# *Falls Lake Reallocation Study*

*Public Land, Public Water, Public Pride*

**Environmental Coordination Meeting**
**Neuse River Resource Recovery Facility**
**July 11, 2016**

US Army Corps of Engineers
**BUILDING STRONG®**

# Falls Lake Reallocation Study

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- **Decision document is needed to obtain Corps of Engineers approval for any reallocation**
- **Reallocation Study and EA initiated in June 2015 with 100% non-Federal funding**
- **Meeting purpose:  provide feedback on scoping input; give overview of study status; obtain informal input on alternatives**

# Falls Lake Reallocation Study

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**The authorized project purposes of Falls Lake include:**

- **flood risk management**
- **water quality**
- **water supply**
- **recreation**

# Falls Lake Reallocation Study

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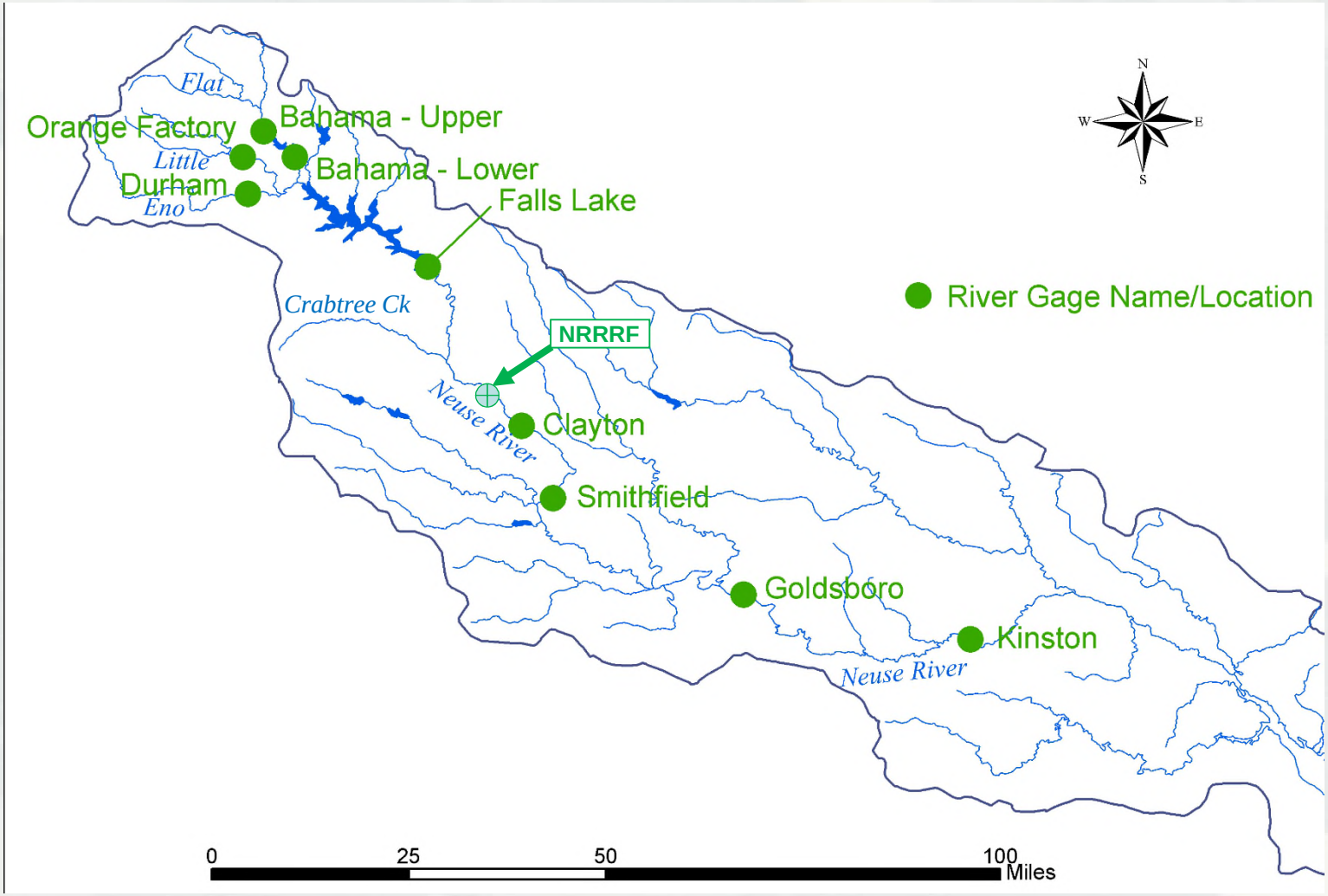

