# Appendix C

## Model Descriptions and Results

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# Analytic Models

## C.1 Introduction

Computer simulations using recognized computer models were used in the Reservoir Operations Study (ROS) to analyze potential impacts on environmental resources that could result from implementation of any of the reservoir operations policy alternatives. Computer models were used to provide information for analysis in six principal areas:

- Reservoir levels, water availability, and hydropower production;
- Energy production costs;
- Water quality;
- Flood risk modeling;
- Land values; and,
- Economic modeling.

The models used to develop the information listed above are described in the succeeding sections. Graphs summarizing the results of the Weekly Scheduling Model (WSM) are included after the model descriptions.

## C.2 Reservoir Levels, Water Availability, and Hydropower Production Modeling

Interactions of unregulated streamflow, regulated discharges, and reservoir pool elevations must be determined to analyze the effects of policy alternatives. To evaluate these interactions, TVA used computer simulations to model the existing reservoir system operations under the existing operations policy and establish a Base Case against which all proposed alternatives were compared. This approach allowed TVA to consider 99 years of hydrologic record under the existing reservoir system and operations policy. The modeling, modeling approach, calibration, and input and output of this effort are described in the following sections.

### Weekly Scheduling Model Description

TVA used the WSM as its basic simulation tool. This proprietary software was developed by TVA for modeling major water control projects in the Tennessee and Cumberland River basins.

This deterministic model simulates operation of the Tennessee and Cumberland River projects on a weekly time interval for a specified period of historical record. For the ROS, the period of record was the 99-year period beginning in 1903 and continuing through 2001. The model operates 1 week at a time, solving the mass balance equations for all reservoirs and satisfying operating constraints/guidelines in a prioritized order (i.e., higher priority guidelines are satisfied first and then secondary guidelines are satisfied next to the extent possible, without violating higher priority operating objectives). The model uses a linear programming approach to develop a solution for each time interval.

TVA has used the model for many years, for many different applications—including contractual power agreements with the Southeastern Power Administration and U.S. Army Corps of Engineers for generation and marketing of Cumberland River hydropower generation, contractual power agreements for purchase of Tapoco power from four facilities on the Little Tennessee River, reservoir studies for the TVA 1990 Lake Improvement Plan, monthly forecasting of power generation for the TVA and Cumberland River systems, and studies for special operations for the TVA reservoir system and unit outage planning.

Model input requirements include:

(1) Average historical weekly unregulated inflows to each reservoir in the model. These were derived from TVA operational data after completion of the projects and from gaged streamflow data prior to completion of the projects.

(2) Plant operating characteristics for all hydropower generating facilities, relating power capacity and energy per unit volume of water as a function of operating head.

(3) Physical characteristics of reservoirs, including maximum and minimum levels, and storage versus elevation curves.

(4) Initial conditions, including pool elevations at the beginning of the simulation.

(5) Operations policy expressed as a prioritized linear programming constraint set, including minimum and maximum flows, minimum and maximum operating levels, and guide curves—all of which can be expressed on a seasonal (or weekly) basis and as conditional constraints based on flow or level conditions at the beginning of each week.

Of the above model inputs, only (4) and (5) were changed when simulating various alternatives to compare to the Base Case.

Available model outputs for each reservoir include:

(1) End of week reservoir elevations (feet above mean sea level);
(2) Weekly average total discharge (in cubic feet per second [cfs]);
(3) Weekly generation (in megawatts per hour [MWH]);
(4) Weekly average turbine discharge capacity (cfs); and,
(5) Maximum generation capacity (MW).

Two examples of post-processed model output are shown in Figures C-01 and C-02.

The WSM was re-calibrated prior to the start of the ROS to ensure that the existing operations policy and project operating characteristics were simulated by the model as accurately as possible. The 10-year period from 1991 to 2000 was used as the calibration period, and yearly results as well as 10-year statistics were used.

In addition to providing detailed information about reservoir levels and water availability, the WSM provided the basis for more detailed information required for the Water Quality modeling and power system evaluations. Post-processing of the WSM results are described below for these two resource areas.

Water Quality modeling required using data for hourly discharges at each of the TVA projects. Because the WSM produces only average weekly discharges, a reasonable disaggregation of the weekly averages into chronological (by hour) release patterns was required. TVA used existing proprietary software to estimate hourly schedules based on the following:

(1) Assumed hydropower peaking hours for each season of the year;

(2) Regression analysis of historical data for each project to determine the ratio of flows on weekdays vs. weekends;

(3) Use of water for hydro peaking at one unit use to cover peak hours, then two-unit use, etc. until available water is scheduled;

(4) If more water is available than will pass through the hydro units, then spill at a steady rate for the week was assumed;

(5) Minimum flows (instantaneous or pulsing) are met first; and,

(6) Ramping rates for the project are satisfied.

Each policy alternative was also evaluated for its impacts on TVA power supply costs. This evaluation required that weekly hydroelectric generation statistics be provided to the overall power resource evaluation modeling effort, as described in Section 5.23 in Volume I of this FEIS.

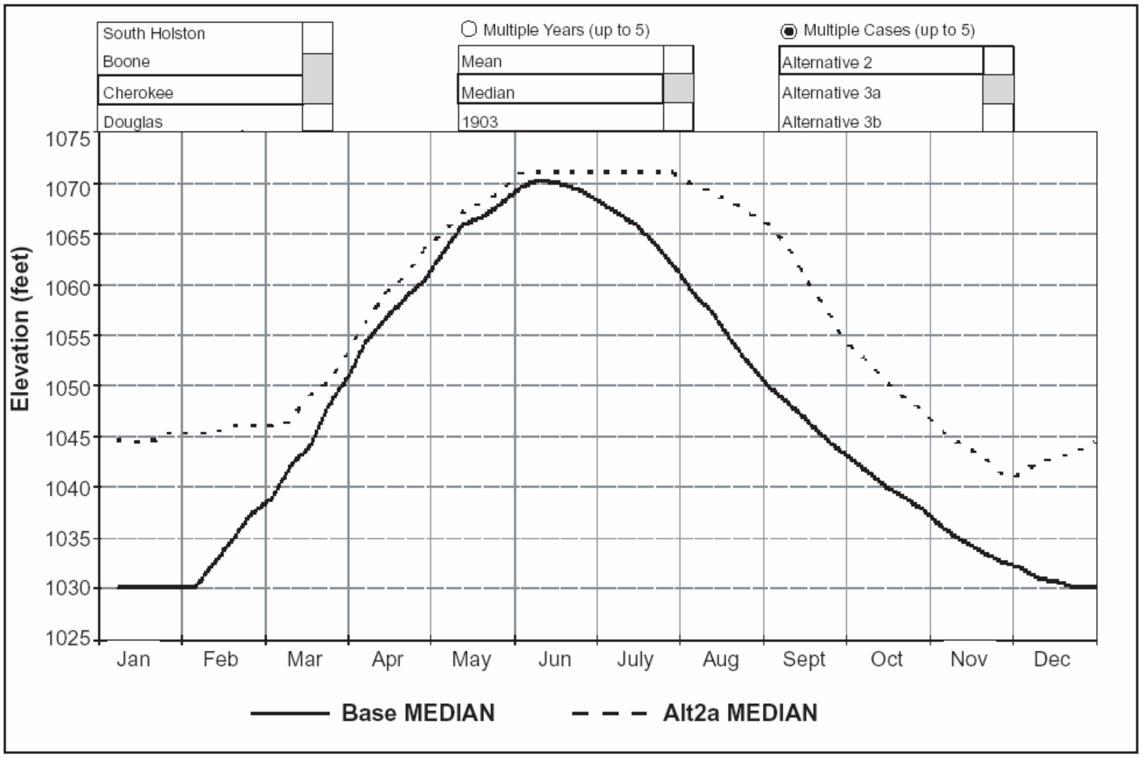



Figure C-01 Median Project Elevations for Two Alternatives

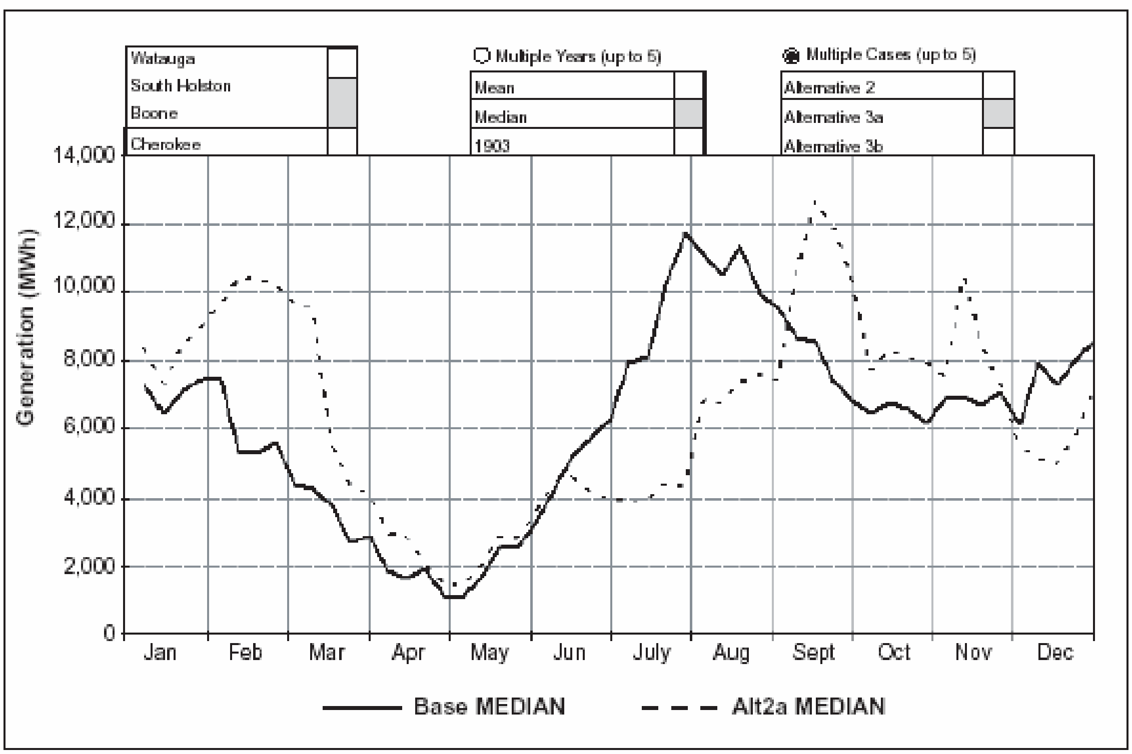



Figure C-02 Average Project Generation for Two Alternatives

The power evaluation model required the following statistics for each alternative:

(1) For a median year, the weekly system hydropower (energy, MWH) available to TVA, and the minimum and maximum power levels (MW) throughout the week at which the generation can be dispatched; and,

(2) The $10^{th}$ and $90^{th}$ percentile of ranked generation for each week over the period of record of the simulation, and the $10^{th}$ and $90^{th}$ percentile of minimum and maximum power levels.

The WSM provides weekly generation for each project for each week of the historical record, from which the system hydropower generation energy statistics can be computed. Hydropower capacity values were computed based on the assumption that the available generation at each plant will be dispatched during the highest cost hours, at the highest available capacity, subject to reserving energy (water) for meeting minimum flow requirements throughout the week.

### Weekly Scheduling Model Results

The WSM was a central tool in the impact assessment for the policy alternatives. This model was used to convert reservoir operations policy changes into predicted future changes in reservoir levels and discharges from the ROS projects in the TVA water control system, given the annual variability in rainfall and runoff within the TVA system.

The WSM provided outputs for each alternative, for different reservoirs and for different time periods. Depending on the comparison desired, a single week, groups of weeks, or an entire year (or years) was selected. The various outputs that can be generated from the WSM include:

- Elevation and flow plots—weekly average reservoir elevation (msl) or flow releases (cfs) for a given period of time;
- Generation and turbine capacity plots—average weekly generation (MW) and weekly average turbine capacity (cfs) for a given period of time; and,
- Probability elevation and flow plots—the predicted frequency at which different average weekly reservoir elevations, flows, or generation would occur over the next 99-year record of a reservoir over any defined set of weeks (e.g., Labor Day, the month of June, or August through October). These are expressed as percentiles—the percentage of time that different levels and flows would occur.

The WSM is important to the EIS because reservoir elevations and reservoir releases and tailwater flows are the drivers for most impacts. This tool quantitatively compares the effects of alternatives on the water control system.

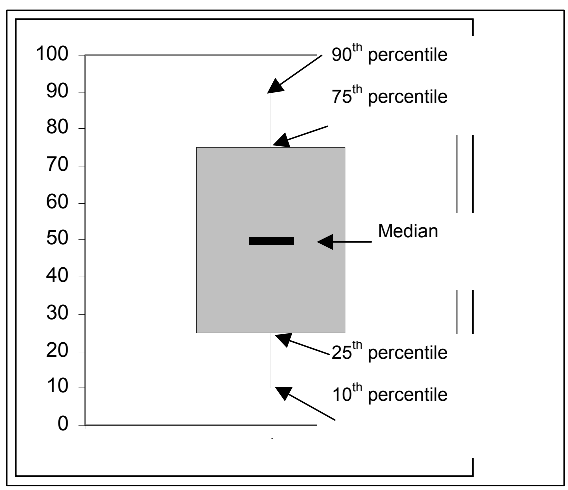
### Overview of Weekly Scheduling Model Results

The results of the WSM predictions are presented in Section C.8. Graphical comparisons in the form of box plots showing the differences in reservoir elevations and flows that would occur under the various alternatives are provided for each of the reservoirs for selected periods, as shown below. The tributary storage reservoirs were plotted for elevation, and all reservoirs in the WSM within the scope of the ROS were plotted for flow. Additionally, elevation probability plots along with flood guide curves for the tributary reservoirs and operating guides for the mainstem reservoirs are presented for the Base Case and the Preferred Alternative.

| Elevation | Flow |
|---|---|
| January 1 (week 52) | Spring fill (weeks 12 – 22) |
| March 15 (week 12) | Summer pool (weeks 22 – 35) |
| Labor Day (week 35) | Fall drawdown (weeks 36 – 48) |
| Memorial Day (week 21) | |
| Last week of October (week 43) | |

### Box Plots

Box plots are used to demonstrate the variability in the results among the alternatives, and the variability that results from interaction between the reservoir operations policy and the wide range of rainfall and runoff conditions that occur from year to year in the Tennessee River basin.

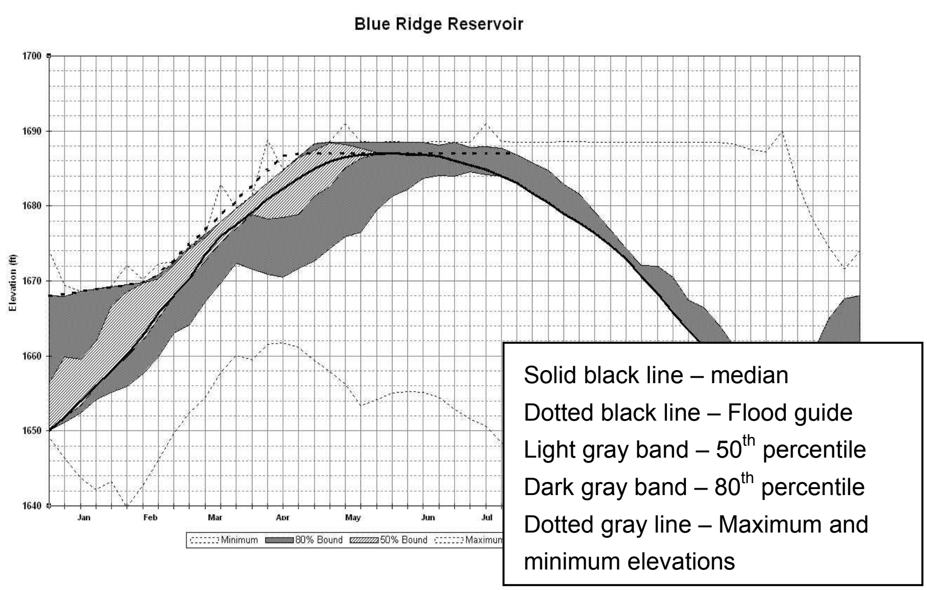



Box plots present, in a single graphic depiction, the full range and distribution of the flows and reservoir levels that would occur over the predicted 99-year record. The statistics presented in box plots and their interpretations are described in the inset box and the table on the next page.

| Percentiles Used in Box Plots | |
|---|---|
| 90th percentile | Reservoir elevations/flow release would be lower/less than this elevation 90% of the time (higher 10% of the time) |
| 75th percentile | Reservoir elevations/flow release would be lower/less than this elevation 75% of the time (higher 25% of the time) |
| Median | Reservoir elevations/flow release would be higher than this elevation 50% of the time and lower than this elevation 50% of the time |
| 25th to 50th percentile range (grey box) | Reservoir elevations/flow release would fall within this range (grey box) 50% of the time |
| 25th percentile | Reservoir elevations/flow release would be lower/less than this elevation 25% of the time (higher 75% of the time) |
| 10th percentile | Reservoir elevations/flow release would be lower/less than this elevation 10% of the time (higher 90% of the time) |

## Probability Plots

Probability plots were developed using the WSM and 99 years of available hydrologic data. Each alternative analyzed was loaded into the WSM and run with the 99 years of hydrologic data. This resulted in 99 plots of modeled weekly elevations for each reservoir. The elevation probability plots represent the results of these 99 years of



weekly elevations. The median line indicates the weekly median elevation for the 99 years ( i.e., for any given week, 50% of the 99 modeled elevation points for that week were at or above the point in the median line and 50% of the 99 modeled elevation points for that week were at or below the median point). The 50% bound for any given week indicates the range where 50% of the 99 modeled elevation points for that week fell. Similarly, the 80% bound indicates where 80% of the points fell. The maximum and minimum lines (the highest modeled elevation for each week and the lowest modeled elevation for each week, respectively) are also included, along with the flood guide elevation (see glossary in Chapter 10 for definition).

## C.3 Energy Cost Modeling

The models used in the power generation analyses for this EIS include the WSM, the PROSYM model, and the RELY model.

The PROSYM model is a commercially available and well established electric power production costing simulation computer software package. This proprietary model is licensed by The Henwood Energy Services, Inc. of Sacramento, California. It is designed for performing planning and operational studies; because of its chronological nature, the model accommodates detailed hour-by-hour investigation of TVA's power operations. PROSYM simulates TVA's power system operation on a chronological hourly basis in 1-week increments and is used to define power system operating costs to meet power loads. Input into the model includes fuel costs, variable operation and maintenance costs, and startup costs specific to TVA's plants. PROSYM determines how to meet hourly loads in the most economical manner possible, given a specified set of generating resources as well as the future capacity needed to maintain power system reliability as determined by the RELY model described below. Output from PROSYM is production cost by power resource.

The RELY model is a generation reliability model used to determine the capacity needed to maintain the reliability of the power system. It calculates the TVA system loss of load probability (LOLP) hourly for the summer and winter peak load seasons through 2022. The results were based on the capacity of the generating resources and purchases, expected equivalent forced outage rates, planned outages, the hourly load forecast, contract load available for interruptions, and uncertainty on the load forecast. The impact of the hourly dispatch each week of the various hydropower alternatives was analyzed to determine the different electric generation capacity needs and to compare them to the capacity needs of the Base Case. On the basis of assumptions about the construction costs of peaking and base types of power plants, TVA then converted the resulting differences to capacity cost differences among the scenarios.

TVA currently uses PROSYM and RELY in its operations and planning activities.

## C.4 Water Quality Modeling

TVA has developed numerical water quality models for various reservoirs in the Tennessee River, Cumberland River, and other river systems to investigate water quality issues typically involving water temperature and dissolved oxygen (DO). The water quality models presently in use in the Tennessee River system include TVARMS, BETTER, CEQUAL-W2, and SysTemp. Each of these models is described below.

TVA uses TVARMS (the Tennessee Valley Authority River Modeling System) to simulate tailwaters and regulated stream reaches. TVARMS consists of two individual models: a flow model (ADYN) and a water quality model (RQUAL) (Hauser et al. 1995). These models can be used independently or in sequence. ADYN is a one-dimensional, longitudinal, unsteady flow model that is valid for streams and the tailwater portions of reservoirs. ADYN solves the one-dimensional equations for conservation of mass and momentum using a four-point implicit finite difference scheme, or McCormack explicit scheme. RQUAL is a one-dimensional water quality model used in conjunction with ADYN. RQUAL solves the mass transport equation with the same numerical scheme as the flow model. RQUAL is useful for studying temperature and nitrogenous and carbonaceous biochemical oxygen demand. TVA rigorously calibrated and verified this model, and has applied it on numerous rivers and reservoirs (Beard and Hauser 1986, Hauser 1985, Brown and Shiao 1985, Hauser and Ruane 1985, Hill and Hauser 1985, Hauser 1983, Hauser et al. 1983, Hauser and Beard 1983). TVA distributed this software and trained others in its use. Several consulting firms use the model.

For the ROS, TVA used TVARMS to simulate tailwaters, including:

| | |
|---|---|
| Norris | Beard et al. 1986, Hauser et al. 1983 |
| Cherokee | Hauser et al. 1983 |
| Douglas | Hauser et al. 1989 |
| South Holston | Hauser et al. 1985, Hadjerioua and Lindquist 2002 |
| Chatuge | Julian 2003 |
| Nottely | Shiao 2002 |
| Watauga | Julian 2002 |
| Fort Patrick Henry | Hadjerioua 2003 (not yet published) |
| Apalachia | Proctor 2003 (not yet published) |
| Normandy | Bevelheimer 2003 (not yet published) |

An additional model was used in the Water Quality analysis. The Box Exchange, Transport and Temperature of a Reservoir (BETTER) model simulates temperature, DO, nutrients, pH, and algal biomass in the longitudinal and vertical dimensions. The strengths of BETTER are:

- Relatively easy simulation of seasonal water quality patterns;
- Representations of numerous physical and biochemical processes; and,
- No major execution problems such as numerical instabilities.

BETTER solves conservation of mass but does not include the momentum equation (Bender et al. 1990). Model results have been accepted by the Tennessee Department of Environment and Conservation (TDEC). For the ROS, TVA used the pre-existing calibrated BETTER models for eight reservoirs:

| | |
|---|---|
| Normandy | Beard and Brown 1984 |
| Boone | Bender et al. 1990 |
| Cherokee | Hauser et al. 1983 and 1987 |
| Douglas | Brown et al. 1987 |
| Fort Loudoun | Brown et al. 1985a |
| Guntersville | Bender et al. 1990 |
| Kentucky | Shiao 2000 |
| Nickajack | Shiao 2000 |
| Nottely | Shiao 1995 |
| Pickwick | Brown et al. 1985b |
| Tellico | Hauser et al. 1982 |
| Watts Bar | Shiao (not published) |
| Wheeler | Shiao (not published) |

CE-QUAL-W2 was developed by the U.S. Army Corps of Engineers (Cole and Buchak 1995). It is a two-dimensional, laterally averaged, hydrodynamic and water quality model that is widely distributed, accepted, and used. The model is best suited for long, narrow waterbodies with longitudinal and vertical water quality gradients. A branching algorithm allows application to geometrically complex waterbodies. The model is useful for predicting water surface elevations, velocities, and temperatures, as well as 21 other water quality constituents. TVA had previously calibrated CE-QUAL-W2 models for Melton Hill and Douglas Reservoirs (Hadjerioua and Lindquist 2000a, 2000b). As part of the ROS, CE-QUAL-W2 models were calibrated for 16 additional reservoirs, as described in the following reports:

| | |
|---|---|
| Apalachia | Proctor 2003 |
| Bear Creek | FTN 2003 |
| Blue Ridge | Proctor 2002 |
| Cedar Creek | FTN 2003 |
| Chatuge | Shiao 2003 |
| Fontana | Hadjerioua and Lindquist 2003a |
| Fort Patrick Henry | Hadjerioua and Lindquist 2003b |
| Great Falls | FTN 2003 |
| Hiwassee | Proctor 2003 |
| Little Bear Creek | FTN 2003 |
| Norris | Hadjerioua and Lindquist 2000c |
| South Holston | Hadjerioua and Lindquist 2003 |
| Tims Ford | Julian 2002 |
| Upper Bear Creek | Ruane 2003 |
| Watauga | Higgins 2003 |
| Wilson | Proctor (not published) |

TVA developed a system-wide water temperature model (SysTemp) to simulate how the TVA system of connected reservoirs thermally responds to meteorology and changes in reservoir operations (Miller et al. 1992). SysTemp extends from Melton Hill and Watts Bar Reservoirs through seven additional reservoirs to Kentucky Dam. Each reservoir in the system includes a BETTER model within each reservoir. SysTemp uses release temperatures and flow from Norris and Watts Bar Hydro Plants as upstream boundary conditions. Headwater elevation at Kentucky Dam forms the downstream boundary condition. As input, SysTemp uses releases from each hydro plant and meteorological conditions. TVA routinely uses SysTemp to provide 90-day water temperature forecasts, which are automatically updated daily.

For the ROS, TVA upgraded the SysTemp model to link the TVARMS, CE-QUAL-W2, and BETTER models to simulate a larger portion of TVA's water control system. The upgraded version has been designated SysTempO and uses water quality model output from upstream waterbodies as input for the next tailwater or reservoir downstream. The individual elements in SysTempO were pre-calibrated for at least 1 year of data before being linked. After linking models together in SysTemp, 8 years of modeled temperature and DO were compared to measured data, and the model was adjusted. The model was then used to simulate the Base Case and policy alternatives to examine the effect of alternative reservoir operations policies on water quality.

All of the reservoirs and tailwaters listed above were linked together except Upper Bear Creek, Bear Creek, and Little Bear Creek Reservoirs. These were not included because changes in operations were not proposed for these reservoirs. Models were not calibrated for Ocoee #1, #2 and #3 Reservoirs. Hiwassee Reservoir results were used as an analog to estimate impacts on the Ocoees. The Tapoco projects between Fontana and Tellico Reservoirs were also not modeled. Empirical relationships were developed by Montgomery (2003) to estimate the changes in water quality between Fontana and Tellico Reservoirs.

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## C.5 Floodflow Modeling

Modeling for the flood control analysis was conducted using RiverWare, a general purpose river basin modeling software system developed by the University of Colorado under primary sponsorship by TVA and the U. S. Bureau of Reclamation. Optimization and simulation functions of this model have been used for several years by TVA to schedule the operation of the reservoir system. For the flood risk analysis in the ROS, the rule-based simulation capabilities of RiverWare were used to model the entire water control system for the 99-year period of record, using a 6-hour timestep.

The model allows sophisticated operating rules to be written for all projects that mimic TVA's operations of these projects during flood control operations and during flood recovery operations. The model results show the headwater elevation for each project and the maximum outflow rates at each project for each storm (minor and major) that has occurred at any location in the Tennessee Valley during the past 99 years, as well as for a number of synthesized design floods. Model calibration for both the physical modeling attributes and the representation of the operations policy for the Base Case was conducted based on recent floods back to 1973.

Additional information on RiverWare can be retrieved from the University of Colorado's web site at: http://cadswes.colorado.edu.

### Use of Modeling Results in Developing the Preferred Alternative

Except for the Base Case, none of the alternatives in the Draft Environmental Impact Statement were completely acceptable from a flood risk standpoint. Detailed analyses indicated that all alternatives investigated were characterized by an unacceptable increase in the risk of flooding at one or more critical locations in the Tennessee Valley. However, the analysis also indicated that each of the alternatives satisfied flood risk evaluation criteria at least for certain seasons at certain locations. This suggested the possibility of combining specific elements of the alternatives investigated in a new, "blended" alternative. It was therefore necessary to conduct additional floodflow modeling to determine whether a Preferred Alternative could be developed that would allow meaningful changes in reservoir pool levels without violating the flood risk criteria.

The RiverWare model was used in developing a series of eight blended alternatives based on successive attempts to limit increases in flood risk to an acceptable level at all locations. Reservoir Recreation Alternative A was used as a baseline for developing Blend 1. Winter flood guides were raised for 11 tributary storage projects, summer flood guides were lowered for five tributary storage projects, winter flood guides were raised for five mainstem projects, and summer flood guides were extended for six mainstem projects. Modeling results showed unacceptable increases in flood risk throughout the system, but particularly in the Hiwassee River watershed and the Tennessee River.

To address these issues, additional modifications were made to the flood guide curves and regulating zones for individual projects where problems were identified, resulting in Blend 2. Modeling of Blend 2 identified additional flood issues, leading to more incremental changes in flood guide curves and regulating zones at individual projects and the development of Blend 3. This process continued until flood risk issues at the critical locations considered were eliminated based on modeling of Blend 8.

Flood risk issues identified for a particular simulation could be associated either with the period of record (flood events observed over a continuous 99-year period), design storms (hypothetical flood events based on scaled replicas of large historical events), or both.

## C.6 Hedonic Valuation Model – Estimated Changes in Property Values

The hedonic valuation model was used to estimate changes in property values as they relate to reservoir levels, a key parameter that varied among the policy alternatives. This model is derived mostly from Lancaster's (1966) consumer theory and Rosen's (1974) model. Numerous studies have used this technique to examine the relationship between attribute preference and the price of properties (Gillard 1981, Li & Brown 1980, Sirpal 1994, Walden 1990). More specifically, applications have included the influence on property sales price of residential and neighborhood attributes, such as land use (Crecine et al. 1967), residential quality and accessibility (Kain and Quigley 1970, Richardson et al. 1974, Randolph 1988, Can 1990, Dubin 1992), externalities in the local surrounding environment (Ridker and Henning 1968; Anderson and Crocker 1971; Wilkinson 1973; Smith and Deyak 1975; Nelson 1978; Berry and Bednarz 1979; Mark 1980; Clark et al. 1997; Simons et al. 1997, 1998, 1999), and water-related amenities (Milon et al.1984, Brown and Pollakowski 1977).

The hedonic valuation model is well suited for linear regression analysis. In the hedonic valuation model, the implicit price of each characteristic of the property embedded in the market price of the property is identified.

The following identifies the basic equation used in this analysis.

(1) $Y_i = a + BX_i + CZ_i + E_i$, where

Y is a vector of assessed property values,

X is a matrix of property attributes exclusive of water fluctuations,

Z is a vector of values of average annual distance to pool, and

E is a vector of normally distributed residual values.

For the purpose of the ROS, it was postulated that the value of residential property located adjacent to the TVA reservoirs reflects the recreational and aesthetic (RA) benefits received from the reservoir by residents (i.e., residential property on or near reservoirs will have a higher value if the winter reservoir level drawdown exposes less area between the summer high pool and winter low pool elevations).

Average annual distance to pool (ADTP) was the variable that linked elevations to property values in the hedonic valuation model and is defined as

(2) ADTP = (Horizontal distance to summer pool) + (Reservoir maximum elevation – average elevation)/(parcel slope fraction).

ADTP variables were derived from distance to pool and slope data for sample parcels from several reservoirs, using a Geographic Information System and historical pool elevation levels. Thus, with simulated weekly elevations for alternative operating scenarios in the context of highly regulated, annual fluctuations in pool levels, potential policy changes can be mapped directly into property values through the ADTP variable. If an operations alternative requires summer reservoir levels to remain at the normal maximum elevation for an additional 30 days per year, for example, the ADTP will be less than it is in the existing condition.

The coefficient for ADTP, then, yields a dollar value per foot of change in average annual distance to pool, and the effect of changes in reservoir operations on property values can be estimated.

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## C.7 Economic Modeling

This project uses TVA's 10-area economic simulation and forecasting model purchased from *Regional Economic Models, Inc.* (REMI) to estimate the total effects, which are reported as economic impacts of alternatives. The REMI model is an integral part of a system of models and processes that TVA uses for economic forecasting and analyses. REMI constructs models that reveal the economic and demographic effects that policy initiatives or external events may impose on a local economy. A REMI model has been built especially for the TVA region that is based on 31 years of historical data. REMI's model-building system uses hundreds of programs developed over the past two decades to build customized models using data from the Bureau of Economic Analysis, the Bureau of Labor Statistics, the Department of Energy, the Census Bureau and other public sources.

REMI Policy Insight, the newest version of REMI's software, utilizes years of economic experience. A major feature of REMI is that it is a dynamic model, which forecasts how changes in the economy and adjustments to those changes will occur on a year-by-year basis. The model is sensitive to a very wide range of policy and project alternatives, and to interactions between the regional and national economies.

The REMI model is a structural model, meaning that the REMI TVA ROS Model includes cause-and-effect relationships. Estimated changes to the five direct drivers are model inputs. The model builds on two key underlying assumptions that guide economic theory: households maximize utility and producers maximize profits. In the model, businesses produce goods to sell to other firms, consumers, investors, governments and purchasers outside the region. The output is produced using labor, capital, fuel and intermediate inputs. The demand for labor, capital and fuel per unit of output depends on their relative costs; an increase in the price of any of these inputs leads to substitution away from that input to other inputs. The supply of labor in the model depends on the number of people in the population and the proportion of those people who participate in the labor force. Economic migration affects the population size. People will move into an area if the real after-tax wage rates, the likelihood of being employed, and the access to consumer goods increases in a region.

Supply and demand for labor in the model determines the wage rates. These wage rates, along with other prices and productivity, determine the cost of doing business for every industry in the model. An increase in the cost of doing business causes an increase in production costs and the price of the goods or service, which would decrease the share of the domestic and foreign markets supplied by local firms. This market share, combined with the demand described above, determines the amount of local output. The model has many other feedbacks. For example, changes in wages and employment affect income and consumption, while economic expansion changes investment and population growth affects government spending.

Figure C-03 is a pictorial representation of the model. The Output block shows a factory that sells to all the sectors of final demand as well as to other industries. The Labor & Capital Demand block shows how labor and capital requirements depend both on output and their relative costs. Population & Labor Supply are shown as contributing to demand and to wage determination in the product and labor market. The feedback from this market shows that economic migrants respond to labor market conditions. Demand and supply interact in the Wage, Costs, & Prices block. Once costs and prices are established, they determine market shares, which along with components of demand determine output.

Linkages indicated by the dashed arrows account for the effects of agglomeration in both the labor and product markets. These effects are crucial to accurately capture the key to why certain areas with a concentration of similar businesses can prosper despite high wages and real estate costs. By having a choice of suppliers and workers, each firm can obtain specialized labor and inputs that best fulfill their needs. This increases productivity and efficiency. Nashville's agglomeration of musical artists, producers, recording studios, show case venues, songwriters, agents, and entertainment lawyers is the perfect example of an agglomeration economy.

The dashed arrow from the Output block to the Cost block shows that more suppliers will increase the efficiency of inputs, which will then reduce production costs and competitiveness.  The dashed arrow from the Labor block shows that more labor will increase the productivity of labor, thus reducing labor costs and thereby making the area more competitive.  The arrow from Output to the Population block shows that the greater output provides more variety of choices and enhances consumer satisfaction, and thus inward migration.  The arrow from the Output to the Shares block shows that the areas with concentration can offer more to purchasers, thus having an effect on market share in addition to the price advantages through the Cost & Price block.

The REMI model has strong dynamic properties, which means that it forecasts what will happen and when it will happen.  The model brings together all of the above elements to determine the value of each of the variables in the model for each year in the baseline forecast.  Inter-industry relationships contained in typical input-output models are captured in the REMI Output block; but REMI goes well beyond typical input-output models by including the relationships among all of the other blocks shown in Figure C-03.

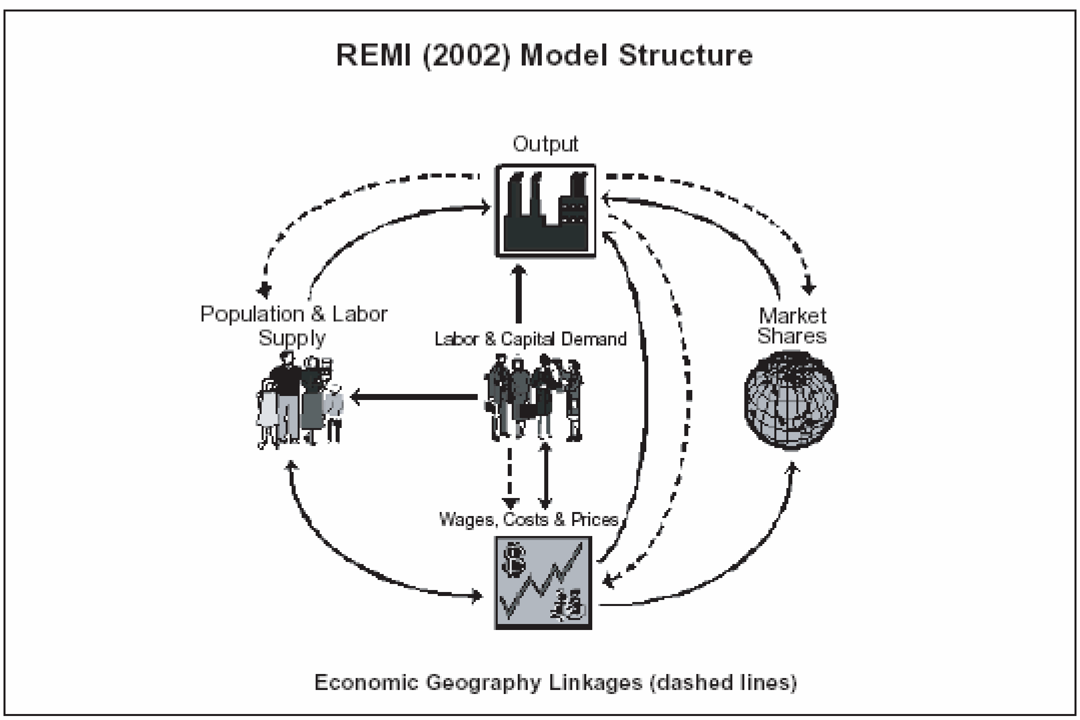



Figure C-03  Pictorial Representation of the REMI Model

The REMI TVA ROS model is designed to examine the effects of policy changes or direct economic changes to the TVA regional economy arising from the five economic drivers. The baseline forecast uses the baseline assumptions about the national and regional economic variables. Alternative forecasts have been generated using selected input variable values for the five drivers that reflect changes caused by alternative reservoir operations. Figure C-04 shows how this process would work for a reservoir operations change called Alternative X.

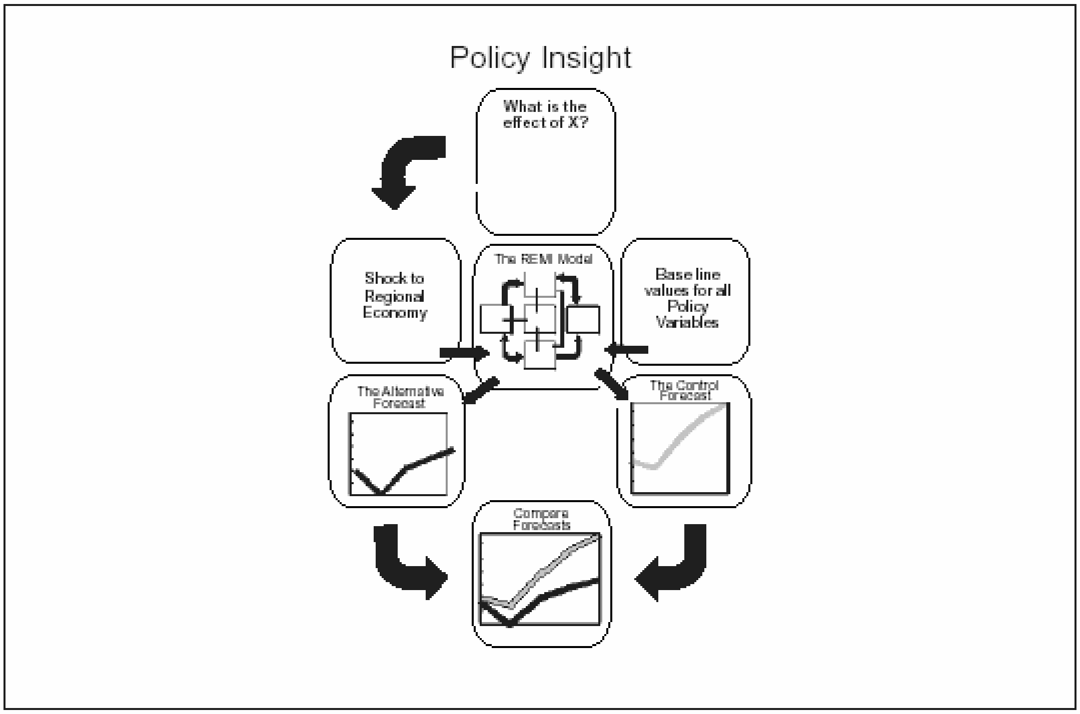



Figure C-04 REMI Model Process for Measuring Changes in Reservoir Operating Policies

The REMI model comes with default baseline economic forecasts for the United States and the TVA region, referred to as “Control Forecasts.” Specified alternatives that will have some effects on the regional economy have been studied to understand and estimate their direct effects. The direct changes to industries affected by reservoir operations are introduced into the model, which is then run to produce a new forecast incorporating the impacts of the specified alternatives. Results are shown in terms of how the new forecast differs from the Control Forecast. For example, reservoir operation changes that sustain tributary reservoir water levels longer into fall would affect local recreation activity and associated spending. The REMI model tracks these changes as consumer spending in relation to specific recreation activities. This study reports incremental changes between the baseline and alternative as the results.

## C.8 Weekly Scheduling Model Results Outputs

The following pages include the tabular and box plot results for selected reservoirs. The conversion chart below relates the letter and number code to the alternative names used in the text of the main document.

**RESERVOIR OPERATIONS POLICY ALTERNATIVES EVALUATED IN DETAIL**

| Alternative Name | Former Number Code |
|---|---|
| Reservoir Recreation A | 2A |
| Reservoir Recreation B | 3C |
| Summer Hydropower | 4D |
| Equalized Summer/Winter Flood Risk | 5A |
| Commercial Navigation | 6A |
| Tailwater Recreation | 7C |
| Tailwater Habitat | 8A |

**Reservoir Elevation (feet above MSL) on January 1st**

Tims Ford Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 870.0 | 875.0 | 871.0 | 871.0 | 865.0 | 870.0 | 871.0 | 875.0 | 870.0 |
| 25 | 870.0 | 875.0 | 871.0 | 871.0 | 865.0 | 870.0 | 871.0 | 875.0 | 870.0 |
| 50 | 870.5 | 875.0 | 871.0 | 871.0 | 865.0 | 870.0 | 871.0 | 875.0 | 870.0 |
| 75 | 873.0 | 878.1 | 873.0 | 873.0 | 865.0 | 873.0 | 873.0 | 878.7 | 873.0 |
| 90 | 873.2 | 879.0 | 873.5 | 873.0 | 865.0 | 873.2 | 873.5 | 879.0 | 873.2 |

Blue Ridge Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 1650.0 | 1660.0 | 1660.0 | 1624.5 | 1666.0 | 1648.2 | 1660.0 | 1677.9 | 1664.8 |
| 25 | 1650.0 | 1660.0 | 1660.0 | 1649.8 | 1666.0 | 1650.0 | 1660.0 | 1678.0 | 1664.8 |
| 50 | 1650.0 | 1669.2 | 1660.0 | 1660.0 | 1667.0 | 1650.0 | 1660.0 | 1678.0 | 1667.2 |
| 75 | 1656.5 | 1677.5 | 1668.0 | 1663.5 | 1672.4 | 1656.5 | 1668.0 | 1680.0 | 1670.1 |
| 90 | 1668.0 | 1680.0 | 1668.0 | 1668.0 | 1677.0 | 1668.0 | 1668.0 | 1680.0 | 1672.0 |

Hiwassee Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 1460.0 | 1472.0 | 1482.9 | 1465.9 | 1479.9 | 1460.0 | 1482.9 | 1482.0 | 1479.0 |
| 25 | 1464.9 | 1475.3 | 1482.9 | 1474.8 | 1479.9 | 1461.8 | 1482.9 | 1482.0 | 1479.0 |
| 50 | 1466.5 | 1480.8 | 1488.2 | 1483.1 | 1482.0 | 1465.9 | 1488.2 | 1483.0 | 1483.5 |
| 75 | 1476.1 | 1486.9 | 1491.9 | 1490.0 | 1486.7 | 1476.1 | 1491.9 | 1489.2 | 1490.0 |
| 90 | 1476.2 | 1490.0 | 1493.1 | 1493.0 | 1488.0 | 1476.2 | 1493.1 | 1490.1 | 1491.8 |

Nottely Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 1743.0 | 1753.0 | 1760.0 | 1742.0 | 1763.3 | 1743.0 | 1760.0 | 1760.0 | 1758.0 |
| 25 | 1745.0 | 1754.3 | 1760.0 | 1750.5 | 1764.0 | 1743.5 | 1760.0 | 1760.0 | 1758.0 |
| 50 | 1745.8 | 1757.0 | 1762.4 | 1760.0 | 1764.5 | 1745.6 | 1762.4 | 1760.6 | 1760.7 |
| 75 | 1752.1 | 1763.0 | 1766.3 | 1764.9 | 1766.6 | 1752.1 | 1766.2 | 1764.4 | 1762.0 |
| 90 | 1752.1 | 1765.0 | 1767.1 | 1766.9 | 1768.0 | 1752.1 | 1767.1 | 1765.1 | 1762.0 |

Chatuge Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 1911.0 | 1913.5 | 1916.0 | 1907.9 | 1915.9 | 1911.0 | 1916.0 | 1916.0 | 1916.0 |
| 25 | 1912.0 | 1913.7 | 1916.0 | 1913.3 | 1915.9 | 1911.2 | 1916.0 | 1916.0 | 1916.0 |
| 50 | 1912.5 | 1915.2 | 1917.5 | 1916.0 | 1916.4 | 1912.3 | 1917.5 | 1916.4 | 1917.5 |
| 75 | 1916.1 | 1917.8 | 1918.6 | 1918.0 | 1919.3 | 1916.1 | 1918.6 | 1918.6 | 1918.0 |
| 90 | 1916.1 | 1919.0 | 1919.1 | 1919.0 | 1920.0 | 1916.1 | 1919.1 | 1919.1 | 1918.0 |

**Reservoir Elevation (feet above MSL) on January 1st (cont.)**

Norris Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 981.5 | 992.0 | 1006.0 | 962.8 | 998.7 | 981.5 | 1004.1 | 1000.0 | 994.0 |
| 25 | 982.2 | 992.2 | 1006.0 | 987.1 | 1001.0 | 981.5 | 1006.0 | 1000.0 | 994.0 |
| 50 | 985.0 | 998.2 | 1009.0 | 1005.3 | 1002.4 | 985.0 | 1008.2 | 1000.0 | 997.0 |
| 75 | 990.1 | 1000.0 | 1010.0 | 1009.3 | 1004.2 | 989.5 | 1010.0 | 1000.0 | 1000.0 |
| 90 | 995.0 | 1003.3 | 1014.4 | 1010.6 | 1006.5 | 995.0 | 1014.2 | 1004.7 | 1003.0 |

Fontana Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 1597.7 | 1597.7 | 1597.7 | 1597.3 | 1597.7 | 1597.7 | 1597.7 | 1596.6 | 1626.1 |
| 25 | 1625.0 | 1625.0 | 1658.0 | 1627.3 | 1658.5 | 1625.0 | 1658.0 | 1644.0 | 1647.8 |
| 50 | 1639.3 | 1625.5 | 1659.7 | 1658.0 | 1659.1 | 1636.9 | 1659.5 | 1644.0 | 1650.9 |
| 75 | 1644.0 | 1642.0 | 1663.0 | 1663.0 | 1660.0 | 1644.0 | 1663.0 | 1644.0 | 1653.0 |
| 90 | 1648.1 | 1647.3 | 1669.0 | 1663.7 | 1660.9 | 1648.0 | 1669.0 | 1651.7 | 1653.0 |

Douglas Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 940.0 | 950.0 | 960.0 | 945.7 | 956.0 | 940.0 | 960.0 | 958.0 | 950.0 |
| 25 | 940.0 | 950.0 | 960.0 | 956.9 | 956.0 | 940.0 | 960.0 | 958.0 | 950.0 |
| 50 | 940.0 | 955.2 | 963.0 | 960.0 | 957.4 | 940.0 | 963.0 | 958.0 | 953.0 |
| 75 | 940.2 | 958.0 | 963.0 | 963.0 | 959.0 | 940.2 | 963.0 | 958.0 | 954.0 |
| 90 | 943.6 | 958.0 | 963.0 | 963.0 | 959.0 | 943.5 | 963.0 | 958.0 | 954.0 |

Cherokee Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 1028.0 | 1040.0 | 1049.0 | 1028.8 | 1048.0 | 1028.0 | 1049.0 | 1046.0 | 1041.0 |
| 25 | 1028.2 | 1040.3 | 1049.0 | 1040.4 | 1048.0 | 1028.0 | 1049.0 | 1046.0 | 1041.0 |
| 50 | 1030.0 | 1044.5 | 1051.4 | 1049.0 | 1049.0 | 1030.0 | 1051.4 | 1046.0 | 1043.4 |
| 75 | 1030.0 | 1046.0 | 1053.0 | 1052.8 | 1050.0 | 1030.0 | 1053.0 | 1046.0 | 1045.0 |
| 90 | 1030.0 | 1046.0 | 1053.0 | 1053.0 | 1050.0 | 1030.0 | 1053.0 | 1046.0 | 1045.0 |

South Holston Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 1695.0 | 1706.2 | 1711.7 | 1679.1 | 1704.5 | 1693.9 | 1713.6 | 1710.9 | 1702.4 |
| 25 | 1695.6 | 1707.0 | 1721.0 | 1695.0 | 1714.9 | 1695.0 | 1721.0 | 1713.0 | 1704.8 |
| 50 | 1701.1 | 1710.0 | 1722.1 | 1713.5 | 1720.0 | 1700.3 | 1722.2 | 1713.0 | 1706.4 |
| 75 | 1702.0 | 1713.0 | 1723.0 | 1722.1 | 1721.0 | 1702.0 | 1723.0 | 1713.0 | 1708.0 |
| 90 | 1702.8 | 1713.0 | 1723.0 | 1723.0 | 1721.0 | 1702.7 | 1723.0 | 1713.0 | 1708.0 |

**Reservoir Elevation (feet above MSL) on January 1st (cont.)**

Watauga Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 1935.0 | 1943.3 | 1947.2 | 1924.7 | 1942.0 | 1933.8 | 1940.3 | 1946.8 | 1947.1 |
| 25 | 1935.4 | 1945.4 | 1954.0 | 1940.6 | 1951.3 | 1935.0 | 1947.4 | 1952.0 | 1949.2 |
| 50 | 1939.8 | 1949.1 | 1955.1 | 1949.1 | 1955.0 | 1939.1 | 1954.0 | 1952.0 | 1950.4 |
| 75 | 1940.0 | 1952.0 | 1957.0 | 1954.9 | 1957.0 | 1940.0 | 1956.9 | 1952.0 | 1952.0 |
| 90 | 1940.1 | 1952.0 | 1957.0 | 1957.0 | 1957.0 | 1940.0 | 1957.0 | 1952.0 | 1952.0 |

**Reservoir Elevation (feet above MSL) on March 15**

Tims Ford

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 878.2 | 878.2 | 878.1 | 878.1 | 865.8 | 878.2 | 878.1 | 878.2 | 878.2 |
| 25 | 878.3 | 878.3 | 878.3 | 878.3 | 865.8 | 878.3 | 878.3 | 878.3 | 878.3 |
| 50 | 878.7 | 878.9 | 878.7 | 878.7 | 866.2 | 878.6 | 878.7 | 878.9 | 878.7 |
| 75 | 879.1 | 879.2 | 879.1 | 879.1 | 866.2 | 879.1 | 879.1 | 879.2 | 879.1 |
| 90 | 879.4 | 880.2 | 879.4 | 879.4 | 868.0 | 879.3 | 879.4 | 880.2 | 879.4 |

Blue Ridge Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 1668.5 | 1673.9 | 1672.5 | 1665.0 | 1660.7 | 1665.1 | 1672.4 | 1678.8 | 1674.0 |
| 25 | 1673.8 | 1676.1 | 1674.8 | 1674.2 | 1664.7 | 1673.5 | 1674.8 | 1678.9 | 1674.7 |
| 50 | 1674.8 | 1679.5 | 1675.2 | 1675.0 | 1667.0 | 1674.8 | 1675.2 | 1679.9 | 1676.6 |
| 75 | 1676.2 | 1680.7 | 1676.5 | 1676.4 | 1667.0 | 1676.2 | 1676.5 | 1680.9 | 1678.9 |
| 90 | 1677.0 | 1681.0 | 1677.0 | 1677.0 | 1669.1 | 1677.0 | 1677.0 | 1681.0 | 1679.3 |

Hiwassee Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 1482.0 | 1482.0 | 1481.8 | 1481.8 | 1460.4 | 1481.0 | 1481.8 | 1482.8 | 1482.6 |
| 25 | 1482.0 | 1483.3 | 1482.0 | 1482.0 | 1467.3 | 1482.0 | 1482.0 | 1484.2 | 1484.4 |
| 50 | 1482.7 | 1488.6 | 1485.0 | 1484.5 | 1468.4 | 1482.7 | 1485.0 | 1489.5 | 1488.5 |
| 75 | 1488.4 | 1492.5 | 1491.7 | 1490.7 | 1474.8 | 1488.4 | 1491.7 | 1492.7 | 1491.7 |
| 90 | 1492.4 | 1493.3 | 1493.3 | 1493.2 | 1477.0 | 1492.4 | 1493.3 | 1493.6 | 1497.2 |

Nottely Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 1754.7 | 1759.2 | 1760.0 | 1759.4 | 1760.6 | 1754.4 | 1760.0 | 1760.7 | 1760.6 |
| 25 | 1755.3 | 1760.8 | 1761.3 | 1761.1 | 1762.3 | 1755.3 | 1761.3 | 1761.5 | 1761.5 |
| 50 | 1755.7 | 1763.0 | 1762.9 | 1762.8 | 1762.6 | 1755.7 | 1762.9 | 1763.7 | 1762.3 |
| 75 | 1758.2 | 1764.8 | 1764.1 | 1763.9 | 1764.8 | 1758.0 | 1764.1 | 1764.8 | 1762.3 |
| 90 | 1760.0 | 1765.1 | 1764.4 | 1764.4 | 1765.3 | 1760.0 | 1764.4 | 1765.1 | 1762.5 |

Chatuge Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 1916.0 | 1916.1 | 1916.4 | 1916.1 | 1914.4 | 1915.8 | 1916.4 | 1916.4 | 1917.3 |
| 25 | 1916.2 | 1916.5 | 1917.4 | 1917.0 | 1915.3 | 1916.2 | 1917.4 | 1916.8 | 1917.7 |
| 50 | 1916.3 | 1917.8 | 1918.3 | 1918.2 | 1915.4 | 1916.3 | 1918.3 | 1918.1 | 1918.2 |
| 75 | 1917.4 | 1918.8 | 1918.9 | 1918.8 | 1916.1 | 1917.2 | 1918.9 | 1918.9 | 1918.2 |
| 90 | 1918.1 | 1919.0 | 1919.1 | 1919.0 | 1916.6 | 1918.1 | 1919.1 | 1919.2 | 1918.6 |

**Reservoir Elevation (feet above MSL) on March 15 (cont.)**

Norris Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 995.7 | 999.2 | 1001.4 | 999.0 | 992.6 | 993.8 | 1001.4 | 1000.6 | 997.2 |
| 25 | 998.5 | 1000.0 | 1001.7 | 1001.5 | 992.9 | 998.4 | 1001.7 | 1000.7 | 998.4 |
| 50 | 999.6 | 1001.5 | 1004.4 | 1004.2 | 995.6 | 999.5 | 1004.4 | 1001.7 | 1001.0 |
| 75 | 1000.8 | 1004.8 | 1006.5 | 1006.0 | 996.5 | 1000.6 | 1006.5 | 1006.6 | 1004.5 |
| 90 | 1005.6 | 1009.5 | 1008.7 | 1008.4 | 999.0 | 1005.5 | 1008.7 | 1009.5 | 1007.1 |

Fontana Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 1643.5 | 1643.5 | 1651.2 | 1648.3 | 1649.0 | 1643.5 | 1651.2 | 1645.5 | 1651.1 |
| 25 | 1643.8 | 1644.0 | 1653.9 | 1653.9 | 1650.5 | 1643.5 | 1653.9 | 1645.5 | 1652.5 |
| 50 | 1645.5 | 1645.5 | 1655.1 | 1655.1 | 1650.5 | 1645.4 | 1655.1 | 1645.5 | 1654.2 |
| 75 | 1645.5 | 1645.5 | 1656.2 | 1656.2 | 1651.7 | 1645.5 | 1656.2 | 1645.6 | 1654.2 |
| 90 | 1651.2 | 1652.0 | 1667.5 | 1667.5 | 1658.8 | 1651.2 | 1667.5 | 1652.1 | 1660.3 |

Douglas Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 958.0 | 958.6 | 957.9 | 957.9 | 943.8 | 958.0 | 957.9 | 959.1 | 956.0 |
| 25 | 958.1 | 958.9 | 958.2 | 958.2 | 943.8 | 958.1 | 958.2 | 959.1 | 956.9 |
| 50 | 958.5 | 959.1 | 958.5 | 958.5 | 943.8 | 958.5 | 958.5 | 959.1 | 958.6 |
| 75 | 958.5 | 959.1 | 958.5 | 958.5 | 944.5 | 958.5 | 958.5 | 959.1 | 958.6 |
| 90 | 958.5 | 959.8 | 958.5 | 958.5 | 949.0 | 958.5 | 958.5 | 959.8 | 958.6 |

