

AUSTIN LAND DEVELOPMENT CODE

Environmental Commission
CodeNEXT: Draft 3
February 21, 2018

SHAPING THE AUSTIN WE IMAGINE



CODENEXT

BRIEFING ON CODENEXT DRAFT 3



OUTLINE

- Draft 3 impervious cover analysis results
- Major watershed-related changes new to Draft 3
- Summary of localized flood modeling results
- Landscape and Functional Green



MATERIALS AVAILABLE IN BACKUP

1. Summary of Major and Minor Water Quality and Drainage Changes (Drafts 1 - 3)
2. Tables of Major Policy Considerations
3. Draft 3 Code Excerpts
 - Drainage
 - Water Quality
 - Residential Development Regulations
 - Urban Forest Protection and Replenishment
 - Landscape (Code and Functional Green Overview)
 - Civic Open Space
 - Conservation Land, Park, and PUD Zones
 - Parkland Dedication



DRAFT 3

What does CodeNEXT Draft 3 carry forward?

- Flood risk reduction requirements
- Drainage standards
- Stream & lake buffers
- Watershed impervious cover limits
- Critical environmental feature setbacks
- Steep slope protections
- Cut & fill limits
- Erosion & sedimentation control requirements
- Water quality treatment standards
- Tree protections

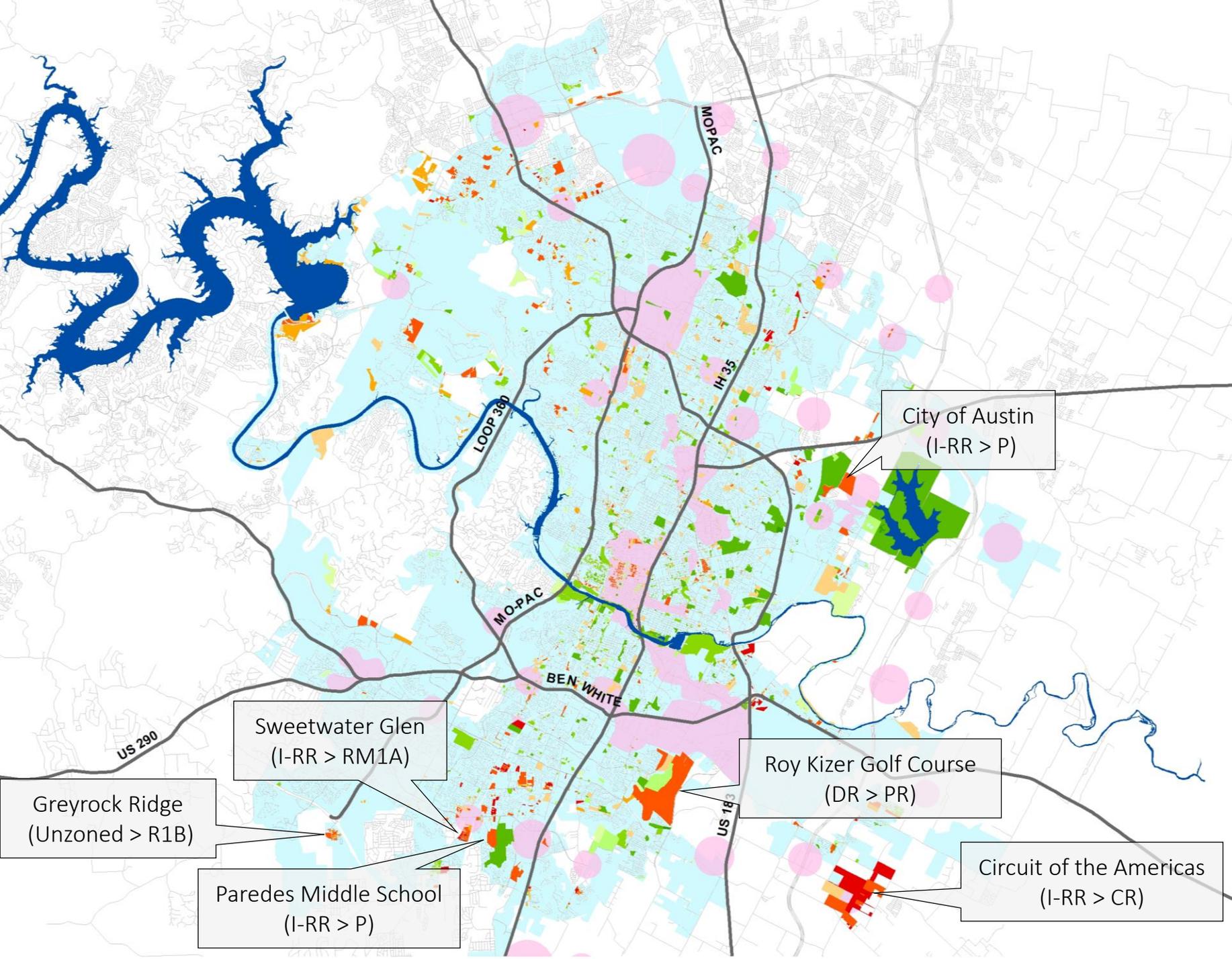


IMPERVIOUS COVER ANALYSIS: DRAFT 3

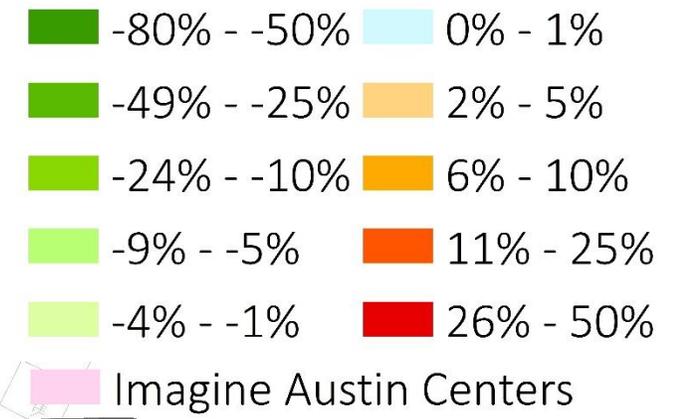
Area	Existing Impervious Cover	Current Code: Maximum Impervious Cover	CodeNEXT Draft 3: Maximum Impervious Cover	Difference between Current and Proposed Entitlements
Zoning Jurisdiction	26.8%	45.8%	45.4%	-0.44%
Urban Watersheds	50.6%	64.6%	63.4%	-1.14%

Note: This analysis does **not** account for steep slopes, critical environmental feature setbacks, landscape, and protected trees. These requirements potentially lower the total amount of impervious cover for any given parcel.





Percent change from current impervious cover entitlements



MAJOR CHANGES NEW TO DRAFT

3

Chapter 25-8A (Water Quality) → 23-3D (Water Quality)

- Simplified beneficial use proposal to require the use of green stormwater infrastructure to capture and treat the entire water quality volume, for most sites.
- Specified applicable regulations for single-family, two-family, and “missing middle” projects (1 to 6 units).
- Added provision that a residential lot may not contain the buffer associated with a critical environmental feature (in addition to not including the feature).



