

## ALLATOONA PERTINENT DATA

### GENERAL

Location – Bartow County, Georgia, Etowah River, river mile 47.86	
Drainage area above damsite – square miles	1,122
Drainage area btwn damsite & mouth of Etowah River at Rome, GA – sq mi	728

### RESERVOIR

Length – river miles	28.0
Full summer pool elevation – feet NGVD29	840.0
Peak pool for standard project flood – feet NGVD29	864.7
Peak pool for spillway design flood – feet NGVD29	872.1
Area at full summer pool (elev. 840) – acres	11,862
Total volume at full summer pool (elev. 840)– acre feet	367,471
Total volume (between elev. 823-840) – acre feet	164,702
Total volume at elev. 823 – acre feet	202,769
Total Inactive volume (below elev. 800) – acre feet	82,891
Shore line length at static full pool – miles	270

### TAILWATER ELEVATIONS

Normal, (minimum outflow 240 cfs) – feet NGVD29	690.0
Normal, one turbine operating (outflow 3,250 cfs) – feet NGVD29	692.6
Normal, full powerhouse flow (outflow 6,500 cfs) – feet NGVD29	694.7
Bankfull (9,500 cfs)	696.5

### DAM/EARTH DIKES

Total length, concrete dam – feet	1,250
Total length, earth dikes - feet	4,200
Top elevation, dam – feet NGVD29	880.0
Top elevation, earth dike – feet NGVD29	875.0

### SPILLWAY SECTION

Total length – feet (net length 400 ft)	500
Number of piers, including end piers	12
Elevation of crest – feet NGVD29	835.0
Type of gates	Tainter
Size of gates – feet	9@40 x 26 2 @ 20 x 26
Elevation top of gates – feet NGVD29	860.0
Number of gates	11

### POWER PLANT AND DATA

Number of units	3
Generator rating, two units @ 40,000 each; 1 small unit @ 2,200 – kW (declared values)	82,200
Plant output at rated net head	
Installed capacity at rated power factor – kW	86,800
Installed capacity at unity power factor – kW	96,400

### STREAM FLOW

Drainage area at dam site-square miles	1,122
Minimum mean monthly flow prior to construction (Oct 1931)-cfs	240
Minimum mean monthly flow after construction based on unimpaired flows (September 2007)-cfs	148
Minimum mean monthly flow after construction based on flows computed at the project without correcting for losses (Sept. 2007)-cfs	-5
Maximum mean monthly flow prior to construction (Dec 1932)-cfs	9,360
Maximum mean monthly flow after construction based on unimpaired flows (March 1980)-cfs	8,249
Maximum mean monthly flow after construction based on flows computed at the project without correcting for losses (March 1980)-cfs	8,326
Average daily flow (1896 – 1949 Prior to construction)-cfs	2,257
Average daily flow (1950 – 2012) unimpaired flows)-cfs	1,764
Average daily flow (1950 – 2012) computed at the project-cfs	1,706
Discharge at bankfull stage-cfs	9,500
Maximum recorded daily flow (Sept 2009)-cfs	53,534

### SPILLWAY-DESIGN FLOOD

National Weather Service 72-hr storm at Long. 84° 23' and Lat, 34° 18'

Total rainfall-inches	30.7
Total storm runoff-inches	25.3
Total volume of storm runoff-acre feet	1,496,000
Peak rates of flow	
Reservoir inflow-cfs	382,000
Reservoir outflows -cfs	333,000
Duration of flood-days	9
Maximum pool elevation feet-NGVD29	872.1
Top of flood risk management pool, elevation feet-NGVD29	860.0

### RESERVOIR

Summer top of conservation, 1 May – 5 Sep, elevation feet-NGVD29	840.0
Winter top of conservation pool, 31 Dec 15-Jan, elevation feet-NGVD29	823.0
Bottom of conservation pool, elevation feet-NGVD29	800.0
Storage volumes-acre feet	
Maximum pool, spillway design flood; (elevation 872.1 feet-NGVD29 )	886,200
Total storage,-(elevation 860 feet-NGVD29)	670,047
Total storage,-(elevation 840 feet-NGVD29)	367,471
Total storage,-(elevation 823 feet-NGVD29)	202,769
inactive storage, below elevation 800 feet-NGVD29	82,891
Summer flood risk management storage, (elev. 840 – 860 feet NGVD29)/inches of runoff	302,576/5.11

