



2022 Environmental Code Amendments Phase 1

Planning Commission

September 27, 2022



Objective



- Respond to portion of Resolution 20220609-061 that requires staff to bring forth an ordinance amending Title 25 related to environmental protection.
- Due September 15, 2022
- Key subject areas
 - Stormwater
 - Landscape
 - **Water Resource Protection**
 - **Colorado River Protections**
 - Previously identified minor code amendments and other amendments that meet the objectives of the resolution
 - **Don't Disincentivize Missing Middle**



Progress So Far



- Internal Watershed Protection Dept (WPD) technical staff
- Input from other departments including
 - **Development Services Department**
 - Austin Water
 - Austin Transportation
 - CoA Project Connect Office
 - Housing and Planning
 - Law
- 7/25/2022 Environmental Commission Workgroup
- 8/3/2022 Environmental Commission Update
- 8/18/2022 Codes and Ordinances Joint Committee
- 8/23/2022 Planning Commission Briefing
- 9/6/2022 Zoning and Platting
- 9/7/2022 Environmental Commission
- 9/13/2022 Planning Commission
- 9/20/2022 Zoning and Platting Commission (Recommended)
- 9/21/2022 Environmental Commission (Recommended)



Next Steps



- 9/27/2022 Planning Commission
- 10/13/2022 City Council

Phase 2: Greenfield Detention Requirements and Urban Slope **Protection**

- **September & October Commissions**
- **November City Council**





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



Rain garden



Conventional Stormwater Control (Sedimentation & Filtration Pond)





Benefits of Green Stormwater Infrastructure (GSI)

- Improved ecosystem services
- Improved stormwater infiltration
- Soil health
- Wildlife habitat
- Heat island mitigation
- Water conservation
- Aesthetic value







GSI Timeline

- 2012: Imagine Austin approved
- 2013: Watershed Protection Ordinance approved
- 2014: Phase 2 of the Watershed Protection Ordinance
 Austin Water Resource Planning Task Force
- 2015: Green Infrastructure Working Group WPD CodeNEXT Team
- 2016: Development and approval of draft code language
 Natural & Built Environment Prescription Paper
- 2017: GSI proposal included in CodeNEXT

Cistern at Reilly Elementary





GSI Timeline





Rain garden along Butler Trail

 2017: Original GSI proposal include in Draft 1 and 2 of CodeNEXT

> Revised GSI proposal developed for inclusion in Draft 3

Council Resolution for

Green Infrastructure/GSI

- 2018: CodeNEXT process ended by City Council
- 2019: Council adopts policy direction to guide LDC Revision GSI proposal revised for

inclusion in public draft

- 2020: LDC Revision halted after District Court ruling
- 2022: New Council Resolution from City Council (20220609-061)





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

- Adopt LDC Rewrite 2nd Reading Recommendation
- Code Amendments
 - Require GSI for sites with less than 90% impervious cover
 - Carve outs for sites that treat existing impervious cover with an area greater than 10 acres or for sites that may generate highly contaminated runoff
 - Allow administrative variance with conditions
- Future Environmental Criteria Manual (ECM) amendments to more clearly define GSI
- Consider improvement to sedimentation/filtration pond design standards





"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"

- Staff do not recommend requiring all landscape areas to serve as water quality controls for water quality treatment requirements
- Remove requirement that all parking lot landscape areas be protected by a 6" curb (LDC 25-2-1007 Parking Lots)
- Remove stormwater irrigation requirement (LDC 25-2-1008 Irrigation Requirements)
- Require applicants to drain stormwater to landscape areas where possible (LDC 25-8-185 Overland Flow)





"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"

- Land Development Code and Environmental Criteria Manual already allow cisterns to be sized beyond required storm capture amount = no code amendment necessary
- ECM update to continue investigating emerging technology, including smart controls, to determine release requirements for water quality
- Continued close collaboration between Austin Water and WPD staff



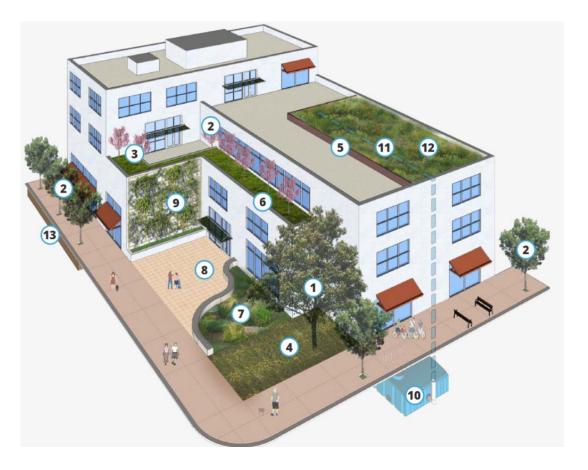
What is Functional Green?