Cherokee Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 1041.6 | 1045.8 | 1049.0 | 1049.0 | 1049.0 | 1041.2 | 1049.0 | 1047.5 | 1043.6 |
| 25 | 1042.5 | 1046.4 | 1050.7 | 1050.6 | 1049.9 | 1042.5 | 1050.7 | 1047.7 | 1044.2 |
| 50 | 1043.3 | 1047.7 | 1053.0 | 1053.0 | 1050.0 | 1043.3 | 1053.0 | 1047.7 | 1045.6 |
| 75 | 1043.8 | 1047.7 | 1053.0 | 1053.0 | 1050.0 | 1043.8 | 1053.0 | 1047.7 | 1045.6 |
| 90 | 1043.8 | 1047.7 | 1053.4 | 1053.0 | 1050.3 | 1043.8 | 1053.4 | 1047.7 | 1045.6 |

South Holston Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 1707.1 | 1711.9 | 1721.0 | 1702.4 | 1717.4 | 1705.6 | 1721.0 | 1713.5 | 1711.1 |
| 25 | 1710.8 | 1713.0 | 1721.7 | 1721.0 | 1717.9 | 1710.4 | 1721.7 | 1713.8 | 1712.5 |
| 50 | 1713.2 | 1713.8 | 1722.4 | 1722.4 | 1718.2 | 1713.2 | 1722.4 | 1713.8 | 1713.2 |
| 75 | 1713.5 | 1713.8 | 1722.4 | 1722.4 | 1718.2 | 1713.5 | 1722.4 | 1713.8 | 1713.2 |
| 90 | 1713.5 | 1716.7 | 1725.0 | 1724.4 | 1722.3 | 1713.5 | 1724.7 | 1716.7 | 1714.3 |

**Reservoir Elevation (feet above MSL) on March 15 (cont.)**

Watauga Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 1944.0 | 1949.5 | 1954.0 | 1943.5 | 1956.4 | 1940.8 | 1954.0 | 1950.3 | 1949.5 |
| 25 | 1947.7 | 1950.8 | 1955.0 | 1954.0 | 1957.1 | 1946.5 | 1954.9 | 1950.9 | 1951.0 |
| 50 | 1950.2 | 1952.2 | 1957.0 | 1957.0 | 1958.1 | 1950.0 | 1957.0 | 1952.2 | 1952.2 |
| 75 | 1951.4 | 1952.2 | 1957.0 | 1957.0 | 1958.1 | 1951.4 | 1957.0 | 1952.2 | 1952.2 |
| 90 | 1951.5 | 1953.0 | 1957.8 | 1957.5 | 1959.2 | 1951.5 | 1957.7 | 1953.0 | 1952.7 |

**Reservoir Elevation (feet above MSL) on Memorial Day**

Tims Ford Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 885.6 | 885.6 | 885.6 | 885.6 | 875.1 | 885.6 | 885.6 | 885.6 | 885.6 |
| 25 | 887.0 | 887.0 | 887.0 | 887.0 | 877.9 | 887.0 | 887.0 | 887.0 | 887.0 |
| 50 | 887.9 | 887.9 | 887.9 | 887.9 | 879.3 | 887.9 | 887.9 | 887.9 | 887.9 |
| 75 | 887.9 | 887.9 | 887.9 | 887.9 | 880.3 | 887.9 | 887.9 | 887.9 | 887.9 |
| 90 | 887.9 | 887.9 | 887.9 | 887.9 | 880.5 | 887.9 | 887.9 | 887.9 | 887.9 |

Blue Ridge Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 1680.0 | 1683.0 | 1683.7 | 1678.6 | 1673.6 | 1676.8 | 1685.6 | 1685.4 | 1683.2 |
| 25 | 1686.9 | 1686.9 | 1686.9 | 1686.8 | 1676.2 | 1683.0 | 1686.9 | 1687.0 | 1686.3 |
| 50 | 1686.9 | 1686.9 | 1686.9 | 1686.9 | 1678.6 | 1686.9 | 1686.9 | 1687.0 | 1686.8 |
| 75 | 1687.4 | 1687.5 | 1687.4 | 1687.4 | 1678.7 | 1687.4 | 1687.5 | 1687.6 | 1687.0 |
| 90 | 1688.5 | 1688.5 | 1688.5 | 1688.5 | 1679.9 | 1688.5 | 1688.5 | 1688.5 | 1688.0 |

Hiwassee Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 1511.5 | 1514.0 | 1514.5 | 1509.5 | 1493.6 | 1509.0 | 1503.1 | 1509.6 | 1511.8 |
| 25 | 1516.7 | 1518.0 | 1518.3 | 1517.0 | 1501.4 | 1514.6 | 1511.5 | 1515.2 | 1516.5 |
| 50 | 1520.3 | 1520.3 | 1520.3 | 1520.3 | 1507.7 | 1520.2 | 1516.0 | 1520.8 | 1520.7 |
| 75 | 1520.5 | 1520.5 | 1520.5 | 1520.5 | 1508.0 | 1520.5 | 1520.5 | 1520.9 | 1520.7 |
| 90 | 1521.0 | 1521.0 | 1521.1 | 1521.1 | 1508.9 | 1521.0 | 1521.0 | 1521.4 | 1521.3 |

Nottely Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 1767.6 | 1768.5 | 1768.9 | 1769.5 | 1768.1 | 1766.1 | 1764.3 | 1769.3 | 1770.2 |
| 25 | 1771.7 | 1772.6 | 1773.2 | 1773.7 | 1770.3 | 1769.8 | 1768.4 | 1772.2 | 1773.3 |
| 50 | 1776.6 | 1776.6 | 1776.6 | 1776.6 | 1771.6 | 1776.3 | 1774.0 | 1776.3 | 1776.6 |
| 75 | 1776.8 | 1776.8 | 1776.8 | 1776.8 | 1772.1 | 1776.8 | 1776.8 | 1777.0 | 1776.8 |
| 90 | 1777.0 | 1777.0 | 1777.0 | 1777.0 | 1772.6 | 1777.0 | 1777.0 | 1777.3 | 1776.8 |

Chatuge Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 1922.2 | 1922.6 | 1922.8 | 1922.1 | 1920.2 | 1921.1 | 1920.5 | 1922.9 | 1922.4 |
| 25 | 1924.1 | 1924.4 | 1924.9 | 1924.7 | 1921.5 | 1923.2 | 1922.3 | 1924.5 | 1924.2 |
| 50 | 1925.9 | 1925.9 | 1925.9 | 1925.9 | 1922.7 | 1925.8 | 1924.8 | 1925.9 | 1925.7 |
| 75 | 1925.9 | 1925.9 | 1925.9 | 1925.9 | 1922.7 | 1925.9 | 1925.9 | 1926.0 | 1925.8 |
| 90 | 1926.0 | 1926.0 | 1926.0 | 1926.0 | 1923.0 | 1926.0 | 1926.0 | 1926.1 | 1925.8 |

**Reservoir Elevation (feet above MSL) on Memorial Day (cont.)**

Norris Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 1009.0 | 1010.6 | 1011.8 | 1007.2 | 1002.0 | 1006.1 | 1010.0 | 1011.0 | 1009.2 |
| 25 | 1012.8 | 1014.4 | 1014.7 | 1012.9 | 1004.6 | 1012.2 | 1013.0 | 1015.1 | 1013.6 |
| 50 | 1017.1 | 1017.7 | 1017.8 | 1017.5 | 1007.3 | 1017.0 | 1016.6 | 1019.5 | 1019.2 |
| 75 | 1019.2 | 1019.2 | 1019.8 | 1019.8 | 1011.1 | 1019.2 | 1019.7 | 1020.0 | 1019.9 |
| 90 | 1019.9 | 1019.9 | 1020.0 | 1020.0 | 1013.8 | 1019.9 | 1020.0 | 1020.1 | 1020.2 |

Fontana Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 1693.1 | 1695.1 | 1696.3 | 1694.7 | 1670.2 | 1687.4 | 1694.3 | 1690.5 | 1695.7 |
| 25 | 1700.6 | 1701.7 | 1702.1 | 1702.3 | 1675.1 | 1697.0 | 1701.6 | 1697.4 | 1702.5 |
| 50 | 1702.6 | 1702.6 | 1702.6 | 1702.6 | 1678.3 | 1702.6 | 1702.6 | 1702.9 | 1702.9 |
| 75 | 1702.6 | 1702.6 | 1702.6 | 1702.6 | 1678.3 | 1702.6 | 1702.6 | 1702.9 | 1702.9 |
| 90 | 1702.9 | 1702.9 | 1702.9 | 1702.9 | 1678.7 | 1702.9 | 1702.9 | 1702.9 | 1703.0 |

Douglas Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 989.1 | 990.4 | 991.2 | 987.0 | 970.3 | 984.7 | 991.1 | 986.4 | 985.7 |
| 25 | 993.2 | 993.6 | 993.7 | 992.8 | 976.3 | 991.0 | 993.7 | 992.3 | 991.2 |
| 50 | 993.8 | 993.8 | 993.8 | 993.8 | 981.6 | 993.8 | 993.8 | 994.0 | 993.7 |
| 75 | 993.8 | 993.8 | 993.8 | 993.8 | 982.9 | 993.8 | 993.8 | 994.0 | 993.7 |
| 90 | 994.0 | 994.0 | 994.0 | 994.0 | 983.0 | 994.0 | 994.0 | 994.0 | 993.8 |

Cherokee Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 1056.8 | 1058.5 | 1059.3 | 1060.9 | 1057.2 | 1053.6 | 1059.0 | 1060.1 | 1058.7 |
| 25 | 1061.1 | 1064.5 | 1065.7 | 1065.6 | 1058.6 | 1059.9 | 1065.2 | 1063.9 | 1063.1 |
| 50 | 1068.4 | 1070.1 | 1070.5 | 1070.4 | 1059.8 | 1068.4 | 1070.7 | 1068.8 | 1067.4 |
| 75 | 1070.9 | 1070.9 | 1070.9 | 1070.9 | 1060.3 | 1070.9 | 1070.9 | 1071.0 | 1070.3 |
| 90 | 1071.0 | 1071.0 | 1071.0 | 1071.0 | 1060.5 | 1071.0 | 1071.0 | 1071.0 | 1070.5 |

SouthHolston Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 1721.6 | 1722.4 | 1724.2 | 1719.7 | 1722.5 | 1720.5 | 1723.7 | 1720.7 | 1719.5 |
| 25 | 1726.4 | 1726.5 | 1726.8 | 1725.1 | 1723.5 | 1725.5 | 1727.1 | 1724.0 | 1724.3 |
| 50 | 1727.4 | 1728.3 | 1728.6 | 1728.5 | 1724.4 | 1727.3 | 1728.7 | 1727.2 | 1727.2 |
| 75 | 1728.9 | 1728.9 | 1728.9 | 1728.9 | 1724.8 | 1728.9 | 1728.9 | 1729.0 | 1728.8 |
| 90 | 1729.0 | 1729.0 | 1729.0 | 1729.0 | 1725.0 | 1729.0 | 1729.0 | 1729.0 | 1729.0 |

**Reservoir Elevation (feet above MSL) on Memorial Day (cont.)**

Watauga Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 1949.4 | 1953.1 | 1956.1 | 1945.6 | 1959.2 | 1948.9 | 1952.3 | 1953.1 | 1950.9 |
| 25 | 1957.0 | 1957.4 | 1957.5 | 1955.5 | 1960.4 | 1956.2 | 1954.9 | 1955.4 | 1954.2 |
| 50 | 1957.9 | 1958.5 | 1958.7 | 1958.6 | 1961.5 | 1957.8 | 1957.2 | 1957.6 | 1957.0 |
| 75 | 1958.9 | 1958.9 | 1958.9 | 1958.9 | 1962.0 | 1958.9 | 1958.6 | 1959.0 | 1958.8 |
| 90 | 1959.0 | 1959.0 | 1959.0 | 1959.0 | 1962.2 | 1959.0 | 1958.9 | 1959.0 | 1959.0 |

**Reservoir Elevation (feet above MSL) on Labor Day**

Tims Ford Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 885.2 | 885.2 | 887.6 | 873.3 | 878.2 | 885.2 | 887.6 | 885.2 | 885.2 |
| 25 | 885.2 | 885.2 | 887.9 | 873.3 | 880.8 | 885.2 | 887.9 | 885.2 | 885.2 |
| 50 | 885.2 | 885.2 | 888.0 | 873.3 | 883.7 | 885.2 | 888.0 | 885.2 | 885.2 |
| 75 | 885.2 | 885.2 | 888.0 | 873.3 | 885.4 | 885.2 | 888.0 | 885.2 | 885.2 |
| 90 | 885.2 | 885.2 | 888.0 | 873.3 | 885.4 | 885.2 | 888.0 | 885.2 | 885.2 |

Blue Ridge Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 1676.4 | 1675.7 | 1682.3 | 1651.4 | 1664.3 | 1676.0 | 1681.8 | 1682.9 | 1676.7 |
| 25 | 1676.4 | 1679.8 | 1685.4 | 1659.1 | 1669.6 | 1676.4 | 1685.6 | 1686.1 | 1679.5 |
| 50 | 1676.4 | 1682.3 | 1686.8 | 1665.6 | 1672.9 | 1676.4 | 1686.9 | 1687.0 | 1680.5 |
| 75 | 1676.4 | 1685.0 | 1687.0 | 1676.0 | 1676.3 | 1676.4 | 1687.0 | 1687.0 | 1681.1 |
| 90 | 1679.2 | 1686.9 | 1687.0 | 1683.1 | 1676.9 | 1679.2 | 1687.0 | 1687.0 | 1682.1 |

Hiwassee Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 1503.4 | 1503.9 | 1511.3 | 1470.9 | 1468.9 | 1501.5 | 1500.0 | 1506.9 | 1503.1 |
| 25 | 1503.6 | 1509.9 | 1515.6 | 1480.1 | 1487.1 | 1503.4 | 1510.9 | 1515.5 | 1508.9 |
| 50 | 1505.2 | 1513.6 | 1519.3 | 1490.0 | 1496.2 | 1505.0 | 1518.2 | 1519.1 | 1510.6 |
| 75 | 1509.0 | 1518.0 | 1521.0 | 1505.3 | 1505.9 | 1509.0 | 1520.9 | 1521.0 | 1511.6 |
| 90 | 1516.5 | 1520.6 | 1521.0 | 1515.8 | 1508.0 | 1516.5 | 1521.0 | 1521.0 | 1513.1 |

Nottely Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 1763.1 | 1767.2 | 1771.5 | 1748.4 | 1761.4 | 1762.7 | 1765.0 | 1769.0 | 1766.9 |
| 25 | 1763.3 | 1770.6 | 1773.9 | 1753.6 | 1763.8 | 1763.1 | 1771.3 | 1773.9 | 1769.5 |
| 50 | 1764.5 | 1772.8 | 1776.1 | 1759.3 | 1765.0 | 1764.3 | 1775.4 | 1775.9 | 1770.4 |
| 75 | 1767.5 | 1775.3 | 1777.0 | 1768.0 | 1766.2 | 1767.5 | 1777.0 | 1777.0 | 1771.1 |
| 90 | 1773.4 | 1776.8 | 1777.0 | 1774.0 | 1766.5 | 1773.4 | 1777.0 | 1777.0 | 1771.9 |

Chatuge Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 1920.0 | 1921.7 | 1923.6 | 1913.5 | 1915.2 | 1919.5 | 1920.8 | 1922.5 | 1920.5 |
| 25 | 1920.0 | 1923.2 | 1924.7 | 1915.8 | 1917.4 | 1920.0 | 1923.5 | 1924.6 | 1921.8 |
| 50 | 1920.6 | 1924.2 | 1925.6 | 1918.2 | 1918.5 | 1920.4 | 1925.3 | 1925.5 | 1922.3 |
| 75 | 1922.1 | 1925.2 | 1926.0 | 1922.1 | 1919.6 | 1922.1 | 1926.0 | 1926.0 | 1922.8 |
| 90 | 1924.7 | 1925.9 | 1926.0 | 1924.7 | 1919.9 | 1924.7 | 1926.0 | 1926.0 | 1923.3 |

**Reservoir Elevation (feet above MSL) on Labor Day (cont.)**

Norris Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 1004.2 | 1009.3 | 1012.2 | 986.5 | 998.2 | 1002.3 | 1008.4 | 1013.3 | 1004.9 |
| 25 | 1004.5 | 1012.8 | 1015.2 | 994.5 | 1003.4 | 1004.4 | 1011.9 | 1015.4 | 1008.4 |
| 50 | 1006.4 | 1015.0 | 1018.3 | 999.8 | 1010.1 | 1006.0 | 1016.8 | 1018.7 | 1011.4 |
| 75 | 1010.2 | 1017.9 | 1019.6 | 1009.6 | 1017.0 | 1009.8 | 1019.3 | 1019.7 | 1014.3 |
| 90 | 1016.0 | 1019.4 | 1020.0 | 1014.5 | 1020.5 | 1016.0 | 1020.0 | 1020.0 | 1018.0 |

Fontana Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 1659.0 | 1667.6 | 1667.6 | 1646.3 | 1654.4 | 1659.0 | 1667.7 | 1667.6 | 1659.0 |
| 25 | 1681.0 | 1684.3 | 1693.9 | 1651.6 | 1658.0 | 1680.2 | 1693.2 | 1695.5 | 1683.5 |
| 50 | 1682.2 | 1692.9 | 1702.1 | 1664.7 | 1664.2 | 1682.0 | 1702.3 | 1702.5 | 1693.2 |
| 75 | 1685.4 | 1698.8 | 1703.0 | 1681.6 | 1671.0 | 1685.2 | 1703.0 | 1703.0 | 1696.9 |
| 90 | 1694.2 | 1701.8 | 1703.0 | 1692.9 | 1673.5 | 1694.2 | 1703.0 | 1703.0 | 1699.4 |

Douglas Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 978.2 | 977.6 | 987.4 | 942.2 | 949.1 | 978.2 | 988.1 | 988.7 | 976.3 |
| 25 | 978.2 | 983.6 | 992.1 | 953.2 | 958.5 | 978.2 | 992.2 | 992.9 | 982.0 |
| 50 | 979.3 | 987.2 | 993.8 | 962.8 | 964.5 | 979.1 | 993.9 | 994.0 | 984.9 |
| 75 | 982.0 | 991.2 | 994.0 | 977.7 | 970.5 | 982.0 | 994.0 | 994.0 | 987.3 |
| 90 | 990.8 | 993.7 | 994.0 | 987.3 | 972.6 | 990.7 | 994.0 | 994.0 | 990.9 |

Cherokee Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 1048.7 | 1058.5 | 1065.7 | 1031.7 | 1053.4 | 1048.7 | 1066.2 | 1067.0 | 1054.9 |
| 25 | 1048.9 | 1063.1 | 1069.2 | 1040.1 | 1058.7 | 1048.9 | 1069.5 | 1070.1 | 1058.4 |
| 50 | 1050.0 | 1065.8 | 1070.9 | 1047.0 | 1062.1 | 1049.7 | 1070.9 | 1071.0 | 1061.2 |
| 75 | 1053.1 | 1068.9 | 1071.0 | 1058.7 | 1065.5 | 1052.9 | 1071.0 | 1071.0 | 1064.1 |
| 90 | 1062.1 | 1070.8 | 1071.0 | 1065.1 | 1066.5 | 1061.0 | 1071.0 | 1071.0 | 1068.0 |

South Holston Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 1713.0 | 1716.5 | 1716.7 | 1703.1 | 1711.5 | 1711.5 | 1718.7 | 1716.3 | 1710.7 |
| 25 | 1713.0 | 1721.9 | 1721.6 | 1708.7 | 1718.8 | 1713.0 | 1724.2 | 1721.5 | 1719.8 |
| 50 | 1714.7 | 1725.2 | 1726.9 | 1713.2 | 1723.0 | 1714.7 | 1727.6 | 1726.9 | 1721.8 |
| 75 | 1718.0 | 1727.5 | 1728.8 | 1720.9 | 1725.4 | 1717.9 | 1729.0 | 1728.9 | 1725.0 |
| 90 | 1725.9 | 1728.8 | 1729.0 | 1725.1 | 1726.5 | 1725.7 | 1729.0 | 1729.0 | 1728.1 |

**Reservoir Elevation (feet above MSL) on Labor Day (cont.)**

Watauga Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 1941.4 | 1950.1 | 1950.3 | 1940.0 | 1948.5 | 1941.4 | 1944.2 | 1950.1 | 1948.6 |
| 25 | 1941.8 | 1954.0 | 1953.7 | 1944.5 | 1954.2 | 1941.6 | 1947.8 | 1953.9 | 1950.7 |
| 50 | 1944.2 | 1956.3 | 1957.4 | 1947.7 | 1955.5 | 1943.9 | 1952.6 | 1957.4 | 1951.8 |
| 75 | 1946.7 | 1957.9 | 1958.9 | 1953.1 | 1956.1 | 1946.7 | 1956.2 | 1959.0 | 1955.0 |
| 90 | 1954.3 | 1958.9 | 1959.0 | 1956.3 | 1957.1 | 1954.1 | 1958.1 | 1959.0 | 1958.1 |

**Reservoir Elevation (feet above MSL) at end of October**

Tims Ford Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 881.3 | 881.3 | 880.8 | 870.4 | 869.7 | 881.3 | 880.8 | 881.3 | 881.3 |
| 25 | 881.3 | 881.3 | 880.8 | 870.9 | 869.7 | 881.3 | 880.8 | 881.3 | 881.3 |
| 50 | 881.3 | 881.3 | 880.8 | 871.0 | 869.7 | 881.3 | 880.8 | 881.3 | 881.3 |
| 75 | 881.3 | 881.3 | 880.8 | 871.0 | 869.7 | 881.3 | 880.8 | 881.3 | 881.3 |
| 90 | 881.8 | 881.3 | 880.8 | 871.0 | 869.7 | 881.8 | 880.8 | 881.3 | 881.8 |

Blue Ridge Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 1659.5 | 1667.3 | 1671.8 | 1620.0 | 1665.6 | 1659.4 | 1671.6 | 1679.5 | 1669.4 |
| 25 | 1659.5 | 1669.1 | 1673.7 | 1643.6 | 1670.7 | 1659.5 | 1673.8 | 1685.4 | 1669.9 |
| 50 | 1659.5 | 1671.8 | 1674.3 | 1659.4 | 1672.9 | 1659.5 | 1674.3 | 1687.0 | 1671.1 |
| 75 | 1659.5 | 1675.1 | 1675.7 | 1667.7 | 1673.0 | 1659.5 | 1675.7 | 1687.0 | 1672.6 |
| 90 | 1664.0 | 1679.9 | 1679.2 | 1675.5 | 1674.6 | 1664.0 | 1679.2 | 1687.0 | 1675.3 |

Hiwassee Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 1483.0 | 1484.4 | 1498.1 | 1450.0 | 1474.0 | 1482.4 | 1490.7 | 1504.0 | 1488.2 |
| 25 | 1484.1 | 1486.2 | 1501.0 | 1459.6 | 1492.4 | 1483.7 | 1498.3 | 1504.0 | 1489.4 |
| 50 | 1486.5 | 1490.5 | 1502.9 | 1480.8 | 1499.2 | 1486.4 | 1502.3 | 1504.0 | 1491.5 |
| 75 | 1493.8 | 1498.7 | 1504.8 | 1492.5 | 1499.2 | 1492.7 | 1504.3 | 1504.5 | 1493.2 |
| 90 | 1504.0 | 1504.0 | 1508.6 | 1505.2 | 1499.2 | 1504.0 | 1507.9 | 1506.1 | 1499.3 |

Nottely Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 1751.7 | 1757.2 | 1766.2 | 1735.0 | 1760.8 | 1751.6 | 1761.9 | 1770.4 | 1761.7 |
| 25 | 1752.4 | 1758.4 | 1767.9 | 1739.9 | 1761.7 | 1752.2 | 1766.2 | 1776.3 | 1762.2 |
| 50 | 1753.8 | 1760.3 | 1768.8 | 1755.4 | 1762.0 | 1753.8 | 1768.6 | 1777.0 | 1763.3 |
| 75 | 1758.6 | 1763.9 | 1769.8 | 1762.4 | 1762.1 | 1757.8 | 1769.6 | 1777.2 | 1764.3 |
| 90 | 1764.9 | 1769.6 | 1771.3 | 1769.9 | 1764.0 | 1764.9 | 1771.2 | 1777.7 | 1766.3 |

Chatuge Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 1915.4 | 1916.5 | 1920.1 | 1905.0 | 1915.4 | 1914.9 | 1918.2 | 1923.2 | 1917.9 |
| 25 | 1915.5 | 1916.9 | 1920.8 | 1911.9 | 1916.9 | 1915.4 | 1920.1 | 1925.6 | 1918.1 |
| 50 | 1916.4 | 1917.9 | 1921.3 | 1915.8 | 1917.5 | 1916.4 | 1921.2 | 1926.0 | 1918.7 |
| 75 | 1918.5 | 1920.3 | 1921.8 | 1918.9 | 1917.5 | 1918.3 | 1921.7 | 1926.1 | 1919.2 |
| 90 | 1921.9 | 1923.1 | 1922.8 | 1922.1 | 1918.0 | 1921.9 | 1922.7 | 1926.4 | 1920.4 |

**Reservoir Elevation (feet above MSL) at end of October (cont.)**

Norris Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 988.4 | 996.2 | 1007.9 | 965.2 | 994.3 | 988.3 | 1003.3 | 1009.2 | 998.4 |
| 25 | 989.3 | 997.7 | 1010.9 | 983.1 | 1000.4 | 988.8 | 1007.5 | 1009.3 | 999.4 |
| 50 | 991.4 | 1000.2 | 1012.9 | 991.9 | 1007.5 | 991.2 | 1011.7 | 1009.3 | 1001.5 |
| 75 | 999.0 | 1005.2 | 1013.7 | 1003.5 | 1014.6 | 999.1 | 1013.4 | 1009.3 | 1003.8 |
| 90 | 1004.2 | 1009.3 | 1015.5 | 1011.6 | 1015.2 | 1004.0 | 1015.0 | 1009.6 | 1008.7 |

Fontana Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 1603.0 | 1612.0 | 1612.0 | 1603.0 | 1603.0 | 1603.0 | 1612.0 | 1612.0 | 1603.0 |
| 25 | 1650.4 | 1651.9 | 1677.0 | 1608.8 | 1656.8 | 1649.3 | 1676.6 | 1684.8 | 1661.9 |
| 50 | 1653.3 | 1658.0 | 1681.7 | 1652.5 | 1666.4 | 1652.7 | 1681.6 | 1684.8 | 1664.3 |
| 75 | 1660.3 | 1669.5 | 1682.3 | 1669.6 | 1666.4 | 1660.1 | 1682.4 | 1684.8 | 1667.7 |
| 90 | 1673.4 | 1676.7 | 1686.8 | 1679.6 | 1667.4 | 1673.3 | 1686.9 | 1684.8 | 1672.5 |

Douglas Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 956.0 | 958.3 | 975.2 | 940.0 | 953.9 | 953.5 | 975.2 | 991.2 | 959.6 |
| 25 | 956.2 | 960.0 | 977.3 | 942.1 | 963.7 | 956.0 | 977.5 | 991.6 | 961.3 |
| 50 | 957.8 | 964.5 | 978.0 | 955.6 | 964.6 | 957.8 | 978.0 | 991.6 | 963.0 |
| 75 | 964.3 | 971.4 | 979.3 | 967.1 | 964.7 | 964.3 | 979.4 | 991.6 | 965.9 |
| 90 | 972.7 | 978.0 | 983.6 | 979.0 | 965.6 | 972.4 | 983.7 | 991.6 | 973.5 |

Cherokee Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 1035.6 | 1044.7 | 1057.9 | 1020.9 | 1058.0 | 1035.5 | 1058.1 | 1058.4 | 1046.4 |
| 25 | 1036.3 | 1045.4 | 1060.0 | 1031.0 | 1063.8 | 1036.0 | 1060.2 | 1058.4 | 1047.4 |
| 50 | 1037.9 | 1047.6 | 1060.7 | 1042.7 | 1066.1 | 1037.9 | 1060.7 | 1058.4 | 1049.0 |
| 75 | 1042.5 | 1051.7 | 1061.5 | 1051.8 | 1066.1 | 1042.4 | 1061.5 | 1058.4 | 1051.0 |
| 90 | 1050.2 | 1056.9 | 1063.5 | 1060.6 | 1067.1 | 1048.7 | 1063.5 | 1058.4 | 1056.4 |

South Holston Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 1701.0 | 1710.2 | 1713.1 | 1676.0 | 1708.4 | 1700.7 | 1717.7 | 1711.7 | 1705.6 |
| 25 | 1701.7 | 1712.7 | 1718.7 | 1695.1 | 1714.1 | 1701.6 | 1722.2 | 1718.3 | 1709.8 |
| 50 | 1704.0 | 1715.1 | 1723.7 | 1707.3 | 1720.2 | 1703.8 | 1724.7 | 1725.2 | 1711.5 |
| 75 | 1708.1 | 1720.8 | 1725.4 | 1715.2 | 1723.0 | 1707.5 | 1725.6 | 1729.0 | 1714.2 |
| 90 | 1715.3 | 1725.3 | 1726.7 | 1722.9 | 1724.0 | 1714.0 | 1727.3 | 1729.0 | 1719.6 |

**Reservoir Elevation (feet above MSL) at end of October (cont.)**

Watauga Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 1936.6 | 1945.4 | 1947.9 | 1929.0 | 1945.3 | 1936.5 | 1936.9 | 1946.9 | 1948.4 |
| 25 | 1937.2 | 1945.8 | 1952.7 | 1940.0 | 1950.5 | 1937.1 | 1942.0 | 1951.7 | 1949.8 |
| 50 | 1940.0 | 1948.6 | 1955.8 | 1943.3 | 1953.7 | 1940.0 | 1946.5 | 1956.5 | 1951.1 |
| 75 | 1942.4 | 1951.1 | 1956.9 | 1949.4 | 1953.8 | 1942.4 | 1952.6 | 1959.0 | 1953.6 |
| 90 | 1948.6 | 1955.1 | 1958.2 | 1955.0 | 1954.5 | 1948.0 | 1954.9 | 1959.0 | 1956.4 |

**Average Reservoir Releases (cfs) during Weeks 12 through 22**

Wilson Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 21644 | 22573 | 22706 | 21951 | 25680 | 24264 | 23923 | 23918 | 22676 |
| 25 | 30068 | 31266 | 32116 | 31082 | 35127 | 32337 | 33350 | 32849 | 30678 |
| 50 | 39894 | 42482 | 43766 | 40293 | 45606 | 41567 | 44068 | 41983 | 40544 |
| 75 | 64160 | 66829 | 68706 | 66686 | 69729 | 65503 | 68855 | 66650 | 65455 |
| 90 | 81509 | 84266 | 86088 | 84425 | 88088 | 82843 | 86380 | 83965 | 79668 |

Guntersville Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 15899 | 16887 | 17523 | 16771 | 19524 | 18718 | 18812 | 19023 | 17402 |
| 25 | 22077 | 23278 | 24384 | 23178 | 25985 | 23989 | 25415 | 24331 | 22881 |
| 50 | 29090 | 30812 | 31808 | 30753 | 34899 | 30215 | 32236 | 30863 | 29435 |
| 75 | 45003 | 47238 | 49093 | 48179 | 51303 | 45882 | 49313 | 47258 | 46292 |
| 90 | 57246 | 59496 | 60922 | 59943 | 63298 | 58125 | 61117 | 59172 | 57675 |

Kentucky Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 24737 | 25677 | 27435 | 24828 | 27048 | 32491 | 27924 | 26137 | 25249 |
| 25 | 37350 | 39286 | 41276 | 38916 | 41809 | 45869 | 42019 | 39364 | 38196 |
| 50 | 50534 | 52178 | 54460 | 51514 | 55263 | 57927 | 54971 | 53007 | 50834 |
| 75 | 80257 | 83242 | 86343 | 83029 | 88243 | 88228 | 86603 | 83506 | 82006 |
| 90 | 103831 | 107372 | 110102 | 106650 | 112713 | 110266 | 110124 | 107248 | 105552 |

Pickwick Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 21192 | 23122 | 23744 | 21356 | 25739 | 24714 | 24951 | 24842 | 22970 |
| 25 | 30808 | 32621 | 33486 | 32484 | 34857 | 33981 | 34586 | 34045 | 32421 |
| 50 | 41040 | 44012 | 45251 | 41856 | 46147 | 43023 | 45624 | 44457 | 41530 |
| 75 | 66688 | 69719 | 71406 | 68743 | 73044 | 68501 | 71509 | 69649 | 67824 |
| 90 | 87390 | 90627 | 91962 | 90012 | 93103 | 89194 | 92316 | 90514 | 87636 |

Wheeler Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 19971 | 20858 | 21849 | 20829 | 23863 | 23143 | 23394 | 22114 | 21639 |
| 25 | 27987 | 29658 | 30409 | 29081 | 33088 | 30480 | 31440 | 31130 | 28751 |
| 50 | 36341 | 39106 | 40344 | 38891 | 41683 | 37711 | 40952 | 39551 | 37066 |
| 75 | 59548 | 62368 | 63969 | 62262 | 65444 | 60918 | 64165 | 62130 | 60766 |
| 90 | 77506 | 80009 | 81255 | 79832 | 82353 | 78855 | 81276 | 79974 | 78012 |

**Average Reservoir Releases (cfs) during Weeks 12 through 22 (cont.)**

Chickamauga Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 12075 | 13387 | 13426 | 13242 | 15813 | 14711 | 14825 | 14323 | 13220 |
| 25 | 16881 | 18016 | 18859 | 18026 | 20466 | 18760 | 19602 | 19144 | 17664 |
| 50 | 21712 | 23931 | 25225 | 23340 | 28065 | 23066 | 25725 | 24053 | 22437 |
| 75 | 33884 | 36120 | 38212 | 37298 | 40151 | 34764 | 38438 | 36360 | 35186 |
| 90 | 44338 | 46647 | 48024 | 47110 | 50056 | 45217 | 48052 | 46578 | 44693 |

Watts Bar Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 9092 | 9305 | 9850 | 9563 | 12484 | 10847 | 10558 | 10576 | 10298 |
| 25 | 11673 | 12472 | 13186 | 12730 | 15755 | 13294 | 14041 | 13559 | 12617 |
| 50 | 16484 | 17655 | 19327 | 18099 | 22027 | 17147 | 19424 | 18045 | 16815 |
| 75 | 24910 | 26656 | 28695 | 27763 | 31135 | 25494 | 28892 | 26429 | 26021 |
| 90 | 36778 | 38197 | 39938 | 39311 | 41528 | 37383 | 40081 | 38097 | 35865 |

Fort Loudoun Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 5564 | 5703 | 6079 | 6407 | 8677 | 6812 | 6346 | 6628 | 5799 |
| 25 | 6610 | 7160 | 8194 | 7916 | 10877 | 7861 | 8295 | 7741 | 7405 |
| 50 | 9945 | 10002 | 11493 | 11174 | 14522 | 10447 | 11493 | 10372 | 10610 |
| 75 | 15699 | 16663 | 18293 | 18015 | 20827 | 15967 | 18340 | 16665 | 16614 |
| 90 | 22382 | 23444 | 25156 | 24878 | 27691 | 22650 | 25160 | 23444 | 22446 |

Nickajack Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 13030 | 14081 | 14692 | 14541 | 16896 | 16135 | 16040 | 15344 | 14053 |
| 25 | 18557 | 19834 | 20536 | 19579 | 22364 | 20870 | 21423 | 20953 | 19647 |
| 50 | 23522 | 25463 | 26752 | 25450 | 29926 | 24492 | 27383 | 25656 | 24151 |
| 75 | 36814 | 39049 | 41044 | 40130 | 43058 | 37693 | 41270 | 39124 | 38116 |
| 90 | 46873 | 48733 | 50699 | 49785 | 52706 | 47752 | 50749 | 48986 | 47477 |

Tims Ford Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 83 | 82 | 80 | 80 | 80 | 83 | 80 | 82 | 85 |
| 25 | 349 | 349 | 349 | 349 | 193 | 349 | 349 | 349 | 349 |
| 50 | 596 | 596 | 596 | 596 | 415 | 596 | 596 | 596 | 596 |
| 75 | 1068 | 1069 | 1068 | 1068 | 875 | 1066 | 1068 | 1069 | 1068 |
| 90 | 1537 | 1605 | 1537 | 1537 | 1480 | 1537 | 1537 | 1605 | 1474 |

**Average Reservoir Releases (cfs) during Weeks 12 through 22 (cont.)**

Blue Ridge Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 282 | 365 | 299 | 180 | 285 | 313 | 310 | 399 | 340 |
| 25 | 422 | 472 | 408 | 403 | 397 | 450 | 412 | 502 | 433 |
| 50 | 566 | 611 | 566 | 562 | 570 | 572 | 566 | 647 | 597 |
| 75 | 771 | 849 | 771 | 771 | 778 | 772 | 771 | 849 | 818 |
| 90 | 1057 | 1136 | 1057 | 1057 | 1074 | 1057 | 1057 | 1138 | 1112 |

Hiwassee Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 301 | 297 | 324 | 365 | 564 | 365 | 859 | 521 | 407 |
| 25 | 514 | 636 | 594 | 600 | 783 | 597 | 984 | 768 | 643 |
| 50 | 956 | 1044 | 976 | 1044 | 1194 | 1015 | 1267 | 1108 | 1130 |
| 75 | 1575 | 1763 | 1747 | 1747 | 1927 | 1604 | 1803 | 1757 | 1713 |
| 90 | 2271 | 2555 | 2417 | 2408 | 2632 | 2271 | 2460 | 2523 | 2536 |

Nottely Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 67 | 122 | 123 | 77 | 165 | 68 | 226 | 156 | 97 |
| 25 | 101 | 170 | 164 | 147 | 225 | 107 | 256 | 197 | 154 |
| 50 | 180 | 257 | 245 | 243 | 343 | 193 | 308 | 266 | 237 |
| 75 | 267 | 358 | 345 | 347 | 475 | 281 | 384 | 359 | 355 |
| 90 | 438 | 522 | 508 | 508 | 652 | 438 | 508 | 518 | 480 |

Chatuge Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 120 | 119 | 124 | 91 | 157 | 121 | 228 | 126 | 160 |
| 25 | 165 | 169 | 175 | 171 | 211 | 181 | 264 | 176 | 209 |
| 50 | 236 | 247 | 250 | 244 | 318 | 257 | 324 | 265 | 282 |
| 75 | 408 | 443 | 444 | 444 | 479 | 417 | 450 | 443 | 439 |
| 90 | 545 | 567 | 582 | 582 | 635 | 545 | 584 | 577 | 596 |

Norris Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 1000 | 1099 | 1193 | 1023 | 1488 | 1000 | 1569 | 1166 | 1197 |
| 25 | 1453 | 1592 | 1718 | 1767 | 1998 | 1777 | 2073 | 1634 | 1633 |
| 50 | 2358 | 2638 | 2940 | 2940 | 2968 | 2593 | 3049 | 2478 | 2405 |
| 75 | 3883 | 4249 | 4501 | 4395 | 4521 | 3963 | 4585 | 4032 | 3945 |
| 90 | 5646 | 6236 | 5896 | 5896 | 6346 | 5644 | 5978 | 6241 | 5627 |

**Average Reservoir Releases (cfs) during Weeks 12 through 22 (cont.)**

Fontana Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 634 | 594 | 848 | 858 | 2230 | 747 | 876 | 824 | 880 |
| 25 | 979 | 897 | 1143 | 1166 | 2505 | 1130 | 1206 | 1001 | 1242 |
| 50 | 1644 | 1644 | 2045 | 2045 | 3443 | 1870 | 2045 | 1668 | 2097 |
| 75 | 3010 | 3032 | 3434 | 3434 | 4725 | 3010 | 3434 | 3032 | 3236 |
| 90 | 4230 | 4230 | 4653 | 4653 | 5900 | 4238 | 4653 | 4241 | 4549 |

Douglas Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 1819 | 1638 | 1315 | 1811 | 2023 | 2043 | 1515 | 1891 | 1954 |
| 25 | 2466 | 2339 | 2032 | 2466 | 3196 | 2876 | 2232 | 2487 | 2515 |
| 50 | 3865 | 3865 | 3805 | 3856 | 4345 | 4170 | 3805 | 3865 | 3866 |
| 75 | 5892 | 5892 | 5892 | 5892 | 6715 | 5892 | 5892 | 5892 | 5868 |
| 90 | 8687 | 8687 | 8687 | 8687 | 9184 | 8687 | 8687 | 8687 | 8436 |

Cherokee Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 325 | 357 | 1066 | 705 | 1613 | 325 | 1113 | 891 | 438 |
| 25 | 452 | 784 | 1544 | 1324 | 2727 | 554 | 1719 | 1221 | 811 |
| 50 | 981 | 1378 | 2445 | 2366 | 3928 | 1484 | 2413 | 1731 | 1520 |
| 75 | 2149 | 2838 | 4017 | 3835 | 5445 | 2153 | 4017 | 2866 | 2607 |
| 90 | 3627 | 4327 | 5202 | 5152 | 7189 | 3888 | 5275 | 4560 | 4282 |

South Holston Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 318 | 364 | 663 | 448 | 535 | 318 | 598 | 501 | 471 |
| 25 | 467 | 518 | 857 | 772 | 826 | 459 | 832 | 610 | 587 |
| 50 | 712 | 737 | 1091 | 1091 | 1132 | 729 | 1091 | 813 | 757 |
| 75 | 962 | 1000 | 1344 | 1342 | 1387 | 962 | 1342 | 1017 | 993 |
| 90 | 1218 | 1297 | 1662 | 1647 | 1748 | 1213 | 1649 | 1300 | 1303 |

Watauga Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 374 | 462 | 584 | 337 | 461 | 376 | 646 | 444 | 524 |
| 25 | 434 | 550 | 666 | 653 | 596 | 442 | 735 | 535 | 590 |
| 50 | 618 | 658 | 821 | 818 | 807 | 628 | 860 | 670 | 713 |
| 75 | 856 | 917 | 1057 | 1048 | 1011 | 856 | 1109 | 907 | 934 |
| 90 | 1016 | 1082 | 1236 | 1235 | 1173 | 998 | 1263 | 1068 | 1116 |

**Average Reservoir Releases (cfs) during Weeks 12 through 22 (cont.)**

Great Falls Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 2369 | 2233 | 2233 | 2233 | 2322 | 2369 | 2233 | 2233 | 2280 |
| 25 | 3121 | 2985 | 2985 | 2985 | 3038 | 3121 | 2985 | 2985 | 2985 |
| 50 | 4181 | 4065 | 4065 | 4065 | 4087 | 4181 | 4065 | 4065 | 4065 |
| 75 | 5385 | 5249 | 5249 | 5249 | 5262 | 5385 | 5249 | 5249 | 5249 |
| 90 | 6287 | 6152 | 6152 | 6152 | 6157 | 6287 | 6152 | 6152 | 6058 |

Ocoee #1 Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 932 | 1015 | 932 | 828 | 957 | 933 | 929 | 1086 | 956 |
| 25 | 1246 | 1276 | 1256 | 1209 | 1194 | 1262 | 1256 | 1339 | 1265 |
| 50 | 1642 | 1667 | 1641 | 1612 | 1635 | 1619 | 1641 | 1710 | 1655 |
| 75 | 2090 | 2163 | 2092 | 2092 | 2063 | 2092 | 2092 | 2170 | 2121 |
| 90 | 2594 | 2652 | 2594 | 2594 | 2682 | 2600 | 2594 | 2668 | 2627 |

Boone Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 1132 | 1232 | 1667 | 1251 | 1451 | 1143 | 1718 | 1353 | 1463 |
| 25 | 1492 | 1760 | 2207 | 2002 | 2213 | 1517 | 2237 | 1841 | 1820 |
| 50 | 2199 | 2305 | 2762 | 2762 | 2808 | 2309 | 2778 | 2453 | 2379 |
| 75 | 2885 | 2960 | 3549 | 3465 | 3630 | 2885 | 3591 | 2956 | 2998 |
| 90 | 3570 | 3787 | 4350 | 4264 | 4422 | 3570 | 4373 | 3787 | 3708 |

Ocoee #2 Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 864 | 958 | 897 | 766 | 928 | 830 | 870 | 987 | 911 |
| 25 | 1124 | 1167 | 1117 | 1088 | 1094 | 1149 | 1107 | 1199 | 1135 |
| 50 | 1499 | 1536 | 1499 | 1459 | 1491 | 1459 | 1499 | 1541 | 1504 |
| 75 | 1818 | 1880 | 1820 | 1820 | 1820 | 1820 | 1820 | 1898 | 1841 |
| 90 | 2340 | 2430 | 2345 | 2345 | 2375 | 2340 | 2345 | 2437 | 2326 |

Melton Hill Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 1613 | 1611 | 1634 | 1710 | 1934 | 1685 | 2082 | 1668 | 1711 |
| 25 | 1969 | 2174 | 2263 | 2353 | 2542 | 2390 | 2623 | 2232 | 2173 |
| 50 | 3243 | 3523 | 3740 | 3801 | 3783 | 3486 | 3888 | 3346 | 3196 |
| 75 | 4851 | 5463 | 5475 | 5473 | 5532 | 4950 | 5583 | 5207 | 4899 |
| 90 | 7330 | 7929 | 7702 | 7702 | 7826 | 7330 | 7810 | 7626 | 6960 |

**Average Reservoir Releases (cfs) during Weeks 12 through 22 (cont.)**

Ocoee #3 Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 738 | 843 | 765 | 657 | 785 | 760 | 764 | 880 | 810 |
| 25 | 1003 | 1045 | 1017 | 983 | 994 | 1019 | 1015 | 1091 | 1026 |
| 50 | 1322 | 1353 | 1322 | 1271 | 1370 | 1352 | 1322 | 1379 | 1343 |
| 75 | 1601 | 1671 | 1602 | 1602 | 1615 | 1641 | 1602 | 1679 | 1612 |
| 90 | 2144 | 2224 | 2144 | 2144 | 2197 | 2146 | 2144 | 2224 | 2185 |

Apalachia Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 393 | 395 | 419 | 469 | 666 | 472 | 932 | 618 | 498 |
| 25 | 640 | 726 | 707 | 709 | 890 | 705 | 1094 | 880 | 749 |
| 50 | 1091 | 1183 | 1098 | 1181 | 1327 | 1152 | 1379 | 1222 | 1262 |
| 75 | 1742 | 1930 | 1914 | 1914 | 2084 | 1768 | 1969 | 1929 | 1886 |
| 90 | 2509 | 2769 | 2618 | 2614 | 2869 | 2509 | 2652 | 2737 | 2752 |

Fort Patrick Henry Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 1034 | 1163 | 1572 | 1176 | 1360 | 1059 | 1626 | 1248 | 1395 |
| 25 | 1460 | 1689 | 2143 | 1947 | 2169 | 1460 | 2155 | 1779 | 1778 |
| 50 | 2175 | 2258 | 2719 | 2719 | 2748 | 2266 | 2731 | 2406 | 2331 |
| 75 | 2893 | 2992 | 3586 | 3471 | 3690 | 2893 | 3628 | 2958 | 3059 |
| 90 | 3630 | 3755 | 4347 | 4232 | 4419 | 3616 | 4359 | 3755 | 3686 |

**Average Reservoir Releases (cfs) during Weeks 23 through 35**

Wilson Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 25274 | 21823 | 17452 | 39069 | 20412 | 24470 | 17461 | 17405 | 21889 |
| 25 | 28683 | 23659 | 19677 | 40698 | 22086 | 28098 | 19976 | 20069 | 24369 |
| 50 | 34203 | 28285 | 24871 | 43386 | 26971 | 33787 | 25004 | 25404 | 28943 |
| 75 | 41130 | 35509 | 32037 | 47247 | 33293 | 41130 | 31864 | 32893 | 37020 |
| 90 | 51058 | 45128 | 43517 | 53814 | 43565 | 51058 | 43228 | 43872 | 46018 |

Guntersville Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 23133 | 19940 | 16320 | 35948 | 19304 | 22275 | 16383 | 15823 | 20610 |
| 25 | 26155 | 21146 | 18108 | 36577 | 20537 | 25781 | 18289 | 17753 | 22164 |
| 50 | 30755 | 24478 | 21214 | 37721 | 23972 | 29831 | 21342 | 21330 | 25816 |
| 75 | 36585 | 30377 | 27153 | 40034 | 29584 | 35757 | 27174 | 27929 | 31778 |
| 90 | 42914 | 38808 | 37203 | 44490 | 37561 | 42493 | 37074 | 37899 | 39488 |

Kentucky Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 27119 | 23918 | 21124 | 36760 | 22317 | 28567 | 21023 | 21862 | 25077 |
| 25 | 31168 | 27010 | 23939 | 39119 | 25638 | 33192 | 23984 | 24683 | 28219 |
| 50 | 35993 | 31008 | 28912 | 41952 | 29721 | 40127 | 28828 | 30208 | 32744 |
| 75 | 42628 | 38289 | 35356 | 46604 | 36842 | 46585 | 35504 | 36612 | 40079 |
| 90 | 53160 | 50692 | 49135 | 56650 | 49183 | 62438 | 49063 | 49865 | 49952 |

Pickwick Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 24876 | 21548 | 16751 | 39258 | 19602 | 24254 | 16835 | 17259 | 21011 |
| 25 | 28932 | 23041 | 18923 | 41060 | 21526 | 28661 | 19171 | 19944 | 24002 |
| 50 | 34853 | 28744 | 25066 | 44228 | 27482 | 34793 | 25285 | 25773 | 29139 |
| 75 | 42537 | 35495 | 31693 | 49107 | 32967 | 42537 | 31256 | 32802 | 36758 |
| 90 | 51555 | 46786 | 44827 | 55475 | 45357 | 51555 | 44843 | 45146 | 46371 |

Wheeler Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 24822 | 21740 | 17099 | 38800 | 20405 | 24170 | 17199 | 17192 | 22102 |
| 25 | 28952 | 23451 | 19711 | 40311 | 22454 | 28431 | 19925 | 20225 | 24176 |
| 50 | 34066 | 27699 | 24528 | 42613 | 26517 | 33671 | 24661 | 25091 | 28455 |
| 75 | 40350 | 34424 | 31644 | 46191 | 32542 | 39905 | 31419 | 32278 | 35859 |
| 90 | 49700 | 43704 | 42089 | 52093 | 41938 | 49700 | 41945 | 42569 | 44830 |

**Average Reservoir Releases (cfs) during Weeks 23 through 35 (cont.)**

Chickamauga Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 21061 | 18610 | 14946 | 35000 | 18319 | 20396 | 14989 | 14352 | 19057 |
| 25 | 24714 | 19418 | 16663 | 35000 | 19125 | 23900 | 16803 | 16011 | 21078 |
| 50 | 28129 | 22236 | 19602 | 35000 | 21833 | 27634 | 19674 | 19232 | 23918 |
| 75 | 33068 | 27166 | 25025 | 36071 | 26272 | 33068 | 25020 | 25072 | 29438 |
| 90 | 38065 | 33562 | 32435 | 40655 | 32648 | 38065 | 32160 | 32689 | 35130 |

Watts Bar Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 16983 | 14530 | 11654 | 27241 | 14308 | 16519 | 11932 | 11044 | 15440 |
| 25 | 20213 | 15708 | 13059 | 28140 | 15294 | 19478 | 13097 | 12512 | 16989 |
| 50 | 23183 | 17882 | 15821 | 28966 | 17345 | 23089 | 16065 | 15458 | 19991 |
| 75 | 26951 | 21322 | 20229 | 29997 | 20846 | 26936 | 19851 | 19602 | 23281 |
| 90 | 30932 | 27643 | 26965 | 32307 | 25891 | 30578 | 26850 | 26603 | 28229 |

Fort Loudoun Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 13440 | 11509 | 9215 | 20181 | 11556 | 12849 | 9194 | 8402 | 11848 |
| 25 | 15762 | 12472 | 10394 | 21176 | 12313 | 15338 | 10498 | 9915 | 12942 |
| 50 | 17868 | 14070 | 12543 | 21952 | 14067 | 17630 | 12517 | 11582 | 15044 |
| 75 | 20700 | 16766 | 15569 | 22741 | 16955 | 20486 | 15670 | 15453 | 17706 |
| 90 | 22713 | 19423 | 19067 | 23670 | 19654 | 22713 | 19018 | 18473 | 20325 |

Nickajack Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 21033 | 18720 | 15367 | 34797 | 18510 | 20519 | 15471 | 14499 | 19424 |
| 25 | 24928 | 19653 | 16493 | 35255 | 19151 | 24195 | 16610 | 16095 | 21093 |
| 50 | 28695 | 22969 | 19929 | 35606 | 22372 | 28435 | 19808 | 19504 | 24569 |
| 75 | 34194 | 28048 | 25724 | 36688 | 27155 | 33715 | 25753 | 25881 | 30420 |
| 90 | 39646 | 33945 | 33385 | 40936 | 33716 | 39494 | 33130 | 33593 | 35536 |

Tims Ford Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 219 | 220 | 80 | 830 | 80 | 232 | 80 | 220 | 229 |
| 25 | 328 | 328 | 174 | 938 | 80 | 336 | 174 | 328 | 328 |
| 50 | 454 | 454 | 292 | 1061 | 80 | 454 | 292 | 454 | 454 |
| 75 | 633 | 634 | 472 | 1243 | 173 | 633 | 472 | 634 | 634 |
| 90 | 897 | 898 | 736 | 1482 | 439 | 897 | 736 | 898 | 882 |

**Average Reservoir Releases (cfs) during Weeks 23 through 35 (cont.)**

Blue Ridge Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 369 | 362 | 301 | 589 | 388 | 340 | 319 | 315 | 402 |
| 25 | 510 | 429 | 354 | 683 | 442 | 492 | 359 | 352 | 446 |
| 50 | 594 | 513 | 446 | 756 | 530 | 595 | 446 | 443 | 535 |
| 75 | 715 | 603 | 559 | 832 | 610 | 712 | 559 | 556 | 647 |
| 90 | 916 | 871 | 801 | 936 | 871 | 903 | 804 | 798 | 903 |

Hiwassee Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 1271 | 1058 | 967 | 2206 | 1284 | 1213 | 1016 | 1049 | 1299 |
| 25 | 1733 | 1350 | 1093 | 2389 | 1551 | 1656 | 1039 | 1079 | 1523 |
| 50 | 2082 | 1634 | 1380 | 2624 | 1842 | 2055 | 1166 | 1302 | 1829 |
| 75 | 2414 | 1963 | 1717 | 2792 | 2207 | 2374 | 1567 | 1676 | 2217 |
| 90 | 2628 | 2546 | 2458 | 2839 | 2672 | 2602 | 2393 | 2413 | 2858 |

Nottely Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 235 | 170 | 155 | 453 | 289 | 240 | 174 | 199 | 249 |
| 25 | 390 | 289 | 238 | 485 | 352 | 374 | 207 | 235 | 332 |
| 50 | 479 | 349 | 281 | 569 | 396 | 464 | 254 | 281 | 393 |
| 75 | 535 | 428 | 357 | 614 | 485 | 531 | 330 | 353 | 465 |
| 90 | 634 | 541 | 530 | 647 | 592 | 623 | 523 | 525 | 623 |

Chatuge Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 267 | 212 | 194 | 431 | 308 | 259 | 191 | 225 | 269 |
| 25 | 375 | 281 | 249 | 490 | 355 | 369 | 229 | 253 | 346 |
| 50 | 449 | 342 | 298 | 536 | 421 | 447 | 270 | 298 | 403 |
| 75 | 525 | 412 | 366 | 579 | 491 | 510 | 341 | 361 | 485 |
| 90 | 600 | 560 | 529 | 637 | 644 | 599 | 523 | 523 | 621 |

Norris Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 2216 | 1407 | 1407 | 3221 | 1407 | 2167 | 1767 | 1407 | 1840 |
| 25 | 2697 | 1762 | 1407 | 3973 | 1407 | 2571 | 1767 | 1443 | 2249 |
| 50 | 3310 | 2295 | 1908 | 4547 | 1580 | 3297 | 1891 | 1792 | 3078 |
| 75 | 4010 | 2911 | 2460 | 5238 | 2009 | 4006 | 2407 | 2520 | 3615 |
| 90 | 4585 | 3690 | 3441 | 5654 | 2775 | 4585 | 3386 | 3356 | 4233 |

**Average Reservoir Releases (cfs) during Weeks 23 through 35 (cont.)**

Fontana Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 2873 | 2597 | 2260 | 4132 | 2660 | 2836 | 2212 | 2054 | 2756 |
| 25 | 3439 | 2935 | 2574 | 4371 | 3004 | 3410 | 2566 | 2463 | 3007 |
| 50 | 4005 | 3423 | 3177 | 4560 | 3398 | 3956 | 3172 | 3073 | 3407 |
| 90 | 5385 | 5251 | 5256 | 5452 | 4809 | 5205 | 5249 | 5105 | 4317 |
| 75 | 4632 | 4092 | 4013 | 4920 | 3980 | 4632 | 4017 | 3929 | 5362 |

