



CUC Work Session

Post-Development Stormwater

City Ordinance Updates – Extended Detention

March 28, 2024





Contents

1. What has changed in the Ordinance?
2. What is Stormwater Extended Detention?
3. Why is Stormwater Detention important?
4. What are the proposed changes to the Stormwater Detention Ordinance?
5. Why is a change in ordinance needed?
6. How was the proposed ordinance derived?
7. Where will the proposed Stormwater Detention Ordinance apply?
8. What are the benefits?



What has changed in the Ordinance?

- Application of stormwater management measures.
- Extended Detention requirements.



Bioswale - Edgewood Townhomes



Permeable Pavers - Urban Market on Howell Mill



Detention Basin - Old Fourth Ward Pond



Stormwater Management Measures

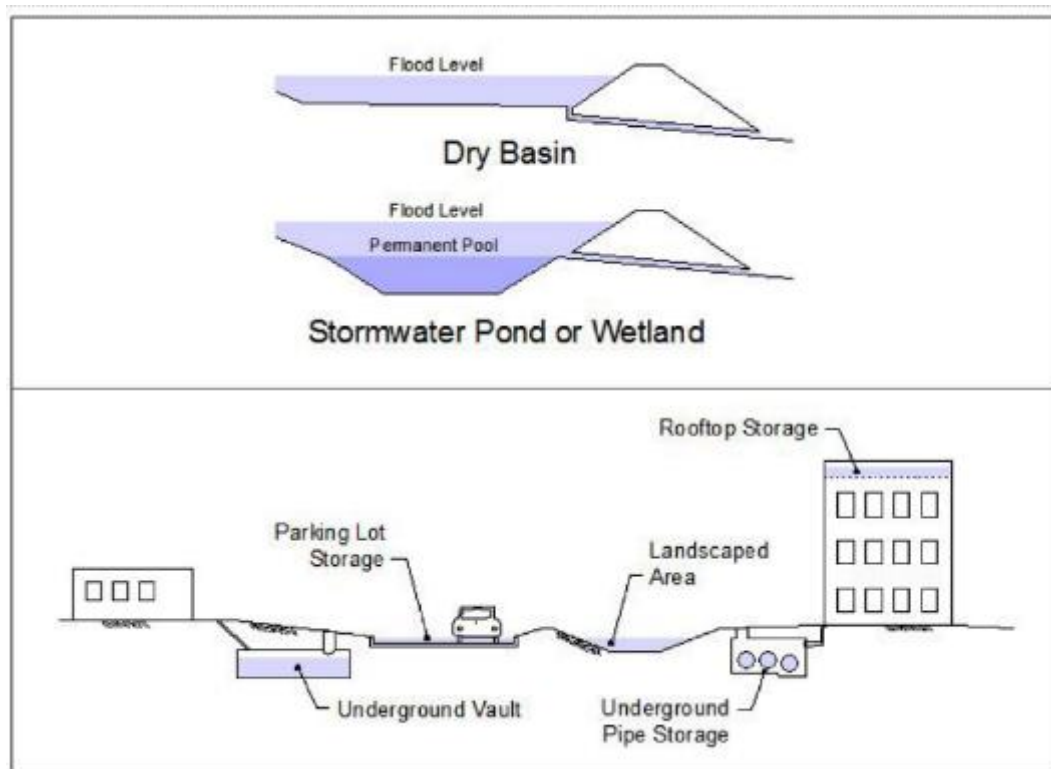
- Prioritized measures changed to allow flexibility in stormwater measure applications.
- Combination of more than one measure is now allowed for most beneficial use.
- Proposed modification is compliant with regulatory requirements.

Stormwater management measures shall be prioritized to meet the runoff reduction standard with one or a combination of more than one (chain or treatment train) of the following measures, as defined in the Georgia Stormwater Management Manual:

- (a) Vegetated infiltration BMPs: bioretention, stormwater planters, or similar practices consistent with the Georgia Stormwater Management Manual.
- (b) Green roofs, rainwater harvesting and reuse, and lined bioretention or lined stormwater planters
- (c) Permeable pavements
- (d) Infiltration practices installed underground, specifically dry wells, modified french drains, and similar practices consistent with the Georgia Stormwater Management Manual.



What is Stormwater Extended Detention?



