NATURAL RESOURCES COMMISSION
WORK SESSION
JULY 21, 2026

ALPHARETTA CITY HALL
FIRST FLOOR COMMUNITY ROOM
2 PARK PLAZA
6:30 PM

1. CALL TO ORDER

2. ROLL CALL

3. WORK SESSION ANNOUNCEMENTS

At the adjournment of this Work Session, the Natural Resources Commission will convene and conduct its monthly public meeting.

4. PRESENTATIONS

a. *Webb Bridge Park Mural Project - Kim Zane*

b. *GIS Tree Canopy Information - Joe Carnow*

c. *Paddle 4 Tomorrow - Tony Narcisse*

d. *Miyawaki Urban Forest Project Ideas*

5. WORK SESSION ITEMS

a. Staff Reports

i. *Arborist Report*

ii. *Environmental Programs*

b. Program Updates

6. ADJOURNMENT

Here's a **clear, executive-level summary of the key highlights** from the *Trees to Offset Stormwater* case study for **Alpharetta**, focused on what matters most for policy, planning, and design decisions.

Executive Summary — Key Highlights

1. Purpose of the Study

The report evaluates **how Alpharetta's urban tree canopy functions as green infrastructure** to:

- Reduce stormwater runoff
- Improve water quality
- Support regulatory compliance
- Enhance quality of life

  It provides the city with **baseline data, modeling tools, and policy recommendations** to better integrate trees into stormwater management.

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2. Major Findings (Why Trees Matter)

- **2017 Citywide tree canopy coverage: ~53%** (9,121 acres), which is high compared to many U.S. cities.
- During a **10-year, 24-hour storm**, Alpharetta's trees absorb **~30 million gallons of water** — equivalent to **45 Olympic swimming pools**.
- **One mature tree can absorb thousands of gallons of stormwater annually.**
- **Tree clusters outperform isolated trees** because they:
  - Have healthier soils
  - Retain more water
  - Are more resilient to storms
  - Provide greater ecological and stormwater value

Key insight: Losing mature trees has a *much larger negative impact* than the benefit gained from planting small replacement trees.

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3. Stormwater & Infrastructure Impact

- Excess stormwater runoff is a **leading cause of surface-water pollution** and flooding.
- Trees:
  - Intercept rainfall
  - Increase infiltration
  - Reduce runoff volume and velocity

- A **10% loss of tree canopy** would increase runoff by **~16.2 million gallons** per major storm.
- Increasing canopy from **53% to 57%** could **reduce runoff by ~3.7 million gallons** per storm.

Trees effectively **expand the capacity of grey infrastructure** without new pipes or detention ponds.

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4. New Technical Tools Delivered to the City

The project produced:

- **High-resolution tree canopy and land-cover maps**
- **Possible Planting Area (PPA)** and **Potential Canopy Area (PCA)** analysis
- A **stormwater uptake calculator** using modified TR-55 curve numbers that:
    - Accounts for tree location (forest, lawn, pavement)
    - Allows "what-if" scenario modeling
- A full **GIS geodatabase** for ongoing planning use

These tools allow **both watershed-scale and site-scale decision making**.

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5. Community Engagement Insights

Residents emphasized:

- Need for **more shade in parks and public spaces**
- Concern about **invasive species** (e.g., Emerald Ash Borer)
- Desire for greener redevelopment (e.g., North Point Mall)
- Strong support for using trees as part of stormwater solutions

Top community priorities:

1. Use the stormwater calculator to guide canopy goals
2. Create an Urban Forest Management Plan
3. Monitor tree health and canopy change over time

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6. Policy & Ordinance Review — Strengths

Alpharetta is recognized as a **Tree City USA** for 29 consecutive years and stands out for:

- Dedicated arborists on staff
- Strong development review process
- A **mandatory arborist checklist** tracking trees through development
- Increasing planting standards to ensure long-term tree survival

The report calls Alpharetta **one of the strongest performers** among 12 southeastern pilot cities.