Douglas Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 4657 | 4478 | 3477 | 6995 | 4989 | 4462 | 3340 | 3111 | 4344 |
| 25 | 5556 | 4921 | 3839 | 7631 | 5662 | 5287 | 3810 | 3646 | 5012 |
| 50 | 6372 | 5492 | 4684 | 8059 | 6472 | 6335 | 4644 | 4512 | 5629 |
| 75 | 7386 | 6409 | 5792 | 8627 | 7553 | 7340 | 5738 | 5663 | 6883 |
| 90 | 8231 | 7561 | 7370 | 9284 | 8799 | 8073 | 7370 | 7260 | 7827 |

Cherokee Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 3407 | 2199 | 1451 | 4931 | 1825 | 3330 | 1352 | 1216 | 2468 |
| 25 | 4321 | 2797 | 2087 | 5629 | 2178 | 4194 | 2093 | 1808 | 3116 |
| 50 | 5602 | 3300 | 2721 | 6574 | 2506 | 5518 | 2754 | 2354 | 3847 |
| 75 | 6305 | 3858 | 3382 | 7156 | 3009 | 6214 | 3412 | 3109 | 4559 |
| 90 | 7105 | 4812 | 4452 | 7933 | 3884 | 7071 | 4341 | 4280 | 5261 |

South Holston Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 730 | 548 | 528 | 770 | 529 | 716 | 490 | 480 | 564 |
| 25 | 838 | 621 | 592 | 911 | 584 | 830 | 550 | 567 | 670 |
| 50 | 976 | 717 | 720 | 1078 | 719 | 970 | 682 | 678 | 782 |
| 75 | 1144 | 826 | 824 | 1205 | 809 | 1144 | 798 | 785 | 904 |
| 90 | 1301 | 1025 | 1000 | 1341 | 1009 | 1301 | 977 | 926 | 1011 |

Watauga Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 620 | 392 | 385 | 532 | 532 | 579 | 583 | 366 | 414 |
| 25 | 720 | 453 | 428 | 654 | 609 | 706 | 583 | 403 | 494 |
| 50 | 846 | 509 | 503 | 740 | 675 | 832 | 583 | 479 | 573 |
| 75 | 960 | 613 | 595 | 845 | 784 | 958 | 608 | 577 | 675 |
| 90 | 1137 | 809 | 785 | 971 | 994 | 1113 | 818 | 764 | 887 |

**Average Reservoir Releases (cfs) during Weeks 23 through 35 (cont.)**

Great Falls Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 267 | 381 | 381 | 483 | 343 | 267 | 381 | 381 | 418 |
| 25 | 545 | 659 | 659 | 760 | 604 | 545 | 659 | 659 | 659 |
| 50 | 868 | 900 | 900 | 1002 | 891 | 868 | 900 | 900 | 900 |
| 75 | 1460 | 1570 | 1570 | 1671 | 1570 | 1460 | 1570 | 1570 | 1570 |
| 90 | 2265 | 2312 | 2312 | 2414 | 2312 | 2265 | 2312 | 2312 | 2300 |

Ocoee #1 Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 766 | 741 | 644 | 1025 | 766 | 749 | 675 | 682 | 755 |
| 25 | 964 | 907 | 822 | 1194 | 923 | 959 | 819 | 815 | 932 |
| 50 | 1147 | 1066 | 996 | 1328 | 1065 | 1134 | 996 | 993 | 1102 |
| 75 | 1411 | 1319 | 1250 | 1462 | 1314 | 1399 | 1255 | 1256 | 1345 |
| 90 | 1932 | 1861 | 1838 | 1918 | 1865 | 1932 | 1843 | 1829 | 1854 |

Boone Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 1799 | 1471 | 1429 | 2305 | 1387 | 1816 | 1535 | 1414 | 1524 |
| 25 | 2100 | 1551 | 1522 | 2533 | 1475 | 2089 | 1607 | 1503 | 1629 |
| 50 | 2445 | 1697 | 1662 | 2810 | 1629 | 2433 | 1728 | 1630 | 1823 |
| 75 | 2790 | 2164 | 2080 | 3041 | 2151 | 2768 | 2191 | 2043 | 2311 |
| 90 | 3207 | 2814 | 2765 | 3451 | 2706 | 3207 | 2749 | 2739 | 2795 |

Ocoee #2 Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 731 | 695 | 608 | 980 | 711 | 673 | 633 | 640 | 717 |
| 25 | 880 | 832 | 746 | 1132 | 841 | 867 | 750 | 747 | 848 |
| 50 | 1056 | 966 | 900 | 1238 | 963 | 1050 | 898 | 909 | 1001 |
| 75 | 1347 | 1213 | 1192 | 1364 | 1220 | 1347 | 1190 | 1187 | 1275 |
| 90 | 1756 | 1646 | 1657 | 1723 | 1666 | 1756 | 1664 | 1631 | 1727 |

Melton Hill Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 2564 | 1667 | 1541 | 3605 | 1585 | 2503 | 1887 | 1552 | 2178 |
| 25 | 2892 | 1986 | 1669 | 4229 | 1700 | 2751 | 1980 | 1713 | 2568 |
| 50 | 3813 | 2645 | 2196 | 4999 | 1963 | 3717 | 2265 | 2180 | 3397 |
| 75 | 4587 | 3331 | 2880 | 5631 | 2560 | 4494 | 2970 | 3006 | 4028 |
| 90 | 5417 | 4652 | 4210 | 6116 | 3423 | 5417 | 4301 | 4261 | 4939 |

**Average Reservoir Releases (cfs) during Weeks 23 through 35 (cont.)**

Ocoee #3 Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 680 | 650 | 580 | 929 | 669 | 648 | 602 | 601 | 684 |
| 25 | 823 | 779 | 685 | 1059 | 791 | 798 | 683 | 676 | 785 |
| 50 | 981 | 884 | 812 | 1155 | 883 | 962 | 817 | 808 | 922 |
| 75 | 1205 | 1125 | 1050 | 1269 | 1138 | 1205 | 1048 | 1058 | 1147 |
| 90 | 1654 | 1556 | 1525 | 1638 | 1557 | 1654 | 1525 | 1525 | 1584 |

Apalachia Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 1324 | 1100 | 1013 | 2248 | 1347 | 1261 | 1066 | 1100 | 1358 |
| 25 | 1783 | 1401 | 1154 | 2456 | 1607 | 1705 | 1087 | 1135 | 1579 |
| 50 | 2150 | 1693 | 1446 | 2681 | 1898 | 2110 | 1223 | 1364 | 1891 |
| 75 | 2514 | 2047 | 1799 | 2870 | 2281 | 2456 | 1656 | 1768 | 2308 |
| 90 | 2769 | 2665 | 2573 | 2882 | 2787 | 2723 | 2511 | 2525 | 2973 |

Fort Patrick Henry Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 1698 | 1363 | 1310 | 2230 | 1265 | 1740 | 1415 | 1304 | 1395 |
| 25 | 1996 | 1444 | 1418 | 2431 | 1387 | 1974 | 1500 | 1401 | 1525 |
| 50 | 2356 | 1651 | 1586 | 2710 | 1554 | 2348 | 1660 | 1534 | 1774 |
| 75 | 2723 | 2125 | 2070 | 3026 | 2137 | 2702 | 2141 | 1961 | 2224 |
| 90 | 3165 | 2741 | 2695 | 3418 | 2633 | 3155 | 2676 | 2676 | 2723 |

**Average Reservoir Releases (cfs) during Weeks 36 through 48**

Wilson Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 25548 | 25938 | 23631 | 18203 | 17039 | 24778 | 23596 | 25066 | 24399 |
| 25 | 29914 | 31150 | 28218 | 19620 | 21714 | 28724 | 27871 | 30292 | 28967 |
| 50 | 37528 | 39018 | 33243 | 24436 | 29042 | 36246 | 33478 | 35753 | 37252 |
| 75 | 42253 | 44826 | 40986 | 31104 | 38174 | 41161 | 40907 | 44041 | 44673 |
| 90 | 53612 | 56405 | 52948 | 43087 | 51538 | 52766 | 52812 | 57761 | 54591 |

Guntersville Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 23606 | 23589 | 20954 | 16982 | 14190 | 23090 | 20880 | 23017 | 21079 |
| 25 | 26576 | 28299 | 24291 | 17872 | 17611 | 25638 | 24303 | 26470 | 25490 |
| 50 | 32763 | 35223 | 29512 | 21161 | 23437 | 31717 | 29150 | 31967 | 32160 |
| 75 | 37183 | 39121 | 34547 | 26728 | 29558 | 36613 | 34480 | 39356 | 37683 |
| 90 | 46132 | 48015 | 44059 | 36790 | 42019 | 45466 | 44008 | 49317 | 46932 |

Kentucky Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 23821 | 24871 | 23820 | 18915 | 20491 | 25450 | 23757 | 24992 | 23963 |
| 25 | 27791 | 29876 | 27123 | 20116 | 24649 | 27696 | 27004 | 28427 | 27522 |
| 50 | 33106 | 34413 | 31689 | 24238 | 29740 | 32289 | 31718 | 32890 | 32386 |
| 75 | 40610 | 41981 | 39796 | 32764 | 39138 | 41573 | 39638 | 42253 | 40663 |
| 90 | 52817 | 55586 | 53558 | 44475 | 51393 | 54759 | 53269 | 57572 | 52716 |

Pickwick Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 25155 | 25524 | 23513 | 17411 | 17273 | 24301 | 23406 | 24293 | 24584 |
| 25 | 30031 | 31890 | 28580 | 19265 | 22361 | 28714 | 28296 | 30116 | 29829 |
| 50 | 37216 | 38757 | 33922 | 24513 | 29736 | 35699 | 33592 | 35439 | 37520 |
| 75 | 43045 | 44576 | 41780 | 32690 | 39053 | 41706 | 41663 | 45227 | 45497 |
| 90 | 54386 | 57014 | 53963 | 43267 | 52842 | 53167 | 53758 | 58369 | 57126 |

Wheeler Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 25355 | 25956 | 23328 | 18212 | 17611 | 24675 | 23376 | 25153 | 24257 |
| 25 | 29589 | 31399 | 28150 | 19550 | 21496 | 28645 | 27803 | 29249 | 29029 |
| 50 | 36596 | 38254 | 33414 | 23858 | 28535 | 34814 | 32946 | 35289 | 36432 |
| 75 | 41628 | 44521 | 40185 | 30743 | 36896 | 40815 | 40210 | 43151 | 44322 |
| 90 | 52786 | 55445 | 52009 | 42527 | 50598 | 51907 | 51919 | 56800 | 53160 |

**Average Reservoir Releases (cfs) during Weeks 36 through 48 (cont.)**

Chickamauga Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 22562 | 21846 | 19588 | 15914 | 12785 | 22209 | 19388 | 21578 | 19176 |
| 25 | 24711 | 26740 | 22631 | 16872 | 16027 | 23890 | 22521 | 25483 | 23780 |
| 50 | 30242 | 32908 | 27202 | 19154 | 20818 | 29498 | 27194 | 29950 | 29607 |
| 75 | 35610 | 36756 | 31451 | 24688 | 26128 | 35090 | 31296 | 35789 | 34902 |
| 90 | 38949 | 40891 | 37532 | 31334 | 34990 | 38155 | 36826 | 42459 | 39746 |

Watts Bar

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 18179 | 17580 | 15308 | 12744 | 9397 | 17759 | 15407 | 18100 | 15171 |
| 25 | 20645 | 22905 | 18296 | 13603 | 12360 | 20091 | 18428 | 21728 | 19721 |
| 50 | 24956 | 27789 | 21919 | 15381 | 16511 | 24711 | 21935 | 25301 | 24291 |
| 75 | 28676 | 30443 | 24820 | 19758 | 21081 | 28424 | 24588 | 29270 | 28814 |
| 90 | 32272 | 34281 | 29840 | 24370 | 27179 | 32011 | 29537 | 35899 | 33025 |

Fort Loudoun

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 13530 | 14237 | 12663 | 9014 | 6703 | 13410 | 12740 | 14431 | 11536 |
| 25 | 15100 | 17089 | 14439 | 9844 | 8745 | 14965 | 14569 | 16327 | 14785 |
| 50 | 17869 | 20324 | 17091 | 11986 | 12027 | 17735 | 17228 | 18757 | 18116 |
| 75 | 21278 | 22970 | 19608 | 14892 | 15577 | 21095 | 19428 | 21903 | 21342 |
| 90 | 23224 | 24684 | 22067 | 17787 | 19350 | 23161 | 22135 | 25871 | 23911 |

Nickajack Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 22001 | 22149 | 19549 | 16009 | 12858 | 21851 | 19398 | 21744 | 19287 |
| 25 | 25130 | 27154 | 22659 | 16985 | 16142 | 24406 | 22721 | 25564 | 23787 |
| 50 | 30592 | 33630 | 27528 | 19453 | 21375 | 29976 | 27419 | 30298 | 29687 |
| 75 | 36225 | 37283 | 32242 | 25043 | 26571 | 35718 | 32087 | 37334 | 35535 |
| 90 | 39875 | 41456 | 38850 | 32047 | 36127 | 39257 | 38232 | 43529 | 40897 |

Tims Ford Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 557 | 527 | 751 | 194 | 798 | 557 | 751 | 527 | 559 |
| 25 | 643 | 592 | 782 | 229 | 949 | 643 | 782 | 592 | 641 |
| 50 | 737 | 687 | 870 | 319 | 1105 | 737 | 870 | 681 | 734 |
| 75 | 913 | 854 | 1016 | 531 | 1338 | 929 | 1016 | 842 | 899 |
| 90 | 1212 | 1196 | 1346 | 877 | 1634 | 1220 | 1346 | 1196 | 1217 |

**Average Reservoir Releases (cfs) during Weeks 36 through 48 (cont.)**

Blue Ridge Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 475 | 306 | 460 | 325 | 173 | 482 | 460 | 218 | 334 |
| 25 | 536 | 443 | 528 | 397 | 256 | 538 | 529 | 294 | 416 |
| 50 | 609 | 561 | 605 | 456 | 360 | 609 | 605 | 379 | 503 |
| 75 | 699 | 666 | 675 | 570 | 461 | 699 | 675 | 460 | 585 |
| 90 | 839 | 737 | 780 | 694 | 630 | 839 | 779 | 665 | 725 |

Hiwassee Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 1610 | 1666 | 1522 | 1006 | 526 | 1673 | 1057 | 1331 | 1298 |
| 25 | 1797 | 2075 | 1838 | 1209 | 802 | 1851 | 1649 | 1756 | 1671 |
| 50 | 2051 | 2381 | 2125 | 1464 | 1212 | 2063 | 2105 | 2048 | 1900 |
| 75 | 2379 | 2624 | 2415 | 1885 | 1701 | 2384 | 2357 | 2383 | 2202 |
| 90 | 2701 | 2891 | 2903 | 2397 | 2259 | 2701 | 2917 | 2961 | 2611 |

Nottely Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 326 | 325 | 292 | 210 | 162 | 339 | 203 | 244 | 253 |
| 25 | 376 | 412 | 363 | 248 | 203 | 379 | 330 | 367 | 326 |
| 50 | 430 | 498 | 429 | 306 | 265 | 433 | 418 | 428 | 389 |
| 75 | 511 | 562 | 483 | 391 | 326 | 512 | 469 | 496 | 439 |
| 90 | 578 | 617 | 599 | 512 | 457 | 578 | 599 | 632 | 550 |

Chatuge Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 311 | 355 | 322 | 258 | 143 | 311 | 252 | 223 | 235 |
| 25 | 348 | 418 | 378 | 293 | 190 | 352 | 357 | 309 | 309 |
| 50 | 413 | 502 | 447 | 357 | 284 | 417 | 435 | 370 | 386 |
| 75 | 475 | 545 | 506 | 424 | 343 | 477 | 485 | 430 | 436 |
| 90 | 540 | 598 | 654 | 558 | 504 | 540 | 654 | 617 | 573 |

Norris Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 3229 | 2627 | 1614 | 1910 | 1307 | 3259 | 1695 | 2918 | 1670 |
| 25 | 3511 | 3817 | 2173 | 2041 | 1307 | 3521 | 1949 | 3670 | 2781 |
| 50 | 4117 | 4545 | 2603 | 2365 | 1703 | 4091 | 2455 | 4182 | 3647 |
| 75 | 4744 | 5334 | 3028 | 3196 | 3290 | 4717 | 2955 | 4839 | 4184 |
| 90 | 5622 | 5992 | 4002 | 3966 | 4456 | 5644 | 3989 | 5973 | 5278 |

**Average Reservoir Releases (cfs) during Weeks 36 through 48 (cont.)**

Fontana Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 3375 | 3834 | 2941 | 2316 | 1360 | 3300 | 2940 | 3252 | 2657 |
| 25 | 3827 | 4311 | 3317 | 2650 | 1851 | 3831 | 3334 | 3705 | 3414 |
| 50 | 4433 | 4837 | 3930 | 3174 | 2616 | 4442 | 3933 | 4375 | 4250 |
| 75 | 4883 | 5175 | 4795 | 4210 | 4251 | 4906 | 4797 | 5194 | 4885 |
| 90 | 5650 | 5898 | 5600 | 5072 | 4969 | 5650 | 5613 | 5967 | 5684 |

Douglas Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 4731 | 4569 | 4597 | 2094 | 1640 | 4893 | 4560 | 4630 | 4341 |
| 25 | 5369 | 5976 | 5470 | 3284 | 2503 | 5490 | 5475 | 5793 | 5509 |
| 50 | 6473 | 7163 | 6327 | 4259 | 3910 | 6450 | 6320 | 6665 | 6644 |
| 75 | 7699 | 8219 | 7445 | 5690 | 5357 | 7664 | 7444 | 8025 | 7973 |
| 90 | 8829 | 9426 | 9118 | 7024 | 6977 | 8829 | 9128 | 10240 | 9201 |

Cherokee Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 3687 | 3927 | 3481 | 2089 | 1588 | 3691 | 3516 | 4552 | 3040 |
| 25 | 4056 | 5066 | 3996 | 2512 | 2144 | 4056 | 4071 | 5171 | 3974 |
| 50 | 4667 | 5980 | 4363 | 2943 | 2685 | 4728 | 4458 | 5878 | 4669 |
| 75 | 5587 | 6994 | 4814 | 3500 | 3564 | 5633 | 4846 | 6475 | 5834 |
| 90 | 6954 | 7772 | 5886 | 4205 | 4800 | 6935 | 5726 | 7992 | 6498 |

South Holston Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 713 | 588 | 382 | 506 | 417 | 717 | 353 | 481 | 604 |
| 25 | 829 | 800 | 451 | 586 | 484 | 825 | 459 | 621 | 746 |
| 50 | 981 | 999 | 524 | 691 | 571 | 981 | 538 | 804 | 935 |
| 75 | 1216 | 1168 | 635 | 884 | 652 | 1224 | 644 | 996 | 1120 |
| 90 | 1461 | 1357 | 882 | 1064 | 861 | 1461 | 945 | 1227 | 1265 |

Watauga Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 318 | 347 | 286 | 321 | 301 | 338 | 399 | 304 | 202 |
| 25 | 377 | 499 | 328 | 420 | 366 | 403 | 399 | 338 | 294 |
| 50 | 544 | 612 | 392 | 482 | 441 | 564 | 406 | 451 | 429 |
| 75 | 734 | 770 | 518 | 588 | 526 | 746 | 499 | 605 | 589 |
| 90 | 927 | 912 | 677 | 865 | 648 | 927 | 659 | 754 | 725 |

**Average Reservoir Releases (cfs) during Weeks 36 through 48 (cont.)**

Great Falls Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 317 | 317 | 317 | 216 | 317 | 317 | 317 | 317 | 319 |
| 25 | 504 | 504 | 504 | 402 | 504 | 504 | 504 | 504 | 504 |
| 50 | 935 | 935 | 935 | 834 | 935 | 935 | 935 | 935 | 935 |
| 75 | 1577 | 1577 | 1577 | 1485 | 1577 | 1577 | 1577 | 1577 | 1577 |
| 90 | 2529 | 2529 | 2529 | 2427 | 2529 | 2529 | 2529 | 2529 | 2502 |

Ocoee #1 Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 721 | 606 | 694 | 646 | 477 | 732 | 694 | 506 | 592 |
| 25 | 864 | 791 | 861 | 742 | 575 | 855 | 860 | 631 | 744 |
| 50 | 1039 | 1001 | 1050 | 886 | 799 | 1039 | 1050 | 806 | 952 |
| 75 | 1232 | 1204 | 1216 | 1079 | 984 | 1232 | 1217 | 983 | 1108 |
| 90 | 1531 | 1368 | 1478 | 1354 | 1288 | 1531 | 1478 | 1341 | 1393 |

Boone Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 1606 | 1510 | 1349 | 1378 | 1245 | 1645 | 1425 | 1409 | 1469 |
| 25 | 1758 | 1865 | 1412 | 1465 | 1325 | 1796 | 1505 | 1554 | 1622 |
| 50 | 2252 | 2251 | 1640 | 1586 | 1429 | 2261 | 1693 | 1901 | 2030 |
| 75 | 2778 | 2684 | 1965 | 1843 | 1742 | 2806 | 1983 | 2404 | 2499 |
| 90 | 3215 | 3197 | 2658 | 2331 | 2327 | 3236 | 2649 | 3023 | 2950 |

Ocoee #2 Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 707 | 571 | 696 | 580 | 437 | 722 | 696 | 471 | 580 |
| 25 | 806 | 761 | 789 | 701 | 529 | 819 | 797 | 572 | 692 |
| 50 | 973 | 935 | 975 | 802 | 718 | 973 | 975 | 738 | 876 |
| 75 | 1181 | 1099 | 1130 | 1021 | 921 | 1181 | 1130 | 934 | 1064 |
| 90 | 1489 | 1339 | 1363 | 1270 | 1169 | 1489 | 1363 | 1230 | 1279 |

Melton Hill Reservoir

| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 3321 | 2676 | 1762 | 2058 | 1382 | 3350 | 1777 | 2937 | 1878 |
| 25 | 3622 | 4021 | 2383 | 2204 | 1505 | 3629 | 2149 | 3842 | 2920 |
| 50 | 4445 | 4889 | 2791 | 2720 | 1876 | 4409 | 2632 | 4361 | 3967 |
| 75 | 4965 | 5612 | 3376 | 3629 | 3568 | 4994 | 3250 | 5248 | 4563 |
| 90 | 6096 | 6659 | 4716 | 4172 | 5220 | 6199 | 4558 | 6682 | 5711 |

**Average Reservoir Releases (cfs) during Weeks 36 through 48 (cont.)**

Ocoee #3 Reservoir

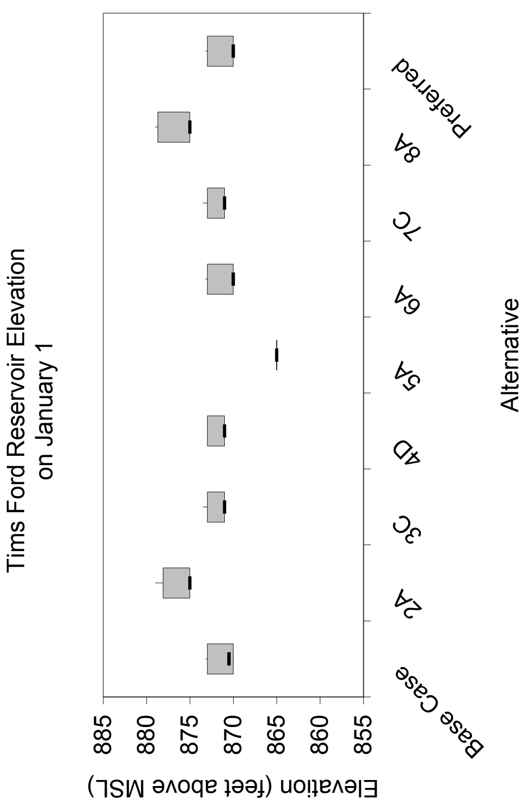
| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 675 | 511 | 639 | 552 | 391 | 703 | 638 | 429 | 534 |
| 25 | 768 | 680 | 756 | 636 | 466 | 759 | 756 | 517 | 644 |
| 50 | 891 | 831 | 889 | 755 | 635 | 892 | 889 | 650 | 761 |
| 75 | 1089 | 1017 | 1044 | 907 | 824 | 1089 | 1044 | 832 | 963 |
| 90 | 1339 | 1207 | 1286 | 1203 | 1111 | 1339 | 1289 | 1154 | 1233 |

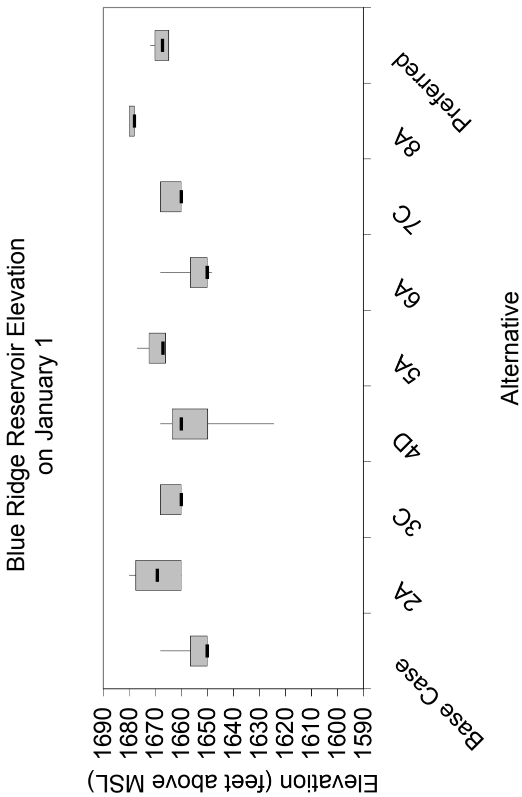
Apalachia Reservoir

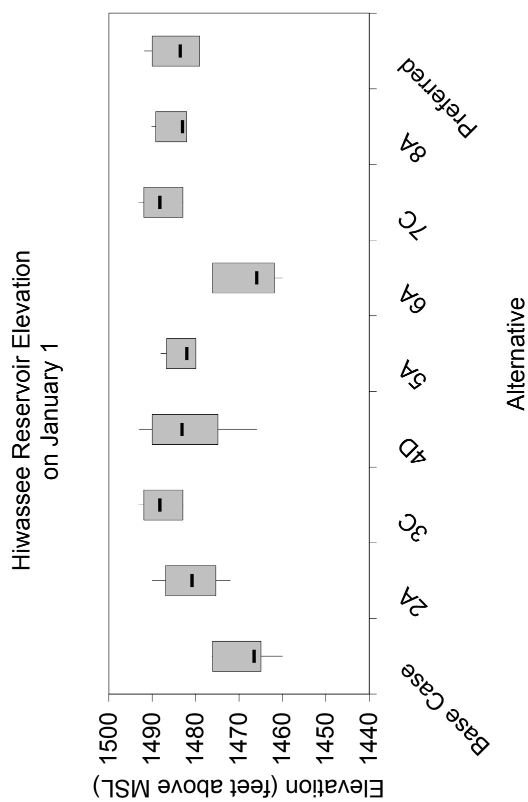
| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 1638 | 1692 | 1559 | 1039 | 548 | 1700 | 1090 | 1366 | 1324 |
| 25 | 1831 | 2115 | 1874 | 1242 | 835 | 1886 | 1688 | 1783 | 1703 |
| 50 | 2093 | 2418 | 2167 | 1491 | 1238 | 2110 | 2160 | 2088 | 1937 |
| 75 | 2445 | 2681 | 2475 | 1942 | 1756 | 2445 | 2419 | 2440 | 2258 |
| 90 | 2760 | 2968 | 2985 | 2455 | 2344 | 2760 | 3000 | 3044 | 2697 |

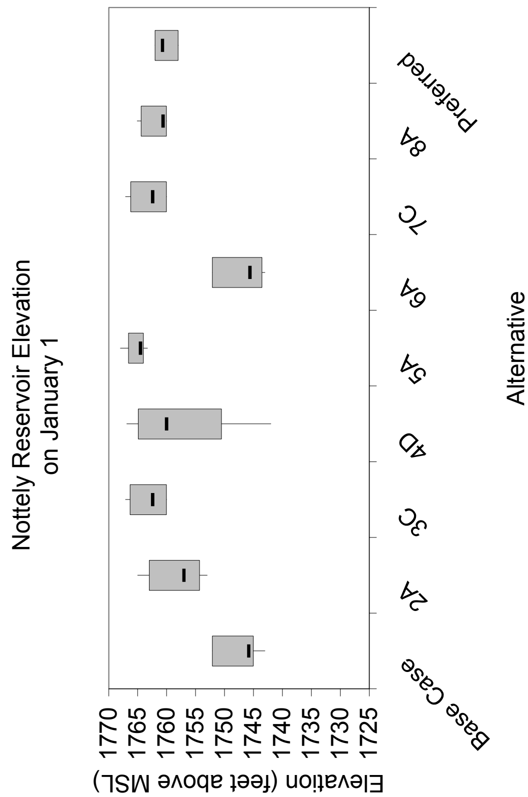
Fort Patrick Henry Reservoir

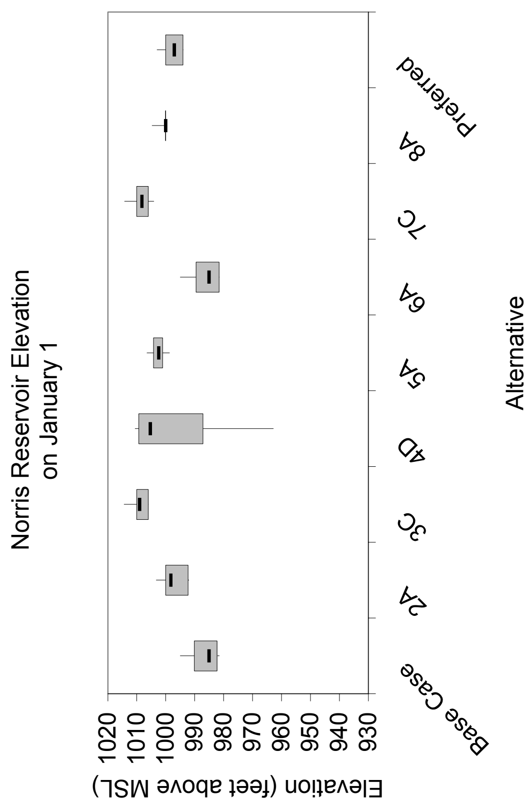
| Percentile | Base | 2A | 3C | 4D | 5A | 6A | 7C | 8A | Preferred |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 1476 | 1377 | 1210 | 1254 | 1132 | 1500 | 1286 | 1264 | 1325 |
| 25 | 1641 | 1753 | 1298 | 1360 | 1199 | 1667 | 1363 | 1424 | 1512 |
| 50 | 2153 | 2139 | 1521 | 1479 | 1314 | 2147 | 1593 | 1786 | 1905 |
| 75 | 2667 | 2580 | 1903 | 1729 | 1644 | 2687 | 1881 | 2286 | 2416 |
| 90 | 3147 | 3189 | 2679 | 2276 | 2447 | 3177 | 2590 | 3017 | 2974 |

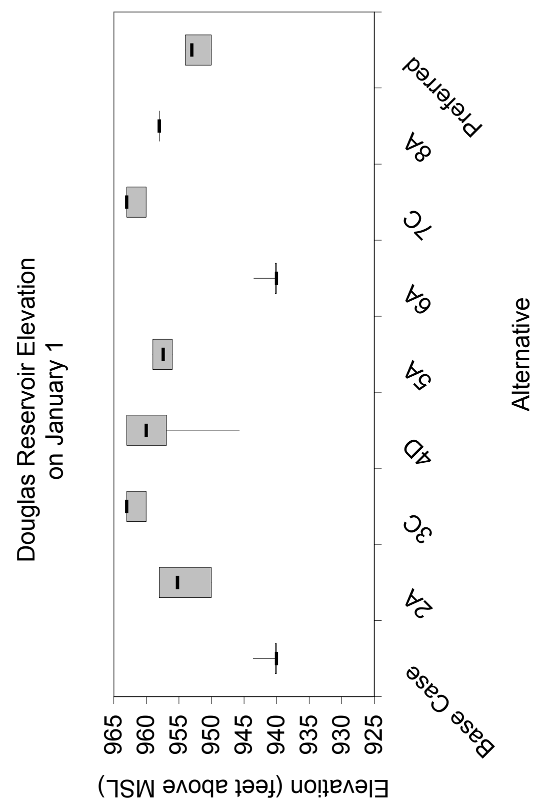

Tims Ford Reservoir Elevation
on January 1
Elevation (feet above MSL)
885
880
875
870
865
860
855
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

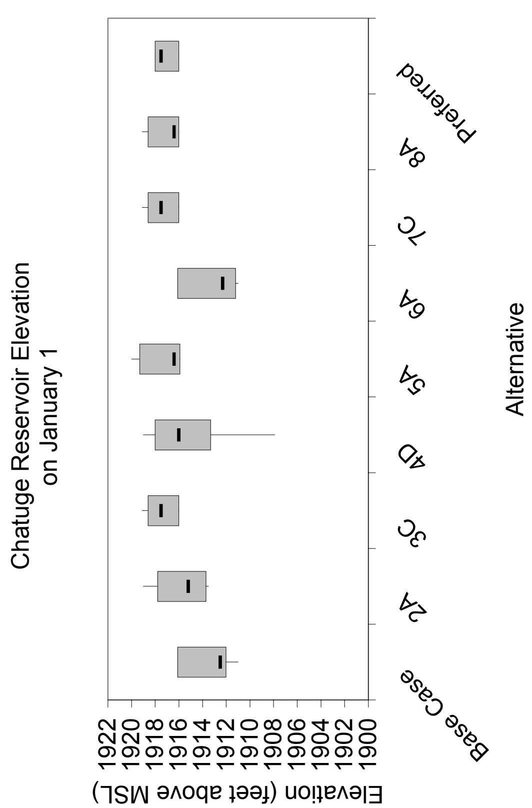

Blue Ridge Reservoir Elevation
on January 1
Elevation (feet above MSL)
1690
1680
1670
1660
1650
1640
1630
1620
1610
1600
1590
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

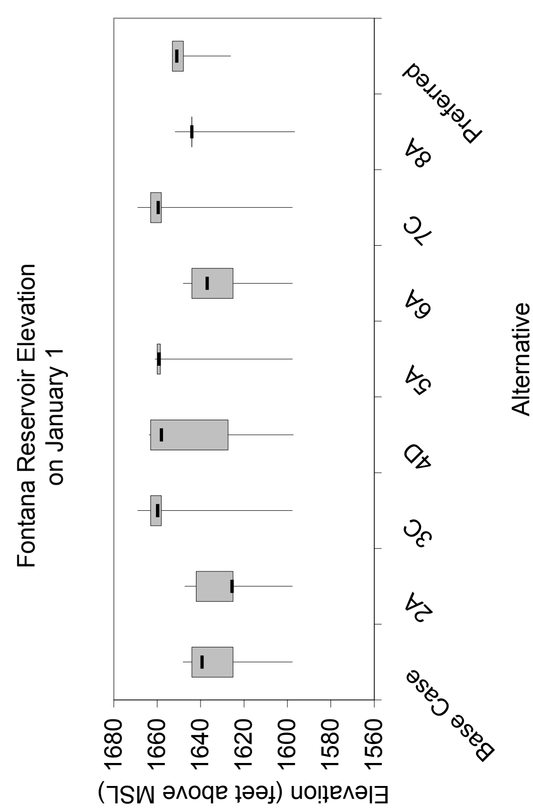

Hiwassee Reservoir Elevation
on January 1
Elevation (feet above MSL)
1500
1490
1480
1470
1460
1450
1440
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

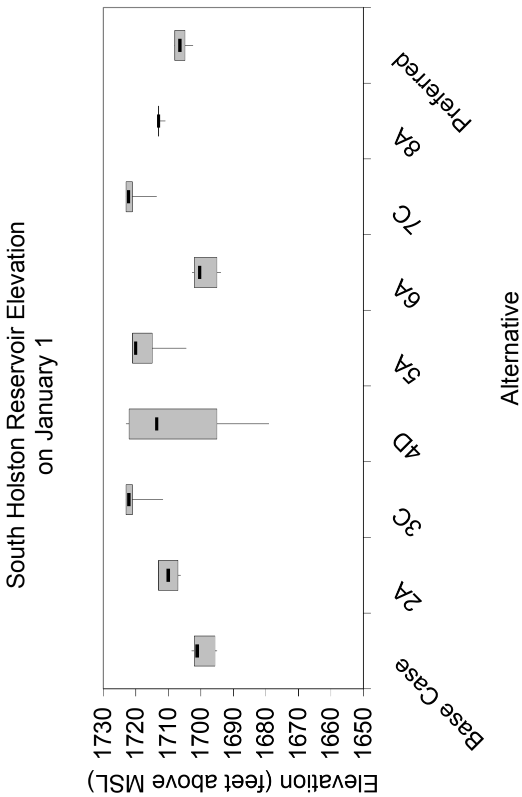

Nottely Reservoir Elevation
on January 1
Elevation (feet above MSL)
1770
1765
1760
1755
1750
1745
1740
1735
1730
1725
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

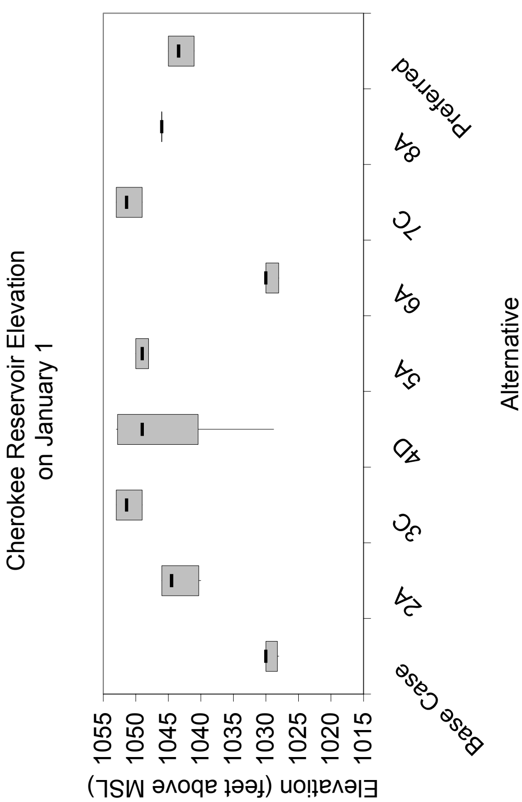

Norris Reservoir Elevation
on January 1
Elevation (feet above MSL)
1020
1010
1000
990
980
970
960
950
940
930
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

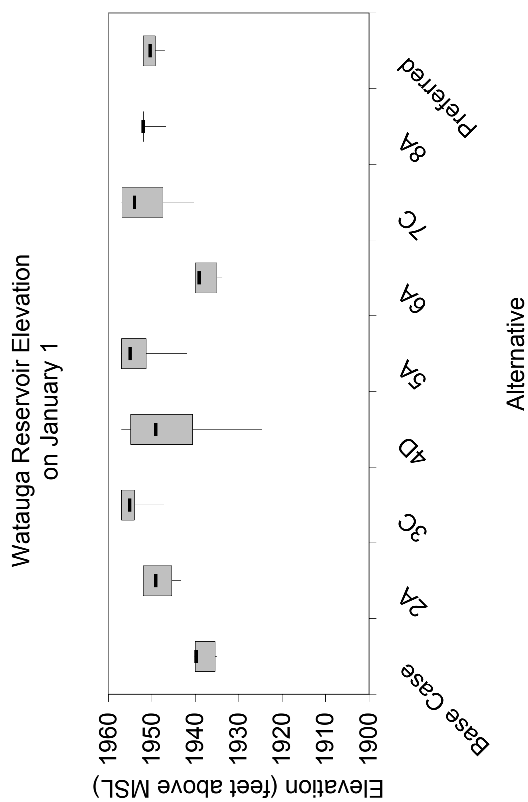

Douglas Reservoir Elevation
on January 1
Elevation (feet above MSL)
965
960
955
950
945
940
935
930
925
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

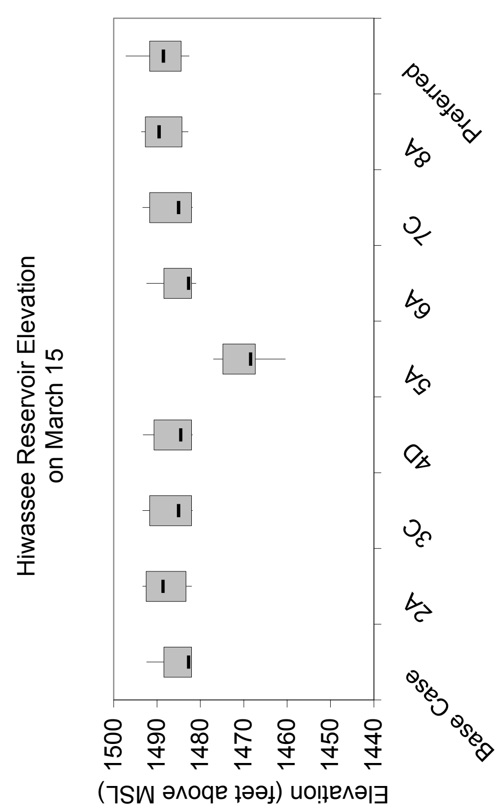

Chatuge Reservoir Elevation
on January 1
Elevation (feet above MSL)
1922
1920
1918
1916
1914
1912
1910
1908
1906
1904
1902
1900
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

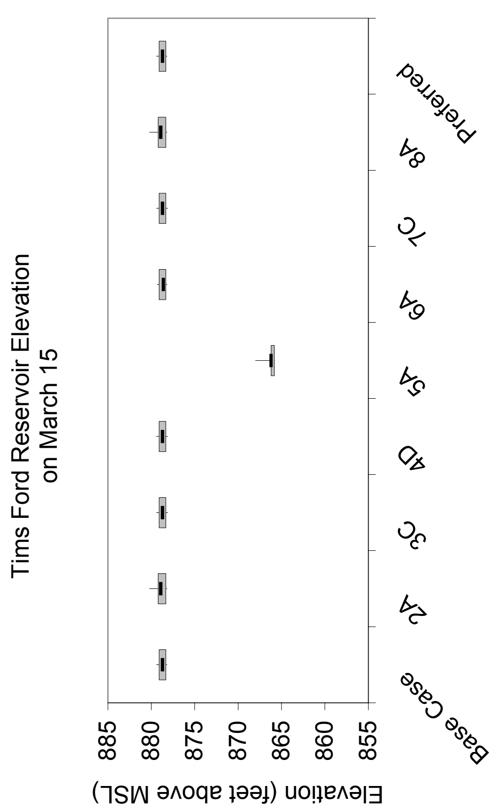

Fontana Reservoir Elevation
on January 1
Elevation (feet above MSL)
1680
1660
1640
1620
1600
1580
1560
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

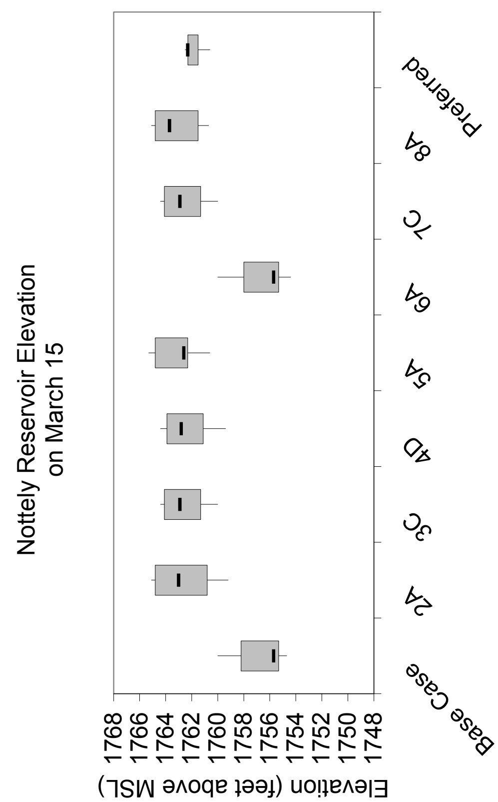

South Holston Reservoir Elevation
on January 1
Elevation (feet above MSL)
1730
1720
1710
1700
1690
1680
1670
1660
1650
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

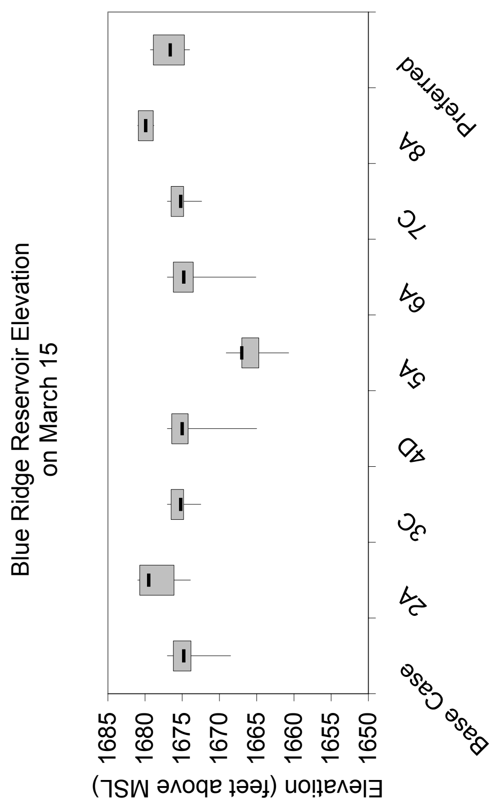

Cherokee Reservoir Elevation
on January 1
Elevation (feet above MSL)
1055
1050
1045
1040
1035
1030
1025
1020
1015
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

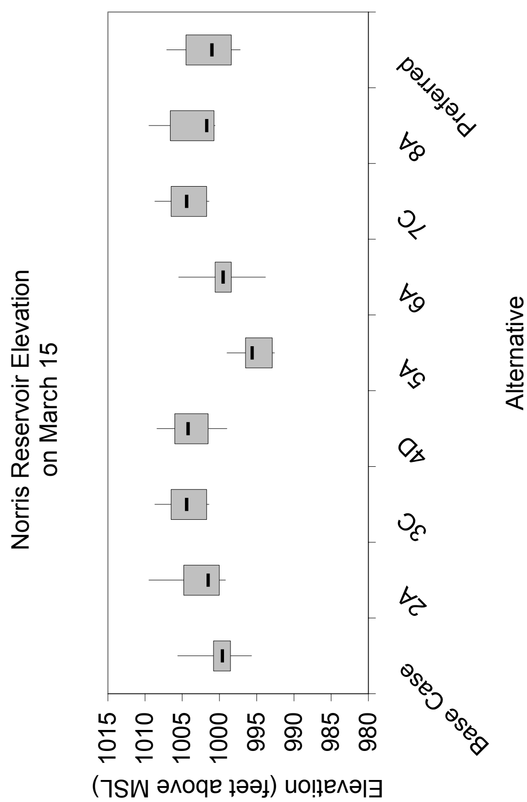

Watauga Reservoir Elevation
on January 1
Elevation (feet above MSL)
1960
1950
1940
1930
1920
1910
1900
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

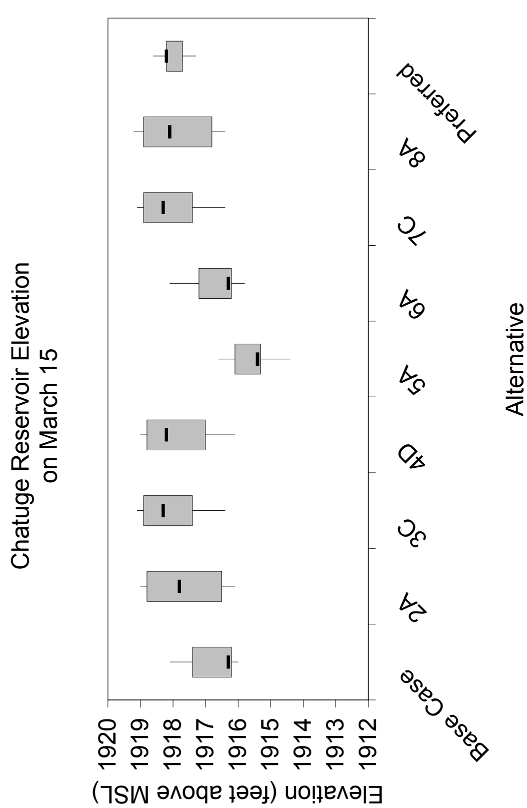

Hiwassee Reservoir Elevation
on March 15
Elevation (feet above MSL)
1500
1490
1480
1470
1460
1450
1440
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

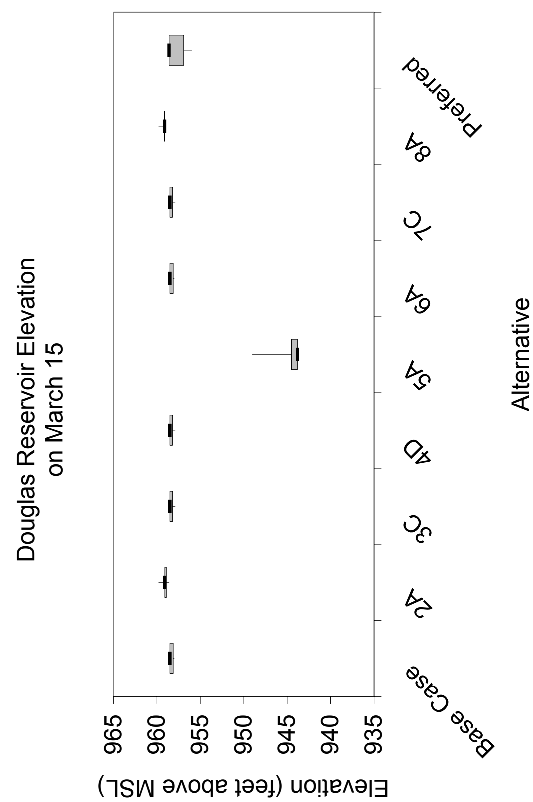

Tims Ford Reservoir Elevation
on March 15
Elevation (feet above MSL)
885
880
875
870
865
860
855
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

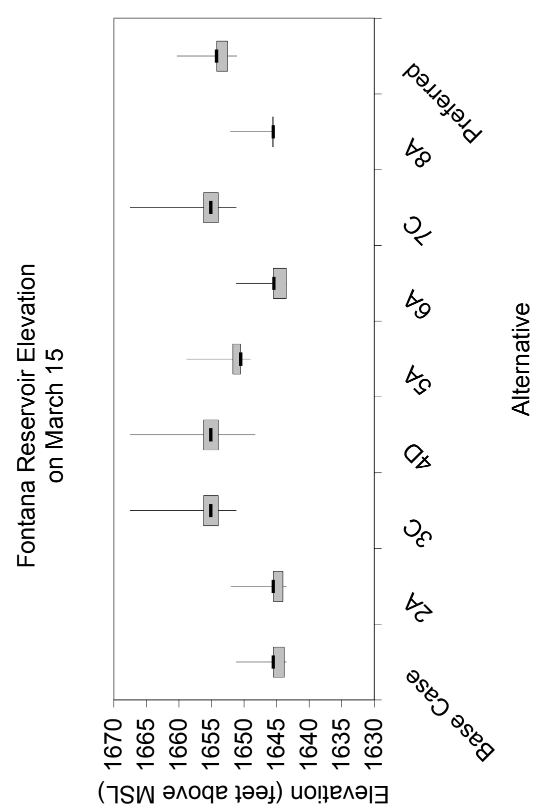

Nottely Reservoir Elevation
on March 15
Elevation (feet above MSL)
1768
1766
1764
1762
1760
1758
1756
1754
1752
1750
1748
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

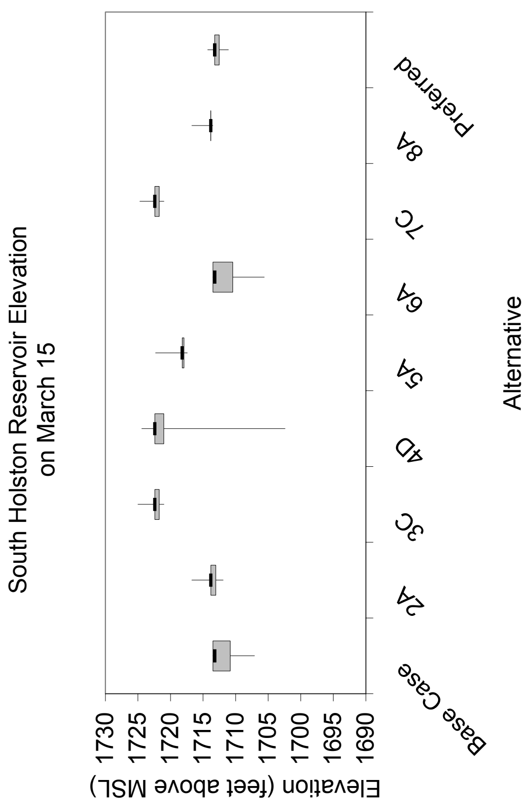

Blue Ridge Reservoir Elevation
on March 15
Elevation (feet above MSL)
1685
1680
1675
1670
1665
1660
1655
1650
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

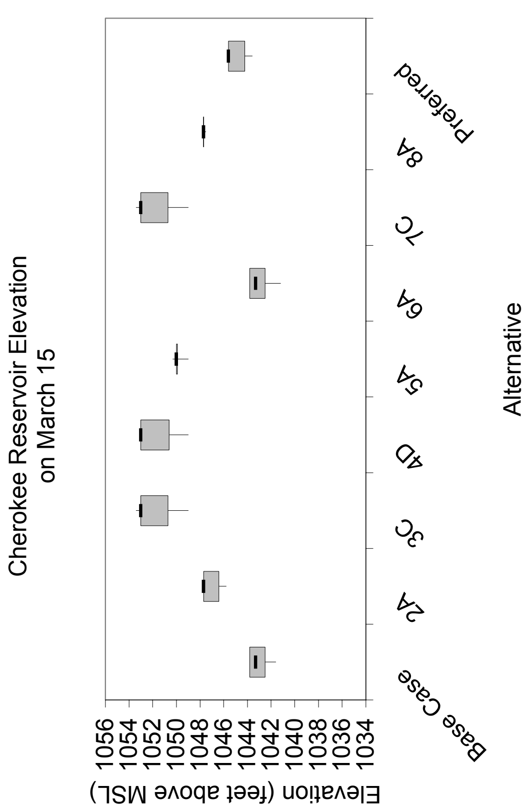

Norris Reservoir Elevation
on March 15
Elevation (feet above MSL)
1015
1010
1005
1000
995
990
985
980
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

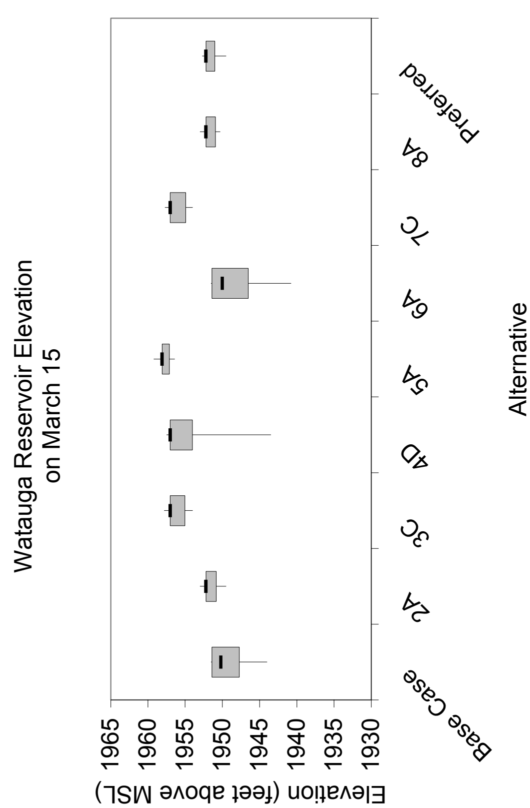

Chatuge Reservoir Elevation
on March 15
Elevation (feet above MSL)
1920
1919
1918
1917
1916
1915
1914
1913
1912
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

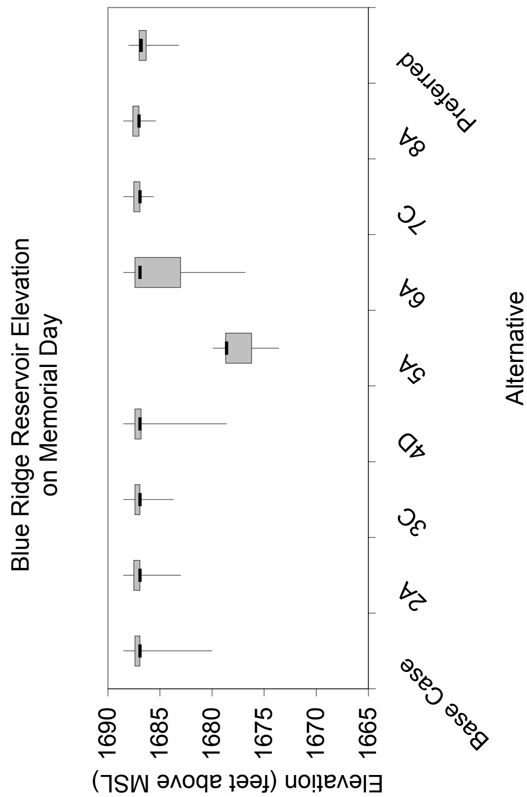

Douglas Reservoir Elevation
on March 15
Elevation (feet above MSL)
965
960
955
950
945
940
935
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

