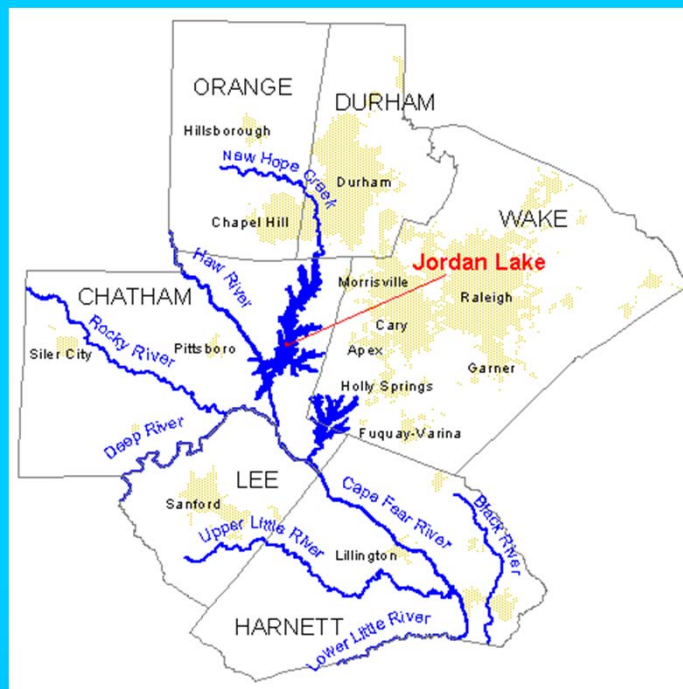
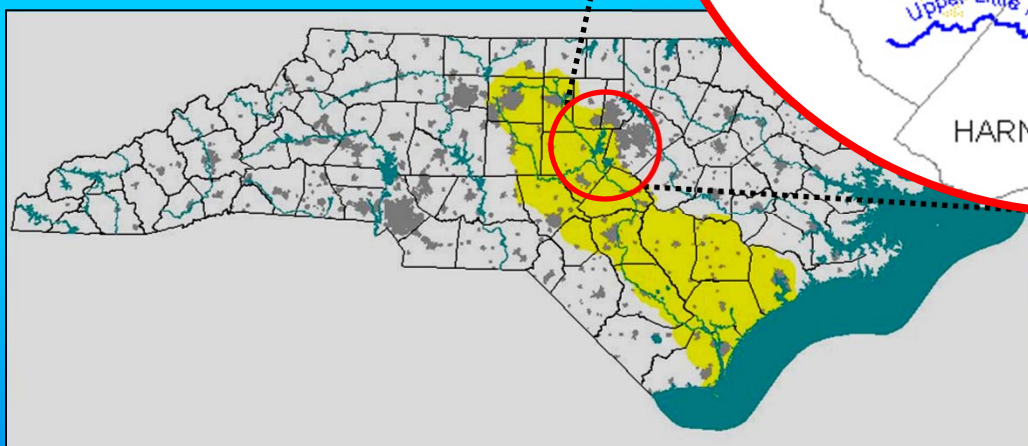
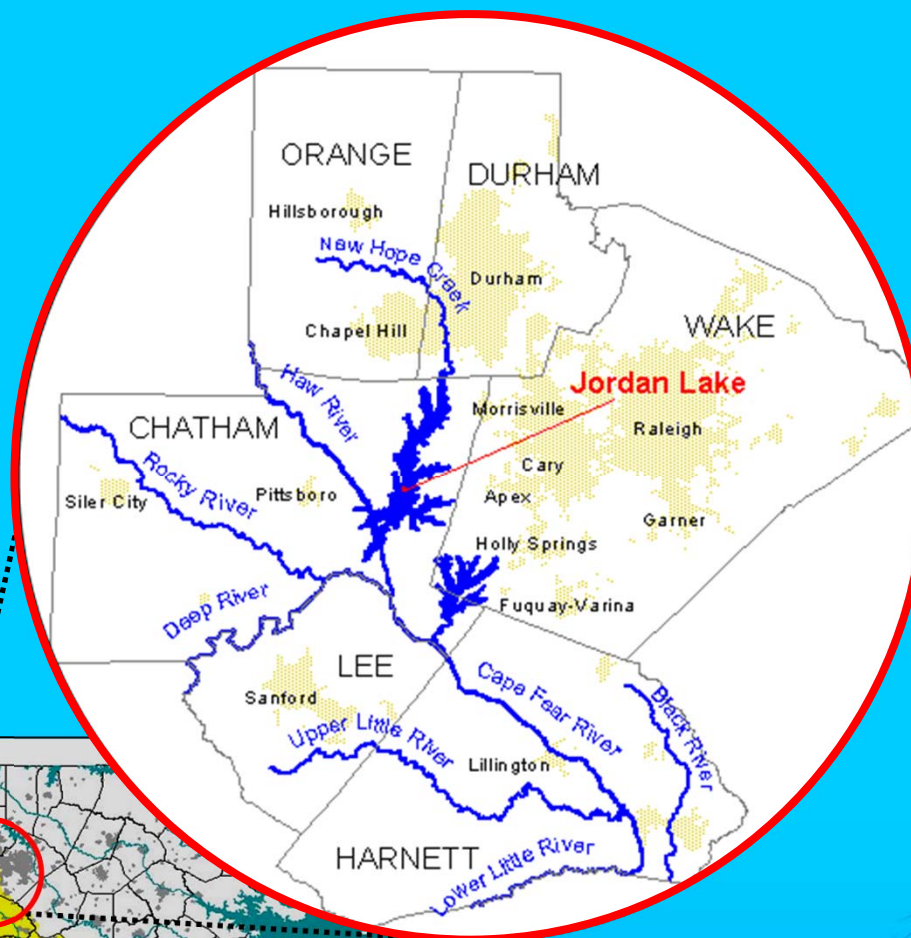