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7. Top Recommendations (Condensed)

Priority actions include:

- Develop a **formal Urban Forest Management Plan**
- Reassess tree canopy every **4 years**
- Set **minimum and maximum parking requirements**
- Adopt **complete green streets** policies
- Require adequate **soil volumes** for trees (1,000+ cu ft for canopy trees)
- Establish **post-storm tree replacement funding**
- Consider a **stormwater utility fee** with tree-planting credits

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8. Broader Benefits Beyond Stormwater

The report documents strong evidence that urban trees:

- Improve air quality and public health
- Reduce heat island effects
- Increase property values and retail activity
- Encourage walking, biking, and social activity
- Support children's cognitive development and reduce ADHD symptoms

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Bottom Line

Alpharetta's urban forest is already a major infrastructure asset.

This report provides the **data, tools, and policy roadmap** needed to:

- Protect that asset as the city grows
- Reduce long-term stormwater costs
- Improve resilience, livability, and economic value

If you'd like, I can:

- Condense this into a **1-page briefing slide**
- Translate it into **developer-facing design guidelines**
- Map findings to **Double Diamond / design-strategy frameworks**
- Extract **metrics suitable for grants or city council presentations**

Just tell me how you plan to use it.

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Below is a **clean set of quantitative, grant-ready and council-ready metrics** distilled from the report. These are phrased so they can be dropped directly into **grant applications, budget justifications, capital planning decks, or council briefings** .

Core Metrics for Grants & City Council
(City of Alpharetta — Trees to Offset Stormwater Study)

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1. 2017 Baseline Urban Forest Metrics (Credibility & Need)

- **Total city area:** 27.3 sq mi
- **Tree canopy coverage: 53.2%**
- **Total canopy area: 9,121 acres**
- **Population (2017 est.):** 65,799 residents
- **Streams:** 42.2 miles

Grant framing:
"Alpharetta has established a verified, GIS-based baseline for urban canopy coverage, enabling measurable outcomes and longitudinal performance tracking."

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2. Stormwater Performance Metrics (High-Impact Numbers)

- **Stormwater absorbed during a 10-year, 24-hour storm:**
  ~30 million gallons
- **Equivalent visualization:**
  ≈45 Olympic-sized swimming pools per storm event
- **Water absorbed annually by a mature tree:**
  Hundreds to thousands of gallons per year (species & setting dependent)

Grant framing:
"Existing urban tree canopy functions as distributed green infrastructure, absorbing tens of millions of gallons of stormwater during major rainfall events."

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3. Risk & Loss Scenarios (Why Protection Matters)

- **10% canopy loss → +16.2 million gallons of runoff per major storm**
- **Tree removal impact:**
  Mature tree loss produces *greater stormwater impact* than gains from planting small replacement trees.
- **Tree survival reality:**
  Only **~50% of street trees survive 13–20 years** without proper soil volume and care.

Council framing:
"Tree loss is not neutral—removal of mature canopy rapidly increases runoff volumes and infrastructure burden."

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4. Improvement & ROI Scenarios (Actionable Wins)

- **Increase canopy from 53% → 57%**
  - **≈3.7 million gallons less runoff per major storm**
- **Clustered trees outperform isolated trees** due to:
  - Better soil infiltration
  - Reduced compaction
  - Greater storm resilience

Grant framing:

"Modest increases in canopy coverage generate measurable, near-term reductions in stormwater runoff."

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5. Watershed Equity Metrics (Targeting Investment)

Tree canopy varies significantly by watershed:

- **Highest canopy:**
  Crooked Creek–Chattahoochee River — **71.4%**
- **Lowest canopy:**
  Rocky Creek–Little River — **21.6%**
- **Citywide average: 53.2%**

Policy framing:

"Canopy data enables equitable, watershed-based targeting of green infrastructure investments."

