive effects on anxiety and mood. Simply having views of outdoor green space has been shown to reduce stress. Additionally, studies have also shown that greener urban settings can reduce adult depression. The presence of nature in and around the places in our everyday lives provides a valuable restorative experience. In addition to mental health benefits, access to nature and green infrastructure in cities has been shown to reduce rates of asthma, cardiovascular disease, obesity, diabetes, high blood pressure, and pregnancy complications.

Urban Heat Island

Trees and plants keep temperatures cooler by providing shade, deflecting solar radiation, and evapotranspiring moisture into the atmosphere. Buildings and pavement displace these natural cooling processes by retaining heat and using air conditioning that increases the surrounding air temperature. This creates an ‘urban heat island’ where daytime temperatures can be up to seven degrees higher than nearby rural areas. Vegetated ponds reduce this effect.

Carbon Sequestration

Biofilters can contribute to carbon sequestration and atmospheric carbon dioxide reduction by fostering perennial vegetation. Even small areas of herbaceous cover can store carbon, which can increase substantially as the system ages (i.e., 3.34 kg carbon per square meter after 21 years).

Data

Table 2 – FTE Impact Table

	Impacted Work Group			
	DSD - WQ Review	DSD - Inspections	WPD - Pond Maintenance	WPD - Pond Inspections
Annual Volume of New Biofilter Sites	50	50	4	50
Annual Volume of New Planted Biofilter Sites	43	43	0	14
Additional Volume High RG Scenario	25	25	0	25
Current Time Per Site (Hours)	1.0	0.7	48.0	0.5
Additional Time Per Planted Site	10%	0%	100%	50%
Additional Time Per Year (Hours)	4.3	0.0	0.0	3.6
Additional Time Per Year High RG (Hours)	31.8	17.0	0.0	22.3

- 2. Require surface parking lot stormwater to enter pervious parking lot islands, landscaped medians, and perimeter landscapes as a method of water quality and require that pavement be graded to allow runoff to enter planting areas;**

Fiscal Impact Analysis

Due to the existing requirements for partial stormwater irrigation of landscape areas found in LDC 25-2-1008, Development Review Department Environmental Review staff already conducts a high-level review of stormwater conveyance in parking lots to check for compliance with 25-2-1008. The proposed code change removes this existing stormwater irrigation requirement, which in turn will remove the requirement that applicants provide the required landscape area and stormwater percentage calculations that are needed to demonstrate compliance with existing requirements. The proposed code

change will significantly simplify the review process, and will eliminate the need for landscape architects to fill out the Innovative Water Management table found in ECM Appendix C. Therefore this code change will have a neutral or positive effect on both staff and applicant's time. No additional staff are anticipated with this code change.

Cost of No Action

The intent of this amendment is to require that applicants disconnect stormwater in order to achieve better infiltration of stormwater into the ground, thus reducing run-off, allowing more stormwater to become available to support plant life, reducing the urban heat island effect, and capturing pollutants before entering a pipe where they will flow to a water quality pond and then be discharged to a receiving water body. The Watershed Protection Department has promoted disconnected stormwater since at least 2010, when the original Innovative Water Management code requirement was put forth. This code change takes that original requirement a step further, while simplifying the review process.

3. Implement Functional Green requirements for properties with more than 80% allowable impervious cover;

Fiscal Impact Analysis

The new requirement for Functional Green Landscape is expected to increase review and inspection times, at least temporarily. Staff anticipates an increase of 46 hours per month for DSD Environmental Review (approximately one FTE) and at least 15 hours per month for DSD Environmental Inspection (approximately one-third of an FTE). Inspection times for DSD Environmental Inspection will increase beyond that if many projects opt for rain gardens, which can require multiple additional hours to inspect.

Data

Calculations for additional review and inspection time are based on the following assumptions.

1. 5% of site plan permit applications are expected to be redevelopment exception projects that would have IC > 80%.
2. 10% of site plan permit applications are expected to be urban projects that would have IC > 80%.
3. 156 site plan permit applications per month (average calculated from Microstrategy dashboard data for October 2019 through July 2022).
4. Review: 2 hours of additional review expected per project (1 hour for the first submittal; 30 minutes each for two subsequent submittals). This additional time is expected to decrease as reviewers and applicants learn the new requirements.
5. Inspection: 0.63 additional hours for each landscape inspection. This additional time is expected to decrease as inspectors and contractors learn the new requirements.