MAJOR CHANGES

23-3D-6: Water Quality Control and Green Stormwater Infrastructure Standards

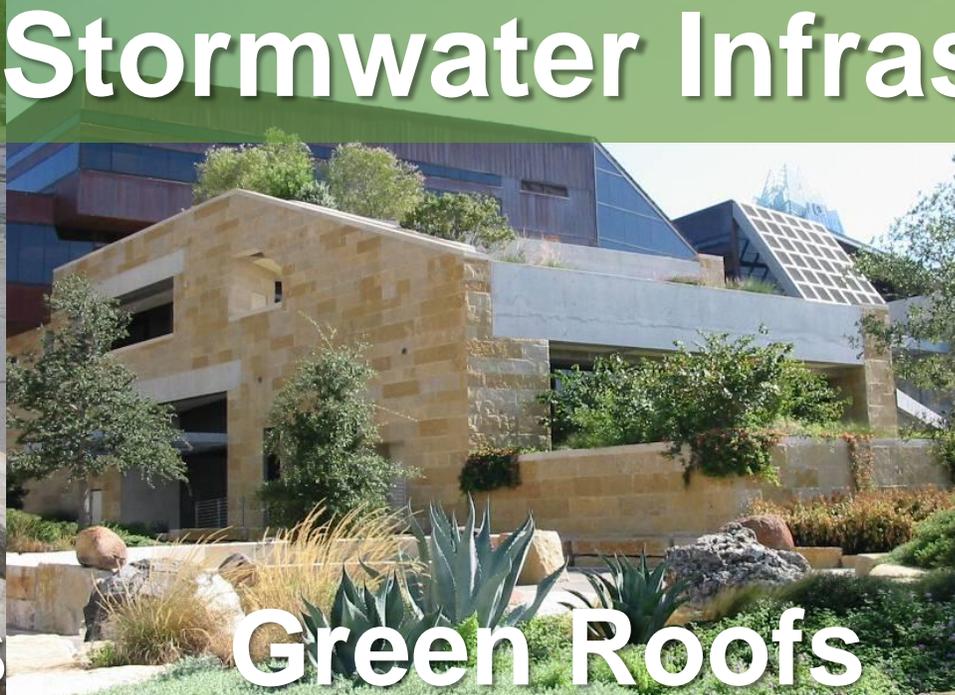
- Simplified beneficial use proposal to require the use of green stormwater infrastructure to capture and treat the entire water quality volume.
 - Conventional water quality controls (e.g., sand filter) allowed under certain conditions, including residential subdivisions, hot-spot land uses (e.g., automotive repair), and regional ponds.
 - Sites with greater than 80% impervious cover may also use conventional controls, but to do so would need to capture stormwater for onsite irrigation (or indoor use) based on a water budget; rainwater harvesting given more flexibility for longer drawdown times.
 - Administrative variance for unique site conditions.
 - Changed the reference from a sedimentation-filtration treatment standard to a more general load reduction standard.



Green Stormwater Infrastructure



Rain Gardens



Green Roofs



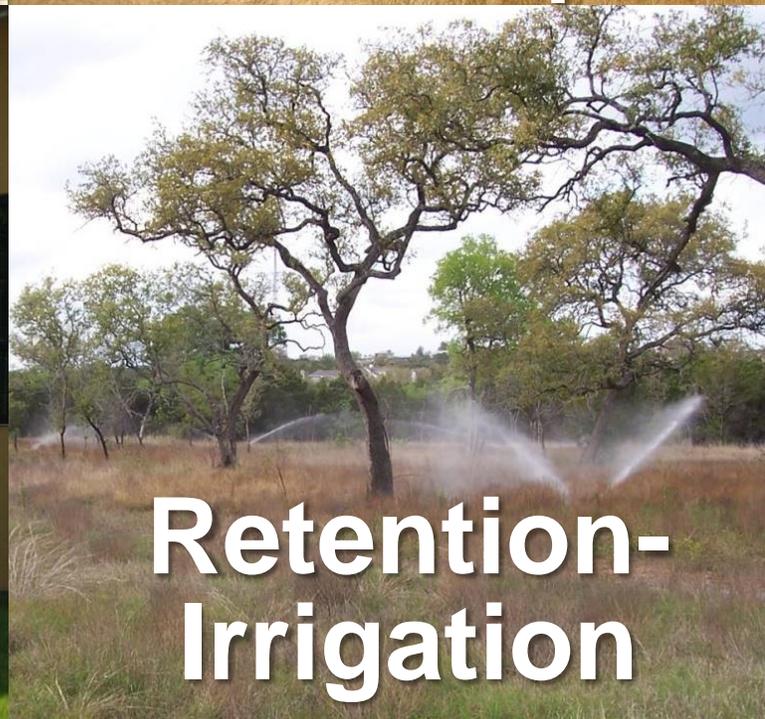
**Vegetative
Filter Strips**



**Porous
Pavement**



**Rainwater
Harvesting**



**Retention-
Irrigation**

MAJOR CHANGES NEW TO DRAFT

3

Chapter 25-7 (Drainage) → 23-10E (Drainage)

