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**KENTUCKY RIVER BASIN WATER SUPPLY
ASSESSMENT STUDY**

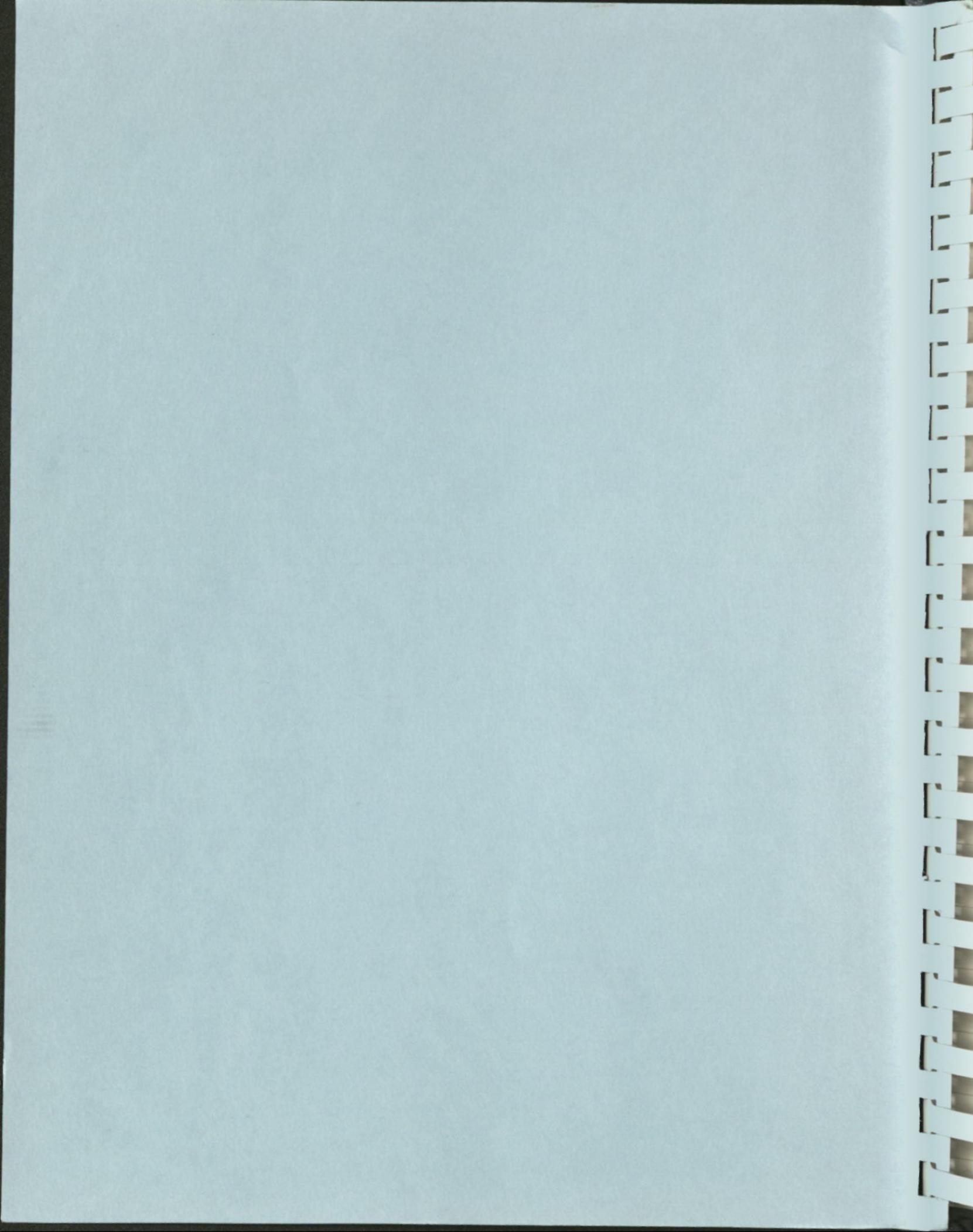
Task III Report - Deficit Analysis

L. Ormsbee
J. Herman

Prepared for:
The Kentucky River Authority

By:
The Kentucky Water Resource Research Institute
University of Kentucky
Lexington, Kentucky

AUGUST 1996
KWRRI



KENTUCKY RIVER BASIN WATER SUPPLY ASSESSMENT STUDY

TASK III - DEFICIT ANALYSIS

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- 1.2 Previous Deficit Studies
- 1.3 Weather Data and Water Use
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Prepared for:

The Kentucky River Authority

By:
The Kentucky Water Resource Research Institute
University of Kentucky
Lexington, Kentucky

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AUGUST 1996



TRANSFERT D'INFORMATION
DU DOCUMENT

PARIS - 1988

100 pages

Format A4 (210 x 297 mm)

Le présent document a été élaboré par l'Institut national
de la statistique et de l'économie
et a été édité par l'Institut national
de la statistique et de l'économie

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EXECUTIVE SUMMARY

This report summarizes the water supply deficit results of Phase III of the KWRRI Kentucky River Basin Water Supply Assessment Study commissioned by the Kentucky River Authority. The purpose of Phase III is to quantify water supply in the Kentucky River Basin during a severe drought for the existing supply system/resources under current and projected demand forecasts. A quantification of the susceptibility of the basin to a severe drought is necessary for the Authority to properly develop a long-range water supply plan.

A computer model was developed to simulate water exchanges and movement in the basin. The model, KYBASIN, is a planning tool designed to quantify daily water supply and deficits in the basin under a series of user-defined conditions. These conditions describe the design drought, demand forecasts, and physical parameters of the river system. All deficit results presented in this report were generated using the KYBASIN model. Upon completion of the contract, this model will be turned over to the Authority for use in evaluating water supply alternatives.

The impacts on water supply from the imposition of two historical droughts are examined in the report. The two droughts are those that occurred in 1930 and 1953, and represent the two most severe droughts on record in the basin. Simulation of the basin was performed on the existing supply system for each drought under demand forecasts for 1994, 2000, 2010, and 2020. Two demand forecasts were developed for each future year to reflect two population projections; one assuming a moderate population growth, and one assuming a high population growth rate.

The analyses in this report identify potential water supply deficits in the basin under a severe drought occurrence if current supply resources are not upgraded. The table below identifies the total annual deficits in the basin that would occur if 1930 or 1953 drought conditions were to re-occur under each demand forecast. Two deficit values are listed for future years to reflect the two population forecasts.

Table E.1: Total basin water supply deficits in billion gallons

Demand Forecast	1994	2000	2010	2020
1930 Drought	6.3	6.6 / 7.3	7.2 / 8.5	7.4 / 9.7
1953 Drought	2.2	2.3 / 2.6	2.5 / 3.2	2.7 / 3.8

The deficits presented in Table E.1 are highly sensitive to estimates for lock and dam leakage, transmission losses from headwater reservoirs, and minimum flow requirements. Definitive estimates for lock leakages and transmission losses are not available. Current minimum flow requirements are set by the Division of Water to preserve river biota. Currently, minimum flow requirements are based on a statistical frequency of historic naturally occurring flows and do not identify the actual flow necessary to sustain aquamarine ecosystems. The strong influence of these three parameters on predicted deficits enforces the need for more refined estimates.

The main conclusion to be drawn from the deficit predictions in Table E.1 is the realization that significant water shortages would be incurred if a severe drought were to occur in the basin. Furthermore, water shortages of varying intensity would occur basin-wide, with the largest deficits concentrating in pool 9. The susceptibility of the basin to a severe drought enforces the need for an effective drought management strategy and long range water supply plan. The results offered in this report are a first step. They are intended to inform/alert decision makers of the susceptibility of the basin to a severe drought, identify the magnitude and location of water shortages, isolate significant factors influencing water supply shortages, and provide an initial reference point for evaluating potential water supply alternatives aimed at eliminating/reducing water supply deficits in the basin during a severe drought.

CHAPTER I

INTRODUCTION

1.0 Overview

This report summarizes the water supply deficit results of Phase III of the KWRRI Kentucky River Basin Water Supply Assessment Study. This study was authorized by the Kentucky River Authority in a contract with the Kentucky Water Resource Research Institute dated April 1, 1995. The study was conducted in five phases. Phase III was concerned with the determination of expected water supply deficits under historical streamflow conditions for existing and forecasted demand patterns. Phase III of the study was conducted in two parts: 1) forecast future water demands, and 2) determine the resulting water supply deficits. This report summarizes the results of the second part of the Phase III study. The results of the first part are summarized in a companion report (Blomquist, et al., 1996).

1.1 Scope of Study

The purpose of Phase III is to quantify water supply in the Kentucky River Basin during a severe drought for the existing supply system under current (1994) and projected demand forecasts for 2000, 2010, and 2020. The impacts of the two most severe historical droughts on record, those occurring in 1930 and 1953, are examined. The location and magnitude of water shortages in the basin for these two droughts are identified by performing a hydrologic/hydraulic simulation of water movement and exchanges in the basin. Water shortages, or deficits, are defined as unsatisfied municipal, industrial, and commercial demands. Demands and deficits examined in Phase III apply to surface water demands only. Non-surface water supplies and demands are addressed in the Phase II report entitled **Evaluation of Water Supplies in the Upper Forks of the Kentucky River Basin**. (Carey and Morris, 1996)

1.2 Physical Description of Study Area

The Kentucky River Basin extends over much of the central and eastern portions of the state and is home to approximately 710,000 Kentuckians. The watershed includes all or part of 42 counties and drains over 7,000 square miles with a tributary network of more than 15,000 miles. Three forks, the North, South, and Middle, form the headwaters of the Kentucky River. These forks combine near Heidelberg and drain over 1/3 of the basin. The river reach extending from the union of the three forks near Heidelberg downstream to the river's mouth at the Ohio River near Carrollton, Ky. is commonly referred to as the *main stem* of the river. The main stem is approximately 255 miles long

and is divided into fourteen contiguous pools by a series of locks and dams. These locks and dams, originally established for navigation, now serve to impound the river for the 575,000 Kentucky residents that rely on the river as their primary water supply. The pools created by the lock and dams provide a year-round water supply to the surrounding municipalities, industries, and riparian farmers.

Four major impoundments exist in the basin that affect water supply. The Corps of Engineers owns and operates two flood-control reservoirs in the headwaters of the Kentucky River. The larger of the two reservoirs, Buckhorn Lake, has a total storage capacity of 54,783 million gallons (MG) and impounds approximately 10,500 MG at seasonal pool. The smaller reservoir, Carr Fork Lake, is roughly 2/7 the size of Buckhorn Lake, and impounds 7500 million gallons at seasonal pool. While Buckhorn and Carr Fork are not water supply reservoirs, they augment flows in the river during low flow periods. A third impoundment, Herrington Lake, exists on the Dix River, a major tributary located in the middle of the basin. Herrington Lake is owned and operated by Kentucky Utilities for hydropower generation and has no release obligation during drought periods. The fourth major impoundment in the basin is Jacobson Reservoir, a pump storage facility used exclusively for water supply. Water from the Kentucky River is pumped into Jacobson during wet periods and used to augment water supply during dry and peak periods. Jacobson is owned and operated by Kentucky American Water Company, the largest water supplier in the river basin.

Figure 1.1 is a map of the Kentucky River Basin. The shaded region extending from the headwaters of the river, including the three forks, to lock and dam #2 at Lockport, Ky. denotes the area considered in this analysis.

KENTUCKY RIVER BASIN



Figure 1.1: Map of Kentucky River Basin

1.3 Overview of Harza Deficit Analysis

In 1988, the Kentucky River Basin experienced a significant drought with water shortages (of varying intensity) realized in 35 counties and resulted in the declaration of a state water emergency. The attention caused by the '88 drought stimulated considerable public concern as to the availability of water in the basin during a severe drought. In response to growing public concern, a study was contracted with Harza Engineers to assist the Kentucky River Basin Steering Committee, a predecessor of the Authority, in adopting a long-range water supply plan. The purpose of the study was to quantify demand deficits occurring in the basin under several different droughts and for current and projected demand forecasts. Additionally, alternatives aimed at reducing or eliminating a design deficit were to be developed and evaluated.

The results of Harza's deficit analysis are documented in a 1990 report entitled **Phase I Interim Report Water Demands and Water Supply Yield and Deficit** (Harza, 1990). Water-supply deficits were computed for each of the Kentucky River pools between Frankfort (Pool 4) and Beattyville (Pool 14) for current water demands and for projected water demands through the year 2050. Hydrologic conditions considered included the drought of record (1930), the second most severe drought (1953) and the most recent drought (1988), as well as two "statistical" droughts (100-year and 50-year). The effects of a conservation program and a water-shortage response plan were developed. A water-supply deficit was defined as the difference between the water demand and the water supply when the water supply was less than demand. In calculating the deficit, Harza included irrigation as one of the major demands types. Table 1.1 below provides the computed total deficits for Kentucky River Pools 4 through 14 for historical droughts for 1990 and 2050 demand projections.

Table 1.1: Harza Analysis: Simulated demand deficits in billion gallons

<u>Drought</u>	<u>Conservation</u>	<u>1990</u>	<u>2050</u>
1930	No	8.1	8.7
1953	No	6.4	7.0
1988	No	1.3	6.5

In each case, the deficit represents the total unsatisfied net municipal and irrigation demands that would result under the listed conditions. The deficit was quantified under the assumption that DOW minimum flow requirements in the river had to be met before withdrawals could be made, as is stipulated on state withdrawal permits. Consequently, pool storage below dam crest could not be depleted, or "mined". Additionally, the impact of Jacobson reservoir on subsidizing Kentucky-American demands during low flow periods was not considered. It should be noted that the Harza

study was completed prior to approval of the 1992 modification¹ to Kentucky-American's withdrawal permit and its impacts are not reflected in their analysis.

Based on the results of the study, the report recommended the 1930 year drought be used as the design drought and the design deficit be 7 billion gallons. The design deficit of 7 billion gallons was found to be the deficit for the 1930 drought for 2050 forecasted water demands with implementation of an effective water-shortage response program, rounded upward from 6.5 billion gallons to account for slightly higher forecasted demands in 2020 than in 2050. The Harza report determined that the recommended design deficit was similar to the deficit that would occur for the 100-year drought for 2020 conditions without an effective-water shortage response plan.

1.4 Description of Harza Model

Harza developed a computer model, RRBY, to simulate water exchanges in the basin. The model operates on a daily time interval and performs a mass-balance calculation of inflows and outflows for each pool to compute water supply shortages. Inflows into a pool include upstream flow, waste-water treatment plant (WWTP) discharges, and lateral inflows from the incremental watershed. Outflows from a pool include lock and dam leakage, municipal and industrial demands, irrigation demands, and flow over the dam. Evaporation and transmission losses are incorporated into the historic lateral inflows. Water supply shortages are incurred whenever net inflow into a pool is insufficient to satisfy the daily projected net demands. Net inflow is the inflow remaining in a pool *after* dam leakage and minimum flow requirements have been met. Net demands on a pool are defined as the sum of the municipal, industrial, and irrigation demands less any waste-water treatment plant discharges into the pool.

The RRBY model simulates the river by performing successive mass-balance calculations, beginning with pool 14 and continuing downstream on a pool-by-pool basis to pool 4. Any water remaining in a pool above the dam crest after demands have been satisfied is assumed to pass downstream to the next pool. Excess flow, flow exiting a pool, is not routed through the river and each time step is begun with pools at (or possibly below) crest. Consequently, carryover storage in the river above dam crests is neglected.

Demands imposed on the river are computed from monthly averaged withdrawal data from 1990. Demands are not adjusted for any variance in water usage that may occur due to differences in weather conditions (e.g., temperature and rainfall) between the demand and drought years. Municipal demands were restricted to the major main stem

¹ In December 1992 the DOW approved a modification to Kentucky-American's water withdrawal permit. The modification included a schedule of allowable withdrawals from Pool 9 during low flow periods. The schedule reflects a relaxation in the previous minimum flow requirements for specific voluntary reductions in Kentucky-American river withdrawals.

demands on the river; the many smaller industrial/commercial withdrawals were not included. In addition, the potential deficit impacts resulting from municipal and industrial demands in the headwaters and on tributaries to the main stem were not considered.

WWTP discharges are calculated by multiplying fixed discharge rates by an average daily demand, regardless if the demand is met, and are assumed to be instantaneous. Flows returning to the river from WWTP discharges are not reflected in the net inflow calculation. Demands are automatically reduced for WWTP discharges in the net demand calculation. Hence, daily pool deficits never exceed net daily demand. In other words, inflow into a pool from WWTP discharges is excluded from minimum flow requirements, since demands are always reduced to net values.

1.5 Critique of the Harza Model

From the above description it can be seen that several weaknesses exist in the method in which the Harza model predicts/calculates water supply deficits; the most significant being the use of a mass-balance algorithm to simulate river hydraulics. Other weaknesses include the assumption of constant lock and dam leakage at all water levels, the inclusion of irrigation demands in municipal supply deficits, and the exclusion of all tributary and headwater demands. A complete critique of the Harza model appears in the Phase I report (Ormsbee, et al., 1996) and identifies specifically the weaknesses of the model and its assumptions.

In light of the weaknesses in the Harza model, a new model was developed to simulate the river basin. The new model utilizes a level-pool routing algorithm to simulate river hydraulics and is a much closer representation of river behavior. In addition, the new model was constructed with inherent flexibility, permitting modification of most basin parameters and policies, thereby avoiding many of the limitations of the Harza model and prolonging the model's usefulness to decision-makers in the future. A more complete description of the model is given in the next chapter.

CHAPTER 2

MODEL DESCRIPTION

2.0 Overview

A computer model was developed to perform the calculations necessary to simulate water movement and exchanges in the Kentucky River Basin. The model, KYBASIN, is a planning tool designed to quantify daily water supply and deficits in the basin under a series of user-defined conditions. Simulation of the river system is performed using a level pool routing algorithm operating on an 8-hour time interval. Level pool routing of river flows was performed to obtain a realistic emulation of river hydraulics. Model output is calculated on an 8-hour interval with results tabulated every 24 hours. The model permits simulation of the basin under a selected drought and demand forecast for a 12 month period.

The user-defined inputs to the model needed to characterize the basin are shown in Table 2.1. The values for these variables used in the deficit analysis have been loaded into the model as defaults. The basin attributes below allow characterization of the current river system, as well as an innumerable amount of potential future basin eventualities.

Table 2.1: KYBASIN input variables

- | | |
|---|--|
| <ul style="list-style-type: none">• municipal demands• irrigation demands• dam crest elevation• critical intake elevation• return flow percentages• stage-storage equations for reservoirs | <ul style="list-style-type: none">• lock leakage• initial water levels• minimum flow requirements• maximum reservoir releases• reservoir rule curves• stage-storage equations for main stem pools |
|---|--|

In addition to basin characterization, a specific annual streamflow sequence must be provided. Synthetic or historical streamflows may be used. In the deficit analysis, only historical droughts were examined. Daily water supply availability is quantified through the use of a predefined database of daily river inflows. Daily river inflow databases can be derived from historical streamflow data maintained by the USGS. The historical natural river inflows are used to determine how the present or a future river system would behave under historical drought conditions.

Model outputs are provided on a daily time interval and consist of pool storages, deficits, and flows at the lock and dam locations. Output is provided in both graphical and tabular formats. Storages for the four major reservoirs in the basin (Buckhorn, Carr

Fork, Herrington Lake, and Jacobson) are also given. Deficits for tributary, reservoir, and headwater demands are not calculated by the model.

2.1 Model Structure

KYBASIN was developed in a Microsoft_® Excel spreadsheet environment and consists of five separate files. A spreadsheet environment was selected because of its inherent flexibility, portability, user-friendliness, and graphic capability. The open-faced nature of a spreadsheet permits ease of usage and understanding. Graphic output, pop-up menus, buttons, and macro code, enhance the user-friendliness of the model.

Figure 2.1 is a diagram of the model illustrating the five model files and their interaction. The Input/Output Module (IOM) is the sole interface with the user. Simulations, data entry, and review of output are all performed from the IOM. The four engine files perform all the calculations necessary to simulate the river basin system. Simulations are initiated by the user in the IOM. Each of the four engine files are called by the IOM during the simulation. Each engine file simulates a three-month period. During a simulation, the IOM opens the first engine file and inserts the user-defined inputs. After simulation of the first three months, the results are copied from the engine file to the output database in the IOM. The engine file is then closed and the next engine file is opened. This process is repeated for the remaining 12 month period. At the completion of the simulation the last engine file is closed and the results of the simulation can be viewed through the IOM.

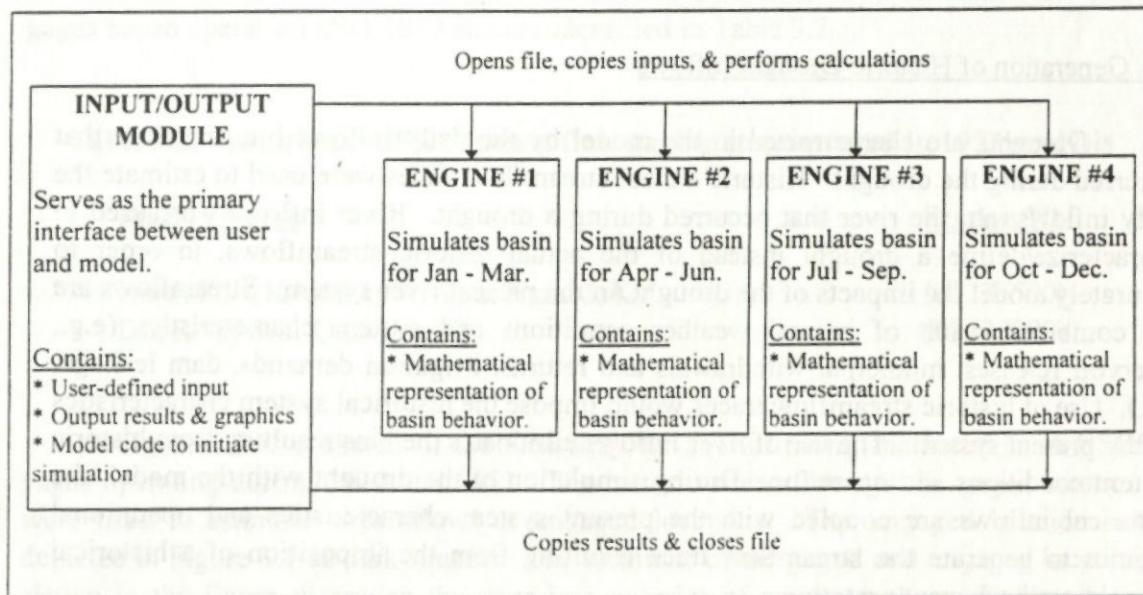


Figure 2.1: Model flow diagram

CHAPTER III

HYDROLOGIC ANALYSIS

3.0 Overview

Simulations of water movement and exchanges in the Kentucky River Basin were performed using a hydrologic routing model (KYBASIN) of the main stem of the Kentucky River to identify the location and magnitude of water shortages resulting from the imposition of two historical droughts. The following chapter details the methodology used to simulate the river and addresses the individual factors affecting water movement in the basin. Much of the physical data used in defining/modelling the river basin appears in appendices at the end of this report.

3.1 Historical Droughts

Two historical droughts were imposed on the basin for the deficit analysis. The two droughts examined were those occurring in 1930 and 1953. These droughts represent the two most severe droughts on record in the basin. The two droughts were defined by the estimated daily river inflows that occurred during the drought. Historic temperature and rainfall conditions for each drought were used to adjust municipal, industrial, and irrigation demands to account for variances in water usage resulting from the imposition of drought conditions.

3.2 Generation of Historic Drought Inflows

Droughts are characterized in the model by the daily inflows into the river that occurred during the drought. Historic annual streamflow traces were used to estimate the daily inflows into the river that occurred during a drought. River inflows were used to characterize/define a drought instead of the actual historic streamflows, in order to accurately model the impacts of the drought on the present river system. Streamflows are the combined result of natural weather conditions and system characteristics (e.g., reservoir releases, municipal withdrawals and returns, irrigation demands, dam leakage, etc.). Use of historic streamflow traces would impose the historical system characteristics on the present system. The use of river inflows eliminates the bias resulting from historic system conditions and operation. During simulation of the drought with the model, the historical inflows are coupled with the present system characteristics and operational policies to generate the streamflow trace resulting from the imposition of a historical drought on the current system.

3.3. Historical Streamflow Traces

The 1930 and 1953 droughts were defined by the daily river inflows/losses that occurred as a result of the meteorological and hydrological conditions of the drought. River inflows and losses were estimated from recorded streamflow data. Historic streamflow traces for each drought were developed from U.S. Geological Survey (USGS) streamflow records. Table 3.1 summarizes the gaging stations used to construct streamflow traces for each drought. The number in parenthesis is the USGS identification number for the gaging station.

Table 3.1: USGS stream flow gaging stations used in 1930 analysis

<u>Station Name</u>	<u>Station ID</u>
North Fork Kentucky River at Jackson, Ky.	(03280000)
Middle Fork Kentucky River at Tallega, Ky.	(03281000)
South Fork Kentucky River at Booneville, Ky.	(03281500)
Kentucky River at Lock 14, at Heidelberg, Ky.	(03282000)
Kentucky River at Lock 10, near Winchester, Ky.	(03284000)
Kentucky River at Lock 6, near Salvisa, Ky.	(03287000)
Kentucky River at Lock 4, at Frankfort, Ky.	(03287500)
Kentucky River at Lock 2, at Lockport, Ky.	(03290500)

Two additional streamflow gages were used to determine 1953 streamflows. These gages began operation after 1930 and are identified in Table 3.2.

Table 3.2: Additional USGS stream flow gaging stations used in 1953 analysis

<u>Station Name</u>	<u>Station ID</u>
North Fork Kentucky River at Hazard, Ky.	(03277500)
Dix River near Danville, Ky.	(03285000)

Figure 3.1 is a sketch of the Kentucky River illustrating the location of USGS gages operating during 1930 and 1953. The historic streamflows at the gaged locations were used to estimate streamflows at ungaged locations. The ungaged locations are depicted in Figure 3.1 as dark squares. The locations of the gaged and ungaged locations shown in the figure discretize the river into a series of small reaches. These reaches represent the computational segments used in the analysis.

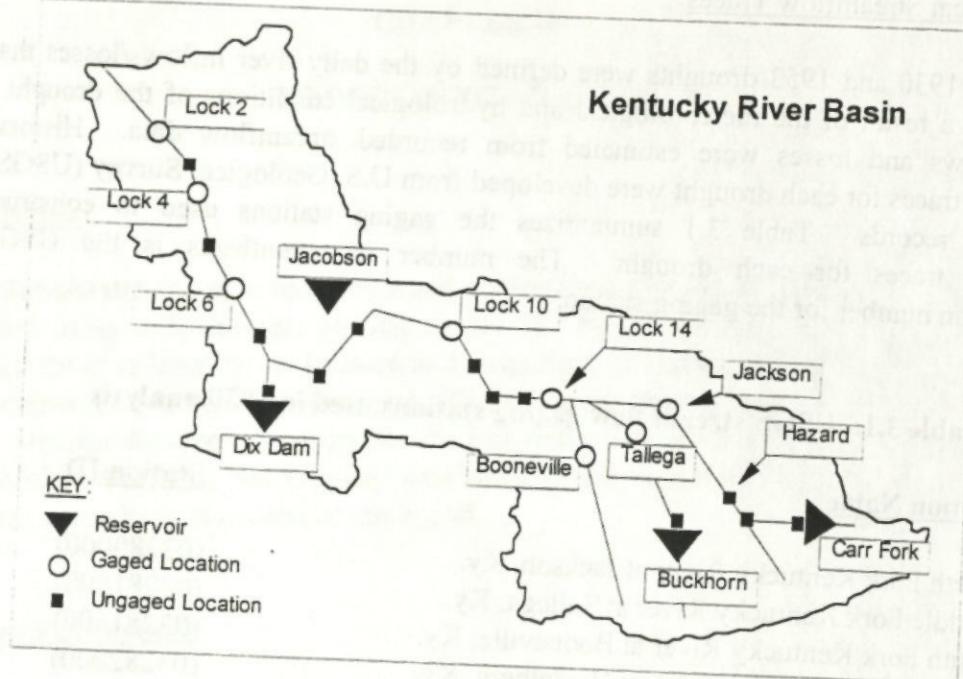


Figure 3.1: Gaging station locations and computational reaches

3.4 Lateral Inflows

The historical streamflow traces for each drought at the gaged and ungaged locations were used to estimate the daily lateral inflows into each reach that occurred during the drought. The lateral inflows represent the net flow into a pool or reach resulting from the combined effects of runoff from the watershed, groundwater inflows or recharge, and daily evaporative loss. The lateral inflow traces are used as input to the simulation model and define the hydrological impacts of the drought on the basin.

Lateral inflow traces for the headwater reaches were calculated as the difference between the recorded flows at the upstream and downstream locations. Streamflows at the ungaged locations in the headwaters were estimated by dividing the watershed of the closest downstream gage into smaller subsheds and proportioning flows based on drainage area.

The lateral inflows for pool 14 were calculated explicitly using a mass balance algorithm. Inflows into pool 14 were calculated as the sum of the recorded flows at Jackson, Tallega, and Booneville. The recorded flows at lock 14 were used in conjunction with a calibrated stage-discharge equation for the dam at lock 14 to establish daily storage values. The calibrated stage-discharge equation was derived from rating data provided by the USGS. Daily lateral inflows were calculated as the difference between pool inflow, outflow, and change in storage.

Estimated lateral inflows for pools 2 - 13 could not be determined explicitly. Recorded streamflows exist only at locks 14, 10, 6, 4, and 2. Consequently, it is impossible to explicitly establish the daily inflows, outflows, and changes in storage for the intermediate pools (the pools between gaged locks) necessary to perform a mass balance. As a result, computer models were developed to simulate the main stem pools in reaches between gaged locks. The models employ a non-linear optimizer and a level-pool routing algorithm to model storage and flow in the pools. Lateral flows are optimized in order to achieve a close match between the simulated outflow at the end of the reach and the actual flow recorded at the gage. A single daily variable is used to compute the total lateral inflow for the entire reach between gaged locks. Individual pool laterals are computed as a proportion of the total gaged difference based on watershed area or pool length. If the daily total difference is positive, then laterals are proportioned by watershed area. If the daily total is negative, then laterals are proportioned by pool length. Negative laterals indicate that losses from the pool (e.g., evaporation, groundwater recharge, etc.) were larger than the positive inflow from runoff and base flow.

3.5 Dix Dam Inflows

Natural Kentucky River flows occurring in 1930 include the impacts of Dix Dam. The dam, which began operation in 1925, impounds the Dix river and empties into pool 7 of the Kentucky River, near High Bridge. The absence of suitable flow gaging records on Dix River precluded computation of reliable inflows into Dix Dam (Herrington Lake) for 1930. Historical records indicate the maximum water level at Dix Dam in 1930 was 735', approximately 25 feet below the emergency spillway. Records of dam releases do not exist for 1930. In the absence of historical release records, the lack of a minimum release requirement, and the implausibility of releases for flood control, it is unlikely historical releases were made from the dam during the drought. Consequently, lateral inflows into pool 7 were not adjusted for any principal or emergency spillway releases from Dix Dam that may have occurred in 1930.

Despite the lack of regulated releases from the dam in 1930, water was exiting from the dam. Historical records indicate that a significant amount of leakage was occurring through the dam in 1930. A constant value of 66 cubic feet per second (cfs) was assumed for the daily release from Dix Dam in 1930 for lateral flow computations. This value is attributable wholly to leakage through the dam and is based on published estimates by Schmidt (1960) for 1930. Computation of lateral inflows for Kentucky River pools were adjusted to reflect the 66 cfs release.

Inflows into Dix Dam for 1953 drought conditions were computed from historic streamflow records of the USGS gaging station on Dix River near Danville, Ky. Simulation of 1953 inflows into the Herrington Lake was performed to generate historic releases from the dam. A level-pool reservoir routing algorithm and 1953 historic lake

levels, obtained from Kentucky Utilities, were employed to predict the historic 1953 reservoir releases. The historic releases were used in conjunction with a 1953 dam leakage estimate of 47.5 cfs (Schmidt, 1960) to adjust recorded flows at Lock & Dam #6 in the determination of Ky. River main stem pool lateral inflows. Recorded Lock #6 flows were reduced by Dix release and leakage estimates to generate an unbiased lateral inflow trace for pools 6, 7, 8, & 9 (the pools located between the gages at Locks #6 & #10). Current estimates for Dix Dam leakage and releases are added back into the river during simulation of the basin with the model. The additional contribution to river flows from the incremental watershed between the gaging station near Danville and the dam structure was computed on a unit flow per area basis derived from the gaged portion of the watershed.

3.6 Buckhorn and Carr Fork Inflows

USGS streamflow records for 1930 and 1953 reflect the naturally occurring flows in the river. The 1930 and 1953 lateral inflows for headwater and main stem reaches were not adjusted for the effects of Buckhorn and Carr Fork reservoirs, since they did not begin operation until 1960 and 1976, respectively. However, reservoir inflows were estimated for use in simulating the basin under present and future conditions. Inflows into both reservoirs were computed by dividing the watersheds of the gages at Tallega and Jackson into smaller subsheds. Daily flow values at the gages were then proportioned to the smaller subsheds by a ratio of the watershed areas. The contribution from the subshed corresponding to the watershed of each reservoir was used as the daily inflow to the reservoir.

3.7 Permitted Demands

Municipal, industrial, and commercial demands on the basin were estimated from Division of Water surface water withdrawal permits. All permitted withdrawals were considered in the analysis. Withdrawals were grouped by intake location into the reaches illustrated in Figure 3.1. Withdrawals were further classified as either main stem or tributary withdrawals. Main stem withdrawals were used to define daily pool deficits. Tributary withdrawals were used to adjust lateral inflows into main stem and headwater reaches. Demands in the headwater reaches were used to adjust inflows into Pool 14. Adjustment to main stem and headwater lateral inflows was made to acknowledge the impacts of the off-stem demands on main stem water supply, but water supply deficits occurring on tributaries or in the headwaters were not quantified.

Division of Water 1994 monthly withdrawal data was used to estimate municipal, industrial, and commercial demands on the basin for 1994, 2000, 2010, and 2020. Water use was estimated for summer and winter months using a separate mathematical regression model. The models use estimates for population, economic and demographic

factors, public water and sewer use, weather conditions, and time trends to predict present and future water use. U.S. Census data from 1970 - 1993 was used as a basis for estimating these parameters. Population estimates for future years were obtained from the Louisville Data Center. Two population projections were obtained for each future year; one assuming a moderate growth rate, and one assuming a high growth rate. Two sets of water demand forecasts were made for each future year to reflect the two population projections.

All demand forecasts, including both current (1994) and projected demand predictions, were adjusted to account for variations in water use attributable to differences in weather conditions (i.e., temperature and precipitation) between the drought and demand years. The weather-augmented demands were used to acknowledge the increase in water consumption resulting from the onset of the extended hot and dry conditions associated with drought periods.

Municipal, industrial, and commercial demand projections were made by the Water Resources Research Institute Economics Group. Demand projections did not assume any increase/decrease in future per capita water use from the present usage. The demand forecasts used in the deficit analysis are listed in Appendix A. A more complete explanation of their derivation can be found in the companion report to Phase III, entitled **Water Use Estimation and Forecasting for the Kentucky River Basin**. (Blomquist, et al., 1996)

3.8 Return Flows

A percentage of the water used to satisfy permitted demands returns to the river as discharges from waste-water treatment plants. The portion of permitted demands passed to the treatment facility for discharge back into natural waters is termed return flow. Return flows re-enter the river at the location of the associated WWTP. Flow returning to a pool from a treatment plant is modeled as inflow into the pool. As with all pool inflows, return flow water cannot be used to satisfy demands unless minimum flow requirements are met.

The magnitude of return flows is a function of several variables including water usage, transmission losses, and inter-basin transfers. These variables influence the amount of consumptive loss that occurs on water withdrawn from the river before it is returned. To determine the consumptive loss on permitted water withdrawals from the river, return flow percentage rates were calculated by relating WWTP discharges to the associated permitted water withdrawal. The discharge location for each of the major WWTP's is identified in Table 3.3. Return flows from tributary demands were returned to the river as inflow to the parent main stem pool. Return flows for headwater demands re-entered the river at the next downstream reach. All return flows were lagged a day to account for time spent in the supply and treatment systems. Average return flow rates

were calculated for the major WWTPs in the basin from monthly averaged daily withdrawal and discharge data, obtained from the DOW and the specific WWTP, respectively. A basin average rate was determined from the individual rates developed for the major WWTPs. The basin average rate was applied to the smaller WWTPs. Table 3.4 summarizes the major WWTPs on the river and the individual return flow percentages that were developed.

The return flow percentages listed in Table 3.4 were used to determine the flow entering the river from WWTP discharges. WWTP discharges were determined by multiplying the appropriate calibrated return flow percentage from Table 3.4 with the actual water supplied to the dependent withdrawer on the previous day. Return flows were based on water supplied rather than raw demands to reflect the impacts of demand restrictions.

In the determination of municipal return flow rates, a significant amount of interflow into the sewer lines feeding WWTPs was detected during storm events. The treated storm water returning to the river masks the true consumptive loss for permitted demands and results in their under-prediction. To obtain a truer indication of the water returning from permitted withdrawals, monthly return flow rates were correlated with withdrawal data from the year experiencing the lowest rainfall value in the last 10 years. For example, the lowest monthly rainfall total in Lexington over the last 10 years for the month of January occurred in 1991. Consequently, the January return flow rate for the Town Branch WWTP was calculated by relating the monthly-averaged daily discharge from the plant to the average Ky-American withdrawal for January of 1991. Use of the driest year reduces the error in predicting consumptive losses resulting from stormwater intrusion into the sewer system. The impacts on consumptive loss rates from changes in water use or technological advances between the base year (i.e., 1991) and the analysis year (i.e., 1994, 2000, etc.) were not forecasted; it is assumed that the current consumptive loss percentages will be applicable to demands in future years.