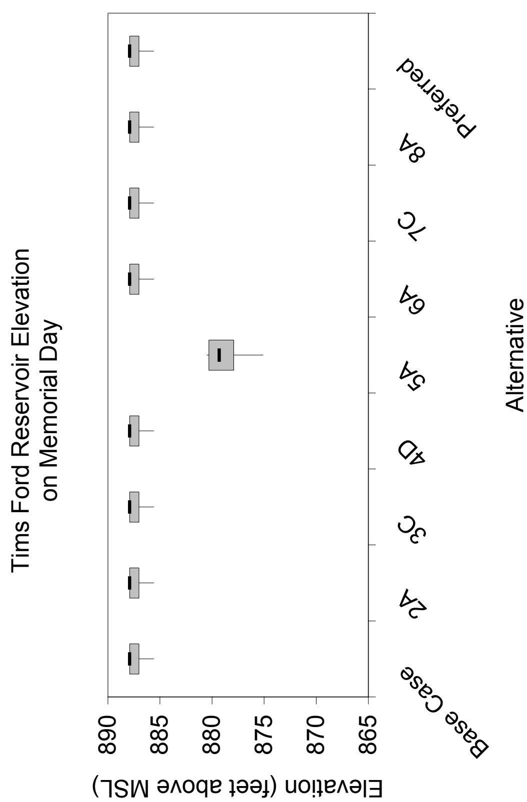

Fontana Reservoir Elevation
on March 15
Elevation (feet above MSL)
1670
1665
1660
1655
1650
1645
1640
1635
1630
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

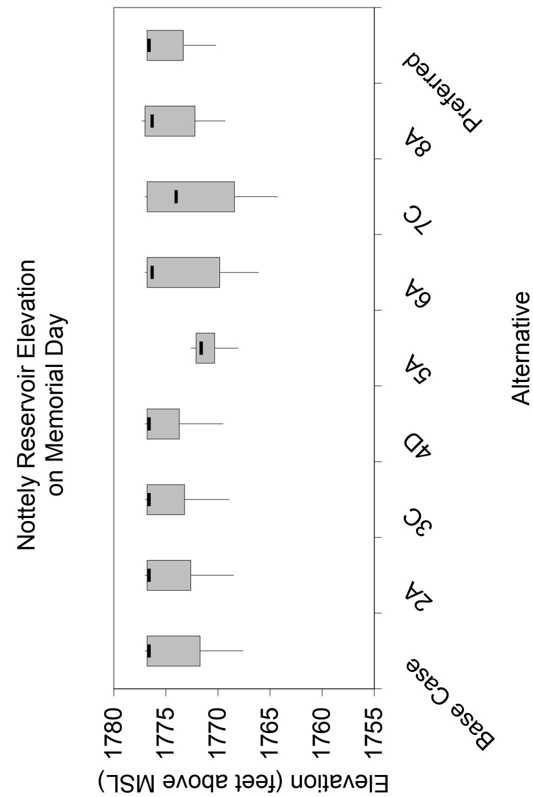

South Holston Reservoir Elevation
on March 15
Elevation (feet above MSL)
1730
1725
1720
1715
1710
1705
1700
1695
1690
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

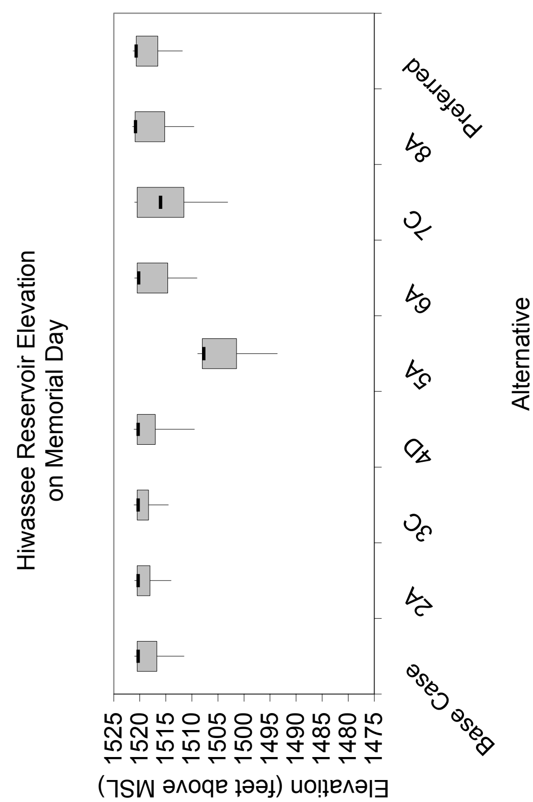

Cherokee Reservoir Elevation
on March 15
Elevation (feet above MSL)
1056
1054
1052
1050
1048
1046
1044
1042
1040
1038
1036
1034
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

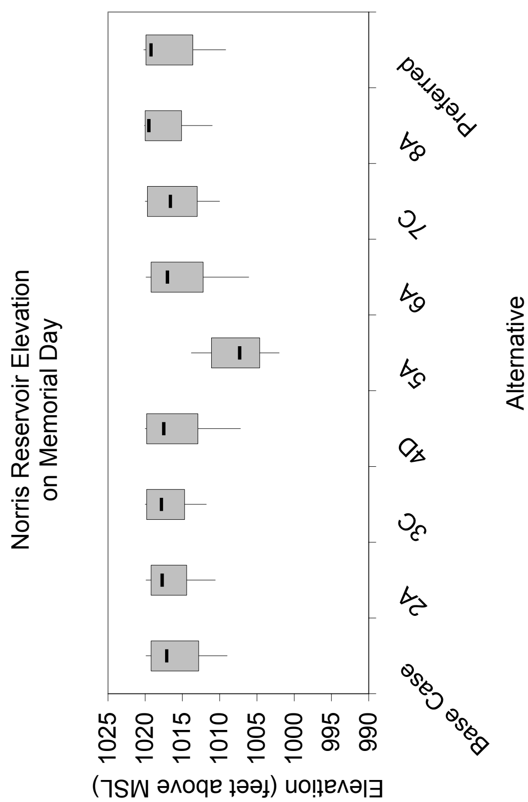

Watauga Reservoir Elevation
on March 15
Elevation (feet above MSL)
1965
1960
1955
1950
1945
1940
1935
1930
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

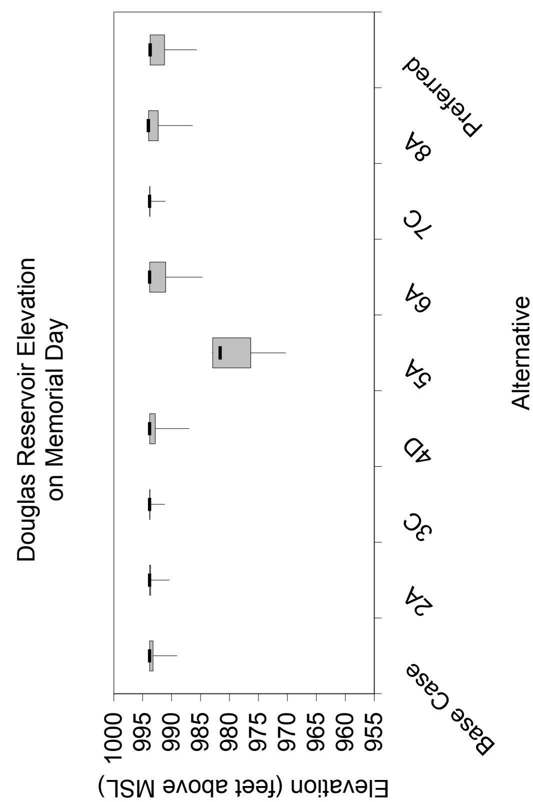

Blue Ridge Reservoir Elevation
on Memorial Day
Elevation (feet above MSL)
1690
1685
1680
1675
1670
1665
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

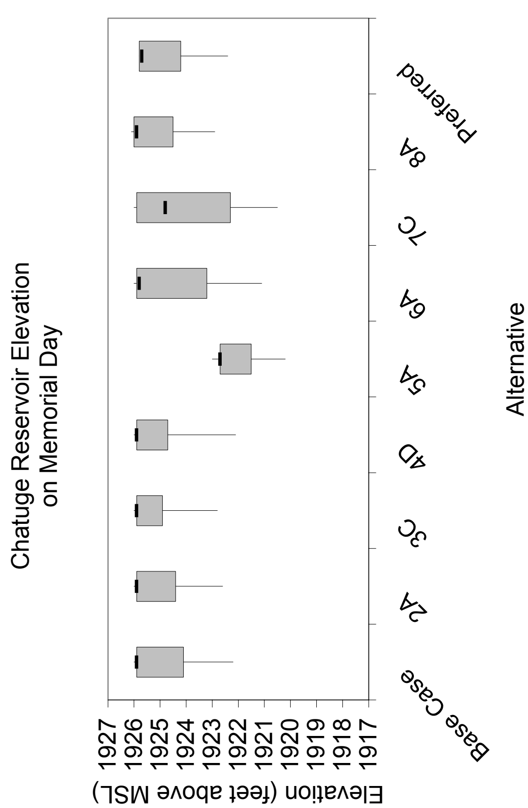

Tims Ford Reservoir Elevation
on Memorial Day
Elevation (feet above MSL)
890
885
880
875
870
865
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

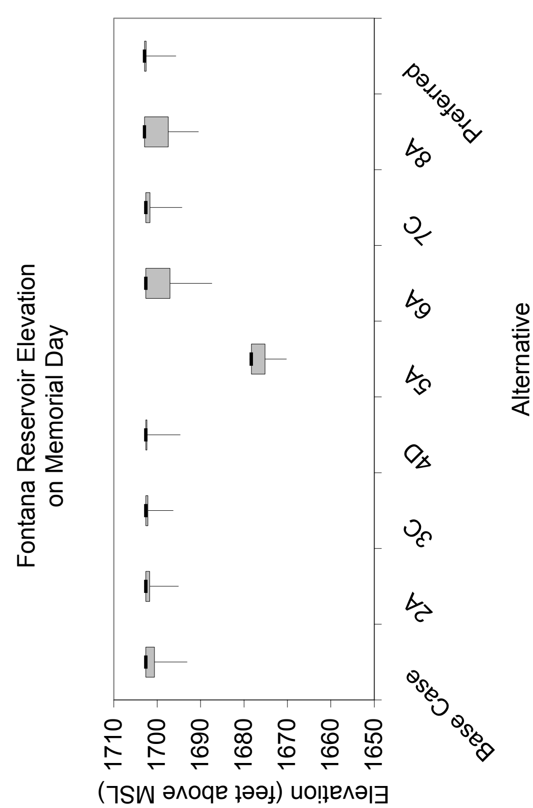

Nottely Reservoir Elevation
on Memorial Day
Elevation (feet above MSL)
1780
1775
1770
1765
1760
1755
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

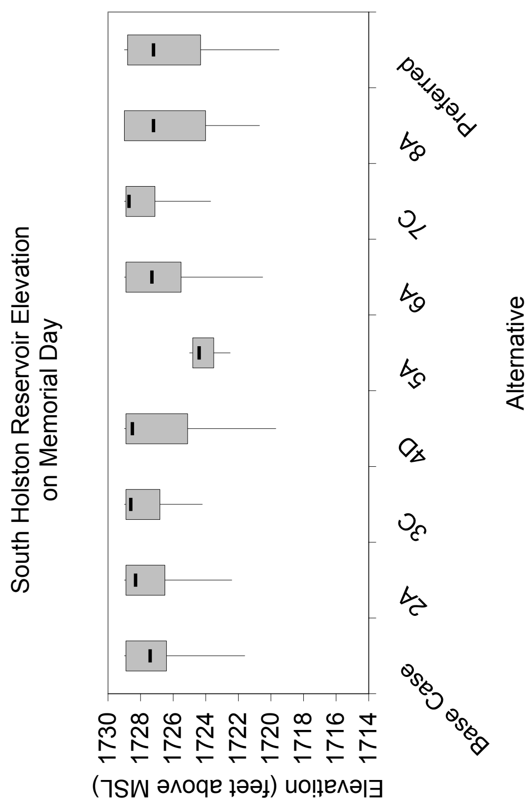

Hiwassee Reservoir Elevation
on Memorial Day
Elevation (feet above MSL)
1525
1520
1515
1510
1505
1500
1495
1490
1485
1480
1475
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

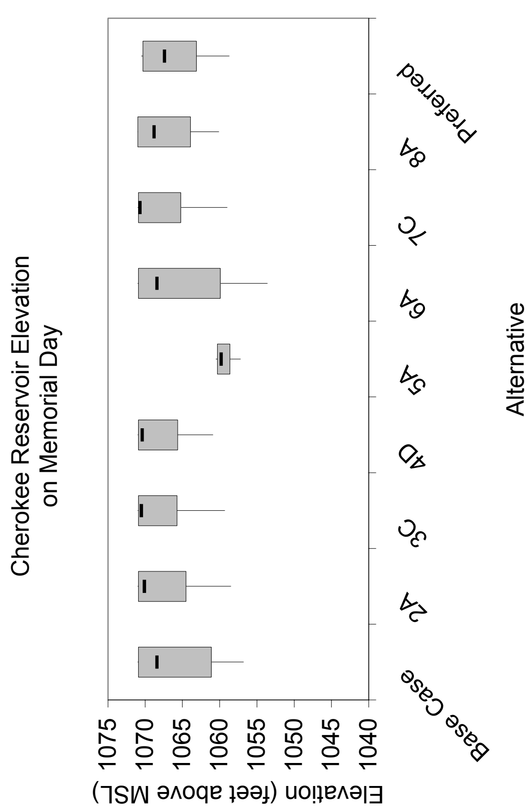

Norris Reservoir Elevation
on Memorial Day
Elevation (feet above MSL)
1025
1020
1015
1010
1005
1000
995
990
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

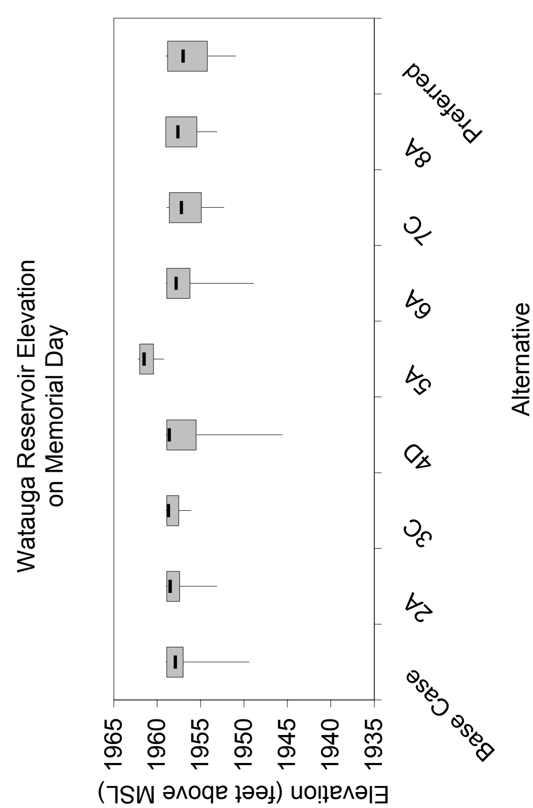

Douglas Reservoir Elevation
on Memorial Day
Elevation (feet above MSL)
1000
995
990
985
980
975
970
965
960
955
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

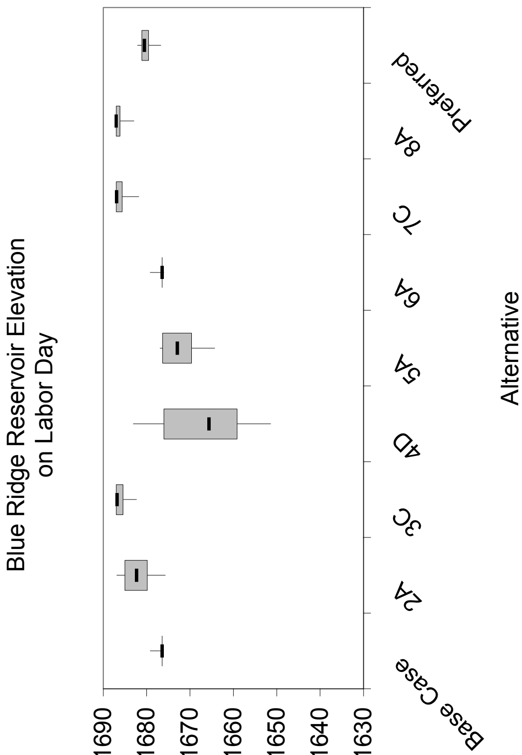

Chatuge Reservoir Elevation
on Memorial Day
Elevation (feet above MSL)
1927
1926
1925
1924
1923
1922
1921
1920
1919
1918
1917
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

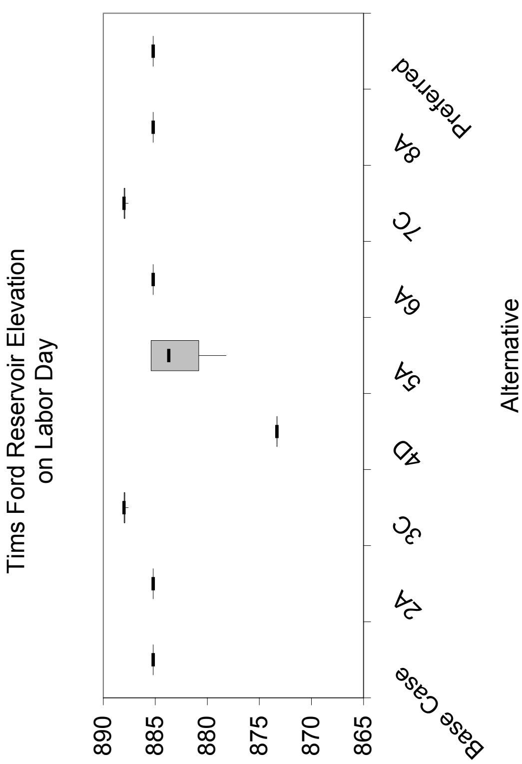

Fontana Reservoir Elevation
on Memorial Day
Elevation (feet above MSL)
1710
1700
1690
1680
1670
1660
1650
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

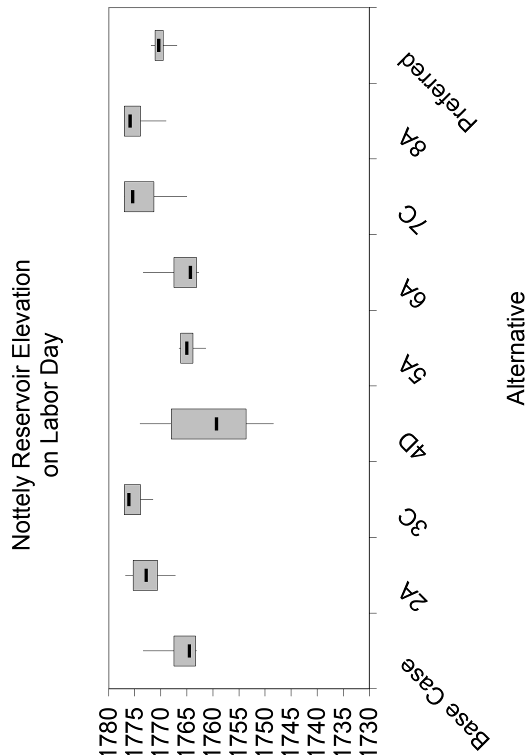

South Holston Reservoir Elevation on Memorial Day
Elevation (feet above MSL)
1730
1728
1726
1724
1722
1720
1718
1716
1714
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

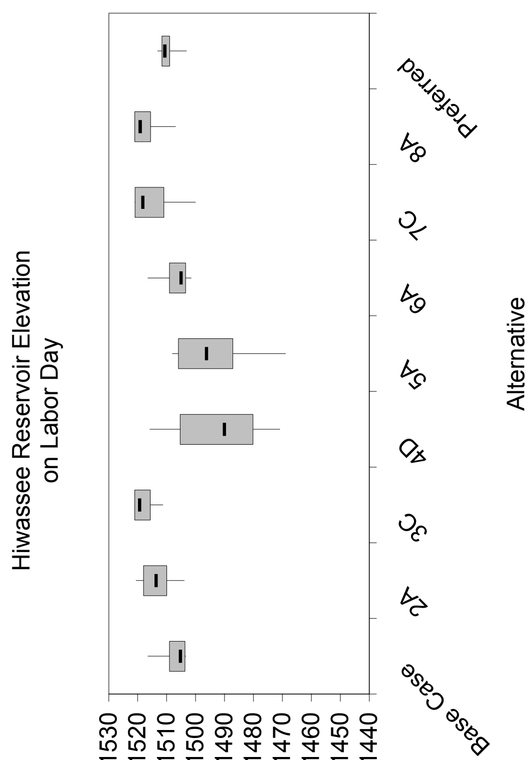

Cherokee Reservoir Elevation on Memorial Day
Elevation (feet above MSL)
1075
1070
1065
1060
1055
1050
1045
1040
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

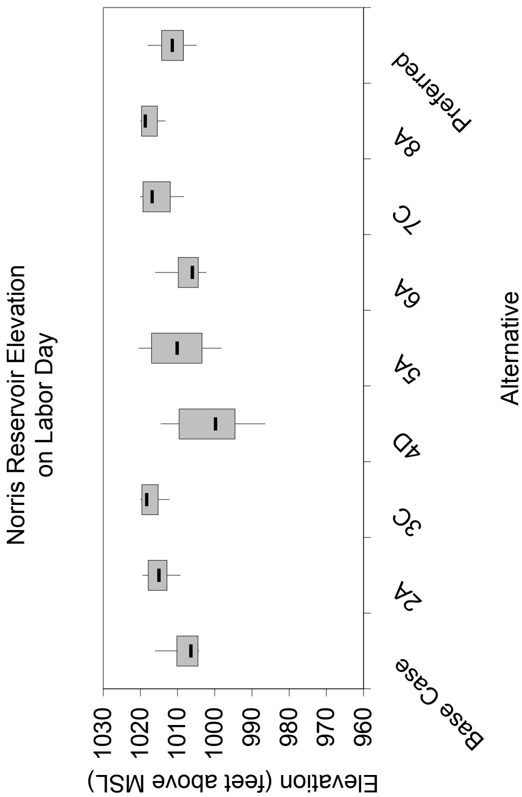

Watauga Reservoir Elevation on Memorial Day
Elevation (feet above MSL)
1965
1960
1955
1950
1945
1940
1935
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

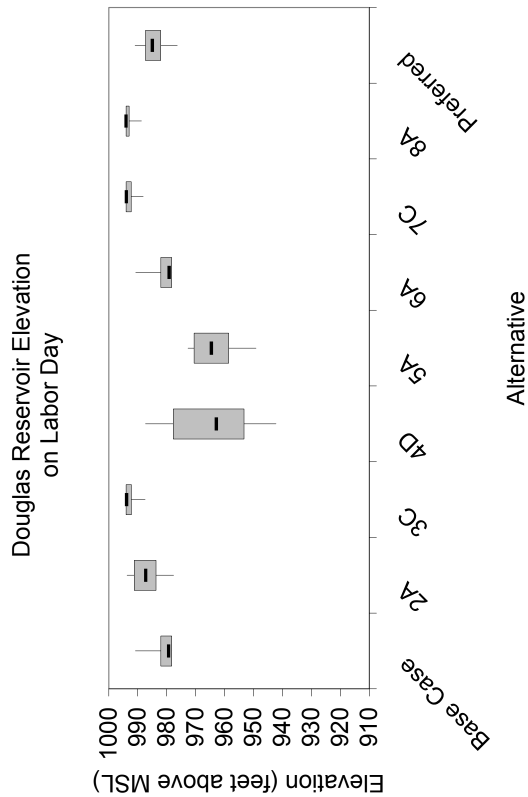

Blue Ridge Reservoir Elevation
on Labor Day
Elevation (feet above MSL)
1690
1680
1670
1660
1650
1640
1630
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

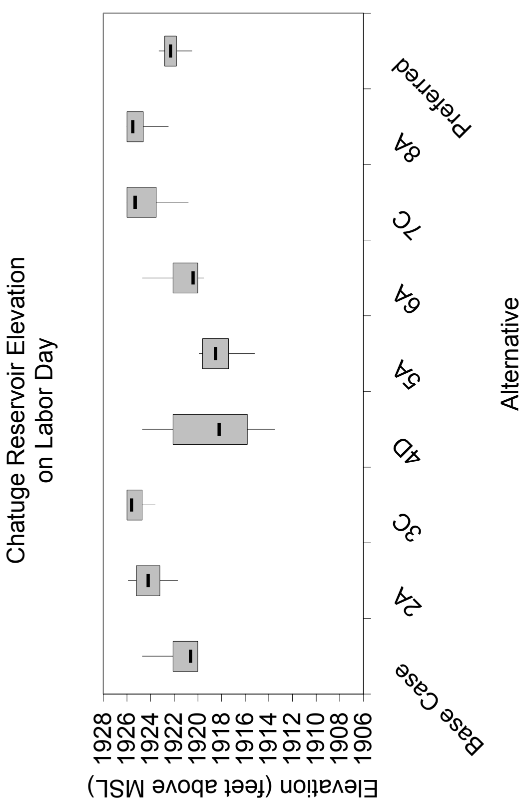

Tims Ford Reservoir Elevation
on Labor Day
Elevation (feet above MSL)
890
885
880
875
870
865
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

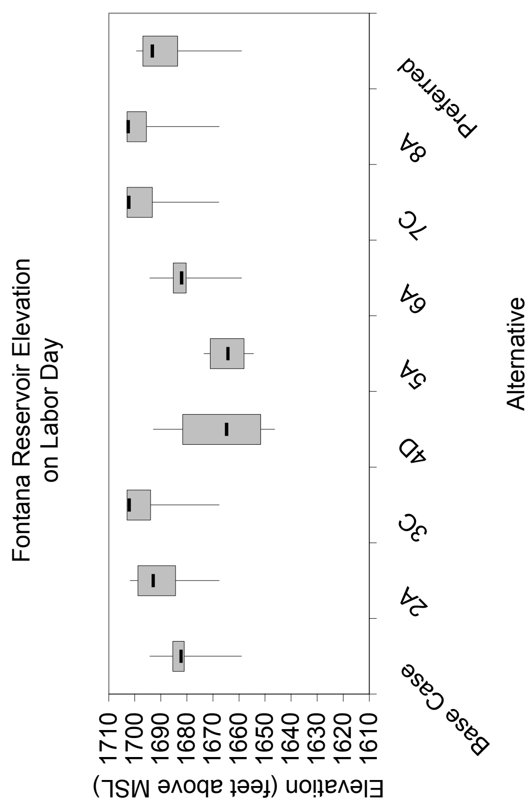

Nottely Reservoir Elevation
on Labor Day
Elevation (feet above MSL)
1780
1775
1770
1765
1760
1755
1750
1745
1740
1735
1730
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

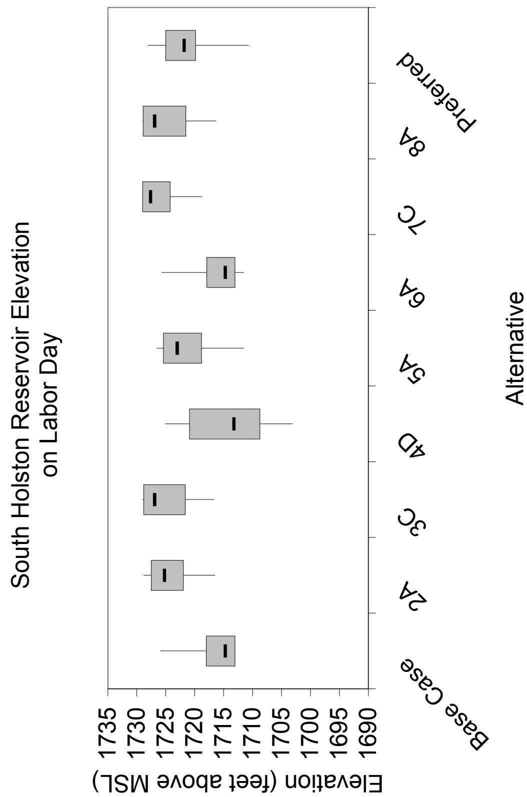

Hiwassee Reservoir Elevation
on Labor Day
Elevation (feet above MSL)
1530
1520
1510
1500
1490
1480
1470
1460
1450
1440
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

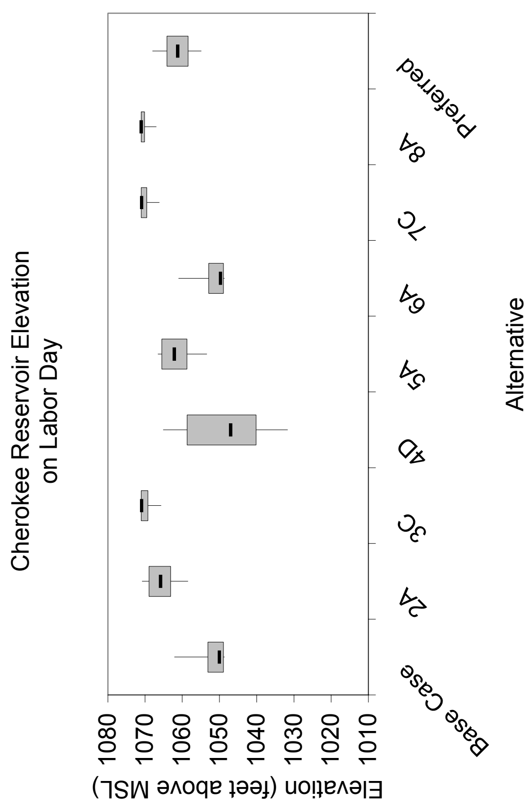

Norris Reservoir Elevation
on Labor Day
Elevation (feet above MSL)
1030
1020
1010
1000
990
980
970
960
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

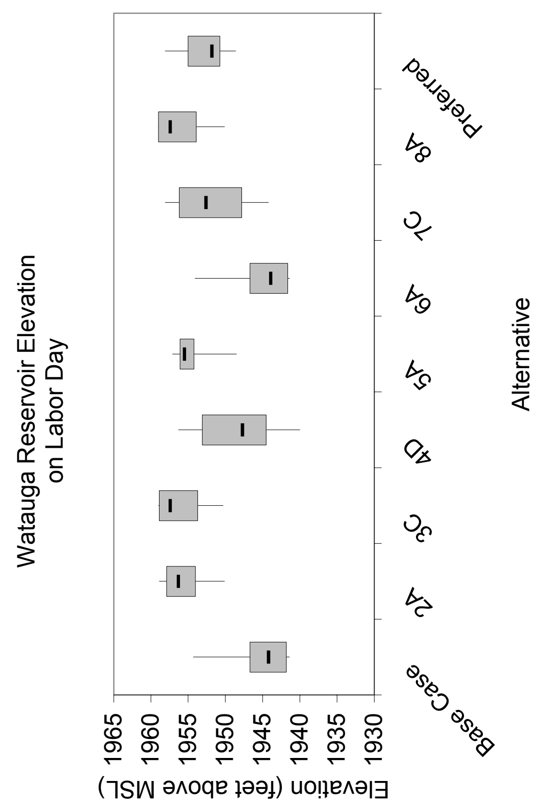

Douglas Reservoir Elevation
on Labor Day
Elevation (feet above MSL)
1000
990
980
970
960
950
940
930
920
910
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

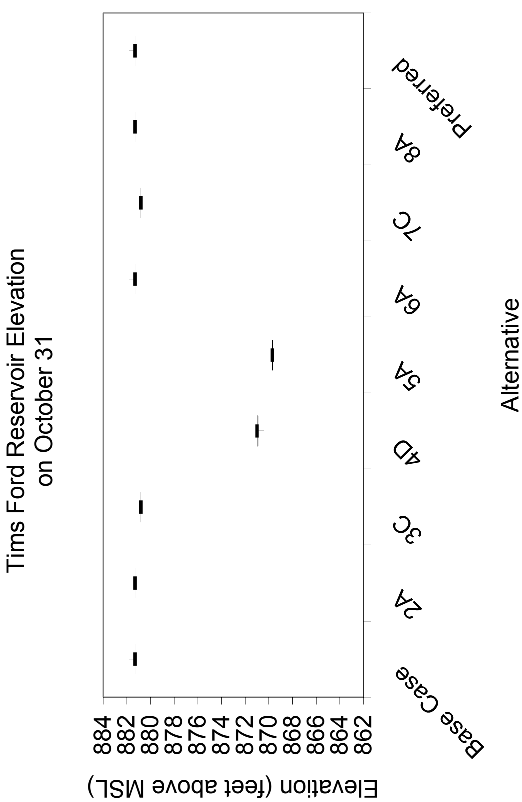

Chatuge Reservoir Elevation
on Labor Day
Elevation (feet above MSL)
1928
1926
1924
1922
1920
1918
1916
1914
1912
1910
1908
1906
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

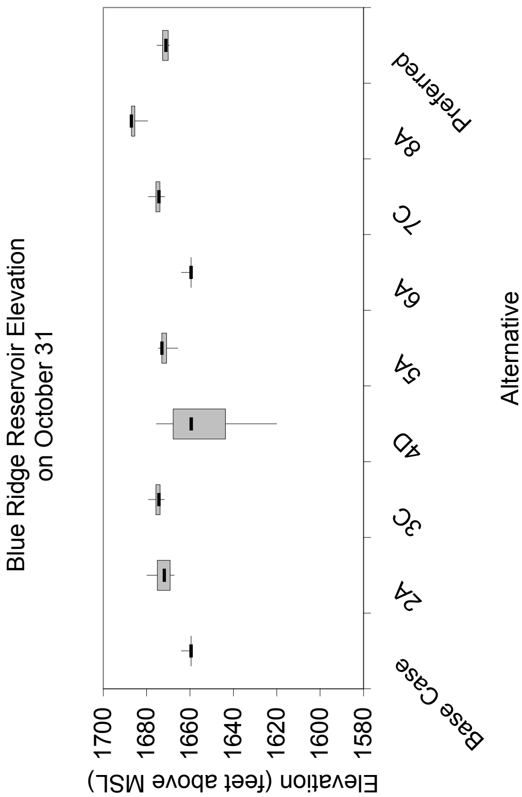

Fontana Reservoir Elevation
on Labor Day
Elevation (feet above MSL)
1710
1700
1690
1680
1670
1660
1650
1640
1630
1620
1610
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

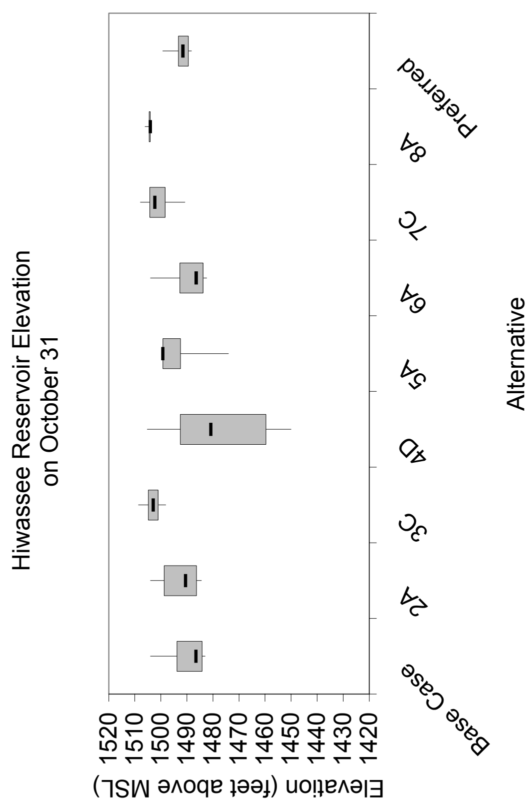

South Holston Reservoir Elevation
on Labor Day
Elevation (feet above MSL)
1735
1730
1725
1720
1715
1710
1705
1700
1695
1690
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

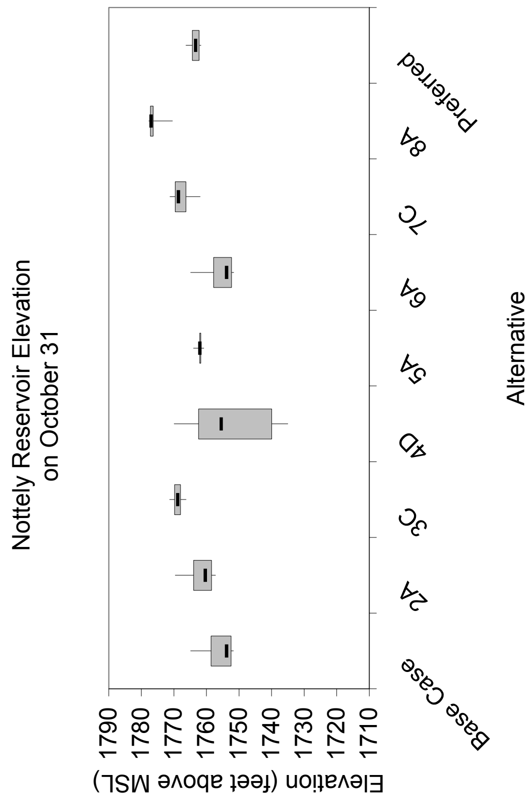

Cherokee Reservoir Elevation
on Labor Day
Elevation (feet above MSL)
1080
1070
1060
1050
1040
1030
1020
1010
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

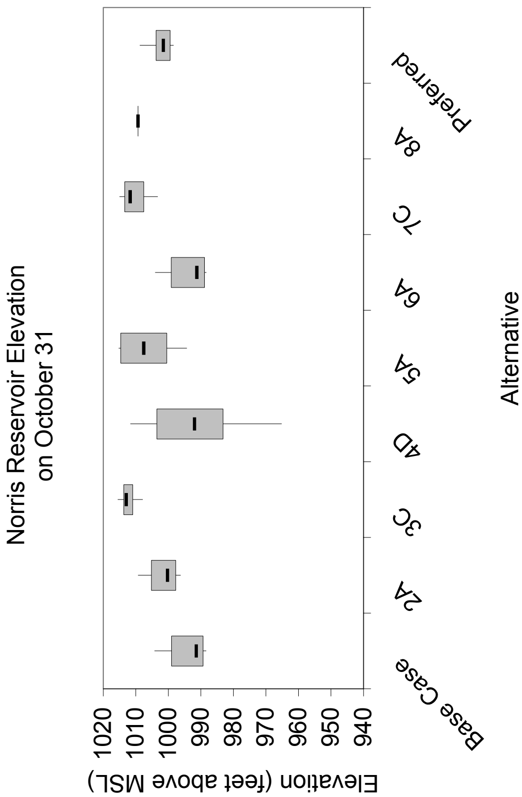

Watauga Reservoir Elevation
on Labor Day
Elevation (feet above MSL)
1965
1960
1955
1950
1945
1940
1935
1930
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

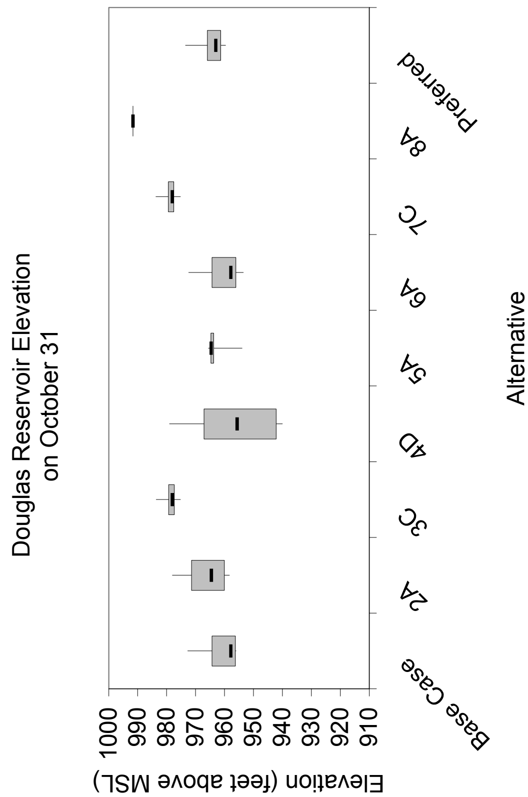

Tims Ford Reservoir Elevation
on October 31
Elevation (feet above MSL)
884
882
880
878
876
874
872
870
868
866
864
862
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

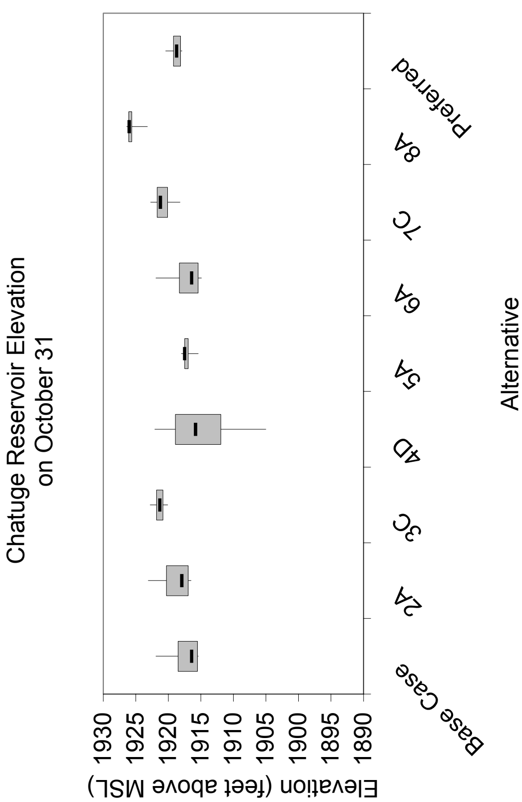

Blue Ridge Reservoir Elevation
on October 31
Elevation (feet above MSL)
1700
1680
1660
1640
1620
1600
1580
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

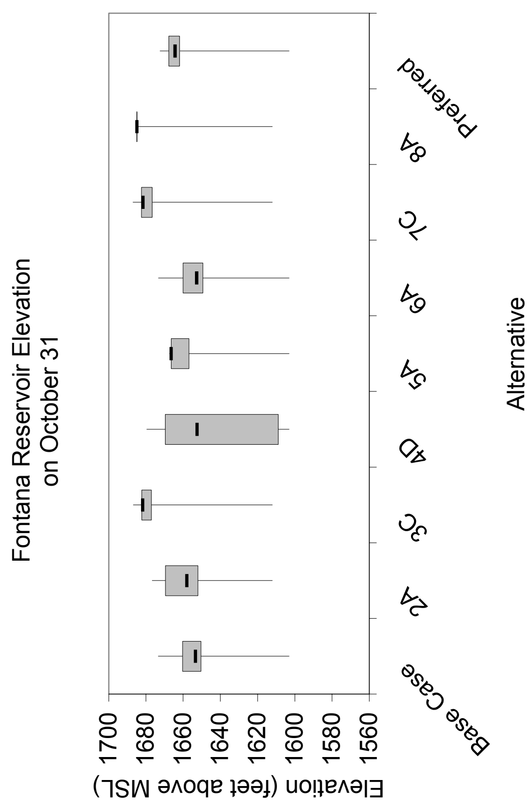

Hiwassee Reservoir Elevation
on October 31
Elevation (feet above MSL)
1520
1510
1500
1490
1480
1470
1460
1450
1440
1430
1420
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

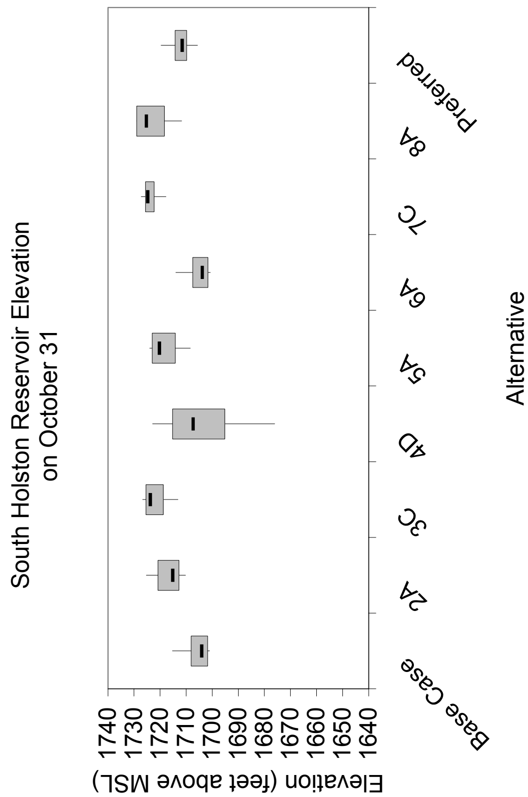

Nottely Reservoir Elevation
on October 31
Elevation (feet above MSL)
1790
1780
1770
1760
1750
1740
1730
1720
1710
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

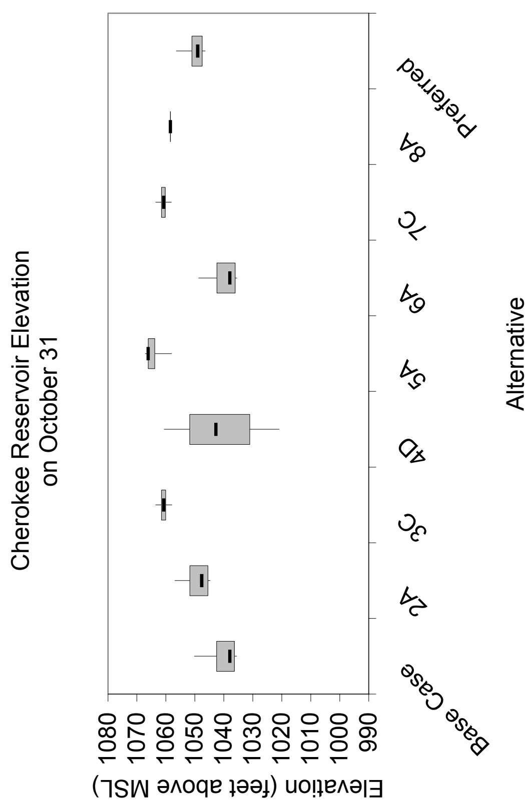

Norris Reservoir Elevation
on October 31
Elevation (feet above MSL)
1020
1010
1000
990
980
970
960
950
940
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

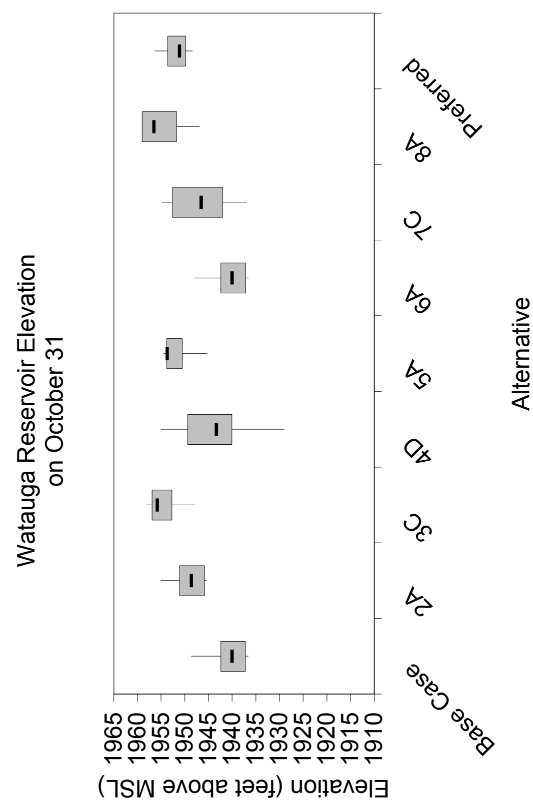

Douglas Reservoir Elevation
on October 31
Elevation (feet above MSL)
1000
990
980
970
960
950
940
930
920
910
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

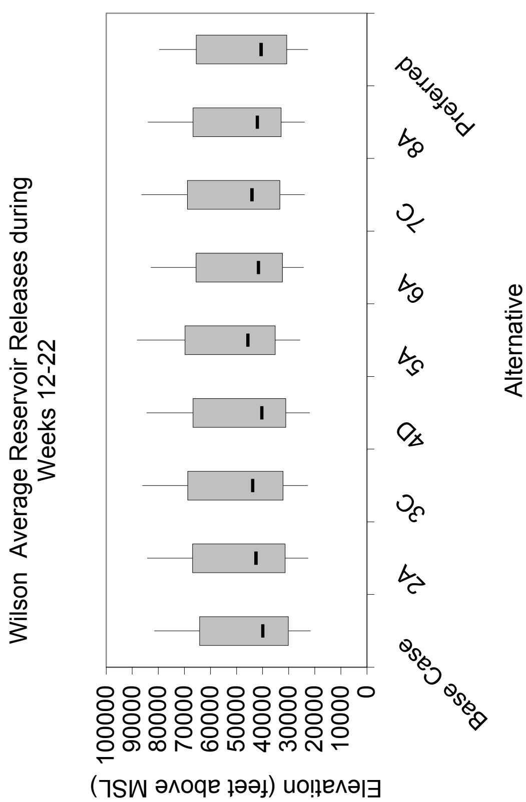

Chatuge Reservoir Elevation
on October 31
Elevation (feet above MSL)
1930
1925
1920
1915
1910
1905
1900
1895
1890
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

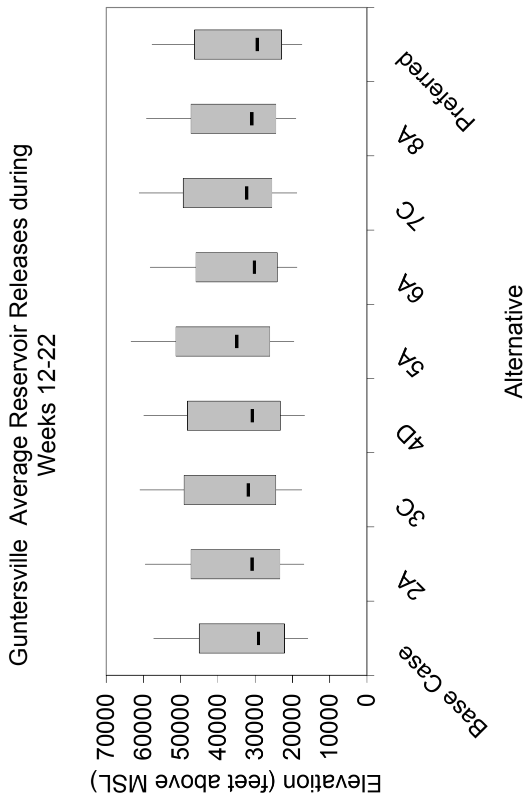

Fontana Reservoir Elevation
on October 31
Elevation (feet above MSL)
1700
1680
1660
1640
1620
1600
1580
1560
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

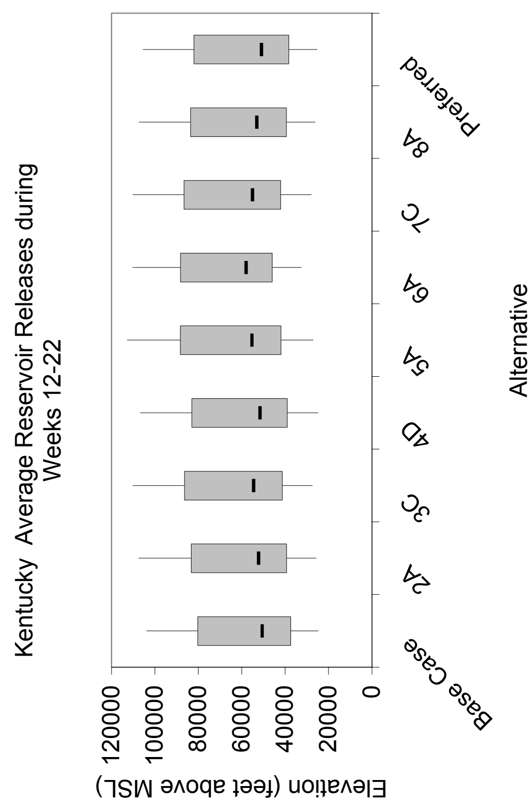

South Holston Reservoir Elevation
on October 31
Elevation (feet above MSL)
1740
1730
1720
1710
1700
1690
1680
1670
1660
1650
1640
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

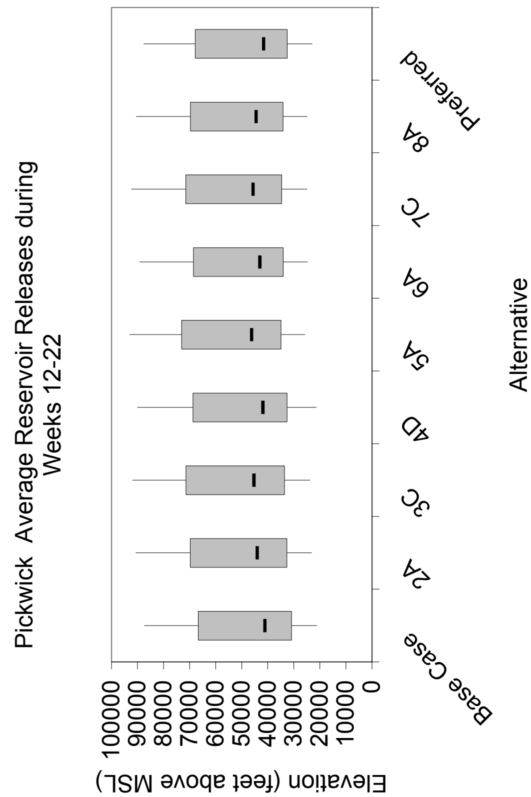

Cherokee Reservoir Elevation
on October 31
Elevation (feet above MSL)
1080
1070
1060
1050
1040
1030
1020
1010
1000
990
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

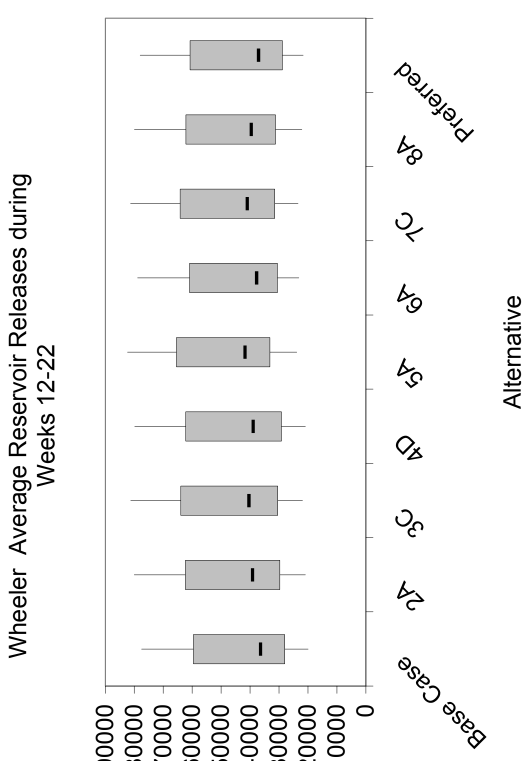

Watauga Reservoir Elevation
on October 31
Elevation (feet above MSL)
1965
1960
1955
1950
1945
1940
1935
1930
1925
1920
1915
1910
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

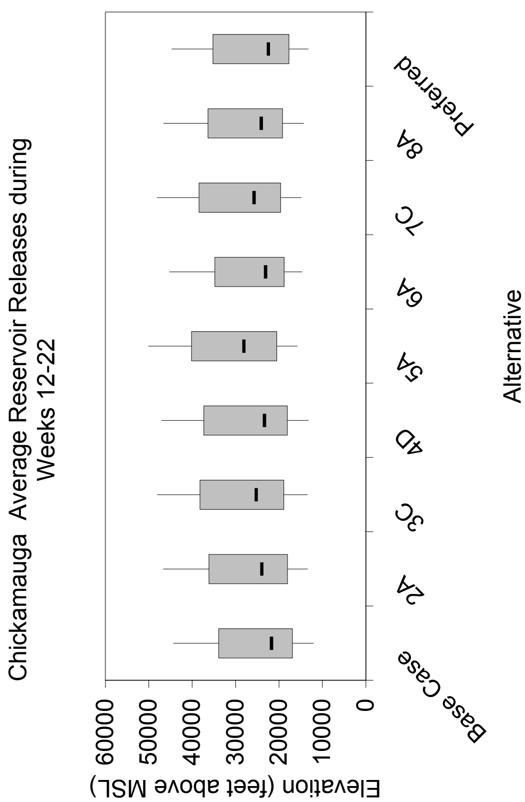

Wilson Average Reservoir Releases during Weeks 12-22
Elevation (feet above MSL)
100000
90000
80000
70000
60000
50000
40000
30000
20000
10000
0
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

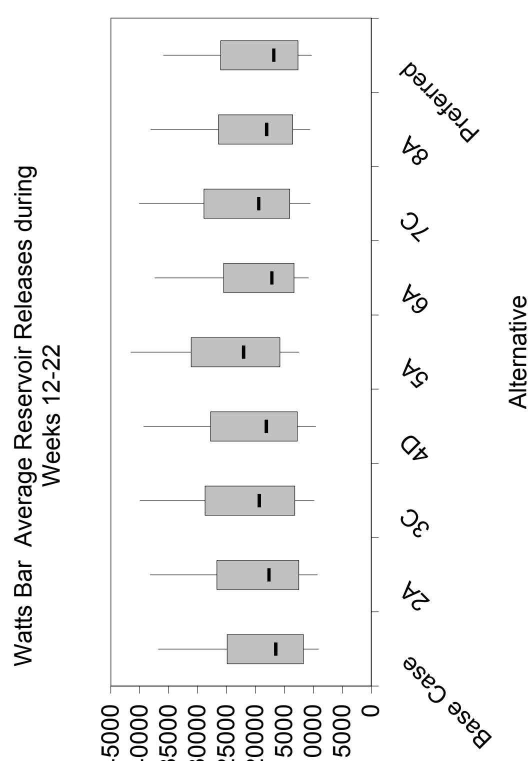

Guntersville Average Reservoir Releases during Weeks 12-22
Elevation (feet above MSL)
70000
60000
50000
40000
30000
20000
10000
0
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