# Falls Lake Reallocation Study

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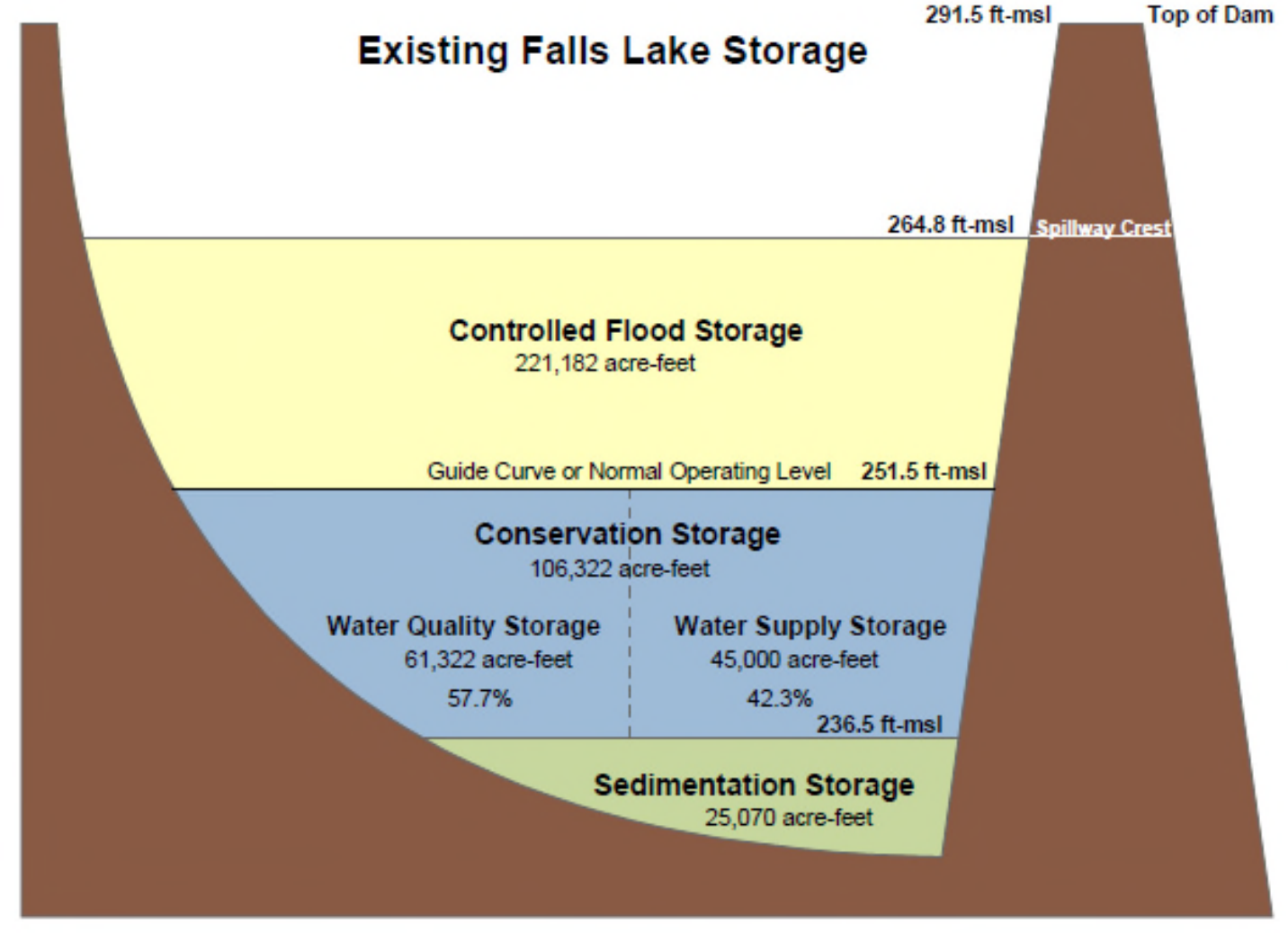