3.9 Agricultural Demands

Water withdrawn from the Kentucky River for agricultural uses is not regulated by the DOW. The lack of recorded withdrawal data makes it difficult to develop accurate estimates for agricultural withdrawals from the river. In the absence of historical records, an empirical method was employed to estimate withdrawals. Agricultural demand was divided into two types: irrigation and livestock demand. Irrigation demand was determined from Census of Agriculture data and the following equation.

$$\text{Irrigation water demand} = (\text{daily water demand per acre}) \times (\text{total irrigated land})$$

Table 3.3: Withdrawal and discharge locations for major WWTP's

Discharger	Dependent Withdrawer	Withdrawal Location	Discharge Location
Frankfort STP	Frankfort	POOL 4	POOL 3
Town Branch STP (Lex)	KAWC	POOL 9	POOL 3
Midway STP	KAWC	POOL 9	POOL 3
Stamping Ground STP	Stamping Grnd	Trib to POOL 3	POOL 3
Georgetown STP #1	Georgetown	Trib to POOL 3	POOL 3
Georgetown STP #2	KAWC (Toyota)	POOL 9	POOL 3
Versailles STP	KAWC/Versailles	POOL 9 & 5	POOL 4
Wilmore STP	Wilmore	POOL 6	POOL 7
West Hickman STP (Lex)	KAWC	POOL 9	POOL 7
Nicholasville STP	Nicholasville	POOL 8	POOL 7
Lancaster STP	Lancaster	POOL 8	POOL 7
Berea STP	Berea	Trib to POOL 8 & 11	POOL 8
Tates Creek STP (Rich)	Richmond	POOL 11	POOL 9
Dreaming Creek STP (Rich)	Richmond	POOL 11	POOL 10
Irvine STP	Irvine	POOL 11	POOL 11
Beattyville STP	Beattyville	POOL 14	POOL 14
Danville STP	Danville	H. LAKE	H. LAKE

Table 3.4: Return flow percentages for major WWTP's

Discharger	Return Flow Percentages (return flow = monthly demand x return flow percentage)											
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Frankfort STP	0.55	1.12	0.78	0.57	0.61	0.63	0.57	0.60	0.65	0.58	0.66	0.79
Town Branch STP (Lex)	0.47	0.61	0.53	0.45	0.38	0.24	0.41	0.41	0.37	0.41	0.45	0.46
Midway STP	0.01	0.01	0.01	0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.01
Stamping Ground STP	0.81	0.81	0.52	0.49	0.28	0.65	0.67	0.52	0.45	0.25	0.34	0.45
Georgetown STP #1	0.64	0.99	0.85	0.57	0.64	0.50	0.62	0.59	0.61	0.60	0.73	0.83
Georgetown STP #2	0.02	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Versailles STP	0.03	0.04	0.05	0.03	0.02	0.02	0.03	0.02	0.02	0.02	0.02	0.05
Wilmore STP	0.57	0.58	0.79	0.48	0.69	0.19	0.41	0.69	0.53	0.55	0.36	1.22
West Hickman STP (Lex)	0.32	0.48	0.40	0.27	0.25	0.16	0.50	0.21	0.20	0.25	0.36	0.44
Nicholasville STP	0.72	0.84	0.70	0.51	0.66	0.55	0.69	0.54	0.71	0.62	0.69	0.72
Lancaster STP	0.39	0.40	0.49	0.52	0.29	0.20	0.35	0.22	0.26	0.21	0.34	0.31
Berea STP	0.64	0.99	0.85	0.57	0.64	0.50	0.62	0.59	0.61	0.60	0.73	0.83
Tates Creek STP (Rich)	0.25	0.35	0.37	0.31	0.27	0.35	0.19	0.36	0.42	0.38	0.39	0.32
Dreaming Creek STP (Rich)	0.50	0.40	0.43	0.42	0.42	0.35	0.41	0.35	0.42	0.36	0.42	0.42
Irvine STP	0.53	0.54	0.53	0.49	0.53	0.32	0.36	0.41	0.29	0.41	0.46	0.60
Beattyville STP	0.27	0.18	0.21	0.26	0.12	0.04	0.27	0.17	0.09	0.14	0.19	0.20
Danville STP	0.61	1.17	0.97	0.58	0.59	0.40	0.54	0.44	0.58	0.47	0.68	0.76
BASIN AVERAGE	0.64	0.99	0.85	0.57	0.64	0.50	0.62	0.59	0.61	0.60	0.73	0.83

Total irrigated land acreage was estimated from regression analysis of census data. Livestock demand was estimated from state animal inventory numbers and average daily animal consumption rates.

Two estimates for the total daily agricultural demand on the basin were developed. The first estimate reflects the maximum amount of water needed in the basin to satisfy all agricultural demands. The second estimate represents the most likely agricultural demand on the basin. This estimate considers the economic feasibility of supplying the water and realizes that agricultural demands will sometimes be cost prohibitive. The second estimate reflects the most realistic estimate, since it is unlikely farmers will continue to irrigate when the cost of the irrigation exceeds the anticipated income from harvest. Table 3.5 indicates the two total agricultural demand estimates. The large difference between the two estimates reveals the difficulty in establishing a reliable agricultural demand estimate for the basin.

Table 3.5: Daily agricultural demand estimates for the basin

	<u>(mgd)</u>
Ideal daily demand	76
Most likely daily demand	11

In conjunction with the empirical approach above, a qualitative assessment was also made to identify agricultural demands in the basin. Agricultural maps of the basin showing livestock locations and crop types revealed that most of the irrigable lands are located in the lower region of the basin. Additionally, much of the farmland in this region is non-irrigable due to the extremely large pumping costs that would be required to overcome unforgiving terrain. Based on an analysis of these factors, the final total irrigation demand was lowered to 7 million gallons per day. Due to the lack of specific information regarding agricultural withdrawal locations, the total demand estimate was distributed evenly across the river from pool 8 to pool 2. Agricultural demands were estimated for the summer months only (May - September). Agricultural withdrawals from tributaries were not quantified and no adjustment was made to pool inflows for tributary agricultural demands.

The final agricultural demands were developed by the Water Resources Research Institute Economics Group. A more complete discussion of these demands appears in the companion report to Phase III, entitled **Water Use Estimation and Forecasting for the Kentucky River Basin** (Blomquist, et al., 1996).

3.10 Lock & Dam Leakage

The locks and dams on the Kentucky River leak. While several studies have been conducted to quantify the extent of the leakage at lock locations during low flow periods, no conclusive leakage estimate/relationship is accepted. Furthermore, recent efforts by Corps of Engineers to repair leaks in the dams invalidate estimates from previous leakage studies.

An accurate quantification of leakage through the locks and dams is paramount to obtaining a realistic characterization of the river system. Leakage represents a net loss from the river system. Poor estimates for leakage result in under/over-prediction of available water supply in the river.

The impact of leakage on emulating river behavior is more critical during low flow or drought periods. When water levels drop below crest, flow in the river is reduced to lock and dam leakage. The severity of pool depletion is directly proportional to the magnitude of the leakage. While pool depletion in intermediate pools is temporarily offset by leakage from the upstream pool, pool 14 has the potential for rapid depletion. During drought periods inflow into pool 14 is approximately equal to upstream releases from Buckhorn and Carr Fork. If inflow from these releases is less than the leakage through the dam, there is a net loss from the pool. As pool 14 water levels drop, leakage through the dam is reduced as cracks become exposed and hydraulic head decreases. The corresponding reduction in pool 13 inflows results in a net loss from that pool, as initially higher water levels predicate a large leakage flow. If drought conditions persist, pool depletion propagates downstream.

Accurate quantification of lock and dam leakage directly impacts predicted water shortages/deficits. Permitted demands are regulated by the ability of the river to pass a specified minimum flow at lock locations. No withdrawals are permitted if minimum flow requirements cannot be met². The DOW recognizes lock leakage as a reduction in the flow over the dam needed to meet minimum flow requirements. Flows into a pool in excess of the adjusted minimum flow requirement can be used to satisfy demands. During low flow periods, inflated leakage estimates would unknowingly entitle larger withdrawals than permissible at the expense of unfulfilled minimum flow requirements. Conversely, deflated leakage estimates would inflate water shortages unjustly, mandating larger flows be passed downstream than intended.

In the absence of a conclusive leakage relationship, current leakage at all lock and dam locations was estimated to be 50 cfs at water levels equal to the dam crest elevation. This estimate is consistent with the values assumed in previous studies (Harza 1990, COE 1978). Lock and dam leakage was considered to be constant at and above the dam

² Legislation exists in which the Governor may declare a state water emergency. In the event a water emergency is declared, the DOW can relax minimum flow requirements and allocate water amongst users.

crest elevation. At elevations below crest, leakage was reduced according to the standard orifice equation given below.

$$Q = Cd A (2gh)^{1/2}$$

where:

- A = orifice area (determined explicitly by assuming Q=50 cfs at dam crest)
- Cd = coefficient of discharge (assumed to be 0.64)
- g = gravity constant, 32.17 ft/sec²
- h = hydraulic head on orifice opening (measured upward from base of dam)

Leakage was reduced for elevations below crest to reflect the reduction of hydraulic head and the exposure of the leakage orifices at lower elevations. Similar increases in leakage estimates were not made for elevations above crest.

The lateral inflow traces used to define the 1930 and 1953 historical droughts were generated by simulating the river system for these periods. Historical lock and dam leakage estimates were needed to accurately characterize the historical river system. Leakage in the locks and dams during 1930 and 1953 was estimated to be 10 cfs. This value was determined based on review of USGS flow records at the locks. Larger leakage values were deemed unlikely due to the rapid changes in the recorded daily streamflow values occurring above 10 cfs. The rapid changes in flows are better explained by slight changes in weir head than the large fluctuations in pool levels that would be required to change daily leakage values. Due to the unlikelihood of rapid and large scale changes in water levels below the dam crests, larger leakage values were excluded from consideration.

3.11 Natural Losses

Natural losses in the river system (e.g., evaporation, groundwater seepage/recharge, etc.) were accommodated in historical lateral inflow estimates. The natural lateral inflows reflect the natural losses that occurred in the river during the drought. As a consequence, loss values are based on the recorded flows that occurred in the river during the drought. No adjustment is made to lateral inflows to accommodate slight changes in natural losses due to differences in flow magnitudes between modeled and historical flows.

Daily evaporative losses were calculated for the four major impoundments considered in the analysis for the period between May 1 and September 30. Evaporative

losses were estimated by the equation below.

$$E = 0.7 E_{pan} A_s$$

where:

E = evaporation, inches

E_{pan} = pan evaporation value, inches

A_s = surface area of reservoir, acres

The National Oceanic and Atmospheric Administration (NOAA), the government agency responsible for collecting and publishing evaporation data, has no pan evaporation data in the basin for 1930. As a result, a correlative model was used to estimate historical evaporation for the 1930 drought. Estimates for daily pan evaporation values were derived using monthly regression equations developed from historical temperature, rainfall, and evaporation records. Actual pan evaporation measurements were used for 1953. The actual and synthetic pan evaporation data used in the analysis is provided in Appendix B.

3.12 Minimum Flow Requirements

The Division of Water, through use of its withdrawal permits, currently enforces a minimum flow requirement at all Kentucky River lock and dam locations. Minimum flows in the river are mandated to protect the many riparian ecosystems that abound in and on the banks of the Kentucky River. A minimum flow requirement is necessary to provide adequate dilution to incoming pollution from the watershed (i.e., from straight pipe discharges, agricultural and urban runoff, mineral leaching, etc.). Permitted withdrawals in main stem pools are contingent on the ability of the river to pass a specified minimum flow at lock locations. No demands are permitted if minimum flow requirements cannot be met. During extended low flow periods where enforcement of minimum flow requirements could result in substantial loss, the Governor may declare a state water emergency. In the event a water emergency declaration, the DOW can relax minimum flow requirements and allocate water in the river among permitted users.

The DOW currently defines the minimum flow requirements at the locks as the minimum 7-day average flow occurring at a location on an average of once in 10 years. This flow is termed the 7Q10 and is based on a statistical analysis of recorded USGS streamflows at the gaged locks dating since 1976. Flow records prior to 1976 are not used because they do not reflect the regulatory effects of both COE reservoirs (Buckhorn and Carr Fork) on the river.

Table 3.6 summarizes the DOW-mandated minimum flow requirements used in the analysis. In determining the availability of water for permitted withdrawal in a pool, it is assumed that leakage through Kentucky River locks and dams may be used to help satisfy minimum flow requirements.

Table 3.6: DOW minimum flow requirements at Ky. River lock and dam locations

Lock and Dam	Minimum Flow Reqm't (cfs)
14	75
13	79
12	82
11	91
10	120
9	124
8	128
7	134
6	136
5	139
4	175
3	195
2	202

30
↑
124 ↓

or modified
for

Conservative
-30 forward
For modified
perm:t

3.13 Reservoir Characteristics and Operation

The impacts of four major impoundments (Buckhorn, Carr Fork, Jacobson, Herrington Lake) on water supply and movement in the basin were considered in the deficit analysis. The location of each reservoir is shown in Figure 3.1. Relationships for reservoir capacity and surface area were derived for each impoundment based on information provided by the COE, Kentucky Utilities, and Kentucky-American Water Company. Reservoir release strategies (excluding Jacobson) were based on trying to maintain a schedule of daily desired target elevations, or rule curve. At water levels above the rule curve water was released up to the maximum capacity of the spillway. When inflow into a reservoir was unable to sustain the rule curve elevation, only the minimum release requirement was made for that day. No additional flow augmentation beyond minimum flow requirements was assumed during the drought. The minimum flow requirement, maximum allowable release, and storage capacity of the each reservoir are listed in Table 3.7. Rule curves for Buckhorn, Carr Fork, and Herrington Lake appear in Appendix C.

Table 3.7: Reservoir characteristics

<u>Reservoir</u>	<u>Gross Storage (MG)</u>	<u>Max Allowable Release (cfs)</u>	<u>Minimum Flow Reqm't (cfs)</u>
Buckhorn	34,483	3500	30
Carr Fork	15,520	800	5
Herrington Lake	175,983	1500	20 ³

³ Assumed leakage (see discussion in section 3.16)

3.14 Buckhorn and Carr Fork

Releases from Buckhorn and Carr Fork reservoirs have a significant impact on river flows during low flow periods. During severe drought periods releases from these reservoirs account for most of the inflow into pool 14. Both Buckhorn and Carr Fork are operated by the COE for flood control and no additional releases are required beyond DOW minimum flow requirements. While the Corps has made voluntary releases at the request of the DOW during extended drought periods in the past, low flow augmentation beyond minimum release requirements was not presumed in the deficit analysis.

3.15 Transmission Losses

Transmission losses from Buckhorn and Carr Fork reservoir releases are due to evaporation, groundwater recharge, etc. in the North and Middle Forks. A relationship was derived by the Corps of Engineers in 1978 (USACOE 1978) identifying transmission losses between Buckhorn Reservoir and Tallega, Ky. as approximately 10%. The Corps estimate is based on a small sample of recorded flow data in 1974 and 1975 at each location. The original deficit analysis by Harza (Harza 1990) did not consider transmission losses in reservoir releases.

The lack of any conclusive data concerning transmission losses for the two reaches precludes a definitive estimate of current transmission losses for Buckhorn and Carr Fork releases. Consequently, no transmission losses were assumed in the deficit analysis in releases from these reservoirs. While it is likely some degree of loss occurs in reservoir releases before they reach the main stem of the Ky. River, the lack of a definitive data set precluded any sophisticated estimation of these losses beyond conjecture. It is important to note that natural losses for all tributary flows including, the Middle and North Forks are included in the historical lateral flow estimates for these reaches. The magnitude of these losses are based on the natural flows occurring in 1930 and 1953. In order to determine the potential impact of additional transmission losses

associated with supplemental reservoir releases, a sensitivity analysis was performed. The results of this analysis are presented in Chapter 4.

3.16 Dix Dam

Dix Dam is a hydropower facility owned and operated by Kentucky Utilities (KU), a private power company. During peak hydropower generation, approximately 1500 cfs is passed downstream through the turbines. Releases from the dam enter the Ky. River in pool 7 near High Bridge and could impact water supply availability for the lower reaches of the Ky. River. The DOW currently does not mandate a minimum flow release requirement from the dam. No additional releases from Dix Dam beyond those required to maintain the rule curve and dam leakage were assumed.

No releases from Dix Dam were assumed for simulations of the river under 1930 drought conditions. The unavailability of historical flow records in the dam's headwaters precluded the calculation of historical inflows. Dam records for 1930 indicate water levels in the lake were well below normal and it is unlikely regulated releases were made during the drought. As a result, in simulations of the existing system under 1930 drought conditions, contributions from the Dix watershed were limited to current dam leakage estimates. Reservoir releases for simulations of the system under 1953 drought conditions were routed according to the rule curve procedure outlined in section 3.13.

Leakage from Dix Dam is known to have existed since the dam first began operation in 1925. Over the past 70 years, various attempts at repairing/reducing the leakage have been made with limited success. A recent effort (1994) by KU has significantly decreased leakage from previous values. Leakage through the dam is measured by means of a low-level weir located at the downstream base of the dam. KU leakage records for the dam indicate current dam leakage varies between 5 and 30 cfs for water levels between 720' and 760', the normal annual operating range of the dam. Weir flow records outside this range do not exist for post-repair periods. Due to the close proximity of the weir to the dam's base, leakage around the dam bypasses the weir and small streams can be seen exiting the downstream channel sides. The exact magnitude of the unmeasured seepage around the dam is unknown. Water balance computations for the reservoir indicate that the seepage around the dam is relatively minor in comparison with leakage through the dam. In addition, during drought periods, when water levels in the dam are expected to be lower than 1994 levels, it is likely that the seepage around the dam will become less significant. For the deficit analysis a constant leakage value of 20 cfs was assumed for the dam. Leakage values were not adjusted for changes in lake levels, since true leakage from the dam is unclear and refinements to the leakage estimate would be uncertain.

3.17 Jacobson Reservoir

Jacobson reservoir, located in Lexington, is a pump storage facility owned and operated by the Kentucky-American Water Company. The total gross storage capacity of the reservoir is approximately 620 MG, of which 80% (500 MG) can be used for water supply. Water withdrawn from the reservoir is pumped approximately 3 miles to a water treatment plant where it is distributed to Ky-American customers. Jacobson's watershed is insufficient to replenish current demands on the reservoir and reservoir inflow comes primarily from a raw water diversion of Kentucky River flows in pool 9. Due to permit restrictions and physical limitations, Jacobson can only be refilled during high flow periods in the Ky River.

For the deficit analysis, Jacobson was assumed to be initially full. No raw water diversions were permitted from pool 9 to replenish reservoir levels during simulations. Withdrawals were made from Jacobson to accommodate Ky-American demands that could not be satisfied from Pool 9. Water was not withdrawn from the reservoir below the sediment pool level (i.e., 120 MG). When water in the reservoir was reduced to the sediment pool level, Jacobson was no longer considered a water supply source for the remaining period. No inflow was assumed for the reservoir during the analysis. Outflows from Jacobson were restricted to municipal withdrawals from Ky-American and the Andover Golf and Country Club. In addition, reservoir storage was reduced for evaporative losses during summer months.

3.18 Flow Routing

The Kentucky River is divided into fourteen contiguous pools by a series of submerged dams of varying heights. During normal and flood periods, flow in the river is passed downstream by means of the submerged, uncontrolled spillways that span the river's width. The dams serve as large weirs, dictating flow by their shape, size, and elevation. During significant dry periods, the water level in the pools can drop below crest. When water levels are below crest, the entire character of the river is changed; there is no longer a continuous water body but a series of back-to-back impoundments with no formal release mechanism. At sub-crest levels, flow in the river is reduced to leakage through the locks and dams.

Flows in the river were routed through the main stem pools through the use of a level pool routing algorithm. Inflow into a pool was defined as the sum of the upstream flow, lateral inflows from the incremental watershed, and WWTP discharges. Lateral inflows were adjusted to account for tributary demands. Unsatisfied tributary demands were not migrated to the main stem pools. Return flows from tributary demands were added directly to the parent pool's inflow. Net pool inflows were added to existing pool storages to determine the available water to satisfy minimum flow requirements and

demands. Agricultural demands were given priority over minimum flow requirements and municipal demands. Since agricultural demands are unregulated by the DOW, minimum flow requirement restrictions were not honored and agricultural withdrawals were limited only by pool capacity. Pool storage remaining after agricultural withdrawal reductions was eligible to satisfy municipal demands provided minimum flow requirements could be met. If minimum flows could not be maintained by pool inflows and existing storage above crest, then permitted withdrawals were prohibited. Water remaining in a pool after municipal and agricultural withdrawals was routed over the dam using the level pool algorithm with an 8-hour time step. A larger time step was not used, due to its inability to accurately emulate the river behavior at water elevations near the dam crest. Routed outflow from the pool includes both weir and leakage flows. Use of a combined outflow function from the pool permitted continuous modeling of low level flows at water levels above and below the dam crest.

3.19 Deficit Calculation

Daily water shortages, or deficits, were quantified during simulation of the river basin under drought conditions. Deficits were defined as unsatisfied permitted demand withdrawals on main stem pools. Demands on main stem tributaries and in the headwater forks were not included in the total basin deficit values. However, inflows into main stem pools were adjusted for the impacts of the off-stem withdrawals as a reduction in lateral inflows.

Deficits were contingent upon the ability of the pool to satisfy DOW minimum flow requirements. Routing calculations were performed every 8 hours and include a deficit calculation. During the routing calculation, pool storage and inflows were compared with minimum flow requirements to determine the availability of water for municipal withdrawal. When minimum flow requirements could not be met with pool inflows or storage, municipal withdrawals were halted and a deficit equal to the desired daily demand was incurred. Partial deficits resulted if daily remaining water supplies above minimum flow requirements were insufficient to satisfy the daily desired withdrawals. The 8-hour deficit values were then combined to determine the daily deficit.

For simulations where the minimum flow requirements were relaxed, deficits were quantified based on the critical intake elevation in the pool. The critical intake elevation is defined as the lowest water level in the pool from which water can still be withdrawn through the intake. The critical intake elevation is equal to the intake inlet elevation plus a specific minimum required head necessary for proper pump operation. One critical intake elevation is assigned to each pool. In the deficit analysis, the critical intake elevation was set equal to the elevation of the highest permitted withdrawal intake in each pool.

To accommodate the effects of Jacobson Reservoir, two deficits for pool 9 were quantified in the analysis, a preliminary and final deficit. The preliminary deficit was defined as the deficit occurring in pool 9 without subsidies from Jacobson reservoir. The final daily deficit values reflect any reduction, or deficit relief, provided by Jacobson Reservoir. Hence, final deficits are always less than or equal to preliminary deficits for pool 9. Only final deficit values for pool 9 are listed in report results.

3.20 Kentucky-American Withdrawal Permit Modification

In 1992 the Division of Water revised Ky-American's surface water withdrawal permit. The modification called for a relaxation of minimum flow requirements in pool 9 withdrawals for voluntary withdrawal reductions. The permit establishes a schedule of allowable withdrawals based on incoming flows from pool 10. The revised permit authorizes Ky-American a minimum daily withdrawal of 25 mgd regardless of river flows. As a consequence, Ky-American may withdraw water from pool 9 at water levels below dam crest (i.e., "mine" the pool) during a drought. Currently, Ky-American is the only permitted withdrawer which may legally "mine" a river pool. A copy of the 1992 revised permit is provided in Appendix D.

A condition of the revised permit is the requirement that Ky-American must conduct biological testing of downstream waters to ensure water quality standards are being maintained. The revision to Ky-American's withdrawal permit is conditionally based upon favorable biological testing results. The DOW can nullify the relaxation of minimum flow requirements established in the revised permit, if they believe that it is having a detrimental effect on the water quality of the river.

Because of the conditional nature of the permit modification, it was not considered in the deficit analysis and Ky-American withdrawals were controlled by the ability of lock 9 to pass a minimum flow of 124 cfs downstream. A separate sensitivity analysis was conducted on the basin assuming implementation of the revised permit to identify the impacts of the revision on water supply. Results from this analysis are presented in the next chapter.

Number of days	
For demands not supplied	116
No deficit	149
Less than 25% water supplied	107
Less than 50% water supplied	33
Less than 25% water mine	98
Number supplied	23

CHAPTER IV

RESULTS

4.0 Overview

Simulations of the Kentucky River Basin under the existing supply system were performed to quantify the current and future susceptibility of the basin to a severe drought. To assess the capacity of water supply during a severe drought, the KYBASIN model was used to simulate water transfer and movement in the basin for current and future demands under the imposition of both the 1930 and 1953 droughts. Through use of the model the location and magnitude of water supply deficits on main stem of the river were identified. Deficits were defined as unsatisfied permitted demand withdrawals and were calculated on an 8-hour basis over the entire 12-month analysis period. Permitted demands went unsatisfied whenever withdrawals were restricted by DOW minimum flow requirements or withdrawal intakes became exposed.

The following chapter discusses the results of the deficit analysis. Deficits are identified in Kentucky River pools under 1930 and 1953 drought conditions for current river demands (1994) and forecasted demands for the years 2000, 2010, and 2020. A comparison between KYBASIN results and those reported by Harza (Harza 1990) is also made. Additionally, the sensitivity of water supply deficits to several input parameters is examined.

4.1 1930 Baseline Deficit

Simulation of the basin under 1930 drought conditions and 1994 demand forecasts revealed that a total annual water supply deficit of 6.3 billion gallons (BG) would result in the basin under the current supply system. Water shortages, of varying intensity, would occur in all main-stem pools, with the exception of pools 2, 12, and 13, which do no support any permitted withdrawals. Figure 4.1 illustrates the distribution of the deficit along the river. Daily deficit values, lock flows, and water levels for all main stem pools appear in Appendix E.

Water Supply Deficits for 1930 Drought, 1994 Demands, Existing Supply System

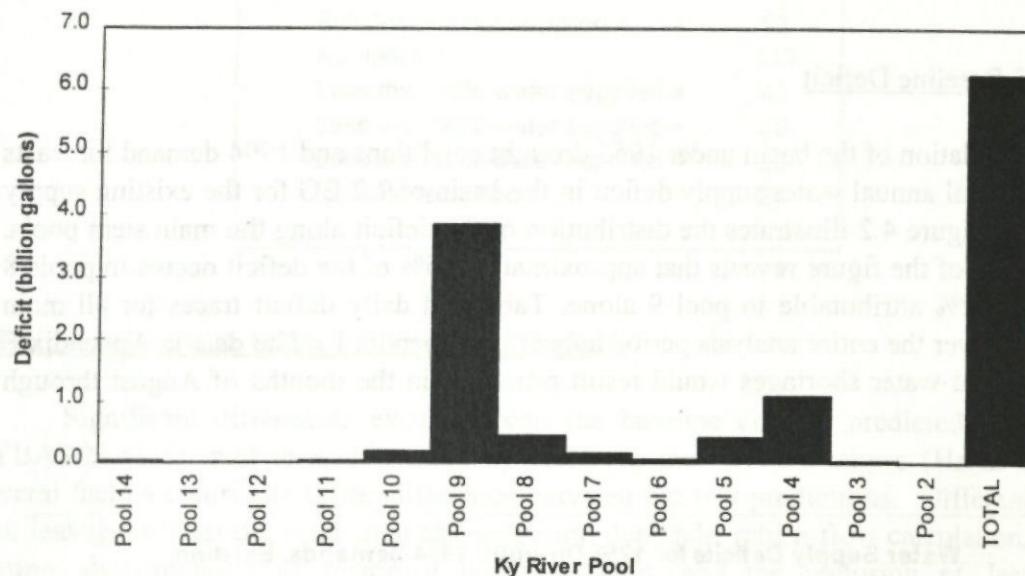


Figure 4.1: 1930 Baseline deficit distribution

Kentucky-American Water Company (KAWC), which supplies water to Lexington and portions of the surrounding counties, incurs the largest pool deficit, accounting for 3.9 BG of the total basin deficit. Table 4.1 below summarizes the predicted daily deficits for Ky-American. The table indicates that the current water resources will not be able to support the entire Ky-American demand for 116 days of the 365-day analysis period. In addition, no water will be supplied for 53 of the 116 days due to insufficient supply.

Table 4.1: Deficit severity for Ky-American Water Co. - 1930 drought

Number of days ...	
Full demand not supplied =	116
No deficit =	249
Less than 75% water supplied =	107
Less than 50% water supplied =	85
Less than 25% water supplied =	69
No water supplied =	53

It should be noted that the baseline deficit results do not consider any conservation measures or reflect any drought management policies that may be enacted by municipal suppliers.

4.2 1953 Baseline Deficit

Simulation of the basin under 1953 drought conditions and 1994 demand forecasts predicts a total annual water supply deficit in the basin of **2.2 BG** for the existing supply resources. Figure 4.2 illustrates the distribution of the deficit along the main stem pools. Examination of the figure reveals that approximately 75% of the deficit occurs in pools 8 & 9, with 62% attributable to pool 9 alone. Tabulated daily deficit traces for all main stem pools over the entire analysis period appear in Appendix F. The data in Appendix F illustrates that water shortages would result primarily in the months of August through December.

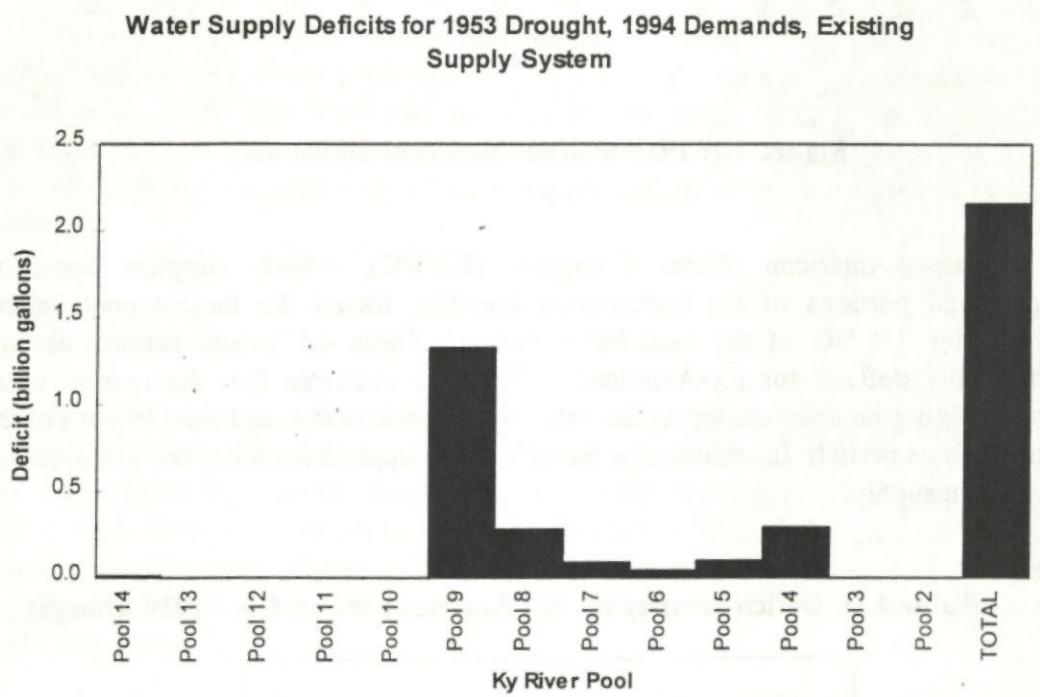


Figure 4.2: 1953 Baseline deficit distribution

Table 4.2 summarizes the severity of the 1953 drought on Ky-American Water Co. The table indicates that current water supply resources would be inadequate to support the full Ky-American demand for 52 of the 365-day analysis period. Additionally, a period of 24 days with no permitted withdrawal would be expected.

Table 4.2: Deficit severity for Ky-American Water Co. - 1953 drought

Number of days ...	
Full demand not supplied =	52
No deficit =	313
Less than 75% water supplied =	43
Less than 50% water supplied =	30
Less than 25% water supplied =	28
No water supplied =	24

4.3 Comparison with Harza 1930 and 1953 Deficits

Significant differences exist between the baseline deficits predicted using the KYBASIN model and those identified by Harza in their 1990 analysis (Harza 1990). Several factors contribute to the difference between the two predictions. Differences in lock leakage estimation, municipal and irrigation demands, return flow calculation, flow routing, determination of historical lateral inflows, and the inclusion of Jacobson Reservoir all contributed to the discrepancy. A complete discussion of the impact of these assumptions is provided in the Task I report.

4.4 Sensitivity Analysis - Baseline Deficits

Water supply in the basin during a drought is highly dependent on realistic estimates for lock and dam leakage, transmission losses, and required minimum flow values. Deficit values predicted using the model are only as valid as the estimates for these variables. In order to evaluate the sensitivity of predicted deficits, the basin was resimulated under baseline conditions for different estimates for these parameters.

4.4.1 Leakage Sensitivity

Figure 4.3 illustrates the results from four simulations of the basin under different lock and dam leakage estimates. Leakage values on the horizontal axis denote flow through each lock and dam when water levels equal the dam crest elevation. Deficit values on the vertical axis reflect the total annual deficit for the basin. From the figure, it can be seen that the deficit increases at larger leakage estimates. The baseline deficits presented previously assumed a leakage value of 50 cfs at all locks and dams and appear in the middle of the two curves. From the curve for the 1930 drought, it can be concluded that if lock and dam leakage were eliminated, the deficit could be reduced from 6.3 BG to 5.4 BG. The savings is less for the 1953 curve due to the decreased severity of that drought.

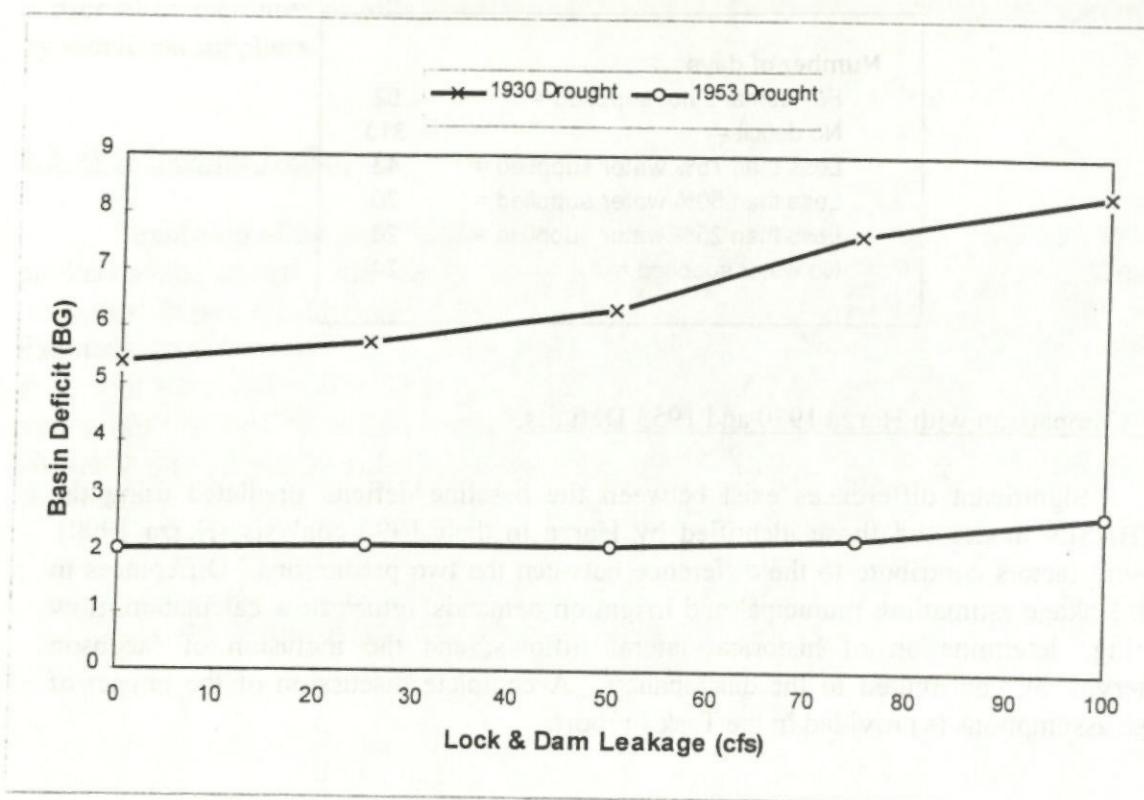


Figure 4.3: Lock leakage vs. basin deficit

4.4.2 Transmission Loss Sensitivity

Figure 4.4 illustrates the impact of transmission losses from Buckhorn and Carr Fork Reservoir releases on the basin deficit. The horizontal axis denotes the percentage of Buckhorn and Carr Fork releases that are lost prior to arrival at pool #14. Figure 4.4 was generated from simulations of the basin under baseline conditions and transmission losses ranging from 0 to 100%. In general, it can be seen that increased estimates for transmission losses result in larger deficits. Transmission losses were considered a net loss from the river basin and were subtracted immediately following release from the reservoir. In the deficit analysis, no conclusive relationship was derived for transmission losses from the headwater reservoirs. Consequently, no transmission losses were assumed for Buckhorn and Carr Fork releases.

The figure illustrates the significant impact of Buckhorn and Carr Fork releases on water supply in main stem pools. At a 100% transmission loss, no reservoir releases reach pool 14 and a basin deficit of 12.3 BG is incurred under 1930 drought conditions. Comparison of this deficit with that experienced under 0% transmission losses yields a

'ballpark' estimate of the impact of Buckhorn and Carr Fork releases on main stem water supply.

