Presentation for

Lake Peachtree
Spillway Design Approach

April 21, 2016
Design of New Spillway

Where are We Going?

Purpose:
Design a New Spillway to Replace the Current Spillway

Design Parameters:
• New Spillway Should Facilitate Category I Dam Standards
• Minimize Disruption of Lake Operations
  – Keep Old Spillway in Place While Building New Spillway
  – Only Lower Lake Enough to Prevent Water From Flooding Work Site
  – Remove Old Spillway at End of Construction
Alternatives for New Spillway System
Peachtree City Dam
Cost-Savings Analysis

Radial Weirs  
Box-Inlet Drop Spillways  
Fuse Gates  
Labyrinth Weirs  
PK Weirs

\[ Q = cLH^{3/2} \]
Ogee Shape Spillway
Weir Spillway – Ogee Shape
Straight Drop Spillway
Combination Spillway
Box Inlet Drop
Chute Spillway

www.damsafety.org
Chute Spillway
Gated Spillway
Dog River Dam
Lake Spivey Dam
Pine Lake Dam
Piano Key (PK) Weirs

Video courtesy EDF
Common Applications
Design of New Spillway

*Where are We Going?*

**Approach:**

- **Phase 1 – Schematic Design**
  - Prepare Concept Plans
  - Environmental / Regulatory Permitting Assessment
  - Prepare Initial Opinions of Probable Cost
  - Presentation of Formal Concepts to City Leadership

- **Phase 2 – Public Meetings**
  - Seek Public Input on Concepts

- **Phase 3 – Preliminary Design**
  - Prepare Final Concept Plan & Layouts
  - Update Opinion of Probable Cost
  - Update City Leadership / Public
Design of New Spillway

Where are We Going?

Approach:

• Phase 4 – Design Development
  – Complete Design to 60% Completion Point
  – Initiate Permitting Process
  – Update Opinion of Probable Cost
  – Update City Leadership / Public

• Phase 5 – Final Design
  – Complete Engineering (Plans & Specifications)
  – Update Opinion of Probable Cost
  – Update City Leadership / Public
Design of New Spillway
Where are We Going?

**Approach:**

- **Phase 6 – Contract Documents**
  - Prepare Bidding / Procurement Documents
  - Finish Environment / Regulatory Permitting
- **Phase 7 – Bidding**
  - Bid Project
  - Secure City Council Authorization for Construction Contract
- **Phase 8 – Construction**
  - Construct New Spillway w/ Full Time Construction Oversight
- **Phase 9 – Project Closeout**
  - As-Built Drawings / Operation Manual
  - Emergency Action Plan
Design of New Spillway

Where are We Going?

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 7 – Bidding (Jul 2017 – Sep 2017)
- Phase 8 – Construction (Sep 2017 – May 2018)
- Phase 9 – Project Closeout (May 2018 – Jul 2018)
Questions & Discussion