- Extended Detention is the capture, storage and controlled release, of stormwater generated in the City during rain.
- The detention can be in open basins and ponds, or in underground vaults and tanks.

Graphic courtesy of the Georgia Stormwater Management Manual, 2016



Why is Stormwater Detention important?

- New development often has negative effects on both the quality and quantity of stormwater runoff.
 - The additional impervious surfaces cause increases in peak flows and total runoff volume which can **increase urban flood risk**.
 - Further, the additional runoff picks up greater concentrations of many pollutants, **degrading water quality in receiving creeks, streams, rivers and waterbodies**.
- Extended detention is an approach to help reduce these impacts of new development.

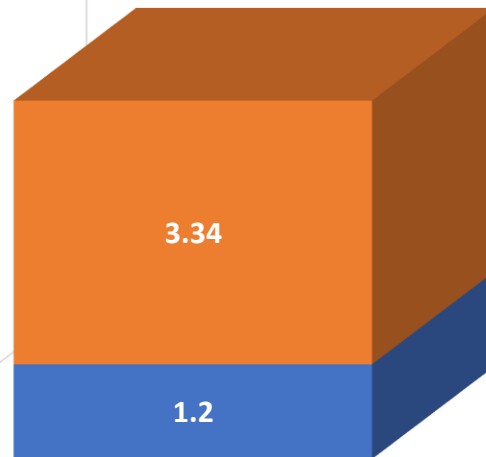


What are the proposed changes to the Stormwater Detention Ordinance?

Current (Abridged) City Ordinance:

- Developers are required to attenuate **1.2 inches** for Water Quality and **3.34 inches** for Channel Protection (1-year, 24-hour). This is a total capture of **4.54 inches** of rainfall for a period of **24-hours**.
- This approach is consistent with the Georgia Stormwater Maintenance Manual.