# Jordan Lake Water Supply Storage Allocation Round 4 Update



**Water Allocation Committee**  
**Environmental Management Commission**  
**Tom Fransen**  
**Division of Water Resources, NC DENR**

# Jordan Lake Overview



# **History of Jordan Lake Impoundment**

**1945 – Disastrous flooding in Cape Fear River Basin**

**1945 – Congress -> USACE study water resource needs**

**1963 – Authorized “New Hope Reservoir”**

**1967 – Construction begins**

**1971 – USACE Environmental Impact Study**

**1979 – Federal Court allows impoundment of lake**

**1981-1982 – Impoundment**



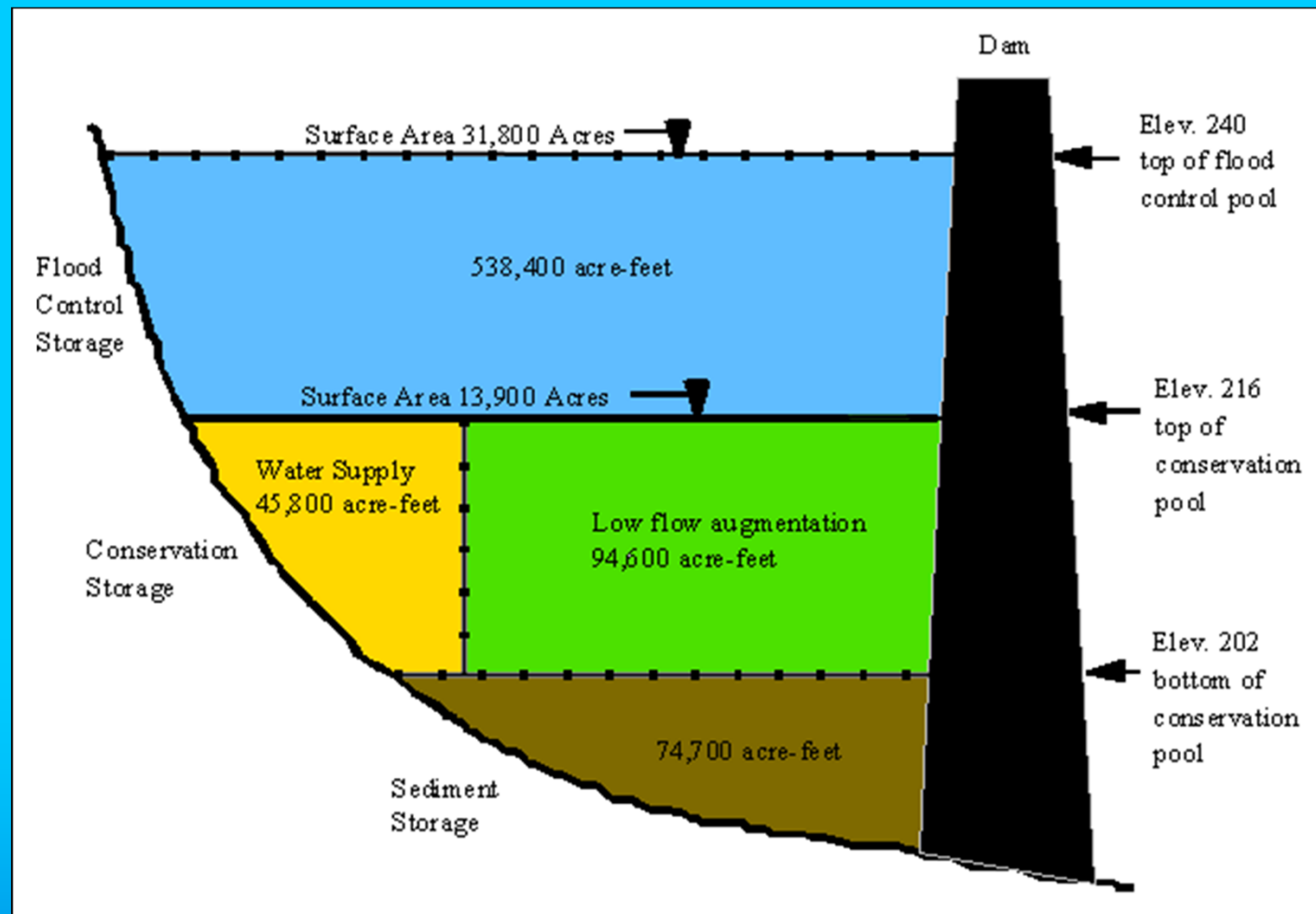
**Looking south toward Lillington, Sept. 18, 1945**  
(From Harnett County Public Library)

# Purposes / Uses

- **Built and operated by the Army Corps of Engineers for:**
  - **Flood Control**
  - **Water Quality**
  - **Water Supply**
  - **Recreation**
  - **Fish and Wildlife Conservation**
- **State of North Carolina partnered with the Federal Government to include water supply storage**
- **EMC responsible for allocating water supply storage to units of local government that request it GS 143-354(a)(11)**



# Reservoir Storage Allocation



# Jordan Lake Allocation Process




# **Application Requirements 15A NCAC 2G .0500**

- **Population and Demand to 2060**
  - Include methodology and assumptions
- **Presently available sources and yield**
- **Map of current and future service areas**
- **Alternative sources**
- **Potential yield, quality, costs**
- **Demand management practices**
- **Plans to utilize Jordan Lake**
- **Financial commitment statement**
- **Additional necessary information**



# **Allocation Decisions**

## **Long Range Water Resources Evaluation Neuse River and Cape Fear River Basins**

- **Describe hydrologic conditions and water uses in a basin**
  - **Describe water sharing arrangements among communities**
  - **Interpret output of the hydrologic model**
  - **Quantify impacts of water withdrawals**
  - **Identify areas that will face supply challenges**
  - **Identify magnitude and duration of water supply shortages**
- 