- Specified applicable regulations for single-family, two-family, and “missing middle” projects (1 to 6 units).
- Clarified that Regional Stormwater Management Program (RSMP) eligibility will be based on a comparison to existing conditions, but participation will be based on a comparison to undeveloped conditions (e.g., the payment will be calculated as if the site was undeveloped).
- Added exemption from requirement to reduce peak rates of discharge to undeveloped conditions for existing impervious cover associated with City roadway projects.*

*Inadvertently left out of initial Draft 3 publication. This language will be included in the updated staff recommendation.



3

23-2A-3: Residential Development Regulations

- Goal: Better tailor applicable regulations and permit review procedures to a project's overall scale and intensity.
- Divides residential development into 3 categories:
 - 1 to 2 units: Require a higher level of environmental and drainage review than current practice.
 - 3 to 6 units (“missing middle”): Create a new, scaled and streamlined single-permit process for 3 – 6 unit development on residentially-platted lots.
 - Over 6 units: Full site plan with building permit



MAJOR CHANGES NEW TO DRAFT

3

1 – 2 units

- Historically, environmental and drainage regulations have not been applied at the individual lot level.
- Current practice includes impervious cover, floodplain, and erosion hazard zone review.
- Draft 3 requires review for and compliance with the following additional elements:
 - Engineer's certification that any drainage changes will not negatively impact adjacent properties, if the new structure, addition, or change in roof pitch is larger than 300 square feet and is located on an unplatted tract or within a subdivision approved more than 5 years previously;
 - Comprehensive Watershed Ordinance creek buffers for properties subdivided from May 18, 1986 to Oct. 27, 2013;
 - Watershed Protection Ordinance creek buffers for properties subdivided on or after Oct. 28, 2013 or within 75 feet of the shoreline of a lake;
 - Construction on slopes requirements, for properties subdivided on or after May 18, 1986; and
 - Cut/fill limits



MAJOR CHANGES NEW TO DRAFT

3

3 – 6 units (“missing middle”)

- Creates a new, scaled single-permit process for 3 - 6 unit development on residentially-platted lots.
- Offers a faster, lower-cost path for residential projects that provide a diversity of housing types while maintaining impervious cover and resulting environmental/drainage impacts of 1 - 2 family projects.
- Qualifying projects must
 - be located outside the Barton Springs Zone
 - cannot exceed 45% impervious cover; and
 - cannot require a Land Use Commission variance.



3

Residential Development (1 - 6 units)

Environmental requirements

- Impervious cover (zoning)*
- Tree protection*
- Creek buffers (based on date of subdivision)
- Steep slopes (based on date of subdivision)
- Cut/fill restrictions
- Erosion and sedimentation controls*
- Lake protections

Drainage requirements

- Floodplain*
- Erosion hazard zone*
- Engineer's certification that any drainage changes will not negatively impact adjacent properties



MAJOR CHANGES NEW TO DRAFT 3

Residential Development (1 - 6 units)

Draft 2

Parcels	Parcels with creek buffers		Parcels with slopes over 15%*		Total Eligible Parcels
	Pre-86**	Post-86, 2013	Pre-86	Post-86, 2013	
1 – 2 unit	17,521	4,594	24,234	9,604	136,672
3 – 6 unit	1,746	233	480	502	27,128
Total	19,267	4,827	24,714	10,106	163,800

Draft 3

Parcels	Parcels with creek buffers		Parcels with slopes over 15%*		Total Eligible Parcels
	Pre-86**	Post-86	Pre-86	Post-86	
1 – 2 unit	17,702	4,431	19,522	11,696	171,231
3 – 6 unit	190	182	138	525	3,742
Total	17,892	4,613	19,660	12,221	174,973