Cost of No Action

A wide variety of sources agree that greener urban design standards, even for densely developed sites, promote a wide range of ecosystem services that enhance the quality of life for urban residents. Features proposed as a part of Functional Green will help to mitigate urban heat island effects, benefit the mental and physical health of our community, promote biodiversity conservation and wildlife habitat – critical to sustaining our regional food web, conserve potable water, and provide more aesthetically pleasing landscapes in cities.

Urban Heat Island

Trees and plants keep temperatures cooler by providing shade, deflecting solar radiation, and evapotranspiring moisture into the atmosphere. Buildings and pavement displace these natural cooling processes by retaining heat and using air conditioning that increases the surrounding air temperature. This creates an ‘urban heat island’ where daytime temperatures can be up to seven degrees higher than nearby rural areas. Vegetated ponds reduce this effect.

Human Health Benefits

Research has documented benefits of urban greenspace on human health and well-being, including positive effects on anxiety and mood. Simply having views of the outdoors has been shown to reduce stress. Additionally, studies have also shown that greener urban settings can reduce adult depression. The presence of nature in and around the places in our everyday lives provides a valuable restorative experience. In addition to mental health benefits, access to nature and green infrastructure in cities has been shown to reduce rates of asthma, cardiovascular disease, obesity, diabetes, high blood pressure, and pregnancy complications.

Biodiversity Conservation and Wildlife Habitat

Studies show that even small patches of urban wildlife habitat have a measurable impact on promoting larger ecosystem services and in providing refuge for urban species. Additionally, planting diverse native and adapted species as proposed in functional green promotes regional biodiversity efforts critical to supporting the full trophic web and our regional food production systems.

Water Conservation

Provisions in Functional Green including native plantings and cisterns promote reduced potable water use. Native and climate-adapted plantings require less water for irrigation and are more likely to survive drought scenarios. Cisterns can be used to provide water for irrigation needs for much of the calendar year.

4. Require that all subdivisions and site plans in Urban Watersheds meet steep slope protections;

The Council resolution directed staff to engage stakeholders about this proposed amendment and to return to Council for consideration in November. Therefore, no code amendments are proposed at this time and will instead be proposed at a later date.

5. Allow cisterns to be sized beyond the required storm capture amount and remove requirement for stormwater release so that they can supply irrigation needs throughout the year;

The Land Development Code and Environmental Criteria Manual currently allow cisterns to be sized beyond the required storm capture amount, and there is no requirement that the additional volume be released in 48 to 72 hours. Therefore, no code amendments are proposed at this time.

6. Require new and redeveloped projects to use greenfield conditions as a baseline when calculating drainage requirements;

The Council resolution directed staff to engage stakeholders about this proposed amendment and to return to Council for consideration in November. Therefore, no code amendments are proposed at this time and will instead be proposed at a later date.

7. Prohibit in-channel detention ponds, except for capital projects or private/public partnerships where no other alternative is feasible;

Fiscal Impact Analysis

Prohibiting the use of in-channel detention ponds and in-channel wet ponds would have a neutral to positive impact on City staffing. Under current code, in-channel ponds require complex sediment transport modeling, which is time consuming to explain to applicants and review. Limiting the use of in-channel ponds would therefore decrease the review time for the few projects per year that currently propose in-channel ponds. Additional staff time would be required for projects that request a variance from the new provision, but variances are likely to be very rare so the impact would be minimal. Additionally, there have been variance requests for additional grading necessary to allow in-channel detention ponds in the past and the potential for future grading variances is high due to the inability for staff to grant administrative variances for grading in excess of the allowable amount adjacent to waterways. Processing Land Use Commission variances has a significant effect on staff time. The proposed code amendment would still allow the City to construct in-channel ponds if truly necessary, so there would be no potential cost impacts to City projects.

Cost of No Action

Constructing in-channel detention ponds and in-channel wet ponds creates significant disturbance to a creek and the adjacent riparian habitat. Continuing to allow these ponds could result in significant erosion, decreased water quality, and loss of habitat.

8. Require projects to relocate replaced or upsized wastewater pipes outside of the inner half of the critical water quality zone;

Fiscal Impact Analysis

Existing stream buffer code protections do not allow utility lines to be placed in the inner half of the critical water quality zones (CWQZs) of urban or suburban watersheds, and do not allow any utility lines in the CWQZs within the Drinking Water Protection Zone watersheds. Although there is a higher potential for negative environmental impacts from wastewater lines specifically, the code already prohibits all utility lines from being located in the inner half. Staff's recommendation is to clarify that this prohibition extends to major replacements of existing utility lines. Because the recommended code change is only a clarification to existing policy, the proposed code change will have a neutral effect on City projects.