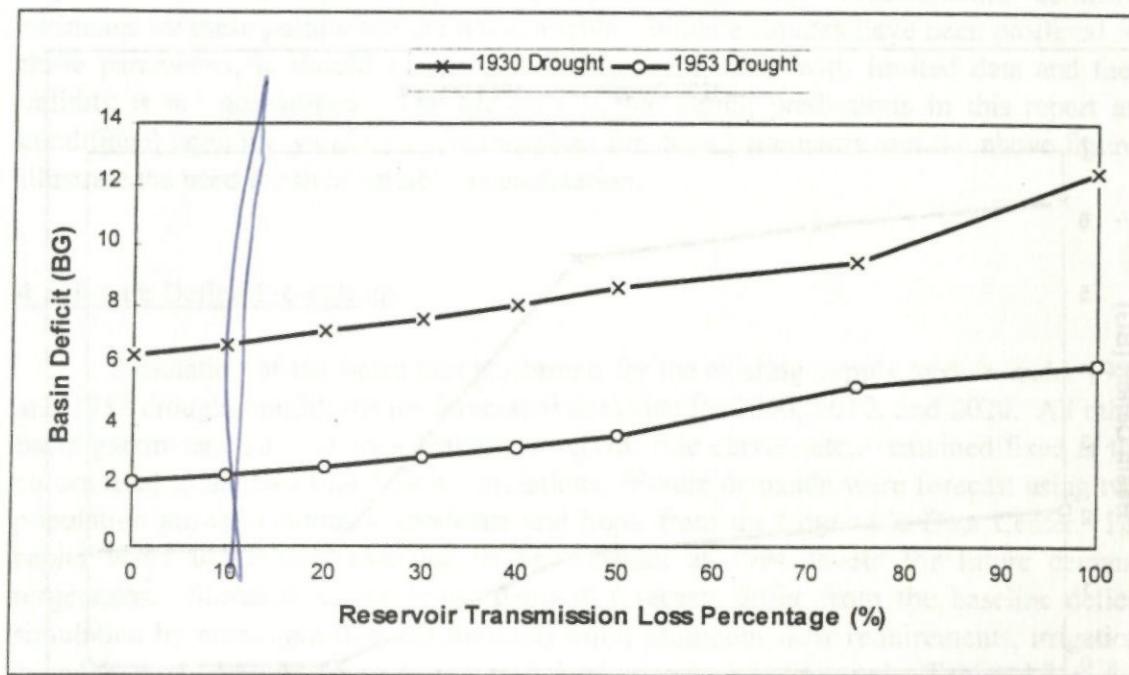


Figure 4.4: Reservoir transmission losses vs. basin deficit

4.4.3 Minimum Flow Requirement Sensitivity

Figure 4.5 illustrates the impact on basin deficit from reductions in the DOW mandated minimum flow requirements. Each curve in the figure was created from five simulations of the basin under baseline conditions for minimum flow requirement reductions of 0%, 25%, 50%, 75%, and 100%. The horizontal axis denotes the percentage decrease in the minimum flow requirement at all lock and dam locations. Buckhorn and Carr Fork minimum releases are not affected by the reduction. The graph illustrates that for a zero percent reduction in the minimum flow requirement, the 1930 baseline deficit occurs, and that if minimum flow requirements were relaxed by 50% at all lock and dam locations, the deficit would be reduced from 6.3 BG to 5.5 BG. The figure also illustrates that reduction of the minimum flow requirement by an additional 25% would yield a substantial decrease in the basin deficit. This is attributable to the fact that at a 75% reduction in the requirement, minimum flows are less than the lock and dam leakage estimate of 50 cfs. The implication of this result is that minimum flows can be satisfied at water levels below crest, thereby allowing legal mining of river pools. In point of fact, at a 75% reduction, minimum flows are maintained at water levels below demand intakes. Consequently, pools can be mined until the intakes are exposed. This point is evidenced by the lack of further reduction in the basin deficit from a 100%

reduction in minimum flow requirements. It is important to note that even when minimum flows are reduced by 100%, flow still exists in the river and is equal to lock and dam leakage.

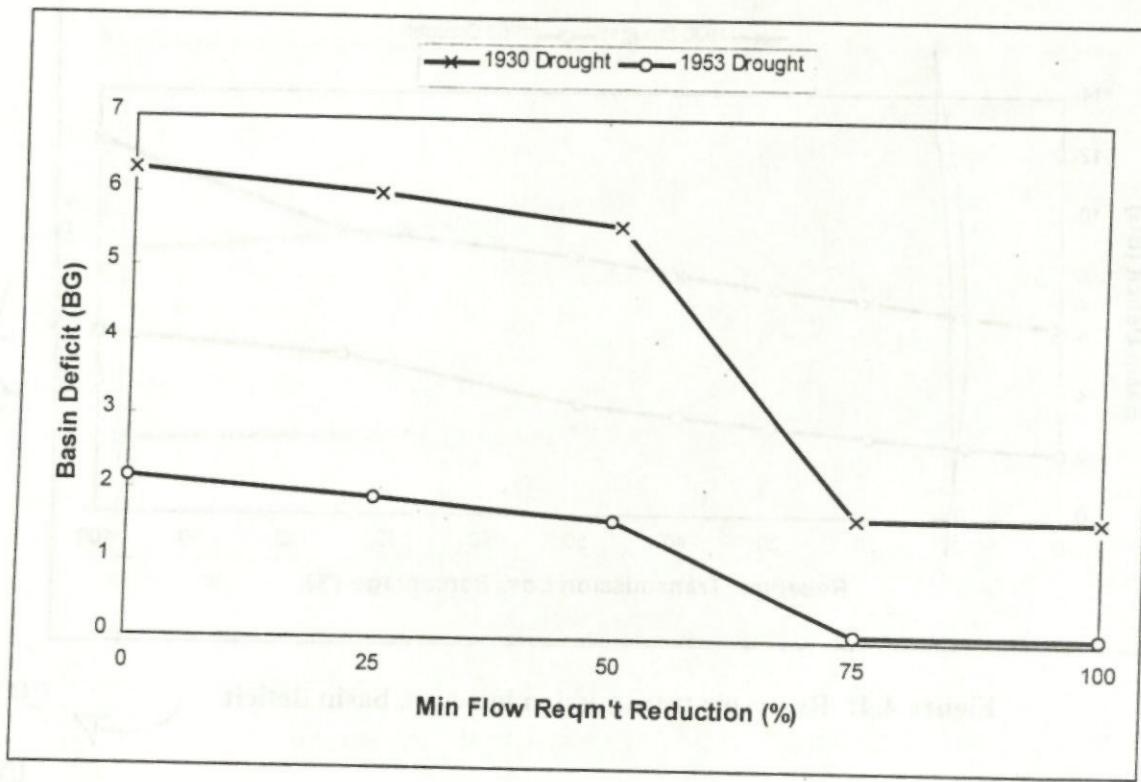


Figure 4.5: Minimum flow requirement reduction vs. basin deficit

4.4.4 Summary

Water supply sensitivity to minimum flow requirements was performed to illustrate the impact of these requirements. Minimum flows are mandated in the river to protect river biota. Currently, the DOW bases the minimum flow requirement on a statistical frequency of past flows. The focus of this type of requirement is to ensure that flows in the river are not reduced beyond a historic naturally occurring flow of the specified frequency. The impetus is to limit the disruption of the natural river system by human interference. A primary criticism of this approach is that this method is purely statistical and does not identify the minimum flows necessary to preserve biological systems in the river. Critics are quick to point out that current DOW minimum flow requirements could conceivably over-predict the actual flows necessary to sustain river biota. While it is beyond the scope of this study to identify the minimum flow requirements in the river necessary to preserve river biota, the sensitivity study was provided to illustrate the impact on water supply of reductions in the current requirements.

Figures 4.3 - 4.5 illustrate the large disparity between predicted deficits and variegated estimates for lock leakage, transmission losses, and minimum flow requirements. With the exception of the minimum flow requirements, definitive estimates for these parameters are not available. While estimates have been proffered for these parameters, it should be noted that they were made with limited data and their validity is not guaranteed. The accuracy of the deficit predictions in this report are conditional upon the validity of the estimates for these parameters and the above figures illustrate the need for their reliable quantification.

4.5 Future Deficit Projections

Simulation of the basin was performed for the existing supply system under 1930 and 1953 drought conditions for forecasted demands for 2000, 2010, and 2020. All other basin parameters, such as lock leakage, reservoir rule curves, etc., remained fixed at the values used in the baseline deficit simulations. Future demands were forecast using two population growth estimates, moderate and high, from the Louisville Data Center. Per capita water usage was assumed to be constant at 1994 levels for future demand projections. Simulations for future demand forecasts differ from the baseline deficit simulation by municipal demand forecasts only; minimum flow requirements, irrigation demands, and physical characteristics of the basin were not altered. Tables 4.3 & 4.4 summarize the basin deficits resulting from the future demand forecasts. Total annual deficits for each main stem pool are identified for each forecast. Daily deficit distributions in each pool over the 12-month analysis period (both droughts) appear in Appendices G and H. From the graph it can be seen that 1930 and 1953 drought conditions would induce total annual basin deficits of 9.7 and 3.8 BG, respectively, under 2020 demand forecasts (high population growth) if current water supply resources were not upgraded.

4.6 Sensitivity Analysis - Future Deficit Projections

The accuracy of predicted deficits under future demand forecasts, like baseline deficit results, is sensitive to reliable estimates for lock and dam leakage, reservoir transmission losses, and minimum flow requirement values. In addition, future deficit projections are sensitive to estimates of future per capita water use. Per capita water use, simply stated, is the average amount of water each person in the basin uses per day. Currently, the per capita water use for Fayette county residents is approximately 210 mgd. Unlike lock leakage and transmission losses, which can be estimated from field measurements, future per capita water use is a function of many unpredictable factors. These factors include future water prices, advances in water-saving technology, future public attitudes on water and conservation, and the development of water-using

Table 4.3: Water supply deficits for future demand projections under existing supply system and 1930 drought of record

Deficit Location	Demand Forecast						
	1994	2000 M	2000 H	2010 M	2010 H	2020 M	2020 H
TOTAL	6.281	6.552	7.202	7.156	8.496	7.411	9.706
Pool 14	0.033	0.034	0.033	0.034	0.034	0.035	0.034
Pool 13	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Pool 12	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Pool 11	0.035	0.037	0.040	0.043	0.050	0.049	0.061
Pool 10	0.204	0.215	0.232	0.237	0.268	0.250	0.295
Pool 9	3.862	4.058	4.581	4.496	5.593	4.658	6.553
Pool 8	0.431	0.454	0.498	0.508	0.591	0.540	0.678
Pool 7	0.147	0.152	0.157	0.160	0.168	0.164	0.176
Pool 6	0.064	0.068	0.076	0.079	0.094	0.085	0.110
Pool 5	0.410	0.432	0.454	0.478	0.522	0.505	0.582
Pool 4	1.066	1.070	1.099	1.089	1.145	1.094	1.186
Pool 3	0.031	0.031	0.032	0.031	0.032	0.032	0.032
Pool 2	0.000	0.000	0.000	0.000	0.000	0.000	0.000

M = moderate population growth forecast; H=high population growth forecast

Table 4.4: Water supply deficits for future demand projections under existing supply system and 1953 drought

Deficit Location	Demand Forecast						
	1994	2000 M	2000 H	2010 M	2010 H	2020 M	2020 H
TOTAL	2.161	2.279	2.573	2.542	3.177	2.656	3.775
Pool 14	0.013	0.013	0.013	0.013	0.013	0.013	0.013
Pool 13	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Pool 12	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Pool 11	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Pool 10	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Pool 9	1.335	1.424	1.655	1.616	2.126	1.688	2.611
Pool 8	0.284	0.302	0.337	0.342	0.408	0.364	0.466
Pool 7	0.096	0.096	0.100	0.097	0.105	0.099	0.110
Pool 6	0.042	0.045	0.049	0.051	0.060	0.055	0.070
Pool 5	0.098	0.104	0.111	0.117	0.133	0.126	0.154
Pool 4	0.292	0.295	0.308	0.305	0.331	0.311	0.351
Pool 3	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Pool 2	0.000	0.000	0.000	0.000	0.000	0.000	0.000

M = moderate population growth forecast; H=high population growth forecast

technology. The difficulty in reliably forecasting these future parameters precludes consistent accuracy in predicting future per capita water use.

In planning for long-term water supply needs, careful consideration must be given to future per capita trends. It is important for decision makers to recognize the difficulty and unreliability of forecasting future per capita usage. Coupled with that recognition, decision makers should be aware of the potential impacts of changes in per capita usage on future water supply needs.

Figure 4.6 below identifies potential per capita water usage in the basin for future years using two different prediction methods. The portion of both curves prior to 1995 illustrates the actual historical per capita water use from 1986-1994. The per capita water use values from 1995-2020 denote predictions. The upper curves illustrate the predicted per capita water use resulting from a fixed growth rate increase. A fixed growth rate in per capita water use, as the name implies, assumes that people in the basin will continue to use more water per person each year. The lower curves in the figure illustrate future per capita water use assuming a constant per capita water use. The constant per capita water use assumes that basin residents in the future will use the same amount of water per person as residents did in 1994. Consequently, any increase in demand from 1994 in future year predictions is solely explained by the six determinants of water use described in the demand forecast model (i.e., changes in population, demographics, etc). A complete explanation of these six determinants appears in a companion report (Blomquist, et al., 1996).

The future deficit predictions presented previously assume a constant per capita water use equal to 1994 usage. The constant per capita water use method was adopted due to the difficulty and somewhat speculative nature of predicting future per capita water use trends. While use of a constant per capita water use may result in under-prediction of basin demands (and subsequently basin deficits), it does provide an unbiased characterization of future demands. The fixed rate growth model was not adopted primarily because of the unrealistic magnitude of the resulting projected per capita estimates. Figure 4.6 emphasizes this point, indicating a 25% increase in per capita water use after 25 years.

Figure 4.7 illustrates the sensitivity of predicted basin deficits to future per capita water use estimates. The two curves indicate predicted basin deficits resulting from demand forecasts using the two different techniques (constant and fixed rate) for estimating future per capita water use.

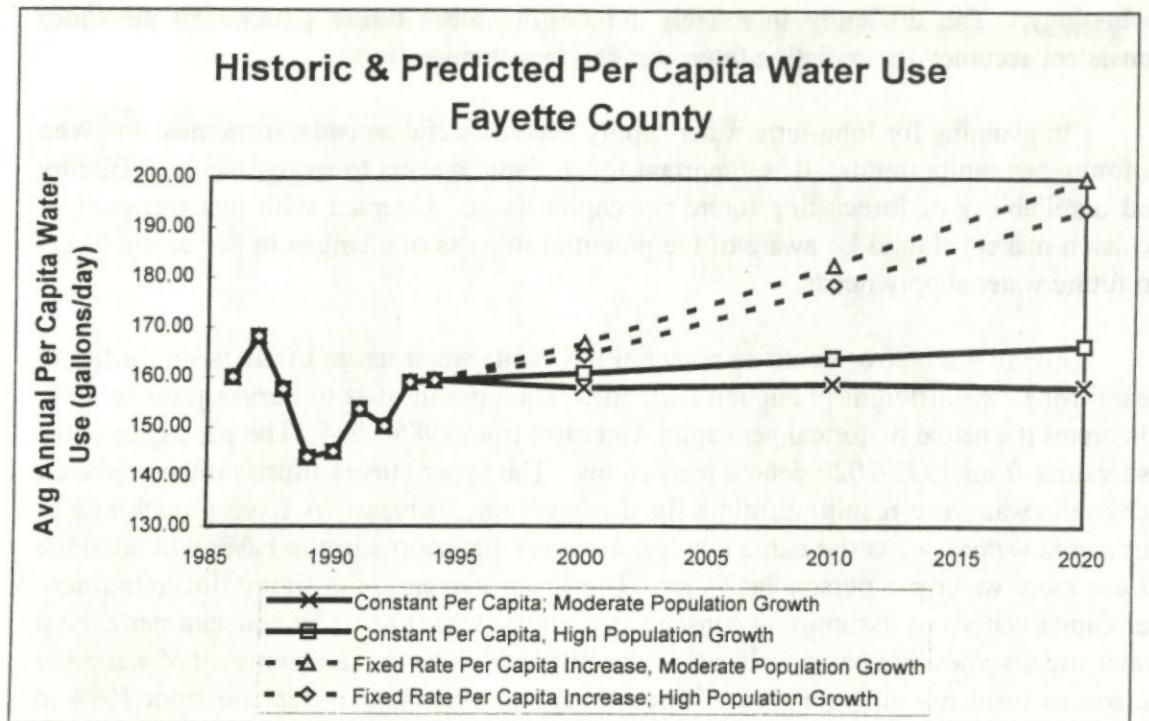


Figure 4.6: Per capita water use trends for Fayette County

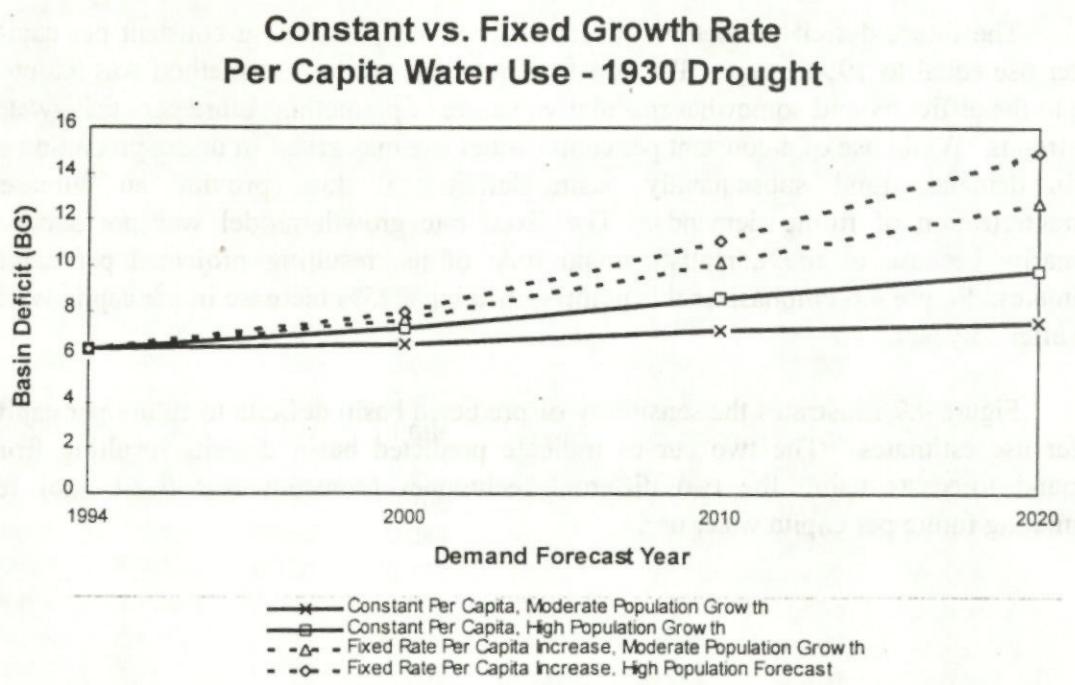


Figure 4.7: Per capita growth trend vs. basin deficit

4.7 Additional Considerations

Future deficit projections reflect anticipated basin deficits under the existing system for future demand forecasts. Deficit projections do not account for changes in the basin composition beyond an increased withdrawal load at the existing intake. While the future is certainly unknown, it is possible to examine some of the potential eventualities. Two such "what if" scenarios were examined to identify the impact on predicted deficits.

The first scenario involved the migration of all water users in the basin to the Ky. River. This scenario assumes that municipal water utilities expand coverage to all customers within their county. Alternately, this simulation also represents the predicted response of those basin residents not on public water in the event private groundwater supplies are depleted during an extended drought period. Under this eventuality the future deficit projection is re-simulated with new demand forecasts. New demand forecasts are generated by increasing the service area of each municipal water supplier in the basin to include all residents in its county. In concert with the expanded customer base of the local municipalities, public sewer use is also increased. Figure 4.8 illustrates the predicted deficits in the basin resulting from the additional demands on the river. From the figure it can be seen that the deficit would be increased by approximately 3 BG in 2020 under high population growth.

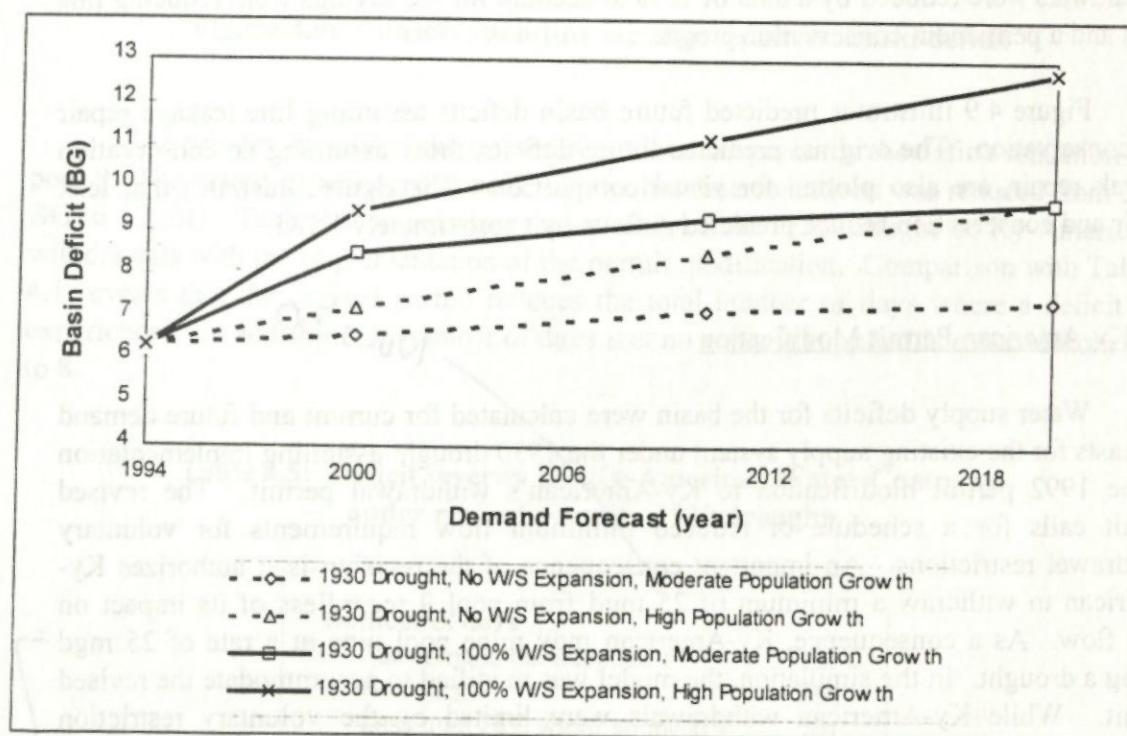


Figure 4.8: 100% Public water/sewer expansion vs. basin deficit

The second "what if" scenario identifies the impact of conservation and line leakage repair on predicted future deficits. Under this scenario all permitted municipal demands were reduced by a specific percentage associated with the anticipated savings from an aggressive leak repair program aimed at reducing system leaks down to 15% of water withdrawals. Current system losses from leakage for all municipalities were obtained from a report published by the Kentucky Rural Water Association for the Authority (KRWA 1996). Those systems leaking more than 15% were identified and the difference between current leakage and the 15% target was calculated. The percentage differences were then used to reduce forecasted demands. An exception to this procedure was made for Ky-American Water Co., which has selected a system leakage target of 10% (Bridwell 1996) as a company objective. Current Ky-American system leakage is estimated to be approximately 14% (Bridwell 1996).

In addition to reducing municipal demands by the savings associated with leak reductions, the impact of a moderate conservation program was examined. Due to the multitude of withdrawers from the river and lack of any formal demand management plans, conservation was only assumed for Ky-American Water Co. Ky-American has undertaken numerous studies and programs directed toward identifying/reducing daily demands through permanent conservation practices. A recent report by the Tellus Institute (Tellus 1994) prepared for the PSC, identifies a 6-7% reduction in daily demands is possible from a conservation program. Accordingly, Ky-American daily withdrawals were reduced by a total of 10% to account for the savings from reducing line leaks and a permanent conservation program.

Figure 4.9 illustrates predicted future basin deficits assuming line leakage repair and conservation. The original predicted future deficits, those assuming no conservation or leak repair, are also plotted for visual comparison. The figure illustrates that leak repair and conservation reduce predicted deficits by approximately 1 BG.

4.8 Ky-American Permit Modification

Water supply deficits for the basin were calculated for current and future demand forecasts for the existing supply system under the 1930 drought assuming implementation of the 1992 permit modification to Ky-American's withdrawal permit. The revised permit calls for a schedule of reduced minimum flow requirements for voluntary withdrawal restrictions. An important consequence of the revision is it authorizes Ky-American to withdraw a minimum of 25 mgd from pool 9 regardless of its impact on river flow. As a consequence, Ky-American may mine pool nine at a rate of 25 mgd during a drought. In the simulation, the model was modified to accommodate the revised permit. While Ky-American withdrawals were limited by the voluntary restriction schedule, no reduction in demands was made.

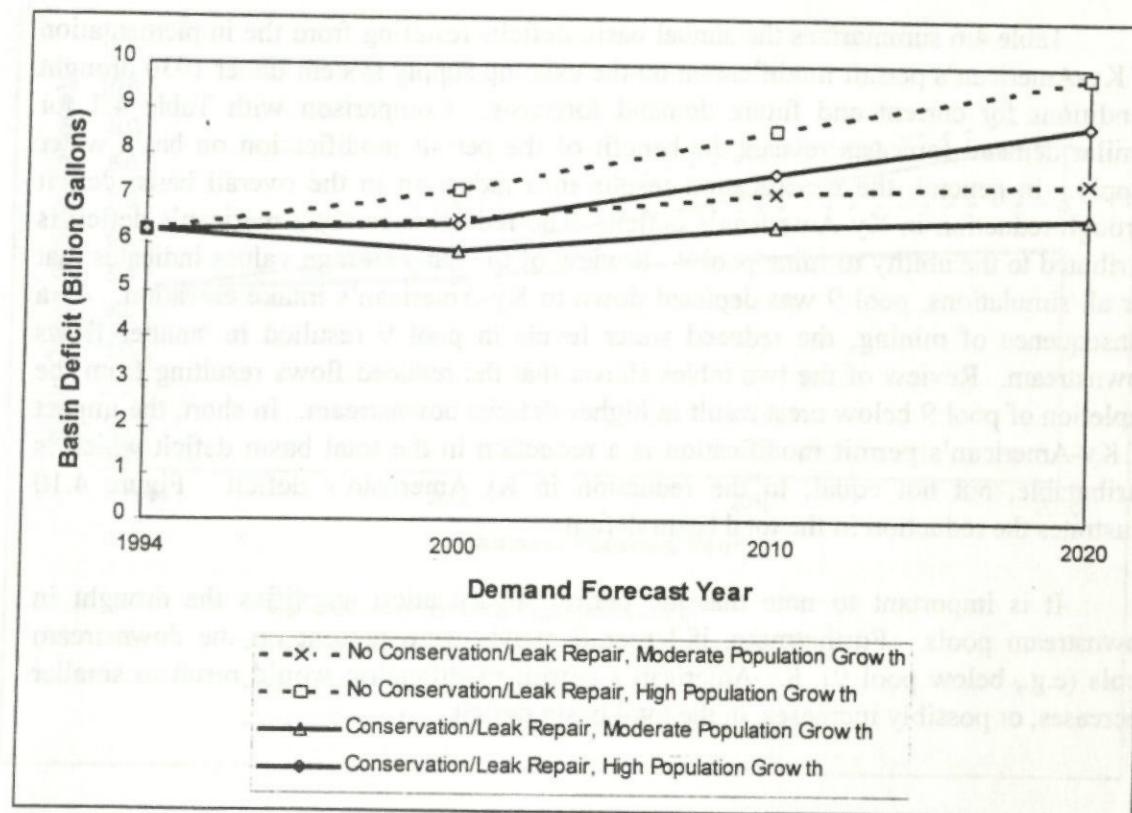


Figure 4.9: Conservation/line leakage repair vs. basin deficit

The primary benefit of the revised Ky-American permit is the deficit reduction on pool 9. The deficit experienced in pool 9 under baseline conditions was reduced from 3.9 BG to 2.2 BG. Table 4.5 summarizes the severity of the 1930 drought on Ky-American withdrawals with the implementation of the permit modification. Comparison with Table 4.1 reveals that the revised permit reduces the total number of days where a deficit is experienced. In addition, the number of days that no water is supplied is reduced from 53 to 8.

Table 4.5: Deficit severity for Ky-American Water Company under revised permit - 1930 drought

Number of days ...	
Full demand not supplied =	107
No deficit =	258
Less than 75% water supplied =	101
Less than 50% water supplied =	10
Less than 25% water supplied =	10
No water supplied =	8

30 m/s
Can be simulated by following more in,

Table 4.6 summarizes the annual basin deficits resulting from the implementation of Ky-American's permit modification on the existing supply system under 1930 drought conditions for current and future demand forecasts. Comparison with Table 4.3 for similar demand forecasts reveals the benefit of the permit modification on basin water supply. In general, the modification results in a reduction in the overall basin deficit through reduction in Ky-American's deficit. The reduction in Ky-American's deficit is attributed to the ability to mine pool 9. Review of the daily storage values indicates that for all simulations, pool 9 was depleted down to Ky-American's intake elevation. As a consequence of mining, the reduced water levels in pool 9 resulted in smaller flows downstream. Review of the two tables shows that the reduced flows resulting from the depletion of pool 9 below crest result in higher deficits downstream. In short, the impact of Ky-American's permit modification is a reduction in the total basin deficit which is attributable, but not equal, to the reduction in Ky-American's deficit. Figure 4.10 illustrates the reduction in the total basin deficit.

It is important to note that the permit modification amplifies the drought in downstream pools. Furthermore, if larger demands were present on the downstream pools (e.g., below pool 9), Ky-American's permit modification would result in smaller decreases, or possibly increases, in the total basin deficit.

Table 4.6: Water supply deficits for current & future demand projections under the existing supply system, 1930 drought of record, and revised Ky-American withdrawal permit

Deficit Location	Demand Forecast						
	1994	2000 M	2000 H	2010 M	2010 H	2020 M	2020 H
TOTAL	4.870	5.178	5.949	5.885	7.567	6.180	9.127
Pool 14	0.033	0.034	0.033	0.034	0.034	0.035	0.034
Pool 13	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Pool 12	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Pool 11	0.035	0.037	0.040	0.043	0.050	0.049	0.061
Pool 10	0.204	0.215	0.232	0.237	0.268	0.250	0.295
Pool 9	2.236	2.447	3.007	2.913	4.092	3.080	5.127
Pool 8	0.564	0.595	0.644	0.657	0.748	0.694	0.850
Pool 7	0.155	0.163	0.178	0.180	0.218	0.188	0.267
Pool 6	0.067	0.072	0.085	0.087	0.118	0.097	0.148
Pool 5	0.458	0.487	0.536	0.556	0.687	0.596	0.835
Pool 4	1.091	1.099	1.161	1.147	1.312	1.158	1.453
Pool 3	0.027	0.028	0.033	0.032	0.042	0.033	0.057
Pool 2	0.000	0.000	0.000	0.000	0.000	0.000	0.000

M = moderate population growth forecast; H=high population growth forecast

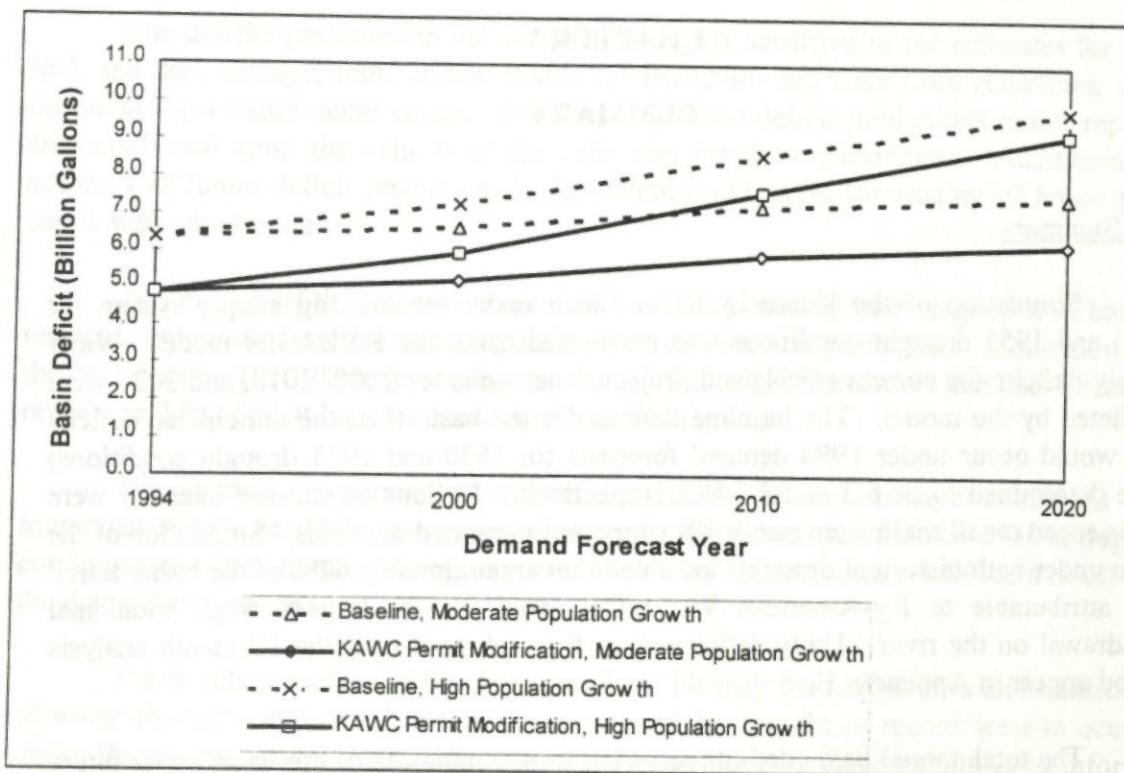


Figure 4.10: Deficit Comparison: Baseline vs. Ky-American permit modification

Source: Ky-American Water Company, Inc., 2001. The Ky-American Water Company, Inc. (Ky-American) is a wholly-owned subsidiary of the Commonwealth of Kentucky. Ky-American is the sole provider of drinking water to approximately 1.2 million residents in the Louisville/Jefferson County area. Ky-American also provides wastewater collection and treatment services to approximately 1.2 million residents in the Louisville/Jefferson County area. Ky-American is a member of the Commonwealth of Kentucky's Water Resources Control Board.

Estimated basin deficit (GDP) affected by water use restrictions (1.2 million residents during population peak = M)

Year	H-0000	M-0000	H-0100	M-0100	H-0200	M-0200	H-0300	M-0300	H-0400	M-0400	H-0500	M-0500	H-0600	M-0600	H-0700	M-0700	H-0800	M-0800	H-0900	M-0900	H-1000	M-1000	H-1100	M-1100	H-1200	M-1200	Demand Forecast
1994	1.3	1.7	1.5	1.8	1.7	2.1	1.5	1.8	1.6	2.0	1.5	1.8	1.4	1.7	1.3	1.6	1.2	1.5	1.1	1.4	1.0	1.3	0.9	1.2	0.8	1.1	
2000	1.5	1.8	1.6	1.9	1.7	2.0	1.6	1.9	1.7	2.0	1.6	1.9	1.4	1.7	1.3	1.6	1.2	1.5	1.0	1.3	0.9	1.2	0.8	1.1	0.7	1.0	

CHAPTER V

SUMMARY

5.0 Summary

Simulation of the Kentucky River Basin under the existing supply system for 1930 and 1953 drought conditions was performed using the KYBASIN model. Water supply deficits for current (1994) and projected demands for 2000, 2010, and 2020 were predicted by the model. The baseline deficits for the basin (i.e., the anticipated deficits that would occur under 1994 demand forecasts for 1930 and 1953 drought conditions) were determined to be 6.3 and 2.2 BG, respectively. Deficits of varying intensity were experienced on all main stem pools that supported permitted demands. Simulation of the basin under both historical droughts indicated that approximately 62% of the basin deficit was attributable to Ky-American Water Co. (pool 9), the largest single municipal withdrawal on the river. Daily deficit values for each pool over the 12-month analysis period appear in Appendix E.

The total annual basin deficits resulting from simulation of the basin under future demand forecasts are summarized in Table 5.1 below. Values in the table represent the anticipated basin deficit that would occur under 1930 and 1953 drought conditions for existing water supply resources. Future demand forecasts were developed from two population growth rates, termed *moderate* and *high*. The predicted water supply deficits under both population growth rates are identified in the table.

**Table 5.1: Summary of water supply deficits (BG) for future demand forecasts
(M = moderate population growth rate, H = high population growth rate)**

Demand Forecast	1994	2000 M	2000 H	2010 M	2010 H	2020 M	2020 H
1930 Drought	6.3	6.6	7.3	7.2	8.5	7.4	9.7
1953 Drought	2.2	2.3	2.6	2.5	3.2	2.7	3.8

The 1992 revision to Ky-American's withdrawal permit was not considered in the deficit analysis results above. The revised permit was considered in a separate analysis. Implementation of the revised permit resulted in a reduction in the total basin deficit. While the permit modification significantly reduced the deficit to Ky-American, small increases resulted in downstream pools. Downstream deficit increases were attributable to reduced flows through lock and dam 9 that resulted from the lower water levels in pool 9.

The deficits presented in the analysis are highly sensitive to the estimates for the lock and dam leakage, transmission losses for Buckhorn and Carr Fork reservoirs, and minimum flow requirement values. The accuracy of the deficit predictions in this report are conditional upon the validity of the estimates for these parameters. Additionally, accuracy of future deficit predictions is dependent on accurate forecasting of future per capita water use trends.

An analysis of the impact on predicted deficits resulting from migration of basin residents on private water sources to public water utilities was performed. Simulation of the basin under 1930 drought conditions and a 2020 high population demand forecast revealed a 3 BG deficit increase resulting from the migration.

The impacts of permanent conservation measures and leakage reductions in municipal supply networks were also examined. Predicted deficits for 1930 drought conditions and 2020 demand forecasts were reduced by approximately 1 BG as a result of the demand reductions.

The results presented in the deficit analysis identify the magnitudes and locations of water shortages that would result in the basin if the drought of record were to occur under the existing supply system/resources. The purpose of these results is to inform decision makers of the susceptibility of the basin to a severe drought, identify the magnitude and location of water shortages, isolate significant factors influencing water supply shortages, and provide an initial reference point for evaluating potential water supply alternatives aimed at eliminating/reducing water supply shortages in the basin during a severe drought.