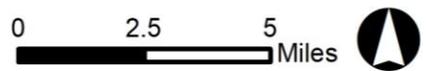
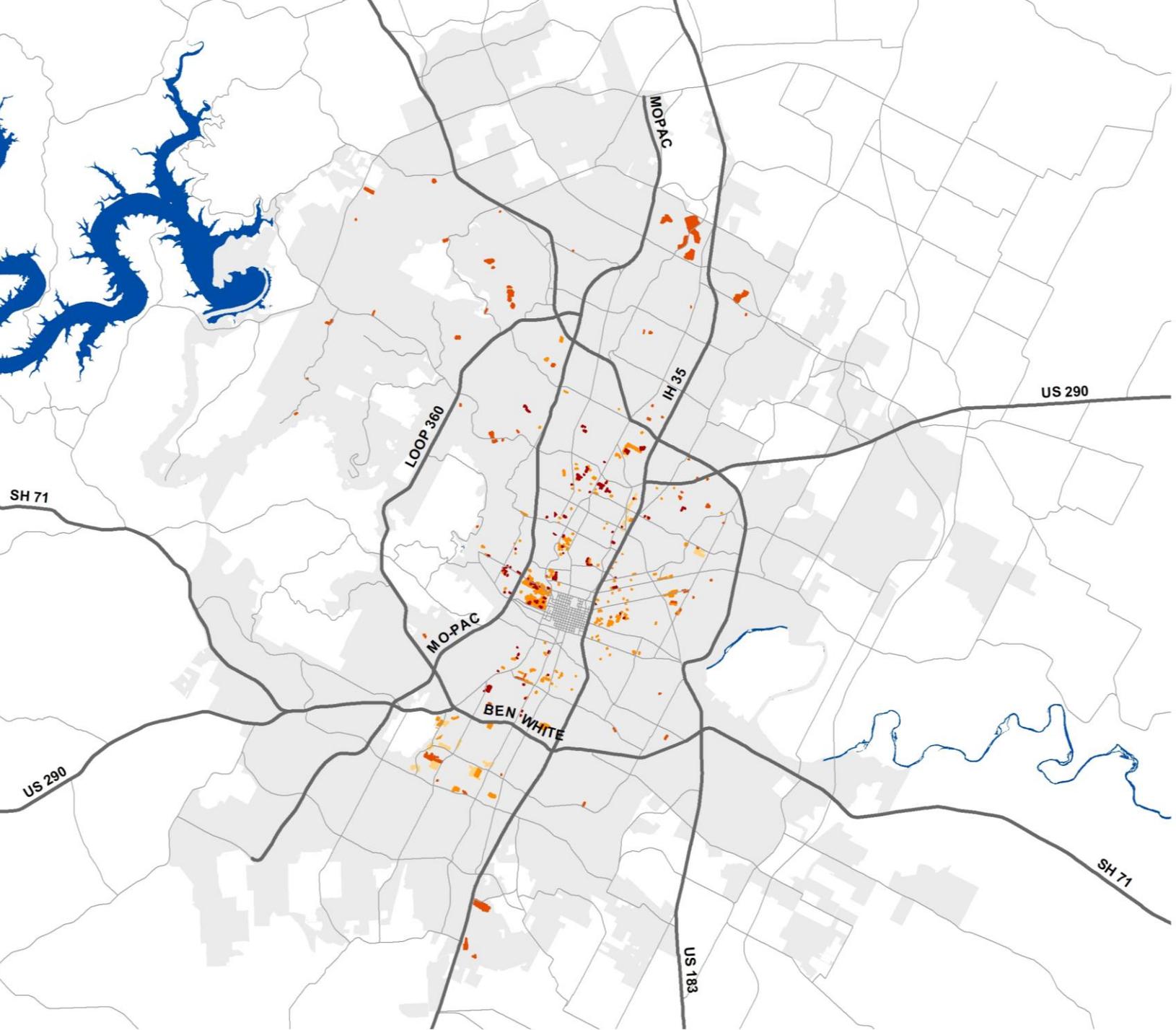


