

Lake Gaston Roanoke Rapids Lake Operations



February 3, 2016

Dominion Reservoir Level Operational Objectives

- Compliance with Federal Energy Regulatory Commission (FERC) license
- Meet VA State Corporation Commission and NC Utilities Commission objective providing reliable low cost electricity to customers

Roanoke River Flow Control

- USACE responsibilities:
 - meet contractual hydropower obligations at Kerr,
 - publish Weekly Declaration of flows from Kerr,
 - designate flood and drought operations at Kerr,
 - prescribe releases from Roanoke Rapids Dam during flood operations and fish spawn.
- Dominion responsibilities:
 - Required to discharge full declaration and prescribed, releases through the system each week,
 - Determines dam flows, volume and timing,
 - Comply with license.

Dominion

FERC License Requirements

- Cooperation with USACE flood control
- Lake level
 - Normal
 - Flood Control
 - Spawning Season
 - Drought
- Downstream flow requirements
- Anadromous fish spawning flows (Mar 1- June 15)

2004 License Development

Competing Interests

- Dominion wanted flexibility and maximized storage
- LGA / Regional Partnership of Local Governments wanted steady and higher lake levels
- Original license
 - 198 - 199 typical target level
- Current license
 - Target level 199.5 ± 0.5
- Good faith effort 199.5- 200.0 on summer weekends
 - Boater Safety (rocks and stumps)
 - Access to shallow coves

Lake Gaston Level

Current License Requirements

- Measured at the Gaston dam
- Normal: 199.0 – 200.0
- March 1 – June 15: 199.0 – 201.0 Fish Spawning
- Flood Control
 - Up to 203.0 when Flood Operations declared
 - Notify LGA if anticipate above 201
 - Update website with anticipated levels.
- Drought: 197.0