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APPENDIX A

Water Demand Forecasts 1994 - 2020

Permitted Demands on Main Stem, Tributaries, and Headwater Forks of Ky. River

(Augmented for 1930 Weather Conditions)

Demand Forecasts for Main Stem and Headwater Withdrawals - 1994

<u>Reach</u>	<u>Permitted Withdrawal</u>	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>Jun</u>	<u>Jul</u>	<u>Aug</u>	<u>Sep</u>	<u>Oct</u>	<u>Nov</u>	<u>Dec</u>
Pool #2	None												
Pool #3	Leestown Company	1.486	1.381	1.499	1.439	0.523	0.606	0.613	0.208	0.244	0.737	0.620	1.130
Pool #4	Fmkfrt Electric WPB Capitol Powerhouse	8.306 0.000	7.702 0.000	7.333 0.000	7.376 0.000	7.707 0.000	9.139 0.000	8.708 3.734	7.950 2.652	7.802 2.268	7.740 2.827	6.412 0.009	6.818 0.000
Pool #5	Cty of Versailles Lawrenceberg Muni WW Austin-Nichols Distilling	2.124 1.710 1.396	2.275 1.859 1.403	2.076 1.932 1.241	2.219 2.000 1.429	2.257 2.053 1.435	2.666 2.296 1.422	2.581 2.008 0.135	2.686 2.104 0.693	2.464 1.900 1.071	2.450 1.677 1.003	2.322 1.596 0.908	2.074 1.481 0.999
Pool #6	Cty of Wilmore	0.564	0.517	0.632	0.600	0.580	0.481	0.722	0.654	0.864	0.622	0.552	0.535
Pool #7	Cty of Harrodsburg	1.985	1.668	1.588	1.708	1.817	1.923	1.829	1.873	1.644	1.794	1.589	1.451
Pool #8	Cty of Lancaster Cty of Nicholasville	1.081 2.082	0.867 2.081	0.402 2.078	0.951 2.127	1.088 2.295	1.303 2.716	1.184 2.603	1.296 2.451	1.233 2.462	1.283 2.414	0.943 2.333	0.877 2.228
Pool #9	Ky Amer WC	39.787	33.368	35.996	36.361	39.892	50.800	47.337	48.133	43.116	40.582	36.995	35.454
Pool #10	Winchester Muni Util East Ky Power Coop	3.634 0.003	3.485 0.006	3.365 0.001	3.716 0.003	3.712 0.003	4.731 0.007	5.058 0.010	5.000 0.008	5.000 0.007	5.000 0.090	5.000 0.084	4.805 0.026
Pool #11	Rchmd WGSW Irvine Muni Util DLX, Inc Ky Processing	5.290 0.965 0.035	5.132 0.871 0.066	4.835 0.822 0.033	5.004 1.059 0.034	4.908 1.053 0.000	5.461 1.092 0.000	5.526 1.164 0.000	5.209 1.283 0.142	5.335 1.205 0.077	5.035 1.136 0.034	4.694 1.086 0.228	4.475 1.068 0.000
Pool #12	None												
Pool #13	None												
Pool #14	City of Blyville	0.709	0.634	0.649	0.587	0.605	0.759	0.579	0.643	0.586	0.560	0.573	0.603
Dix Dam	Danville Water Works Northpoint Training Ctr Old Bridge Golf Course	4.082 0.217 0.000	3.892 0.191 0.000	3.596 0.205 0.000	3.566 0.185 0.000	3.802 0.189 0.040	4.112 0.180 0.054	3.923 0.209 0.353	3.747 0.191 0.362	3.669 0.201 0.134	3.459 0.191 0.112	3.430 0.195 0.000	3.536 0.229 0.000
Jacobson	Andover Golf & CC	0.000	0.000	0.000	0.000	0.116	0.254	0.200	0.202	0.085	0.030	0.000	0.000
Buckhorn	Dept of Parks	0.012	0.009	0.017	0.018	0.026	0.023	0.030	0.027	0.024	0.027	0.026	0.021
Carr Fork	None												
NFJUSCFR	Whitesburg Muni WW DLX, Inc Enterprise Coal Blue Diamond Coal (2) Golden Oak Mining Ky Criterion Coal -	0.334 0.000 0.014 0.128 0.309 0.000	0.285 0.000 0.017 0.135 0.328 0.000	0.272 0.007 0.020 0.127 0.343 0.000	0.264 0.005 0.015 0.119 0.312 0.000	0.258 0.000 0.020 0.135 0.313 0.000	0.290 0.000 0.023 0.111 0.324 0.000	0.344 0.000 0.021 0.102 0.121 0.000	0.291 0.000 0.025 0.144 0.129 0.000	0.274 0.000 0.026 0.216 0.135 0.000	0.268 0.000 0.029 0.250 0.133 0.000	0.258 0.000 0.023 0.173 0.139 0.000	0.246 0.000 0.022 0.255 0.150 0.000
CF@Mouth	Leeco Coal	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NF@Hazrd	Hazard Water Dept	2.993	2.709	2.558	2.496	2.495	2.743	3.153	2.841	2.664	3.178	3.361	3.552
NF@Jack	Jackson Muni WW Cockrell Fork Mining Whitaker Coal (3) Benco Mining Buckhorn Processing Leeco, Inc (2)	0.605 0.000 3.254 0.000 0.134 0.517	0.746 0.000 3.730 0.000 0.070 0.620	0.697 0.000 3.486 0.000 0.278 0.630	0.699 0.000 3.616 0.000 0.258 0.566	0.712 0.000 3.641 0.000 0.212 0.548	0.771 0.000 3.536 0.000 0.288 0.580	0.710 0.000 2.962 0.000 0.250 0.566	0.775 0.000 3.192 0.000 0.231 0.533	0.706 0.000 2.680 0.000 0.240 0.530	0.706 0.000 1.023 0.000 0.206 0.508	0.697 0.000 0.972 0.004 0.253 0.488	0.633 0.000 0.775 0.004 0.233 0.385
MF@Tall	None												
SF@Boon	Booneville WSD Mountain Clay Manchester WW (2)	0.366 0.000 1.706	0.320 0.000 1.565	0.303 0.000 1.393	0.304 0.000 1.332	0.305 0.000 1.420	0.509 0.000 2.452	0.319 0.000 2.364	0.405 0.000 2.629	0.303 0.000 2.671	0.278 0.000 2.628	0.285 0.000 2.631	0.278 0.000 2.466

KEY:

Pool X = Main stem reach immediately upstream of lock and dam X.
 Reservoir = Reach including reservoir and its headwaters.
 NFJUSCFR = North Fork reach that is upstream of the confluence of Carr Fork River.
 CF@Mouth = Carr Fork River reach extending between the river mouth and Carr Fork Reservoir.
 NF@Hazrd = North Fork reach extending between Hazard, Ky and the confluence of Carr Fork River.
 NF@Jack = North Fork reach extending between USGS gages at Hazard, Ky and Jackson, Ky.
 MF@Tall = Middle Fork reach extending between Buckhorn Dam and USGS gage at Tallega, Ky.
 SF@Boon = South Fork reach located upstream of USGS gage at Booneville.

Numbers in parenthesis after withdrawal names denote number of permits.

Demand Forecasts for Tributary Withdrawals - 1994

<u>Receiving Reach</u>	<u>Permitted Withdrawal</u>	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>Jun</u>	<u>Jul</u>	<u>Aug</u>	<u>Sep</u>	<u>Oct</u>	<u>Nov</u>	<u>Dec</u>
Pool #2	Owenton Water Works (2)	0.602	0.514	0.555	0.568	0.654	0.852	1.352	1.205	1.135	1.517	1.445	1.574
Pool #3	Georgetown Mun WW (2)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	Stamping Ground WW (2)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	Ky Fish/Wife-Frndfr Hatch	0.025	0.151	0.637	0.444	0.858	1.920	1.899	1.048	0.620	0.774	0.233	0.048
	Old Grand Dad Distilling	0.000	0.001	0.003	0.001	0.004	0.003	0.019	0.002	0.003	0.004	0.003	0.004
	BH/Canewood Golf Course	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	Longview Country Club	0.000	0.000	0.000	0.012	0.038	0.030	0.022	0.018	0.028	0.025	0.000	0.000
	Frankfort Country Club	0.000	0.000	0.000	0.003	0.060	0.208	0.225	0.119	0.151	0.067	0.002	0.000
	Players Club of Lex	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.556	0.403	0.000	0.000
Pool #4	Old Crow Dist Co (2)	0.022	0.007	0.017	0.012	0.026	0.017	0.045	0.018	0.030	0.031	0.022	0.014
	Wilson Landscaping	0.000	0.000	0.000	0.008	0.028	0.048	0.032	0.000	0.000	0.000	0.000	0.000
Pool #5	None												
Pool #6	None												
Pool #7	Andover Golf Club	0.000	0.000	0.000	0.007	0.050	0.076	0.076	0.065	0.052	0.050	0.000	0.000
	Lone Oak Country Club	0.000	0.000	0.000	0.022	0.023	0.042	0.048	0.047	0.058	0.008	0.000	0.000
	Connemara Golf Course	0.000	0.000	0.000	0.027	0.158	0.210	0.124	0.146	0.123	0.029	0.000	0.000
Pool #8	Berea College Water Utility	1.204	2.003	1.832	1.585	1.189	0.259	0.071	0.253	0.204	0.519	0.425	0.613
Pool #9	Arlington Assoc/EKU Golf	0.000	0.000	0.000	0.000	0.042	0.044	0.029	0.030	0.028	0.016	0.006	0.000
Pool #10	Clay City Water Works	0.220	0.214	0.201	0.202	0.203	0.306	0.230	0.283	0.230	0.233	0.223	0.220
	Stanton Muni Water Works	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Pool #11	Berea College Water Util (2)	0.998	0.000	0.000	0.245	0.770	1.900	2.211	1.852	2.016	1.469	1.635	1.351
	Bluegrass Army Depot	0.233	0.221	0.220	0.206	0.197	0.170	0.192	0.197	0.162	0.156	0.131	0.141
Pool #12	None												
Pool #13	None												
Pool #14	None												
Dix Dam	Danville Country Club	0.000	0.000	0.000	0.046	0.075	0.170	0.110	0.114	0.040	0.000	0.000	0.000
	Stanford Water Works	0.719	0.705	0.651	0.660	0.686	0.735	0.718	0.699	0.656	0.640	0.648	0.641
Jacobson	None												
Buckhorn	Hyden-Leslie Co Water	0.623	0.571	0.538	0.583	0.576	0.631	0.652	0.701	0.618	0.674	0.688	0.692
	Shamrock Coal (4)	0.633	0.745	0.601	0.549	0.602	0.620	0.905	1.065	0.619	0.935	1.035	1.035
	Leeco, Inc (2)	0.424	0.312	0.220	0.249	0.391	0.547	0.551	0.671	0.578	0.439	0.286	0.218
	Bit-Laurel Mining	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	Cypress Cumb Coal (4)	0.290	0.446	0.426	0.407	0.378	0.439	0.361	0.477	0.385	0.411	0.432	0.415
Carr Fork	None												

KEY:

Pool X = Main stem reach immediately upstream of lock and dam X.
 Reservoir = Reach including reservoir and its headwaters.
 NFJUSCFR = North Fork reach that is upstream of the confluence of Carr Fork River.
 CF@Mouth = Carr Fork River reach extending between the river mouth and Carr Fork Reservoir.
 NF@Hazrd = North Fork reach extending between Hazard, Ky and the confluence of Carr Fork River.
 NF@Jack = North Fork reach extending between USGS gages at Hazard, Ky and Jackson, Ky.
 MF@Tall = Middle Fork reach extending between Buckhorn Dam and USGS gage at Tallegea, Ky.
 SF@Boon = South Fork reach located upstream of USGS gage at Booneville.

Numbers in parenthesis after withdrawal names denote number of permits.

Demand Forecasts for Main Stem and Headwater Withdrawals - 2000 Moderate Growth

<u>Reach</u>	<u>Permitted Withdrawal</u>	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>Jun</u>	<u>Jul</u>	<u>Aug</u>	<u>Sep</u>	<u>Oct</u>	<u>Nov</u>	<u>Dec</u>
Pool #2	None												
Pool #3	Leestown Company	1.487	1.382	1.500	1.440	0.524	0.606	0.616	0.208	0.245	0.738	0.621	1.131
Pool #4	Fmkftr Electric WPB Capitol Powerhouse	8.314 0.000	7.709 0.000	7.339 0.000	7.383 0.000	7.715 0.000	9.139 0.000	8.742 3.749	7.950 2.652	7.839 2.279	7.746 2.829	6.420 0.009	6.825 0.000
Pool #5	Cty of Versailles Lawrenceberg Muni WW Austin-Nichols Distilling	2.320 1.736 1.418	2.459 1.884 1.422	2.256 1.958 1.257	2.414 2.028 1.449	2.472 2.085 1.457	2.926 2.337 1.447	2.853 2.014 0.135	2.925 2.149 0.708	2.630 1.900 1.071	2.666 1.711 1.024	2.518 1.627 0.925	2.260 1.507 1.017
Pool #6	Cty of Wilmore	0.603	0.551	0.671	0.639	0.617	0.504	0.785	0.701	0.922	0.662	0.587	0.568
Pool #7	Cty of Harrodsburg	1.985	1.668	1.588	1.708	1.817	2.018	1.899	1.971	1.867	1.794	1.589	1.451
Pool #8	Cty of Lancaster Cty of Nicholasville	1.081 2.226	0.867 2.218	0.402 2.206	0.951 2.265	1.088 2.443	1.326 2.844	1.184 2.831	1.319 2.627	1.233 2.628	1.283 2.570	0.943 2.481	0.877 2.367
Pool #9	Ky Amer WC	41.029	34.560	37.173	37.595	41.202	50.800	49.373	49.040	41.984	41.887	38.237	36.656
Pool #10	Winchester Muni Util East Ky Power Coop	3.641 0.003	3.492 0.006	3.372 0.001	3.723 0.003	3.720 0.003	4.731 0.007	5.093 0.010	5.009 0.008	5.000 0.007	5.008 0.090	5.007 0.084	4.812 0.026
Pool #11	Rchmnd WGSW Irvine Muni Util DLX, Inc/Ky Processing	5.488 0.965 0.035	5.319 0.871 0.066	5.019 0.822 0.033	5.207 1.059 0.034	5.128 1.053 0.000	5.487 1.165 0.000	5.874 1.164 0.000	5.401 1.354 0.149	5.642 1.205 0.077	5.260 1.136 0.034	4.891 1.086 0.228	4.660 1.068 0.000
Pool #12	None												
Pool #13	None												
Pool #14	City of Bytville	0.709	0.634	0.649	0.587	0.605	0.816	0.579	0.704	0.586	0.560	0.573	0.603
Dix Dam	Danville Water Works Northpoint Training Ctr Old Bridge Golf Course	4.082 0.217 0.000	3.892 0.191 0.000	3.596 0.205 0.000	3.566 0.185 0.000	3.802 0.189 0.040	4.196 0.184 0.055	4.042 0.216 0.364	3.875 0.198 0.374	3.757 0.206 0.137	3.459 0.191 0.112	3.430 0.195 0.000	3.536 0.229 0.000
Jacobson	Andover Golf & CC	0.000	0.000	0.000	0.000	0.120	0.254	0.209	0.206	0.089	0.031	0.000	0.000
Buckhorn	Dept of Parks	0.012	0.009	0.017	0.018	0.026	0.023	0.030	0.028	0.024	0.027	0.026	0.021
Carr Fork	None												
NFJUSCFR	Whitesburg Muni WV DLX, Inc Enterprise Coal Blue Diamond Coal (2) Golden Oak Mining Ky Criterion Coal	0.341 0.000 0.014 0.128 0.316 0.000	0.294 0.000 0.018 0.135 0.339 0.000	0.281 0.007 0.021 0.127 0.355 0.000	0.271 0.005 0.015 0.119 0.320 0.000	0.261 0.000 0.020 0.135 0.316 0.000	0.305 0.000 0.024 0.112 0.340 0.000	0.405 0.000 0.025 0.104 0.143 0.000	0.353 0.000 0.030 0.147 0.156 0.000	0.302 0.000 0.029 0.220 0.149 0.000	0.272 0.000 0.029 0.250 0.135 0.000	0.267 0.000 0.024 0.173 0.144 0.000	0.257 0.000 0.023 0.255 0.157 0.000
CF@Mouth	Leeco Coal	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NF@Hazrd	Hazard Water Dept	2.993	2.711	2.561	2.496	2.495	2.760	3.215	2.898	2.713	3.178	3.361	3.555
NF@Jack	Jackson Muni WV Cockrell Fork Mining Whitaker Coal (3) Benco Mining Buckhorn Processing Leeco, Inc (2)	0.605 0.000 3.254 0.000 0.134 0.517	0.746 0.000 3.733 0.000 0.070 0.621	0.697 0.000 3.491 0.000 0.278 0.631	0.699 0.000 3.616 0.000 0.258 0.566	0.712 0.000 3.641 0.000 0.212 0.548	0.787 0.000 3.558 0.000 0.295 0.584	0.710 0.000 3.020 0.000 0.255 0.577	0.787 0.000 3.256 0.000 0.236 0.544	0.706 0.000 2.730 0.000 0.244 0.540	0.706 0.000 1.023 0.004 0.206 0.508	0.697 0.000 0.972 0.004 0.253 0.488	0.633 0.000 0.776 0.004 0.233 0.385
MF@Tall	None												
SF@Boon	Booneville WSD Mountain Clay Manchester WV (2)	0.369 0.000 1.715	0.328 0.000 1.580	0.312 0.000 1.410	0.308 0.000 1.342	0.305 0.000 1.420	0.622 0.000 2.586	0.319 0.000 2.504	0.526 0.000 2.789	0.308 0.000 2.761	0.278 0.000 2.628	0.288 0.000 2.640	0.285 0.000 2.480

KEY:

- Pool X = Main stem reach immediately upstream of lock and dam X.
- Reservoir = Reach including reservoir and its headwaters.
- NFJUSCFR = North Fork reach that is upstream of the confluence of Carr Fork River.
- CF@Mouth = Carr Fork River reach extending between the river mouth and Carr Fork Reservoir.
- NF@Hazrd = North Fork reach extending between Hazard, Ky and the confluence of Carr Fork River.
- NF@Jack = North Fork reach extending between USGS gages at Hazard, Ky and Jackson, Ky.
- MF@Tall = Middle Fork reach extending between Buckhorn Dam and USGS gage at Tallega, Ky.
- SF@Boon = South Fork reach located upstream of USGS gage at Booneville.

Numbers in parenthesis after withdrawal names denote number of permits.

Demand Forecasts for Tributary Withdrawals - 2000 Moderate Growth

<u>Receiving Reach</u>	<u>Permitted Withdrawal</u>	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>Jun</u>	<u>Jul</u>	<u>Aug</u>	<u>Sep</u>	<u>Oct</u>	<u>Nov</u>	<u>Dec</u>
Pool #2	Owenton Water Works (2)	0.603	0.514	0.555	0.569	0.656	0.858	1.352	1.210	1.135	1.519	1.446	1.574
Pool #3	Georgetown Mun WW (2)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	Stamping Ground WW (2)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	Ky Fish/Wife-Frnkfrt Hatch	0.025	0.151	0.638	0.444	0.859	1.920	1.907	1.048	0.623	0.775	0.233	0.048
	Old Grand Dad Distilling	0.000	0.001	0.003	0.001	0.004	0.003	0.019	0.002	0.003	0.004	0.003	0.004
	BH/Canewood Golf Course	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	Longview Country Club	0.000	0.000	0.000	0.012	0.038	0.057	0.044	0.049	0.061	0.025	0.000	0.000
	Frankfort Country Club	0.000	0.000	0.000	0.003	0.060	0.208	0.226	0.112	0.152	0.067	0.002	0.000
	Players Club of Lex	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.581	0.416	0.000	0.000
Pool #4	Old Crow Dist Co (2)	0.022	0.007	0.017	0.012	0.026	0.017	0.045	0.018	0.030	0.031	0.022	0.014
	Wilson Landscaping	0.000	0.000	0.000	0.008	0.028	0.048	0.032	0.000	0.000	0.000	0.000	0.000
Pool #5	None												
Pool #6	None												
Pool #7	Andover Golf Club	0.000	0.000	0.000	0.007	0.053	0.080	0.082	0.070	0.056	0.053	0.000	0.000
	Lone Oak Country Club	0.000	0.000	0.000	0.023	0.024	0.044	0.052	0.050	0.062	0.009	0.000	0.000
	Connemara Golf Course	0.000	0.000	0.000	0.029	0.168	0.220	0.135	0.156	0.131	0.031	0.000	0.000
Pool #8	Berea College Water Utility	1.249	2.076	1.902	1.649	1.242	0.260	0.075	0.262	0.216	0.542	0.443	0.638
Pool #9	Arlington Assoc/EKU Golf	0.000	0.000	0.000	0.000	0.044	0.044	0.031	0.031	0.030	0.017	0.006	0.000
Pool #10	Clay City Water Works	0.222	0.214	0.201	0.204	0.208	0.355	0.230	0.329	0.230	0.238	0.225	0.221
	Stanton Muni Water Works	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Pool #11	Berea College Water Util (2)	1.035	0.000	0.000	0.255	0.805	1.909	2.351	1.920	2.132	1.535	1.704	1.407
	Bluegrass Army Depot	0.242	0.229	0.228	0.214	0.206	0.171	0.204	0.204	0.171	0.163	0.136	0.147
Pool #12	None												
Pool #13	None												
Pool #14	None												
Dix Dam	Danville Country Club	0.000	0.000	0.000	0.046	0.075	0.173	0.113	0.118	0.041	0.000	0.000	0.000
	Stanford Water Works	0.735	0.717	0.662	0.675	0.708	0.759	0.745	0.717	0.656	0.662	0.664	0.654
Jacobson	None												
Buckhorn	Hyden-Leslie Co Water	0.626	0.574	0.541	0.586	0.578	0.640	0.652	0.709	0.618	0.676	0.690	0.695
	Shamrock Coal (4)	0.636	0.748	0.604	0.552	0.604	0.630	0.905	1.078	0.619	0.937	1.038	1.039
	Leeco, Inc (2)	0.426	0.313	0.221	0.250	0.392	0.556	0.551	0.680	0.578	0.440	0.287	0.219
	Bit-Laurel Mining	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	Cypress Cumb Coal (4)	0.291	0.448	0.428	0.409	0.379	0.446	0.361	0.483	0.385	0.412	0.433	0.417
Carr Fork	None												

KEY:

Pool X = Main stem reach immediately upstream of lock and dam X.
 Reservoir = Reach including reservoir and its headwaters.
 NFJUSCFR = North Fork reach that is upstream of the confluence of Carr Fork River.
 CF@Mouth = Carr Fork River reach extending between the river mouth and Carr Fork Reservoir.
 NF@Hazard = North Fork reach extending between Hazard, Ky and the confluence of Carr Fork River.
 NF@Jack = North Fork reach extending between USGS gages at Hazard, Ky and Jackson, Ky.
 MF@Tall = Middle Fork reach extending between Buckhorn Dam and USGS gage at Tallega, Ky.
 SF@Boon = South Fork reach located upstream of USGS gage at Booneville.

Numbers in parenthesis after withdrawal names denote number of permits.

Demand Forecasts for Main Stem and Headwater Withdrawals - 2000 High Growth

Reach	Permitted Withdrawal	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Pool #2	None												
Pool #3	Leestown Company	1.524	1.417	1.536	1.478	0.538	0.613	0.630	0.213	0.252	0.754	0.641	1.164
Pool #4	Fmkfrt Electric WPB Capitol Powerhouse	8.520 0.000	7.902 0.000	7.515 0.000	7.575 0.000	7.935 0.000	9.244 0.000	8.947 3.837	8.140 2.715	8.065 2.344	7.914 2.891	6.634 0.009	7.024 0.000
Pool #5	Cty of Versailles Lawrenceberg Muni WW Austin-Nichols Distilling	2.364 1.820 1.486	2.500 1.962 1.481	2.296 2.039 1.310	2.457 2.115 1.511	2.519 2.187 1.529	2.968 2.431 1.506	2.898 2.172 0.146	2.963 2.245 0.739	2.667 1.964 1.107	2.714 1.821 1.089	2.562 1.724 0.981	2.302 1.591 1.073
Pool #6	City of Wilmore	0.666	0.606	0.734	0.703	0.678	0.556	0.866	0.768	1.006	0.728	0.644	0.623
Pool #7	City of Harrodsburg	2.064	1.739	1.656	1.786	1.908	2.037	1.930	1.974	1.669	1.886	1.668	1.523
Pool #8	City of Lancaster City of Nicholasville	1.124 2.460	0.903 2.440	0.435 2.414	0.993 2.490	1.143 2.684	1.342 3.137	1.184 3.124	1.322 2.880	1.233 2.865	1.338 2.824	0.986 2.721	0.914 2.594
Pool #9	Ky Amer WC	43.854	37.269	39.849	40.400	44.180	54.790	53.871	53.228	49.105	44.856	41.059	39.387
Pool #10	Winchester Muni Util East Ky Power Coop	3.786 0.003	3.627 0.006	3.505 0.001	3.866 0.003	3.877 0.003	4.859 0.007	5.296 0.011	5.189 0.008	5.166 0.007	5.163 0.093	5.149 0.087	4.949 0.027
Pool #11	Rchmnd WGSW Irvine Muni Util DLX, Inc Ky Processing	5.692 1.003 0.036	5.512 0.902 0.068	5.209 0.852 0.034	5.417 1.096 0.035	5.355 1.101 0.000	5.806 1.151 0.000	6.204 1.164 0.000	5.692 1.327 0.146	5.930 1.205 0.077	5.491 1.183 0.035	5.094 1.118 0.235	4.851 1.102 0.000
Pool #12	None												
Pool #13	None												
Pool #14	City of Bytville	0.713	0.635	0.650	0.590	0.612	0.767	0.579	0.647	0.586	0.567	0.577	0.605
Dix Dam	Danville Water Works Northpoint Training Ctr Old Bridge Golf Course	4.164 0.221 0.000	3.970 0.195 0.000	3.672 0.209 0.000	3.647 0.189 0.000	3.889 0.193 0.041	4.194 0.184 0.055	4.051 0.216 0.365	3.858 0.197 0.373	3.741 0.205 0.137	3.546 0.196 0.115	3.512 0.200 0.000	3.613 0.234 0.000
Jacobson	Andover Golf & CC	0.000	0.000	0.000	0.000	0.128	0.274	0.228	0.223	0.097	0.033	0.000	0.000
Buckhorn	Dept of Parks	0.012	0.009	0.017	0.018	0.026	0.023	0.030	0.027	0.024	0.027	0.026	0.021
Carr Fork	None												
NFJUSCFR	Whitesburg Muni WW DLX, Inc Enterprise Coal Blue Diamond Coal (2) Golden Oak Mining Ky Criterion Coal	0.334 0.000 0.014 0.128 0.309	0.285 0.000 0.017 0.135 0.328	0.272 0.007 0.020 0.127 0.343	0.264 0.005 0.015 0.119 0.312	0.258 0.000 0.020 0.135 0.313	0.290 0.000 0.023 0.111 0.324	0.349 0.000 0.022 0.103 0.123	0.291 0.000 0.025 0.145 0.129	0.274 0.000 0.026 0.216 0.135	0.268 0.000 0.029 0.251 0.133	0.258 0.000 0.023 0.173 0.139	0.246 0.000 0.022 0.255 0.150
CF@Mouth	Leeco Coal	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NF@Hazrd	Hazard Water Dept	2.994	2.709	2.558	2.497	2.501	2.743	3.188	2.852	2.667	3.188	3.363	3.552
NF@Jack	Jackson Muni WW Cockrell Fork Mining Whitaker Coal (3) Benco Mining Buckhorn Processing Leeco, Inc (2)	0.605 0.000 3.255 0.000 0.134 0.517	0.746 0.000 3.730 0.000 0.070 0.620	0.697 0.000 3.486 0.000 0.278 0.630	0.699 0.000 3.617 0.000 0.258 0.566	0.712 0.000 3.649 0.000 0.212 0.549	0.787 0.000 3.536 0.000 0.288 0.580	0.710 0.000 2.995 0.000 0.253 0.572	0.789 0.000 3.204 0.000 0.232 0.535	0.706 0.000 2.683 0.000 0.240 0.531	0.706 0.000 1.026 0.004 0.207 0.510	0.697 0.000 0.973 0.004 0.253 0.488	0.633 0.000 0.775 0.004 0.233 0.385
MF@Tall	None												
SF@Boon	Booneville WSD Mountain Clay Manchester WW (2)	0.366 0.000 1.706	0.320 0.000 1.565	0.303 0.000 1.393	0.304 0.000 1.332	0.306 0.000 1.421	0.518 0.000 2.482	0.319 0.000 2.416	0.412 0.000 2.663	0.303 0.000 2.671	0.279 0.000 2.629	0.285 0.000 2.631	0.278 0.000 2.466

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 NF@Hazrd = North Fork reach extending between Hazard, Ky and the confluence of Carr Fork River.
 NF@Jack = North Fork reach extending between USGS gages at Hazard, Ky and Jackson, Ky.
 MF@Tall = Middle Fork reach extending between Buckhorn Dam and USGS gage at Tallega, Ky.
 SF@Boon = South Fork reach located upstream of USGS gage at Booneville.

Numbers in parenthesis after withdrawal names denote number of permits.

Demand Forecasts for Tributary Withdrawals - 2000 High Growth

<u>Receiving Reach</u>	<u>Permitted Withdrawal</u>	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>Jun</u>	<u>Jul</u>	<u>Aug</u>	<u>Sep</u>	<u>Oct</u>	<u>Nov</u>	<u>Dec</u>
Pool #2	Owenton Water Works (2)	0.614	0.517	0.555	0.579	0.678	0.853	1.352	1.192	1.135	1.544	1.457	1.578
Pool #3	Georgetown Mun WW (2)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	Stamping Ground WW (2)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	Ky Fish/Wife-Fmkfr Hatch	0.026	0.155	0.653	0.456	0.883	1.942	1.952	1.073	0.641	0.791	0.241	0.049
	Old Grand Dad Distilling	0.000	0.001	0.003	0.001	0.004	0.003	0.020	0.002	0.003	0.004	0.003	0.004
	BH/Canewood Golf Course	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	Longview Country Club	0.000	0.000	0.000	0.198	0.159	0.139	0.090	0.104	0.142	0.254	0.000	0.000
	Frankfort Country Club	0.000	0.000	0.000	0.003	0.062	0.210	0.231	0.122	0.156	0.069	0.002	0.000
	Players Club of Lex	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.634	0.445	0.000	0.000
Pool #4	Old Crow Dist Co (2)	0.023	0.007	0.017	0.012	0.027	0.017	0.046	0.018	0.031	0.032	0.023	0.014
	Wilson Landscaping	0.000	0.000	0.000	0.008	0.029	0.049	0.033	0.000	0.000	0.000	0.000	0.000
Pool #5	None												
Pool #6	None												
Pool #7	Andover Golf Club	0.000	0.000	0.000	0.008	0.058	0.088	0.091	0.076	0.061	0.058	0.000	0.000
	Lone Oak Country Club	0.000	0.000	0.000	0.026	0.027	0.049	0.058	0.055	0.067	0.009	0.000	0.000
	Connemara Golf Course	0.000	0.000	0.000	0.032	0.185	0.243	0.149	0.172	0.143	0.034	0.000	0.000
Pool #8	Berea College Water Utility	1.296	2.151	1.974	1.716	1.297	0.275	0.080	0.276	0.227	0.566	0.461	0.665
Pool #9	Arlington Assoc/EKU Golf	0.000	0.000	0.000	0.000	0.046	0.047	0.033	0.033	0.031	0.017	0.007	0.000
Pool #10	Clay City Water Works	0.229	0.215	0.201	0.209	0.221	0.354	0.230	0.319	0.230	0.253	0.231	0.222
	Stanton Muni Water Works	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Pool #11	Berea College Water Util (2)	1.074	0.000	0.000	0.265	0.840	2.020	2.483	2.024	2.241	1.602	1.774	1.465
	Bluegrass Army Depot	0.251	0.237	0.237	0.223	0.215	0.181	0.216	0.215	0.180	0.170	0.142	0.153
Pool #12	None												
Pool #13	None												
Pool #14	None												
Dix Dam	Danville Country Club	0.000	0.000	0.000	0.047	0.077	0.173	0.113	0.117	0.041	0.000	0.000	0.000
	Stanford Water Works	0.759	0.735	0.678	0.699	0.741	0.786	0.778	0.733	0.656	0.696	0.688	0.673
Jacobson	None												
Buckhorn	Hyden-Leslie Co Water	0.623	0.571	0.538	0.583	0.576	0.614	0.652	0.688	0.618	0.674	0.688	0.692
	Shamrock Coal (4)	0.633	0.745	0.601	0.549	0.602	0.604	0.905	1.045	0.619	0.935	1.035	1.035
	Leeco, Inc (2)	0.424	0.312	0.220	0.249	0.391	0.533	0.551	0.659	0.578	0.439	0.286	0.218
	Bit-Laurel Mining	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	Cyrus Cumb Coal (4)	0.290	0.446	0.426	0.407	0.378	0.428	0.361	0.468	0.385	0.411	0.432	0.415
Carr Fork	None												

KEY:

Pool X = Main stem reach immediately upstream of lock and dam X.
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 SF@Boon = South Fork reach located upstream of USGS gage at Booneville.

Numbers in parenthesis after withdrawal names denote number of permits.

Demand Forecasts for Main Stem and Headwater Withdrawals - 2010 Moderate Growth

Reach	Permitted Withdrawal	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Total
Pool #2	None													
Pool #3	Leestown Company	1.505	1.399	1.518	1.459	0.531	0.606	0.625	0.211	0.250	0.745	0.631	1.147	12.300
Pool #4	Fmkfrt Electric WPB Capitol Powerhouse	8.413 0.000	7.802 0.000	7.424 0.000	7.476 0.000	7.822 0.000	9.143 0.000	8.867 3.803	2.688 2.320	7.980 2.859	7.827 0.009	6.524 0.000	6.922 0.000	83.000
Pool #5	Cty of Versailles Lawrenceberg Muni WW Austin-Nichols Distilling	2.566 1.823 1.489	2.688 1.965 1.483	2.481 2.042 1.312	2.657 2.118 1.514	2.740 2.191 1.531	3.241 2.446 1.515	3.185 2.195 0.148	3.214 2.263 0.745	2.916 1.979 1.115	2.936 1.825 1.092	2.764 1.727 0.983	2.493 1.595 1.076	31.000
Pool #6	Cty of Wilmore	0.682	0.620	0.750	0.718	0.693	0.579	0.902	0.800	1.045	0.744	0.658	0.636	8.000
Pool #7	Cty of Harrodsburg	1.985	1.668	1.588	1.708	1.817	2.077	1.959	2.030	1.726	1.794	1.589	1.451	20.000
Pool #8	Cty of Lancaster Cty of Nicholasville	1.111 2.517	0.892 2.494	0.425 2.465	0.980 2.545	1.126 2.743	1.353 3.269	1.184 3.253	1.337 2.999	1.233 2.978	1.322 2.886	0.973 2.780	0.903 2.650	20.000
Pool #9	Ky Amer WC	43.287	36.725	39.312	39.837	43.582	53.980	53.035	52.455	48.345	44.260	40.493	38.839	510.000
Pool #10	Winchester Muni Util East Ky Power Coop	3.689 0.003	3.537 0.006	3.416 0.001	3.770 0.003	3.772 0.003	4.752 0.007	5.182 0.011	5.090 0.008	5.069 0.007	5.059 0.091	5.054 0.085	4.857 0.026	60.000
Pool #11	Rchmd WGSW Irvine Muni Util DLX, Inc Ky Processing	5.851 0.965 0.035	5.663 0.871 0.066	5.357 0.822 0.033	5.580 1.059 0.034	5.531 1.053 0.000	6.082 1.178 0.000	6.489 1.164 0.000	5.947 1.366 0.151	6.181 1.210 0.077	5.671 1.136 0.034	5.252 1.086 0.228	5.000 1.068 0.000	60.000
Pool #12	None													
Pool #13	None													
Pool #14	City of Bytwville	0.709	0.634	0.649	0.587	0.605	0.851	0.579	0.739	0.586	0.560	0.573	0.603	10.000
Dix Dam	Danville Water Works Northpoint Training Ctr Old Bridge Golf Course	4.082 0.217 0.000	3.892 0.191 0.000	3.596 0.205 0.000	3.566 0.185 0.000	3.802 0.189 0.040	4.274 0.187 0.056	4.114 0.219 0.371	3.950 0.201 0.382	3.836 0.191 0.140	3.459 0.210 0.112	3.430 0.195 0.000	3.536 0.229 0.000	40.000
Jacobson	Andover Golf & CC	0.000	0.000	0.000	0.000	0.127	0.270	0.225	0.220	0.095	0.033	0.000	0.000	10.000
Buckhorn	Dept of Parks	0.012	0.009	0.017	0.018	0.026	0.024	0.031	0.028	0.025	0.027	0.026	0.021	10.000
Carr Fork	None													
NFJUSCFR	Whitesburg Muni WW DLX, Inc Enterprise Coal Blue Diamond Coal (2) Golden Oak Mining Ky Criterion Coal	0.349 0.000 0.015 0.128 0.322 0.000	0.303 0.000 0.018 0.135 0.349 0.000	0.290 0.007 0.021 0.127 0.366 0.000	0.277 0.005 0.016 0.119 0.328 0.000	0.264 0.000 0.020 0.135 0.320 0.000	0.353 0.000 0.028 0.113 0.394 0.000	0.475 0.000 0.029 0.105 0.167 0.000	0.428 0.000 0.037 0.149 0.190 0.000	0.372 0.000 0.035 0.224 0.183 0.000	0.275 0.000 0.030 0.250 0.137 0.000	0.276 0.000 0.025 0.173 0.148 0.000	0.268 0.000 0.024 0.255 0.163 0.000	30.000
CF@Mouth	Leeco Coal	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	10.000
NF@Hazrd	Hazard Water Dept	2.993	2.713	2.563	2.496	2.495	2.803	3.262	2.947	2.763	3.178	3.361	3.557	100.000
NF@Jack	Jackson Muni WW Cockrell Fork Mining Whitaker Coal (3) Benco Mining Buckhorn Processing Leeco, Inc (2)	0.605 0.000 3.254 0.000 0.134 0.517	0.746 0.000 3.735 0.000 0.070 0.621	0.697 0.000 3.493 0.000 0.279 0.631	0.699 0.000 3.616 0.000 0.258 0.566	0.712 0.000 3.641 0.000 0.212 0.548	0.816 0.000 3.613 0.000 0.294 0.593	0.710 0.000 3.065 0.000 0.298 0.585	0.817 0.000 3.311 0.000 0.240 0.553	0.706 0.000 2.780 0.000 0.249 0.550	0.706 0.000 1.023 0.004 0.206 0.508	0.697 0.000 0.972 0.004 0.253 0.488	0.633 0.000 0.776 0.004 0.233 0.385	100.000
MF@Tall	None													
SF@Boon	Booneville WSD Mountain Clay Manchester WW (2)	0.370 0.000 1.713	0.331 0.000 1.577	0.316 0.000 1.406	0.309 0.000 1.339	0.305 0.000 1.420	0.658 0.000 2.642	0.319 0.000 2.562	0.565 0.000 2.841	0.346 0.000 2.815	0.278 0.000 2.628	0.289 0.000 2.638	0.288 0.000 2.477	100.000

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- NF@Hazrd = North Fork reach extending between Hazard, Ky and the confluence of Carr Fork River.
- NF@Jack = North Fork reach extending between USGS gages at Hazard, Ky and Jackson, Ky.
- MF@Tall = Middle Fork reach extending between Buckhorn Dam and USGS gage at Tallega, Ky.
- SF@Boon = South Fork reach located upstream of USGS gage at Booneville.

Numbers in parenthesis after withdrawal names denote number of permits.