*Not including Urban watersheds, parcels with < 25 square feet of high slope area, or areas within buffers

**Subdivisions with no recorded date assumed to be pre 1986

Potential 3 - 6 unit parcels

- R3
- R4
- RM1A
- RM1B
- Zoning Jurisdiction



SUMMARY OF LOCALIZED FLOOD MODELING RESULTS



LOCALIZED FLOODING RESULTS

Flood Risk Reduction Proposal

- Redevelopment must provide its proportionate share of flood risk reduction.
- Site plan (e.g., commercial, multifamily) and residential subdivision projects must limit post-development peak flow rates of stormwater runoff to that of the site with **zero impervious cover**.
- Off-site drainage improvements or a payment-in-lieu of detention will be an option where greater benefits are provided; projects must still prove no adverse downstream impacts.

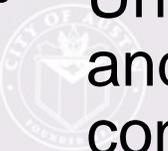


IMPACT OF FLOOD PROPOSAL

Draft 3 Zoning

Area	Pct. of City Area	Existing Impervious Cover (%)	Allowed Maximum Impervious Cover (%)		Difference in Existing IC vs. Max. Proposed Entitlements	Pct. of Citywide Unbuilt Impervious Cover
			Current LDC	Proposed LDC		
Single-Family Residential	27%	23%	34%	34%	11%	16%
Commercial/Multifamily	19%	38%	61%	63%	24%	25%
F25/PUDs	24%	18%	60%	60%	42%	54%
Public (e.g., parkland)	14%	2%	13%	8%	6%	4%
No Zoning (e.g., Unzoned, roadways)	15%	56%	57%	57%	1%	1%
Total	100%	26.8%	45.8%	45.4%	18.6%	100%

- Under the new proposal, all commercial/multifamily properties and most PUDs and F25 tracts would have to provide flood risk reduction relative to undeveloped conditions.

