**Atoka Dam & Spillway Rehabilitation – WC-0864**

- Earthen Dam
- Constructed in 1959
- Top Elevation = 600’ MSL
- Spillway Elevation = 590’ MSL
Atoka Dam & Spillway Rehabilitation – WC-0864

May 2015 Flood

- Approx. 100 year event
- Peak Lake Level 596.4
Atoka Dam & Spillway Rehabilitation – WC-0864

May 2015 Flood

- Peak Discharge about 15,000 cfs (404 Million Gallons per Hour)
Atoka Dam & Spillway Rehabilitation – WC-0864
May 2015 Flood

- Crest - Damaged & needs to be replaced
- Chute - Undersized
- Stilling basin – Destroyed
- Freese & Nichols, Inc.
Current Performance

* State Criteria for Flood Passage
  * Required to pass 75% of the Probable Maximum Flood (PMF)
  * Currently passes about 32% PMF
    Requires raising the top of the dam and enlarging the spillway
Computer Modeling

- Recommend Ogee Weir
- Raise Top of Dam 7.5’
- Wider Chute with Steeper Slope
- Rehabilitate Stilling Basin
Raising Top of the Dam

- Two-wall system
- Less impact on embankment
- Maintain centerline alignment
Protecting Pump Stations
Renderings
Renderings
Renderings
Renderings
Renderings
* Higher lake levels will spill out the south end (Existing Berm at 602)
* Increase height of berm
* Raising the height of dam and berm will not increase lake capacity
South End of Reservoir
Lake Road Closure