"Implement Functional Green requirements for properties with more than 80% allowable impervious cover"

Functional Green Landscape is based on the ecosystem service value created by landscape. It is intended to improve ecological balance, replenish native vegetation, and enhance public health, safety, and welfare.

The Functional Green Score measures the total amount of ecosystem services provided by the landscape elements proposed for a development site. Landscape plans are required to reach a total target Functional Green Score based on the assigned value per square foot area of each landscape element in relation to the area of the site.





What is Functional Green?



Required number of points based on site area for high impervious sites.

Landscape elements may include:

- Existing or newly planted trees
- Shrubs, ornamental grasses, perennial forbs, groundcovers
- Turf areas maintained for aesthetic or athletic uses
- Vegetated wall
- Irrigation with alternative water sources
- Vegetated roof
- Rain gardens
- Porous pavement
- Suspended pavement system (for improved urban tree health)
- Pollinator resources
- Publicly accessible green space adjacent to ROW or public sidewalk





Functional Green



"Implement Functional Green requirements for properties with more than 80% allowable impervious cover"

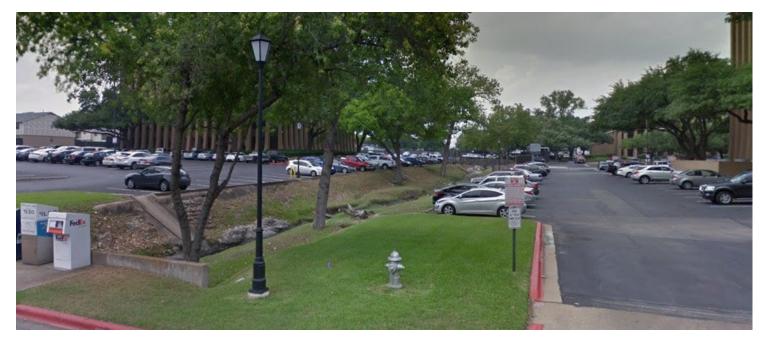
- Uphold previous recommendation from LDC rewrite 2nd reading with minor edits
- New Landscape Section in LDC 25-8 Subchapter C
- Applies to Central Business District and Downtown Mixed-Use zoning districts and other sites with greater than 80% allowable impervious cover



Water Resource Protection



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



Example of existing in-channel detention pond

Draft Recommendation

 LDC code amendment to 25-8-261(F) which allows in-channel detention and wet ponds

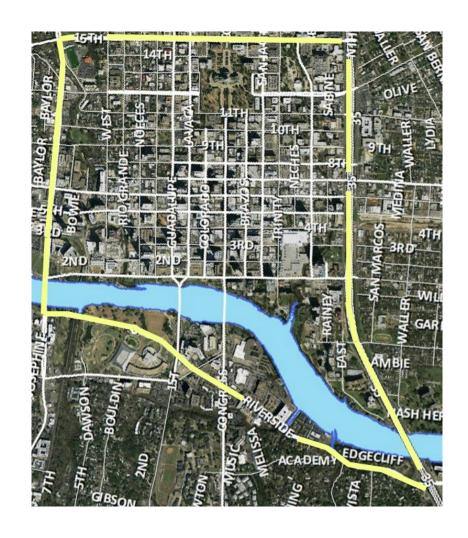


Water Resource Protection



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

- Code amendment to LDC 25-8-282(A) **Wetland Protection**
- Retain existing exemptions for wetlands bounded by I-35, Riverside Dr. Barton Springs Rd, Lamar, and 15th Street but carve out the wetlands associated with Lady Bird Lake.