Demand Forecasts for Tributary Withdrawals - 2010 Moderate Growth

<u>Receiving Reach</u>	<u>Permitted Withdrawal</u>	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>Jun</u>	<u>Jul</u>	<u>Aug</u>	<u>Sep</u>	<u>Oct</u>	<u>Nov</u>	<u>Dec</u>
Pool #2	Owenton Water Works (2)	0.607	0.515	0.555	0.573	0.665	0.861	1.352	1.209	1.135	1.529	1.450	1.576
Pool #3	Georgetown Mun WW (2)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	Stamping Ground WW (2)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	Ky Fish/Wife-Frnkft Hatch	0.025	0.153	0.645	0.450	0.871	1.921	1.934	1.062	0.634	0.783	0.237	0.049
	Old Grand Dad Distilling	0.000	0.001	0.003	0.001	0.004	0.003	0.020	0.002	0.003	0.004	0.003	0.004
	BH/Canewood Golf Course	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	Longview Country Club	0.000	0.000	0.000	0.120	0.109	0.137	0.088	0.105	0.144	0.159	0.000	0.000
	Frankfort Country Club	0.000	0.000	0.000	0.003	0.061	0.208	0.229	0.121	0.154	0.068	0.002	0.000
	Players Club of Lex	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.624	0.440	0.000	0.000
Pool #4	Old Crow Dist Co (2)	0.022	0.007	0.017	0.012	0.026	0.017	0.046	0.018	0.031	0.031	0.022	0.014
	Wilson Landscaping	0.000	0.000	0.000	0.008	0.028	0.048	0.032	0.000	0.000	0.000	0.000	0.000
Pool #5	None												
Pool #6	None												
Pool #7	Andover Golf Club	0.000	0.000	0.000	0.008	0.060	0.091	0.094	0.080	0.063	0.060	0.000	0.000
	Lone Oak Country Club	0.000	0.000	0.000	0.026	0.027	0.051	0.060	0.058	0.070	0.010	0.000	0.000
	Connemara Golf Course	0.000	0.000	0.000	0.032	0.189	0.253	0.155	0.179	0.149	0.035	0.000	0.000
Pool #8	Berea College Water Utility	1.332	2.210	2.030	1.767	1.340	0.288	0.083	0.289	0.236	0.585	0.476	0.685
Pool #9	Arlington Assoc/EKU Golf	0.000	0.000	0.000	0.000	0.047	0.049	0.034	0.034	0.033	0.018	0.007	0.000
Pool #10	Clay City Water Works	0.227	0.215	0.201	0.207	0.217	0.404	0.231	0.373	0.241	0.248	0.229	0.222
	Stanton Muni Water Works	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Pool #11	Berea College Water Util (2)	1.104	0.000	0.000	0.273	0.868	2.116	2.597	2.114	2.336	1.655	1.829	1.510
	Bluegrass Army Depot	0.258	0.244	0.244	0.230	0.222	0.189	0.226	0.225	0.187	0.176	0.147	0.158
Pool #12	None												
Pool #13	None												
Pool #14	None												
Dix Dam	Danville Country Club	0.000	0.000	0.000	0.046	0.075	0.177	0.115	0.120	0.042	0.000	0.000	0.000
	Stanford Water Works	0.767	0.741	0.683	0.706	0.752	0.812	0.806	0.756	0.656	0.707	0.696	0.679
Jacobson	None												
Buckhorn	Hyden-Leslie Co Water	0.626	0.574	0.541	0.586	0.578	0.649	0.652	0.717	0.618	0.676	0.691	0.695
	Shamrock Coal (4)	0.636	0.749	0.605	0.552	0.604	0.639	0.905	1.090	0.619	0.938	1.039	1.040
	Leeco, Inc (2)	0.426	0.314	0.221	0.250	0.393	0.564	0.551	0.687	0.578	0.440	0.287	0.219
	Bit-Laurel Mining	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	Cyprus Cumb Coal (4)	0.291	0.448	0.429	0.409	0.379	0.452	0.361	0.488	0.385	0.412	0.434	0.417
Carr Fork	None												

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Demand Forecasts for Main Stem and Headwater Withdrawals - 2010 High Growth

<u>Reach</u>	<u>Permitted Withdrawal</u>	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>Jun</u>	<u>Jul</u>	<u>Aug</u>	<u>Sep</u>	<u>Oct</u>	<u>Nov</u>	<u>Dec</u>
Pool #2	None												
Pool #3	Leestown Company	1.557	1.447	1.568	1.511	0.552	0.631	0.645	0.219	0.259	0.768	0.660	1.193
Pool #4	Fmkfrt Electric WPB Capitol Powerhouse	8.702 0.000	8.072 0.000	7.671 0.000	7.746 0.000	8.130 0.000	9.513 0.000	9.154 3.926	8.360 2.789	8.296 2.412	8.063 2.945	6.824 0.010	7.200 0.000
Pool #5	City of Versailles Lawrenceberg Muni WW Austin-Nichols Distilling	2.649 1.965 1.604	2.766 2.097 1.583	2.557 2.179 1.399	2.739 2.266 1.619	2.830 2.363 1.651	3.322 2.611 1.617	3.272 2.470 0.166	3.286 2.433 0.801	2.987 2.120 1.195	3.027 2.009 1.202	2.846 1.891 1.076	2.571 1.736 1.171
Pool #6	Cty of Wilmore	0.795	0.718	0.863	0.832	0.802	0.672	1.048	0.921	1.195	0.860	0.760	0.734
Pool #7	Cty of Harrodsburg	2.143	1.810	1.725	1.864	1.999	2.161	2.063	2.084	1.777	1.978	1.747	1.596
Pool #8	Cty of Lancaster Cty of Nicholasville	1.173 2.936	0.942 2.892	0.472 2.838	1.040 2.948	1.203 3.174	1.380 3.795	1.184 3.778	1.346 3.453	1.233 3.404	1.400 3.340	1.035 3.210	0.955 3.056
Pool #9	Ky Amer WC	48.952	42.158	44.678	45.462	49.553	62.748	62.061	60.857	56.614	50.212	46.153	44.317
Pool #10	Winchester Muni Util East Ky Power Coop	3.958 0.003	3.789 0.007	3.664 0.001	4.037 0.003	4.065 0.003	5.113 0.008	5.561 0.011	5.425 0.009	5.400 0.008	5.349 0.096	5.319 0.089	5.112 0.028
Pool #11	Rchmnd WGSW Irvine Muni Util DLX, Inc/ Ky Processing	6.15 1.03 0.04	5.95 0.93 0.07	5.64 0.88 0.04	5.89 1.13 0.04	5.86 1.14 0.00	6.55 1.21 0.00	6.98 1.21 0.00	6.38 1.37 0.15	6.61 1.22 0.08	6.01 1.22 0.04	5.55 1.14 0.24	5.28 1.13 0.00
Pool #12	None												
Pool #13	None												
Pool #14	City of Byville	0.718	0.637	0.651	0.595	0.621	0.803	0.579	0.678	0.586	0.577	0.582	0.607
Dix Dam	Danville Water Works Northpoint Training Ctr Old Bridge Golf Course	4.234 0.225 0.000	4.036 0.198 0.000	3.736 0.213 0.000	3.715 0.193 0.000	3.963 0.197 0.042	4.321 0.189 0.057	4.175 0.223 0.376	3.971 0.202 0.384	3.861 0.212 0.141	3.620 0.200 0.117	3.582 0.204 0.000	3.679 0.238 0.000
Jacobson	Andover Golf & CC	0.000	0.000	0.000	0.000	0.144	0.314	0.263	0.255	0.112	0.037	0.000	0.000
Buckhorn	Dept of Parks	0.012	0.009	0.017	0.018	0.026	0.023	0.030	0.027	0.024	0.027	0.026	0.021
Carr Fork	None												
NFJUSCFR	Whitesburg Muni WW DLX, Inc Enterprise Coal Blue Diamond Coal (2) Golden Oak Mining Ky Criterion Coal	0.334 0.000 0.014 0.128 0.309 0.000	0.285 0.000 0.017 0.135 0.328 0.000	0.272 0.007 0.020 0.127 0.343 0.000	0.264 0.005 0.015 0.119 0.312 0.000	0.258 0.000 0.020 0.136 0.313 0.000	0.290 0.000 0.023 0.112 0.324 0.000	0.361 0.000 0.022 0.104 0.127 0.000	0.291 0.000 0.025 0.146 0.129 0.000	0.274 0.000 0.026 0.219 0.135 0.000	0.268 0.000 0.029 0.252 0.133 0.000	0.258 0.000 0.023 0.173 0.139 0.000	0.246 0.000 0.022 0.255 0.150 0.000
CF@Mouth	Lecco Coal	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NF@Hazrd	Hazard Water Dept	2.995	2.709	2.558	2.497	2.506	2.761	3.230	2.881	2.696	3.198	3.365	3.552
NF@Jack	Jackson Muni WW Cockrell Fork Mining Whitaker Coal (3) Benco Mining Buckhorn Processing Lecco, Inc (2)	0.605 0.000 3.257 0.000 0.134 0.517	0.746 0.000 3.730 0.000 0.070 0.620	0.697 0.000 3.486 0.000 0.278 0.630	0.699 0.000 3.618 0.000 0.258 0.566	0.712 0.000 3.657 0.000 0.213 0.550	0.815 0.000 3.559 0.000 0.213 0.584	0.710 0.000 3.035 0.000 0.256 0.580	0.813 0.000 3.237 0.000 0.234 0.540	0.706 0.000 2.713 0.000 0.243 0.536	0.706 0.000 1.030 0.000 0.207 0.511	0.697 0.000 0.973 0.004 0.253 0.489	0.633 0.000 0.775 0.004 0.233 0.385
MF@Tall	None												
SF@Boon	Booneville WSD Mountain Clay Manchester WV (2)	0.366 0.000 1.706	0.320 0.000 1.565	0.303 0.000 1.393	0.304 0.000 1.332	0.307 0.000 1.421	0.512 0.000 2.546	0.319 0.000 2.488	0.403 0.000 2.715	0.303 0.000 2.688	0.281 0.000 2.631	0.285 0.000 2.631	0.278 0.000 2.466

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Demand Forecasts for Tributary Withdrawals - 2010 High Growth

<u>Receiving Reach</u>	<u>Permitted Withdrawal</u>	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>Jun</u>	<u>Jul</u>	<u>Aug</u>	<u>Sep</u>	<u>Oct</u>	<u>Nov</u>	<u>Dec</u>
Pool #2	Owenton Water Works (2)	0.629	0.520	0.555	0.592	0.707	0.863	1.352	1.184	1.135	1.577	1.472	1.584
Pool #3	Georgetown Mun WW (2)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	Stamping Ground WW (2)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	Ky Fish/Wlife-Frnkfrt Hatch	0.026	0.158	0.666	0.466	0.905	1.999	1.997	1.102	0.659	0.806	0.248	0.051
	Old Grand Dad Distilling	0.000	0.001	0.003	0.001	0.004	0.003	0.020	0.002	0.003	0.004	0.003	0.004
	BH/Canewood Golf Course	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	Longview Country Club	0.000	0.000	0.000	0.429	0.311	0.292	0.173	0.210	0.302	0.540	0.000	0.000
	Frankfort Country Club	0.000	0.000	0.000	0.003	0.063	0.217	0.236	0.125	0.161	0.070	0.002	0.000
	Players Club of Lex	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.731	0.499	0.000	0.000
Pool #4	Old Crow Dist Co (2)	0.023	0.007	0.018	0.013	0.027	0.018	0.047	0.019	0.032	0.032	0.023	0.015
	Wilson Landscaping	0.000	0.000	0.000	0.008	0.030	0.050	0.033	0.000	0.000	0.000	0.000	0.000
Pool #5	None												
Pool #6	None												
Pool #7	Andover Golf Club	0.000	0.000	0.000	0.010	0.069	0.106	0.110	0.092	0.072	0.069	0.000	0.000
	Lone Oak Country Club	0.000	0.000	0.000	0.030	0.032	0.059	0.070	0.066	0.080	0.011	0.000	0.000
	Connemara Golf Course	0.000	0.000	0.000	0.037	0.218	0.293	0.180	0.206	0.170	0.040	0.000	0.000
Pool #8	Berea College Water Utility	1.400	2.321	2.136	1.865	1.421	0.311	0.090	0.310	0.253	0.620	0.503	0.723
Pool #9	Arlington Assoc/EKU Golf	0.000	0.000	0.000	0.000	0.050	0.053	0.037	0.037	0.035	0.019	0.007	0.000
Pool #10	Clay City Water Works	0.240	0.216	0.201	0.218	0.245	0.404	0.243	0.354	0.230	0.278	0.242	0.225
	Stanton Muni Water Works	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Pool #11	Berea College Water Util (2)	1.160	0.000	0.000	0.288	0.920	2.280	2.793	2.268	2.497	1.754	1.933	1.594
	Bluegrass Army Depot	0.271	0.256	0.256	0.242	0.235	0.204	0.243	0.241	0.200	0.186	0.155	0.166
Pool #12	None												
Pool #13	None												
Pool #14	None												
Dix Dam	Danville Country Club	0.000	0.000	0.000	0.048	0.078	0.179	0.117	0.121	0.042	0.000	0.000	0.000
	Stanford Water Works	0.807	0.771	0.711	0.745	0.806	0.857	0.863	0.785	0.667	0.763	0.736	0.711
Jacobson	None												
Buckhorn	Hyden-Leslie Co Water	0.623	0.571	0.538	0.583	0.576	0.607	0.652	0.688	0.618	0.674	0.688	0.692
	Shamrock Coal (4)	0.633	0.745	0.601	0.549	0.602	0.597	0.905	1.045	0.619	0.935	1.035	1.035
	Leeco, Inc (2)	0.424	0.312	0.220	0.249	0.391	0.527	0.551	0.659	0.578	0.439	0.286	0.218
	Bit-Laurel Mining	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	Cyprus Cumb Coal (4)	0.290	0.446	0.426	0.407	0.378	0.423	0.361	0.468	0.385	0.411	0.432	0.415
Carr Fork	None												

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<u>Reach</u>	<u>Permitted Withdrawal</u>	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Pool #2	None												
Pool #3	Leestown Company	1.503	1.397	1.516	1.457	0.530	0.607	0.625	0.211	0.250	0.745	0.630	1.146
Pool #4	Fmkfrt Electric WPB Capitol Powerhouse	8.403 0.000	7.793 0.000	7.416 0.000	7.467 0.000	7.811 0.000	9.153 0.000	8.874 3.806	8.068 2.691	7.990 2.323	7.819 2.856	6.513 0.009	6.912 0.000
Pool #5	City of Versailles Lawrenceberg Muni WV Austin-Nichols Distilling	2.704 1.886 1.540	2.817 2.024 1.527	2.607 2.103 1.351	2.793 2.184 1.560	2.890 2.267 1.585	3.416 2.527 1.565	3.370 2.329 0.157	3.375 2.347 0.773	3.074 2.049 1.155	3.088 1.907 1.141	2.902 1.800 1.024	2.624 1.657 1.118
Pool #6	City of Wilmore	0.729	0.660	0.787	0.765	0.738	0.624	0.972	0.860	1.118	0.792	0.700	0.677
Pool #7	Cty of Harrodsburg	1.985	1.668	1.588	1.708	1.817	2.133	2.013	2.087	1.783	1.794	1.589	1.451
Pool #8	Cty of Lancaster Cty of Nicholasville	1.130 2.690	0.907 2.659	0.440 2.619	0.999 2.712	1.150 2.921	1.366 3.523	1.184 3.504	1.344 3.221	1.233 3.187	1.346 3.074	0.992 2.958	0.919 2.818
Pool #9	Ky Amer WC	44.042	37.449	40.027	40.587	44.378	55.195	54.285	53.622	49.493	45.053	41.247	39.569
Pool #10	Winchester Muni Util East Ky Power Coop	3.666 0.003	3.515 0.006	3.395 0.001	3.748 0.003	3.747 0.003	4.736 0.007	5.165 0.010	5.077 0.008	5.056 0.007	5.035 0.091	5.032 0.085	4.836 0.026
Pool #11	Rchmnnd WGSW Irvine Muni Util DLX, Inc/Ky Processing	6.103 0.965 0.035	5.901 0.871 0.066	5.592 0.822 0.033	5.839 1.059 0.034	5.811 1.053 0.000	6.490 1.199 0.000	6.911 1.182 0.000	6.322 1.385 0.153	6.551 1.229 0.079	5.957 1.136 0.034	5.502 1.086 0.228	5.236 1.068 0.000
Pool #12	None												
Pool #13	None												
Pool #14	City of Byville	0.709	0.634	0.649	0.587	0.605	0.867	0.579	0.756	0.590	0.560	0.573	0.603
Dix Dam	Danville Water Works Northpoint Training Ctr Old Bridge Golf Course	4.082 0.217 0.000	3.892 0.191 0.000	3.596 0.205 0.000	3.566 0.185 0.000	3.802 0.189 0.040	4.380 0.192 0.058	4.209 0.224 0.379	4.054 0.207 0.392	3.946 0.216 0.144	3.459 0.191 0.112	3.430 0.195 0.000	3.536 0.229 0.000
Jacobson	Andover Golf & CC	0.000	0.000	0.000	0.000	0.129	0.276	0.230	0.225	0.098	0.033	0.000	0.000
Buckhorn	Dept of Parks	0.012	0.009	0.017	0.018	0.026	0.024	0.031	0.029	0.025	0.027	0.026	0.021
Carr Fork	None												
NFJUSCFR	Whitesburg Muni WV DLX, Inc Enterprise Coal Blue Diamond Coal (2) Golden Oak Mining Ky Criterion Coal	0.358 0.000 0.015 0.128 0.331 0.000	0.314 0.000 0.019 0.135 0.362 0.000	0.302 0.008 0.022 0.127 0.380 0.000	0.286 0.005 0.016 0.119 0.338 0.000	0.267 0.000 0.021 0.135 0.324 0.000	0.420 0.000 0.033 0.116 0.469 0.000	0.572 0.000 0.035 0.107 0.201 0.000	0.531 0.000 0.046 0.153 0.235 0.000	0.469 0.000 0.045 0.229 0.231 0.000	0.280 0.000 0.030 0.250 0.139 0.000	0.287 0.000 0.026 0.173 0.154 0.000	0.282 0.000 0.025 0.255 0.172 0.000
CF@Mouth	Leeco Coal	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NF@Hazrd	Hazard Water Dept	2.993	2.714	2.565	2.496	2.495	2.856	3.322	3.009	2.825	3.178	3.361	3.559
NF@Jack	Jackson Muni WV Cockrell Fork Mining Whitaker Coal (3) Benco Mining Buckhorn Processing Leeco, Inc (2)	0.606 0.000 3.254 0.000 0.134 0.517	0.747 0.000 3.737 0.000 0.070 0.621	0.698 0.000 3.496 0.000 0.279 0.632	0.700 0.000 3.616 0.000 0.258 0.566	0.712 0.000 3.641 0.000 0.212 0.548	0.840 0.000 3.682 0.000 0.300 0.604	0.710 0.000 3.121 0.000 0.263 0.596	0.845 0.000 3.381 0.000 0.245 0.565	0.706 0.000 2.842 0.000 0.255 0.562	0.706 0.000 1.023 0.004 0.206 0.508	0.698 0.000 0.972 0.004 0.253 0.488	0.634 0.000 0.776 0.004 0.233 0.386
MF@Tall	None												
SF@Boon	Booneville WSD Mountain Clay Manchester WV (2)	0.371 0.000 1.713	0.333 0.000 1.577	0.319 0.000 1.407	0.310 0.000 1.340	0.305 0.000 1.420	0.693 0.000 2.696	0.319 0.000 2.616	0.602 0.000 2.896	0.382 0.000 2.870	0.278 0.000 2.628	0.290 0.000 2.638	0.290 0.000 2.477

KEY:

Pool X = Main stem reach immediately upstream of lock and dam X.

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NF@Hazrd = North Fork reach extending between Hazard, Ky and the confluence of Carr Fork River.

NF@Jack = North Fork reach extending between USGS gages at Hazard, Ky and Jackson, Ky.

MF@Tall = Middle Fork reach extending between Buckhorn Dam and USGS gage at Tallega, Ky.

SF@Boon = South Fork reach located upstream of USGS gage at Booneville.

Numbers in parenthesis after withdrawal names denote number of permits.

Demand Forecasts for Tributary Withdrawals - 2020 Moderate Growth

Receiving Reach	Permitted Withdrawal	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Pool #2	Owenton Water Works (2)	0.610	0.516	0.555	0.575	0.670	0.866	1.352	1.210	1.135	1.535	1.453	1.577
Pool #3	Georgetown Mun WW (2)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	Stamping Ground WW (2)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	Ky Fish/Wife-Frnkfrt Hatch	0.025	0.153	0.644	0.449	0.870	1.923	1.936	1.064	0.635	0.782	0.237	0.049
	Old Grand Dad Distilling	0.000	0.001	0.003	0.001	0.004	0.003	0.020	0.002	0.003	0.004	0.003	0.004
	BH/Canewood Golf Course	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	Longview Country Club	0.000	0.000	0.000	0.204	0.164	0.197	0.120	0.147	0.207	0.263	0.000	0.000
	Frankfort Country Club	0.000	0.000	0.000	0.003	0.061	0.208	0.229	0.121	0.155	0.068	0.002	0.000
	Players Club of Lex	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.639	0.447	0.000	0.000
Pool #4	Old Crow Dist Co (2)	0.022	0.007	0.017	0.012	0.026	0.017	0.046	0.018	0.031	0.031	0.022	0.014
	Wilson Landscaping	0.000	0.000	0.000	0.008	0.028	0.048	0.032	0.000	0.000	0.000	0.000	0.000
Pool #5	None												
Pool #6	None												
Pool #7	Andover Golf Club	0.000	0.000	0.000	0.009	0.064	0.099	0.102	0.085	0.067	0.064	0.000	0.000
	Lone Oak Country Club	0.000	0.000	0.000	0.028	0.029	0.054	0.065	0.062	0.075	0.010	0.000	0.000
	Connemara Golf Course	0.000	0.000	0.000	0.034	0.201	0.272	0.167	0.192	0.159	0.037	0.000	0.000
Pool #8	Berea College Water Utility	1.389	2.303	2.119	1.849	1.408	0.308	0.089	0.307	0.251	0.614	0.498	0.717
Pool #9	Arlington Assoc/EKU Golf	0.000	0.000	0.000	0.000	0.050	0.052	0.036	0.036	0.035	0.019	0.007	0.000
Pool #10	Clay City Water Works	0.229	0.215	0.201	0.209	0.223	0.431	0.261	0.396	0.265	0.254	0.232	0.222
	Stanton Muni Water Works	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Pool #11	Berea College Water Util (2)	1.151	0.000	0.000	0.286	0.912	2.258	2.766	2.248	2.476	1.738	1.917	1.581
	Bluegrass Army Depot	0.269	0.254	0.254	0.240	0.233	0.202	0.241	0.239	0.199	0.185	0.154	0.165
Pool #12	None												
Pool #13	None												
Pool #14	None												
Dix Dam	Danville Country Club	0.000	0.000	0.000	0.046	0.075	0.181	0.118	0.123	0.043	0.000	0.000	0.000
	Stanford Water Works	0.788	0.756	0.697	0.726	0.779	0.838	0.838	0.774	0.656	0.735	0.716	0.696
Jacobson	None												
Buckhorn	Hyden-Leslie Co Water	0.629	0.577	0.545	0.589	0.580	0.665	0.655	0.731	0.627	0.678	0.693	0.698
	Shamrock Coal (4)	0.639	0.753	0.608	0.555	0.607	0.654	0.910	1.110	0.628	0.941	1.043	1.044
	Leeco, Inc (2)	0.428	0.315	0.223	0.252	0.394	0.577	0.554	0.700	0.587	0.442	0.288	0.220
	Bit-Laurel Mining	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	Cyrus Cumb Coal (4)	0.293	0.451	0.431	0.411	0.381	0.463	0.363	0.497	0.391	0.413	0.435	0.419
Carr Fork	None												

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 CF@Mouth = Carr Fork River reach extending between the river mouth and Carr Fork Reservoir.
 NF@Hazard = North Fork reach extending between Hazard, Ky and the confluence of Carr Fork River.
 NF@Jack = North Fork reach extending between USGS gages at Hazard, Ky and Jackson, Ky.
 MF@Tall = Middle Fork reach extending between Buckhorn Dam and USGS gage at Tallega, Ky.
 SF@Boon = South Fork reach located upstream of USGS gage at Booneville.

Numbers in parenthesis after withdrawal names denote number of permits.

Demand Forecasts for Main Stem and Headwater Withdrawals - 2020 High Growth

Reach	Permitted Withdrawal	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Pool #2	None												
Pool #3	Leestown Company	1.573	1.462	1.584	1.527	0.558	0.640	0.652	0.222	0.263	0.775	0.669	1.208
Pool #4	Fmkfrt Electric WPB Capitol Powerhouse	8.792 0.000	8.156 0.000	7.747 0.000	7.830 0.000	8.226 0.000	9.650 0.000	9.260 3.971	8.472 2.826	8.414 2.446	8.136 2.972	6.917 0.010	7.287 0.000
Pool #5	Cty of Versailles Lawrenceberg Muni WW Austin-Nichols Distilling	2.875 2.106 1.720	2.977 2.230 1.683	2.764 2.316 1.488	2.963 2.414 1.725	3.077 2.535 1.772	3.586 2.791 1.729	3.552 2.769 0.186	3.527 2.622 0.863	3.224 2.277 1.284	3.276 2.195 1.313	3.073 2.055 1.169	2.786 1.877 1.266
Pool #6	Cty of Wilmore	0.914	0.821	0.981	0.950	0.916	0.776	1.210	1.058	1.363	0.983	0.866	0.835
Pool #7	Cty of Harrodsburg	2.199	1.859	1.773	1.918	2.063	2.233	2.141	2.146	1.838	2.042	1.803	1.647
Pool #8	Cty of Lancaster Cty of Nicholasville	1.216 3.373	0.978 3.307	0.506 3.227	1.083 3.368	1.258 3.623	1.407 4.384	1.195 4.384	1.360 3.966	1.233 3.885	1.456 3.813	1.078 3.659	0.993 3.479
Pool #9	Ky Amer WC	53.681	46.694	49.158	50.158	54.538	70.121	69.650	67.925	63.570	55.180	50.879	48.891
Pool #10	Winchester Muni Util East Ky Power Coop	4.073 0.003	3.897 0.007	3.770 0.001	4.151 0.003	4.190 0.003	5.282 0.008	5.737 0.012	5.582 0.009	5.555 0.008	5.473 0.099	5.432 0.091	5.221 0.028
Pool #11	Rchmnd WGSW Irvine Muni Util DLX, Inc/ Ky Processing	6.529 1.042 0.038	6.305 0.934 0.071	5.989 0.883 0.035	6.277 1.134 0.036	6.285 1.150 0.000	7.161 1.225 0.000	7.606 1.228 0.000	6.936 1.384 0.153	7.157 1.227 0.078	6.440 1.231 0.037	5.926 1.152 0.242	5.635 1.138 0.000
Pool #12	None												
Pool #13	None												
Pool #14	City of Blyville	0.720	0.638	0.651	0.597	0.626	0.810	0.579	0.683	0.586	0.582	0.584	0.609
Dix Dam	Danville Water Works Northpoint Training Ctr Old Bridge Golf Course	4.246 0.226 0.000	4.047 0.199 0.000	3.747 0.214 0.000	3.727 0.193 0.000	3.976 0.198 0.042	4.372 0.191 0.057	4.223 0.225 0.380	4.017 0.205 0.388	3.910 0.214 0.143	3.633 0.201 0.118	3.594 0.204 0.000	3.591 0.239 0.000
Jacobson	Andover Golf & CC	0.000	0.000	0.000	0.000	0.159	0.351	0.295	0.285	0.125	0.041	0.000	0.000
Buckhorn	Dept of Parks	0.012	0.009	0.017	0.018	0.026	0.023	0.031	0.028	0.024	0.027	0.026	0.021
Carr Fork	None												
NFJUSCFR	Whitesburg Muni WW , DLX, Inc Enterprise Coal Blue Diamond Coal (2) Golden Oak Mining Ky Criterion Coal	0.334 0.000 0.014 0.128 0.309	0.285 0.000 0.017 0.135 0.328	0.272 0.007 0.020 0.127 0.343	0.264 0.005 0.015 0.119 0.312	0.258 0.000 0.020 0.136 0.313	0.290 0.000 0.023 0.113 0.324	0.386 0.000 0.024 0.105 0.136	0.291 0.000 0.025 0.147 0.129	0.274 0.000 0.026 0.220 0.135	0.268 0.000 0.029 0.252 0.133	0.258 0.000 0.023 0.173 0.139	0.246 0.000 0.022 0.255 0.150
CF@Mouth	Leeco Coal	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NF@Hazard	Hazard Water Dept	2.996	2.709	2.558	2.497	2.508	2.782	3.257	2.902	2.718	3.201	3.365	3.552
NF@Jack	Jackson Muni WW Cockrell Fork Mining Whitaker Coal (3) Benco Mining Buckhorn Processing Leeco, Inc (2)	0.605 0.000 3.257 0.000 0.134 0.517	0.746 0.000 3.730 0.000 0.070 0.620	0.697 0.000 3.486 0.000 0.278 0.630	0.699 0.000 3.618 0.000 0.258 0.566	0.712 0.000 3.659 0.000 0.213 0.551	0.831 0.000 3.586 0.000 0.292 0.588	0.710 0.000 3.060 0.000 0.258 0.584	0.829 0.000 3.261 0.000 0.236 0.544	0.706 0.000 2.734 0.000 0.245 0.541	0.706 0.000 1.031 0.004 0.208 0.512	0.697 0.000 0.973 0.004 0.253 0.489	0.633 0.000 0.775 0.004 0.233 0.385
MF@Tail	None												
SF@Boon	Booneville WSD Mountain Clay Manchester WW (2)	0.366 0.000 1.706	0.320 0.000 1.565	0.303 0.000 1.393	0.304 0.000 1.332	0.308 0.000 1.421	0.509 0.000 2.590	0.319 0.000 2.533	0.399 0.000 2.759	0.303 0.000 2.732	0.282 0.000 2.631	0.285 0.000 2.466	0.278 0.000 0.000

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 NF@Jack = North Fork reach extending between USGS gages at Hazard, Ky and Jackson, Ky.
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Demand Forecasts for Tributary Withdrawals - 2020 High Growth

<u>Receiving Reach</u>	<u>Permitted Withdrawal</u>	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>Jun</u>	<u>Jul</u>	<u>Aug</u>	<u>Sep</u>	<u>Oct</u>	<u>Nov</u>	<u>Dec</u>
Pool #2	Owenton Water Works (2)	0.643	0.523	0.555	0.605	0.735	0.879	1.352	1.184	1.135	1.608	1.486	1.589
Pool #3	Georgetown Mun WW (2)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	Stamping Ground WW (2)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	Ky Fish/Wife-Frmkft Hatch	0.026	0.160	0.673	0.471	0.916	2.027	2.020	1.117	0.669	0.814	0.251	0.051
	Old Grand Dad Distilling	0.000	0.001	0.003	0.001	0.004	0.003	0.021	0.002	0.003	0.004	0.003	0.004
	BH/Canewood Golf Course	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	Longview Country Club	0.000	0.000	0.000	0.620	0.435	0.407	0.235	0.289	0.421	0.776	0.000	0.000
	Frankfort Country Club	0.000	0.000	0.000	0.003	0.064	0.220	0.239	0.127	0.163	0.070	0.002	0.000
	Players Club of Lex	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.820	0.548	0.000	0.000
Pool #4	Old Crow Dist Co (2)	0.023	0.007	0.018	0.013	0.028	0.018	0.048	0.019	0.032	0.033	0.024	0.015
	Wilson Landscaping	0.000	0.000	0.000	0.008	0.030	0.051	0.034	0.000	0.000	0.000	0.000	0.000
Pool #5	None												
Pool #6	None												
Pool #7	Andover Golf Club	0.000	0.000	0.000	0.011	0.079	0.123	0.127	0.105	0.082	0.079	0.000	0.000
	Lone Oak Country Club	0.000	0.000	0.000	0.035	0.036	0.068	0.081	0.076	0.092	0.013	0.000	0.000
	Connemara Golf Course	0.000	0.000	0.000	0.043	0.249	0.339	0.208	0.236	0.194	0.046	0.000	0.000
Pool #8	Berea College Water Utility	1.486	2.461	2.269	1.988	1.523	0.340	0.098	0.337	0.274	0.664	0.537	0.772
Pool #9	Arlington Assoc/EKU Golf	0.000	0.000	0.000	0.000	0.054	0.058	0.040	0.040	0.038	0.020	0.008	0.000
Pool #10	Clay City Water Works	0.248	0.216	0.201	0.224	0.263	0.432	0.279	0.371	0.236	0.297	0.250	0.227
	Stanton Muni Water Works	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Pool #11	Berea College Water Util (2)	1.232	0.000	0.000	0.307	0.986	2.491	3.044	2.466	2.705	1.879	2.064	1.701
	Bluegrass Army Depot	0.288	0.271	0.273	0.258	0.252	0.223	0.265	0.262	0.217	0.200	0.165	0.178
Pool #12	None												
Pool #13	None												
Pool #14	None												
Dix Dam	Danville Country Club	0.000	0.000	0.000	0.048	0.078	0.181	0.118	0.122	0.043	0.000	0.000	0.000
	Stanford Water Works	0.849	0.802	0.739	0.785	0.863	0.909	0.926	0.819	0.699	0.821	0.778	0.745
Jacobson	None												
Buckhorn	Hyden-Leslie Co Water	0.623	0.571	0.538	0.583	0.576	0.607	0.652	0.688	0.618	0.674	0.688	0.692
	Shamrock Coal (4)	0.633	0.745	0.601	0.549	0.602	0.597	0.905	1.045	0.619	0.935	1.035	1.035
	Leeco, Inc (2)	0.424	0.312	0.220	0.249	0.391	0.527	0.551	0.659	0.578	0.439	0.286	0.218
	Bit-Laurel Mining	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	Cyrus Cumb Coal (4)	0.290	0.446	0.426	0.407	0.378	0.423	0.361	0.468	0.385	0.411	0.432	0.415
Carr Fork	None												

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 MF@Tall = Middle Fork reach extending between Buckhorn Dam and USGS gage at Tallega, Ky.
 SF@Boon = South Fork reach located upstream of USGS gage at Booneville.

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APPENDIX B

Pan Evaporation Data

Daily Pan Evaporation Data for 1930 Drought Conditions

Daily pan evaporation values were obtained using a monthly temperature-evaporation predictive model. Model was calibrated using a random sample of recorded evaporation/temperature values from 1978 - 1995. Evaporation values are not listed for the non-summer months due to the relatively small losses experienced during these months.

Day	APR	MAY	JUN	JUL	AUG	SEP
1	0.16	0.26	0.21	0.23	0.25	0.27
2	0.12	0.26	0.26	0.16	0.29	0.28
3	0.17	0.23	0.28	0.16	0.29	0.22
4	0.15	0.26	0.28	0.21	0.32	0.22
5	0.19	0.29	0.25	0.30	0.30	0.24
6	0.18	0.30	0.21	0.33	0.32	0.27
7	0.14	0.26	0.14	0.32	0.30	0.22
8	0.13	0.27	0.11	0.31	0.33	0.22
9	0.17	0.28	0.16	0.31	0.29	0.22
10	0.24	0.27	0.16	0.34	0.23	0.21
11	0.27	0.25	0.23	0.34	0.18	0.22
12	0.28	0.27	0.27	0.35	0.19	0.24
13	0.27	0.23	0.28	0.25	0.23	0.24
14	0.25	0.17	0.30	0.18	0.20	0.22
15	0.26	0.17	0.30	0.16	0.24	0.25
16	0.26	0.20	0.21	0.24	0.28	0.20
17	0.27	0.23	0.24	0.31	0.25	0.20
18	0.22	0.23	0.21	0.30	0.21	0.20
19	0.18	0.24	0.26	0.33	0.19	0.21
20	0.22	0.19	0.22	0.35	0.20	0.21
21	0.17	0.23	0.29	0.36	0.17	0.21
22	0.14	0.27	0.32	0.30	0.17	0.24
23	0.14	0.24	0.35	0.30	0.19	0.26
24	0.24	0.18	0.31	0.31	0.20	0.27
25	0.13	0.18	0.30	0.28	0.25	0.22
26	0.16	0.20	0.28	0.33	0.25	0.19
27	0.20	0.25	0.25	0.35	0.26	0.15
28	0.25	0.23	0.28	0.43	0.27	0.18
29	0.26	0.17	0.31	0.34	0.28	0.16
30	0.26	0.16	0.30	0.27	0.27	0.15
31		0.19		0.28	0.26	

Daily Pan Evaporation Data for 1953 Drought Conditions

Daily pan evaporation values reflect actual measurements made in 1953.

Source: University of Kentucky Agricultural Weather Center.