Cost of No Action

The clarification will provide guidance to project managers and design engineers proposing new or major replacements of existing utility lines. Without this change there will continue to be a gray area related to major replacements of existing lines, which would allow future conflicts to persist related to the preferred location of utility lines that are proposed to be replaced entirely or enlarged to receive additional wastewater. These conflicts have resulted in denied Land Use Commission variances in the past, causing delay and additional cost to both Austin Water utility staff and their projects, and to Environmental Review staff tasked with reviewing the projects for compliance with the LDC.

9. Provide wetland protections and buffers equally along Lady Bird Lake to help to stabilize and prevent erosion along the shoreline;

Fiscal Impact Analysis

The proposed code amendment would extend wetland protections to wetlands along Lady Bird Lake between Lamar Boulevard and I-35. This would result in a small number of additional wetland reviews, but it is not expected to increase the staffing needs of the impacted working groups. The proposed change would apply to City projects along the lake, but the existing code provides several protection methods for wetlands. Much of the area that will have wetland protections is City of Austin parkland. While City projects should follow best practice for development along the lake and provide wetland mitigation for impacts, current code does not specifically require wetland mitigation for City projects. Therefore, there could be some additional cost to City parkland projects that are proposed to occur within 150 feet of a shoreline wetland. Lakefront wetland mitigation typically consists of protective methods to avoid direct impacts to wetland vegetation and enhancement of the wetland fringe by additional planting. While this cost is not typically sufficient to cause delays to the project, there could be additional permitting time and construction cost associated with meeting wetland mitigation requirements.

Cost of No Action

If the proposed amendment is not adopted, wetlands along Lady Bird Lake can continue to be removed or negatively impacted by private and public development. This would result in decreased water quality and loss of wetland habitat to one of the most significant outdoor spaces in the City of Austin.

10. Require utility easements to meet the same standards as utility pipes within the creeks and creek buffers; and

Fiscal Impact Analysis

The requirement that utility easements meet the same standards as utility pipes within creeks will help encourage project managers and design engineers secure easements in locations that will allow future utility lines to be constructed without the need to seek Land Use Commission variances. Land Use Commission variances are never guaranteed, and therefore it is less risky to secure easements in administratively supportable locations so that projects are not forced to redesign after the design process has been completed during the review process. However, securing easements in land located further away from creek centerlines may be more difficult to obtain and more costly, so there could be additional up front costs to new utility projects.

Cost of No Action

Leaking utility infrastructure has negative environmental and public safety consequences to waterways. Water line breaks in creeks can result in fish kills that must be reported to the Texas Commission on Environmental Quality. Wastewater line leaks can result in high bacteria levels that cause waterways to be dangerous to the public. Additionally, utility lines in creeks can be difficult to access without large access drives that will negatively affect the riparian functioning of the land adjacent to the creek, resulting in degraded water quality, bank erosion, lack of wildlife habitat, and less natural open space available to the public. However, Austin Water staff have expressed concern that the resultant need for additional lift stations may also have negative environmental effects from spills.

11. Address current environmental code inconsistencies and other minor code revisions in Chapters 25-7 and 25-8 that staff have previously identified and reviewed as part of the Code Next and the Land Development Code revision processes.

Fiscal Impact Analysis

Staff are proposing a variety of minor code amendments that were previously included in the LDC Revision. Most of the proposed amendments are clarifications of existing code requirements, which will decrease the amount of staff time needed for development review and have no impact on the cost of City projects. A few of the minor code amendments do change the existing code requirements; these are categorized as “policy” or “minor edits” in the summary of proposed amendments provided in Attachment B. However, all of the minor edits that change existing code requirements have either a positive or neutral impact on review time and project cost. None of the proposed minor amendments will require additional staff or increase City project costs.

Cost of No Action

The minor code amendments clarify and streamline existing code requirements. Not adopting these provisions would result in applicants and staff spending more time on the permitting process.

12. The initiated ordinances will ensure that, for the same environmental impact as a single-family home, the City does not disincentivize small-scale missing middle housing projects.

Fiscal Impact Analysis

The proposed code amendments aim to clarify which of the environmental code requirements apply to one- and two-unit residential projects and to qualifying missing middle projects that will be eligible for a streamlined review process. Therefore there will likely be impacts to Environmental Review staff housed in the Development Services Department who will be tasked with determining whether or not some one- or two-unit residential projects comply with environmental regulations that are not currently reviewed during the building permit process. Staff time will be needed to develop a process for streamlining this review so that DSD Environmental Review staff are only brought in when necessary.