Colorado River Protections



"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"

Existing LDC requirements include:

- Erosion Hazard Zone analysis within 100' of the Ordinary High Water Mark (OHWM)
- Critical Water Quality Zone (CWQZ) established at 200'-400' feet depending on 100-year floodplain
- No special consideration for stormwater discharge on highly erodible bank of the Colorado River



Colorado River Protections



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- Code amendment to LDC 25-7-32 Director Authorized to Require Erosion Hazard Zone Analysis — expanded to 400' from Ordinary High Water Mark (OHWM)
- Code amendment to LDC 25-8-92 Critical Water Quality Zones Established to expand CWQZ to 400' from OHWM
- Code amendment to LDC 25-8-261(E) to require new stormwater outfalls to discharge in drainages located upstream of the Colorado River
- Update City of Austin Property Profile viewer to show estimated location of OHWM





"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 process.

The City Council initiates other code amendments, as necessary, to accomplish the goals of this Resolution. The City Council expects that these code amendments will use the previous staff work and, where appropriate, adhere as closely as possible to the language and intent of the ordinances previously drafted and reviewed through the proposed revision of the Land Development Code."



- Update to correct department names and accountable officials
- Minor reorganization of certain sections
 - Minor revisions to titles to improve readability
 - 25-8 Division 1 Critical Water Quality Zone Restrictions renamed Waterway and Floodplain
 - 25-8 Floodplain modification criteria moved directly after Critical Water Quality Zone
 - 25-2-1179(B) Bulkhead wave abatement requirements moved to 25-8-261(C)
 - Move lake fill/land capture & lake dredge requirements to 25-8-261(C)
- Minor edits to improve clarity without changing intent
 - Edits to floodplain modification language
 - Edits to roadside ditch exemption
- Exempt rainwater harvesting cisterns from impervious cover calculations





- Streamline and clarify process for redevelopment exceptions in Urban, Suburban, Water Supply Suburban, and Water Supply Rural watersheds
- Minor edits to Barton Springs Zone redevelopment exception to allow GSI when sedimentation/filtration ponds are currently required
- Update Environmental Resource Inventory requirement to remove certain (WQTZ, EA Contributing Zone, DWPZ) triggers and add requirement for upland ponded areas previously identified in GIS
- Update street crossing requirements to use language consistent with ASMP





- Allow Critical Environmental Feature (CEF) variances to be approved at staff level except when mechanized pedestrian access (aka trams) is proposed within 500' of Lake Austin
- Allow Stormwater Control Measures (SCM) retrofits in floodplain and within 50' of a CEF to address existing drainage issues
- Clarify existing subdivision requirements related to CEFs
- Remove code language that explicitly allows wetlands to serve as water quality controls





- Update cut/fill restrictions to allow cut/fill in excess of 4' for construction of street or driveway necessary to provide primary access with conditions
- Remove 25-8-367 Relocation of Shoreline Between Tom Miller Dam and Longhorn Dam
- Simplify Endangered Species Notification





"WHEREAS, small-scale missing middle housing projects (projects ranging from approximately 3 to 12 units) are required to comply with the same water quality, drainage, and site plan requirements as large scale multifamily residential project, while single-family homes are not subject to those requirements, creating an incentive for developers to build single-family homes over missing middle housing to avoid water quality regulations, contributing to urban sprawl and the housing affordability crisis; and

WHEREAS, a large single-family home can actually have more impervious cover than a multiunit development, and the amount of impervious cover for a project is one of the key factors affecting drainage regardless of project type and should be taken into account when evaluating water quality and drainage requirements for site plans;...

"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"





- Clarify which elements apply to single family residential
 ex: impervious cover definitions, erosion/sedimentation control,
 waterway protections for lots platted after May 18, 1986,
 clearing of vegetation, cut, fill, Save Our Springs (SOS)
- Adopt similar process requirements as proposed in LDC Rewrite





- Allow up to 11 units (unless more allowable via Affordability Unlocked program) on existing single family lots to qualify as small project site plans
- Same environmental requirements as those that apply to single family residential
- Impervious cover limit of 55%
- Site limit of half acre or less
- Administrative variance option for lots with waterway setbacks that were established after platting





- Require Small Project Site Plan Applications for qualifying projects
 - Established review process with existing fee structure for partnering departments
 - No notice
 - Faster review time





Staff Report and Analysis





Staff Report Overview

- Ordinance Amendment Review Sheet
- Attachment A: Summary of Proposed Code Amendments
- Attachment B: Fiscal Impact Analysis
- Attachment C: WPD Equity Review
- Affordability Impact Statement