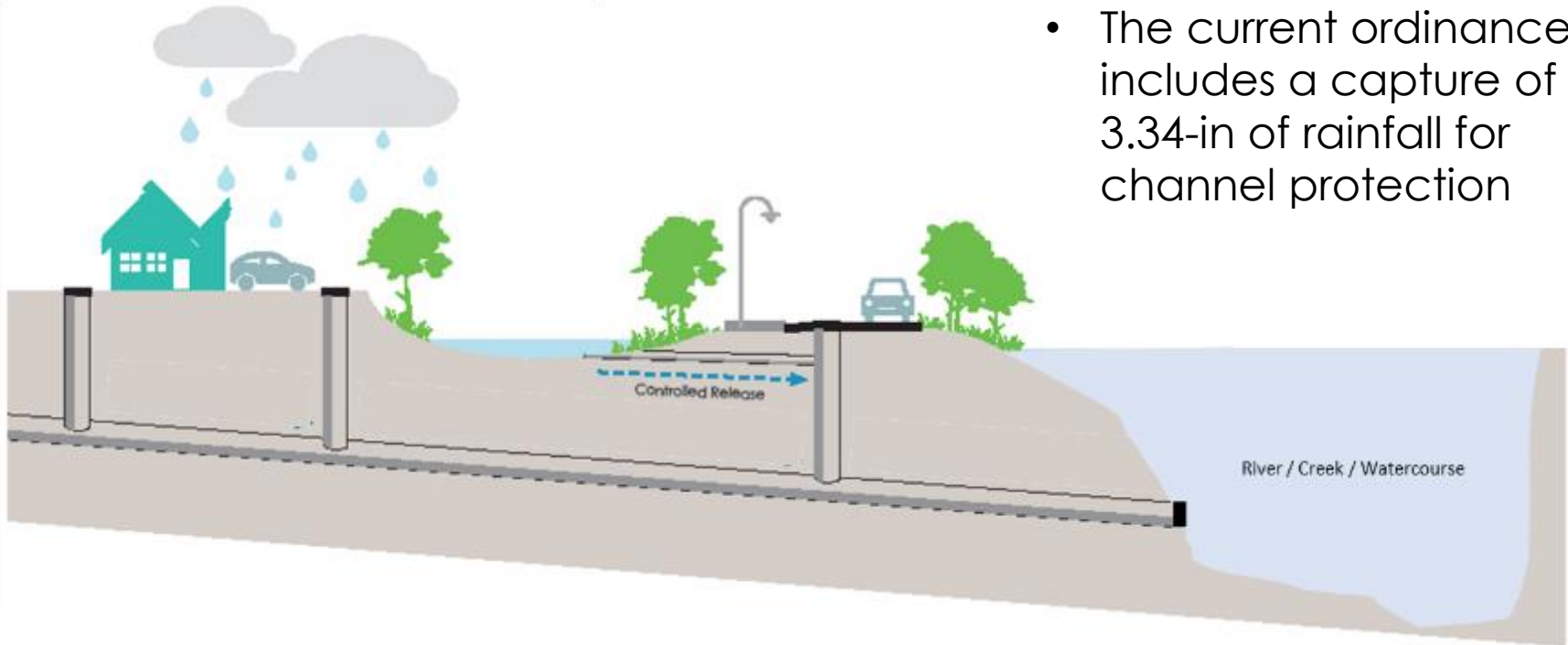
■ Water Quality ■ Channel Protection





Why is a change in ordinance needed?

- The current ordinance includes a capture of 3.34-in of rainfall for channel protection



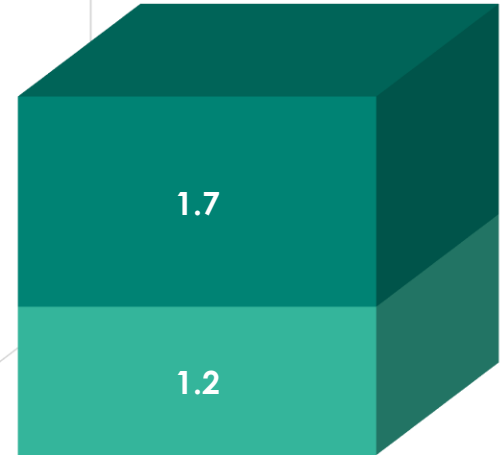


What are the proposed changes to the Stormwater Detention Ordinance?

■ Water Quality ■ Channel Protection

The new proposal is:

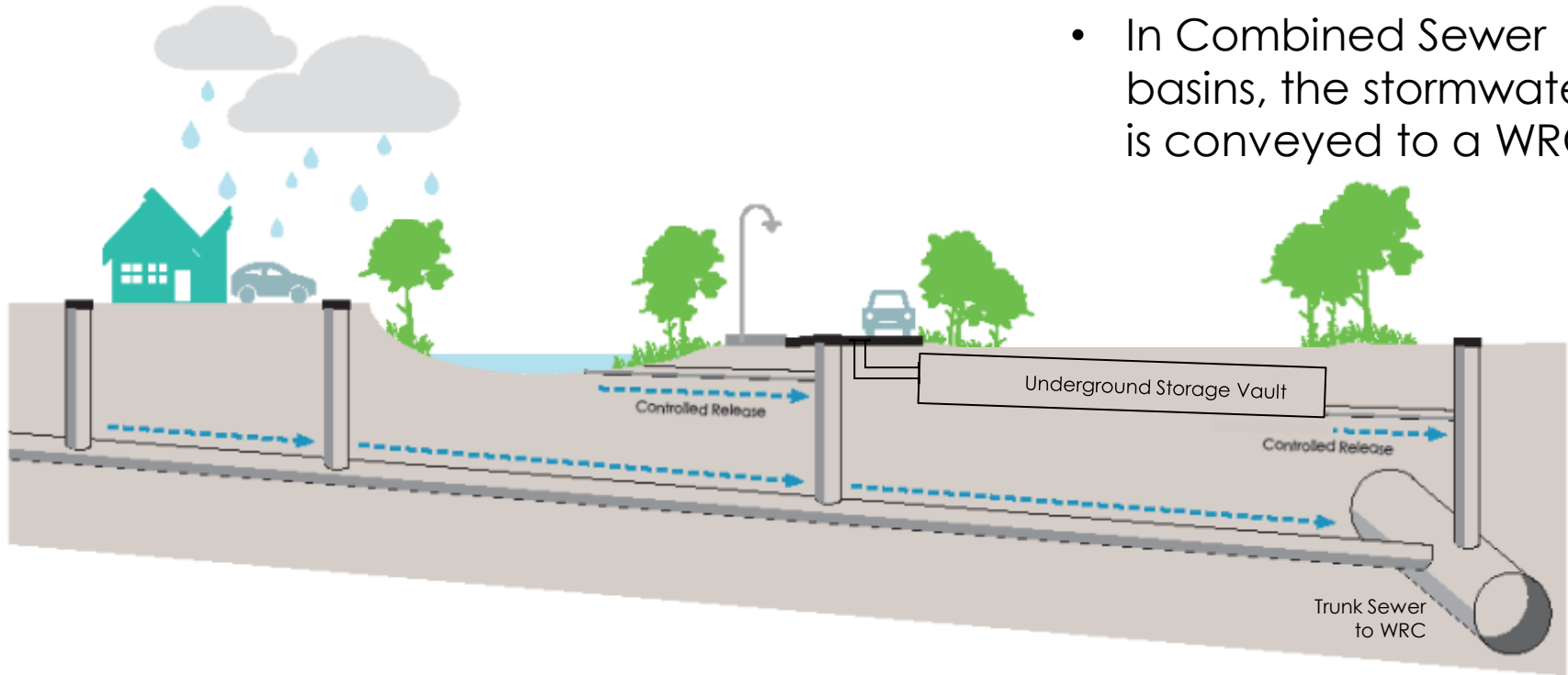
- Reduce the depth of Channel Protection from 3.34 inches by half to **1.7 inches** above the **1.2 inches** Water Quality depth and place the 2-year flood control pond outlet structure device invert at such elevation. This is a total capture of **2.9 inches** of rainfall for a period of **48-hours**.