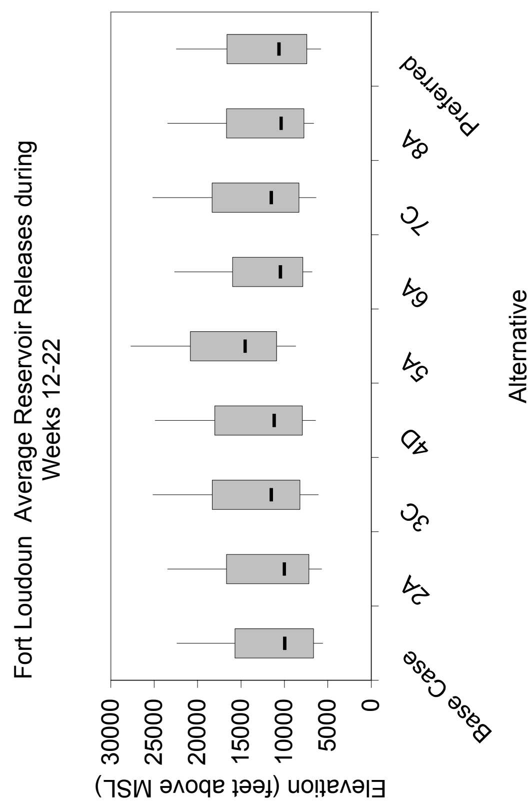

Kentucky Average Reservoir Releases during Weeks 12-22
Elevation (feet above MSL)
120000
100000
80000
60000
40000
20000
0
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

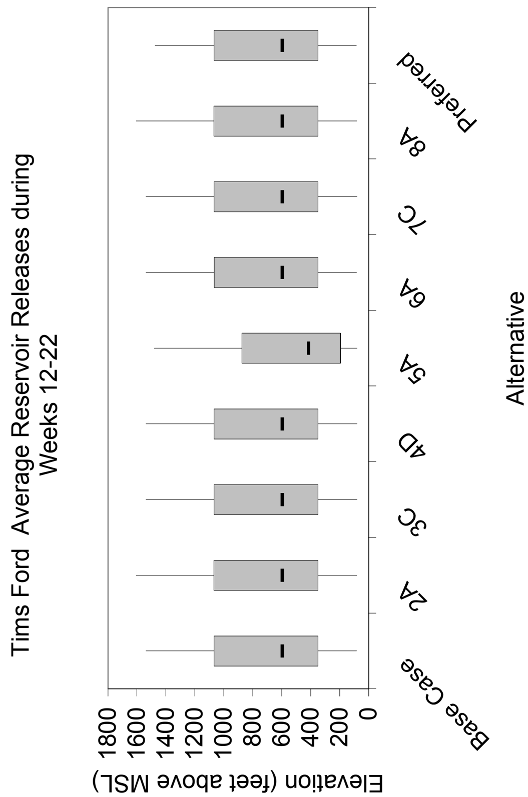

Pickwick Average Reservoir Releases during Weeks 12-22
Elevation (feet above MSL)
100000
90000
80000
70000
60000
50000
40000
30000
20000
10000
0
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

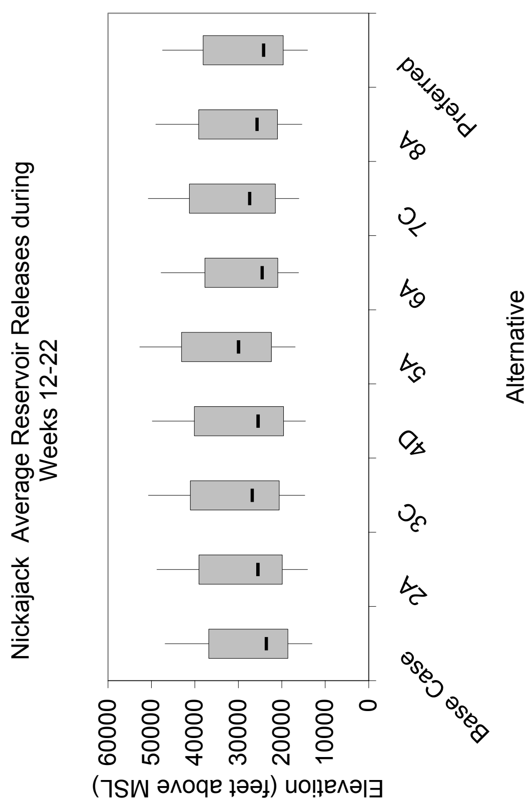

Wheeler Average Reservoir Releases during
Weeks 12-22
Elevation (feet above MSL)
90000
80000
70000
60000
50000
40000
30000
20000
10000
0
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

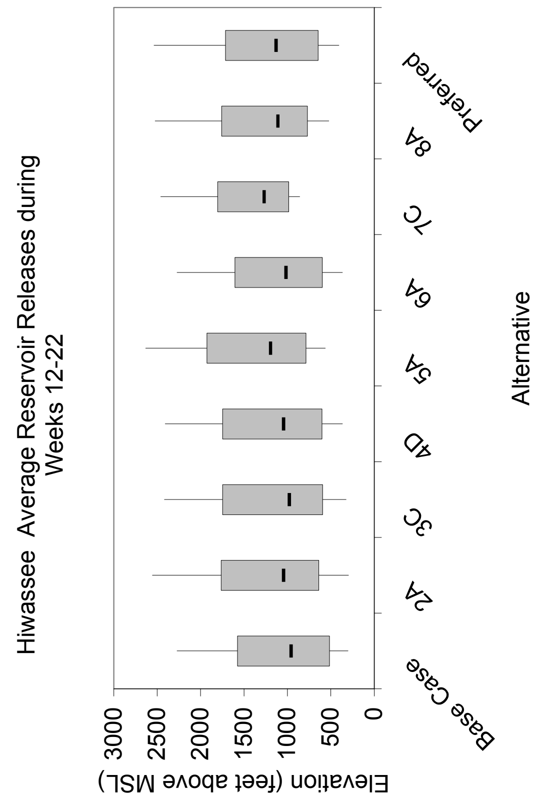

Chickamauga Average Reservoir Releases during
Weeks 12-22
Elevation (feet above MSL)
60000
50000
40000
30000
20000
10000
0
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

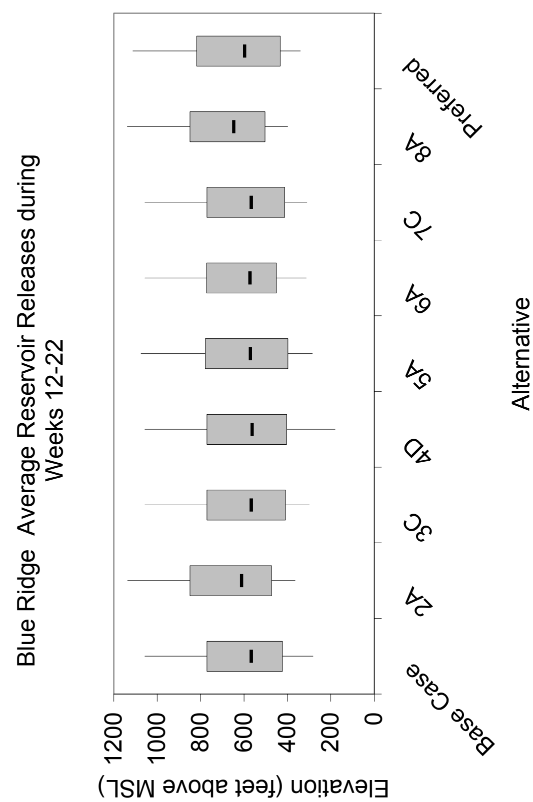

Watts Bar Average Reservoir Releases during
Weeks 12-22
Elevation (feet above MSL)
45000
40000
35000
30000
25000
20000
15000
10000
5000
0
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

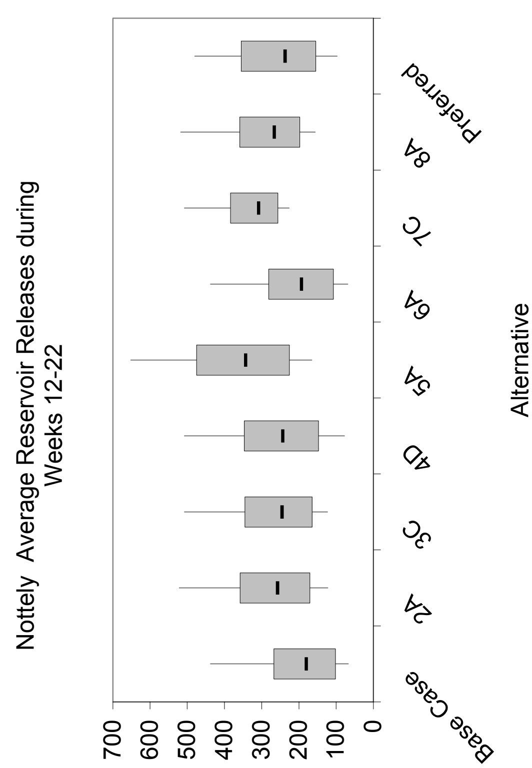

Fort Loudoun Average Reservoir Releases during
Weeks 12-22
Elevation (feet above MSL)
30000
25000
20000
15000
10000
5000
0
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

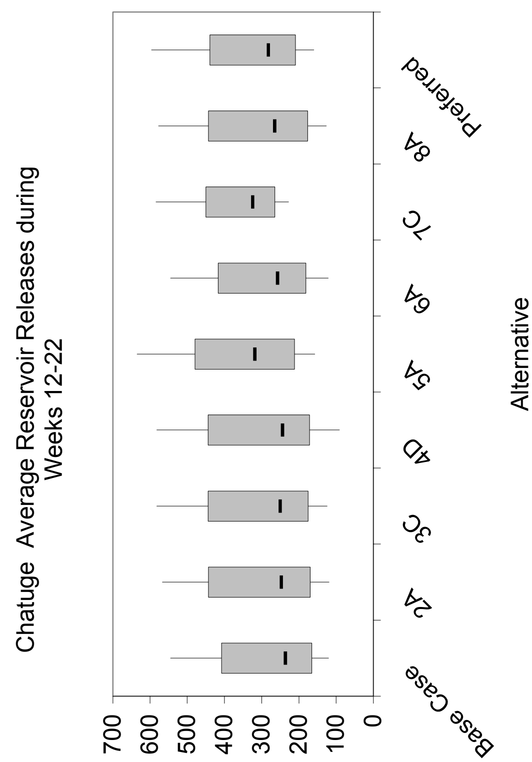

Tims Ford Average Reservoir Releases during
Weeks 12-22
Elevation (feet above MSL)
1800
1600
1400
1200
1000
800
600
400
200
0
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

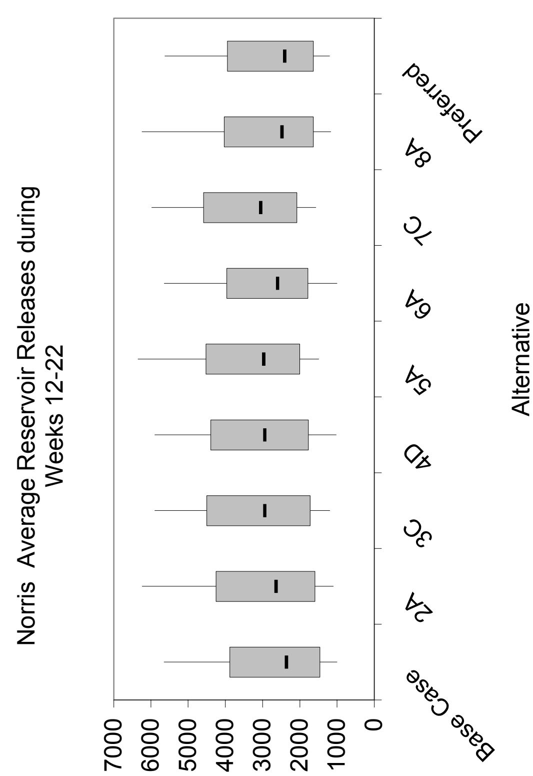

Nickajack Average Reservoir Releases during
Weeks 12-22
Elevation (feet above MSL)
60000
50000
40000
30000
20000
10000
0
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

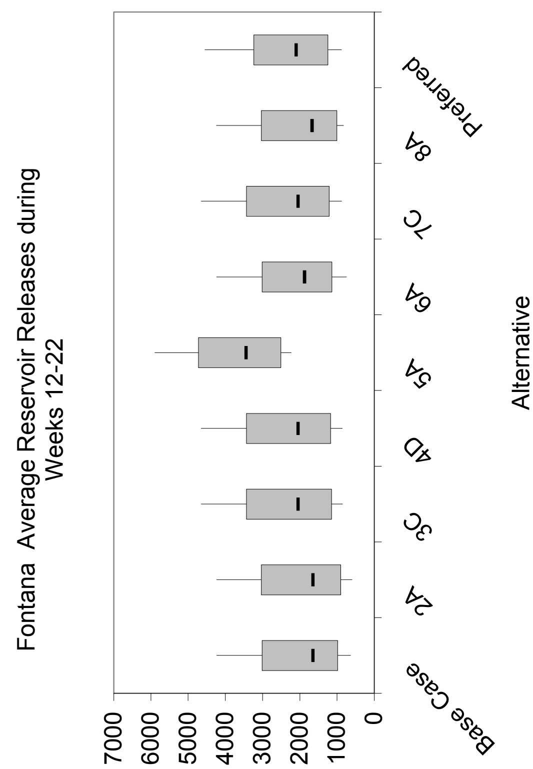

Hiwassee Average Reservoir Releases during
Weeks 12-22
Elevation (feet above MSL)
3000
2500
2000
1500
1000
500
0
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

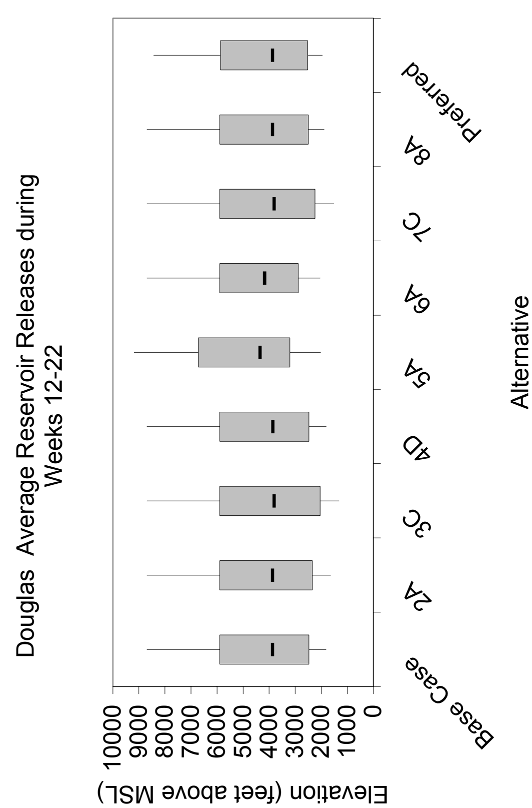

Blue Ridge Average Reservoir Releases during
Weeks 12-22
Elevation (feet above MSL)
1200
1000
800
600
400
200
0
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative


Nottely Average Reservoir Releases during Weeks 12-22
Elevation (feet above MSL)
700
600
500
400
300
200
100
0
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

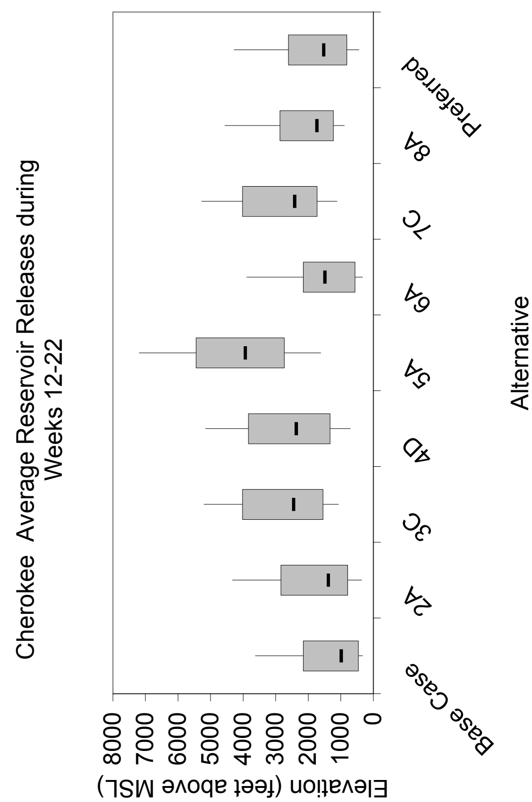

Chatuge Average Reservoir Releases during Weeks 12-22
Elevation (feet above MSL)
700
600
500
400
300
200
100
0
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative


Norris Average Reservoir Releases during Weeks 12-22
Elevation (feet above MSL)
7000
6000
5000
4000
3000
2000
1000
0
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

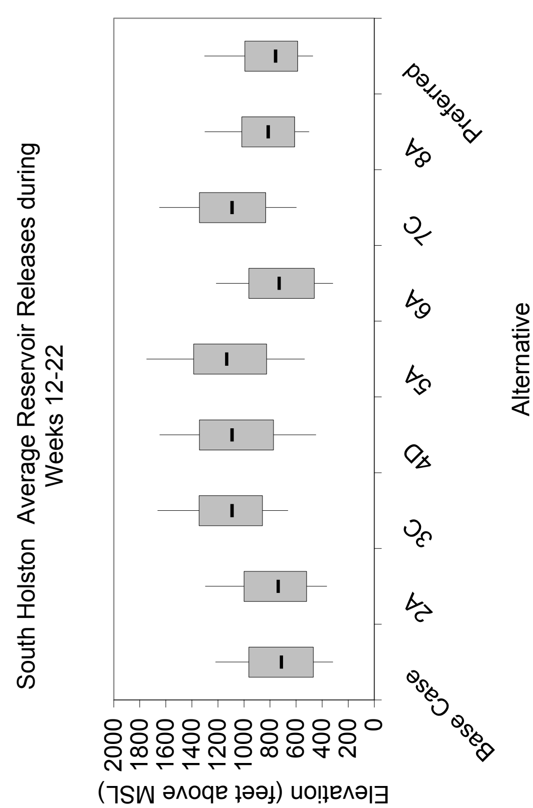

Fontana Average Reservoir Releases during Weeks 12-22
Elevation (feet above MSL)
7000
6000
5000
4000
3000
2000
1000
0
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative



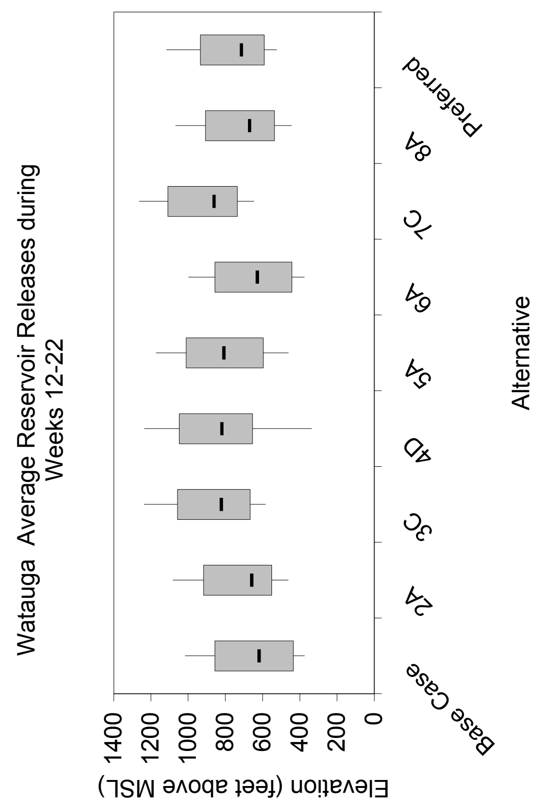
Douglas Average Reservoir Releases during Weeks 12-22
Elevation (feet above MSL)
10000
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

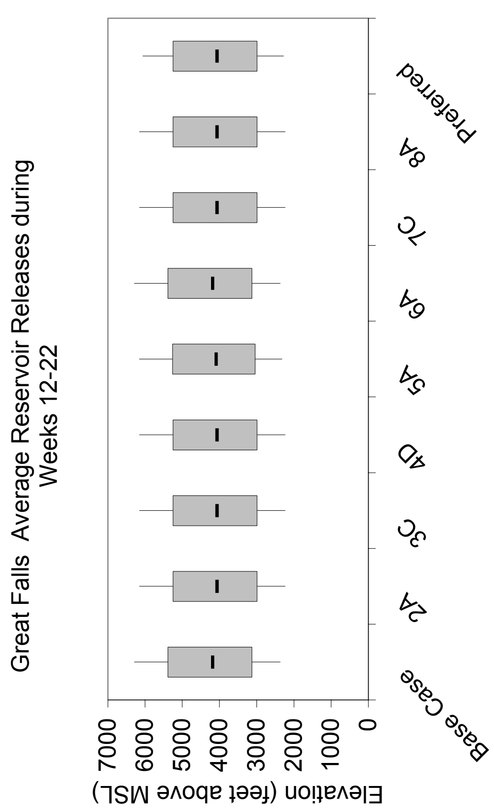
Cherokee Average Reservoir Releases during Weeks 12-22
Elevation (feet above MSL)
8000
7000
6000
5000
4000
3000
2000
1000
0
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

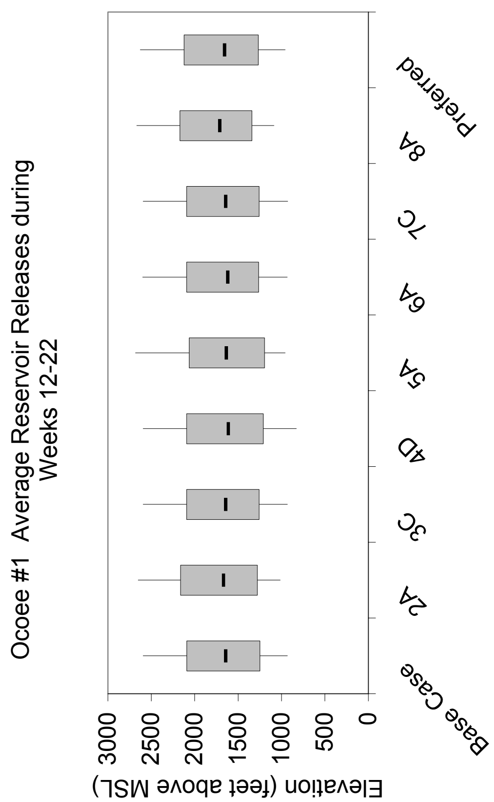



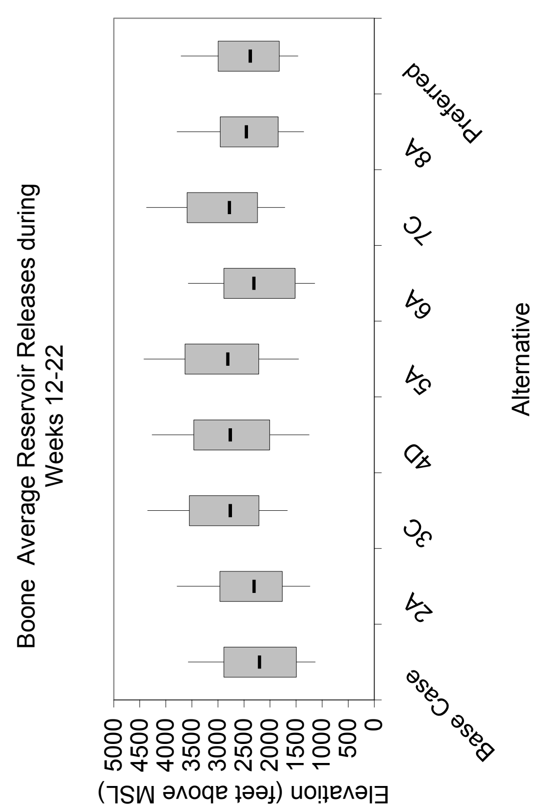
South Holston Average Reservoir Releases during Weeks 12-22
Elevation (feet above MSL)
2000
1800
1600
1400
1200
1000
800
600
400
200
0
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

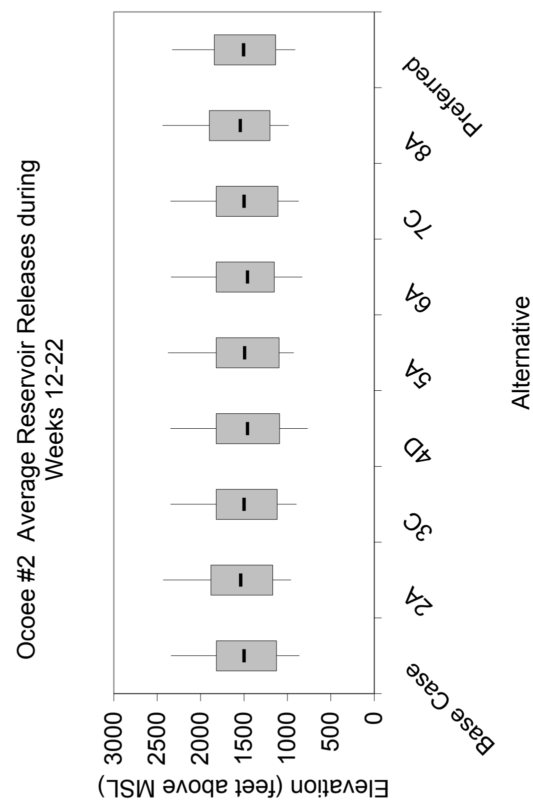



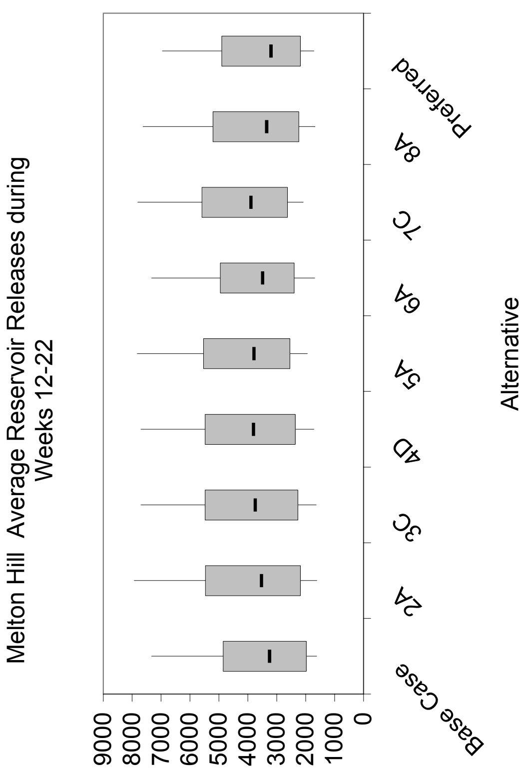
Watauga Average Reservoir Releases during Weeks 12-22
Elevation (feet above MSL)
1400
1200
1000
800
600
400
200
0
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

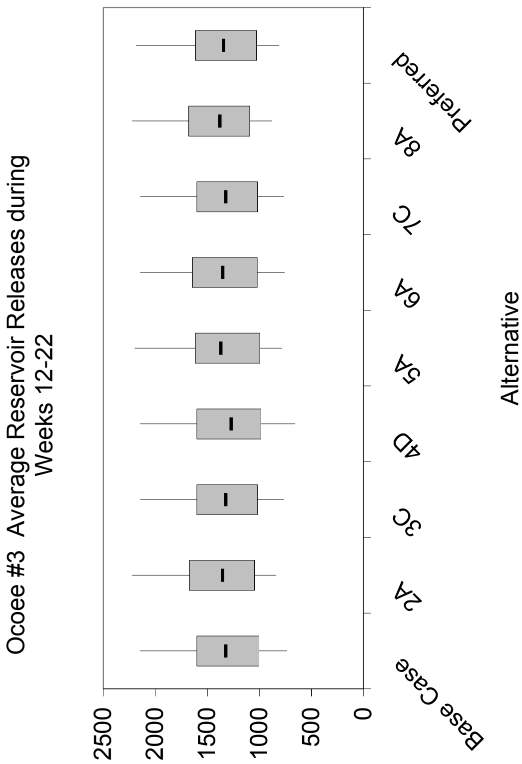

Great Falls  Average Reservoir Releases during
Weeks 12-22
Elevation (feet above MSL)
7000
6000
5000
4000
3000
2000
1000
0
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

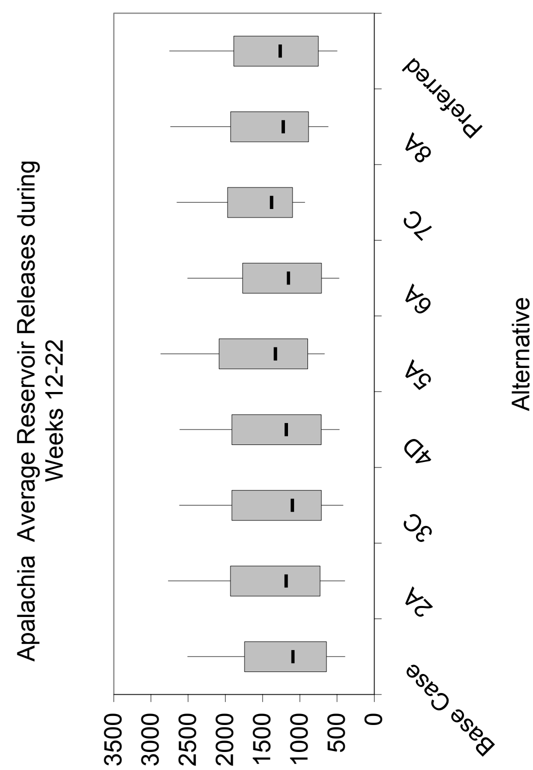

Ocoee #1  Average Reservoir Releases during
Weeks 12-22
Elevation (feet above MSL)
3000
2500
2000
1500
1000
500
0
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

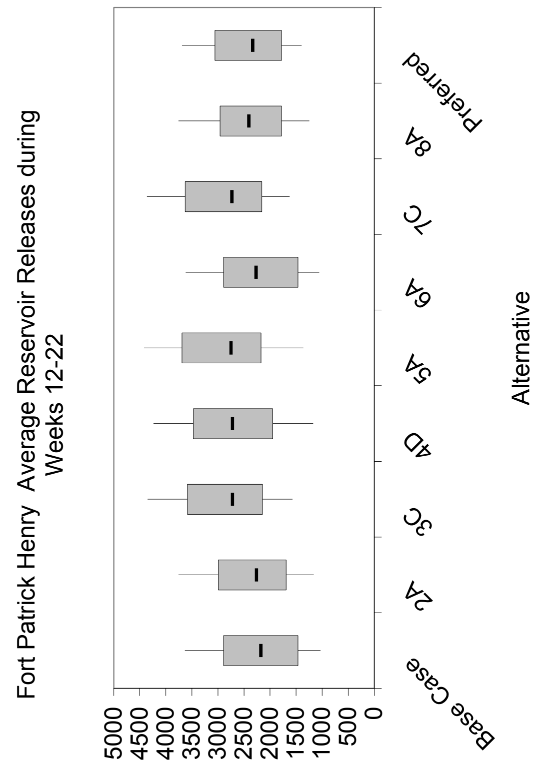

Boone  Average Reservoir Releases during
Weeks 12-22
Elevation (feet above MSL)
5000
4500
4000
3500
3000
2500
2000
1500
1000
500
0
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

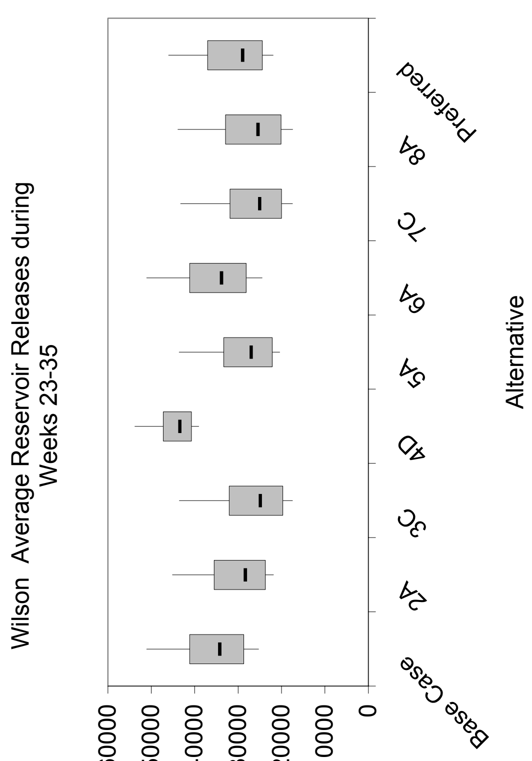

Ocoee #2  Average Reservoir Releases during
Weeks 12-22
Elevation (feet above MSL)
3000
2500
2000
1500
1000
500
0
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

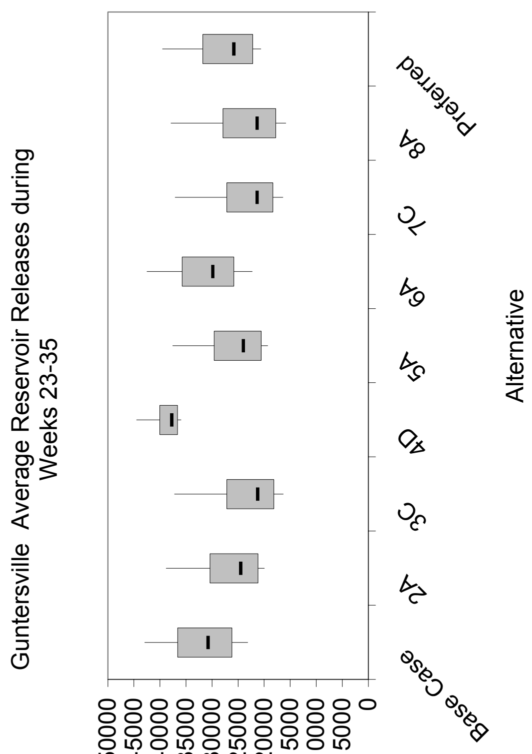

Melton Hill Average Reservoir Releases during
Weeks 12-22
Elevation (feet above MSL)
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

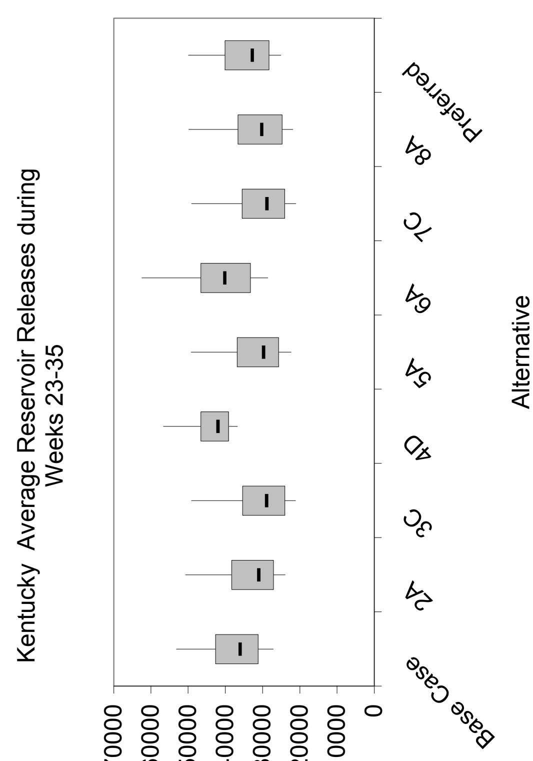

Ocoee #3 Average Reservoir Releases during
Weeks 12-22
Elevation (feet above MSL)
2500
2000
1500
1000
500
0
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

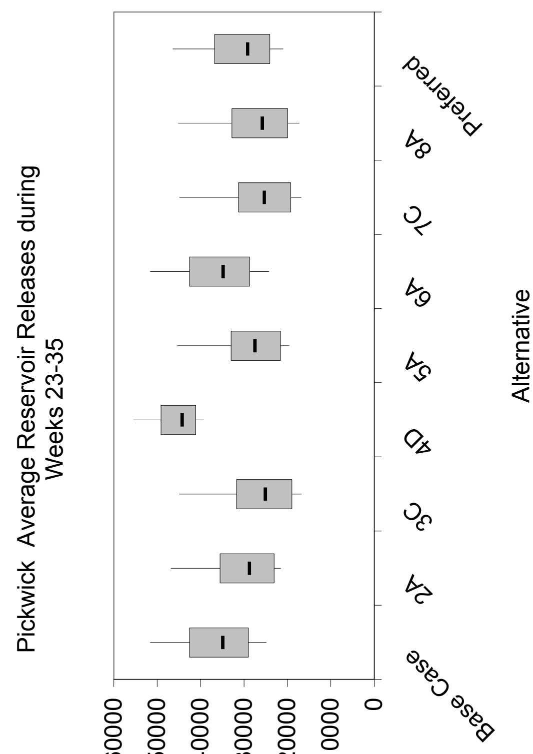

Apalachia Average Reservoir Releases during
Weeks 12-22
Elevation (feet above MSL)
3500
3000
2500
2000
1500
1000
500
0
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

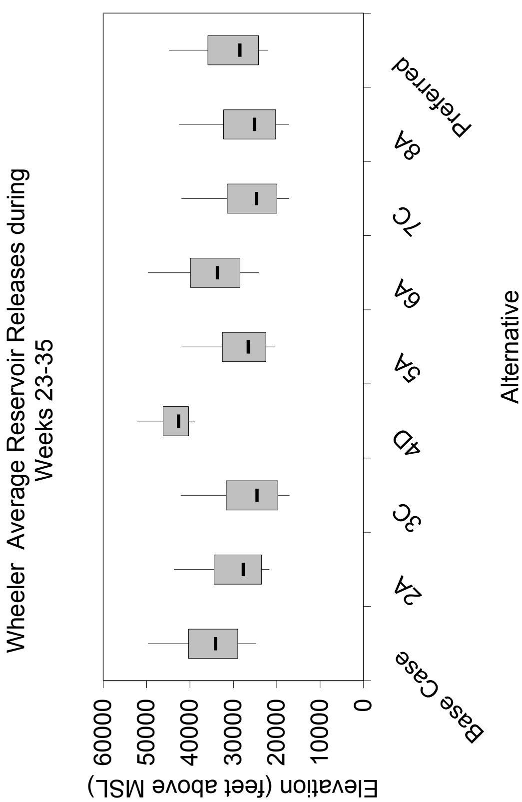

Fort Patrick Henry Average Reservoir Releases during
Weeks 12-22
Elevation (feet above MSL)
5000
4500
4000
3500
3000
2500
2000
1500
1000
500
0
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

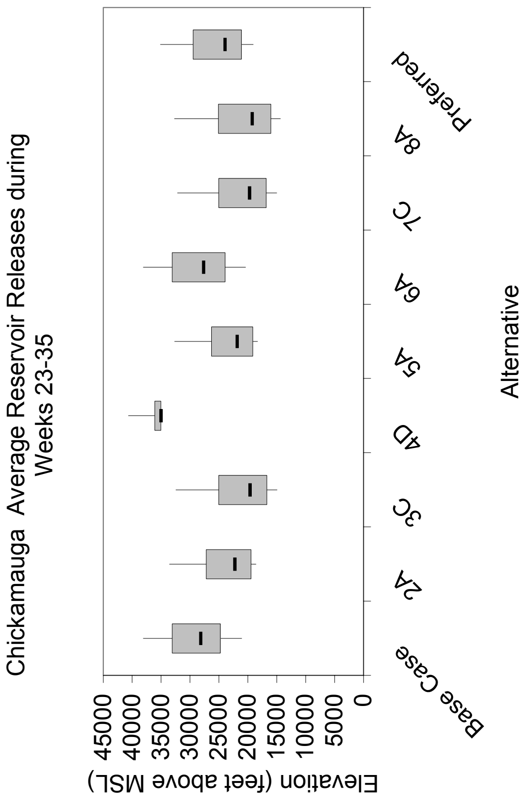

Wilson Average Reservoir Releases during
Weeks 23-35
Elevation (feet above MSL)
60000
50000
40000
30000
20000
10000
0
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

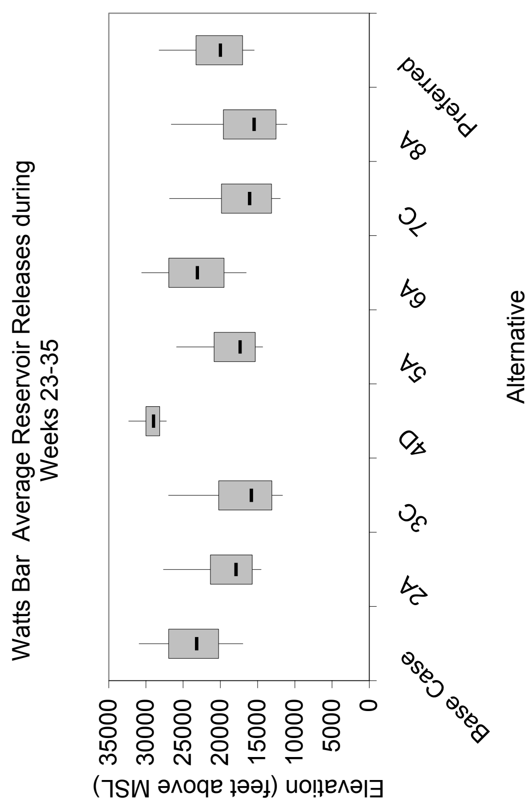

Guntersville Average Reservoir Releases during
Weeks 23-35
Elevation (feet above MSL)
50000
45000
40000
35000
30000
25000
20000
15000
10000
5000
0
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

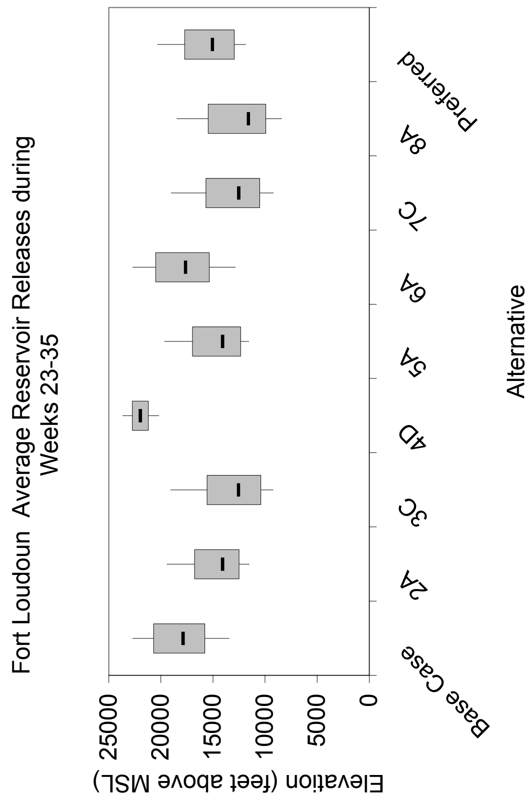

Kentucky Average Reservoir Releases during
Weeks 23-35
Elevation (feet above MSL)
70000
60000
50000
40000
30000
20000
10000
0
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

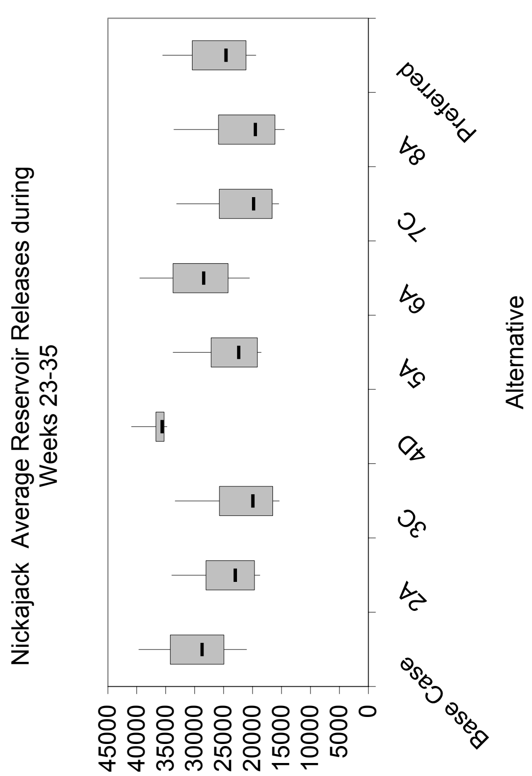

Pickwick Average Reservoir Releases during
Weeks 23-35
Elevation (feet above MSL)
60000
50000
40000
30000
20000
10000
0
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

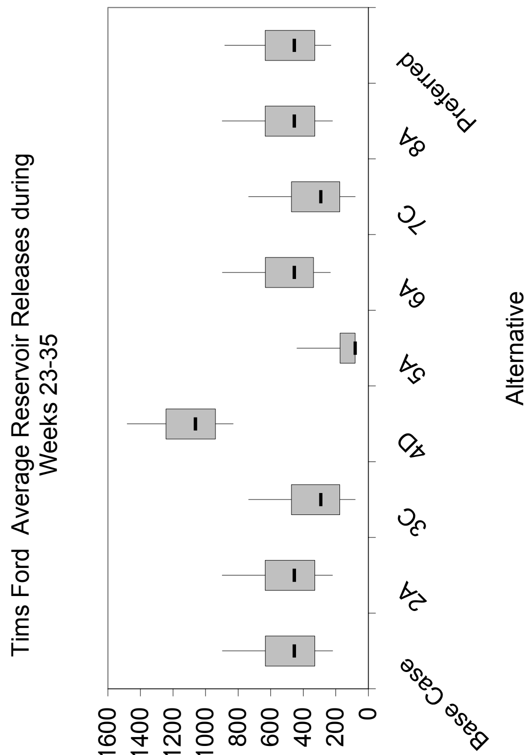

Wheeler Average Reservoir Releases during
Weeks 23-35
Elevation (feet above MSL)
60000
50000
40000
30000
20000
10000
0
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

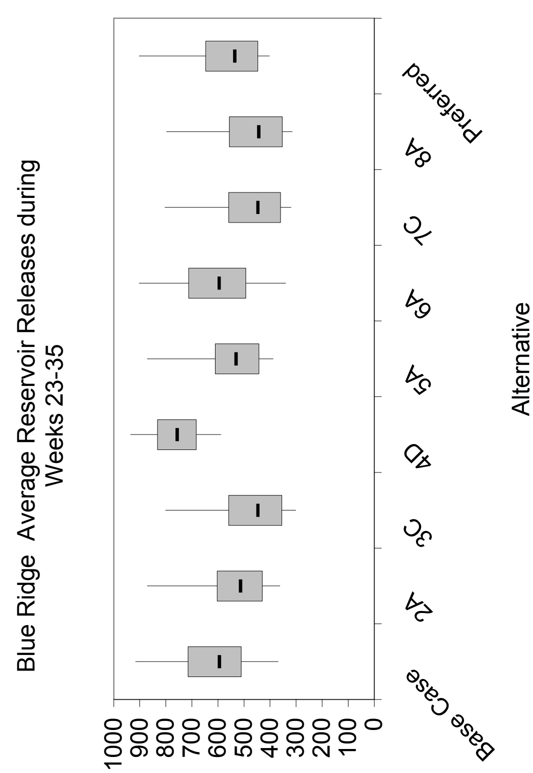

Chickamauga Average Reservoir Releases during
Weeks 23-35
Elevation (feet above MSL)
45000
40000
35000
30000
25000
20000
15000
10000
5000
0
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

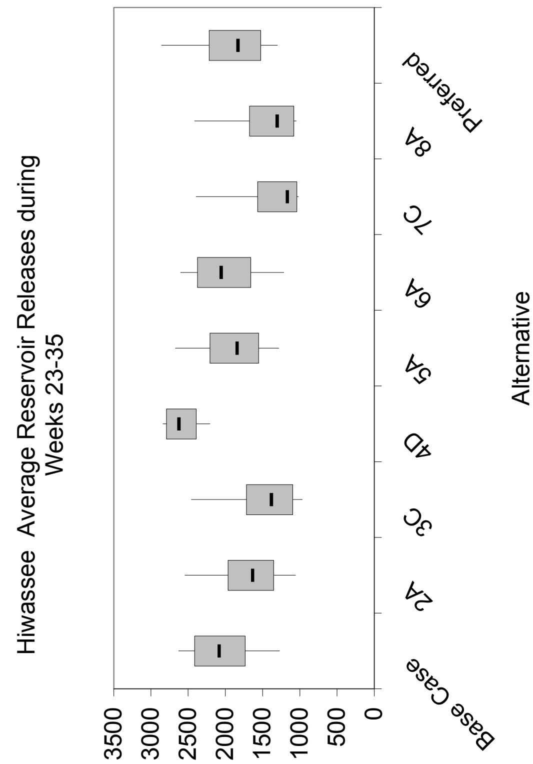

Watts Bar Average Reservoir Releases during
Weeks 23-35
Elevation (feet above MSL)
35000
30000
25000
20000
15000
10000
5000
0
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

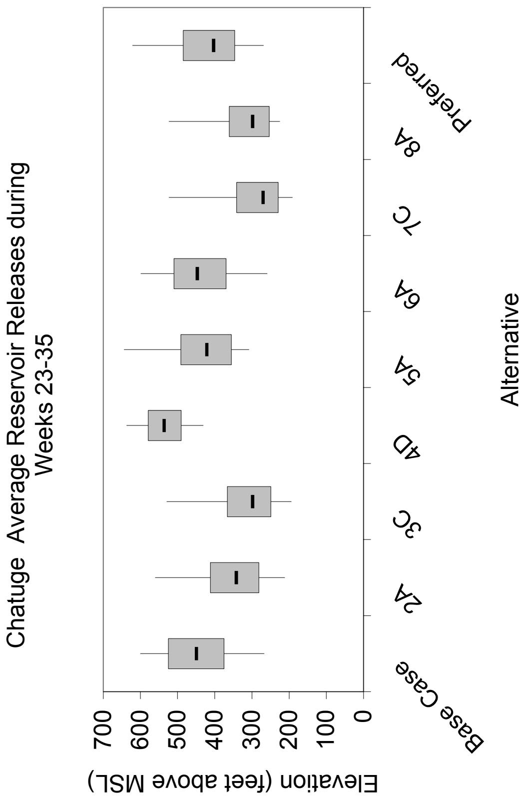

Fort Loudoun Average Reservoir Releases during
Weeks 23-35
Elevation (feet above MSL)
25000
20000
15000
10000
5000
0
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

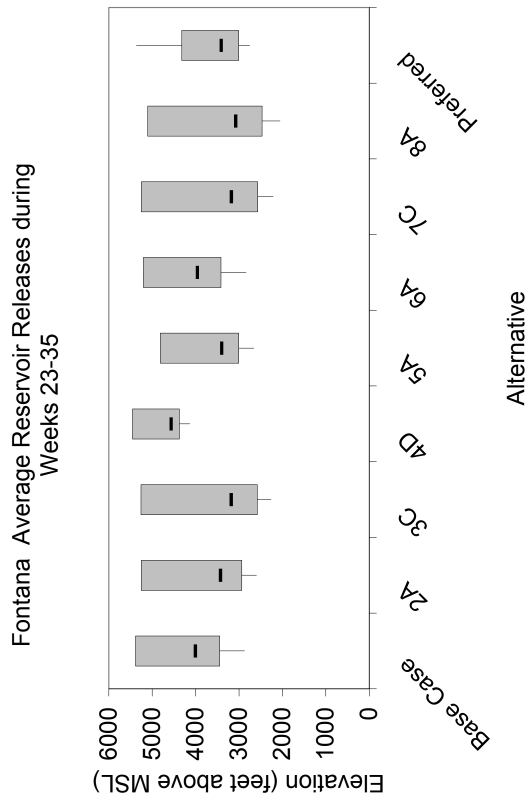

Nickajack Average Reservoir Releases during
Weeks 23-35
Elevation (feet above MSL)
45000
40000
35000
30000
25000
20000
15000
10000
5000
0
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

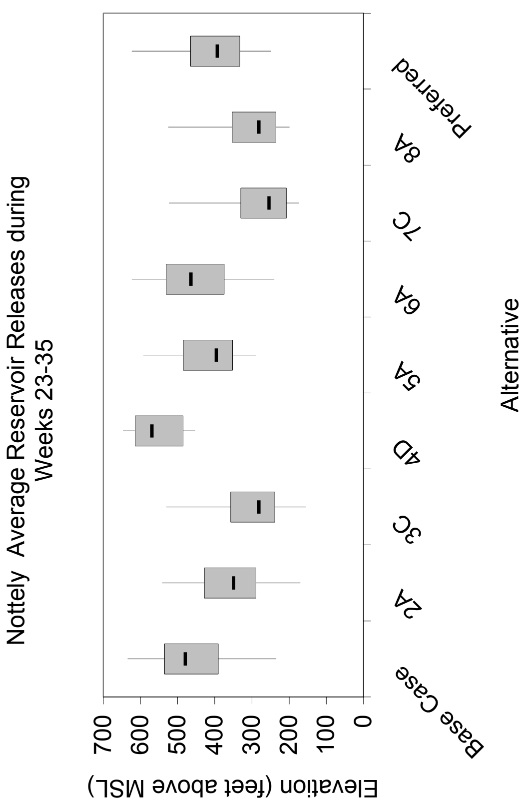

Tims Ford Average Reservoir Releases during
Weeks 23-35
Elevation (feet above MSL)
1600
1400
1200
1000
800
600
400
200
0
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

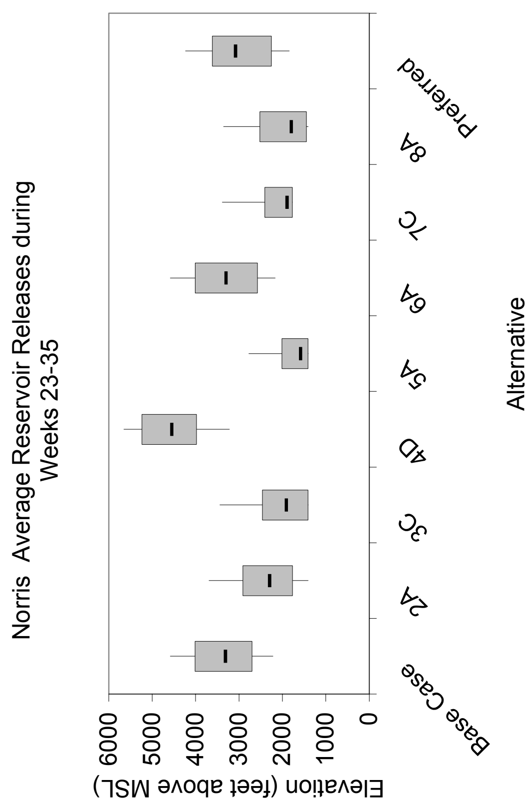

Blue Ridge Average Reservoir Releases during
Weeks 23-35
Elevation (feet above MSL)
1000
900
800
700
600
500
400
300
200
100
0
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

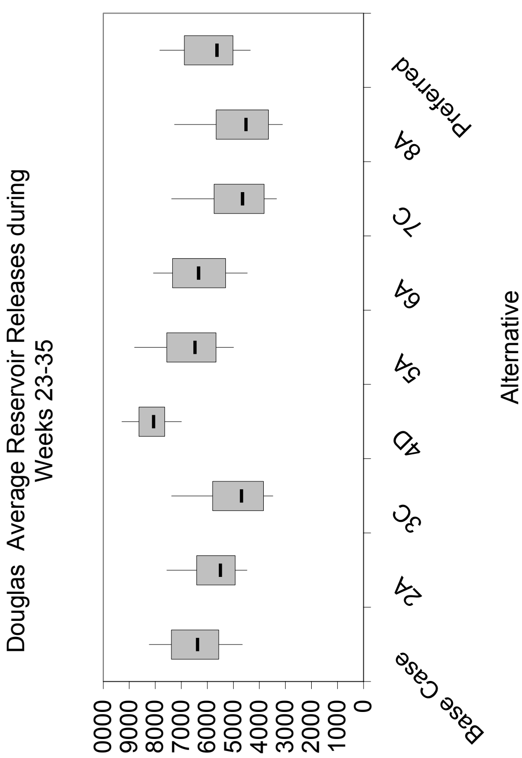

Hiwassee Average Reservoir Releases during
Weeks 23-35
Elevation (feet above MSL)
3500
3000
2500
2000
1500
1000
500
0
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