# Jordan Lake Partners (All the Applicants except Fayetteville)

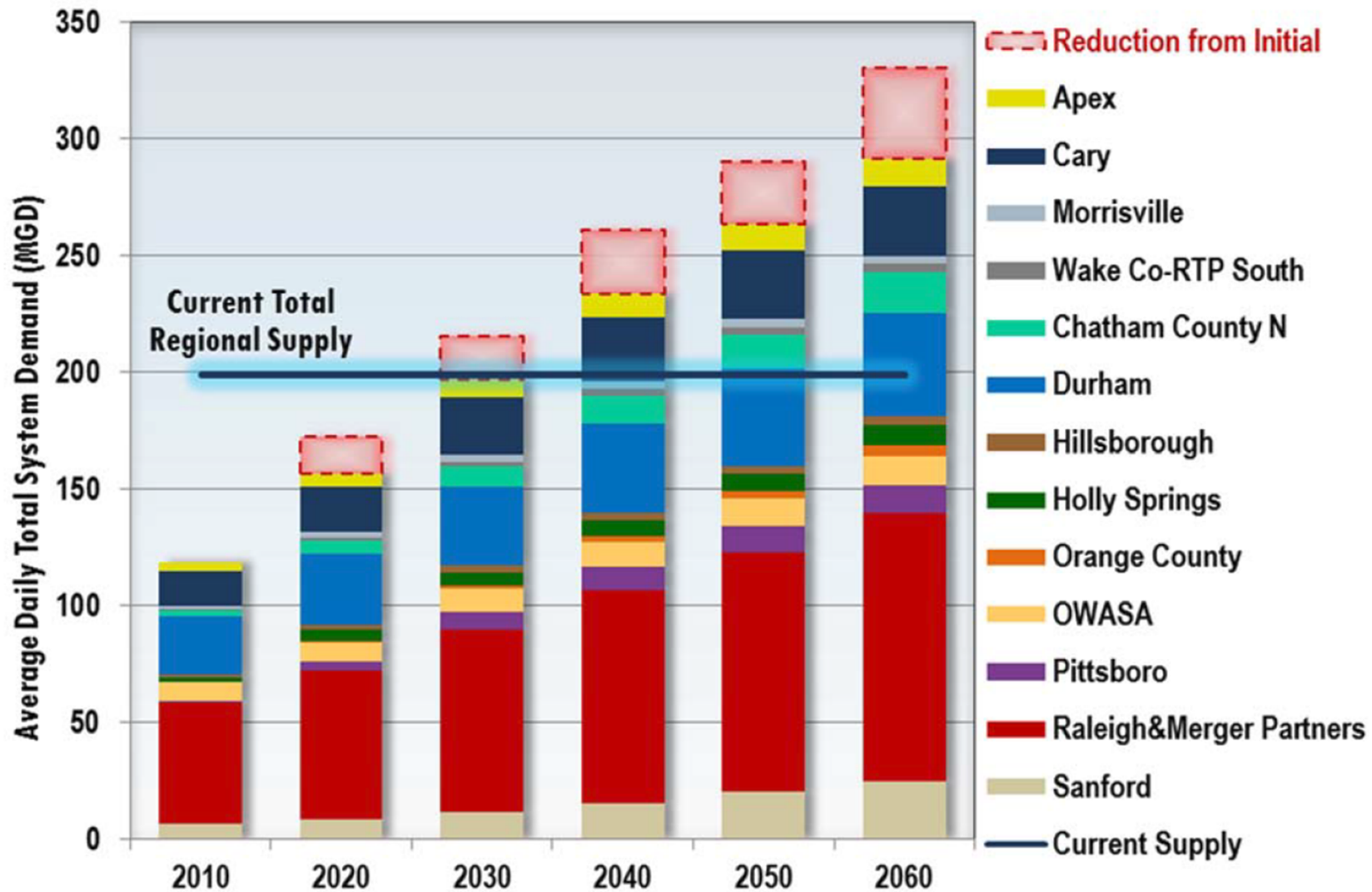
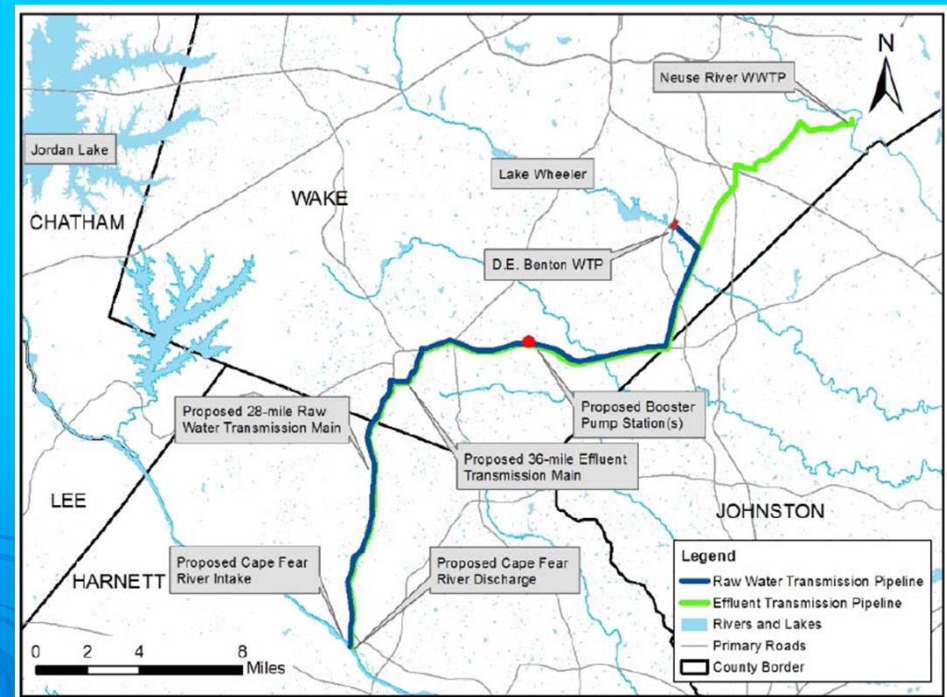


