City of Peachtree City

Lake Peachtree Spillway Replacement

City Council Update

April 6, 2017
Project History to Date

Key Milestones

- Design of New Spillway Authorized Apr 2016
- Preliminary Planning Meeting Held Jun 2016
- Final Concept for Spillway Selected Sept 2016
- Preliminary Design Update December 2016
Features

• Piano Key Weir – Normal Pool 784.5
• Capable of Passing the ½ PMP (13,000 cfs)
  • New Spillway Designed to Pass a 15.9 Inch Rainfall Event that Occurs in 12 hours
• October 2015, Hurricane Floyd Dropped 15.13 Inches in 10 Hours in Columbia SC
• Sept. 2009 Thunderstorm System in West Atlanta dropped 15-20 Inches in 24 hours
Features (cont)

• New Spillway Design will not Increase Flooding Downstream or Upstream
• Compliant with Category I Standards (Georgia Safe Dams Act)
Schedule

- Phase 1 – Schematic Design (Apr – Aug 2016)
- Phase 2 – Public Meetings (Aug 2016 – Sep 2016)
- Phase 3 – Preliminary Design (Sep 2016 – Dec 2016)
- Phase 4 – Design Development (Dec 2016 – Apr 2017)
- **Phase 5 – Final Design (April 2017 – May 2017)**
- Phase 7 – Bidding (Jun 2017 – Aug 2017)
- Phase 8 – Construction (Aug 2017 – Apr 2018)
- Phase 9 – Project Closeout (May 2018 – Jun 2018)
Plan View
Current Efforts

• Engineering Nearing Completion
• Prequalifying Contractors over the Next 45 Days
• Environmental Permitting over the Next 3-5 Months
  • Army Corps of Engineers (Nationwide 3A,3C)
  • State Waters of Georgia - Buffer Encroachment Permit
• Tentative Bid Date July 10, 2017
Construction Sequencing

- **Stage 1** – Lower Lake Peachtree 8.0-feet (late August)
  - Approximately 3-Weeks
- **Stage 2** – Construct Coffer Dam
  - Approximately 4-Weeks
- **Stage 3** – Lower Lake Kedron 2-feet / Raise Lake Peachtree 2-feet
- **Stage 4** – Construct New Spillway Foundation
  - Approximately 3 Months
- **Stage 5** – Potentially Raise Lake Peachtree 2-feet
- **Stage 6** – Construct New Spillway Walls / Weirs
  - Approximately 3 Months
- **Stage 7** – Return Lakes Peachtree and Kedron to Full Pool
Lake Down Approximately 8.0 Feet

Legend
Water Extents at 8-ft of Draw Down
- Less Than 2-ft of Water
- 2-ft of Water or More

Start to Month 2
Construction Sequencing

- Stage 1 – Lower Lake Peachtree 8.0-feet
  - Approximately 3-Weeks
- Stage 2 – Construct Coffer Dam (later part of September)
  - Approximately 4-Weeks (weather dependent)
- Stage 3 – Lower Lake Kedron 2-feet / Raise Lake Peachtree 2-feet
- Stage 4 – Construct New Spillway Foundation
  - Approximately 3 Months
- Stage 5 – Potentially Raise Lake Peachtree 2-feet
- Stage 6 – Construct New Spillway Walls / Weirs
  - Approximately 3 Months
- Stage 7 – Return Lakes Peachtree and Kedron to Full Pool
Coffer Dam Construction
Construction Sequencing

- **Stage 1** – Lower Lake Peachtree 8.0-feet
  - Approximately 3-Weeks

- **Stage 2** – Construct Coffer Dam
  - Approximately 4-Weeks

- **Stage 3** – Lower Lake Kedron 2-feet / Raise Lake Peachtree 2-feet (begin in late October)

- **Stage 4** – Construct New Spillway Foundation
  - Approximately 3 Months

- **Stage 5** – Potentially Raise Lake Peachtree 2-feet

- **Stage 6** – Construct New Spillway Walls / Weirs
  - Approximately 3 Months

- **Stage 7** – Return Lakes Peachtree and Kedron to Full Pool
Lake Kedron
Construction Sequencing