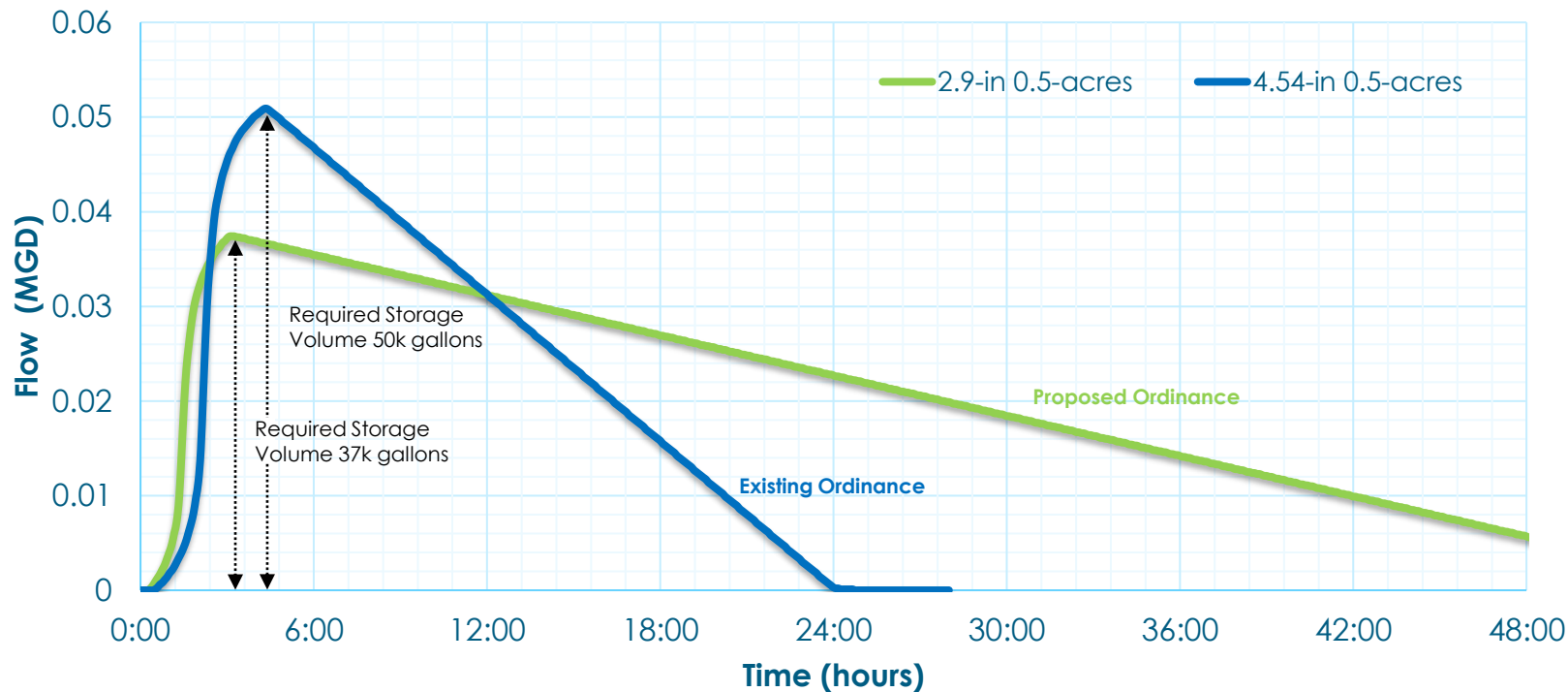
Why is a change in ordinance needed?