Construction and Use Procedures

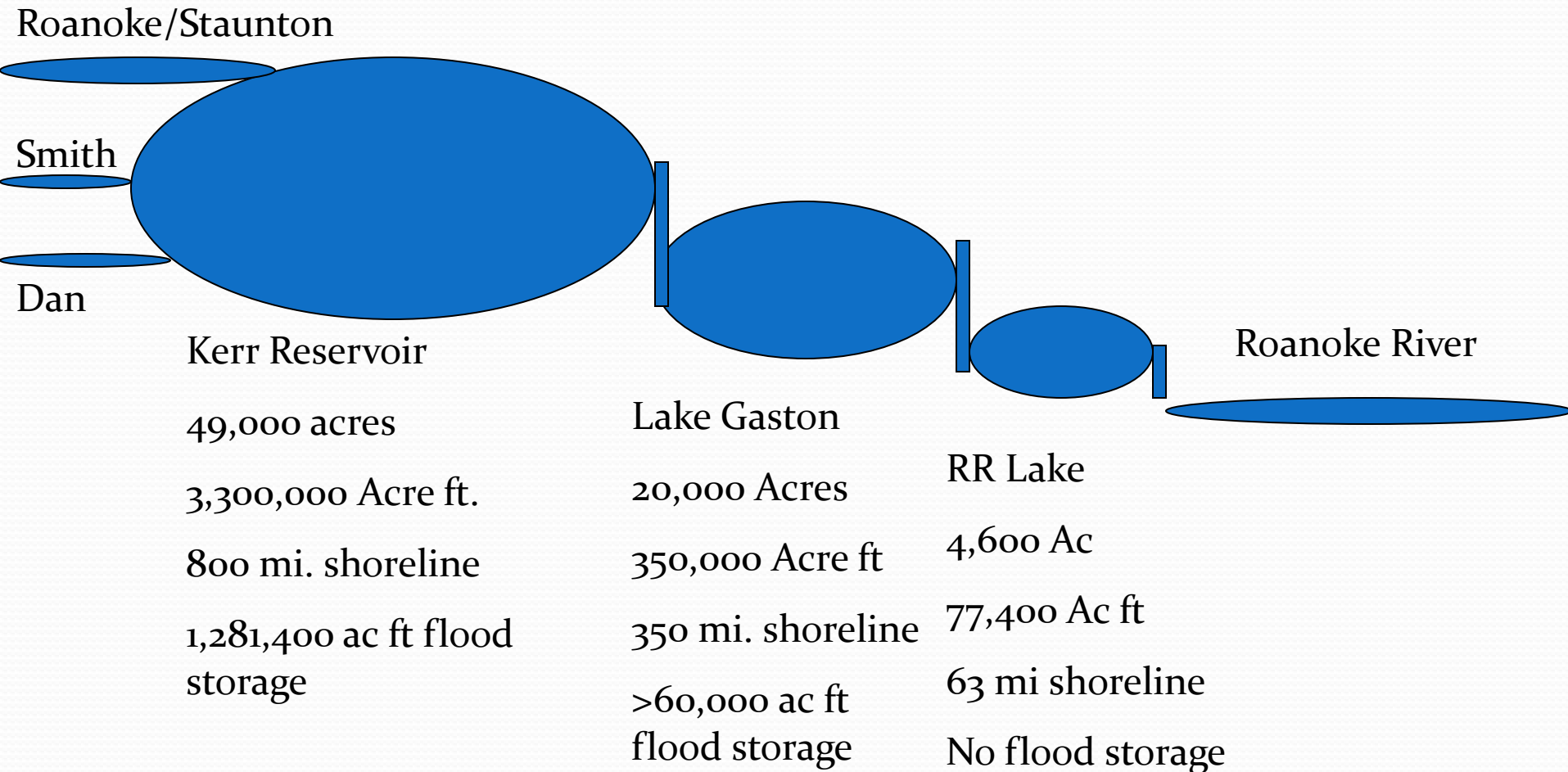
• 1.9 Cautions

- For purposes herein the maximum normal water level (“MNWL”) is defined as 200 feet above mean sea level for Lake Gaston and 132 feet above mean sea level for Roanoke Rapids Lake.
- The Applicant is cautioned that water levels in the Lakes can fluctuate within the following limits (elevations are in feet above mean sea level, measured at the dams):

Condition	Lake Gaston High	Lake Gaston Low
Normal Fluctuation	200.0	199.0
March 1- June 15	201.0	199.0
Abnormal Fluctuation	203.0	195.0
100-Year Flood Event	204.0	

- It is possible that structures may be damaged by high water levels or by wavewash from passing vessels. The issuance of a Construction and Use License Agreement does not relieve the Applicant from taking necessary steps to ensure the integrity of the structure and the safety of moored boats.

Kerr / Gaston / Roanoke Rapids System



What impacts Lake Level?

- Kerr Operations
- Location in the lake
 - Closer to Kerr = more fluctuation
- Gaston Dam operations
- Fetch (wind)
- Coves