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- **Over 20 preliminary alternatives considered for the purpose of providing adequate water supply to the City of Raleigh and partner communities for 30 years following implementation (currently believed to be 2016 through 2045).**

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1. No Action Plan
2. Falls Lake – Reallocation of Storage within the Conservation Pool from Water Quality to Water Supply
3. Falls Lake - Seasonal or Permanent Raising of Normal Pool
4. Falls Lake – Reallocation of Storage in Sediment Pool to the Water Supply Storage Pool
5. Falls Lake - Dredge Lake to Increase Volume
6. Falls Lake - Raise Dam to Provide Additional Water Supply Storage
7. Construct Little River Reservoir
8. Construct Middle Creek Reservoir
9. Construct Buffalo Creek Reservoir
10. Obtain Water Supply from Lakes Benson and Wheeler (Reservoirs)

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11. Neuse River Intake Near Richland Creek
12. Construct Offline Storage, Neuse River at Richland Creek
13. Neuse River Intake Upstream of City Wastewater Treatment Plant
14. Construct Offline Storage Upstream of City Wastewater Treatment Plant
15. Convert Existing Quarries to Reservoirs
16. Development of Groundwater Supplies using Multiple Local Wells
17. Development of Groundwater Supplies by Aquifer Storage and Recovery (ASR)
18. Development of Groundwater Supplies by using PCS Phosphate-owned Pumped Groundwater
19. Reallocation from John H. Kerr Dam and Reservoir

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20. **Obtain Allocation from Jordan Lake**
21. **Purchase Water from Existing Systems**
22. **Wastewater Reuse from City Wastewater Treatment Plant**
    *This measure consists of reuse of wastewater from the existing City Wastewater Treatment Plant for the purposes of supplemental water supply.*
23. **Water Conservation/Efficiency Measures**
    *This measure consists of implementation of various water conservation/efficiency measures within the service area, to lessen current and future water need.*

- **The Corps is required to look at reasonable alternatives.**
- **Have we missed any?**

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- **Scoping feedback on environmental impacts:**
  - **Downstream water quality and flow rates**
  - **Falls lake water quality (chlorophyll a and total organic carbon)**
  - **Recreation**

**Have we missed any?**

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**Why is Reallocation of Storage within the Conservation Pool from Water Quality to Water Supply considered a viable option?**

- **WQ storage not depleted during drought of record**
- **Raleigh's future increased return flows from NRRRF will further contribute to target flows at Clayton**
- **Minimum flow target at Clayton (184/254 cfs) or minimum release requirement at dam (60/100 cfs) will not be impacted.**
- **Environmental impacts are likely very small.**

# Falls Lake Reallocation Study



## Preliminary Environmental Impacts of Reallocation

- Falls Lake impacts are minor
  - Chlorophyll a model (approved by DWQ)
  - Slight decrease in lake levels but within natural conditions
- Neuse River impacts are insignificant
  - Flow rates are above State minimums
  - Flow rates change are small

# Falls Lake Reallocation Study

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## Next Steps:

- Complete draft reallocation report (August)
- Complete agency technical review and vertical team reviews (Sept - Nov)
- Public review of draft report (January)
- Submit final report through HQ (May)
- HQ approval (June)

# Comments/Questions

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