- In Combined Sewer basins, the stormwater is conveyed to a WRC.



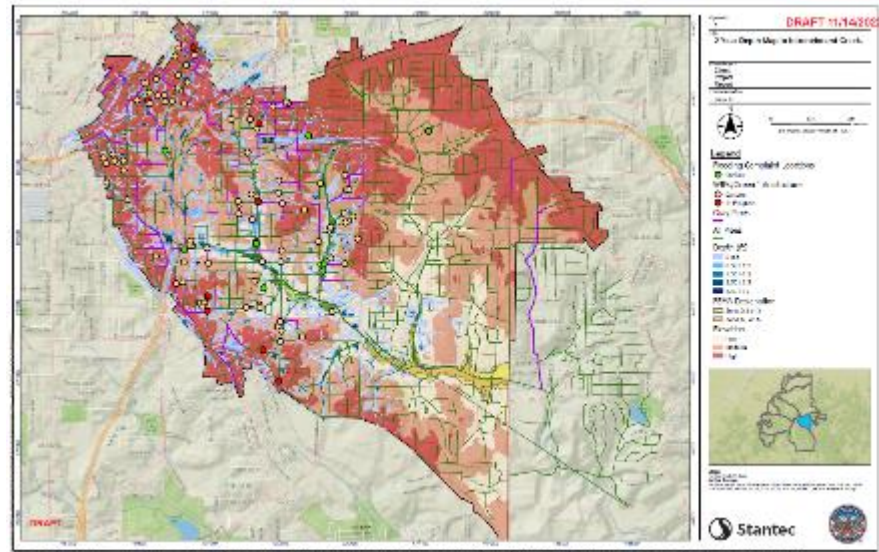
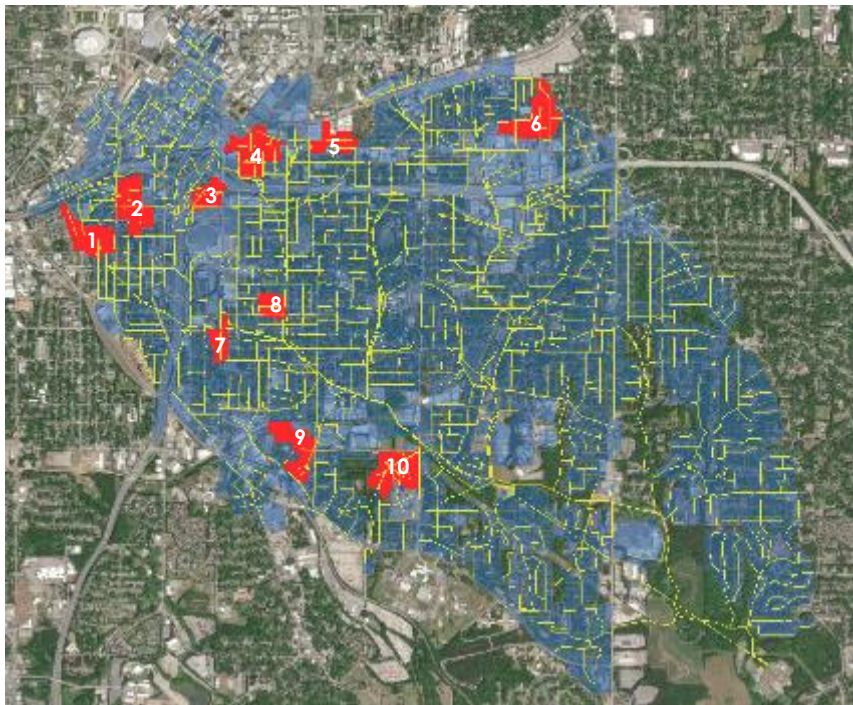