Pan Evaporation in inches	Day	APR	MAY	JUN	JUL	AUG	SEP
	1		0.07	0.35	0.20	0.22	0.21
	2	0.11	0.20	0.18	0.21	0.18	0.18
	3	0.01	0.23	0.25	0.27	0.17	0.22
	4	0.14	0.14	0.21	0.20	0.18	0.24
	5	0.12		0.29	0.13	0.22	0.25
	6	0.13	0.06	0.24	0.14	0.12	0.20
	7		0.08	0.07	0.32	0.12	0.16
	8	0.09	0.02	0.15	0.14	0.20	0.17
	9	0.07	0.10	0.23	0.24	0.23	0.08
	10	0.22	0.15	0.25	0.21	0.10	0.25
	11	0.19	0.18	0.11	0.21	0.15	0.14
	12	0.17	0.12	0.18	0.15	0.15	0.22
	13	0.04	0.12	0.23	0.22	0.16	0.25
	14	0.10	0.06	0.03	0.18	0.19	0.12
	15	0.11	0.07	0.29	0.24	0.20	0.14
	16	0.14	0.08	0.28	0.19	0.23	0.17
	17	0.11	0.06	0.13	0.16	0.22	0.28
	18	0.25	0.06	0.23	0.08	0.19	0.07
	19	0.20	0.04	0.19	0.14	0.19	0.20
	20	0.02		0.22	0.12	0.21	0.09
	21	0.07	0.13	0.26	0.23	0.19	0.23
	22	0.19	0.23	0.19	0.19	0.23	0.08
	23	0.14	0.16	0.27	0.12		0.14
	24	0.08	0.20	0.23	0.24	0.37	0.13
	25	0.20	0.08	0.23	0.23	0.30	
	26	0.11	0.27	0.32	0.20	0.21	0.20
	27	0.14	0.27	0.04	0.21	0.10	0.15
	28	0.04	0.20	0.22	0.24	0.12	0.16
	29	0.08	0.20	0.30	0.20	0.18	0.13
	30	0.15	0.21	0.13	0.25	0.21	0.16
	31		0.31		0.16	0.24	

APPENDIX C

Reservoir Rule Curves for Buckhorn, Carr Fork, and Herrington Lake

Date	Water in millions of acre-feet						
	0.0	0.5	1.0	1.5	2.0	2.5	
1-1	52.0	68.0	84.0	100.0	116.0	132.0	148.0
1-15	54.0	70.0	85.0	100.0	115.0	130.0	145.0
1-30	56.0	72.0	87.0	102.0	117.0	132.0	147.0
2-14	58.0	74.0	89.0	104.0	119.0	134.0	149.0
2-28	60.0	76.0	91.0	106.0	121.0	136.0	151.0
3-13	62.0	78.0	93.0	108.0	123.0	138.0	153.0
3-27	64.0	80.0	95.0	110.0	125.0	140.0	155.0
4-10	66.0	82.0	97.0	112.0	127.0	142.0	157.0
4-24	68.0	84.0	99.0	114.0	129.0	144.0	159.0
5-8	70.0	86.0	101.0	116.0	131.0	146.0	161.0
5-22	72.0	88.0	103.0	118.0	133.0	148.0	163.0
6-5	74.0	90.0	105.0	120.0	135.0	150.0	165.0
6-19	76.0	92.0	107.0	122.0	137.0	152.0	167.0
7-3	78.0	94.0	109.0	124.0	139.0	154.0	169.0
7-17	80.0	96.0	111.0	126.0	141.0	156.0	171.0
8-3	82.0	98.0	113.0	128.0	143.0	158.0	173.0
8-17	84.0	100.0	115.0	130.0	145.0	160.0	175.0
9-3	86.0	102.0	117.0	132.0	147.0	162.0	177.0
9-17	88.0	104.0	119.0	134.0	149.0	164.0	179.0
10-1	90.0	106.0	121.0	136.0	151.0	166.0	181.0
10-15	92.0	108.0	123.0	138.0	153.0	168.0	183.0
10-29	94.0	110.0	125.0	140.0	155.0	170.0	185.0
11-12	96.0	112.0	127.0	142.0	157.0	172.0	187.0
11-26	98.0	114.0	129.0	144.0	159.0	174.0	189.0
12-10	100.0	116.0	131.0	146.0	161.0	176.0	191.0
12-24	102.0	118.0	133.0	148.0	163.0	178.0	193.0
1-7	104.0	120.0	135.0	150.0	168.0	183.0	195.0
1-21	106.0	122.0	137.0	152.0	170.0	185.0	197.0
1-25	108.0	124.0	139.0	154.0	172.0	187.0	199.0
2-8	110.0	126.0	141.0	156.0	174.0	189.0	201.0
2-22	112.0	128.0	143.0	158.0	176.0	191.0	203.0
3-5	114.0	130.0	145.0	160.0	178.0	194.0	205.0
3-19	116.0	132.0	147.0	162.0	180.0	196.0	207.0
4-2	118.0	134.0	149.0	164.0	182.0	198.0	209.0
4-16	120.0	136.0	151.0	166.0	184.0	200.0	211.0
5-3	122.0	138.0	153.0	168.0	186.0	202.0	213.0
5-17	124.0	140.0	155.0	170.0	188.0	204.0	215.0
6-3	126.0	142.0	157.0	172.0	190.0	206.0	217.0
6-17	128.0	144.0	159.0	174.0	192.0	208.0	219.0
7-1	130.0	146.0	161.0	176.0	194.0	210.0	221.0
7-15	132.0	148.0	163.0	178.0	196.0	212.0	223.0
7-29	134.0	150.0	165.0	180.0	198.0	214.0	225.0
8-12	136.0	152.0	167.0	182.0	200.0	216.0	227.0
8-26	138.0	154.0	169.0	184.0	202.0	218.0	229.0
9-9	140.0	156.0	171.0	186.0	204.0	220.0	231.0
9-23	142.0	158.0	173.0	188.0	206.0	222.0	233.0
10-7	144.0	160.0	175.0	190.0	208.0	224.0	235.0
10-21	146.0	162.0	177.0	192.0	210.0	226.0	237.0
11-4	148.0	164.0	179.0	194.0	212.0	228.0	239.0
11-18	150.0	166.0	181.0	196.0	214.0	230.0	240.0
12-2	152.0	168.0	183.0	198.0	216.0	232.0	242.0
12-16	154.0	170.0	185.0	200.0	218.0	234.0	244.0
1-3	156.0	172.0	187.0	202.0	220.0	236.0	246.0
1-17	158.0	174.0	189.0	204.0	222.0	238.0	248.0
1-31	160.0	176.0	191.0	206.0	224.0	240.0	250.0
2-14	162.0	178.0	193.0	208.0	226.0	242.0	252.0
2-28	164.0	180.0	195.0	210.0	228.0	244.0	254.0
3-13	166.0	182.0	197.0	212.0	230.0	246.0	256.0
3-27	168.0	184.0	199.0	214.0	232.0	248.0	258.0
4-10	170.0	186.0	201.0	216.0	234.0	250.0	260.0
4-24	172.0	188.0	203.0	218.0	236.0	252.0	262.0
5-8	174.0	190.0	205.0	220.0	238.0	254.0	264.0
5-22	176.0	192.0	207.0	222.0	240.0	256.0	266.0
6-5	178.0	194.0	209.0	224.0	242.0	258.0	268.0
6-19	180.0	196.0	211.0	226.0	244.0	260.0	270.0
7-3	182.0	198.0	213.0	228.0	246.0	262.0	272.0
7-17	184.0	200.0	215.0	230.0	248.0	264.0	274.0
8-3	186.0	202.0	217.0	232.0	250.0	266.0	276.0
8-17	188.0	204.0	219.0	234.0	252.0	268.0	278.0
9-1	190.0	206.0	221.0	236.0	254.0	270.0	280.0
9-15	192.0	208.0	223.0	238.0	256.0	272.0	282.0
9-29	194.0	210.0	225.0	240.0	258.0	274.0	284.0
10-12	196.0	212.0	227.0	242.0	260.0	276.0	286.0
10-26	198.0	214.0	229.0	244.0	262.0	278.0	288.0
11-9	200.0	216.0	231.0	246.0	264.0	280.0	290.0
11-23	202.0	218.0	233.0	248.0	266.0	282.0	292.0
12-7	204.0	220.0	235.0	250.0	268.0	284.0	294.0
12-21	206.0	222.0	237.0	252.0	270.0	286.0	296.0
1-4	208.0	224.0	239.0	254.0	272.0	288.0	298.0
1-18	210.0	226.0	241.0	256.0	274.0	290.0	300.0
1-32	212.0	228.0	243.0	258.0	276.0	292.0	302.0
2-15	214.0	230.0	245.0	260.0	278.0	294.0	304.0
2-29	216.0	232.0	247.0	262.0	280.0	296.0	306.0
3-12	218.0	234.0	249.0	264.0	282.0	298.0	308.0
3-26	220.0	236.0	251.0	266.0	284.0	300.0	310.0
4-9	222.0	238.0	253.0	268.0	286.0	302.0	312.0
4-23	224.0	240.0	255.0	270.0	288.0	304.0	314.0
5-7	226.0	242.0	257.0	272.0	290.0	306.0	316.0
5-21	228.0	244.0	259.0	274.0	292.0	308.0	318.0
6-4	230.0	246.0	261.0	276.0	294.0	310.0	320.0
6-18	232.0	248.0	263.0	278.0	296.0	312.0	322.0
7-2	234.0	250.0	265.0	280.0	298.0	314.0	324.0
7-16	236.0	252.0	267.0	282.0	300.0	316.0	326.0
8-9	238.0	254.0	269.0	284.0	302.0	318.0	328.0
8-23	240.0	256.0	271.0	286.0	304.0	320.0	330.0
9-6	242.0	258.0	273.0	288.0	306.0	322.0	332.0
9-20	244.0	260.0	275.0	290.0	308.0	324.0	334.0
10-4	246.0	262.0	277.0	292.0	310.0	326.0	336.0
10-18	248.0	264.0	279.0	294.0	312.0	328.0	338.0
11-1	250.0	266.0	281.0	296.0	314.0	330.0	340.0
11-15	252.0	268.0	283.0	298.0	316.0	332.0	342.0
12-9	254.0	270.0	285.0	300.0	318.0	334.0	344.0
12-23	256.0	272.0	287.0	302.0	320.0	336.0	346.0
1-6	258.0	274.0	289.0	304.0	322.0	338.0	348.0
1-20	260.0	276.0	291.0	306.0	324.0	340.0	350.0
1-31	262.0	278.0	293.0	308.0	326.0	342.0	352.0
2-14	264.0	280.0	295.0	310.0	328.0	344.0	354.0
2-28	266.0	282.0	297.0	312.0	330.0	346.0	356.0
3-11	268.0	284.0	299.0	314.0	332.0	348.0	358.0
3-25	270.0	286.0	301.0	316.0	334.0	350.0	360.0
4-8	272.0	288.0	303.0	318.0	336.0	352.0	362.0
4-22	274.0	290.0	305.0	320.0	338.0	354.0	364.0
5-5	276.0	292.0	307.0	322.0	340.0	356.0	366.0
5-19	278.0	294.0	309.0	324.0	342.0	358.0	368.0
6-1	280.0	296.0	311.0	326.0	344.0	360.0	370.0
6-15	282.0	298.0	313.0	328.0	346.0	362.0	372.0
7-5	284.0	300.0	315.0	330.0	348.0	364.0	374.0
7-19	286.0	302.0	317.0	332.0	350.0	366.0	376.0
8-1	288.0	304.0	319.0	334.0	352.0	368.0	378.0
8-15	290.0	306.0	321.0	336.0	354.0	370.0	380.0
9-14	292.0	308.0	323.0	338.0	356.0	372.0	382.0
9-28	294.0	310.0	325.0	340.0	358.0	374.0	384.0
10-12	296.0	312.0	327.0	342.0	360.0	376.0	386.0
10-26	298.0	314.0	329.0	344.0	362.0	378.0	388.0
11-9	300.0	316.0	331.0	346.0	364.0	380.0	390.0
11-23	302.0	318.0	333.0	348.0	366.0	382.0	392.0
12-7	304.0	320.0	335.0	350.0	368.0	384.0	394.0
12-21	306.0	322.0	337.0	352.0	370.0	386.0	396.0
1-4	308.0	324.0	339.0	354.0	372.0	388.0	398.0
1-18	310.0	326.0	341.0	356.0	374.0	390.0	400.0
1							

Date	Pool 14	Pool 13	Pool 12	Pool 11	Pool 10	Pool 9	Pool 8	Pool 7	Pool 6	Pool 5	Pool 4	Pool 3	Pool 2	Dix Dam	Jacobson	Buckhorn	Carr Fork
1-Nov	1131.8	1039.6	2183.3	2300.6	2818.3	3401.5	2864.3	3889.7	3679.9	2365.9	2652.9	3127.6	1669.5	133850.9	96.9	5234.6	6083.8
2-Nov	1123.3	1032.1	2175.9	2296.1	2813.3	3415.1	2890.4	3918.7	3690.4	2371.7	2660.5	3143.1	1676.1	133837.0	96.9	5166.3	6080.6
3-Nov	1122.7	1030.8	2169.9	2289.6	2805.1	3390.5	2846.7	3872.9	3671.8	2361.4	2646.1	3112.6	1660.4	133823.1	96.9	5098.7	6077.4
4-Nov	1122.4	1030.5	2169.8	2286.9	2798.7	3378.9	2829.8	3842.7	3650.2	2347.9	2630.3	3087.4	1645.9	133809.2	96.9	5031.6	6074.2
5-Nov	1122.0	1030.1	2169.4	2286.1	2795.3	3415.5	2912.5	3944.1	3696.4	2375.1	2668.4	3163.4	1686.5	133795.2	96.9	4965.1	6071.0
6-Nov	1122.0	1030.0	2169.1	2285.7	2793.8	3397.5	2879.7	3925.9	3705.1	2382.0	2672.6	3164.6	1689.4	133781.3	96.9	4899.2	6067.8
7-Nov	1121.6	1029.7	2168.9	2285.4	2793.1	3368.3	2817.3	3851.3	3662.8	2355.8	2638.8	3100.9	1655.6	133767.4	96.9	4833.9	6064.6
8-Nov	1121.4	1029.5	2168.6	2285.2	2792.6	3405.6	2899.1	3922.2	3687.2	2370.6	2662.9	3153.4	1681.4	133753.5	96.9	4769.1	6061.3
9-Nov	1121.2	1029.3	2168.2	2284.9	2792.2	3367.7	2798.6	3841.0	3656.0	2351.0	2629.6	3086.7	1648.2	133739.6	96.9	4705.0	6058.1
10-Nov	1121.0	1029.0	2167.9	2284.6	2791.7	3412.6	2910.3	3933.1	3691.3	2372.8	2666.4	3157.7	1683.2	133725.7	96.9	4641.4	6054.9
11-Nov	1120.8	1029.4	2168.9	2286.6	2798.2	3399.1	2818.2	3926.0	3703.7	2380.5	2669.9	3161.0	1687.6	133711.8	96.9	4578.4	6051.7
12-Nov	1120.2	1028.6	2168.1	2285.8	2797.3	3391.6	2864.8	3897.3	3686.3	2370.2	2658.2	3137.9	1674.7	133697.9	96.9	4516.0	6048.5
13-Nov	1119.9	1028.2	2167.2	2285.1	2796.2	3416.5	2914.2	3963.6	3718.1	2389.2	2685.6	3192.7	1704.5	133684.0	96.9	4454.2	6045.4
14-Nov	1120.1	1028.3	2167.0	2284.6	2795.2	3380.5	2843.9	3884.1	3685.4	2369.6	2654.8	3129.6	1671.5	133670.1	96.9	4332.9	6042.2
15-Nov	1119.7	1028.0	2166.8	2284.5	2794.7	3398.6	2883.4	3909.5	3685.9	2370.0	2660.5	3145.4	1677.7	133656.2	96.9	4332.2	6039.0
16-Nov	1145.3	1050.3	2188.2	2294.9	2799.1	3366.6	2762.9	3821.3	3643.2	2342.7	2619.7	3066.2	1637.0	133642.3	96.9	4272.1	6035.9
17-Nov	1126.3	1035.5	2184.4	2305.0	2819.5	3419.8	2892.7	3891.5	3667.4	2358.9	2648.0	3123.3	1663.5	133628.3	96.9	4212.5	6032.9
18-Nov	1125.8	1033.3	2175.4	2295.5	2815.2	3409.5	2874.8	3900.7	3681.3	2365.8	2650.8	3126.8	1668.0	133614.4	96.9	4153.5	6030.0
19-Nov	1125.4	1032.7	2173.0	2290.3	2803.4	3385.6	2835.2	3854.9	3659.8	2353.2	2634.4	3091.8	1648.8	133600.5	96.9	4095.1	6027.7
20-Nov	1125.0	1032.2	2171.9	2287.9	2795.6	3396.3	2872.2	3884.4	3667.2	2358.0	2644.4	3116.1	1660.0	133586.6	96.9	4037.2	6025.8
21-Nov	1123.5	1031.2	2170.7	2286.6	2791.6	3388.8	2864.8	3889.2	3674.5	2362.9	2649.8	3126.4	1667.4	133572.7	96.9	3979.8	6027.4
22-Nov	1123.4	1031.0	2169.9	2285.4	2789.0	3383.5	2860.1	3883.5	3672.8	2362.0	2649.3	3125.2	1667.1	133558.8	96.9	3923.0	6028.5
23-Nov	1123.8	1031.2	2170.0	2285.1	2787.5	3370.5	2836.1	3856.1	3658.8	2353.4	2636.5	3102.6	1655.5	133544.9	96.9	3866.8	6028.0
24-Nov	1123.7	1031.2	2170.1	2285.2	2787.1	3364.3	2825.7	3839.1	3646.2	2345.2	2627.2	3087.8	1646.1	133531.0	96.9	3811.1	6027.2
25-Nov	1123.5	1031.1	2170.0	2285.2	2787.1	3399.2	2895.1	3917.0	3681.5	2367.1	2658.9	3149.4	1679.3	133517.1	96.9	3755.9	6026.3
26-Nov	1123.5	1031.0	2169.9	2285.0	2786.9	3364.4	2770.9	3827.8	3647.1	2344.3	2634.9	3069.9	1639.8	133503.2	96.9	3701.3	6025.2
27-Nov	1123.4	1031.0	2169.8	2284.9	2786.7	3362.7	2700.7	3788.3	3619.8	2326.5	2599.8	3027.4	1615.3	133489.3	96.9	3647.2	6023.7
28-Nov	1123.3	1030.9	2169.7	2284.9	2786.6	3362.4	2684.2	3786.0	3614.7	2323.1	2598.1	3034.8	1615.4	133475.4	96.9	3593.6	6021.8
29-Nov	1123.2	1030.8	2169.6	2284.7	2786.5	3362.4	2649.0	3781.9	3606.5	2320.5	2597.8	3042.8	1617.6	133461.5	96.9	3540.6	6019.7
30-Nov	1123.1	1030.7	2169.4	2284.6	2786.3	3396.6	2781.2	3845.8	3633.7	2341.0	2626.8	3098.0	1650.1	133447.5	96.9	3488.1	6017.6

Date	Pool 14	Pool 13	Pool 12	Pool 11	Pool 10	Pool 9	Pool 8	Pool 7	Pool 6	Pool 5	Pool 4	Pool 3	Pool 2	Dix Dam	Jacobson	Buckhorn	Carr Fork
1-Nov	1131.8	1039.6	2183.3	2300.6	2818.3	3401.5	2864.3	3889.7	3679.9	2365.9	2652.9	3127.6	1669.5	133850.9	96.9	5234.6	6083.8
2-Nov	1123.3	1032.1	2175.9	2296.1	2813.3	3415.1	2890.4	3918.7	3690.4	2371.7	2660.5	3143.1	1676.1	133837.0	96.9	5166.3	6080.6
3-Nov	1122.7	1030.8	2170.9	2289.6	2805.1	3390.5	2846.7	3872.9	3671.8	2361.4	2646.1	3112.6	1660.4	133823.1	96.9	5098.7	6077.4
4-Nov	1122.4	1030.5	2169.8	2286.9	2798.7	3378.9	2829.8	3842.7	3650.2	2347.9	2630.3	3087.4	1645.9	133809.2	96.9	5031.6	6074.2
5-Nov	1122.0	1030.1	2169.4	2286.1	2795.3	3415.5	2912.5	3944.1	3696.4	2375.1	2668.4	3163.4	1686.5	133795.2	96.9	4965.1	6071.0
6-Nov	1122.0	1030.0	2169.1	2285.7	2793.8	3397.5	2879.7	3925.9	3705.1	2382.0	2672.6	3164.6	1689.4	133781.3	96.9	4899.2	6067.8
7-Nov	1121.6	1029.7	2168.9	2285.4	2793.1	3368.3	2817.3	3851.3	3662.8	2355.8	2638.8	3100.9	1655.6	133767.4	96.9	4833.9	6064.6
8-Nov	1121.4	1029.5	2168.6	2285.2	2792.6	3405.6	2899.1	3922.2	3687.2	2370.6	2662.9	3153.4	1681.4	133753.5	96.9	4769.1	6061.3
9-Nov	1121.2	1029.3	2168.2	2284.9	2792.2	3367.7	2798.6	3841.0	3656.0	2351.0	2629.6	3086.7	1648.2	133739.6	96.9	4705.0	6058.1
10-Nov	1121.0	1029.0	2167.9	2284.6	2791.7	3412.6	2910.3	3933.1	3691.3	2372.8	2666.4	3157.7	1683.2	133725.7	96.9	4641.4	6054.9
11-Nov	1120.8	1029.4	2168.9	2286.6	2798.2	3399.1	2818.2	3926.0	3703.7	2380.5	2669.9	3161.0	1687.6	133711.8	96.9	4578.4	6051.7
12-Nov	1120.2	1028.6	2168.1	2285.8	2797.3	3391.6	2864.8	3897.3	3686.3	2370.2	2658.2	3137.9	1674.7	133697.9	96.9	4516.0	6048.5
13-Nov	1119.9	1028.2	2167.2	2285.1	2796.2	3416.5	2914.2	3963.6	3718.1	2389.2	2685.6	3192.7	1704.5	133684.0	96.9	4454.2	6045.4
14-Nov	1120.1	1028.3	2167.0	2284.6	2795.2	3380.5	2843.9	3884.1	3685.4	2369.6	2654.8	3129.6	1671.5	133670.1	96.9	4332.9	6042.2
15-Nov	1119.7	1028.0	2166.8	2284.5	2794.7	3398.6	2883.4	3909.5	3685.9	2370.0	2660.5	3145.4	1677.7	133656.2	96.9	4332.2	6039.0
16-Nov	1145.3	1050.3	2188.2	2294.9	2799.1	3366.6	2762.9	3821.3	3643.2	2342.7	2619.7	3066.2	1637.0	133642.3	96.9	4272.1	6035.9
17-Nov	1126.3	1035.5	2184.4	2305.0	2819.5	3419.8	2892.7	3891.5	3667.4	2358.9	2648.0	3123.3	1663.5	133628.3	96.9	4212.5	6032.9
18-Nov	1125.8	1033.3	2175.4	2295.5	2815.2	3409.5	2874.8	3900.7	3681.3	2365.8	2650.8	3126.8	1668.0	133614.4	96.9	4153.5	6030.0
19-Nov	1125.4	1032.7	2173.0	2290.3	2803.4	3385.6	2835.2	3854.9	3659.8	2353.2	2634.4	3091.8	1648.8	133600.5	96.9	4095.1	6027.7
20-Nov	1125.0	1032.2	2171.9	2287.9	2795.6	3396.3	2872.2	3884.4	3667.2	2358.0	2644.4	3116.1	1660.0	133586.6	96.9	4037.2	6025.8
21-Nov	1123.5	1031.2	2170.7	2286.6	2791.6	3388.8	2864.8	3889.2	3674.5	2362.9	2649.8	3126.4	1667.4	133572.7	96.9	3979.8	6027.4
22-Nov	1123.4	1031.0	2169.9	2285.4	2789.0	3383.5</											

Date	Pool 14	Pool 13	Pool 12	Pool 11	Pool 10	Pool 9	Pool 8	Pool 7	Pool 6	Pool 5	Pool 4	Pool 3	Pool 2	Dix Dam	Jackson	Buckhorn	Carr Fork
1-Dec	1224.6	1126.1	2302.0	2382.1	2863.9	3421.7	2876.0	3879.6	3661.7	2352.5	2634.5	3106.6	1657.1	133433.8	96.9	3436.1	5501.9
2-Dec	1162.4	1068.0	2233.0	2364.5	2947.6	3503.0	2895.9	3869.4	3652.5	2344.5	2617.0	3063.2	1633.7	133420.3	96.9	3423.7	5308.2
3-Dec	1109.9	1025.9	2183.3	2316.7	2876.3	3502.1	2980.5	4068.5	3775.9	2415.0	2703.3	3189.4	1693.3	133406.7	96.9	3411.3	5306.1
4-Dec	1104.5	1017.5	2159.1	2286.8	2822.1	3433.2	2900.2	3970.6	3745.8	2409.2	2710.6	3227.0	1722.8	133393.1	96.9	3398.9	5304.0
5-Dec	1102.7	1013.7	2151.4	2274.8	2793.4	3417.2	2906.8	3966.2	3730.1	2398.1	2697.1	3213.2	1718.9	133379.5	96.9	3386.6	5302.2
6-Dec	1094.6	1010.8	2146.9	2268.8	2779.3	3322.8	2644.3	3788.7	3634.3	2339.3	2617.5	3057.7	1635.6	133365.9	96.9	3380.2	5302.8
7-Dec	1065.1	1011.7	2146.9	2271.0	2786.4	3354.8	2666.5	3808.6	3627.2	2333.1	2611.9	3061.6	1631.4	133352.3	96.9	3392.8	5308.2
8-Dec	1043.6	1013.9	2150.9	2277.4	2803.5	3429.5	2904.1	3917.1	3683.2	2371.1	2668.3	3169.7	1690.5	133338.8	96.9	3398.0	5308.2
9-Dec	1178.1	1075.9	2196.2	2284.8	2780.8	3319.6	2619.8	3760.2	3615.3	2323.5	2592.0	3021.0	1619.0	133325.2	96.9	3403.7	5308.2
10-Dec	1151.1	1055.5	2209.0	2321.0	2794.1	3353.4	2645.4	3786.6	3618.7	2320.6	2590.4	3035.2	1617.5	133311.6	96.9	3408.0	5308.2
11-Dec	1115.8	1025.5	2174.5	2296.5	2792.2	3394.2	2743.2	3836.3	3635.9	2340.3	2619.8	3082.0	1641.0	133298.0	96.9	3415.1	5308.2
12-Dec	1156.3	1060.1	2198.8	2301.3	2802.9	3378.9	2742.7	3823.9	3632.1	2336.8	2616.0	3075.8	1639.8	133284.4	96.9	3422.1	5308.2
13-Dec	1118.5	1029.5	2180.8	2304.6	2810.7	3387.5	2759.5	3826.3	3632.0	2339.2	2621.6	3088.9	1646.3	133270.8	96.9	3421.8	5308.2
14-Dec	1107.3	1019.9	2162.0	2286.3	2804.9	3363.3	2605.4	3750.9	3596.3	2313.0	2584.6	3022.5	1613.5	133257.3	96.9	3416.8	5308.2
15-Dec	1126.6	1029.6	2160.1	2276.0	2779.9	3422.1	2851.6	3867.4	3647.8	2356.8	2657.8	3154.8	1680.9	133243.7	96.9	3408.1	5308.1
16-Dec	1127.9	1036.6	2177.8	2294.3	2811.7	3391.1	2849.4	3861.0	3654.3	2345.4	2621.3	3115.4	1668.0	133230.1	96.9	3399.4	5307.3
17-Dec	1109.9	1023.8	2169.5	2294.5	2818.8	3396.7	2844.1	3850.6	3649.9	2345.6	2621.6	3080.0	1643.8	133216.5	96.9	3421.8	5308.2
18-Dec	1120.4	1027.2	2164.3	2286.3	2810.4	3417.5	2896.0	3917.0	3681.3	2367.6	2659.4	3151.0	1679.7	133202.9	96.9	3381.6	5304.8
19-Dec	1121.9	1031.6	2171.6	2292.2	2819.6	3419.6	2896.9	3940.6	3707.5	2381.8	2671.3	3168.4	1692.2	133189.3	96.9	3370.6	5303.2
20-Dec	1122.1	1031.5	2172.9	2294.4	2820.9	3439.9	2932.6	4001.4	3747.1	2406.6	2706.2	3235.2	1729.7	133175.7	96.9	3359.6	5301.5
21-Dec	1122.2	1029.7	2168.8	2286.2	2798.9	3390.1	2847.5	3894.2	3695.4	2374.8	2659.6	3135.2	1675.5	133162.2	96.9	3348.1	5309.7
22-Dec	1030.5	2169.7	2287.0	2798.3	3430.1	2935.8	2997.7	3737.5	3420.1	2705.6	3237.3	1730.4	133148.6	96.9	3336.7	5298.0	
23-Dec	1122.4	1029.5	2167.7	2283.7	2786.0	3390.3	2867.9	3921.8	3710.7	2384.0	2671.3	3161.2	1689.8	133135.0	96.9	3324.8	5296.3
24-Dec	1122.6	1031.1	2170.5	2287.3	2796.7	3387.5	2862.7	3894.2	3684.3	2369.6	2659.4	3141.8	1676.7	133121.4	96.9	3311.9	5294.9
25-Dec	1122.8	1031.3	2171.4	2289.9	2803.8	3338.9	2642.9	3771.1	3618.3	2326.4	2596.4	3022.4	1617.3	133107.8	96.9	3298.6	5293.7
26-Dec	1121.6	1031.9	2174.5	2297.3	2826.2	3430.6	2855.4	3867.9	3655.6	2354.2	2644.8	3119.6	1659.6	133094.2	96.9	3288.5	5292.5
27-Dec	1136.4	1043.5	2184.9	2302.0	2832.1	3401.8	2828.3	3829.9	3639.7	2342.2	2624.6	3100.8	1656.3	133080.7	96.9	3279.4	5291.4
28-Dec	1127.6	1036.1	2182.4	2302.5	2827.1	3403.4	2833.2	3822.4	3630.4	2335.2	2614.2	3074.9	1641.2	133067.1	96.9	3272.5	5290.5
29-Dec	1127.3	1035.5	2179.2	2300.4	2829.8	3410.5	2833.7	3840.4	3634.0	2338.4	2619.8	3088.9	1646.4	133053.5	96.9	3266.2	5289.6
30-Dec	1159.4	1064.5	2210.1	2315.1	2831.7	3419.2	2879.7	3886.3	3660.6	2353.4	2638.8	3119.9	1664.3	133039.9	96.9	3259.8	5288.5
31-Dec	1154.2	1059.7	2213.8	2329.4	2851.7	3409.8	2826.6	3855.4	3645.1	2342.6	2616.7	3072.8	1640.5	133026.3	96.9	3252.0	5287.3

Simulated Deficit Values (MG) - 1930 Baseline Deficit Analysis

Tabulated values denote the predicted water supply deficits occurring at the listed location in the 1930 baseline deficit simulation.

Date	Pool 14	Pool 13	Pool 12	Pool 11	Pool 10	Pool 9	Pool 8	Pool 7	Pool 6	Pool 5	Pool 4	Pool 3	Pool 2	Dix Dam	Jacobson	Buckhorn	Carr Fork
1-Jul	0.000	0.000	0.000	0.000	17.877	3.787	1.829	0.722	4.724	12.442	0.613	0.000	0.000	0.000	0.000	0.000	0.000
2-Jul	0.000	0.000	0.000	0.000	0.000	22.337	3.787	1.829	0.722	4.724	12.442	0.613	0.000	0.000	0.000	0.000	0.000
3-Jul	0.000	0.000	0.000	0.000	0.000	14.071	3.787	1.829	0.722	4.724	12.442	0.613	0.000	0.000	0.000	0.000	0.000
4-Jul	0.000	0.000	0.000	0.000	0.000	8.210	3.787	1.829	0.722	4.724	12.442	0.613	0.000	0.000	0.000	0.000	0.000
5-Jul	0.000	0.000	0.000	0.000	22.183	3.787	1.829	0.722	4.724	12.442	0.613	0.000	0.000	0.000	0.000	0.000	0.000
6-Jul	0.000	0.000	0.000	0.000	0.000	22.337	3.787	1.829	0.722	4.724	12.442	0.613	0.000	0.000	0.000	0.000	0.000
7-Jul	0.000	0.000	0.000	0.000	0.000	22.337	3.787	1.829	0.722	4.724	12.442	0.613	0.000	0.000	0.000	0.000	0.000
8-Jul	0.000	0.000	0.000	0.000	1.689	22.337	3.787	1.829	0.722	4.724	12.442	0.000	0.000	0.000	0.000	0.000	0.000
9-Jul	0.000	0.000	0.000	0.000	0.000	0.000	3.787	0.610	0.722	4.724	12.442	0.000	0.000	0.000	0.000	0.000	0.000
10-Jul	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
11-Jul	0.000	0.000	0.000	0.000	0.000	22.337	3.787	1.829	0.722	4.724	12.442	0.613	0.000	0.000	0.000	0.000	0.000
12-Jul	0.000	0.000	0.000	0.000	0.000	22.337	3.787	1.829	0.722	4.724	12.442	0.613	0.000	0.000	0.000	0.000	0.000
13-Jul	0.000	0.000	0.000	0.000	0.000	0.000	2.524	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
14-Jul	0.000	0.000	0.000	0.000	0.000	22.337	3.787	1.219	0.722	4.724	12.442	0.000	0.000	0.000	0.000	0.000	0.000
15-Jul	0.000	0.000	0.000	0.000	0.000	30.073	3.787	1.829	0.722	4.724	12.442	0.613	0.000	0.000	0.000	0.000	0.000
16-Jul	0.579	0.000	0.000	0.000	0.000	47.337	3.787	0.000	0.722	4.724	12.442	0.613	0.000	0.000	0.000	0.000	0.000
17-Jul	0.579	0.000	0.000	0.000	0.000	46.876	3.787	1.829	0.722	4.724	12.442	0.613	0.000	0.000	0.000	0.000	0.000
18-Jul	0.579	0.000	0.000	0.000	0.000	15.571	3.787	0.000	0.722	4.724	12.442	0.000	0.000	0.000	0.000	0.000	0.000
19-Jul	0.579	0.000	0.000	0.000	32.616	3.787	0.000	0.722	4.724	12.442	0.409	0.000	0.000	0.000	0.000	0.000	0.000
20-Jul	0.579	0.000	0.000	0.000	47.337	3.787	0.610	0.722	4.724	12.442	0.613	0.000	0.000	0.000	0.000	0.000	0.000
21-Jul	0.579	0.000	0.000	0.000	40.579	3.787	1.829	0.722	4.724	12.442	0.613	0.000	0.000	0.000	0.000	0.000	0.000
22-Jul	0.000	0.000	0.000	0.000	0.000	32.712	3.787	0.000	0.722	4.724	12.442	0.613	0.000	0.000	0.000	0.000	0.000
23-Jul	0.000	0.000	0.000	0.000	4.578	29.224	3.787	0.000	0.722	4.724	12.442	0.000	0.000	0.000	0.000	0.000	0.000
24-Jul	0.000	0.000	0.000	0.000	5.068	19.884	0.000	0.000	0.722	4.724	12.442	0.000	0.000	0.000	0.200	0.000	0.000
25-Jul	0.000	0.000	0.000	0.000	5.068	36.818	0.000	0.000	0.722	4.724	12.442	0.000	0.000	0.000	0.200	0.000	0.000
26-Jul	0.000	0.000	0.000	0.000	5.068	47.337	2.657	0.000	0.722	4.724	12.442	0.409	0.000	0.000	0.200	0.000	0.000
27-Jul	0.000	0.000	0.000	0.000	0.143	47.337	3.787	1.829	0.722	4.724	12.442	0.613	0.000	0.000	0.000	0.000	0.000
28-Jul	0.000	0.000	0.000	0.000	47.337	3.787	1.829	0.722	4.724	12.442	0.613	0.000	0.000	0.000	0.200	0.000	0.000
29-Jul	0.000	0.000	0.000	0.000	16.521	0.566	0.000	0.722	4.724	12.442	0.613	0.000	0.000	0.000	0.200	0.000	0.000
30-Jul	0.000	0.000	0.000	0.000	47.337	3.787	1.219	0.722	4.724	12.442	0.613	0.000	0.000	0.000	0.200	0.000	0.000
31-Jul	0.000	0.000	0.000	0.000	0.441	47.337	3.787	1.829	0.722	4.724	12.442	0.204	0.000	0.000	0.200	0.000	0.000

Date	Pool 14	Pool 13	Pool 12	Pool 11	Pool 10	Pool 9	Pool 8	Pool 7	Pool 6	Pool 5	Pool 4	Pool 3	Pool 2	Dix Dam	Jacobson	Buckhorn	Carr Fork
1-Aug	0.000	0.000	0.000	0.000	0.000	26.851	1.856	0.000	0.654	5.483	10.602	0.208	0.000	0.000	0.202	0.000	0.000
2-Aug	0.643	0.000	0.000	0.000	0.000	48.133	3.747	1.873	0.654	5.483	10.602	0.208	0.000	0.000	0.202	0.000	0.000
3-Aug	0.643	0.000	0.000	0.000	0.000	2.151	48.133	3.747	0.990	0.654	5.483	10.602	0.139	0.000	0.000	0.202	0.000
4-Aug	0.643	0.000	0.000	0.000	0.000	48.133	3.747	1.873	0.654	5.483	10.602	0.208	0.000	0.000	0.202	0.000	0.000
5-Aug	0.643	0.000	0.000	0.000	0.000	0.490	48.133	3.747	1.873	0.654	5.483	10.602	0.208	0.000	0.000	0.202	0.000
6-Aug	0.643	0.000	0.000	0.000	0.000	1.615	48.133	3.747	1.873	0.654	5.483	10.602	0.139	0.000	0.000	0.202	0.000
7-Aug	0.643	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.218	5.483	10.602	0.000	0.000	0.000	0.202	0.000
8-Aug	0.000	0.000	0.000	0.000	0.000	0.331	38.617	0.000	0.000	3.656	7.068	0.000	0.000	0.000	0.202	0.000	0.000
9-Aug	0.000	0.000	0.000	0.000	0.000	1.085	48.133	3.747	1.873	0.436	0.000	0.000	0.139	0.000	0.000	0.202	0.000
10-Aug	0.000	0.000	0.000	0.000	0.000	0.000	48.133	3.747	1.873	0.436	0.000	0.000	0.000	0.000	0.000	0.202	0.000
11-Aug	0.000	0.000	0.000	0.000	0.000	0.000	42.562	3.747	1.873	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
12-Aug	0.000	0.000	0.000	0.000	0.000	27.971	3.747	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
13-Aug	0.000	0.000	0.000	0.000	0.000	0.000	17.435	0.000	0.000	0.000	10.602	0.000	0.000	0.000	0.000	0.000	0.000
14-Aug	0.000	0.000	0.000	0.000	0.000	0.000	48.133	3.747	1.873	0.436	0.000	0.000	0.000	0.000	0.000	0.000	0.000
15-Aug	0.000	0.000	0.000	0.000	0.000	0.000	48.133	1.249	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
16-Aug	0.000	0.000	0.000	0.000	4.097	48.133	3.747	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
17-Aug	0.000	0.000	0.000	0.000	2.565	48.133	3.747	1.873	0.654	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
18-Aug	0.000	0.000	0.000	0.000	3.013	48.133	3.747	1.873	0.654	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
19-Aug	0.000	0.000	0.000	0.000	0.000	48.133	3.747	1.873	0.654	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
20-Aug	0.000	0.000	0.000	0.000	4.690	20.573	2.469	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
21-Aug	0.000	0.000	0.000	0.000	5.008	48.133	3.747	0.624	0.000	1.828	0.000	0.000	0.000	0.000	0.000	0.000	0.000
22-Aug	0.000	0.000	0.000	0.000	5.008	48.133	3.747	1.873	0.654	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
23-Aug	0.000	0.000	0.000	0.000	5.008	46.355	3.747	0.624	0.436	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
24-Aug	0.000	0.000	0.000	0.000	4.917	27.677	2.296	0.000	0.000	3.656	10.602	0.139	0.000	0.000	0.202	0.000	0.000
25-Aug	0.000	0.000	0.000	0.000	3.217	0.000	0.000	0.000	0.000	3.656	10.602	0.208	0.000	0.000	0.202	0.000	0.000
26-Aug	0.000	0.000	0.000	0.000	2.776	48.133	3.747	1.248	0.436	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
27-Aug	0.000	0.000	0.000	0.000	5.008	48.133	3.747	1.873	0.654	1.968	3.534	0.139	0.000	0.000	0.202	0.000	0.000
28-Aug	0.000	0.000	0.000	0.000	5.008	48.133	3.747	1.873	0.654	5.483	10.602	0.208	0.000	0.000	0.202	0.000	0.000
29-Aug	0.643	0.000	0.000	0.000	5.008	48.133	3.747	0.624	0.436	5.483	10.602	0.208	0.000	0.000	0.202	0.000	0.000
30-Aug	0.643	0.000	0.000	0.000	5.008	8.180	0.000	0.000	0.000	5.483	10.602	0.208	0.000	0.000	0.202	0.000	0.000
31-Aug	0.643	0.000	0.000	0.000	4.150	14.193	0.000	0.000	0.000	5.483	10.602	0.069	0.000	0.000	0.202	0.000	0.000