Ordinance Amendment Review Sheet

- Summary of initiated code amendments and staff proposal
- Next steps
 - ECM updates
 - Basic updates to implement amendments
 - Comprehensive updates of GSI criteria
 - Policy guidance
 - Work with AW to define "major replacement" of a utility line, conditions that would support a variance
- Staff recommendation
 - Recommend approval of proposed amendments
 - Request that Council or Planning Commission initiate amendments to relocate Landscaping to Chapter 25-8(C)
- Summary of Commission and Council actions

C20-2022-005a

ORDINANCE AMENDMENT REVIEW SHEET

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

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

Proposed Language: Draft language is included as Attachment A

<u>Summary of proposed code changes</u>: A summary of the proposed code changes is included as Attachment B.

<u>Background</u>: 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:

 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.





Amendments

- Code Section
- Type of change
- Current status/concern
- Proposed improvement
- Benefits

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

8/17/2022

	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.





- Impacts to City staffing & City projects
- GSI
 - Assumption: private development will use biofiltration systems to comply; scenario with distributed controls
 - WPD staff impacts
 - FOD: I new FTE to train internal and external stakeholders on best maintenance practices
 - Pond Inspection & Dam Safety: minimal impact from biofiltration (inspection time); moderate impact from distributed controls (more controls)
 - Pond Maintenance & Vegetation Crews: minimal impact from biofiltration with turf/groundcover; recommend 1 new crew to address existing capacity issues, maintain CIP projects, maybe provide flexibility for planting requirements

Attachment D
Fiscal Impact Analysis

Fiscal Impact Analysis of Proposed Code Amendments

Backeround

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.)

 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 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.





• GSI, cont.

- DSD staff impacts
 - Water Quality Review: minimal impact from biofiltration (review time); moderate impact from distributed controls (more controls)
 - Inspections: no impact from biofiltration; moderate impact from distributed controls (more controls)
- Impacts to City projects
 - Minimal impacts to project cost because most City projects already use GSI (2007 Council resolution, Complete Streets Policy, WPD CIP projects)

Functional Green

- Increase review and inspection time for DSD staff
- 1 FTE in Environmental Review, 1/3 FTE in Environmental Inspection





- Prohibiting in-channel ponds
 - Neutral to positive impact on staffing (decreased review times)
 - No impact to City projects; in-channel ponds still allowed if no alternative
- New utility lines, major replacements, and easements in CWQZ
 - Clarification of current code; neutral to positive impact on staffing
 - Holding easements to the same standard as utility lines reduces risk by eliminating the need for a variance
 - Acquiring compliant easements might be more costly; increase in cost for projects that would have acquired a non-compliant easement





- Wetland protections along Lake Bird Lake
 - Minimal impact on staffing (increased reviews)
 - Potential increase in permitting time and construction cost for City parkland projects that require wetland mitigation
- Other minor amendments
 - Clarifications: neutral to positive impact on staffing (decreased review times), no impact to project cost
 - Code changes: neutral to positive impact on staffing and project cost
- Not disincentivizing missing middle
 - Increase in review time for some 1- and 2-unit projects; decrease in review time for qualifying 3- to 11-unit projects





- Expanded CWQZ and EHZ analysis buffer on Colorado River downstream of Longhorn Dam
 - Expanded EHZ analysis buffer likely to increase staff review time because development in the outer half of the CWQZ will trigger analysis
 - Expanded CWQZ limits the type of development that can be located outside of the floodplain between 200-400 feet of the OHWM
 - More City projects may require EHZ analysis and either be relocated or provide protective works for proposed development
 - However, protecting public infrastructure from erosion saves the City money in the long run



Attachment C: Equity Response, Summary, and Recommendations



 Key findings of Technical Assistance Group

- Amendments offer potentially positive community impacts with unknown affordability concerns that could pose potential unintended consequences
- Supported moving forward with the amendments with conditions
- Recommendations
 - 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

WPD Equity Response

Equity Response, Summary, and Recommendations

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

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

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

human and environmental health is included in the WPD Fiscal Impact Analysis, underway at the time of 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

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



Attachment C: Equity Response, Summary, and Recommendations

- Recommendations, cont.
 - Recommend immediate attention to potential internal equity impacts within WPD, specifically to FOD, 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



Attachment C: Equity Response, Summary, and Recommendations



- Recommendations, cont.
 - 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**