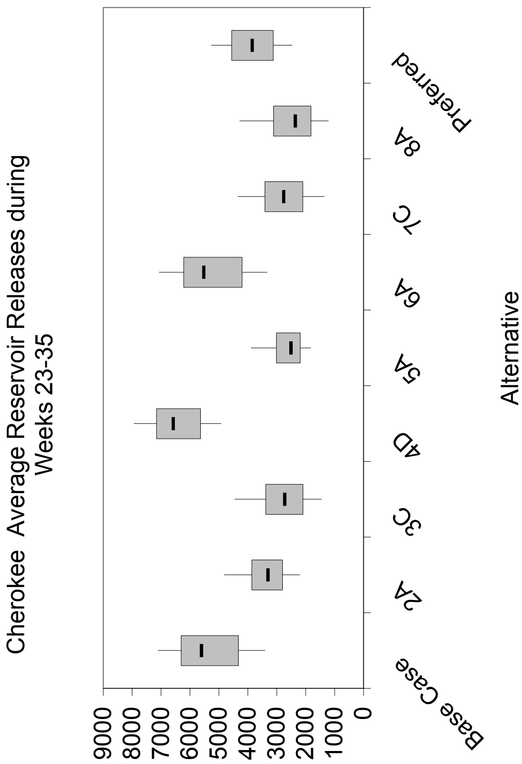

Chatuge Average Reservoir Releases during
Weeks 23-35
Elevation (feet above MSL)
0
100
200
300
400
500
600
700
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

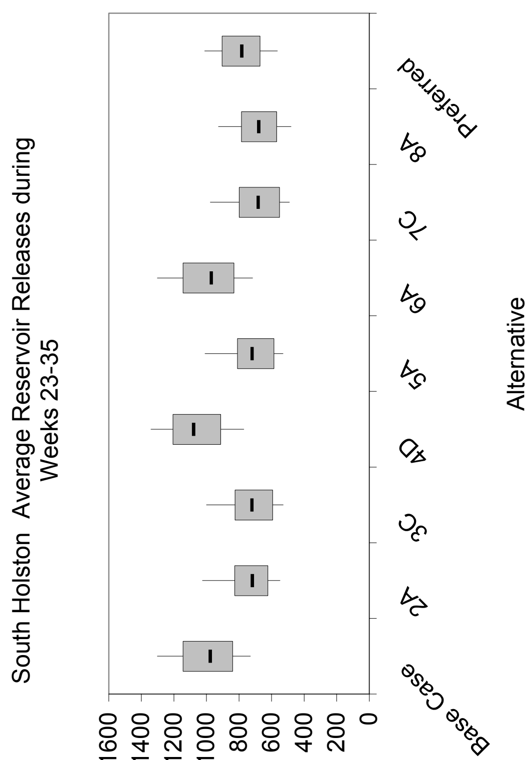

Fontana Average Reservoir Releases during
Weeks 23-35
Elevation (feet above MSL)
0
1000
2000
3000
4000
5000
6000
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

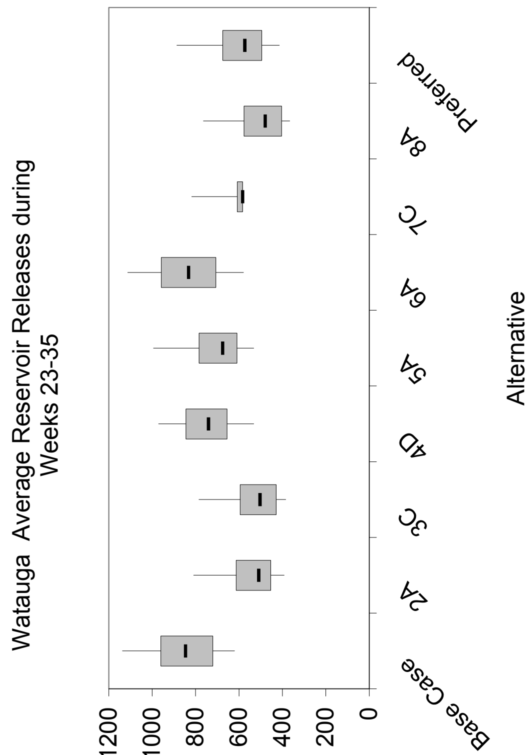

Nottely Average Reservoir Releases during
Weeks 23-35
Elevation (feet above MSL)
0
100
200
300
400
500
600
700
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

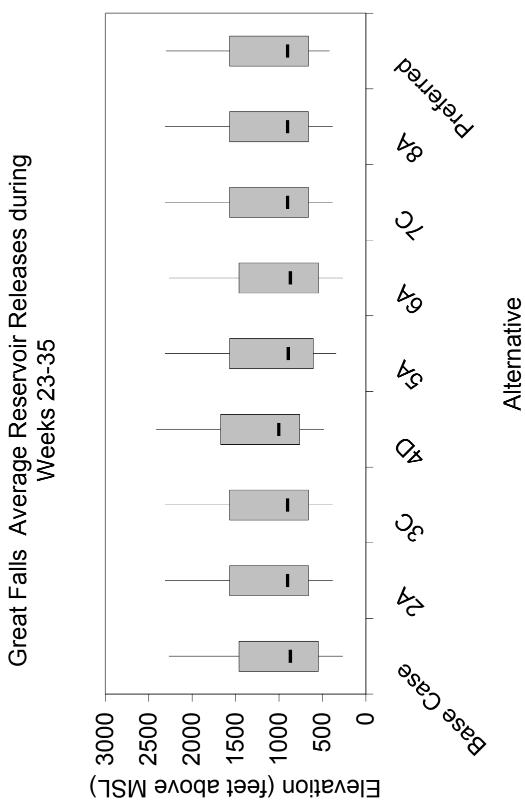

Norris Average Reservoir Releases during
Weeks 23-35
Elevation (feet above MSL)
0
1000
2000
3000
4000
5000
6000
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

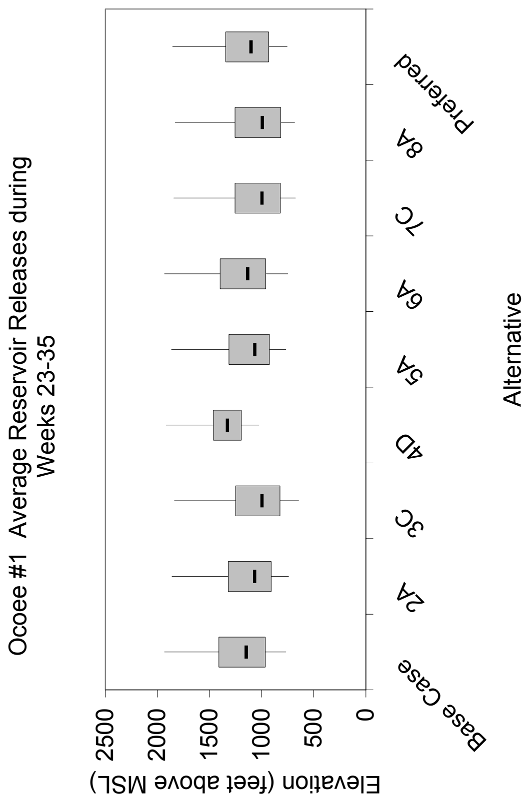

Douglas Average Reservoir Releases during
Weeks 23-35
Elevation (feet above MSL)
10000
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

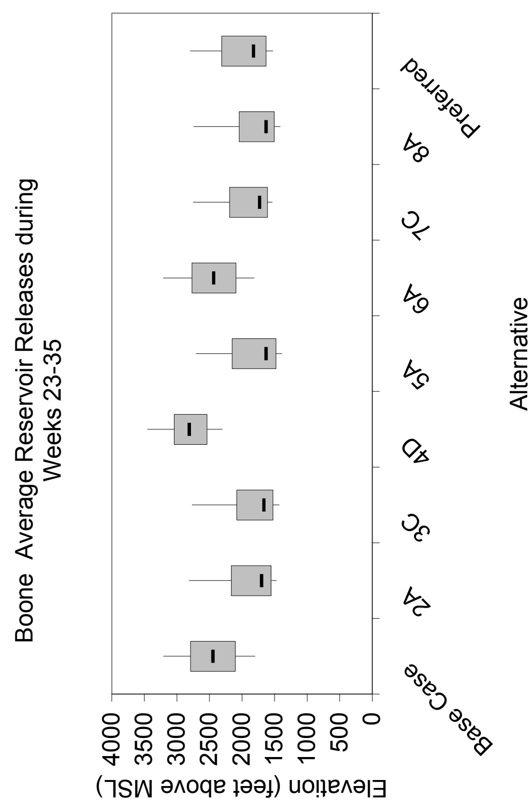

Cherokee Average Reservoir Releases during
Weeks 23-35
Elevation (feet above MSL)
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

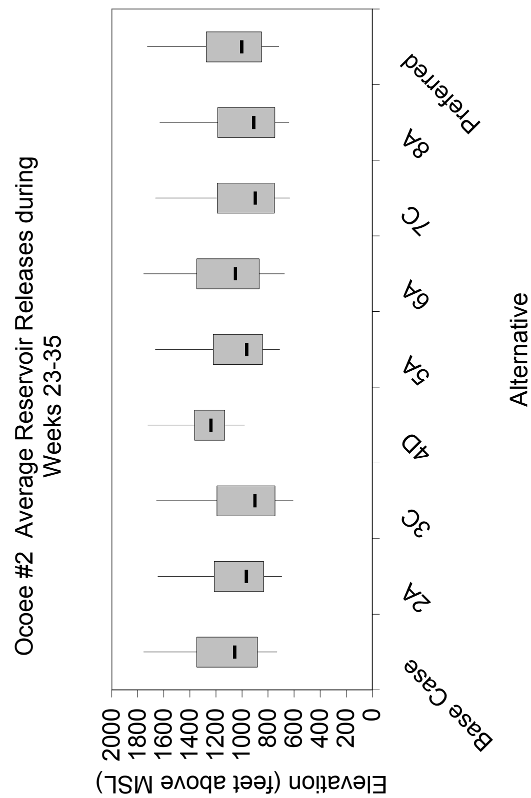

South Holston Average Reservoir Releases during
Weeks 23-35
Elevation (feet above MSL)
1600
1400
1200
1000
800
600
400
200
0
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

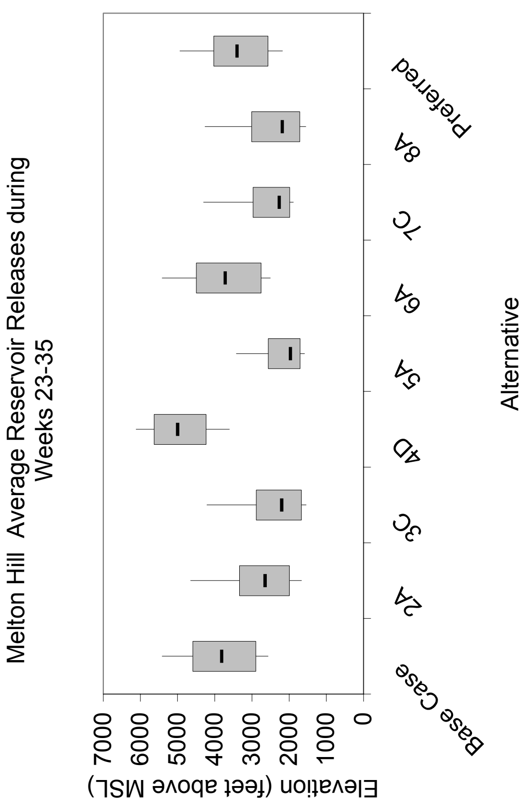

Watauga Average Reservoir Releases during
Weeks 23-35
Elevation (feet above MSL)
1200
1000
800
600
400
200
0
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

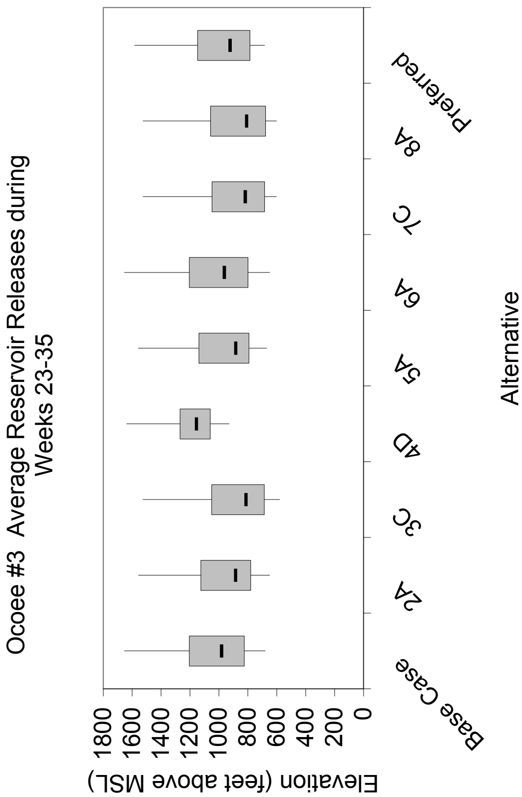

Great Falls Average Reservoir Releases during
Weeks 23-35
Elevation (feet above MSL)
3000
2500
2000
1500
1000
500
0
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

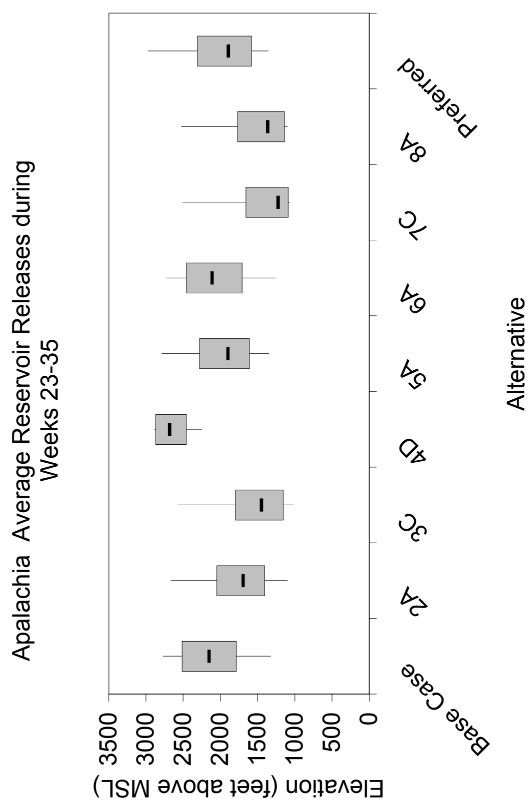

Ocoee #1 Average Reservoir Releases during
Weeks 23-35
Elevation (feet above MSL)
2500
2000
1500
1000
500
0
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

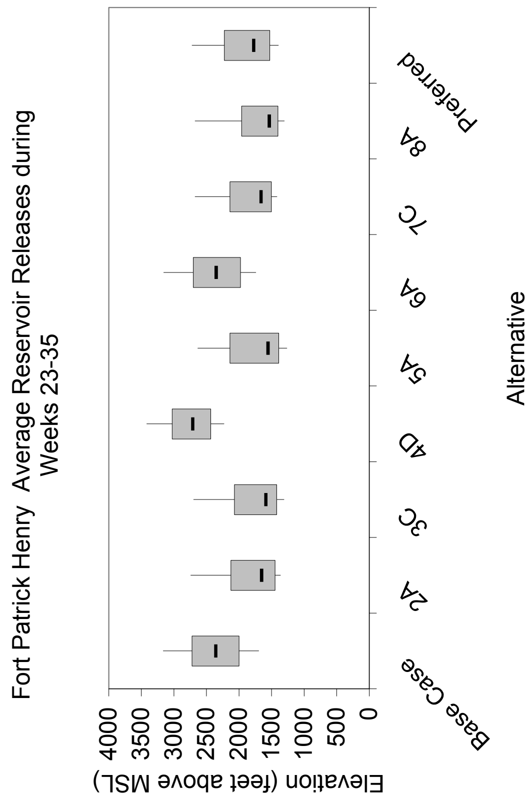

Boone Average Reservoir Releases during
Weeks 23-35
Elevation (feet above MSL)
4000
3500
3000
2500
2000
1500
1000
500
0
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

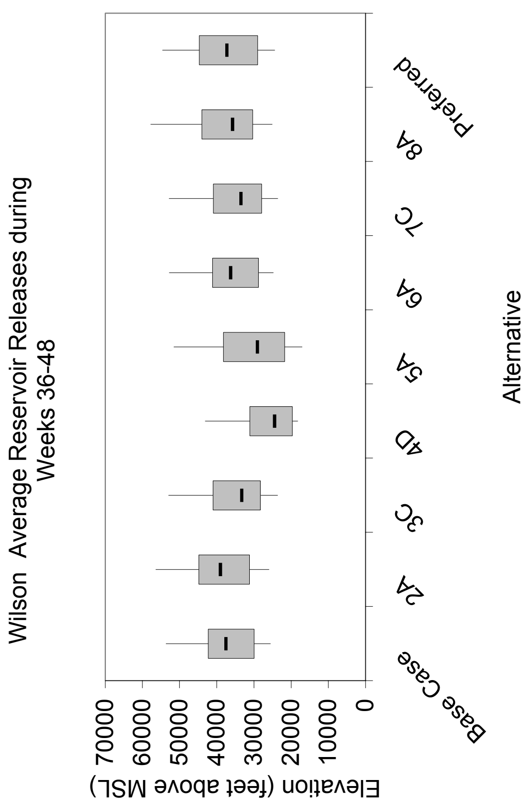

Ocoee #2 Average Reservoir Releases during
Weeks 23-35
Elevation (feet above MSL)
2000
1800
1600
1400
1200
1000
800
600
400
200
0
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

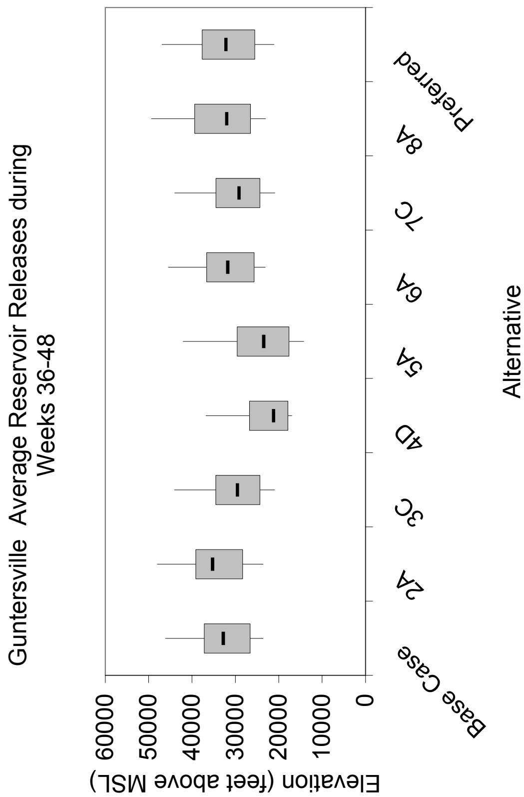

Melton Hill  Average Reservoir Releases during
Weeks 23-35
Elevation (feet above MSL)
7000
6000
5000
4000
3000
2000
1000
0
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

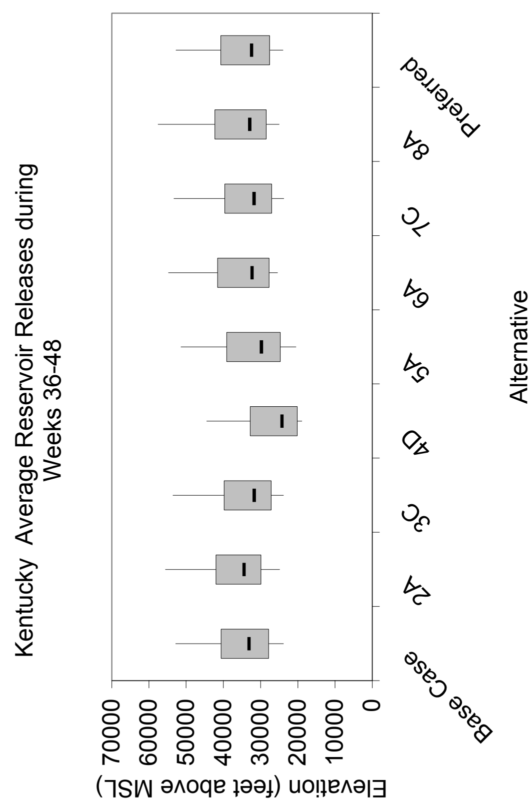

Ocoee #3  Average Reservoir Releases during
Weeks 23-35
Elevation (feet above MSL)
1800
1600
1400
1200
1000
800
600
400
200
0
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

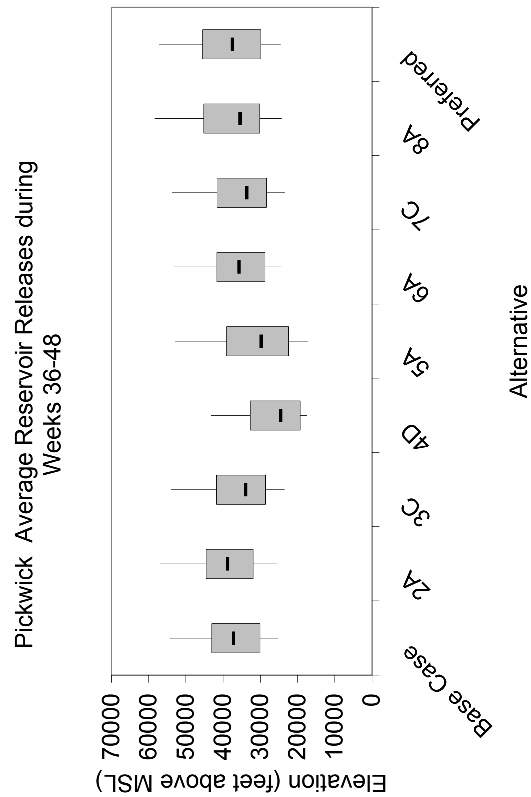

Apalachia  Average Reservoir Releases during
Weeks 23-35
Elevation (feet above MSL)
3500
3000
2500
2000
1500
1000
500
0
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

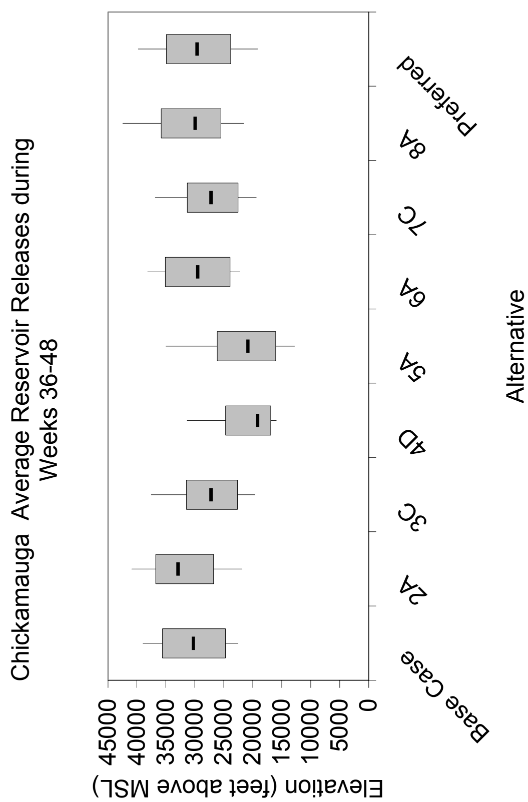

Fort Patrick Henry  Average Reservoir Releases during
Weeks 23-35
Elevation (feet above MSL)
4000
3500
3000
2500
2000
1500
1000
500
0
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

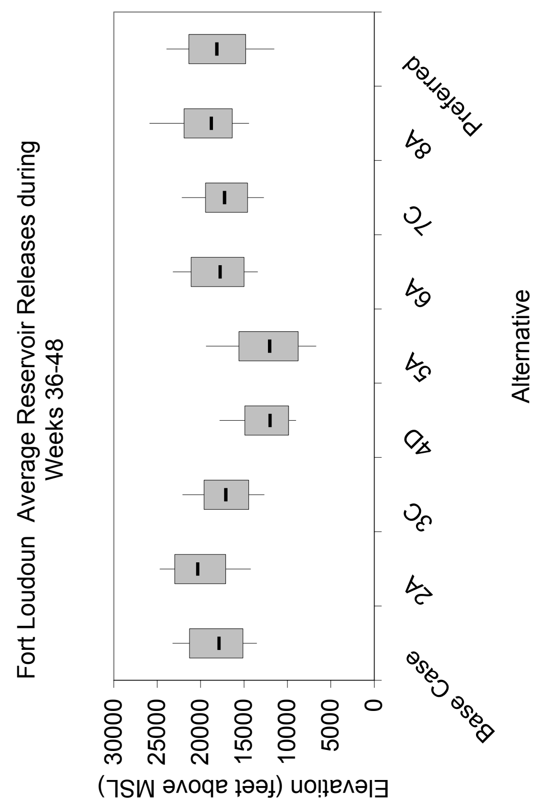

Wilson Average Reservoir Releases during Weeks 36-48
Elevation (feet above MSL)
70000
60000
50000
40000
30000
20000
10000
0
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

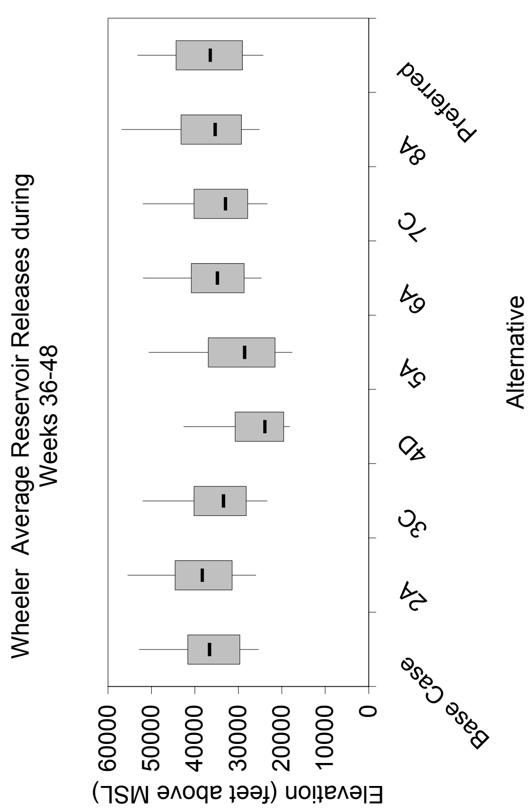

Guntersville Average Reservoir Releases during Weeks 36-48
Elevation (feet above MSL)
60000
50000
40000
30000
20000
10000
0
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

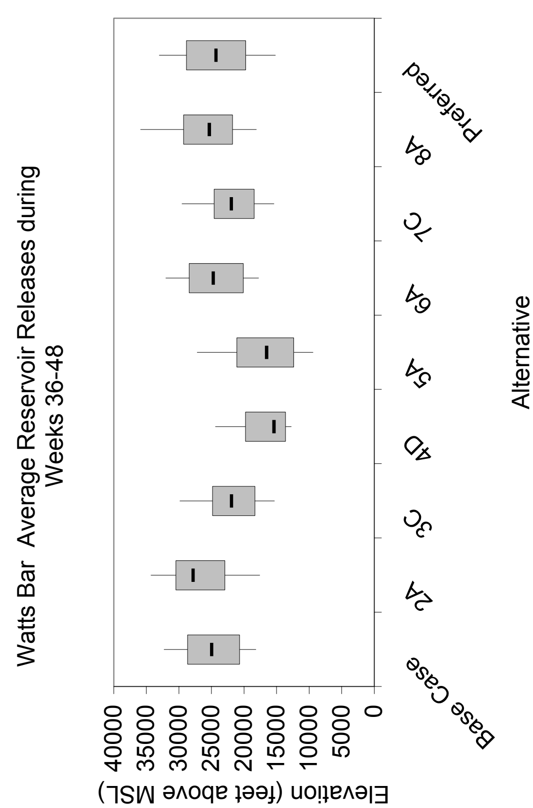

Kentucky Average Reservoir Releases during Weeks 36-48
Elevation (feet above MSL)
70000
60000
50000
40000
30000
20000
10000
0
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

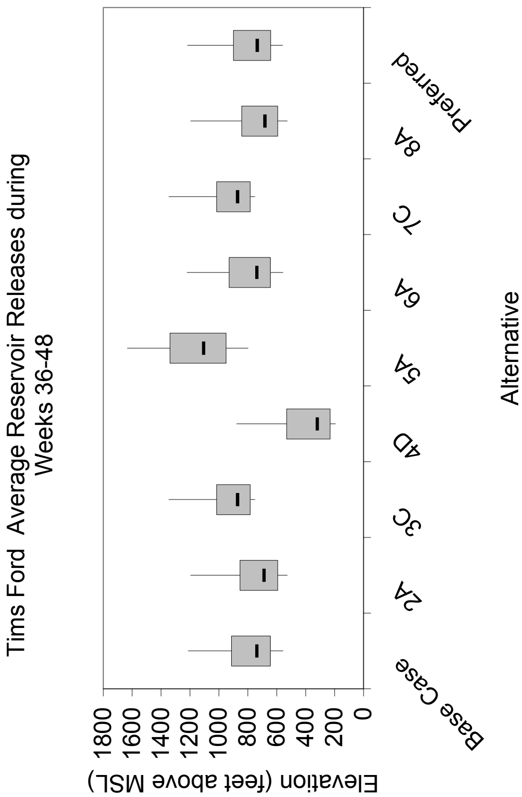

Pickwick Average Reservoir Releases during Weeks 36-48
Elevation (feet above MSL)
70000
60000
50000
40000
30000
20000
10000
0
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

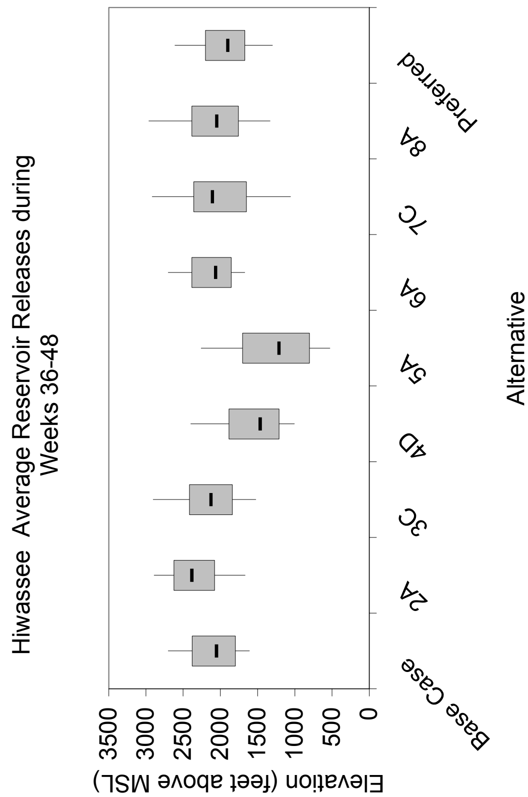

Chickamauga Average Reservoir Releases during Weeks 36-48
Elevation (feet above MSL)
45000
40000
35000
30000
25000
20000
15000
10000
5000
0
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

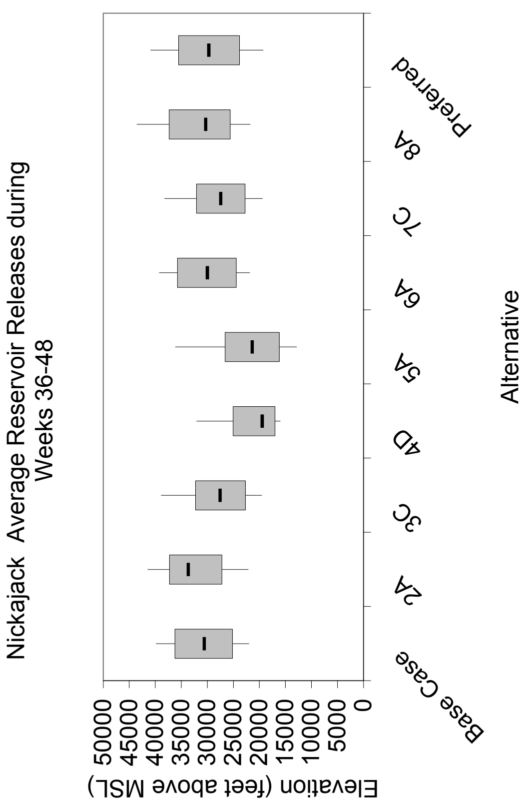

Fort Loudoun Average Reservoir Releases during Weeks 36-48
Elevation (feet above MSL)
30000
25000
20000
15000
10000
5000
0
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

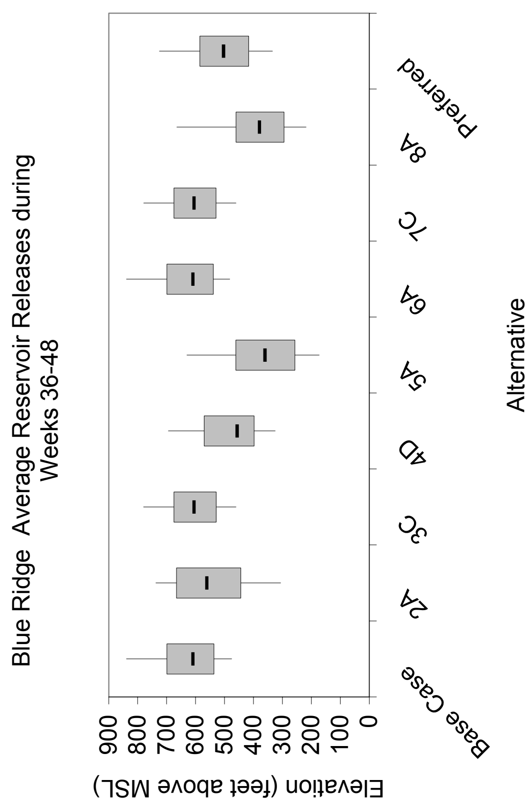

Wheeler Average Reservoir Releases during Weeks 36-48
Elevation (feet above MSL)
60000
50000
40000
30000
20000
10000
0
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

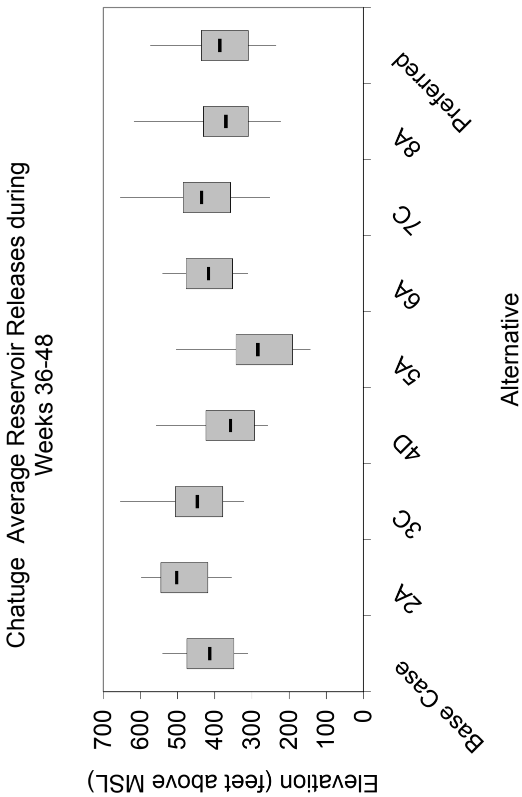

Watts Bar Average Reservoir Releases during Weeks 36-48
Elevation (feet above MSL)
40000
35000
30000
25000
20000
15000
10000
5000
0
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

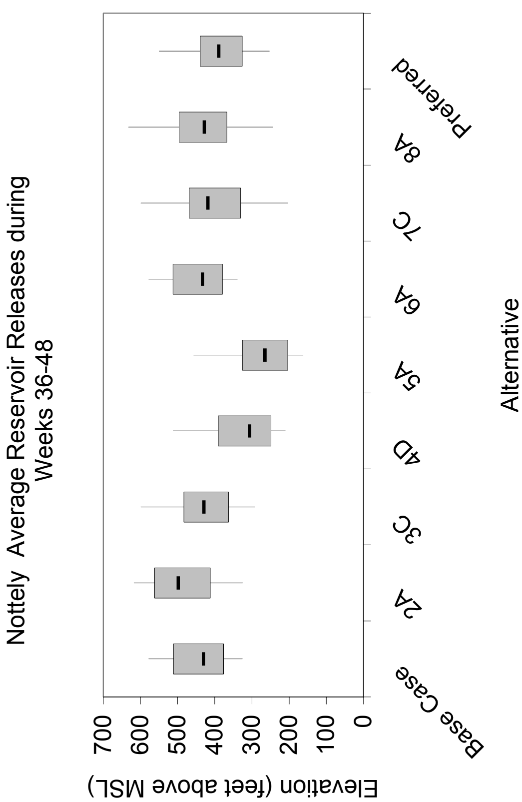

Tims Ford Average Reservoir Releases during
Weeks 36-48
Elevation (feet above MSL)
1800
1600
1400
1200
1000
800
600
400
200
0
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

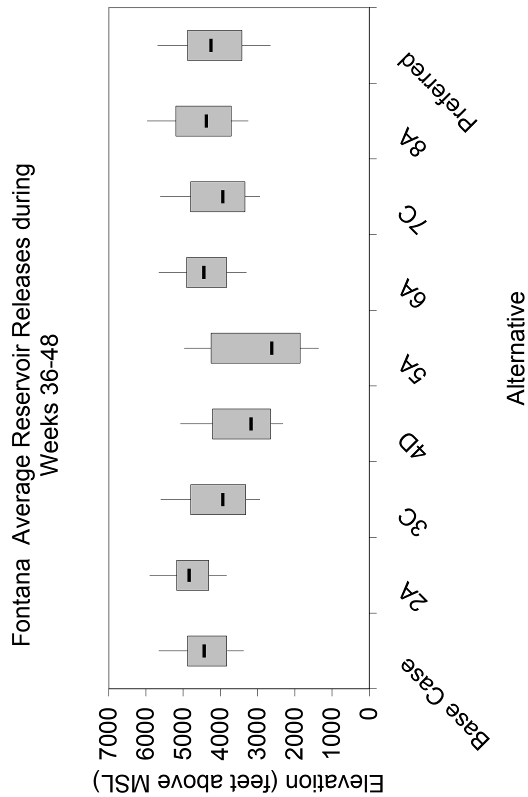

Hiwassee Average Reservoir Releases during
Weeks 36-48
Elevation (feet above MSL)
3500
3000
2500
2000
1500
1000
500
0
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

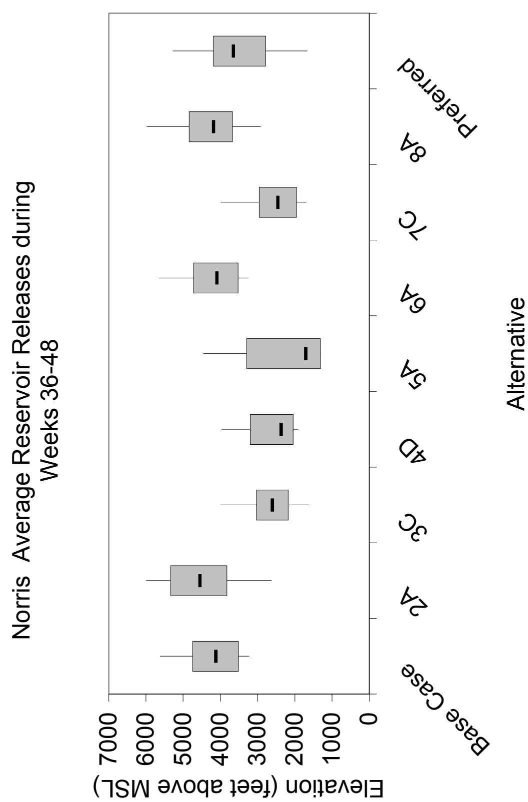

Nickajack Average Reservoir Releases during
Weeks 36-48
Elevation (feet above MSL)
50000
45000
40000
35000
30000
25000
20000
15000
10000
5000
0
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

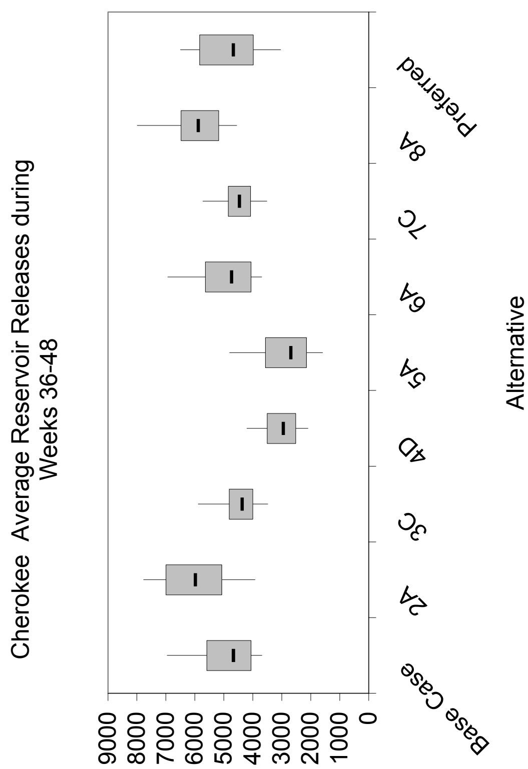

Blue Ridge Average Reservoir Releases during
Weeks 36-48
Elevation (feet above MSL)
900
800
700
600
500
400
300
200
100
0
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

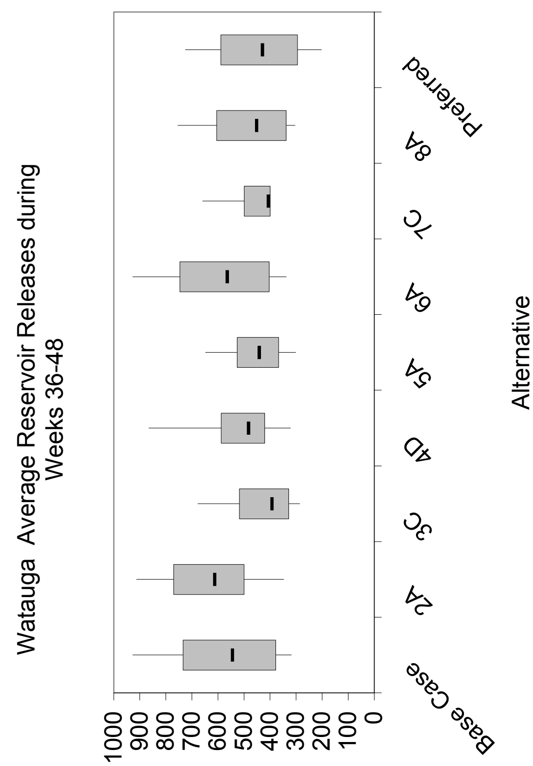

Chatuge Average Reservoir Releases during Weeks 36-48
Elevation (feet above MSL)
700
600
500
400
300
200
100
0
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

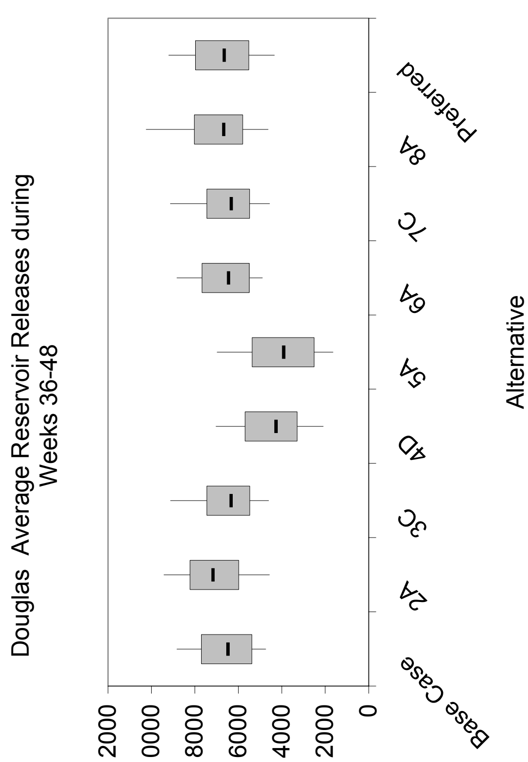

Nottely Average Reservoir Releases during Weeks 36-48
Elevation (feet above MSL)
700
600
500
400
300
200
100
0
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

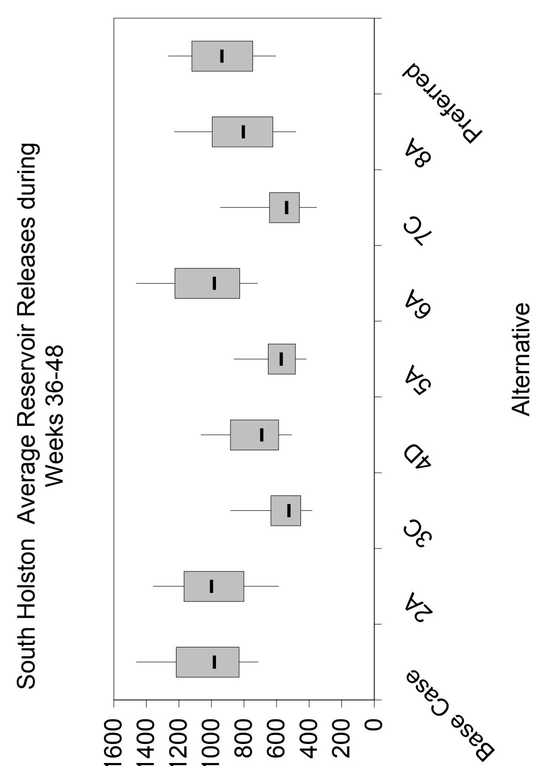

Fontana Average Reservoir Releases during Weeks 36-48
Elevation (feet above MSL)
7000
6000
5000
4000
3000
2000
1000
0
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

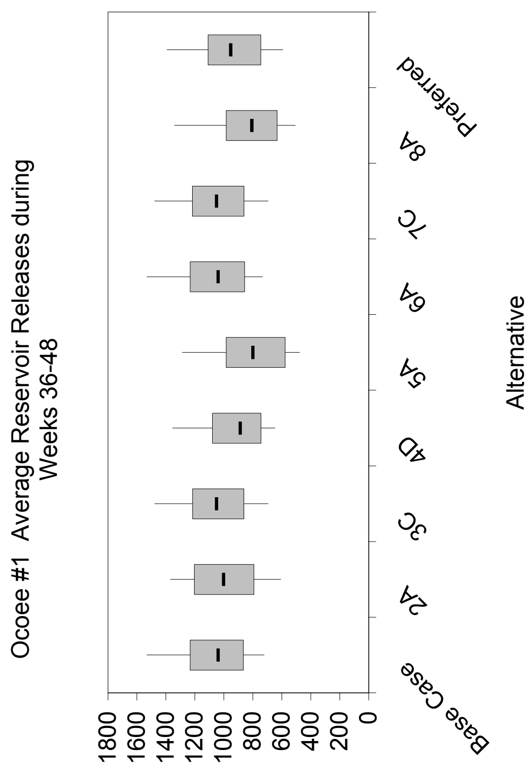

Norris Average Reservoir Releases during Weeks 36-48
Elevation (feet above MSL)
7000
6000
5000
4000
3000
2000
1000
0
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

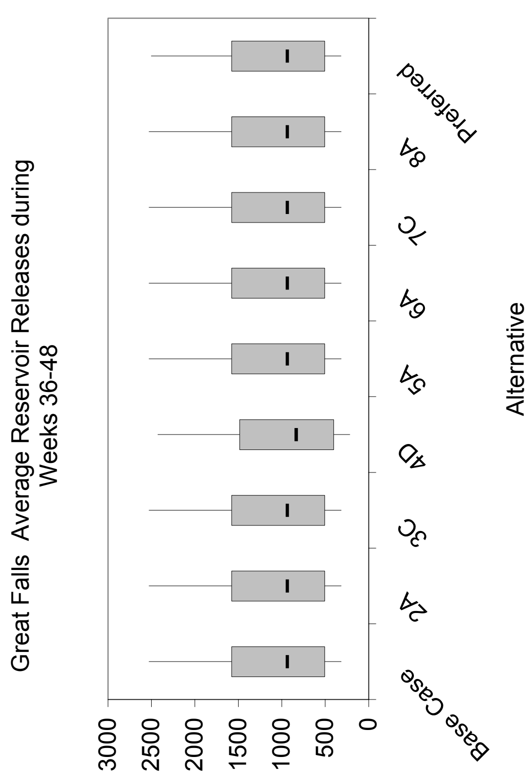

Cherokee Average Reservoir Releases during
Weeks 36-48
Elevation (feet above MSL)
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

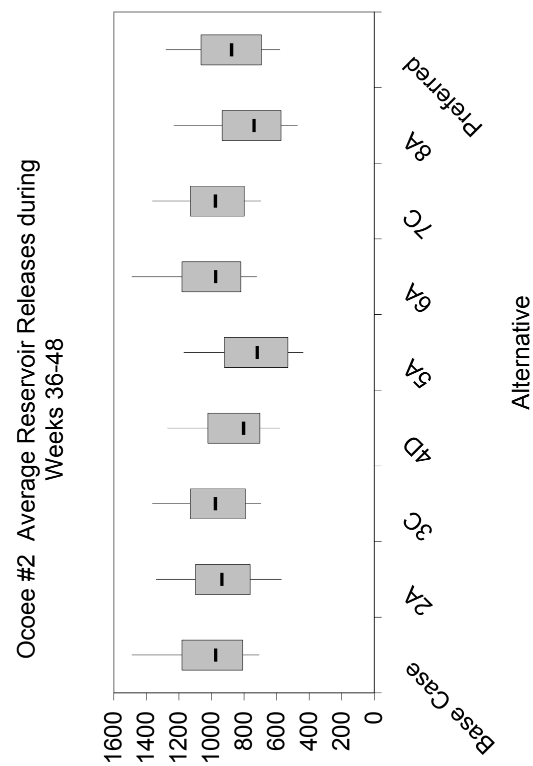

Watauga Average Reservoir Releases during
Weeks 36-48
Elevation (feet above MSL)
1000
900
800
700
600
500
400
300
200
100
0
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

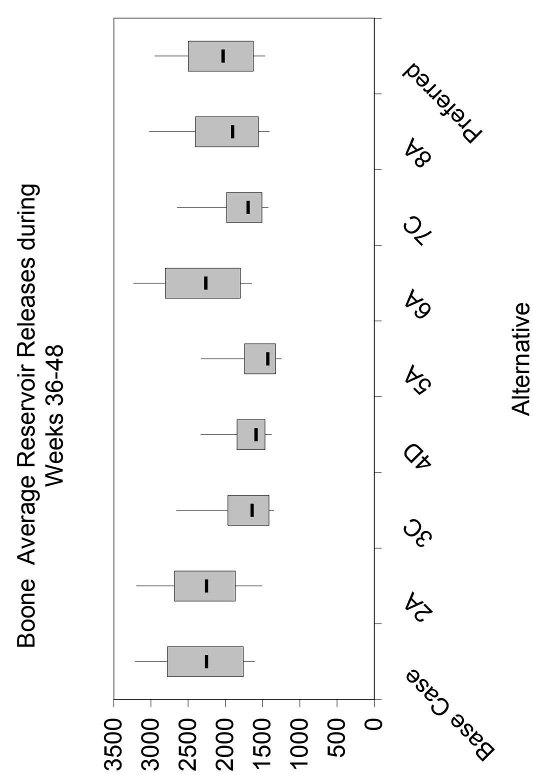

Douglas Average Reservoir Releases during
Weeks 36-48
Elevation (feet above MSL)
12000
10000
8000
6000
4000
2000
0
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

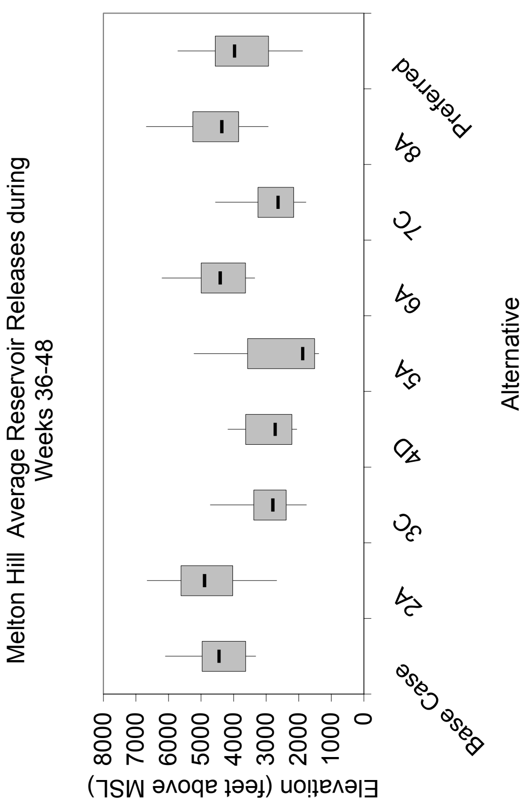

South Holston Average Reservoir Releases during
Weeks 36-48
Elevation (feet above MSL)
1600
1400
1200
1000
800
600
400
200
0
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative


Ocoee #1 Average Reservoir Releases during
Weeks 36-48
Elevation (feet above MSL)
1800
1600
1400
1200
1000
800
600
400
200
0
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

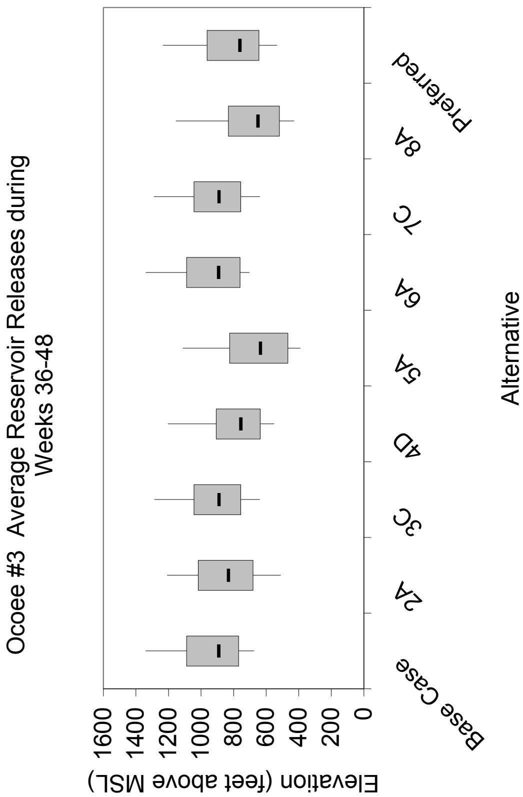

Great Falls Average Reservoir Releases during
Weeks 36-48
Elevation (feet above MSL)
3000
2500
2000
1500
1000
500
0
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative


Ocoee #2 Average Reservoir Releases during
Weeks 36-48
Elevation (feet above MSL)
1600
1400
1200
1000
800
600
400
200
0
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

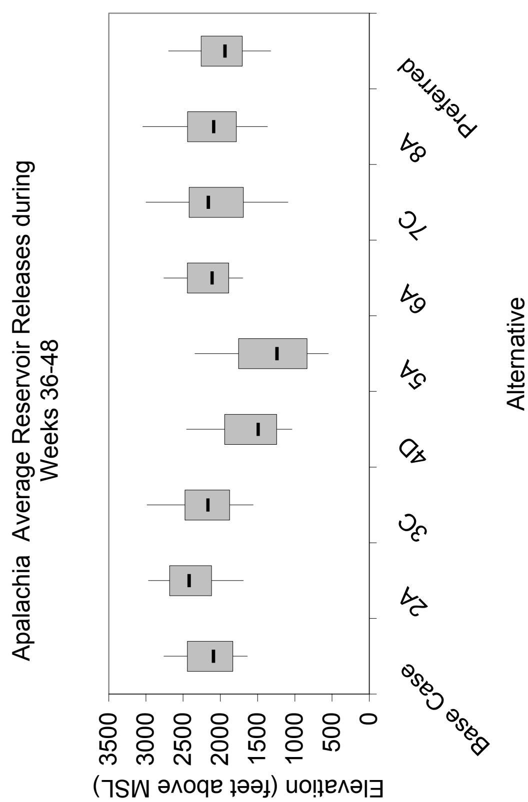

Boone Average Reservoir Releases during
Weeks 36-48
Elevation (feet above MSL)
3500
3000
2500
2000
1500
1000
500
0
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative



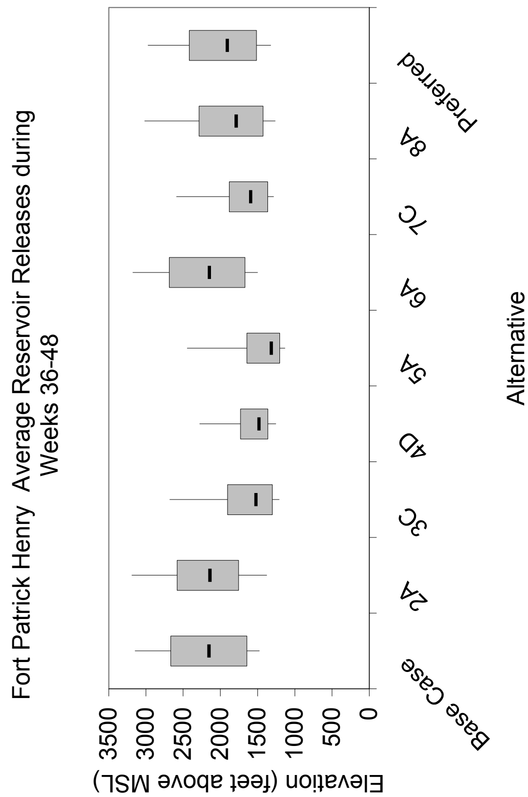
Melton Hill Average Reservoir Releases during
Weeks 36-48
Elevation (feet above MSL)
8000
7000
6000
5000
4000
3000
2000
1000
0
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