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6. Regulatory & Compliance Metrics

- **Supports Clean Water Act goals**
- **Reduces pollutant loading** (nitrogen, phosphorus, sediment)
- **Aligns with MS4 permit requirements**
- **Enhances Total Maximum Daily Load (TMDL) compliance**

Grant framing:

"Urban forest expansion directly supports federally mandated water quality objectives."

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7. Economic & Fiscal Justification Metrics

- **Tree canopy can reduce stormwater runoff by: 2–7%**
- **Parking lot runoff vs forest (1-inch rain):**
  - Forest: **~750 gallons/acre**
  - Parking lot: **~27,000 gallons/acre**
- **Property value impact:**
  Homes near green space valued **10–32% higher** (cited studies)

Council framing:
"Tree preservation reduces long-term capital and maintenance costs for stormwater infrastructure."

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8. Implementation Readiness Metrics (Grant Strength)

- **Tree City USA designation:** 29 consecutive years
- **Certified arborists on staff:** 2
- **Mandatory arborist checklist** embedded in development review
- **GIS geodatabase delivered** for ongoing analysis
- **Stormwater uptake calculator** provided for scenario modeling

Grant framing:
"The city demonstrates strong administrative capacity, technical readiness, and accountability mechanisms."

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9. Community Support Indicators

- **Two public engagement meetings conducted**
- Community priorities ranked:
    1. Use stormwater calculator & expand canopy
    2. Develop Urban Forest Management Plan
    3. Monitor canopy change over time
- Public support for:
    - Green streets
    - Reduced impervious surfaces
    - Park and redevelopment greening

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10. One-Sentence Grant Value Proposition

"By preserving and strategically expanding its 53% urban tree canopy, Alpharetta can cost-effectively absorb tens of millions of gallons of stormwater per storm event, reduce regulatory risk, and deliver measurable environmental, economic, and public-health benefits."

Want Next?

I can:

- Convert this into a **1-page grant metrics table**
- Create **before/after infographics** for council decks
- Draft **grant boilerplate language** aligned to EPA, USDA, or state forestry funding
- Build a **ROI comparison**: trees vs gray infrastructure cost

Just tell me the audience and funding source.

Environmental Programs Update
July 21, 2026

Past Public Programs

1/3/26	Bring One for the Chipper Christmas tree recycling The Home Depot Windward Pkwy	8:30am to 3:00pm
2/3/26	Nature Matters Film Showing Alpharetta Library Film showing and Q&A with writer Mike Buchanan and Director Barbara Ann Temple. Learn More at fulcolibrary.org/Alpharetta	6:00pm to 7:30pm
2/25/26	Septic Tank Maintenance Workshop Virtual Workshop	6:30pm to 7:30pm
3/2/26	Arbor Day Proclamation at City Council Meeting City Hall 2 Park Plaza	6:30pm
3/11/26	Arbor Day Tree Planting at Innovative Academy	12:30pm
3/19/26	Webinar for Fix-A-Leak Week Virtual class	12:00pm to 1:00pm
3/21/26	Water Drop Dash 5K and Fun Run Chattahoochee Nature Center	7:00am-11:00am
3/28/26	Recycling Collections for Electronics and Shredding Alpharetta Public Works Department 1790 Hembree Road	8:30am to Noon
4/18/26	Earth Day Tent at the Farmers Market City Center	8:00am to 12:30pm
5/2/26	Household Hazardous Waste and Paint Collection Alpharetta residents only Registration required	8:30am to 1:00pm
5/30/26	Volunteer Project with M. A. Center Youth Group	
6/27/26	Rain Barrel Workshop with Fulton County and City of Roswell Roswell Area Park	10:00am to 11:30am

Future Programs

9/26/26	Recycling Collections for Electronics and Shredding Alpharetta Public Works Department 1790 Hembree Road	8:30am to Noon
October	Rivers Alive Volunteer Watershed Event	