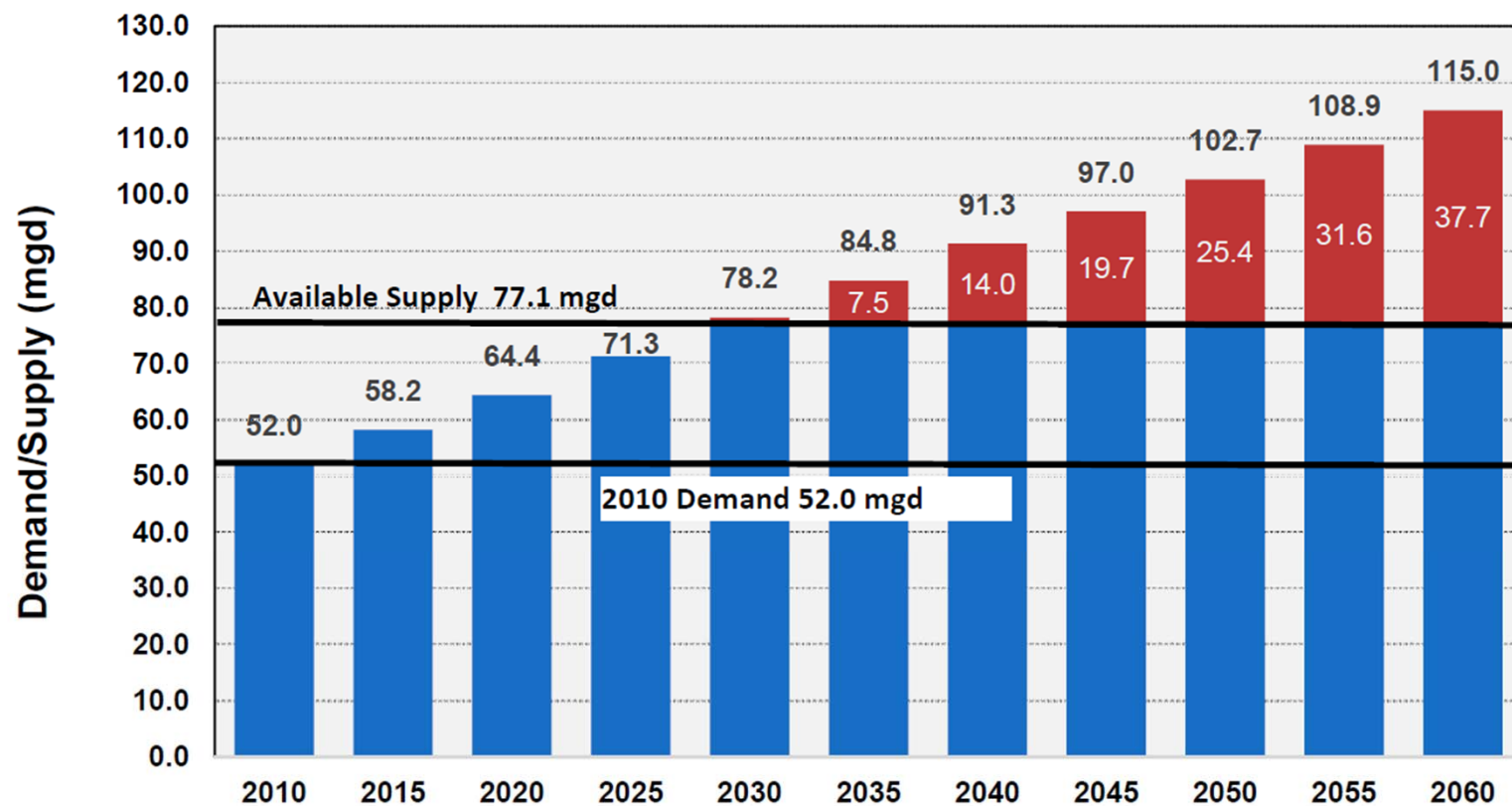
Figure 2 – Regional demand projections, current supply, and reductions resulting from peer review.