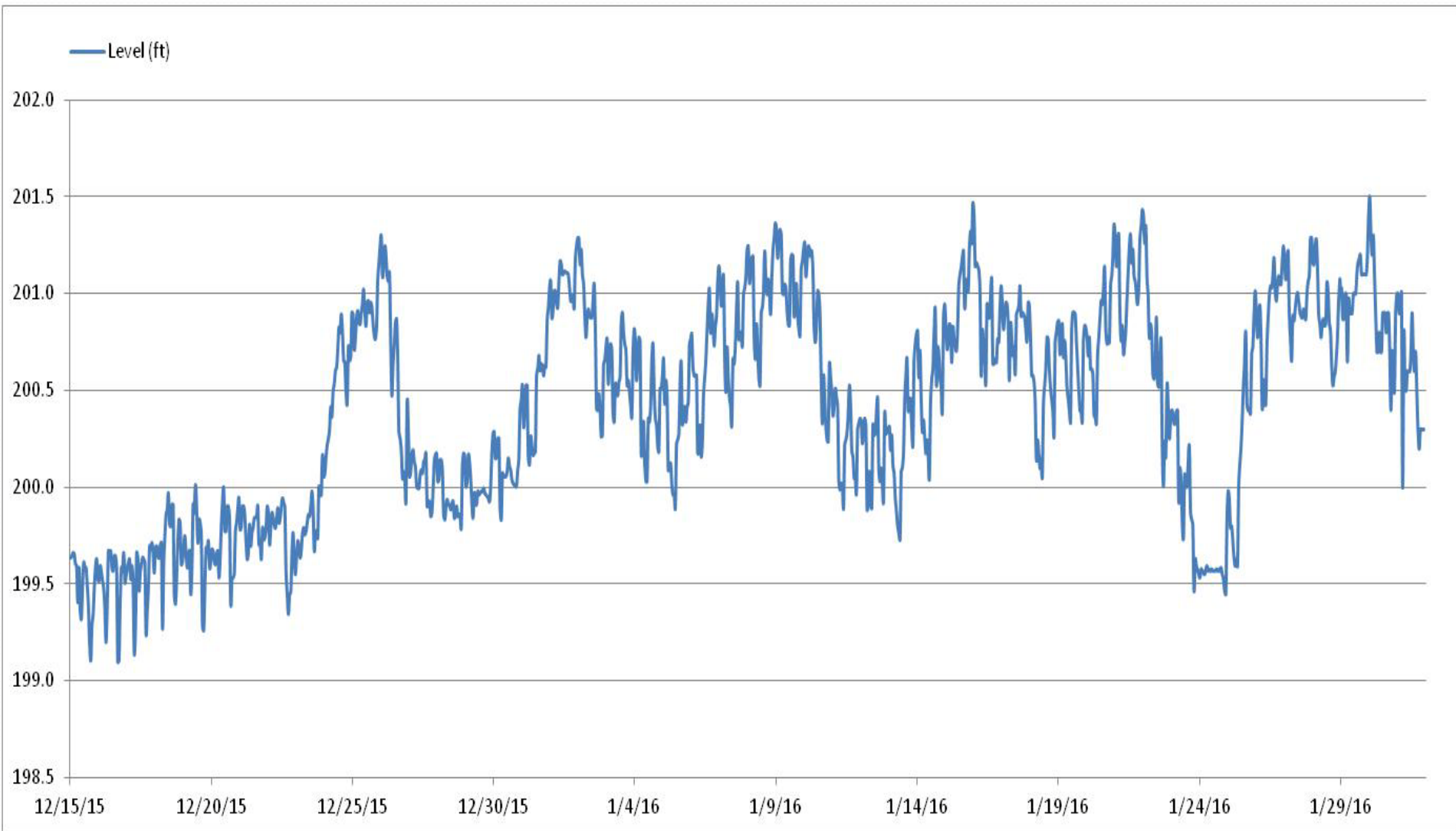
Flows this Fall/Winter

- 1965-2015 average flows
 - 7,788 cfs
- November 1, 2015 – January 31, 2016
 - 16,400 cfs
 - Inflows to Kerr were third wettest December on record.
 - Flood Control declared in 11 of 13 weeks since November 1, 2015

Lake Gaston Levels

- Between Nov 1 – Jan 29 the Lake Gaston Dam gauge indicated:
 - Peak level 201.5 ft (Jan 15th and 30th)
 - 0 hours over 201.5 ft
 - 165 hours over 201.0 ft
 - 10 Weeks in Flood Control, 7.5% of that above 201 ft

Gaston Lake Level Dec 15 – Jan 31



Dominion Actions

- Operated dam to hold lake levels to 201.5 or less during entire flood operation period
- Notified LGA when levels were expected to rise above 201.0
- Updated website to more accurately show anticipated water levels

Questions?