Ocoee #3 Average Reservoir Releases during
Weeks 36-48
Elevation (feet above MSL)
1600
1400
1200
1000
800
600
400
200
0
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

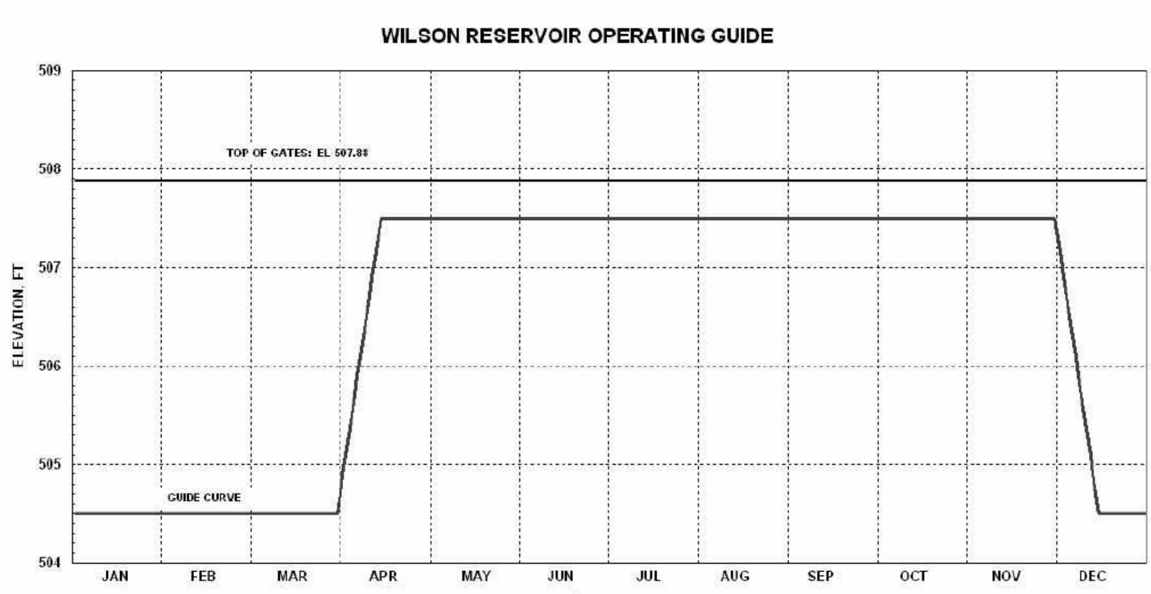



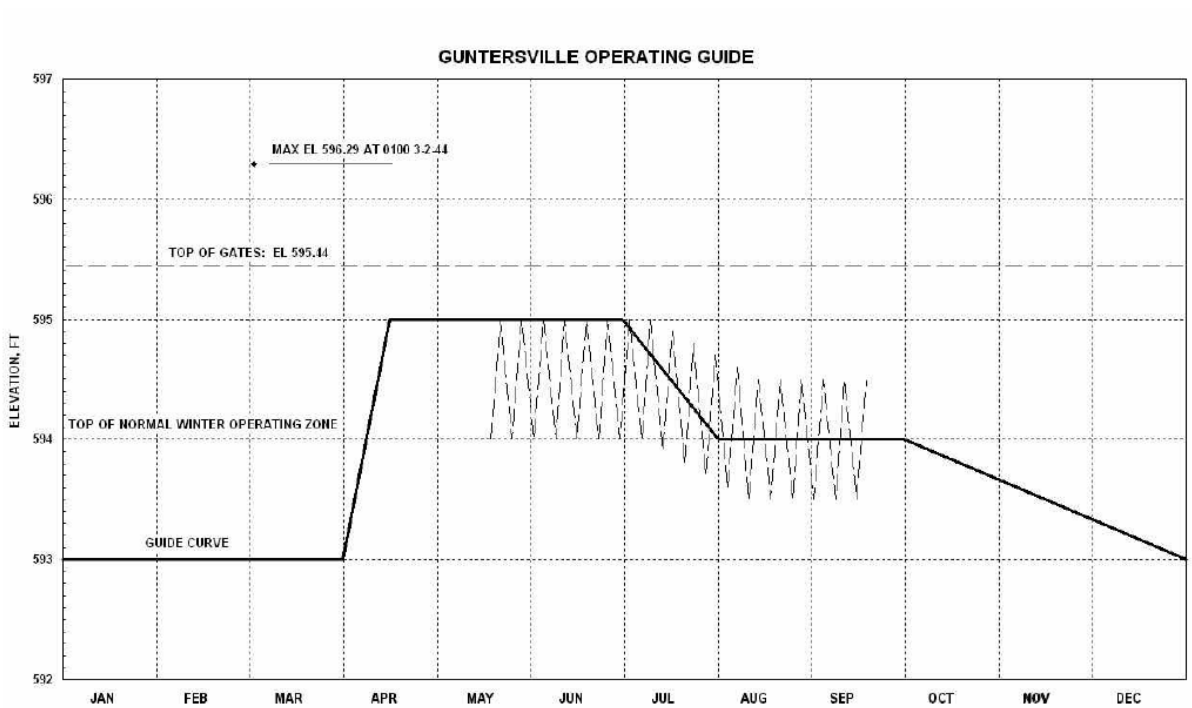
Apalachia Average Reservoir Releases during
Weeks 36-48
Elevation (feet above MSL)
3500
3000
2500
2000
1500
1000
500
0
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

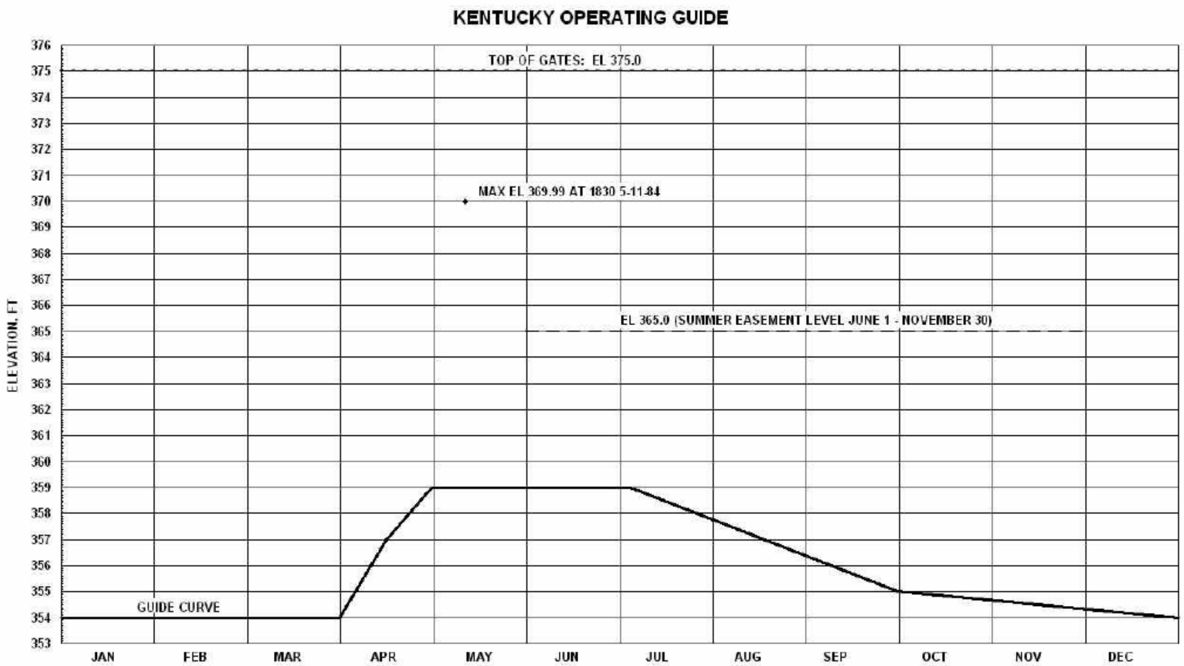
Fort Patrick Henry Average Reservoir Releases during
Weeks 36-48
Elevation (feet above MSL)
3500
3000
2500
2000
1500
1000
500
0
Base Case
2A
3C
4D
5A
6A
7C
8A
Preferred
Alternative

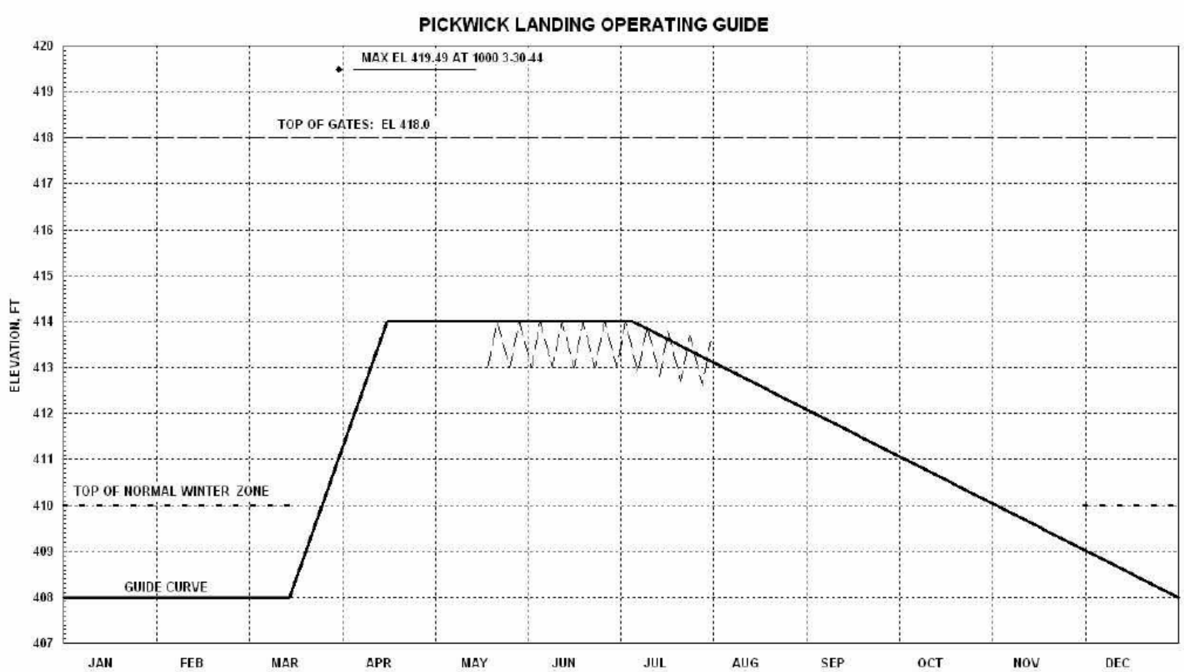
## Operating guides for the 9 mainstem projects, Great Falls, and Boone under the Base Case



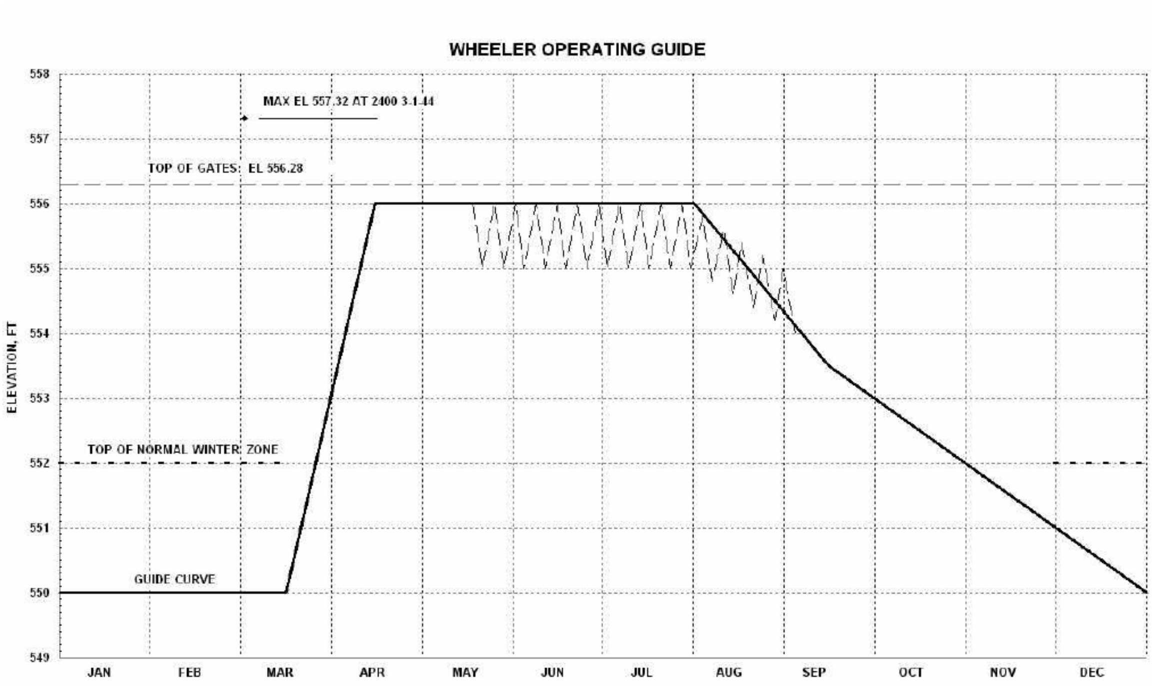



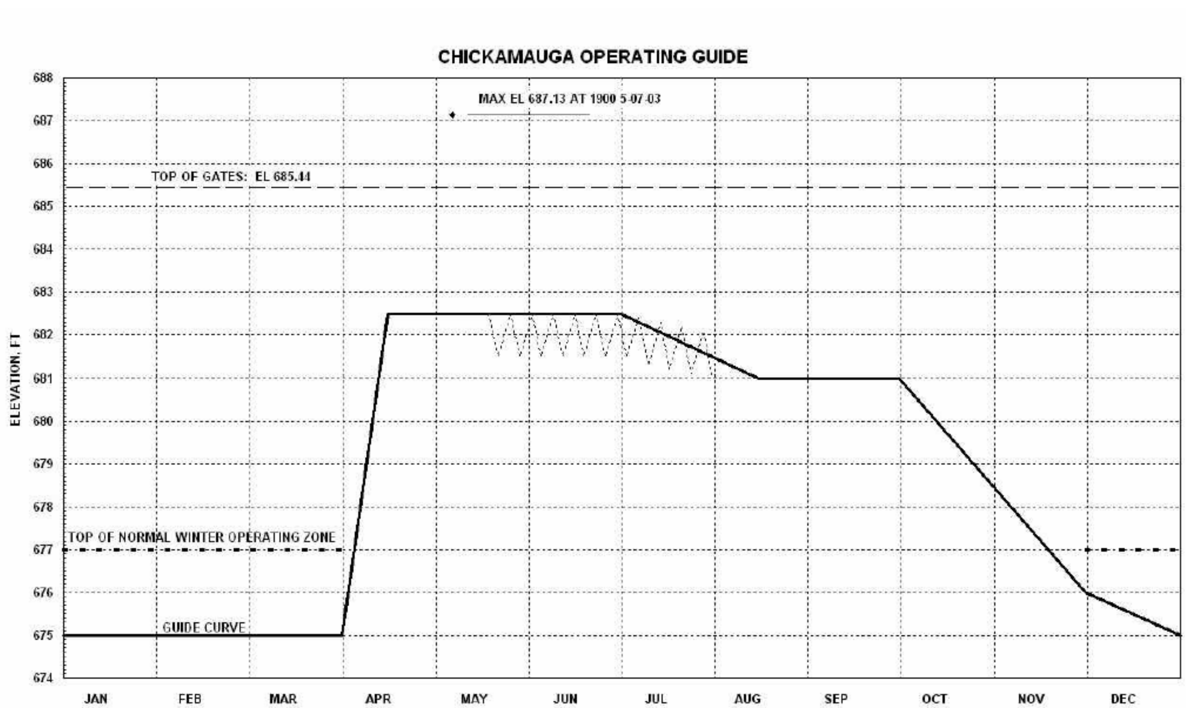
**Operating guides for the 9 mainstem projects, Great Falls, and Boone under the Base Case (cont.)**



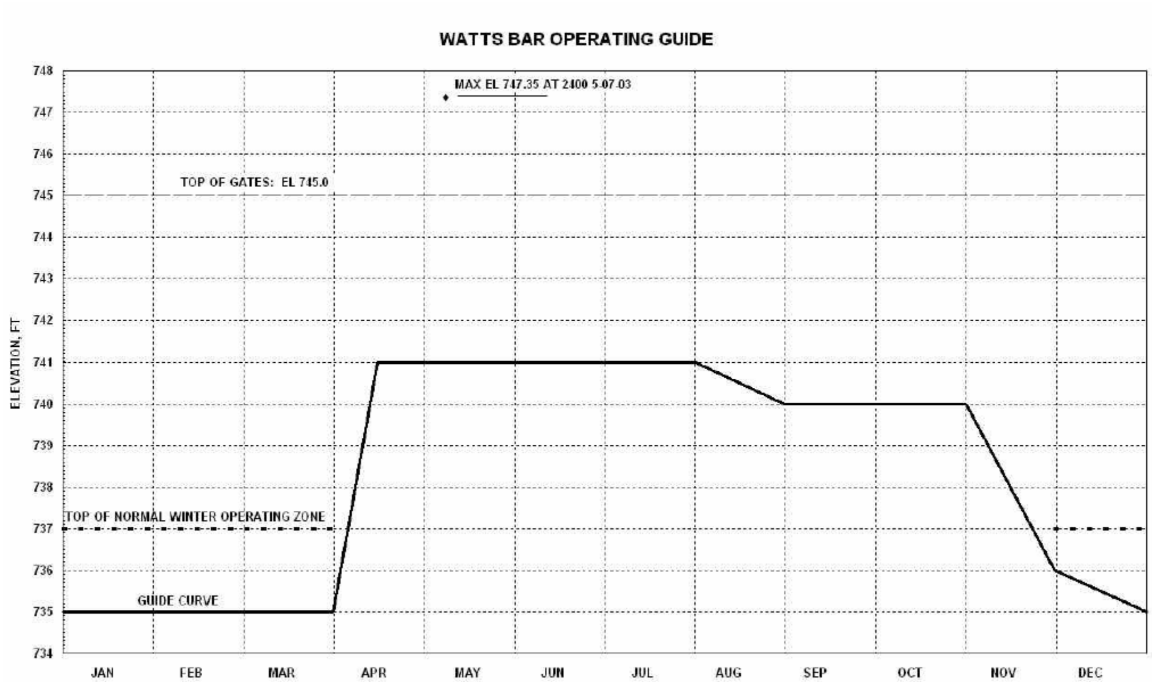



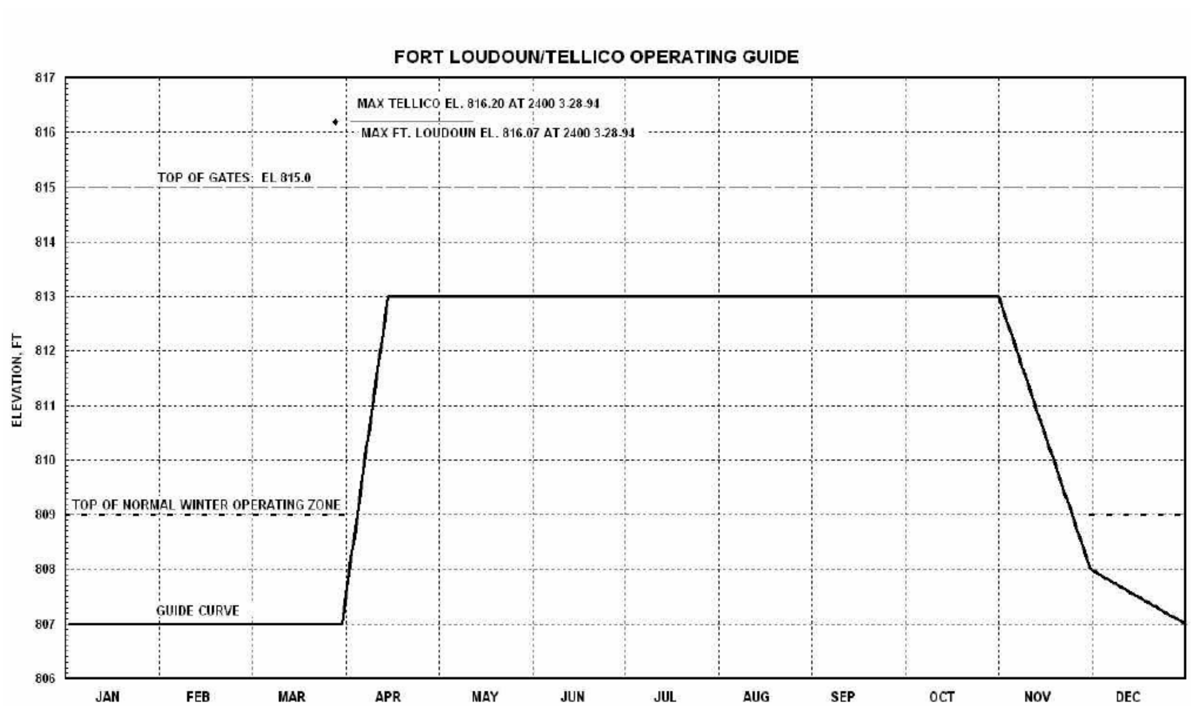
## Operating guides for the 9 mainstem projects, Great Falls, and Boone under the Base Case (cont.)



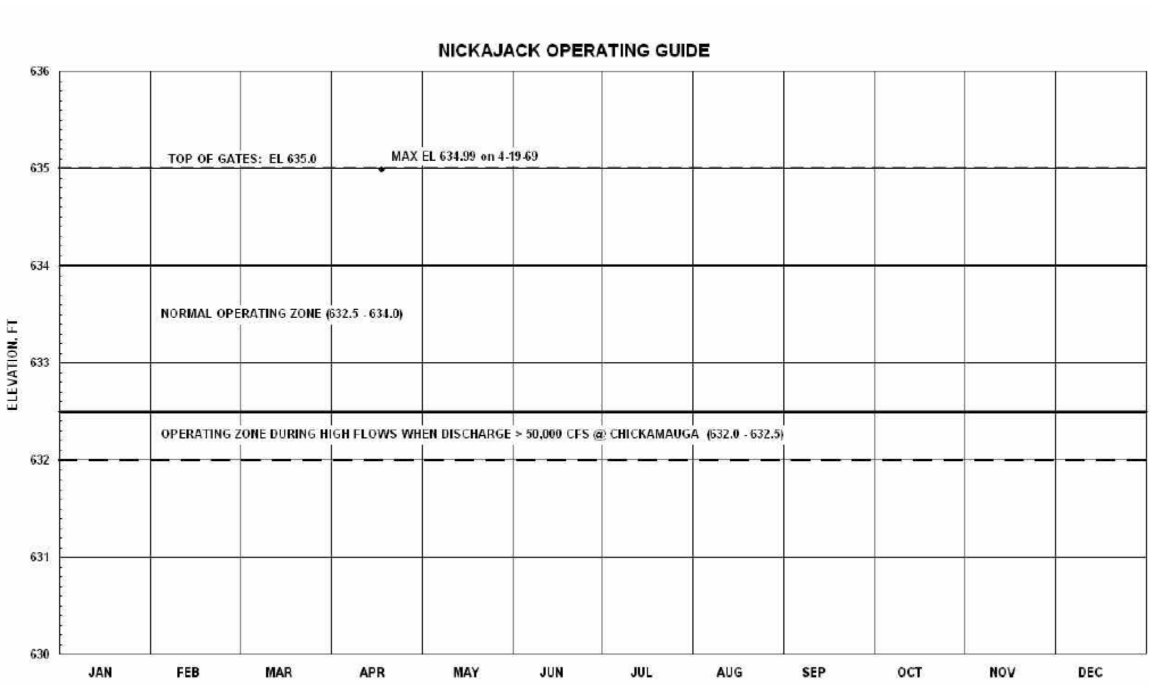



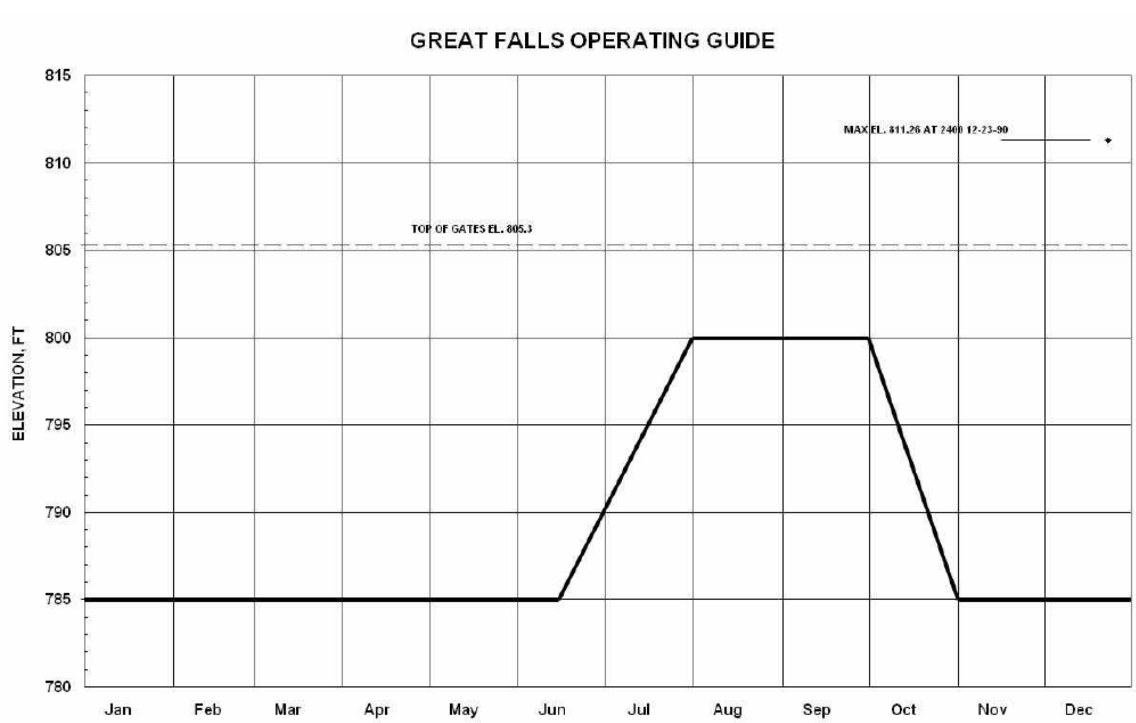
**Operating guides for the 9 mainstem projects, Great Falls, and Boone under the Base Case (cont.)**



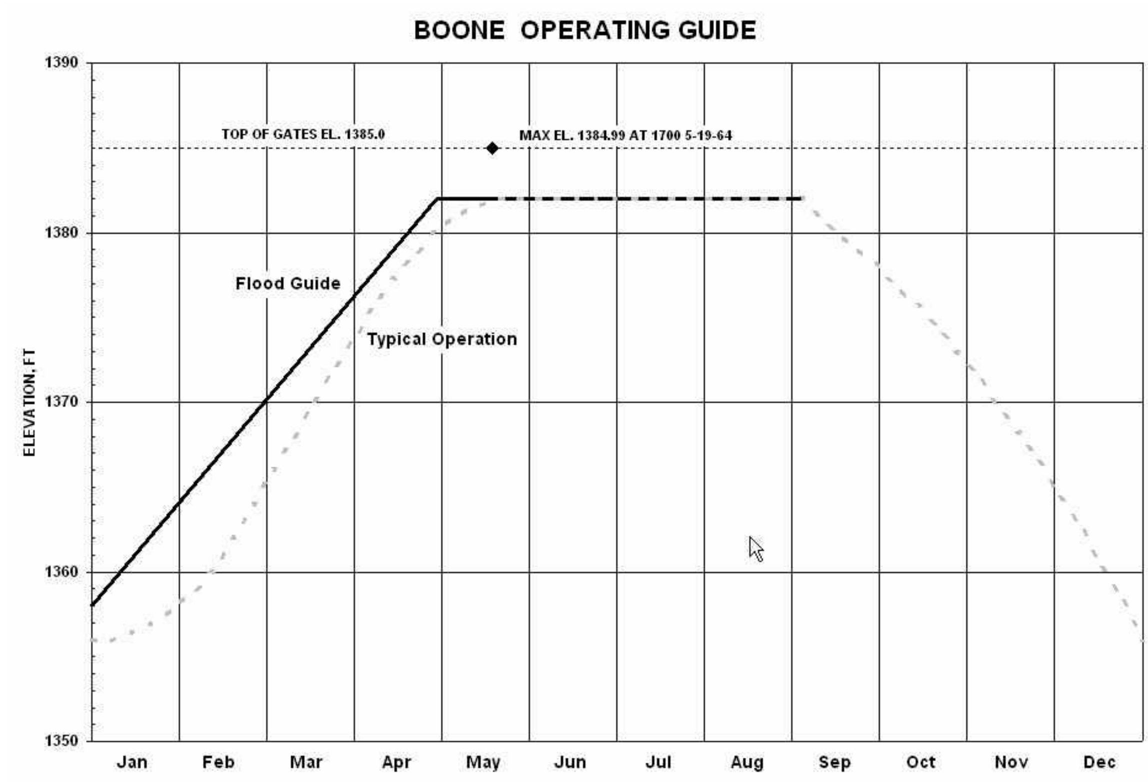



## Operating guides for the 9 mainstem projects, Great Falls, and Boone under the Base Case (cont.)

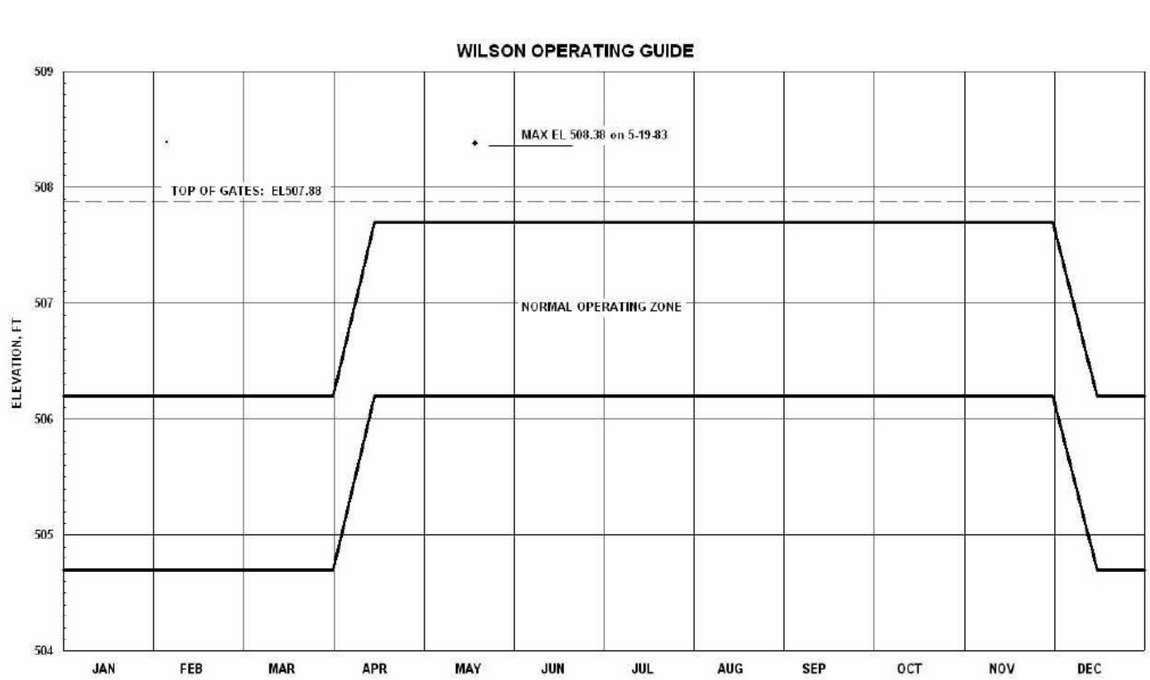


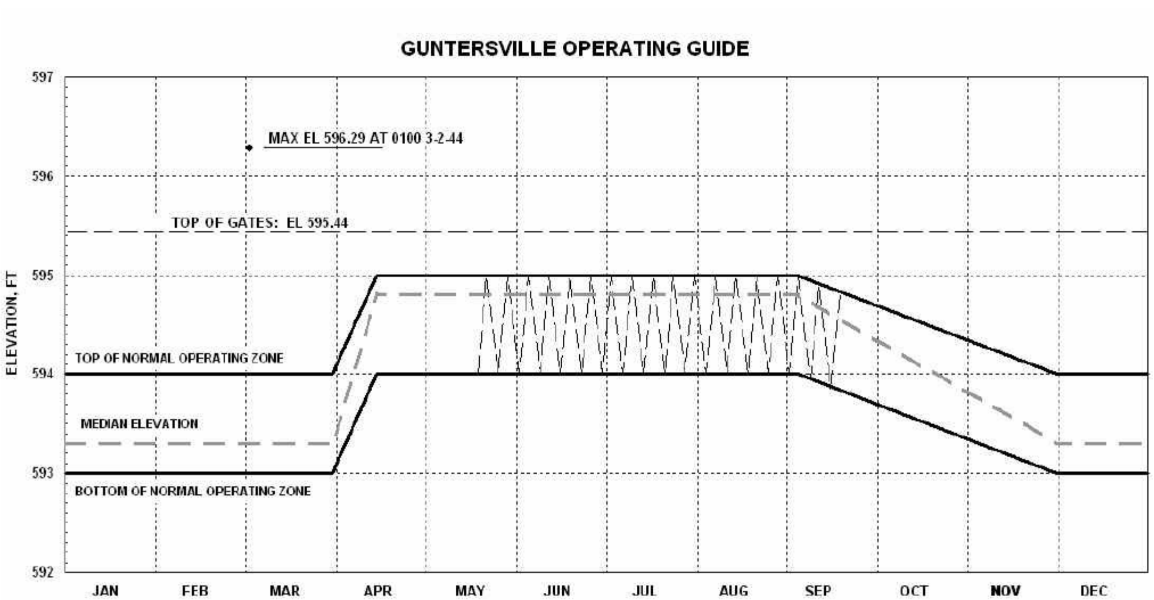



**Operating guides for the 9 mainstem projects, Great Falls, and Boone under the Base Case (cont.)**

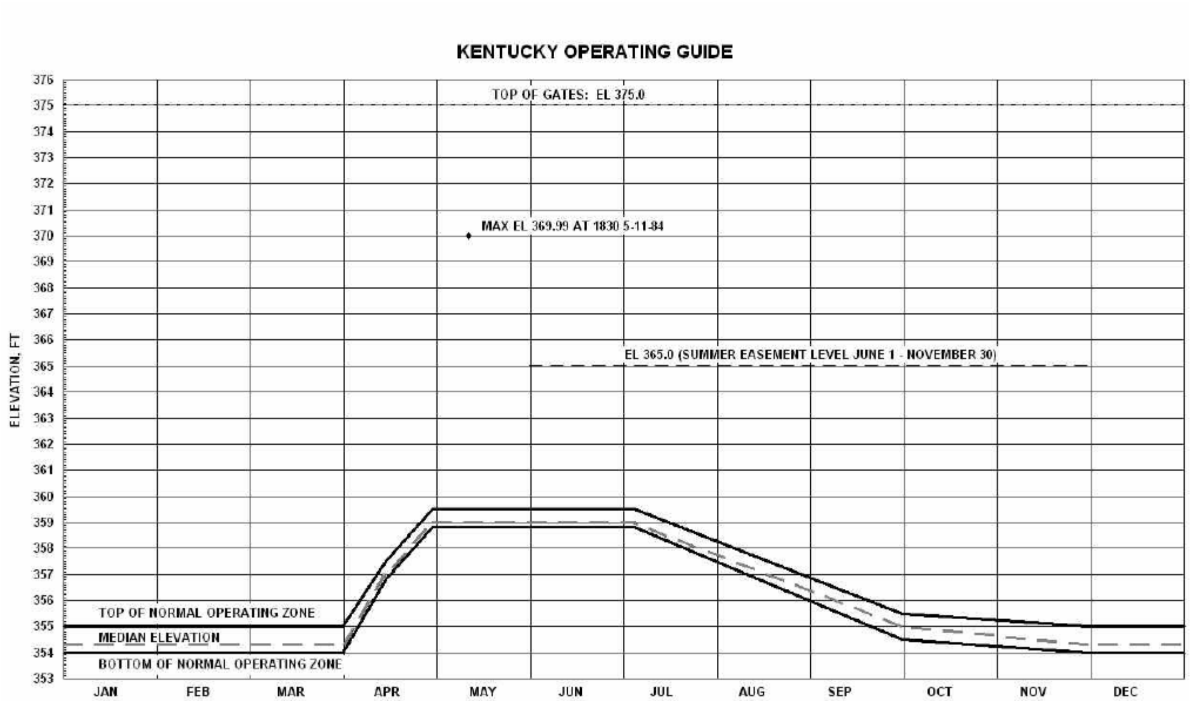


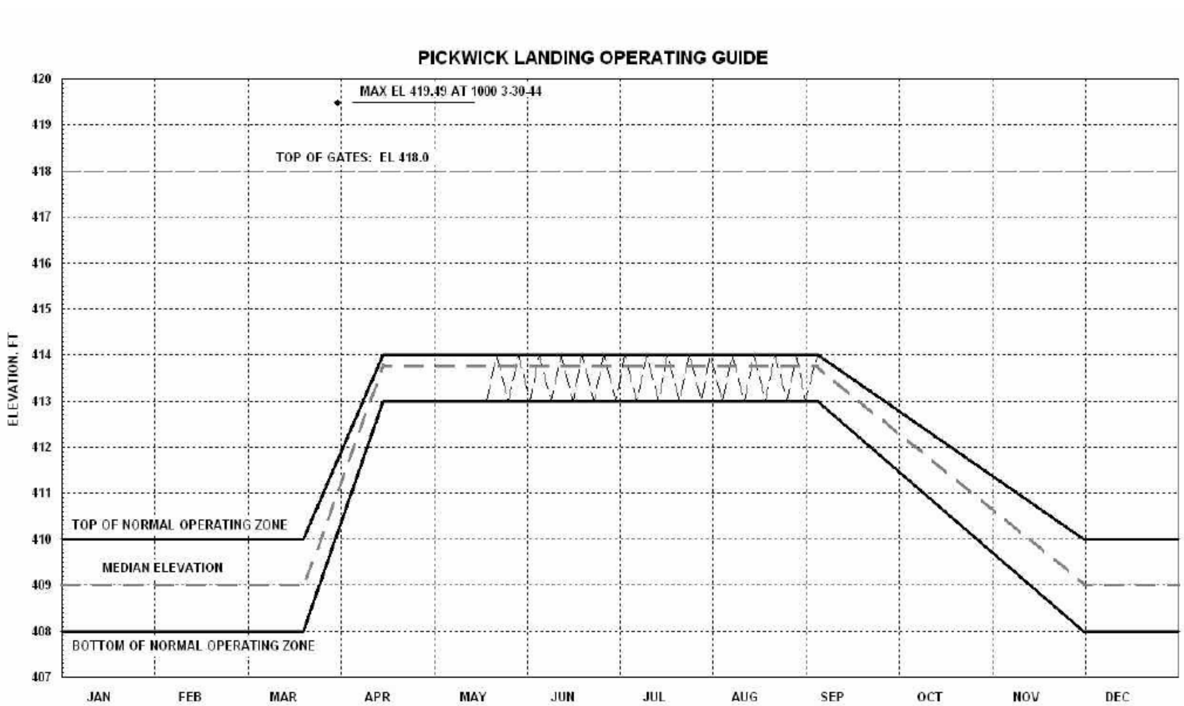
### Operating guides for the nine mainstem projects, Great Falls, and Boone under the Preferred Alternative



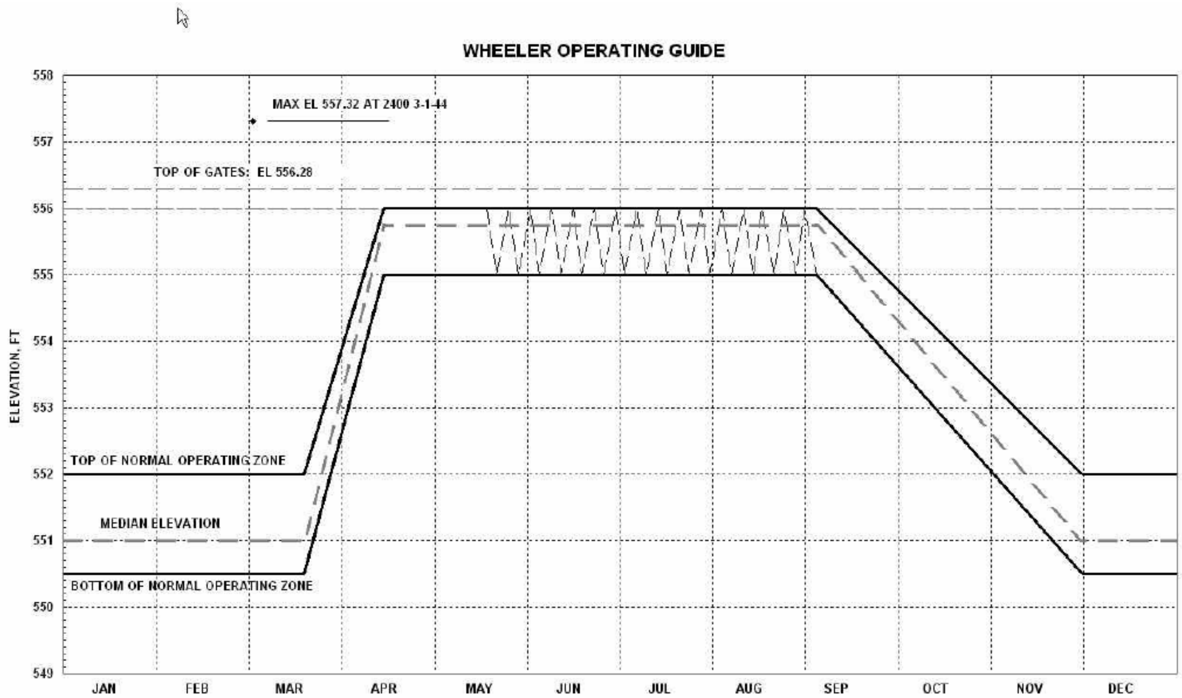



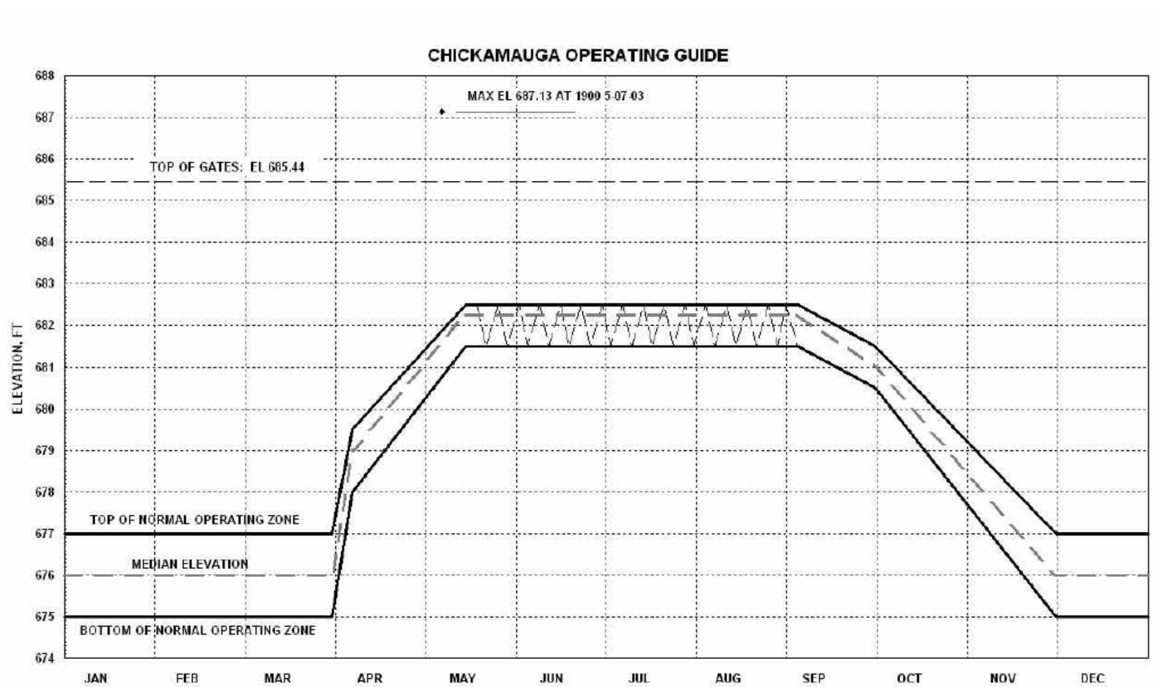
**Operating guides for the nine mainstem projects, Great Falls, and Boone under the Preferred Alternative (cont.)**



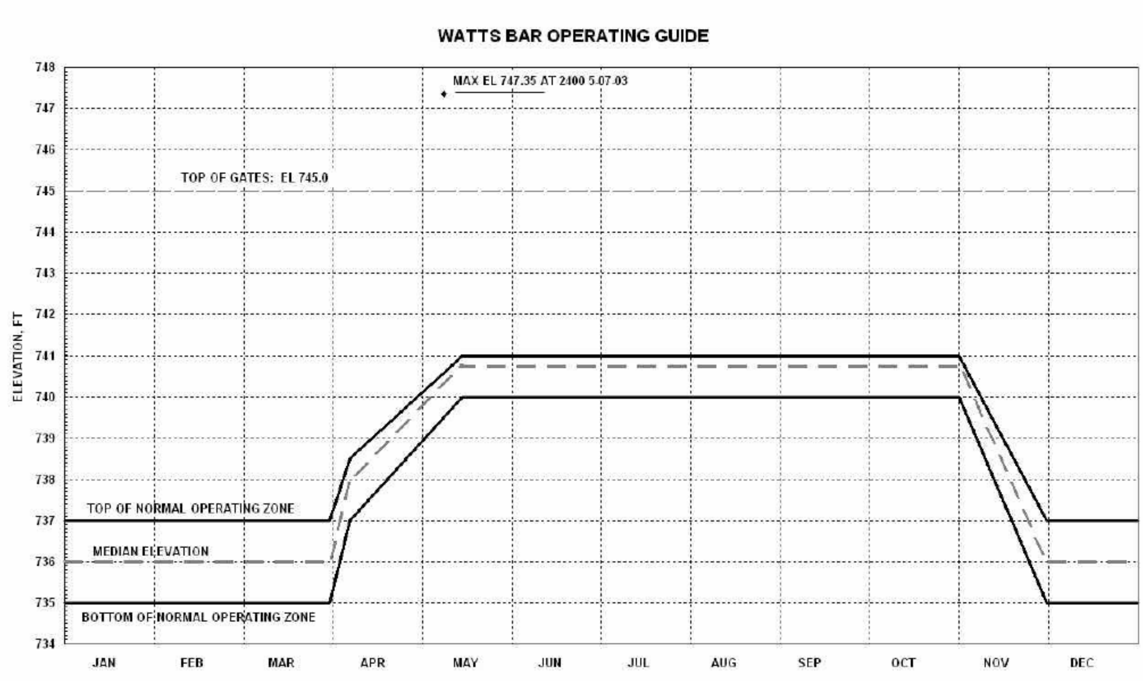



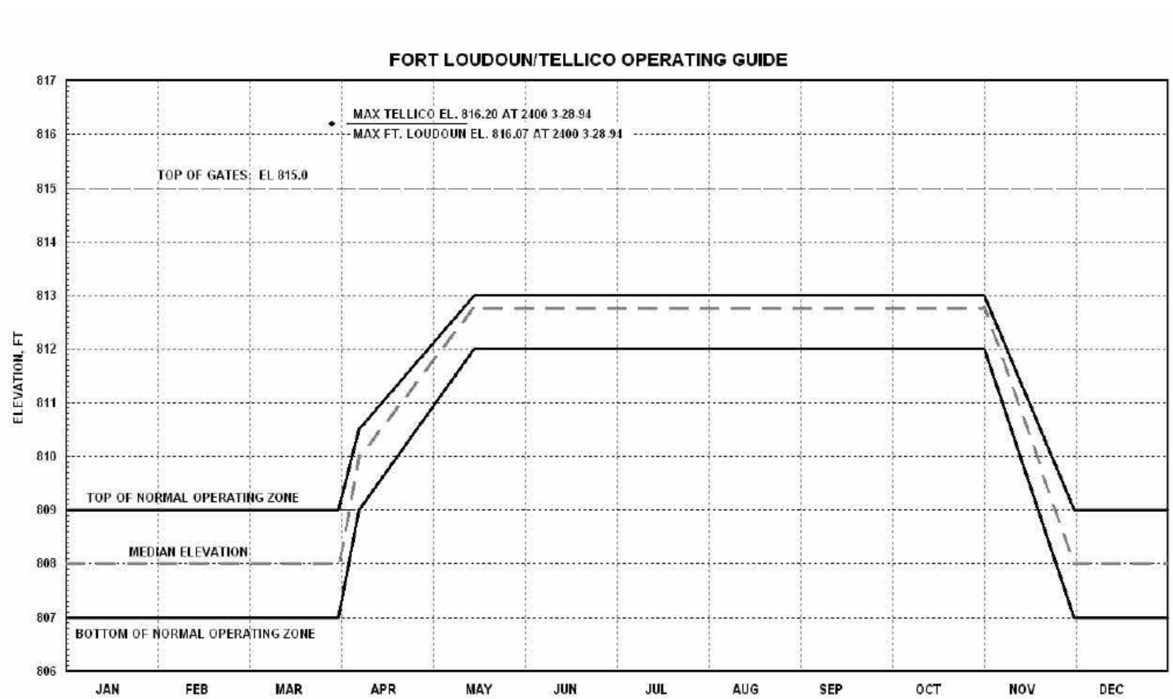
**Operating guides for the nine mainstem projects, Great Falls, and Boone under the Preferred Alternative (cont.)**



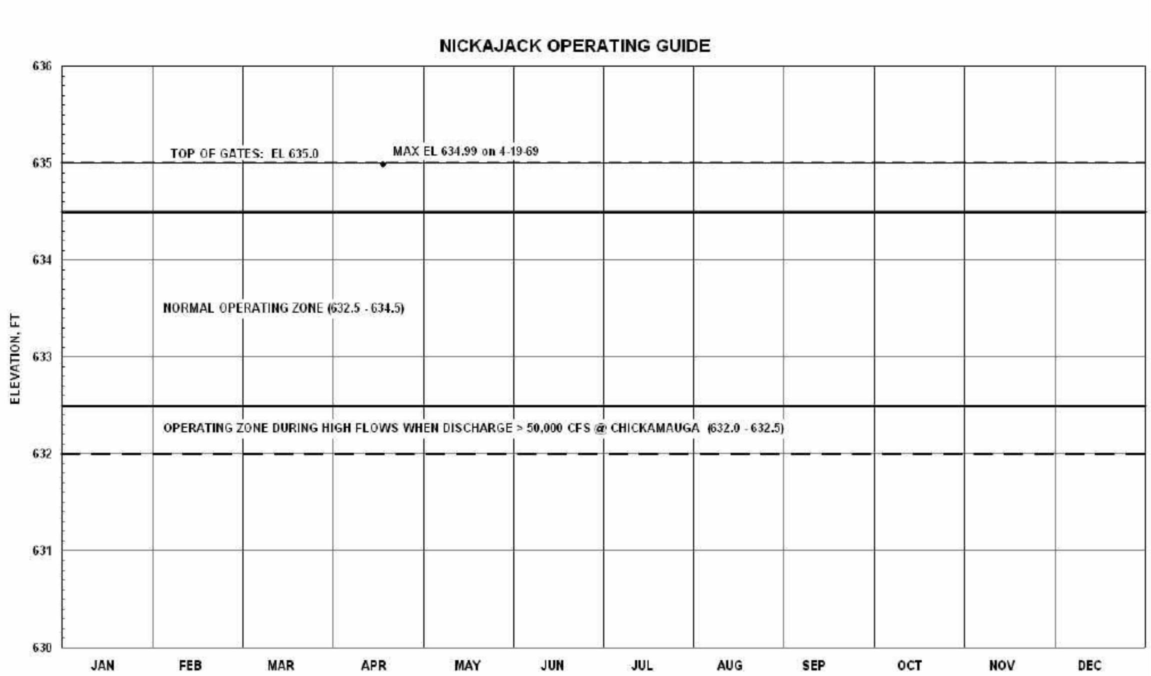



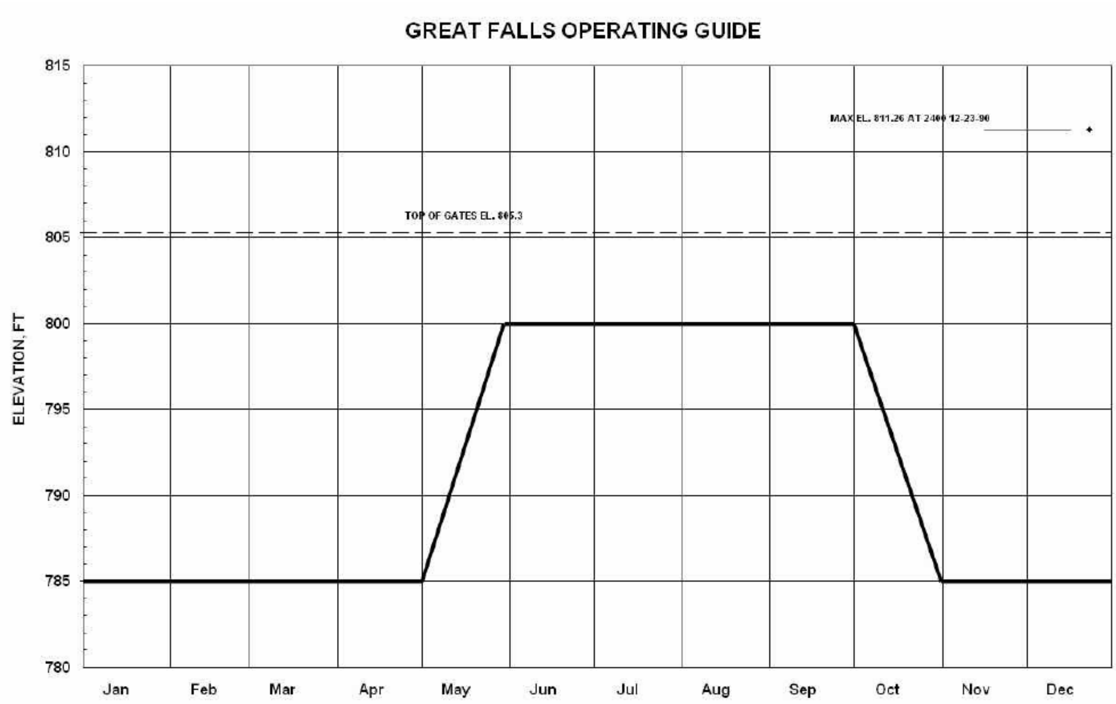
**Operating guides for the nine mainstem projects, Great Falls, and Boone under the Preferred Alternative (cont.)**