Date	Pool 14	Pool 13	Pool 12	Pool 11	Pool 10	Pool 9	Pool 8	Pool 7	Pool 6	Pool 5	Pool 4	Pool 3	Pool 2	Dix Dam	Jacobson	Buckhorn	Carr Fork
1-Sep	0.586	0.000	0.000	0.000	2.003	43.116	2.463	0.000	0.000	1.647	10.070	0.000	0.000	0.085	0.000	0.000	0.000
2-Sep	0.586	0.000	0.000	0.000	1.119	43.116	3.695	1.096	0.288	2.007	10.070	0.244	0.000	0.085	0.000	0.000	0.000
3-Sep	0.586	0.000	0.000	0.000	0.000	43.116	3.695	1.644	0.864	5.435	10.070	0.244	0.000	0.085	0.000	0.000	0.000
4-Sep	0.586	0.000	0.000	0.000	0.425	43.116	3.695	1.644	0.864	0.000	10.070	0.081	0.000	0.085	0.000	0.000	0.000
5-Sep	0.586	0.000	0.000	0.000	3.500	43.116	3.695	1.644	0.864	0.000	10.070	0.244	0.000	0.085	0.000	0.000	0.000
6-Sep	0.586	0.000	0.000	0.000	0.000	43.116	3.695	1.644	0.864	0.000	10.070	0.244	0.000	0.085	0.000	0.000	0.000
7-Sep	0.586	0.000	0.000	0.000	0.000	20.867	3.695	0.000	0.075	0.000	10.070	0.000	0.000	0.085	0.000	0.000	0.000
8-Sep	0.586	0.000	0.000	0.000	2.311	43.116	3.695	0.548	0.000	0.000	10.070	0.163	0.000	0.085	0.000	0.000	0.000
9-Sep	0.586	0.000	0.000	0.000	0.000	43.116	3.695	1.644	0.864	5.435	10.070	0.244	0.000	0.085	0.000	0.000	0.000
10-Sep	0.586	0.000	0.000	0.000	2.041	43.116	3.695	1.644	0.864	5.435	10.070	0.244	0.000	0.085	0.000	0.000	0.000
11-Sep	0.586	0.000	0.000	0.000	0.927	43.116	3.695	1.644	0.864	5.435	10.070	0.244	0.000	0.085	0.000	0.000	0.000
12-Sep	0.586	0.000	0.000	0.000	0.000	43.116	3.695	1.644	0.864	5.435	10.070	0.244	0.000	0.085	0.000	0.000	0.000
13-Sep	0.586	0.000	0.000	0.000	0.000	43.116	3.695	1.644	0.864	5.435	10.070	0.244	0.000	0.085	0.000	0.000	0.000
14-Sep	0.586	0.000	0.000	0.000	0.000	43.116	3.695	1.644	0.864	5.435	10.070	0.244	0.000	0.085	0.000	0.000	0.000
15-Sep	0.586	0.000	0.000	0.000	0.000	43.116	3.695	1.644	0.864	5.435	10.070	0.244	0.000	0.085	0.000	0.000	0.000
16-Sep	0.586	0.000	0.000	0.000	0.000	43.116	3.695	1.644	0.864	4.559	10.070	0.244	0.000	0.085	0.000	0.000	0.000
17-Sep	0.586	0.000	0.000	0.000	0.000	43.116	3.695	1.644	0.864	0.000	10.070	0.244	0.000	0.085	0.000	0.000	0.000
18-Sep	0.586	0.000	0.000	0.000	1.844	39.016	3.695	1.644	0.864	1.980	10.070	0.244	0.000	0.085	0.000	0.000	0.000
19-Sep	0.586	0.000	0.000	0.000	0.992	43.116	3.695	1.644	0.864	5.435	10.070	0.244	0.000	0.085	0.000	0.000	0.000
20-Sep	0.586	0.000	0.000	0.000	5.007	43.116	3.695	1.644	0.864	5.435	10.070	0.244	0.000	0.085	0.000	0.000	0.000
21-Sep	0.586	0.000	0.000	0.000	4.215	23.296	3.695	0.548	0.864	5.435	10.070	0.244	0.000	0.085	0.000	0.000	0.000
22-Sep	0.586	0.000	0.000	0.000	4.501	35.986	3.695	0.000	0.864	5.435	10.070	0.244	0.000	0.085	0.000	0.000	0.000
23-Sep	0.586	0.000	0.000	0.000	4.823	24.591	3.695	0.000	0.864	5.435	10.070	0.244	0.000	0.085	0.000	0.000	0.000
24-Sep	0.586	0.000	0.000	0.000	5.001	0.000	1.232	0.000	0.000	5.435	10.070	0.000	0.000	0.085	0.000	0.000	0.000
25-Sep	0.586	0.000	0.000	0.000	0.000	24.223	0.000	0.000	0.000	0.000	10.070	0.000	0.000	0.085	0.000	0.000	0.000
26-Sep	0.586	0.000	0.000	0.000	0.000	29.966	0.000	0.000	0.000	0.000	10.070	0.000	0.000	0.085	0.000	0.000	0.000
27-Sep	0.586	0.000	0.000	0.000	0.245	43.116	3.695	1.644	0.576	0.000	10.070	0.244	0.000	0.085	0.000	0.000	0.000
28-Sep	0.586	0.000	0.000	0.000	3.278	41.308	3.695	0.000	0.000	0.000	10.070	0.244	0.000	0.085	0.000	0.000	0.000
29-Sep	0.586	0.000	0.000	0.000	1.513	43.116	3.695	1.644	0.455	0.000	10.070	0.244	0.000	0.085	0.000	0.000	0.000
30-Sep	0.586	0.000	0.000	0.000	1.865	43.116	3.695	1.644	0.864	5.435	10.070	0.244	0.000	0.085	0.000	0.000	0.000

APPENDIX F

Tabulated Daily Flows, Storages, and Deficits for Main Stem Pools

1953 Baseline Deficit Analysis Results

Simulated Flow Values (cfs) - 1953 Baseline Deficit Analysis

Tabulated values denote the predicted flows occurring at the listed location in the 1953 baseline deficit simulation.

Flow values denote instantaneous flows at the end of the day occurring at the most downstream point of the listed reach.

Ex: The predicted flow over lock and dam 11 on January 4th for 1953 baseline conditions was 2750 cfs.

Date	Pool 14	Pool 13	Pool 12	Pool 11	Pool 10	Pool 9	Pool 8	Pool 7	Pool 6	Pool 5	Pool 4	Pool 3	Pool 2	Dix Dam	Buckhorn	Carr Fork
1-Jan	843.8	929.7	1010.6	1224.4	1694.7	1956.6	2697.6	2966.3	2853.2	3111.4	3486.5	4193.0	4413.1	19.2	118.3	19.7
2-Jan	1288.8	1321.6	1391.7	1438.4	1572.5	1387.3	1234.2	1354.8	1472.5	1663.6	1978.4	2605.0	2846.6	61.4	150.5	23.5
3-Jan	1617.4	1666.9	1759.5	1881.6	2146.2	1932.2	1713.3	1621.9	1492.2	1828.6	2350.1	2986.9	3213.8	97.3	253.2	26.7
4-Jan	2433.5	2444.1	2604.8	2750.0	2940.7	2583.2	2194.5	2065.5	1899.1	2039.4	2296.7	3092.2	3322.0	162.2	281.9	36.0
5-Jan	2353.9	2458.4	2545.9	2778.1	3347.7	3221.7	3064.1	3108.6	2959.5	2875.2	2779.3	3324.0	3445.1	173.2	279.0	36.8
6-Jan	2161.7	2272.0	2353.7	2577.8	3184.5	3225.9	3385.3	3688.8	3731.4	3512.3	3191.3	4442.4	4783.9	148.4	285.5	33.4
7-Jan	9840.7	8586.3	9366.4	10169.1	9531.8	7907.1	5918.3	5458.5	4453.9	3854.3	3159.1	4205.6	4545.5	1504.0	1457.0	117.1
8-Jan	22266.7	20743.6	21579.8	24977.2	30500.9	29660.4	27824.2	26681.8	23493.6	21858.1	19861.6	20554.1	20127.4	1504.0	2462.6	230.2
9-Jan	28822.4	28641.5	29148.3	31747.5	37677.0	38171.6	37169.1	36642.9	35840.6	34986.3	33681.3	37446.4	38577.2	1504.0	3500.0	178.9
10-Jan	20276.8	24037.1	25251.4	28734.2	38743.7	40301.8	41669.4	43529.0	43406.4	43775.3	43425.5	46399.0	47281.3	1504.0	3500.0	192.1
11-Jan	12101.6	14707.8	16052.0	18197.3	25119.7	27404.1	31368.5	38557.5	41129.5	41457.2	43573.6	47860.5	49069.4	1504.0	2140.4	152.6
12-Jan	8715.1	9677.0	10304.4	11183.0	14061.0	16238.5	20389.1	24435.6	25849.4	27173.7	29697.7	36646.7	39370.7	1504.0	1428.3	101.0
13-Jan	5503.6	6321.3	6482.3	7148.6	9552.6	10459.2	12284.7	15479.7	16003.2	16679.9	17629.6	20406.6	21185.2	1504.0	839.3	73.1
14-Jan	3960.8	4467.7	4711.4	5368.8	7504.4	7892.8	8546.8	10716.6	10946.1	11304.0	11910.3	13028.4	13669.9	1504.0	605.8	60.4
15-Jan	3192.7	3471.1	4059.8	5385.8	-5563.6	5857.4	7760.8	8031.1	8346.4	8805.2	9871.7	10265.3	1504.0	466.5	51.2	
16-Jan	2559.9	2777.0	2888.8	3255.8	4340.8	4567.1	5007.3	6907.6	7126.2	7374.0	7717.9	8395.6	8641.2	1504.0	392.5	36.8
17-Jan	2420.5	2570.6	2706.2	3022.9	3870.3	3818.0	3784.1	5354.2	5394.3	5881.7	6559.5	9392.3	10286.4	1504.0	372.4	41.8
18-Jan	9814.5	8660.4	9457.5	10357.9	10142.1	9579.4	9701.3	10502.2	9904.5	9676.0	9612.9	10816.5	11105.1	1504.0	1406.7	106.0
19-Jan	11971.5	12122.4	12379.4	13793.7	16434.8	16311.3	16556.9	17930.9	17344.7	16675.1	15883.8	15807.6	15581.3	1504.0	1363.6	139.4
20-Jan	7801.8	9034.6	9160.2	10058.9	13392.3	14015.2	15398.4	18157.4	19008.0	19225.1	19224.4	19499.9	19693.4	1504.0	1097.9	96.3
21-Jan	6831.2	7173.8	7499.5	7878.2	9320.5	9954.6	11131.9	13592.3	14196.7	14522.7	14898.3	16118.8	16524.4	1504.0	1083.5	376.2
22-Jan	13451.9	12092.2	12508.7	12750.5	11389.7	10953.2	10729.4	11634.2	11259.2	11167.8	11212.0	12249.3	12655.8	1504.0	2419.5	296.0
23-Jan	12762.0	13280.8	13157.6	13894.6	15621.6	15066.3	14443.4	15175.8	14591.3	13842.3	12907.4	12271.9	11933.6	1054.7	2060.4	160.5
24-Jan	8730.1	9947.5	10192.2	11043.8	14299.7	14685.3	15766.4	18363.9	19128.0	19414.8	19522.3	18595.3	18363.8	1504.0	1385.2	144.7
25-Jan	9683.3	9975.1	10724.6	11907.5	14705.3	15444.8	17033.2	19384.0	19739.4	20090.8	20559.1	22220.1	22454.5	1504.0	1507.3	157.9
26-Jan	9186.2	9713.9	10085.4	11117.5	13637.6	14249.9	15688.9	18146.5	18522.3	18709.8	19047.1	20601.3	21201.7	1504.0	1428.3	122.9
27-Jan	6764.9	7507.9	7694.8	8376.1	10706.2	11224.9	12277.8	14778.8	15268.6	15432.3	15630.1	16758.5	17232.1	1504.0	1054.8	109.2
28-Jan	6432.8	6800.3	7186.6	7901.7	9863.0	10097.6	10621.5	12552.3	12689.0	13276.5	14011.3	16924.5	17849.9	1504.0	1162.5	207.8
29-Jan	11637.6	10717.8	11218.3	11783.6	11683.9	11467.9	11512.5	12632.2	12401.3	12486.4	12856.1	14231.0	14805.8	1504.0	1938.3	236.8
30-Jan	10290.3	10916.6	10877.2	11616.2	13540.8	13586.8	14037.6	15929.3	15937.4	15255.6	15757.7	15340.4	16366.6	147.3	1636.6	147.3
31-Jan	6776.3	7650.5	7734.6	8205.4	10431.1	11121.0	12421.1	14331.0	15119.2	15302.0	15376.8	16046.4	16340.2	724.3	1040.4	102.6

Date	Pool 14	Pool 13	Pool 12	Pool 11	Pool 10	Pool 9	Pool 8	Pool 7	Pool 6	Pool 5	Pool 4	Pool 3	Pool 2	Dix Dam	Buckhorn	Carr Fork
1-Feb	4850.3	5326.3	5464.2	5846.8	7443.2	7961.1	8799.2	10062.5	10505.0	11040.6	11664.3	12819.0	13324.3	429.0	739.7	75.9
2-Feb	3757.5	4065.4	4174.4	4542.0	5804.0	6177.1	6826.5	7739.9	8033.1	8221.5	8559.1	9522.8	9851.0	336.1	549.5	59.2
3-Feb	2949.1	3187.5	3281.0	3628.1	4726.4	5043.2	5622.7	6389.9	6622.8	6809.2	7057.8	7992.2	8330.0	276.7	432.4	50.0
4-Feb	2426.6	2616.2	2720.8	3054.2	4028.2	4147.0	4362.8	4838.5	4951.5	5120.0	5373.7	6235.2	6575.3	232.6	367.7	41.8
5-Feb	2063.9	2196.8	2277.9	2529.1	3251.0	3455.0	3883.7	4471.8	4668.8	4822.6	5033.9	5751.4	5981.9	198.1	321.8	37.9
6-Feb	1783.0	1893.9	1968.7	2194.3	2819.7	3041.5	3534.5	4104.7	4264.5	4379.2	4542.8	5094.8	5282.7	184.3	283.0	41.8
7-Feb	1932.0	1995.6	2087.0	2243.9	2630.1	2409.2	2080.6	2195.8	2228.4	2461.0	2804.0	3661.2	4021.7	200.8	318.9	42.8
8-Feb	2896.7	2829.6	2960.9	2989.6	2848.3	2715.2	2808.8	3103.8	3110.9	3128.7	3157.6	3507.4	3563.7	189.8	614.1	50.0
9-Feb	3167.1	3182.1	3245.3	3348.6	3501.8	3447.2	3518.6	3672.8	3577.8	3552.3	3546.4	3841.0	3919.0	159.4	685.9	44.7
10-Feb	2605.0	2737.6	2758.3	2952.5	3550.2	3631.8	3780.5	4032.2	4019.2	4035.8	4070.9	4411.1	4501.1	137.3	527.9	41.8
11-Feb	2257.0	2369.2	2425.8	2622.5	3211.0	3213.3	3226.5	3453.4	3498.7	3580.7	3701.0	4240.4	4430.7	137.3	438.1	38.8
12-Feb	2926.9	3043.0	3297.4	3722.1	4605.3	4415.8	4282.5	4720.8	4507.0	4482.5	4474.5	4612.9	4613.8	666.1	560.2	51.2
13-Feb	5168.9	4992.2	5369.4	5783.0	6106.2	5772.3	5639.3	6278.6	6130.5	6112.4	6129.4	6143.7	6083.9	835.9	833.2	88.7
14-Feb	5600.2	5689.2	5830.8	6229.3	6956.7	6865.1	6912.1	7415.6	7341.4	7260.5	7178.5	7168.2	7104.6	483.8	933.7	84.2
15-Feb	5083.3	5325.5	5434.6	5802.7	6849.1	6944.7	7193.1	7817.0	7888.9	7918.2	7940.2	8062.4	8082.5	394.1	861.9	105.9
16-Feb	6075.0	6033.4	6270.3	6573.7	7084.1	6991.4	7031.3	7542.6	7531.1	7529.2	7551.2	7808.4	7886.3	497.6	1098.9	173.6
17-Feb	7578.3	7423.5	7627.7	7953.1	8259.3	8031.9	7871.7	8031.9	7867.2	7819.1	7793.0	7908.5	7936.9	361.0	1120.5	194.7
18-Feb	6063.3	6480.6	6460.5	6806.1	7990.9	8162.1	8512.9	9132.3	9274.1	9197.4	9074.9	8994.2	8890.8	254.7	926.6	152.6
19-Feb	4962.6	5282.0	5387.1	5702.7	6888.0	7109.4	7479.2	8078.9	8268.6	8373.0	8463.3	8867.9	9022.9	211.9	775.7	105.9
20-Feb	4262.0	4524.6	4652.0	5019.9	6163.0	6321.7	6610.6	7098.4	7223.2	7301.5	7411.3	7874.4	8043.1	200.8	664.4	96.3
21-Feb	10900.8	9950.6	10738.2	11865.1	12723.6	11799.4	10498.0	10332.5	9122.6	8816.6	8595.3	9068.3	9155.5	1504.0	1616.1	536.7
22-Feb	22235.1	20167.6	20481.7	22144.4	23794.7	23524.1	22157.5	21311.3	19439.7	18627.6	17907.4	16074.6	15314.5	1504.0	3476.5	351.2
23-Feb	15212.9	17568.7	17345.1	18563.3	23211.8	23011.4	23867.9	26426.4	27277.8	26703.5	25731.5	25417.8	25104.9	1504.0	2320.0	181.5
24-Feb	8173.4	9841.7	10278.7	10990.0	14721.0	16145.2	18877.2	22686.0	24512.0	24950.7	25040.3	26066.0	26389.7	1504.0	1185.1	122.9
25-Feb	5782.3	6407.6	6725.6	7250.2	9282.9	10151.0	11683.0	14086.6	14795.8	15133.2	15483.7	17003.5	17581.0	1009.9	847.5	96.3
26-Feb	4439.8	4832.9	4981.7	5430.8	6933.5	7328.8	8022.0	9109.6	9437.7	9597.1	9835.5	10643.1	11084.4	401.0	657.2	81.4
27-Feb	3584.0	3879.4	4018.4	4443.9	5766.8	5994.0	6389.7	7105.5	7289.5	7434.5	7629.2	8365.7	8652.2	322.3	524.3	60.4
28-Feb	2892.2	3126.1	3238.2	3609.1	4728.8	4901.3	5200.3	5778.3	5953.8	6083.9	6266.6	6866.1	7100.3	249.1	422.3	53.4

Date	Pool 14	Pool 13	Pool 12	Pool 11	Pool 10	Pool 9	Pool 8	Pool 7	Pool 6	Pool 5	Pool 4	Pool 3	Pool 2	Dix Dam	Buckhorn	Carr Fork
1-Mar	2354.2	2544.2	2648.0	2986.6	3967.8	4059.2	4221.0	4657.8	4777.8	4912.7	5100.5	5700.1	5929.8	215.5	360.5	46.7
2-Mar	5483.8	5490.2	6247.6	7467.1	9544.6	8638.6	7307.5	7250.6	6141.9	5951.9	5857.9	5601.5	5511.4	1504.0	875.9	138.1
3-Mar	12579.0	12226.7	13460.1	16321.8	21477.9	22276.8	24221.2	25708.3	25196.9	25820.1	26950.9	31843.0	32792.1	1504.0	1522.3	321.0
4-Mar	22353.3	21543.0	22657.6	26224.8	33147.8	36200.3	40808.9	42800.5	42890.3	45608.3	47848.6	57035.6	59733.2	1504.0	2772.2	531.4
5-Mar	22923.1	24036.9	24694.2	27253.7	33852.2	35042.1	37548.8	39718.7	39900.2	41552.3	45245.0	54588.7	57688.8	1504.0	3181.6	323.6
6-Mar	14670.1	17489.4	18303.1	20386.3	27266.4	28491.1	32452.0	38086.3	39659.0	39939.4	41726.3	47651.5	49582.3	1504.0	1953.3	171.0
7-Mar	8100.6	9756.0	10351.9	11389.3	15465.5	17834.1	22272.4	26783.0	29309.9	29627.3	31201.3	38389.5	40949.2	1504.0	1134.5	126.4
8-Mar	5822.3	6422.2	6737.5	7255.7	9229.1	10344.2	12480.0	15796.9	16474.1	17440.9	18523.0	22930.8	25413.6	1504.0	811.2	94.7
9-Mar	4665.6	5018.1	5167.0	5576.8	6938.1	7287.4	7921.2	10084.3	10310.4	10689.2	11429.5	12865.2	13580.2	1504.0	617.3	73.1
10-Mar	3647.8	3949.9	4053.9	4443.8	5709.8	5866.9	6099.9	7906.8	8046.8	8407.4	8928.7	10309.0	10793.8	1504.0	480.8	61.6
11-Mar	3003.2	3228.4	3341.1	3696.1	4777.3	4936.3	5221.6	7021.5	7184.4	7374.3	7682.2	8857.6	9248.2	1504.0	406.1	55.6
12-Mar	2586.7	2751.1	2848.5	3139.4	3986.1	4083.4	4285.4	6029.5	6160.8	6344.8	6604.0	7615.6	7985.4	1504.0	354.4	51.2
13-Mar	2390.8	2524.4	2630.0	2901.4	3636.5	3775.8	4127.9	5916.1	6038.7	6238.5	6520.8	7342.7	7624.4	1504.0	321.4	43.7
14-Mar	2237.4	2376.6	2493.9	2791.5	3566.4	3722.7	4128.4	5917.4	6008.2	6883.7	8062.5	7866.8	798.9	1504.0	305.6	42.8
15-Mar	2909.3	3226.6	3673.5	4594.0	6658.0	7478.2	9523.2	11946.4	12132.1	13174.3	14745.7	18013.9	18643.2	1504.0	357.3	5.0
16-Mar	4348.3	4451.7	4908.3	5641.3	7035.8	7752.8	9664.2	12264.1	12634.2	13277.8	14430.9	20271.2	22020.6	1504.0	460.7	5.0
17-Mar	4081.0	4370.9	4585.3	5195.0	6684.0	7169.7	8318.3	10627.1	10841.3	11179.3	11766.3	14090.7	15234.0	1504.0	428.4	5.0
18-Mar	4078.5	4403.6	4736.7	5497.9	7380.3	7624.3	8268.3	10143.9	10143.6	10313.6	10635.0	12288.5	12853.7	1504.0	488.0	5.0
19-Mar	6443.1	6333.6	6844.6	7590.5	8745.9	9061.9	10178.2	12147.1	12305.1	12453.6	12737.2	13873.1	14235.7	1504.0	919.0	5.0
20-Mar	7195.2	7327.8	7580.4	8247.3	9537.3	9699.3	10315.1	12022.0	12031.3	12042.5	12124.6	13342.9	13733.7	1346.5	1091.4	14.7
21-Mar	5591.8	6091.0	6181.5	6704.6	8398.7	8806.9	9633.0	10848.8	11197.6	11364.0	11570.5	10782.5	10722.3	510.5	825.6	18.8
22-Mar	4365.0	4734.4	4870.3	5293.4	6754.0	7108.7	7737.8	8714.1	9001.1	9316.7	9719.5	11005.7	11316.5	393.1	628.1	5.0
23-Mar	3639.8	3904.2	4038.7	4429.4	5634.9	5949.9	6559.7	7410.3	7657.5	7755.3	7931.0	8670.6	8960.4	346.2	516.7	5.0
24-Mar	3698.0	3826.2	3989.0	4297.6	5088.7	5076.7	5152.9	5767.4	5833.1	6099.0	6455.2	7309.7	7670.9	476.0	595.8	73.2
25-Mar	6128.3	5758.8	6027.4	6143.9	5680.9	5448.0	5565.7	6077.0	6170.3	6291.6	7758.8	8154.8	469.1	1206.3	119.1	
26-Mar	7874.9	7635.0	7754.7	8006.7	7960.2	7734.1	7677.8	7780.9	7487.9	7345.5	7206.1	7164.2	7164.8	340.7	1199.1	58.0
27-Mar	6411.1	6825.5	6795.1	7130.0	8287.3	8351.9	8517.0	9000.8	8994.2	8831.0	8610.8	8632.8	8559.1	270.3	926.2	27.8
28-Mar	5026.8	5375.7	5442.5	5716.8	6876.4	7138.2	7559.7	8245.0	8502.0	8634.3	8743.1	9245.4	9439.3	231.6	725.1	15.7
29-Mar	4125.7	4384.0	4469.4	4763.5	5794.9	5966.4	6242.4	6756.6	6914.9	7054.2	7239.3	7964.0	8236.2	199.9	577.8	5.0
30-Mar	3416.6	3628.5	3706.0	3991.6	4922.3	5057.0	5286.2	5729.8	5869.6	5990.6	6159.8	6817.9	7060.6	175.0	467.2	5.0
31-Mar	3015.0	3167.2	3251.1	3499.5	4252.1	4355.9	4578.4	4988.7	5117.6	5265.4	5466.4	5966.7	6159.0	164.0	424.8	5.0

Date	Pool 14	Pool 13	Pool 12	Pool 11	Pool 10	Pool 9	Pool 8	Pool 7	Pool 6	Pool 5	Pool 4	Pool 3	Pool 2	Dix Dam	Buckhorn	Carr Fork
1-May	1292.8	1368.9	1458.0	1627.8	2061.4	1962.5	1897.0	1946.2	1998.1	2129.7	2322.0	2862.2	3067.0	0.0	30.0	5.0
2-May	2088.2	2045.3	2130.8	2090.6	1896.8	1663.8	1515.6	1552.2	1602.5	1673.8	1773.3	2227.5	2381.6	0.0	30.0	5.0
3-May	2472.0	2507.8	2610.2	2760.0	3019.0	2757.4	2440.1	2073.3	1822.3	1773.4	1766.4	2047.0	2138.3	0.0	30.0	5.0
4-May	2075.5	2192.3	2242.0	2458.0	3059.2	3067.6	3109.2	3144.6	3087.3	3089.3	3086.8	3071.2	2992.8	0.0	30.0	5.0
5-May	2110.3	2308.7	2515.5	2987.6	4134.1	4713.9	6106.4	6826.5	7017.7	7296.7	7645.6	7453.2	7270.9	0.0	58.3	5.0
6-May	7863.9	6870.5	7432.4	7665.0	6192.0	5924.7	6877.7	7233.5	7374.6	7785.2	8459.9	10386.4	10929.1	0.0	1806.9	5.0
7-May	27991.2	23061.5	22713.0	22792.0	17781.1	15571.5	12122.2	8945.9	6864.9	6515.7	6577.0	7634.6	8094.9	781.4	350.0	625.5
8-May	26263.4	27320.2	26262.2	26737.1	28896.4	27021.2	24726.4	24807.2	23962.5	22430.2	20505.3	17518.2	15669.1	806.9	350.0	350.8
9-May	20120.2	22278.6	23171.5	24419.0	29257.0	29073.8	29932.4	32483.0	33523.5	32627.3	30664.7	32578.3	32628.5	508.3	350.0	201.8
10-May	12603.5	14733.9	15385.4	16656.2	20999.4	22325.9	25403.1	28631.5	31000.1	30914.8	30865.9	34532.5	35693.1	340.3	350.0	131.0
11-May	7588.1	8706.1	8986.0	9440.3	11840.8	13112.6	15502.2	17882.5	19190.9	20149.1	21159.1	23566.3	25181.3	238.7	177.0	89.5
12-May	4824.6	5363.4	5410.2	5649.4	7072.1	7882.8	9282.2	10789.0	11451.2	11707.0	12158.4	13289.6	13729.9	186.5	713.0	69.3
13-May	3709.5	4040.6	4176.2	4587.8	5985.1	6328.2	6925.3	7586.5	7741.6	7882.2	8070.6	8881.7	9248.0	168.6	504.7	53.1
14-May	3219.5	3494.3	3685.9	4188.1	5587.5	5847.6	6401.6	7194.7	7337.0	7283.7	7244.0	7768.8	7919.9	405.0	383.2	43.5
15-May	2923.5	3376.0	3768.4	4760.8	7251.1	7643.0	8572.9	10381.4	10361.5	10355.2	10315.1	9628.9	9348.0	1380.2	308.9	41.3
16-May	2857.9	3221.3	3595.4	4432.2	6524.8	7043.2	8240.4	9822.5	10197.5	10969.1	11982.5	12883.0	13224.5	797.1	269.1	44.1
17-May	2824.5	3267.4	3712.7	4753.6	7296.9	8361.4	10776.3	13624.9	14152.3	16510.9	19677.9	24496.2	25772.7	1504.0	248.2	38.5
18-May	3431.3	4039.4	4777.9	6404.2	10205.4	10922.3	12743.5	15181.9	15176.2	15929.5	17591.0	22240.0	23623.0	1504.0	391.9	175.0
19-May	14371.4	12620.0	13741.0	15554.6	16988.7	17755.7	19629.7	20964.8	20494.6	19855.0	19500.5	21816.4	22538.2	1504.0	3500.0	800.0
20-May	27794.9	25385.3	25583.7	27133.3	28817.5	29695.1	30036.0	30014.5	27952.3	27079.7	26223.1	29881.1	31119.4	1504.0	3500.0	800.0
21-May	28543.2	29197.5	29075.1	30275.3	33919.9	34017.7	34479.7	35537.6	35106.4	34395.1	33465.6	36038.8	36825.7	1504.0	3046.5	800.0
22-May	14513.5	18119.9	18254.5	19074.8	24013.4	24724.9	27652.8	34875.4	37059.0	36536.2	36412.6	39970.7	40880.8	1504.0	781.0	800.0
23-May	5719.6	7466.4	7772.0	8373.4	12121.1	14563.2	19328.7	24523.1	27205.8	27911.2	28981.9	35764.8	38220.3	1504.0	496.1	106.0
24-May	3941.3	4379.9	4648.3	5066.5	6808.8	7742.3	9373.5	12390.6	12865.9	13843.1	14811.5	18325.0	19556.0	1504.0	387.0	87.6
25-May	2984.6	3285.5	3420.8	3874.2	5255.2	5583.5	6169.7	8192.9	8389.0	8673.3	9325.8	10304.6	10901.8	1504.0	319.3	59.9
26-May	2297.2	2514.5	2624.2	2998.3	4108.8	4401.6	4963.5	6937.9	7179.7	7309.8	7508.9	8246.4	8453.6	1504.0	240.9	42.2
27-May	1704.9	1855.9	1929.5	2216.4	3054.3	3118.3	3205.1	4903.9	5031.0	5247.9	5540.9	6323.6	6666.8	1504.0	190.7	34.1
28-May	1249.5	1366.2	1441.9	1703.2	2414.6	2385.3	2308.0	3873.4	3937.6	4077.3	4289.4	4861.2	5075.9	1504.0	150.0	27.5
29-May	929.6	1023.2	1102.4	1335.0	1935.8	1858.2	1715.1	3230.2	3266.5	3368.5	3516.2	4059.4	4249.1	1504.0	121.2	25.0
30-May	794.6	857.8	920.7	1077.8	1486.3	1402.3	1284.6	2815.8	2852.9	2935.4	3047.7	3504.2	3661.0	1504.0	99.4	19.9
31-May	732.6	775.6	820.5	923.8	1200.6	926.1	438.3	1757.8	1750.2	1865.1	2030.1	2722.1	2985.6	1504.0	81.5	13.2

Date	Pool 14	Pool 13	Pool 12	Pool 11	Pool 10	Pool 9	Pool 8	Pool 7	Pool 6	Pool 5	Pool 4	Pool 3	Pool 2	Dix Dam	Buckhorn	Carr Fork
1-Jun	608.9	632.1	684.1	744.6	856.3	759.2	732.1	2216.9	1942.0	1713.6	1528.2	1438.9	1504.0	72.1	12.4	
2-Jun	565.9	600.7	675.1	746.8	842.6	564.2	382.9	1732.3	1554.8	1653.7	1755.6	2263.5	2505.0	1504.0	71.0	11.5
3-Jun	480.9	505.4	562.1	622.2	722.3	438.2	239.8	1156.2	931.3	956.1	1012.8	1150.3	1218.8	1115.2	61.4	6.6
4-Jun	412.1	444.3	517.4	589.2	687.6	571.3	511.3	481.0	463.4	493.6	574.1	797.6	890.1	5.5	55.6	6.1
5-Jun	399.8	421.0	467.2	507.9	582.3	471.7	433.5	430.8	379.1	358.0	333.8	480.7	548.6	0.0	38.5	5.0
6-Jun	323.7	343.8	394.9	444.4	519.5	509.9	554.8	626.0	634.6	625.0	603.6	613.5	600.3	17.9	47.4	7.7
7-Jun	1331.4	1412.8	1668.4	1744.2	1596.4	1001.7	609.1	1842.6	1590.0	1535.5	1378.8	1158.7	1038.1	1504.0	139.5	44.3
8-Jun	1225.0	1339.1	1563.1	1803.2	2117.2	2199.6	2315.2	3248.1	3173.1	2967.4	2758.0	2518.0	2366.4	902.2	244.5	26.1
9-Jun	761.8	873.9	1086.1	1355.6	1765.0	1902.5	2068.7	2446.2	2624.6	2658.6	2910.2	3030.8	140.7	169.9	12.7	
10-Jun	1194.2	1250.3	1408.0	1493.0	1560.5	1289.5	1150.0	1708.3	1663.7	1729.9	1779.1	2083.4	2229.0	596.1	241.0	14.5
11-Jun	1079.0	1219.7	1500.0	1802.9	2177.6	2377.5	2603.4	4185.5	4341.2	4121.3	3834.6	3294.6	2945.8	1361.9	281.8	20.5
12-Jun	639.0	771.1	1035.8	1354.1	1816.9	2050.8	2310.2	2900.3	3192.8	3364.3	3562.1	3928.5	4154.5	242.5	171.6	16.0
13-Jun	638.3	709.6	858.9	1005.7	1232.7	1322.8	1479.9	1986.0	2221.9	2328.0	2460.7	2677.5	2908.0	219.4	119.6	9.1
14-Jun	565.0	608.9	703.7	803.5	962.3	934.4	972.9	1349.1	1430.5	1512.4	1608.5	1796.3	1889.1	253.9	90.6	11.9
15-Jun	440.8	478.3	564.9	660.1	802.2	794.4	844.5	1098.9	1161.9	1150.6	1145.1	1255.7	1303.7	147.2	67.2	5.0
16-Jun	481.5	1088.7	2350.2	3692.8	5286.9	4809.6	4199.5	2889.0	1874.5	1619.8	1475.9	1264.1	1187.6	112.0	67.6	5.0
17-Jun	917.5	1533.3	2859.9	4197.9	5801.2	6480.2	7154.2	8305.7	9241.9	8696.8	8279.3	7316.9	6409.9	240.8	137.4	6.9
18-Jun	665.5	859.3	1258.6	1676.4	2304.4	2812.6	3372.5	4492.6	5391.2	5745.4	5918.8	7256.1	7932.8	146.2	112.4	7.7
19-Jun	426.0	492.5	643.4	820.7	1132.7	1397.4	1700.6	2270.3	2691.8	2836.6	3014.3	3793.2	4217.0	77.5	70.7	5.9
20-Jun	340.2	401.4	536.2	675.1	872.9	688.5	597.2	698.8	729.4	905.8	1110.3	1604.3	1865.4	44.8	48.1	5.0
21-Jun	328.9	377.5	480.7	581.1	729.3	702.0	736.3	807.1	803.9	748.5	683.7	801.0	866.3	21.1	32.4	5.0
22-Jun	300.4	363.4	497.1	626.2	785.0	877.2	1024.7	1208.8	1342.9	1221.6	1062.3	995.6	946.5	11.2	30.0	5.0
23-Jun	279.6	308.1	372.6	437.7	558.5	650.8	794.6	1017.6	1186.9	1153.2	1106.8	1213.5	1244.5	0.0	30.0	5.0
24-Jun	204.2	234.0	304.4	370.3	466.3	166.6	52.8	79.0	50.0	136.3	244.9	594.0	758.9	0.0	30.0	5.0
25-Jun	176.5	205.7	269.6	327.1	413.7	197.3	52.1	49.8	49.6	81.4	125.6	255.4	317.0	0.0	30.0	5.0
26-Jun	149.9	170.5	217.7	259.5	332.3	138.1	49.9	49.6	49.2	49.9	51.4	225.3	295.2	0.0	30.0	5.0
27-Jun	385.6	403.6	403.2	374.6	365.5	346.4	357.4	67.6	49.4	50.0	55.9	129.8	161.9	0.0	30.0	5.0
28-Jun	569.4	629.5	743.6	818.9	841.1	700.6	657.3	568.2	201.8	50.0	49.9	109.9	132.2	0.0	30.0	5.0
29-Jun	1914.6	1972.5	2339.2	2510.4	2396.7	2136.1	2029.9	1891.2	1805.4	1696.4	1542.4	819.7	437.5	42.0	112.4	5.0
30-Jun	1347.0	1540.8	1852.0	2245.5	2815.0	2760.5	2735.5	3587.8	3387.4	3378.8	3292.4	3237.1	3162.3	971.1	245.2	33.1