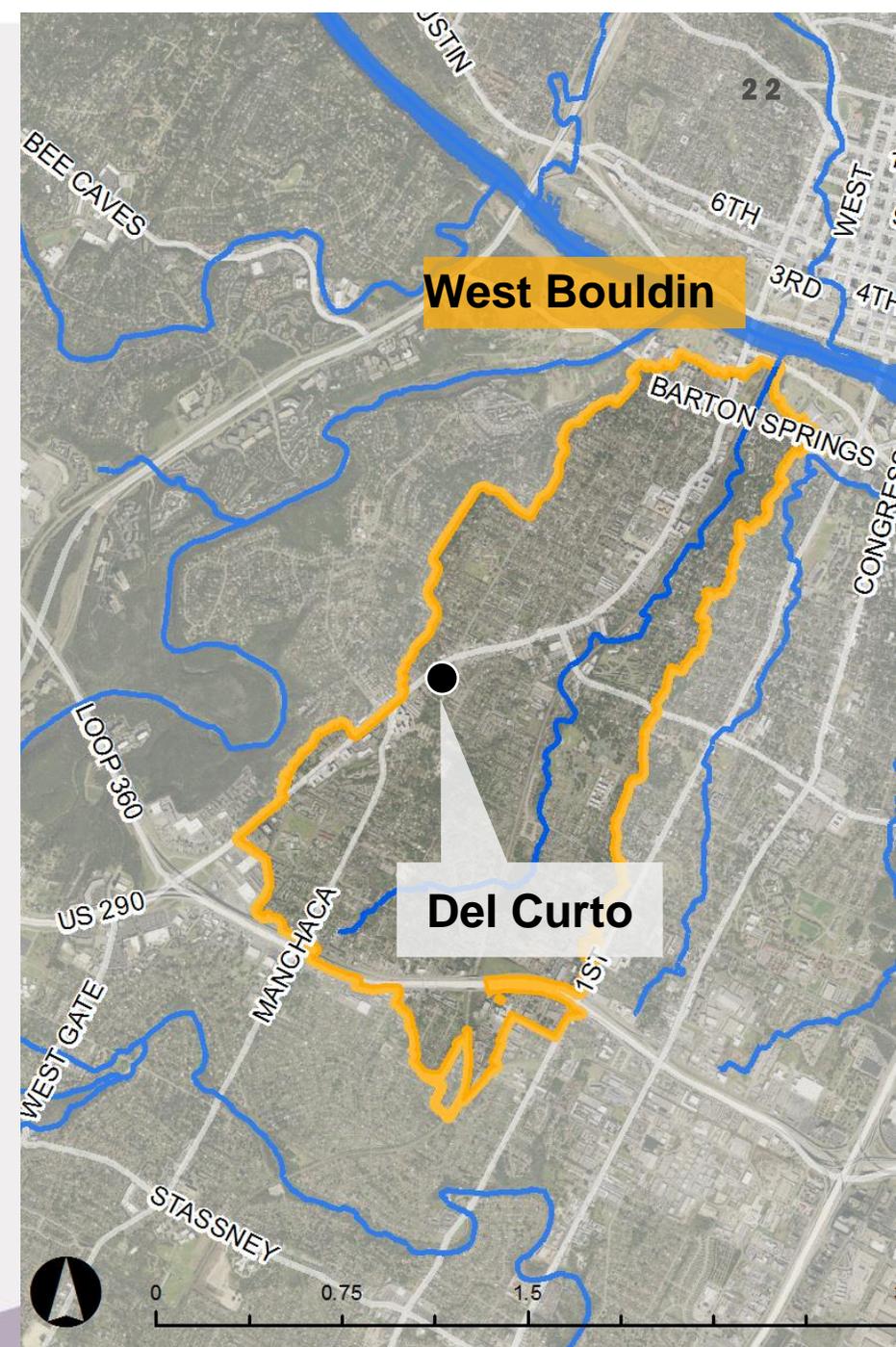


LOCALIZED FLOOD MODELING

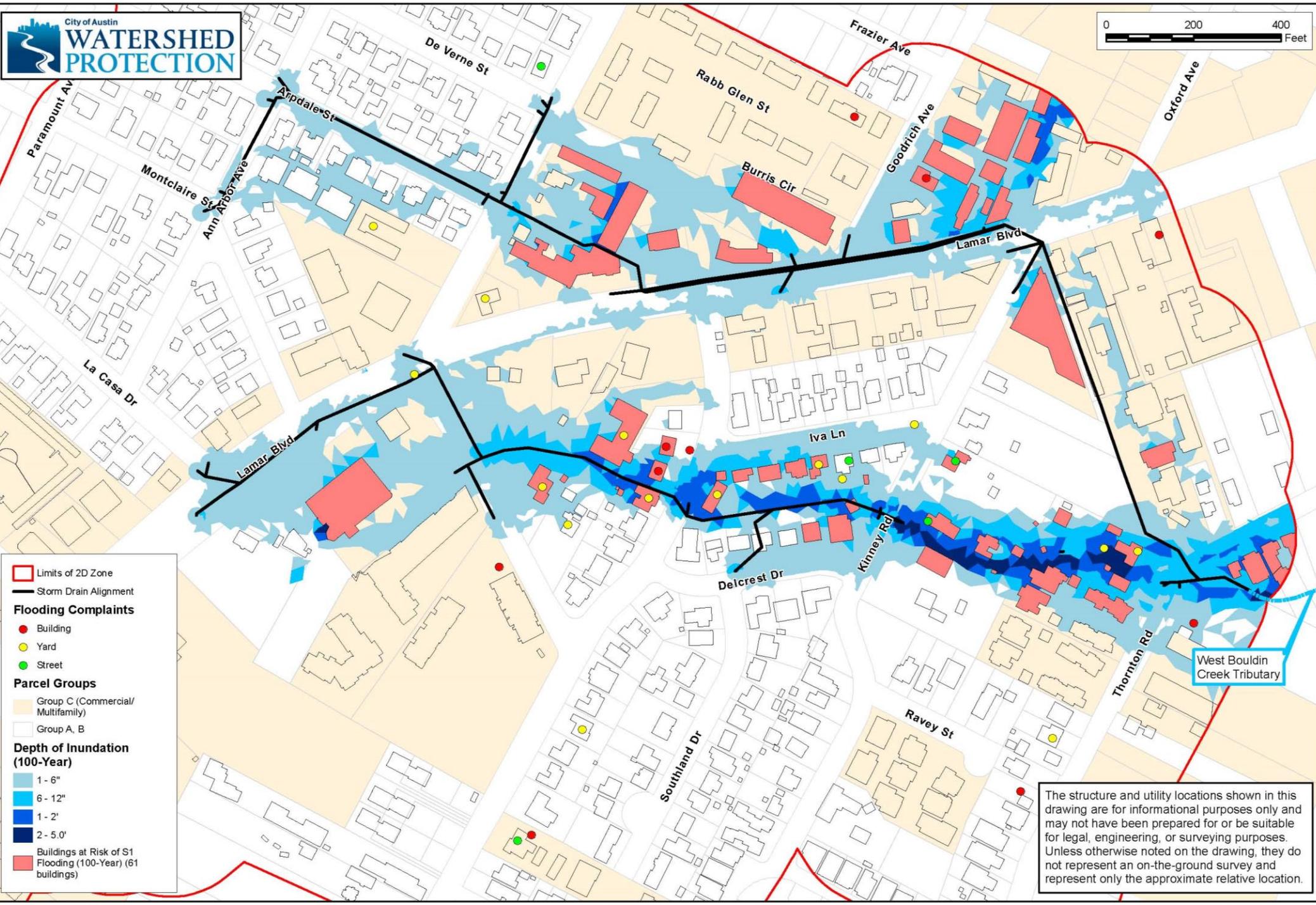
This presentation will focus on 2D modeling results for the Del Curto study area.