The proposed small project site plan process for missing middle projects could incentivize some residential projects to shift from one- or two-unit projects to larger scale projects of up to eleven units. Therefore there could be a shift of review staff burden from residential review staff to the review staff who are involved in the site plan review process.

Cost of No Action

While watershed regulations are not the primary reason why there is a lack of missing middle projects in the City of Austin, they are one of many regulatory burdens that place additional cost on such projects, which may drive developers to propose one- or two-unit residential projects that are not subject to water quality requirements rather than projects with additional units. The proposed small project site plan proposal for missing middle projects would establish a process by which certain missing middle projects could take advantage of fewer regulations and a more streamlined process, thereby helping the City achieve its goals of allowing additional housing types within the urban core. Without this change all projects that propose three or more units will have to follow the full site plan review process with the same water quality requirements as all other multi-family or commercial developments. Additionally, the code will continue to be unclear with regards to the applicable environmental code requirements for single-family building permits.

13. The City Council directs the City Manager to evaluate the effectiveness of existing Critical Water Quality Zone and Erosion Hazard Zone buffers on the Colorado River downstream of the Longhorn Dam and to propose protections that will provide adequate protections to the river that will ensure a healthy riparian corridor to stabilize the riverbank and protect property from erosion.

Fiscal Impact Analysis

The Colorado River downstream of Longhorn Dam is an invaluable and irreplaceable environmental and cultural resource. Unlike Lady Bird Lake and Lake Austin, the Colorado River downstream of Longhorn Dam is not a reservoir with a constant level. It is a mobile and dynamic waterway that meanders through highly erosive alluvial soils. By promoting healthy trees and vegetation along the river corridor and allowing the river adequate space to migrate over time, the proposed code changes will enhance water quality, help reduce erosion and property loss, and provide multiple community benefits.

Impact to City Staffing

Changing the trigger for an erosion hazard zone analysis from 100 feet to 400 feet will likely increase the total amount of review time for sites where this requirement applies since additional types of uses in the outer half of the Critical Water Quality Zone will now require an analysis. However, it is difficult to quantify the increase in staff time since it will largely depend on the proposed construction and whether additional steps for review (e.g., Level 2 analysis, protective works, slope stabilization) are necessary.

Impact to City Projects

Since the new code would also increase the size of the Critical Water Quality Zone (CWQZ) to a standard 400 feet for the entire length of the Colorado River downstream from Longhorn Dam, most erosion hazard zone analyses would be for the uses that are permitted within the CWQZ. However, the proposed code change means an analysis would be triggered for more types of uses that are only allowed in the outer half of the CWQZ (e.g., multi-use trails, park facilities, wastewater lines, green stormwater ponds). Capital improvement projects proposing these types of uses within the CWQZ will have to include an erosion hazard analysis within their planning and design to ensure that the proposed improvements are located outside the erosion hazard zone or protective works are provided. However, the EHZ analysis is a desktop exercise using simple geometric calculations and utilizes data that is typically already gathered by the engineer in the site design process (e.g., hydrologic and hydraulic models, surveyed cross-sections, topographic data). In addition, it is in the best interest of all City departments to locate or protect infrastructure such that it does not become endangered by erosion. In doing so, the City saves money by not needing to repair, relocate, or protect public infrastructure.

Cost of No Action

Not adopting additional protections for the Colorado River downstream of Longhorn Dam will result in less preservation of healthy soils, trees, and vegetation along the river corridor as well as a greater risk of water quality degradation over time. In addition, more structures and infrastructure will potentially be threatened by future erosion. Designing and constructing stabilization projects along the Colorado River is incredibly complex and often prohibitively expensive. As an example, the October 2015 flood event caused significant bank erosion along the Colorado River and undermined the raw water intake for the Sand Hill Energy Center as well as Fallwell Lane—the primary access route to Sand Hill and the South Austin Regional Wastewater Treatment Plant. Stabilizing the bank of the Colorado River to protect the Austin Energy substation and Fallwell Lane is estimated to cost \$9 million. The proposed code changes will reduce the long-term financial burden on the City as well as private property owners by requiring new development to account for potential future erosion and safeguard valuable resources.

Equity Response, Summary, and Recommendations

2022 Environmental Code Amendments

A Technical Assistance Group (TAG) was assembled with a diverse staff including members from the Equity Coordination Team, cross-organizational Equity and Inclusion Program Managers from within and outside of the Watershed Protection Department, City of Austin Environmental Officer and Deputy, and Watershed Protection Department (WPD) planning and policy staff. This TAG was tasked to engage in evaluation and discussion regarding the proposed environmental code amendments requested from City council. Given the time constraints provided for this evaluation, a thorough equity assessment was not feasible to complete using the Government Alliance for Racial Equity (GARE) model; however, through workshop discussions, this document will present discussion points, recommendations, and points of consideration for additional evaluation.