Ordinance example for a sample location



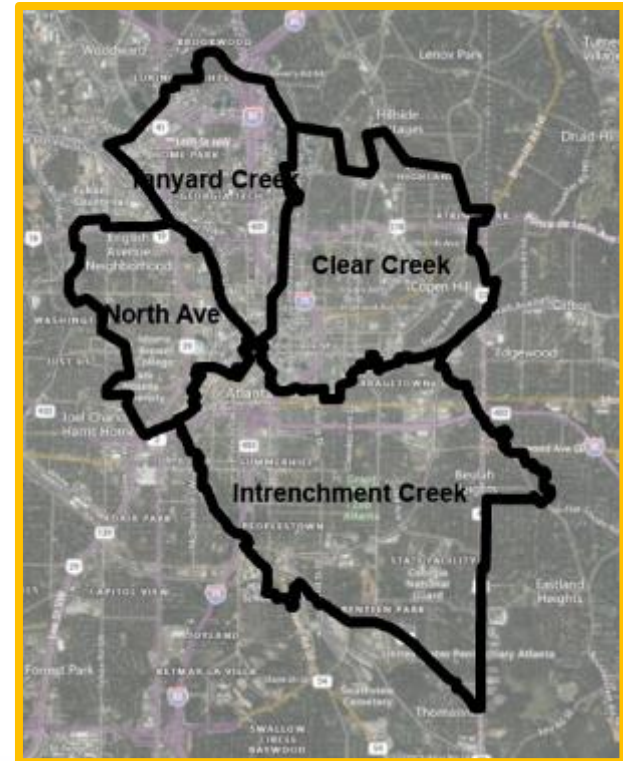
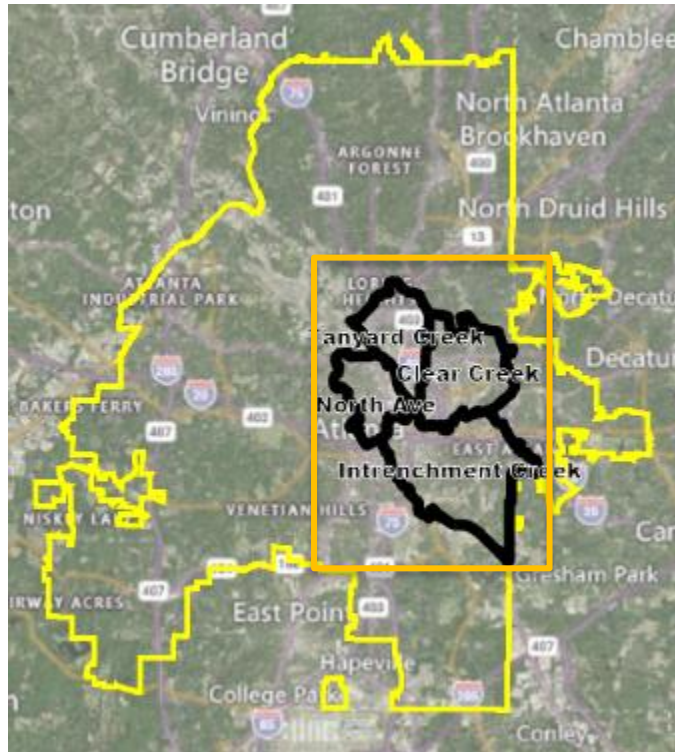


How was the new ordinance derived?





Where does the new ordinance apply?





What are the proposed ordinance benefits?

- Minimizes flooding while supporting the City of Atlanta's continued growth and development in an environmentally sustainable manner.
- Recognizes the need to approach stormwater management differently - "one size fits all".
- Remains compliant with regulatory guidelines, the Metro North Georgia Water Planning District's Stormwater Management Model Ordinance.
- There are potential savings for new development creating more sustainable construction opportunities.

Post-Development Stormwater Extended Detention