Summer conservation storage, (elev. 840 – 800 feet NGVD29/inches of runoff	284,580/4.81
Winter flood risk management storage, (elev. 823 – 860 feet NGVD29/inches of runoff	467,278/7.89
Winter conservation storage, elev. 800 – 823 feet NGVD29/inches of runoff	119,878/2.03
Reservoir areas-acres Area within taking line-acres	
Maximum pool, spillway design flood, elev. 872.1 feet NGVD29 - acres	25,670
Top of flood risk management pool, elev. 860 feet NGVD29 – acres	19,201
Top of summer pool, elev. 840 feet NGVD29 - acres	11,862
Top of winter pool, elev. 823 feet NGVD29 - acres	7,606
Top of inactive storage, elev. 800 feet NGVD29 - acres	3,251
Purchased in fee simple - acres	37,742
River bed - acres	500
Total - acres	38,242
Flowage easement - acres	208
Parks and campgrounds	
Wildlife areas - acres	11,683
Length of shore line-miles	
Top of summer pool, elev. 840 feet NGVD29 - miles	270
Length of reservoir at elev. 840 - feet NGVD29 - river miles	28

#### DAM

Type, main dam	Concrete gravity
Length overall-feet	1,250
Non-overflow section, length - feet	750
Height of main dam above river bed-feet	190
Top of dam, elevation - feet NGVD29	880
Saddle dikes, total length - feet	4,200
Top of saddle dikes, elevation - feet NGVD29	875

#### SPILLWAY

Net length-feet	400
Crest elevation feet-NGVD29	835.0
Crest tainter gates	9@40'x26'; 2@20'x26'
Top of spillway gates, closed, elevation – feet NGVD29	860.0
Total discharge capacity – (pool elev. 870.3)-cfs	321,000
Total discharge capacity – (pool elev. 860.0)-cfs	184,000

## FLOOD RISK MANAGEMENT SLUICE

Number of sluices-5'8"x10'0"	4
Discharge capacity at elev. 860 feet NGVD29 - cfs	17,300
Discharge capacity at elev. 840 feet NGVD29 - cfs	16,200
Discharge capacity at elev. 823 feet NGVD29 - cfs	15,100
Discharge capacity at elev. 800 feet NGVD29 - cfs	13,600

## POWER PLANT

Present installation-kw	
Two units at 42,000 each and 1 small unit at 2,400 (nameplate) - kw	86,400
Two units at 40,000 each and 1 small unit at 2,200 (declared) - kw	82,200
Penstocks            three-20' and one-5.5' dia. Steel pipes	

## POWER DATA

Gross static head at full summer pool (840 feet NGVD29) - feet	150.0
Minimum gross head at bottom of conservation (800 feet NGVD29) - feet	110.0
Average designed head - feet	138.0
Tailwater elevations, feet-NGVD29	
Maximum, design storm-outflow 321,000 cfs - feet NGVD29	733.1
Sump Wall Limit, Turbines and Sluice outflow 11,200 cfs - feet NGVD29	697.0
Downstream bankfull capacity outflow 9,500 cfs - feet NGVD29	696.5
Normal, 2 large units operating outflow 6,500 cfs - feet NGVD29	694.7
Normal, 1 large unit operating outflow 3,250 cfs - feet NGVD29	692.6
Minimum, outflow 203 cfs - feet NGVD29	690.0
Plant output	
Installed capacity, at rated power factor - kw	86,800
Installed capacity, at unity power factor - kw	96,400
Designed dependable capacity - kw	82,200
Overload capacity, at unity power factor - kw	96,4000
Historical average annual energy (1961 – 2013) - kwh	154,534,000