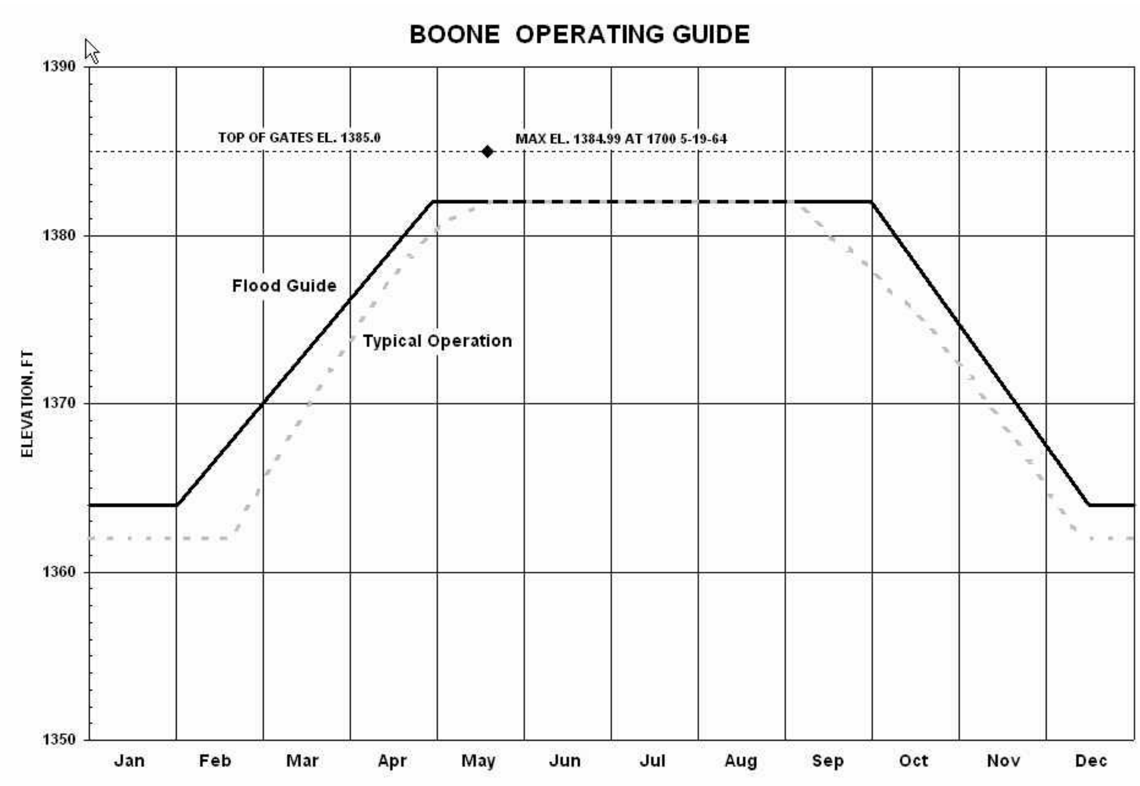



## Operating guides for the nine mainstem projects, Great Falls, and Boone under the Preferred Alternative (cont.)

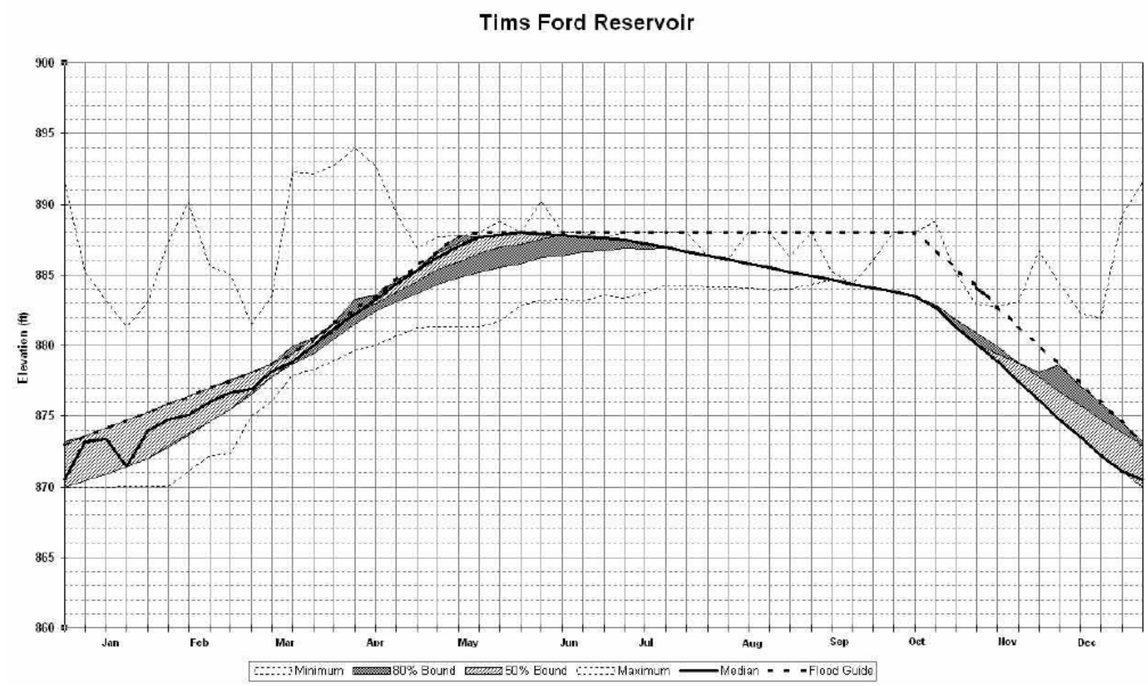


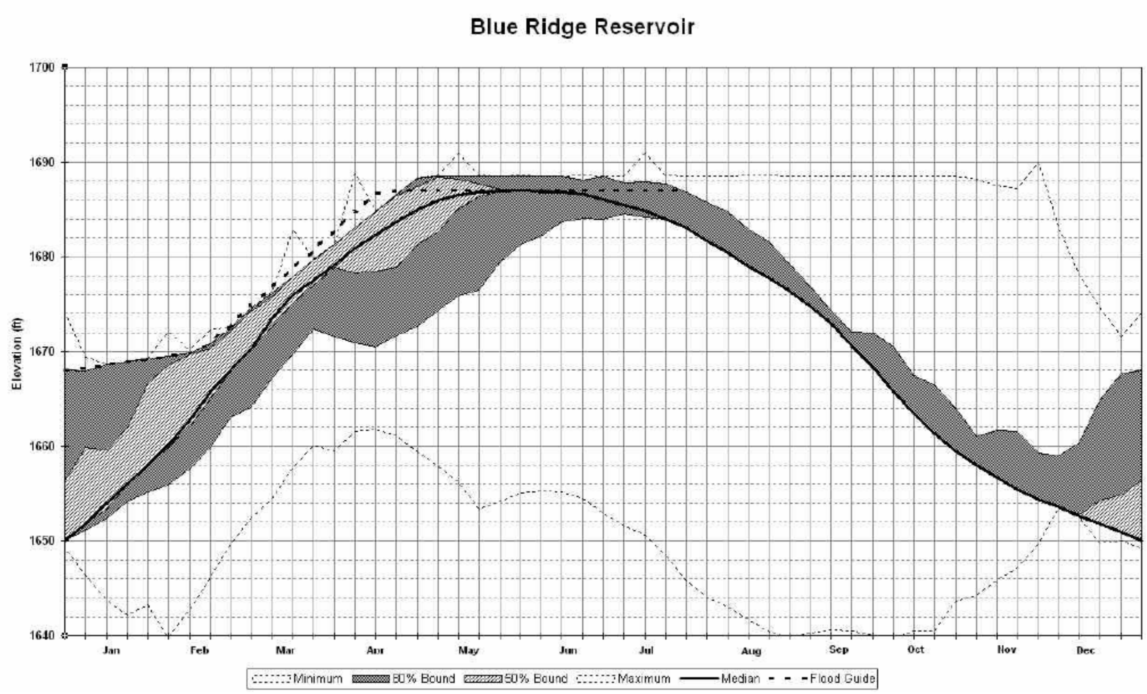



**Operating guides for the nine mainstem projects, Great Falls, and Boone under the Preferred Alternative (cont.)**

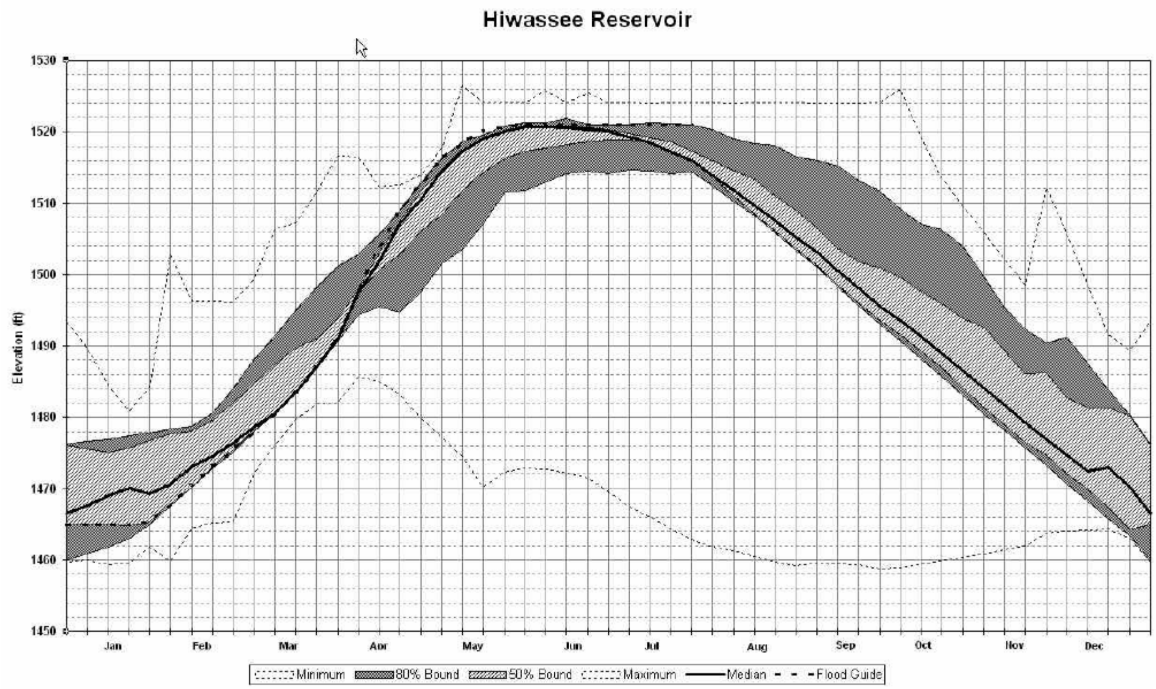


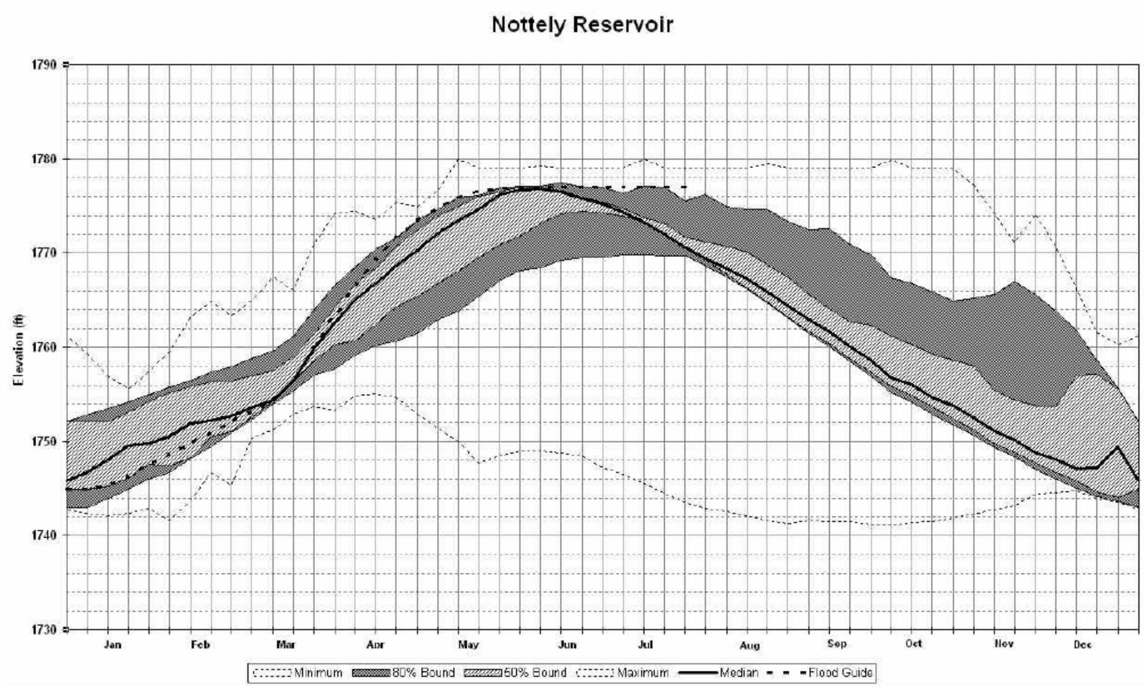
## Elevation probability plots along with flood guide curves for tributary reservoirs under the Base Case



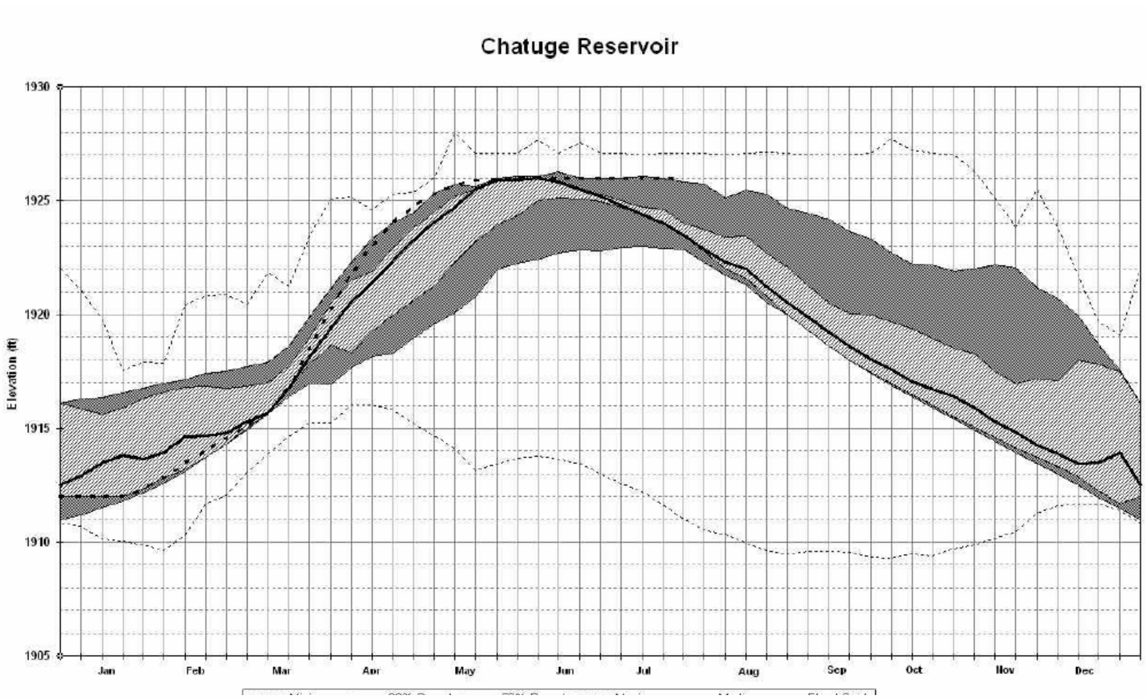



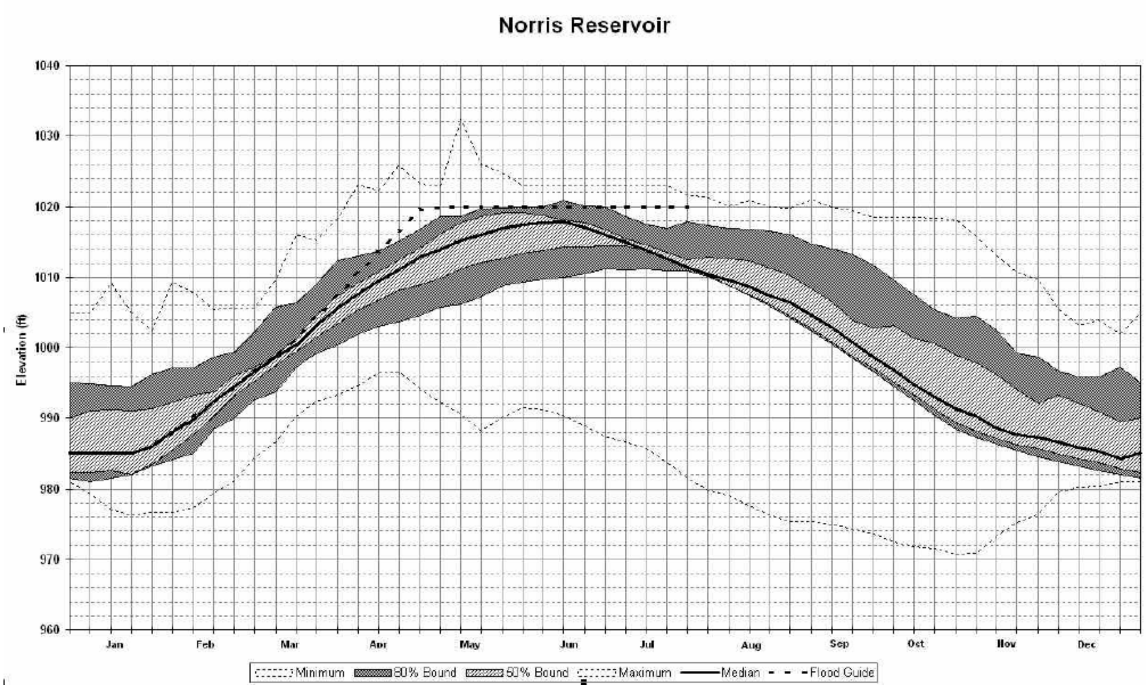
**Elevation probability plots along with flood guide curves for tributary reservoirs under the Base Case (cont.)**



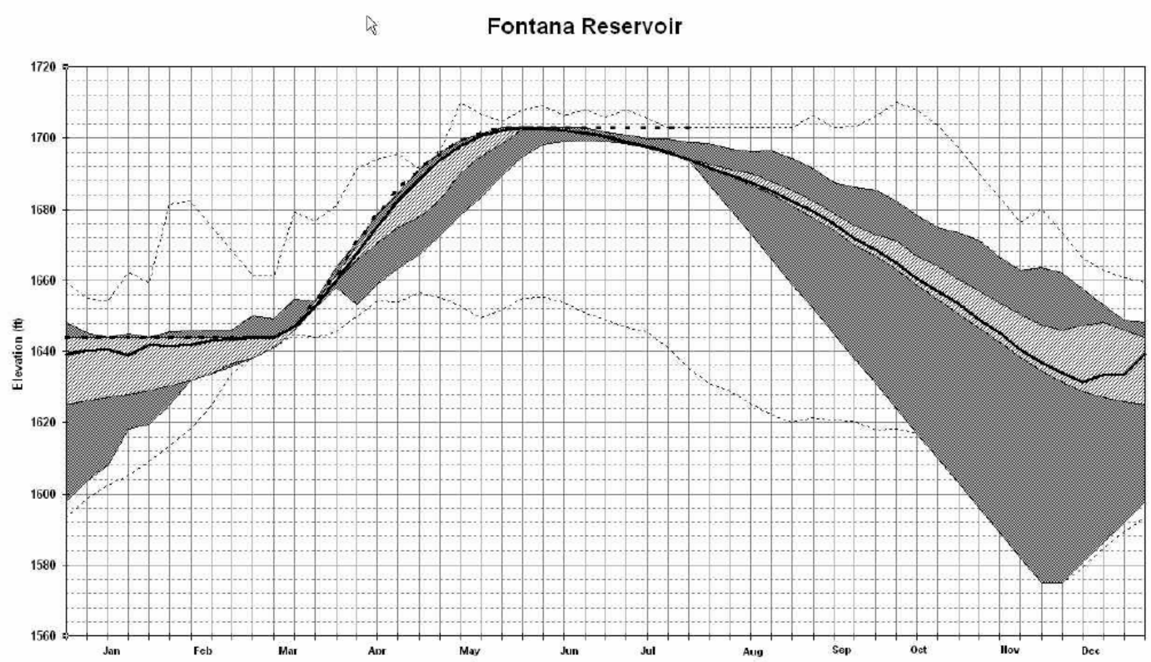



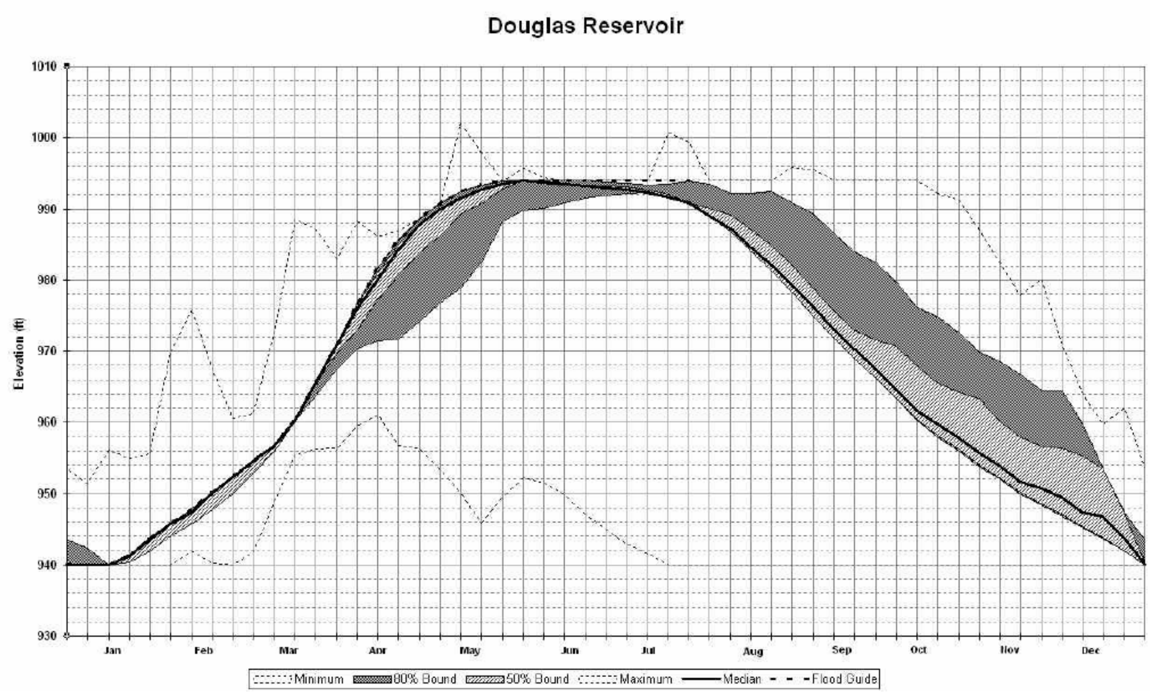
**Elevation probability plots along with flood guide curves for tributary reservoirs under the Base Case (cont.)**



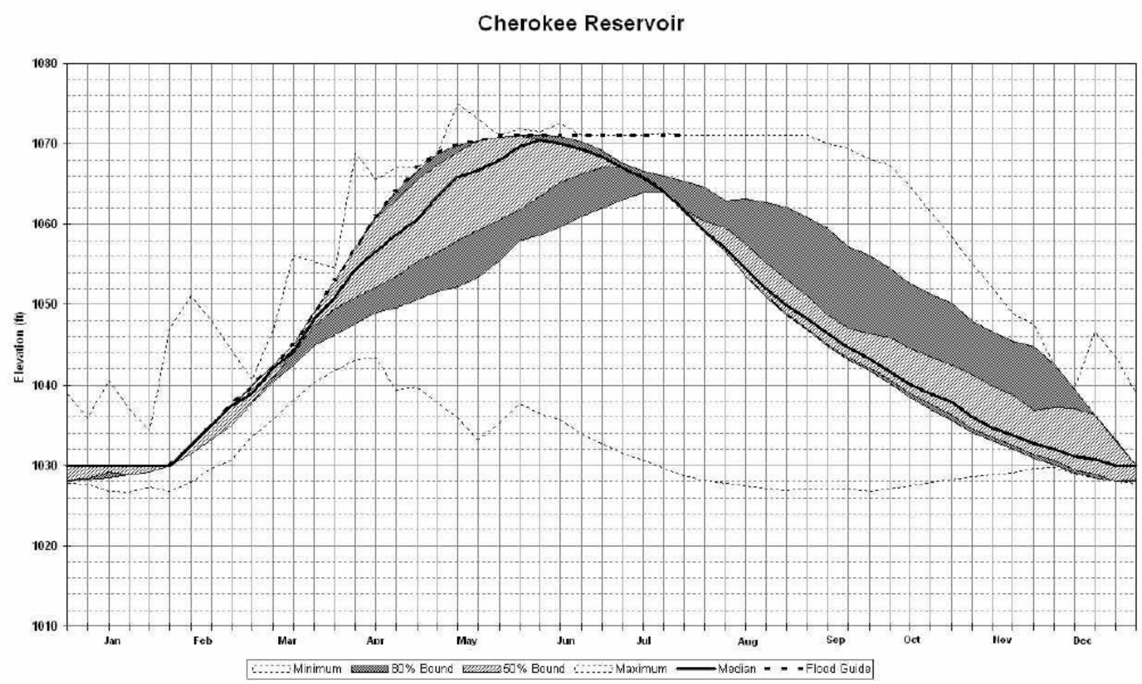



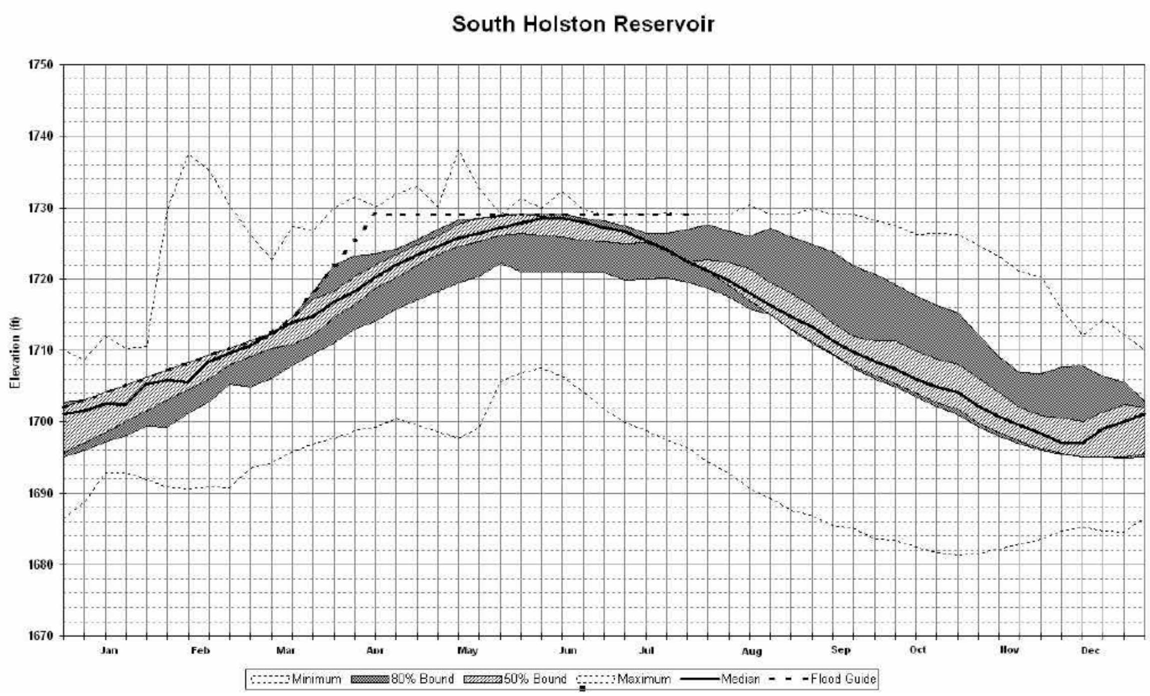
**Elevation probability plots along with flood guide curves for tributary reservoirs under the Base Case (cont.)**



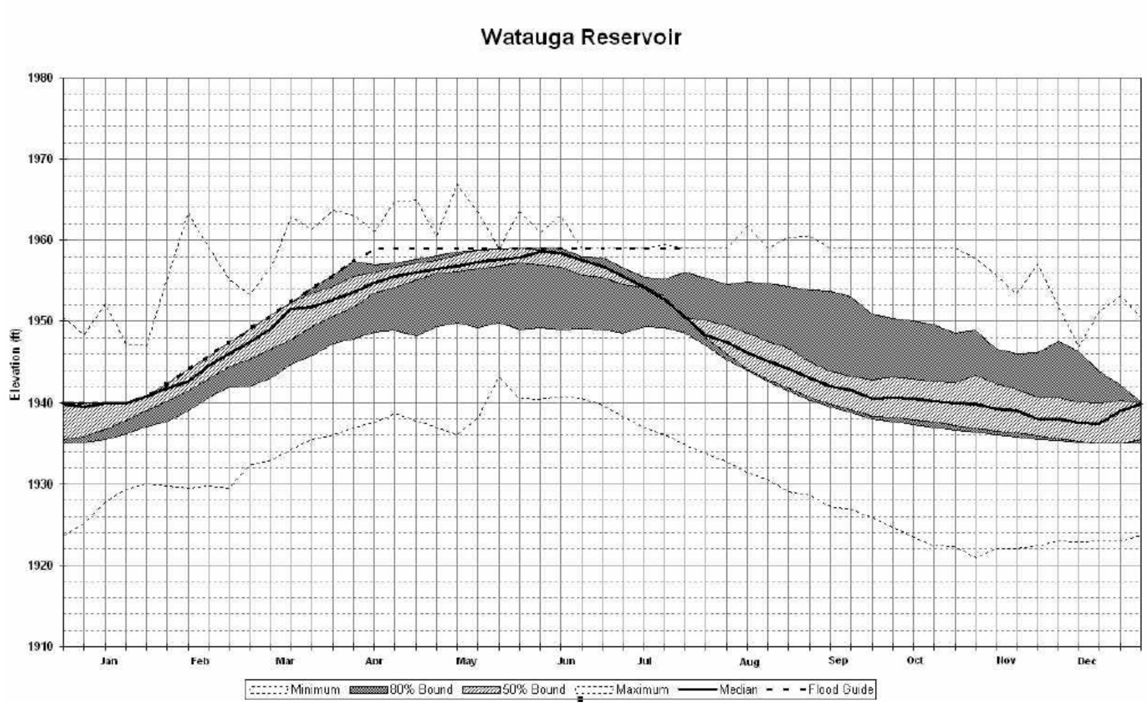



**Elevation probability plots along with flood guide curves for tributary reservoirs under the Base Case (cont.)**

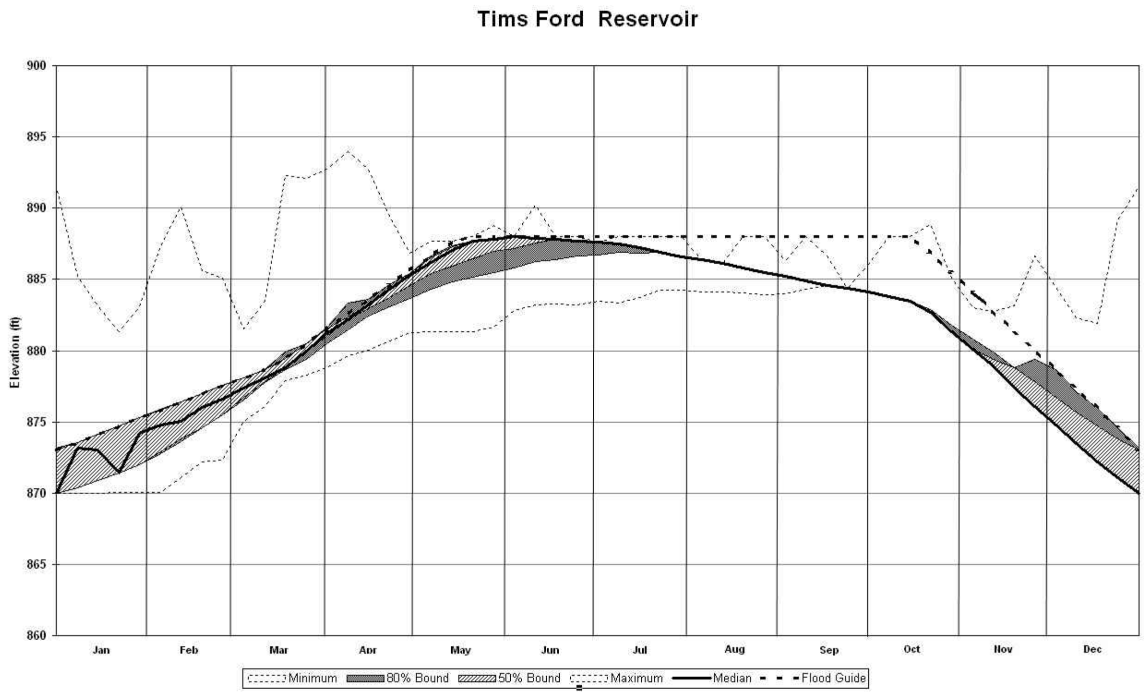


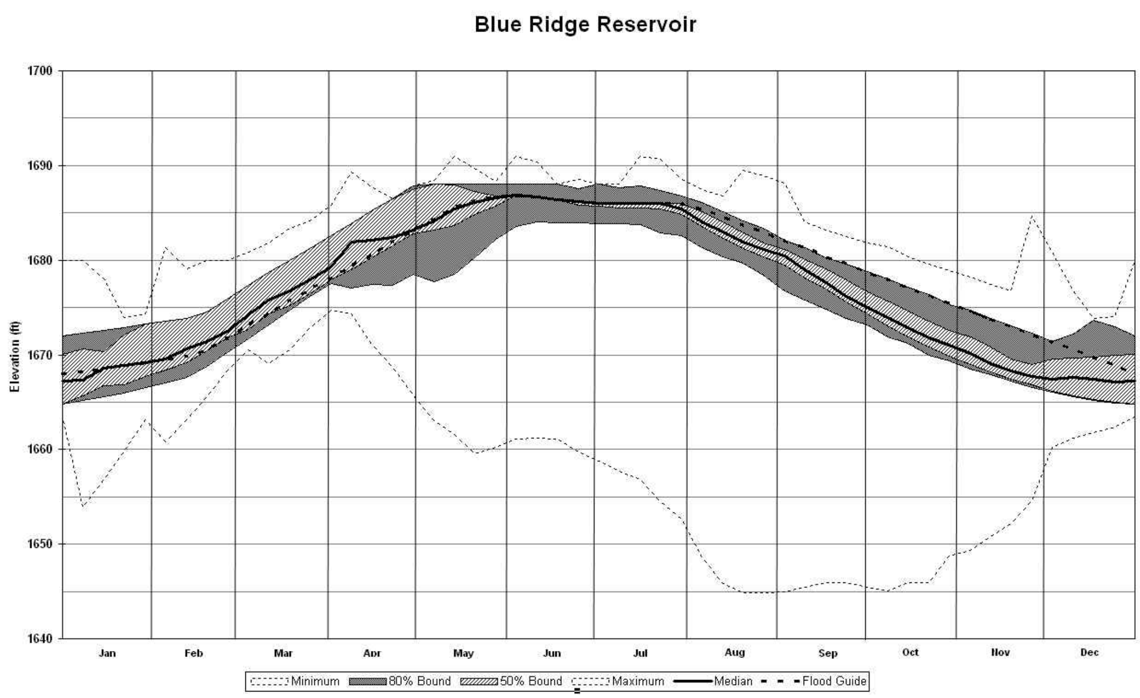



**Elevation probability plots along with flood guide curves for tributary reservoirs under the Base Case (cont.)**

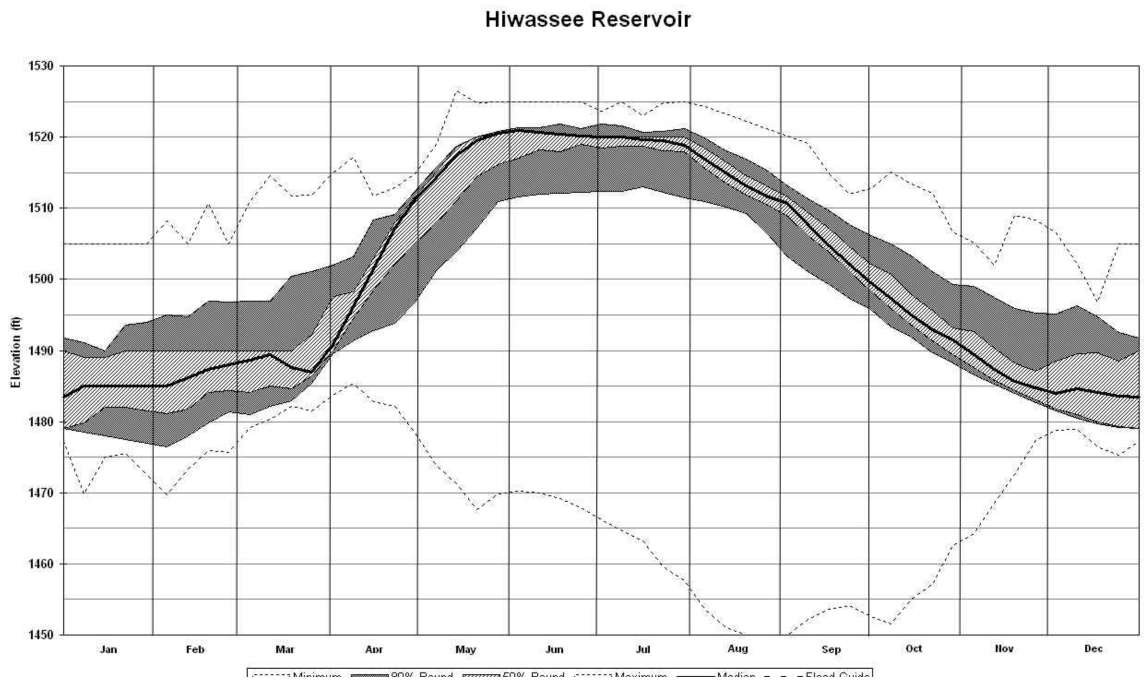


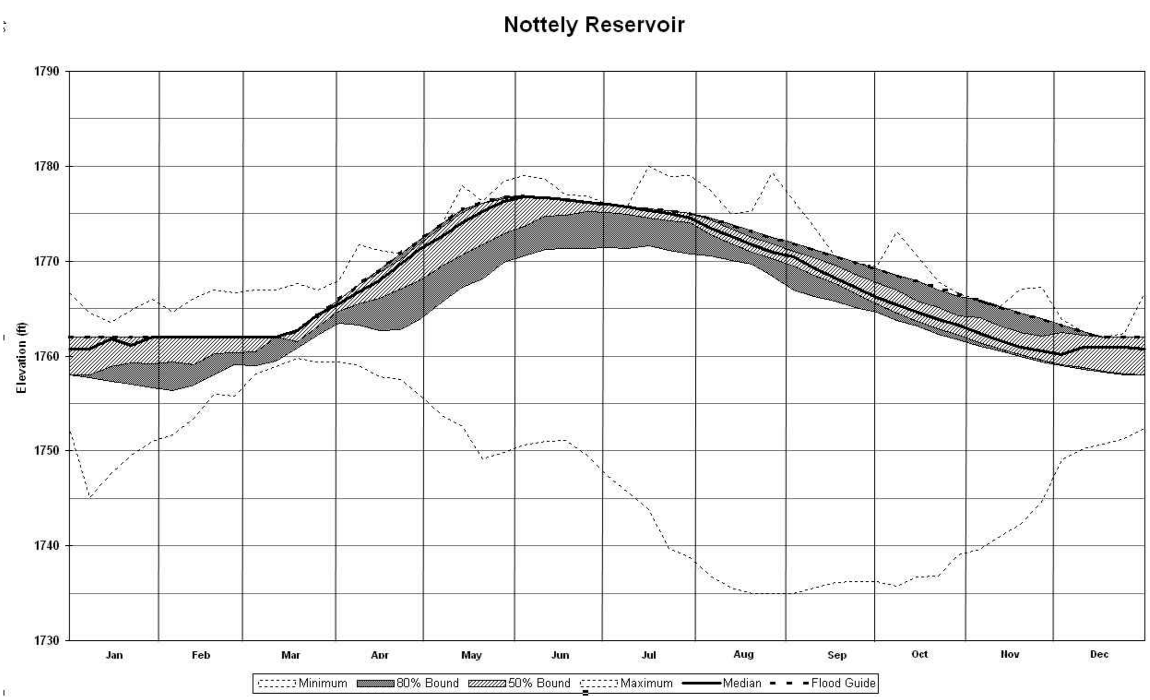
## Elevation probability plots along with flood guide curves for tributary reservoirs under the Preferred Alternative



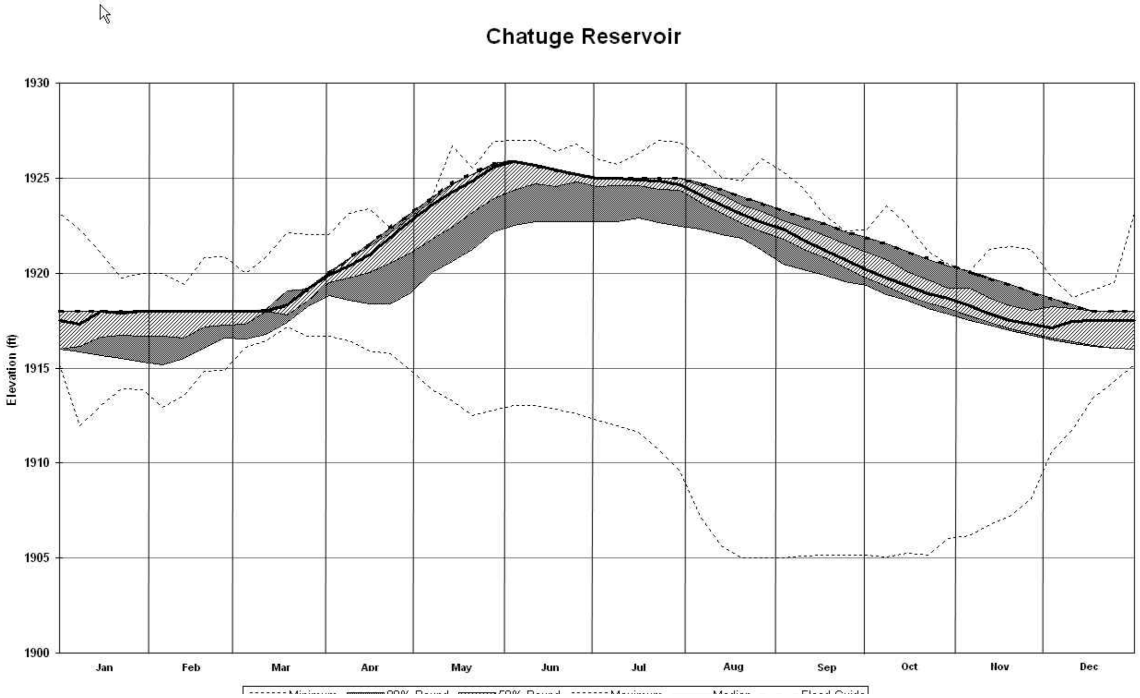



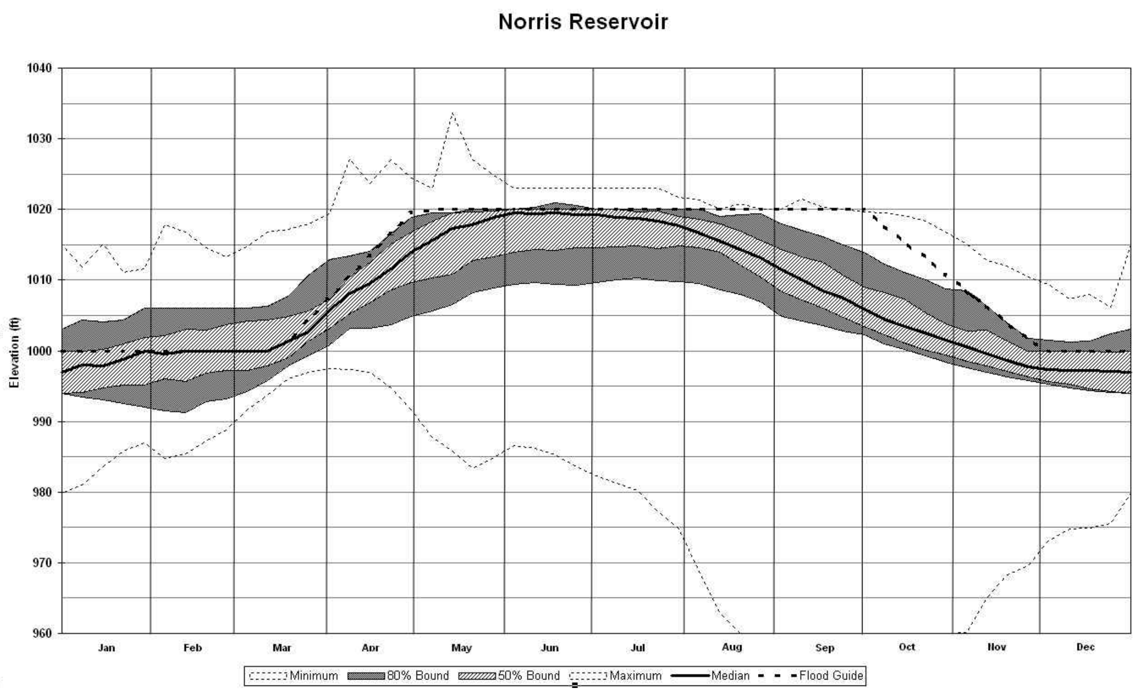
**Elevation probability plots along with flood guide curves for tributary reservoirs under the Preferred Alternative (cont.)**



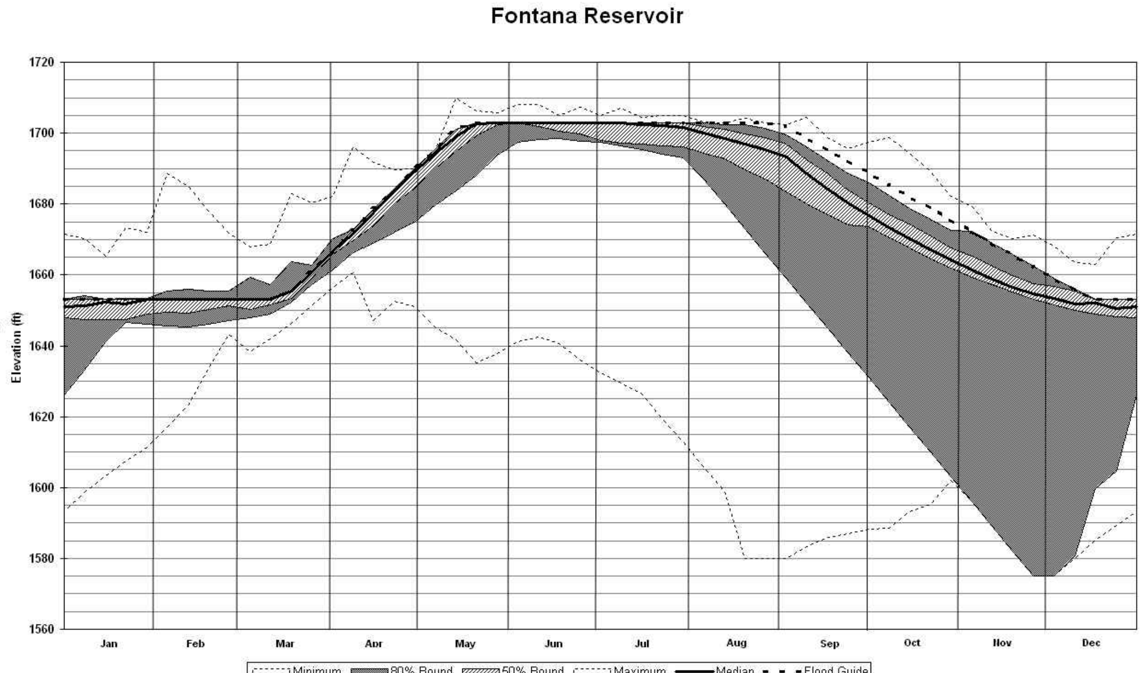



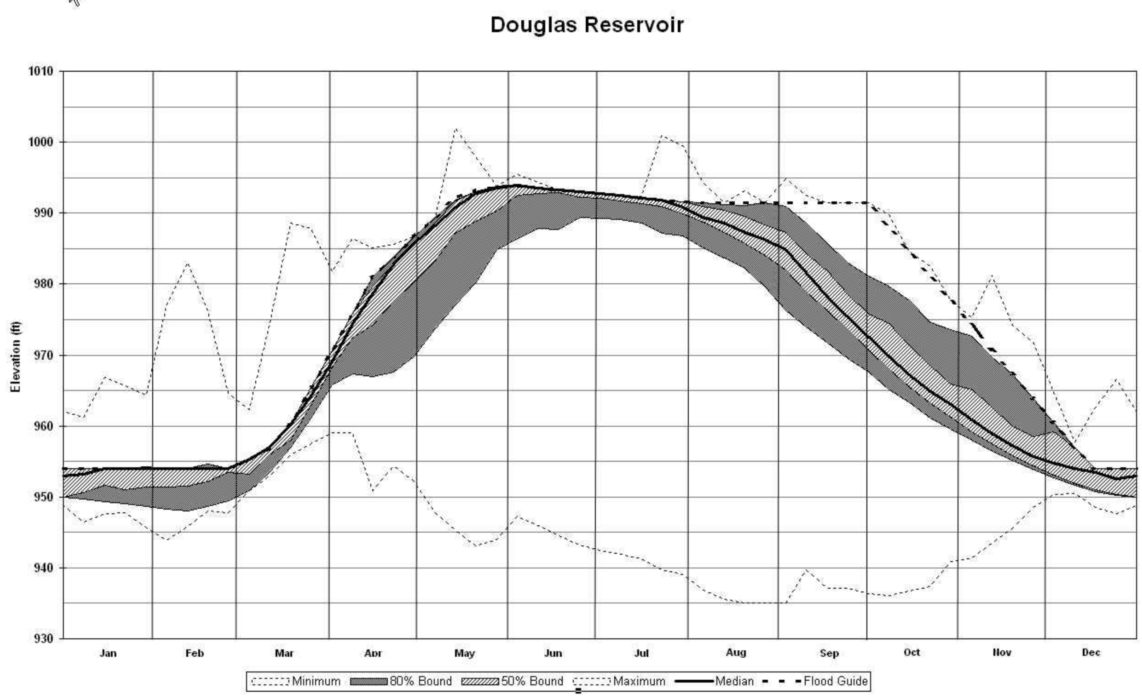
**Elevation probability plots along with flood guide curves for tributary reservoirs under the Preferred Alternative (cont.)**



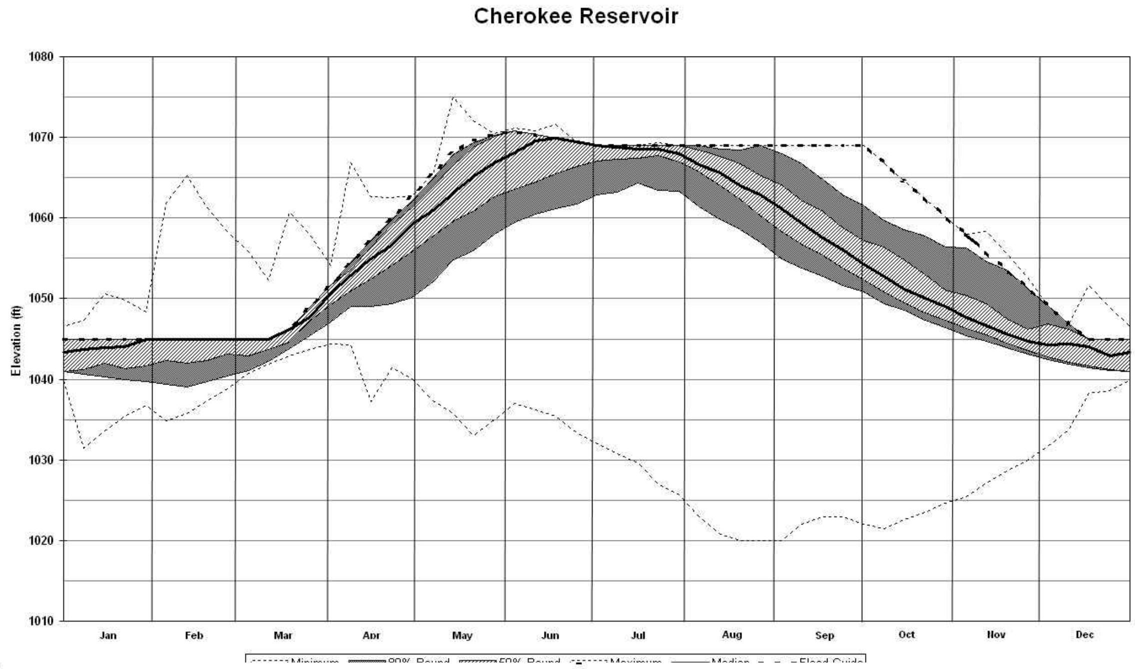



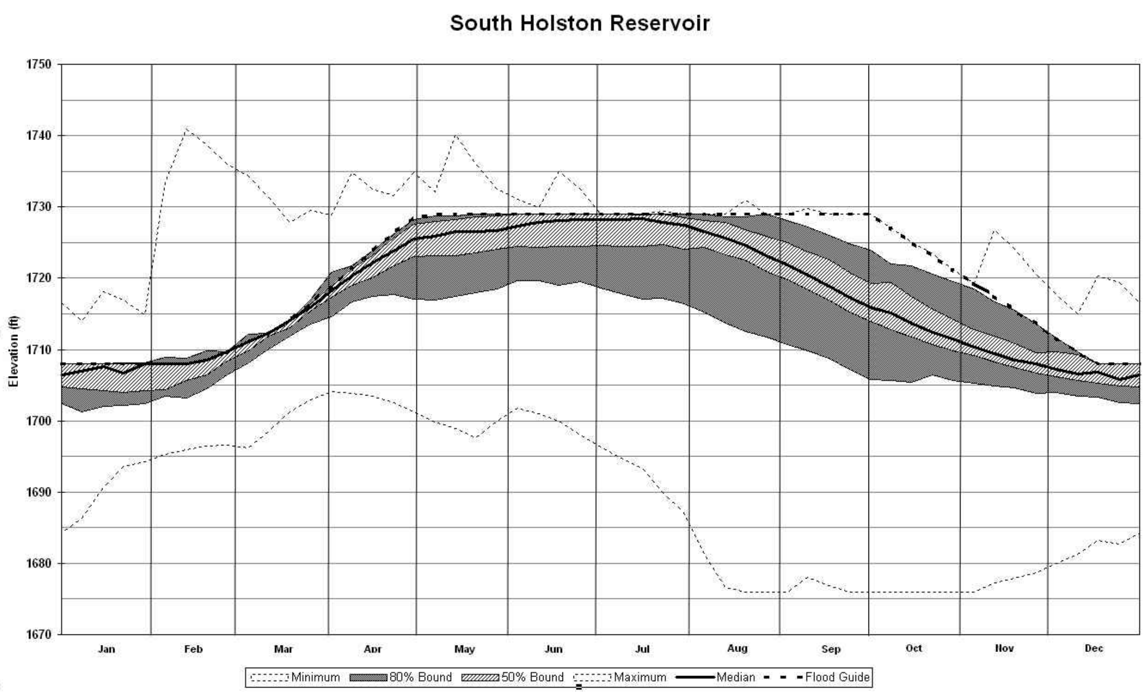
## Elevation probability plots along with flood guide curves for tributary reservoirs under the Preferred Alternative (cont.)



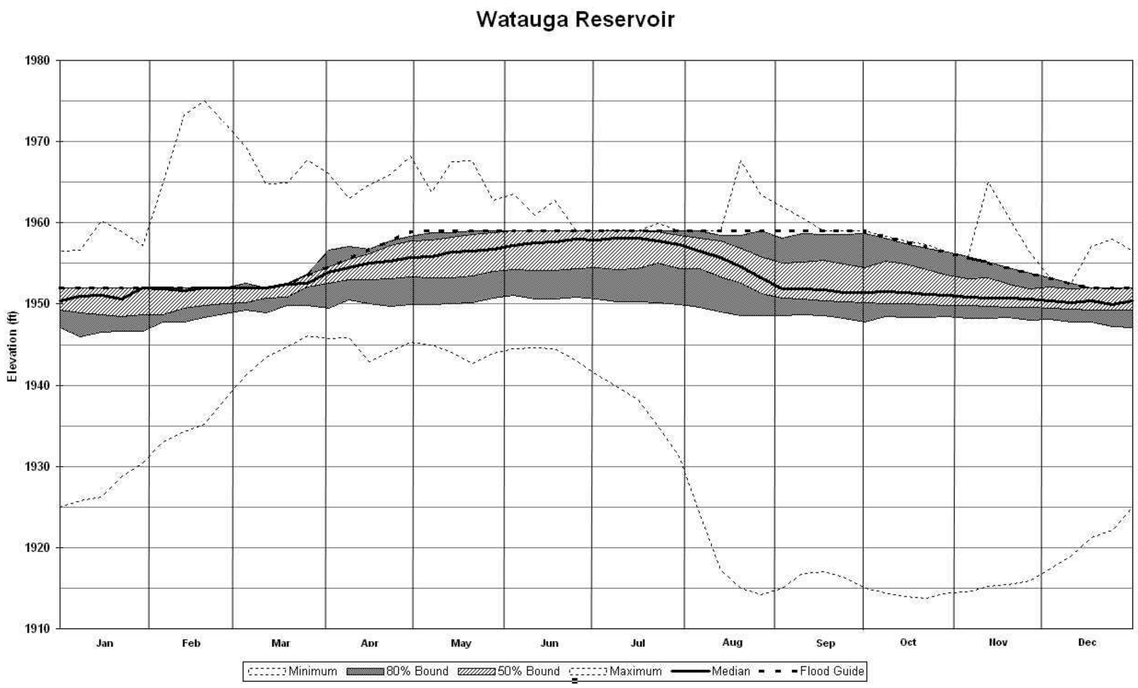



**Elevation probability plots along with flood guide curves for tributary reservoirs under the Preferred Alternative (cont.)**



## Elevation probability plots along with flood guide curves for tributary reservoirs under the Preferred Alternative (cont.)



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