- **Stage 1** – Lower Lake Peachtree 8.0-feet
  - Approximately 3-Weeks

- **Stage 2** – Construct Coffer Dam
  - Approximately 4-Weeks

- **Stage 3** – Lower Lake Kedron 2-feet / Raise Lake Peachtree 2-feet

- **Stage 4** – Construct New Spillway Foundation
  - Approximately 3 Months (November – January, weather dependent)

- **Stage 5** – Potentially Raise Lake Peachtree 2-feet

- **Stage 6** – Construct New Spillway Walls / Weirs
  - Approximately 3 Months

- **Stage 7** – Return Lakes Peachtree and Kedron to Full Pool
Construction Sequencing

- Stage 1 – Lower Lake Peachtree 8.0-feet (late August)
  - Approximately 3-Weeks
- Stage 2 – Construct Coffer Dam (later part of September)
  - Approximately 4-Weeks
- Stage 3 – Lower Lake Kedron 2-feet / Raise Lake Peachtree 2-feet (end of October)
- Stage 4 – Construct New Spillway Foundation
  - Approximately 3 Months (November – January)
- Stage 5 – Potentially Raise Lake Peachtree another 2-feet (January 2018)
- Stage 6 – Construct New Spillway Walls / Weirs
  - Approximately 3 Months
- Stage 7 – Return Lakes Peachtree and Kedron to Full Pool
Lake Down Approximately 6 Feet
Construction Sequencing

- Stage 1 – Lower Lake Peachtree 8.0-feet
  - Approximately 3-Weeks
- Stage 2 – Construct Coffer Dam
  - Approximately 4-Weeks
- Stage 3 – Lower Lake Kedron 2-feet / Raise Lake Peachtree 2-feet
- Stage 4 – Construct New Spillway Foundation
  - Approximately 3 Months
- Stage 5 – Potentially Raise Lake Peachtree 2-feet
- **Stage 6 – Construct New Spillway Walls / Weirs**
  - Approximately 3-4 Months (February – May, weather dependent)
- Stage 7 – Return Lakes Peachtree and Kedron to Full Pool
Construction Sequencing

- **Stage 1** – Lower Lake Peachtree 8.0-feet
  - Approximately 3-Weeks
- **Stage 2** – Construct Coffer Dam
  - Approximately 4-Weeks
- **Stage 3** – Lower Lake Kedron 2-feet / Raise Lake Peachtree 2-feet
- **Stage 4** – Construct New Spillway Foundation
  - Approximately 3 Months
- **Stage 5** – Raise Lake Peachtree 2-feet
- **Stage 6** – Construct New Spillway Walls / Weirs
  - Approximately 3-4 Months
- **Stage 7** – Return Lakes Peachtree and Kedron to Full Pool (May 2018)
Construction Cost Estimate

• Detailed Engineering Estimate based on quantities now complete
• Removal and Disposal of Old Spillway
• 22,000 Cubic Yards of Earthwork
• 3,840 Cubic Yards of Concrete, $2.8M
Construction Cost Estimate

$4,075,000

Less: $2.0M Cost Share from Fayette County

Peachtree City’s Cost: $2,075,000
Existing Outlet Structure
Downstream Drought Mitigation/Dock Maintenance

- Two 30” Slide Gates
- 42” DIP Pipe
- Discharge
Plan View

Existing 30” RCP to be Sealed
Drought Mitigation/Dock Maintenance

- **30” Slide Gates:**
  - Capable of releasing 1 cfs in anticipation of future permit conditions
  - Capable of drawing down the lake to Approx. Elevation 777.5 in 2-3 weeks (up to 118 cfs)
  - Flat Creek base inflow estimated at 18 cfs
Middle Section - Elevation 778
Lower Section – Elevation 778
Methods to Lower the Lake Below Elevation 777.5
Questions?