Local Drainage Systems Analyzed

- Del Curto (1D and 2D)
- Wickersham (1D)
- Evergreen (1D)
- Koenig/Middle Fiskville (1D)



Scenario 1: Existing Conditions 100-year Inundation



LOCALIZED FLOOD MODELING

Primary Questions

1. What are the impacts of proposed CodeNEXT redevelopment regulations on flood risk and local drainage infrastructure?
2. What is the impact of maximum residential buildout on localized flood risk?



LOCALIZED FLOOD MODELING

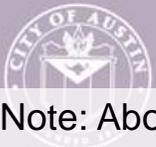
Del Curto Study Area - 2D Modeling Results

Impact of proposed CodeNEXT redevelopment regulations

- Peak flooding depths were generally reduced by up to 5 inches.
- Reduced peak flows by
 - Up to 23% in the 2-year storm
 - Up to 13% in the 100-year storm
- Reduction of flood risk greater than 1 inch for
 - 7 buildings in the 2-year storm
 - 32 buildings in the 100-year storm

Impact of Maximum Residential Buildout

- Peak flooding depths were generally increased by up to 1.5 inches for a 2-year storm and a maximum of 0.1 inches for a 100-year storm.
- Increased peak flows by
 - Up to 3% in the 2-year storm
 - Up to 0.7% in the 100-year storm
- Increase of flood risk (> 1 inche) for
 - 1 building in a 2-year storm event
 - 0 buildings during all other storm events



LOCALIZED FLOOD MODELING

Conclusions

- The proposed CodeNEXT regulations produce beneficial reductions in flood risk, but will not provide a complete and immediate solution to the City's flooding problems.
- 2D localized flood modeling of the Del Curto project area found the impact of redevelopment of residential properties to be minimal.



Questions?

Help us get it right.

We invite you to review and comment on the draft code document, ask questions, and stay connected.

www.austintexas.gov/codenext

codenext@austintexas.gov

Review and comment on the draft code
<https://codenext.civiccomment.org/>

Review and comment on the map
<http://codenext.engagingplans.org/>

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