

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

	Code Section	Type of Change	Current Status/Concern	Proposed Improvement	Benefits
27	25-8-262 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.
28	25-8-364 Floodplain Modification (New section: 25-8-263)	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.
29	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.
30	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.

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Code Section		Type of Change	Current Status/Concern	Proposed Improvement	Benefits
31	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.
32	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.
33	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.
34	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.
35	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.
36	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.

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37	<i>New subchapter:</i> Chapter 25-8, Subchapter C 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.

## **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	<b>Moderate impact.</b> Propose to create new FTE position responsible for training internal staff and external stakeholders best maintenance practices for GSI.	<b>No change.</b>
Pond Maintenance and Vegetation Crews	<b>Minimal impact.</b> 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.	<b>No change.</b>

Pond Inspection and Dam Safety	<b>Minimal impact.</b> This change will marginally increase inspection times for planted systems but will not impact overall staffing needs.	<b>Moderate impact.</b> An increase in the number of controls per site will increase 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	<b>Minimal impact.</b> This change will marginally increase review times but will not impact overall staffing needs.	<b>Moderate impact.</b> An increase in the number of controls per site will increase 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	<b>No impact.</b>	<b>Minimal impact.</b> An increase in the number of controls per site will increase 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. 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.

**9. 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.

## **10. 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; and**

### **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.

## **11. 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.



## Phase 1 Fiscal Impact Summary

Code Amendment	Overall Impact	Additional FTE	Other Cost Impacts to City	Notes
<b>Green Stormwater Infrastructure</b>	Minimal to Moderate	1 GSI Maintenance Trainer*	Marginal increase in staff time related to water quality reviews	FTE impact for review and inspection may be higher if applicants choose to comply with multiple SCMs
<b>Parking Lot Islands</b>	Neutral or Positive	None	None	Simplifies review process
<b>Functional Green</b>	Minimal	1 DSD Env. Reviewer	None	Anticipated increase of 46 hours per month for EV Review and 15 for EV Inspections.
<b>In-channel Detention</b>	Positive	None	None	Simplifies review process
<b>Lady Bird Lake Wetland Protections</b>	Minimal	None	Additional costs for City parkland projects within 150' of a shoreline wetland	
<b>Minor Revisions</b>	Positive	None	None	Clarifies review process
<b>Missing Middle</b>	Minimal under current proposal	Potential shift of review burden among DSD staff	None	Staff impacts are highly dependent on the expected volume of small projects
<b>Colorado River Protections</b>	Minimal	Likely increases review time	More City projects will need to complete EHZ analysis	Avoids future costs to repair, relocate, or protect public infrastructure and private development

\* WPD recommends adding an additional vegetation crew (5 FTES) to support the proposed amendment. While the proposal does not directly drive new impacts to COA maintenance, these FTEs would address existing capacity challenges, support criteria improvements to simplify private compliance, and ensure the continued success of the City's overall GSI program.

# 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, 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