## City of Raleigh and Merger Partners' Jordan Lake Water Supply Storage Allocation Request Revised Application Due Thursday

- **Current round 4 a 4.7% (4.7 MGD) for 2045.**
- **Future round a total of 8.8% (8.8 MGD)**
- **Proposal**
  - Allocation released from Jordan.
  - Intake on the Cape Fear across from Harnett County's.
  - Return effluent to a point near the Harnett County's WWTP.



# Raleigh's Supply and Demand



# Raleigh's Alternatives

Table V.3 – Source Composition of Water Supply Alternatives (MGD)

Need and Source Options	Alternative 1	Alternative 2	Alternative 3
<b>Total Projected Need (2045)</b>	19.7	19.7	19.7
<b>Total Projected Need (2060)</b>	37.7	37.7	37.7
<b>Sources:</b>			
<b>Falls Lake Re-Allocation (1)</b>	14.0 <sup>a</sup>	0.0	0.0
<b>Neuse River Intake (2a)</b>	23.7 <sup>a,b</sup>	0.0	0.0
<b>Neuse River Intake (2b)</b>	0.0 <sup>a</sup>	15.0	15.0
<b>Jordan Lake Allocation - Rd 4 (3)</b>	0.0	8.8	8.8
<b>Little River Reservoir (4)</b>	0.0 <sup>a</sup>	13.7	0.0
<b>Raleigh Quarry (5)</b>	0.0 <sup>a</sup>	0.0	10.6
<b>Purchase Agreement (6)</b>	0.0	0.2	3.3
<b>Total New Supply (MGD)</b>	37.7	37.7	37.7

a – Any combination of these Neuse River Basin alternatives that collectively provide sufficient yield to meet the projected 2060 demand would be satisfactory to the applicant.

b – The yield potential of Source 2a is higher than indicated, but is sized here for this alternative to meet 2060 demand.

# Summary of Jordan Lake Supply Allocations

## Current Plus Requested Allocations

	Current Allocation (percent)	Total Round 4 Request (percent)	(Change)	Projected Jordan Need After Round 4 (percent)
Cary/Apex/Morrisville/Wake RTP	39.0	46.2	(7.2)	48.5
Chatham County	6.0	13.0	(7.0)	18.0
Durham	10.0	16.5	(6.5)	16.5
Fayetteville	0.0	10.0	(10.0)	10.0
Hillsborough	0.0	1.0	(1.0)	1.0
Holly Springs	2.0	2.0	(0.0)	2.0
Orange County	1.0	1.5	(0.5)	1.5
Orange Water and Sewer Authority	5.0	5.0	(0.0)	5.0
Pittsboro	0.0	6.0	(6.0)	6.0
Raleigh	0.0	4.7	(4.7)	8.8
<b>Total</b>	<b>63.0</b>	<b>105.9</b>	<b>(42.9)</b>	<b>118.0</b>

Based on November 2014 data.



# Next Steps

- **Review Raleigh's revised application.**
- **Model the requested allocation amounts.**
- **Complete Cape Fear Water Supply Plan and Staff Allocation Recommendations.**

# Round 4 Schedule

- **11/14/2014 – Final Applications Submitted**
  - DWR reviews applications and develops CFRB Water Supply Plan
- **1/7/2015 – Update to WAC of EMC**
- **3/11/2015 – WSP and Draft Recommendations to WAC of EMC**
- **Public Review and 30-day comment period**
- **9/9/2015 – Response to comments, WSP and Recommendations to WAC of EMC**
- **11/19/2015 – EMC decision on allocations**

# QUESTIONS?

## Contact Information

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