The code amendments, while subject to many reviews and revisions, had previously elicited feedback and received positive support from community and environmental stakeholders. This was a supportive factor to the discussion and continued pro-active transparency and engagement with community, as well as internal equity assessments, would be recommended and supported for future amendment requests. **The consensus of the work group was that the amendments offered potentially positive community impacts with unknown affordability concerns that could pose potential unintended consequences. Based on information provided in the working sessions, the TAG supported moving forward with the amendments with conditions. Details of these recommendations are listed below.**

Throughout the workshop discussion, many concerns were raised regarding unknown cost burdens of many of the amendments in alignment with affordability and displacement. TAG members were advised that an affordability impact statement as well as a fiscal impact analysis were being developed concurrently. To explore the potential unintended burdens and negative impacts to community, further collaborative analysis of equity and affordability should be done. This analysis should also distinguish between costs to deeply affordable housing that are meant to increase permanence to vulnerable communities versus market rate developments. Lastly, consideration should be given to how to quantify displacement risk as a cost.

Planning staff indicated that the proposal includes amendments that promote environmental improvements, including those related to green stormwater infrastructure and wastewater line location requirements, that provide probable community health benefits. A summary of the potential benefits to human and environmental health is included in the WPD Fiscal Impact Analysis, underway at the time of this review. In order to meaningfully evaluate for equity impacts it is imperative to include any potential health-related impacts. Communities of color and low-income communities have been shown to have disproportionately worse physical, mental, and environmental health outcomes compared to other communities. It will be important to promote strategies that can improve health-related quality of life outcomes while identifying mitigation strategies to meaningfully reduce any negative impacts, such as affordability or displacement risk.

In understanding the critical impact that policies and regulations have on our most vulnerable communities, future equity assessments should be thoroughly conducted as amendments are proposed

versus as they are scheduled to be approved. This would present an opportunity to include actual changes to future amendments if items are discovered to have a negative or neutral racial equity impact. Providing adequate time to meaningfully assess potential equity impacts creates opportunity for advocacy for our most vulnerable and impacted communities. Completing thorough equity assessments using the GARE model is the basis for a standard Equity Assessment in Watershed Protection with intention to continue to provide critical analysis and evaluate how projects and regulations impact our vulnerable communities. Evaluating these choice points and identifying unintended burdens to community takes time and commitment from the authoring teams as well as future TAG members. Time invested for these projects allow for opportunities to identify historical precedent and opportunities to engage community and stakeholders. To ensure findings of an Equity Assessment can be meaningfully developed, considered, and implemented, it is essential to scope an assessment in coordination with the WPD Equity Coordination Team as early in the process as possible.

Based on this initial evaluation of the 2022 Environmental Code Amendments Phase 1 deliverable, we identified a combination of unknown, potential positive, potential negative, and neutral racial equity impacts. We recommend that WPD allocate resources to implement the following recommendations to amplify potential positive or neutral impacts and mitigate potential negative impacts:

- Recommend immediate development of a WPD program to provide funding to cost share deeply affordable housing developments to meet existing water quality and drainage requirements as well as the proposed code amendments related to “green” infrastructure. The goal of program would be to promote community and environmental health benefits while offsetting any potential affordability impacts due to additional cost.
- Recommend immediate attention to potential internal equity impacts within Watershed Protection, specifically to the Field Operations Division, in coordination with findings in the Fiscal Impact Analysis. Evaluate potential impacts to workload and allocate immediate resources for staffing, training, facilities, and equipment to ensure there is abundant capacity to meet the anticipated increases that may result from this proposal. Ensure Field Operations Division is a primary stakeholder in developing and implementing related future recommendations such that design standards are oriented towards long term maintenance needs.
- Recommend tracking for staff administrative variances in proposal to ensure accountability in internal equitable decision-making.
- Recommend the TAG continue to coordinate with the project team on the Phase 2 deliverable and conduct a more in-depth assessment of equity impacts for the specific components of the proposal. This work may include development of a proposed framework and process for evaluating code amendments for equity impacts going forward.
- Develop scope for a full equity assessment of all environmental code to be conducted in 2023 with recommendations for potential code changes presented to Council by Fall of 2023.

We understand that the recommendations will require additional resources and further scoping, which can be coordinated with the WPD Equity Coordination Team. We urge the Executive Team to allocate WPD resources to this effort, as identified.