Date	Pool 14	Pool 13	Pool 12	Pool 11	Pool 10	Pool 9	Pool 8	Pool 7	Pool 6	Pool 5	Pool 4	Pool 3	Pool 2	Dix Dam	Buckhorn	Carr Fork
1-Jul	907.5	1072.5	1382.0	1743.5	2274.7	2396.2	2552.8	3305.8	3481.6	3523.9	3598.7	4065.0	4275.3	521.5	104.1	24.1
2-Jul	748.9	840.0	1026.2	1229.9	1541.7	1596.5	1711.3	2368.7	2542.1	2607.0	2673.3	3170.2	3396.9	399.3	77.5	13.1
3-Jul	513.9	591.5	759.8	953.2	1233.4	1209.7	1239.7	1719.7	1776.8	1836.8	1902.7	2150.0	2268.0	355.2	61.0	7.5
4-Jul	418.4	513.4	716.7	927.6	1197.9	855.9	607.3	1911.6	1664.9	1719.2	1710.0	1735.1	1735.4	1504.0	59.8	25.0
5-Jul	613.8	744.0	1011.9	1255.3	1524.7	1396.0	1343.8	2817.8	2723.6	2636.5	2536.2	2372.9	2253.9	1504.0	123.3	17.7
6-Jul	760.0	837.0	999.8	1139.1	1331.5	1446.9	1625.3	3400.8	3583.5	3389.2	3164.0	2968.3	2815.7	1504.0	130.2	13.1
7-Jul	1300.4	1439.0	1792.3	2078.3	2310.0	2252.3	2278.4	3653.8	3735.5	3681.4	3605.9	3783.1	3867.7	1304.4	131.1	11.4
8-Jul	830.1	954.1	1183.4	1470.5	1911.1	2057.5	2231.9	3161.5	3309.9	3245.4	3179.6	3468.6	3598.9	675.2	144.5	16.8
9-Jul	992.9	1103.7	1346.8	1567.4	1827.3	1813.5	1879.0	2544.2	2677.1	2645.9	2609.2	2936.8	3086.6	491.5	148.2	11.8
10-Jul	525.1	611.3	794.6	1030.2	1395.4	1500.9	1633.9	2260.5	2380.5	2323.8	2245.7	2384.3	2437.2	410.0	99.0	8.8
11-Jul	441.2	481.0	571.0	668.9	843.7	883.4	983.4	1574.7	1712.8	1728.0	1732.1	2002.5	2120.2	365.0	77.5	5.0
12-Jul	355.0	386.3	460.1	536.6	657.5	597.3	603.9	1047.6	1085.6	1064.0	1036.2	1270.2	1375.9	341.0	58.0	5.0
13-Jul	276.6	294.4	341.1	388.6	478.6	570.6	705.7	1221.5	1335.0	1215.0	1056.2	1102.4	1110.5	319.7	34.0	5.0
14-Jul	208.9	230.7	283.9	331.7	404.9	465.2	580.6	1097.8	1240.2	1195.8	1132.4	1278.8	1324.4	310.8	30.0	5.0
15-Jul	144.5	168.2	222.9	270.4	342.8	385.9	484.3	961.9	1084.0	1058.2	1020.5	1105.3	1129.0	293.1	30.0	5.0
16-Jul	109.5	126.8	167.7	201.1	263.8	159.4	141.6	494.4	492.7	515.9	541.7	714.4	785.2	287.7	30.0	5.0
17-Jul	100.6	116.7	152.1	179.0	227.7	71.7	49.9	290.8	205.0	276.1	361.1	515.9	571.0	284.9	30.0	5.0
18-Jul	194.2	201.0	203.8	201.4	225.4	268.9	323.6	691.1	748.1	760.4	752.1	657.3	597.6	288.5	30.0	5.0
19-Jul	132.0	153.2	198.4	228.5	257.0	116.2	87.0	957.3	868.9	963.7	1045.5	1275.8	1361.0	876.9	30.0	5.0
20-Jul	214.7	219.7	222.0	219.6	242.7	266.0	323.3	883.0	971.8	911.8	852.9	912.9	930.7	441.3	30.0	5.0
21-Jul	147.4	163.6	200.3	224.1	250.8	235.2	286.0	763.8	836.7	842.6	846.6	971.4	1007.9	348.4	30.0	5.0
22-Jul	331.5	388.0	474.6	530.5	559.6	441.3	423.4	814.7	861.8	846.8	827.2	865.3	867.3	320.1	30.0	5.0
23-Jul	382.2	454.3	599.8	732.5	873.6	814.3	814.3	1306.2	1300.6	1238.0	1148.6	1163.7	1150.9	463.8	30.0	5.0
24-Jul	111.1	165.8	297.8	437.3	640.2	479.2	382.4	774.6	680.0	734.5	792.2	1028.3	1125.2	418.5	30.0	5.0
25-Jul	76.9	109.6	180.6	252.5	381.4	417.9	494.7	947.8	970.4	957.2	926.7	927.8	912.6	339.8	30.0	5.0
26-Jul	175.6	177.0	180.9	192.5	254.1	311.5	761.1	829.1	838.9	843.0	932.9	955.5	309.4	30.0	5.0	
27-Jul	297.4	293.3	263.3	220.9	206.0	180.7	223.4	630.7	685.4	678.6	665.7	780.0	820.0	288.6	30.0	5.0
28-Jul	189.6	198.5	228.9	244.2	247.7	182.7	192.0	550.2	583.1	591.7	596.7	667.1	683.3	271.9	30.0	5.0
29-Jul	131.1	141.8	169.8	189.4	221.7	93.5	61.9	333.8	283.1	276.8	271.1	442.2	510.6	265.8	30.0	5.0
30-Jul	103.9	120.1	155.1	177.9	213.8	265.7	343.2	701.1	766.2	682.6	548.9	448.4	398.6	257.3	30.0	5.0
31-Jul	109.9	121.6	147.3	165.3	201.5	216.2	293.5	708.2	796.7	813.4	822.0	839.8	807.4	261.6	30.0	5.0

Date	Pool 14	Pool 13	Pool 12	Pool 11	Pool 10	Pool 9	Pool 8	Pool 7	Pool 6	Pool 5	Pool 4	Pool 3	Pool 2	Dix Dam	Buckhorn	Carr Fork
1-Aug	119.9	151.4	211.9	256.9	296.0	77.6	50.1	264.8	208.5	280.6	370.5	609.5	707.1	253.0	30.0	5.0
2-Aug	103.3	108.4	125.9	144.4	195.5	206.8	210.6	688.3	672.8	502.8	452.5	435.5	454.6	30.0	5.0	
3-Aug	77.6	96.9	131.5	151.4	185.2	168.1	214.2	764.5	805.7	726.6	617.0	674.5	676.3	464.6	30.0	5.0
4-Aug	117.7	155.7	228.2	285.6	334.9	257.9	268.3	796.4	846.7	1836.3	2971.1	2745.2	2625.5	454.9	30.0	5.0
5-Aug	141.5	164.6	214.9	261.4	332.6	220.0	182.6	637.0	610.0	729.9	886.0	1208.0	1348.1	447.1	30.0	5.0
6-Aug	160.4	179.6	218.7	250.9	306.2	197.1	157.5	599.3	552.4	564.7	577.7	725.3	789.8	450.7	30.0	5.0
7-Aug	95.6	109.7	143.3	168.4	217.3	248.5	313.2	842.8	882.4	852.7	804.2	855.4	858.2	447.5	30.0	5.0
8-Aug	101.5	113.6	140.4	159.5	197.7	200.7	264.9	821.4	896.5	904.7	908.4	1060.4	1107.6	440.1	30.0	5.0
9-Aug	79.4	97.5	131.9	154.5	189.9	136.1	154.7	659.6	690.4	682.4	672.8	865.5	942.2	436.8	30.0	5.0
10-Aug	86.9	101.3	132.7	155.8	192.5	178.3	219.6	747.4	798.9	750.4	669.0	787.8	820.7	442.7	30.0	5.0
11-Aug	96.6	107.1	131.1	147.6	181.0	79.7	68.3	520.8	493.9	492.4	494.1	661.3	721.2	441.0	30.0	5.0
12-Aug	83.8	96.8	122.4	138.3	167.4	187.2	241.3	783.7	849.5	801.3	728.2	692.7	659.4	451.7	30.0	5.0
13-Aug	92.9	103.3	126.4	140.5	167.7	149.9	198.2	738.6	798.3	769.7	730.8	821.8	842.4	441.0	30.0	5.0
14-Aug	80.8	95.4	124.0	141.4	168.9	64.1	49.9	425.6	350.9	385.5	432.6	612.7	680.9	433.5	30.0	5.0
15-Aug	53.5	70.9	102.4	121.0	152.0	199.5	257.0	772.1	852.9	750.1	591.0	561.9	548.6	428.0	30.0	5.0
16-Aug	50.0	63.8	90.4	107.7	140.1	100.5	132.4	631.5	664.6	684.6	706.8	774.9	774.1	423.1	30.0	5.0
17-Aug	72.4	70.9	86.9	97.5	125.8	49.9	341.9	209.2	234.6	276.6	505.3	599.8	420.8	420.8	30.0	5.0
18-Aug	82.5	85.5	93.4	94.9	112.9	49.7	49.2	344.9	193.8	152.8	113.1	292.9	374.8	420.4	30.0	5.0
19-Aug	78.0	82.8	92.3	91.3	102.2	50.0	49.6	587.9	660.5	600.2	464.1	344.4	297.1	418.4	30.0	5.0
20-Aug	66.8	76.3	92.7	96.0	105.5	75.4	49.8	576.7	655.2	645.6	650.1	690.1	681.0	415.0	30.0	5.0
21-Aug	71.6	76.7	89.5	93.4	106.0	64.6	50.4	524.3	553.2	519.5	480.1	628.9	684.9	414.5	30.0	5.0
22-Aug	70.2	77.5	91.8	95.6	108.0	49.9	49.6	380.3	281.0	297.1	322.3	502.8	568.6	410.4	30.0	5.0
23-Aug	58.3	71.7	94.7	104.4	119.2	55.2	49.7	505.5	499.1	460.2	390.6	436.4	457.8	423.9	30.0	5.0
24-Aug	51.6	65.9	90.0	103.0	124.0	93.8	50.5	553.1	619.8	564.1	483.6	583.5	609.2	398.4	30.0	5.0
25-Aug	50.0	61.5	84.0	96.8	121.0	82.5	78.0	532.0	557.1	540.3	520.9	622.7	646.7	401.6	30.0	5.0
26-Aug	49.9	59.8	80.4	91.7	115.4	50.0	49.8	382.6	287.3	305.2	331.4	476.8	528.2	406.3	30.0	5.0
27-Aug	49.9	59.1	78.3	88.7	110.5	57.7	49.9	501.0	502.1	463.5	394.8	444.1	465.8	412.2	30.0	5.0
28-Aug	49.9	58.4	76.2	85.2	105.5	62.6	50.9	526.4	556.7	528.2	485.7	587.5	611.3	409.8	30.0	5.0
29-Aug	49.8	58.7	77.1	85.6	104.9	60.4	58.5	509.1	522.4	513.0	499.7	610.1	640.6	404.9	30.0	5.0
30-Aug	49.7	58.4	76.6	85.0	103.8	60.0	57.1	496.4	498.0	481.9	459.2	578.4	616.8	401.9	30.0	5.0
31-Aug	49.7	56.8	71.8	78.7	97.5	60.0	69.3	524.7	544.7	498.2	434.8	572.2	621.1	399.1	30.0	5.0

1-Aug	150.3	161.3	163.4	164.9	165.8	166.3	167.2	168.2	169.2	169.7	170.2	170.8	171.3	171.8	172.0	172.2
2-Aug	151.1	160.6	161.6	163.0	164.4	165.4	166.3	167.3	168.3	168.8	169.3	169.9	170.4	170.9	171.4	171.6
3-Aug	152.4	162.4	163.4	164.9	165.9	166.9	167.8	168.8	169.8	170.3	170.8	171.4	171.9	172.4	172.9	173.1
4-Aug	153.5	162.8	163.8	165.3	166.3	167.3	168.2	169.2	170.2	170.7	171.2	171.8	172.3	172.8	173.3	173.5
5-Aug	153.9	163.9	164.9	166.4	167.4	168.4	169.3	170.3	171.3	171.8	172.3	172.9	173.4	173.9	174.4	174.6
6-Aug	154.0	164.0	165.0	166.5	167.5	168.5	169.4	170.4	171.4	171.9	172.4	173.0	173.5	174.0	174.5	174.7
7-Aug	154.2	164.2	165.2	166.7	167.7	168.7	169.6	170.6	171.6	172.1	172.6	173.2	173.7	174.2	174.7	174.9
8-Aug	154.3	164.3	165.3	166.8	167.8	168.8	169.7	170.7	171.7	172.2	172.7	173.3	173.8	174.3	174.8	175.0
9-Aug	154.4	164.4	165.4	166.9	167.9	168.9	169.8	170.8	171.8	172.3	172.8	173.4	173.9	174.4	174.9	175.1
10-Aug	154.5	164.5	165.5	166.9	167.9	168.9	169.8	170.8	171.8	172.3	172.8	173.4	173.9	174.4	174.9	175.1
11-Aug	154.6	164.6	165.6	166.9	167.9	168.9	169.8	170.8	171.8	172.3	172.8	173.4	173.9	174.4	174.9	175.1
12-Aug	154.7	164.7	165.7	166.9	167.9	168.9	169.8	170.8	171.8	172.3	172.8	173.4	173.9	174.4	174.9	175.1
13-Aug	154.8	164.8	165.8	166.9	167.9	168.9	169.8	170.8	171.8	172.3	172.8	173.4	173.9	174.4	174.9	175.1
14-Aug	154.9	164.9	165.9	166.9	167.9	168.9	169.8	170.8	171.8	172.3	172.8	173.4	173.9	174.4	174.9	175.1
15-Aug	155.0	164.9	165.9	166.9	167.9	168.9	169.8	170.8	171.8	172.3	172.8	173.4	173.9	174.4	174.9	175.1
16-Aug	155.1	165.0	166.0	167.0	168.0	169.0	170.0	171.0	172.0	173.0	174.0	175.0	176.0	177.0	178.0	179.0
17-Aug	155.2	165.1	166.1	167.1	168.1	169.1	170.1	171.1	172.1	173.1	174.1	175.1	176.1	177.1	178.1	179.1
18-Aug	155.3	165.2	166.2	167.2	168.2	169.2	170.2	171.2	172.2	173.2	174.2	175.2	176.2	177.2	178.2	179.2
19-Aug	155.4	165.3	166.3	167.3	168.3	169.3	170.3	171.3	172.3	173.3	174.3	175.3	176.3	177.3	178.3	179.3
20-Aug	155.5	165.4	166.4	167.4	168.4	169.4	170.4	171.4	172.4	173.4	174.4	175.4	176.4	177.4	178.4	179.4
21-Aug	155.6	165.5	166.5	167.5	168.5	169.5	170.5	171.5	172.5	173.5	174.5	175.5	176.5	177.5	178.5	179.5
22-Aug	155.7	165.6	166.6	167.6	168.6	169.6	170.6	171.6	172.6	173.6	174.6	175.6	176.6	177.6	178.6	179.6
23-Aug	155.8	165.7	166.7	167.7	168.7	169.7	170.7	171.7	172.7	173.7	174.7	175.7	176.7	177.7	178.7	179.7
24-Aug	155.9	165.8	166.8	167.8	168.8	169.8	170.8	171.8	172.8	173.8	174.8	175.8	176.8	177.8	178.8	179.8
25-Aug	156.0	165.9	166.9	167.9	168.9	169.9	170.9	171.9	172.9	173.9	174.9	175.9	176.9	177.9	178.9	179.9
26-Aug	156.1	166.0	167.0	168.0	169.0	170.0	171.0	172.0	173.0	174.0	175.0	176.0	177.0	178.0	179.0	179.0
27-Aug	156.2	166.1	167.1	168.1	169.1	170.1	171.1	172.1	173.1	174.1	175.1	176.1	177.1	178.1	179.1	179.1
28-Aug	156.3	166.2	167.2	168.2	169.2	170.2	171.2	172.2	173.2	174.2	175.2	176.2	177.2	178.2	179.2	179.2
29-Aug	156.4	166.3	167.3	168.3	169.3	170.3	171.3	172.3	173.3	174.3	175.3	176.3	177.3	178.3	179.3	179.3
30-Aug	156.5	166.4	167.4	168.4	169.4	170.4	171.4	172.4	173.4	174.4	175.4	176.4	177.4	178.4	179.4	179.4
31-Aug	156.6	166.5	167.5	168.5	169.5	170.5	1									

Date	Pool 14	Pool 13	Pool 12	Pool 11	Pool 10	Pool 9	Pool 8	Pool 7	Pool 6	Pool 5	Pool 4	Pool 3	Pool 2	Dix Dam	Buckhorn	Carr Fork	
1-Sep	49.7	54.6	67.4	69.9	86.9	65.2	92.7	565.9	603.0	570.5	525.0	623.9	652.0	400.6	30.0	5.0	
2-Sep	49.6	56.0	68.9	71.8	85.9	60.8	70.0	179.2	254.0	274.0	303.2	469.0	529.1	0.0	30.0	5.0	
3-Sep	49.6	56.0	69.1	71.9	85.2	57.9	50.8	89.1	91.6	76.1	68.8	212.7	272.1	0.0	30.0	5.0	
4-Sep	49.6	56.0	69.4	72.3	85.2	59.6	50.1	67.5	59.8	95.0	118.7	132.7	140.0	0.0	30.0	5.0	
5-Sep	52.7	60.4	80.1	85.7	98.5	49.7	49.4	49.8	49.6	67.1	87.6	160.8	178.3	0.0	30.0	5.0	
6-Sep	87.1	76.0	78.9	79.8	94.3	49.9	49.5	49.9	49.6	50.0	60.7	125.1	146.9	0.0	30.0	5.0	
7-Sep	98.7	100.9	101.3	90.5	95.6	65.4	49.8	69.9	49.9	49.9	50.0	139.0	169.9	0.0	30.0	5.0	
8-Sep	93.2	94.9	98.5	91.9	91.3	49.9	49.4	49.9	49.6	49.9	50.0	127.4	152.2	0.0	30.0	5.0	
9-Sep	85.8	92.1	103.0	99.5	99.9	52.8	49.5	54.1	49.7	49.9	50.7	114.9	139.5	0.0	30.0	5.0	
10-Sep	87.1	89.8	97.1	94.3	99.7	69.4	49.8	92.4	49.9	50.0	53.6	122.8	141.9	0.0	30.0	5.0	
11-Sep	75.6	81.3	92.7	91.7	98.5	63.3	49.9	98.5	54.0	50.0	53.9	124.6	144.8	0.0	30.0	5.0	
12-Sep	127.7	119.0	105.6	91.7	95.1	74.2	63.0	124.3	145.8	59.9	49.9	143.8	173.5	0.0	91.5	5.0	
13-Sep	141.8	144.5	143.7	125.9	111.2	50.0	49.8	55.1	49.9	73.8	59.9	100.2	113.2	0.0	151.4	5.0	
14-Sep	143.8	148.0	155.2	148.5	138.1	89.8	56.4	99.3	101.2	58.4	54.5	107.0	120.3	0.0	154.0	5.0	
15-Sep	169.9	173.0	176.0	169.3	164.7	50.0	49.6	49.9	49.7	61.9	61.8	107.9	117.6	0.0	152.0	5.0	
16-Sep	162.6	169.8	184.2	185.7	188.4	100.5	49.8	50.7	49.8	54.2	60.0	118.0	133.2	0.0	149.7	5.0	
17-Sep	175.6	179.4	186.6	184.3	192.1	160.2	96.6	86.9	49.9	50.0	57.1	158.4	185.9	0.0	145.0	5.0	
18-Sep	212.7	214.4	213.0	199.8	197.2	65.1	49.9	50.0	49.6	50.0	59.1	160.5	195.4	0.0	150.3	5.0	
19-Sep	162.5	171.1	192.2	201.8	210.2	159.5	110.8	82.1	49.8	50.0	59.5	133.2	159.5	0.0	145.1	5.0	
20-Sep	150.6	156.4	171.2	177.0	196.8	64.7	49.8	49.9	49.4	57.4	61.8	121.8	139.1	0.0	147.4	5.0	
21-Sep	160.0	164.0	171.9	170.8	184.0	118.9	51.0	50.0	49.4	50.0	52.8	146.7	176.3	0.0	142.2	5.0	
22-Sep	162.6	168.9	181.1	181.4	189.7	185.5	205.8	164.9	49.7	49.9	49.9	165.5	205.6	0.0	145.7	5.0	
23-Sep	173.6	173.1	172.8	166.6	172.2	169.5	217.1	281.4	203.7	50.0	49.9	144.8	178.8	0.0	142.8	5.0	
24-Sep	160.6	163.1	169.1	162.6	164.7	161.7	212.0	305.7	354.5	-	323.1	182.0	149.1	150.0	0.0	142.0	5.0
25-Sep	178.6	180.4	181.6	171.8	170.9	65.2	51.2	95.2	84.7	141.9	203.4	261.3	247.3	0.0	144.6	7.2	
26-Sep	219.4	221.0	217.7	201.1	190.2	146.0	140.3	161.9	179.6	153.4	135.6	212.6	240.1	0.0	137.7	43.5	
27-Sep	205.6	206.7	211.1	206.6	200.9	178.0	204.9	250.4	268.3	250.4	222.4	249.6	248.6	0.0	138.0	44.4	
28-Sep	194.2	195.5	199.8	195.1	197.4	65.4	49.9	59.8	49.9	85.4	133.9	262.3	298.0	0.0	136.6	44.0	
29-Sep	182.6	183.3	186.6	182.3	185.8	134.7	91.6	96.4	80.3	71.2	80.7	190.3	233.4	0.0	136.4	44.2	
30-Sep	185.6	187.0	189.4	178.9	180.1	61.8	49.8	49.9	49.7	51.7	62.1	172.0	208.5	0.0	134.5	43.5	

Date	Pool 14	Pool 13	Pool 12	Pool 11	Pool 10	Pool 9	Pool 8	Pool 7	Pool 6	Pool 5	Pool 4	Pool 3	Pool 2	Dix Dam	Buckhorn	Carr Fork	
1-Oct	209.0	212.8	216.6	205.9	197.4	131.4	51.1	52.8	49.8	50.0	58.3	138.2	178.0	0.0	137.6	46.8	
2-Oct	202.8	206.9	216.0	214.8	214.0	217.9	245.2	210.1	109.9	55.4	59.2	132.7	155.7	0.0	136.8	46.8	
3-Oct	201.7	204.5	210.9	208.5	213.0	211.8	261.1	336.1	357.2	336.0	253.1	183.7	162.7	0.0	135.7	46.7	
4-Oct	200.5	203.8	210.7	207.9	211.8	194.9	232.1	322.2	370.3	386.3	396.9	423.2	396.4	0.0	134.6	46.6	
5-Oct	199.5	200.9	204.5	199.4	202.8	173.2	198.6	277.6	316.4	343.0	370.0	433.8	445.9	0.0	133.5	46.5	
6-Oct	193.4	194.9	198.8	193.7	195.4	72.9	51.7	87.3	71.5	132.5	201.0	321.9	360.7	0.0	132.5	46.4	
7-Oct	191.2	193.7	198.9	194.2	195.2	49.9	49.4	49.8	49.5	66.3	90.8	184.7	220.7	0.0	131.4	46.0	
8-Oct	189.2	189.5	190.9	185.9	186.3	89.8	49.5	49.8	49.5	51.0	62.0	106.0	132.2	0.0	130.3	45.8	
9-Oct	187.0	188.9	192.9	185.5	185.3	153.3	49.9	50.5	49.7	51.7	59.9	105.4	112.5	0.0	129.3	45.7	
10-Oct	184.8	186.7	191.0	185.5	185.4	171.6	161.8	118.5	49.8	60.0	63.1	110.4	117.8	0.0	128.3	45.6	
11-Oct	187.6	187.1	186.2	179.1	177.4	153.1	179.8	217.6	148.9	94.2	75.8	102.5	104.3	0.0	127.2	45.5	
12-Oct	186.6	190.2	196.9	190.6	188.0	157.1	181.9	247.5	268.0	238.2	171.9	154.5	134.7	0.0	126.2	45.4	
13-Oct	185.7	187.6	192.2	187.8	188.9	78.1	59.9	96.8	82.0	105.9	122.7	221.5	236.8	0.0	125.2	45.1	
14-Oct	184.2	186.0	190.0	184.7	185.9	130.9	111.4	130.0	130.0	97.8	70.7	171.6	206.8	0.0	124.1	45.1	
15-Oct	183.2	185.1	189.3	183.9	184.4	184.4	157.5	175.5	210.2	218.1	177.0	114.1	173.5	191.4	0.0	123.1	45.4
16-Oct	201.4	204.1	206.9	198.7	195.2	179.3	214.8	282.4	315.3	282.2	223.7	251.6	248.7	0.0	122.1	45.3	
17-Oct	190.1	192.8	199.9	197.3	198.2	66.7	50.7	79.6	59.6	110.7	165.5	265.9	287.1	0.0	121.1	45.0	
18-Oct	184.9	187.1	192.6	189.3	193.2	119.3	74.1	89.0	78.3	77.6	86.8	160.3	186.4	0.0	120.1	45.1	
19-Oct	183.8	185.7	190.2	185.3	187.8	163.0	173.1	184.7	178.1	132.3	84.5	136.3	150.3	0.0	119.1	45.0	
20-Oct	177.8	180.2	185.8	182.0	184.3	176.5	216.2	279.8	306.4	274.1	212.5	217.0	202.5	0.0	118.2	44.9	
21-Oct	175.7	176.0	177.3	172.4	173.6	155.0	190.0	273.2	313.6	329.3	339.5	354.6	333.5	0.0	117.2	44.8	
22-Oct	173.6	175.4	179.1	171.3	171.0	64.9	50.6	80.9	64.6	123.9	190.8	298.2	328.3	0.0	116.2	44.3	
23-Oct	176.3	177.6	180.3	173.3	171.7	49.9	49.4	49.7	49.5	77.6	112.8	184.1	212.6	0.0	115.2	44.2	
24-Oct	170.5	172.7	177.5	172.5	172.2	57.6	49.4	49.8	49.5	61.3	74.1	116.4	139.0	0.0	114.3	44.2	
25-Oct	173.1	174.6	177.5	171.2	171.1	120.3	49.6	49.9	54.1	62.4	111.6	121.4	0.0	113.3	44.1		
26-Oct	172.2	174.0	177.9	172.0	171.3	144.5	52.7	62.1	49.7	50.0	59.0	110.4	118.6	0.0	112.4	43.9	
27-Oct	166.3	168.6	174.2	169.7	170.5	176.6	207.8	202.6	80.3	70.0	67.5	119.7	130.7	0.0	111.4	44.0	
28-Oct	169.0	172.5	179.4	176.1	177.5	159.5	197.4	269.6	284.1	274.7	224.2	178.4	154.0	0.0	110.4	43.8	
29-Oct	167.9	175.7	171.0	194.8	199.4	179.8	215.2	296.5	342.4	349.8	350.3	354.1	325.8	0.0	109.5	43.7	
30-Oct	166.9	168.6	174.1	172.3	182.8	155.2	180.8	258.7	293.7	329.3	367.2	412.9	412.8	0.0	108.5	43.6	
31-Oct	165.8	168.1	172.9	168.3	172.5	134.7	152.2	220.5	248.0	270.6	295.9	376.6	400.9	0.0	107.6	43.7	

Date	Pool 14	Pool 13	Pool 12	Pool 11	Pool 10	Pool 9	Pool 8	Pool 7	Pool 6	Pool 5	Pool 4	Pool 3	Pool 2	Dix Dam	Buckhorn	Carr Fork
1-Nov.	190.2	191.5	187.6	178.3	183.8	148.5	196.0	252.3	252.1	261.7	284.8	354.6	368.7	0.0	106.7	43.6
2-Nov.	132.5	143.3	164.7	178.0	201.2	144.6	148.8	211.1	226.0	246.8	276.9	334.2	343.0	0.0	105.8	5.0
3-Nov.	130.4	134.3	141.8	147.8	178.4	140.4	152.6	202.8	207.3	223.6	252.6	306.7	315.9	0.0	104.8	5.0
4-Nov.	129.6	133.2	137.5	138.5	160.5	134.0	175.5	231.8	230.0	222.2	219.1	293.6	310.5	0.0	103.9	5.0
5-Nov.	128.5	131.0	134.2	132.3	147.3	113.2	143.5	212.6	224.4	244.9	274.6	313.9	311.7	0.0	103.0	5.0
6-Nov.	122.9	125.6	129.7	127.4	138.6	97.1	111.1	177.3	191.0	217.2	256.8	307.8	313.8	0.0	102.1	5.0
7-Nov.	121.1	123.9	127.3	125.2	136.7	49.9	48.8	49.9	50.0	85.2	144.0	245.8	274.2	0.0	101.2	5.0
8-Nov.	119.2	122.1	125.5	123.4	134.9	59.6	49.1	50.0	50.0	69.9	104.0	162.8	189.0	0.0	100.3	5.0
9-Nov.	117.4	119.3	122.0	118.3	127.2	100.5	49.6	89.3	76.8	70.4	83.1	153.8	168.6	0.0	99.4	5.0
10-Nov.	106.3	110.9	116.8	115.8	126.1	49.9	48.3	49.8	49.9	65.3	88.7	157.3	168.6	0.0	98.5	5.0
11-Nov.	102.0	104.4	109.4	106.8	116.2	55.4	48.6	49.9	49.9	53.5	65.4	105.1	124.3	0.0	97.6	5.0
12-Nov.	107.2	108.2	108.9	104.7	113.7	81.0	49.0	58.6	50.0	50.0	57.2	111.1	118.4	0.0	96.7	5.0
13-Nov.	110.4	110.8	110.6	103.5	107.7	108.7	49.6	124.9	95.1	50.0	50.0	109.5	120.6	0.0	95.8	5.0
14-Nov.	109.7	111.7	113.1	107.3	111.2	110.7	102.6	159.7	159.9	127.8	63.3	113.6	122.0	0.0	94.9	5.0
15-Nov.	108.8	111.0	113.4	108.8	114.2	96.5	157.8	212.7	205.2	183.0	144.8	154.0	142.3	0.0	94.1	5.0
16-Nov.	107.9	110.2	112.8	108.7	115.4	62.6	49.9	88.8	111.8	123.0	122.6	239.5	256.5	0.0	93.2	5.0
17-Nov.	102.3	106.8	111.9	110.8	122.0	97.7	142.0	153.1	143.6	136.4	140.2	189.6	205.8	0.0	92.3	5.0
18-Nov.	104.9	107.0	109.8	107.6	119.7	89.1	130.1	188.2	184.4	188.2	195.9	220.1	212.9	0.0	91.5	5.0
19-Nov.	104.0	106.7	109.7	106.8	117.9	92.6	150.6	217.6	219.1	210.0	202.0	263.5	269.8	0.0	90.6	5.0
20-Nov.	107.7	109.5	110.8	107.1	117.3	98.7	174.8	250.8	255.2	257.2	264.9	317.6	318.6	0.0	89.7	5.0
21-Nov.	103.7	107.1	110.9	108.0	117.8	113.7	221.7	310.6	315.9	304.5	293.9	357.7	365.9	0.0	88.9	5.0
22-Nov.	106.7	109.7	112.3	111.0	124.4	132.9	273.8	381.7	391.8	465.4	585.0	554.0	506.5	0.0	88.1	5.0
23-Nov.	105.6	110.0	114.1	114.1	130.4	63.9	49.8	108.6	157.7	192.1	227.8	365.3	419.5	0.0	87.3	5.0
24-Nov.	110.8	115.3	118.8	120.4	142.0	138.6	239.9	240.2	216.4	203.8	211.4	272.1	293.2	0.0	86.6	5.0
25-Nov.	103.8	114.7	125.1	135.8	173.6	132.4	180.4	259.1	266.8	288.8	318.4	362.7	357.3	0.0	85.9	5.0
26-Nov.	99.7	112.6	126.0	144.5	200.6	64.0	49.5	58.0	80.2	172.2	298.7	453.9	488.5	0.0	85.3	5.0
27-Nov.	100.2	103.4	110.6	115.4	148.5	66.3	49.2	52.5	50.0	50.0	54.8	253.8	332.7	0.0	84.6	5.0
28-Nov.	110.3	112.1	112.7	112.2	136.3	60.6	48.7	49.9	49.9	82.1	126.5	244.1	275.4	0.0	83.8	5.0
29-Nov.	117.1	118.8	118.3	113.4	127.3	49.8	47.2	49.5	49.7	79.2	125.1	171.8	192.2	0.0	82.9	5.0
30-Nov.	105.6	111.6	118.2	118.3	131.9	49.8	46.4	49.3	49.6	49.9	51.1	158.2	194.3	0.0	82.1	5.0

Date	Pool 14	Pool 13	Pool 12	Pool 11	Pool 10	Pool 9	Pool 8	Pool 7	Pool 6	Pool 5	Pool 4	Pool 3	Pool 2	Dix Dam	Buckhorn	Carr Fork
1-Apr	3321.1	3437.0	3626.2	3973.7	4770.2	4737.1	4845.5	4853.2	4811.0	4976.2	5240.3	5820.1	6044.7	0.0	532.3	5.0
2-Apr	3654.1	3720.8	3867.3	4118.0	4648.8	4685.3	4951.6	5168.6	5265.1	5327.1	5442.3	5825.0	5908.2	0.0	289.2	5.0
3-Apr	3132.7	3320.3	3394.9	3699.8	4564.6	4678.1	4930.5	5128.5	5166.9	5235.6	5333.7	5888.8	6066.9	0.0	173.4	5.0
4-Apr	2610.5	2777.9	2854.2	3128.4	3954.6	4094.6	4371.1	4639.7	4767.2	4869.9	5014.4	5620.8	5831.5	0.0	98.8	5.0
5-Apr	2172.6	2315.7	2390.8	2649.7	3403.8	3500.9	3697.6	3914.1	4022.5	4119.3	4255.9	4824.3	5032.7	0.0	43.2	5.0
6-Apr	1955.9	2108.0	2231.0	2556.2	3409.0	3482.6	3694.8	3845.5	3883.0	4284.5	4838.4	6951.6	7641.3	0.0	30.0	5.0
7-Apr	2282.7	2672.5	3117.4	4109.3	6430.1	6471.2	6770.8	6571.2	6154.5	6215.3	6446.8	7382.8	7669.2	0.0	30.0	5.0
8-Apr	3368.1	3521.6	3933.8	4585.2	5935.1	6247.1	7233.0	7870.8	8239.0	8346.4	8553.4	9270.5	9433.8	0.0	226.0	5.0
9-Apr	4106.5	4218.1	4501.2	5011.5	6021.3	6137.8	6663.4	7009.1	7106.4	7300.3	7561.7	8327.6	8636.5	0.0	334.9	5.0
10-Apr	3873.6	4270.6	4593.4	5461.8	7592.2	7652.1	7907.0	7958.7	7758.3	7658.0	7607.1	7707.0	7715.4	0.0	291.1	5.0
11-Apr	3838.5	4087.2	4357.5	4926.1	6372.0	6835.9	7902.4	8648.9	9104.1	9340.2	9625.4	10340.8	10532.1	0.0	261.6	5.0
12-Apr	4056.8	4312.3	4624.6	5297.9	6888.8	7154.0	7876.9	8282.8	8342.1	8324.8	8346.2	8902.4	9082.5	0.0	246.1	5.0
13-Apr	4442.6	4747.8	5143.2	6000.3	7982.7	8392.8	9460.8	10013.6	10141.4	10079.5	10144.9	10165.7	10167.1	0.0	376.7	5.0
14-Apr	4311.0	4607.5	4887.1	5544.1	7183.4	7262.9	8352.7	8957.2	9207.3	9287.8	9388.9	10075.9	10322.4	0.0	370.0	5.0
15-Apr	3636.1	3949.2	4128.1	4656.8	6138.2	6596.7	7559.8	8271.3	8604.1	8698.2	8813.0	9542.8	9788.8	0.0	256.7	5.0
16-Apr	3250.3	3537.5	3759.5	4321.3	5829.0	6110.8	6737.2	7170.7	7303.3	7447.8	7645.4	8227.8	8485.7	0.0	192.9	5.0
17-Apr	3016.2	3229.4	3411.3	3846.2	5002.5	5224.7	5744.5	6173.2	6382.5	6454.1	6578.4	7318.9	7560.0	0.0	155.7	5.0
18-Apr	2618.7	3061.7	3422.5	4379.8	6787.0	6751.0	6739.8	6629.5	6300.0	6897.8	7730.5	10146.2	10972.3	83.0	69.5	5.0
19-Apr	3010.5	3463.5	4013.1	5186.0	7975.9	8871.7	10975.1	13266.4	13778.7	13936.9	14333.4	15917.5	16166.8	1206.1	181.1	5.0
20-Apr	4502.3	4508.4	4910.4	5434.3	6333.4	6785.0	8104.4	9325.0	9780.0	10081.0	10495.2	12348.2	13124.3	306.2	337.9	5.0
21-Apr	4094.8	4379.0	4543.8	5094.2	6458.1	6746.6	7459.6	7948.3	8031.9	8126.9	8315.8	9456.2	9904.2	0.0	219.1	5.0
22-Apr	3310.6	3608.4	3753.5	4225.0	5611.8	5886.2	6428.0	6884.2	7073.3	7214.1	7422.3	8455.3	8837.9	0.0	91.0	5.0
23-Apr	2738.1	2962.5	3091.8	3478.4	4606.9	4896.3	5476.6	5957.8	6200.3	6285.9	6407.4	7329.2	7647.6	0.0	30.0	5.0
24-Apr	2329.6	2524.1	2655.3	3031.1	4069.4	4285.4	4747.8	5111.2	5266.3	5420.2	5623.1	6415.1	6726.5	0.0	30.0	5.0
25-Apr	2061.1	2213.0	2328.8	2639.6	3482.9	3664.0	4082.0	4433.9	4599.2	4761.8	4995.4	5743.7	6012.4	0.0	30.0	5.0
26-Apr	1827.2	1959.3	2061.7	2340.2	3084.3	3236.4	3603.3	3904.5	4034.9	4154.7	4332.6	4929.1	5140.1	0.0	30.0	5.0
27-Apr	1650.5	1769.2	1868.4	2127.3	2808.0	2936.7	3270.0	3538.0	3646.2	3741.5	3884.5	4399.4	4577.3	0.0	30.0	5.0
28-Apr	1471.5	1585.8	1682.4	1937.0	2599.6	2686.4	2930.8	3138.8	3220.7	3311.3	3447.3	4071.9	4286.5	0.0	30.0	5.0
29-Apr	1298.0	1415.3	1518.7	1786.5	2473.5	2376.5	2232.4	2210.1	2228.9	2313.1	2449.8	3168.7	3439.7	0.0	30.0	5.0
30-Apr	1190.9	1293.8	1391.3	1628.8	2237.9	2291.5	2479.0	2656.1	2705.4	2761.4	2829.0	3152.8	3234.4	0.0	30.0	5.0

Date	Pool 14	Pool 13	Pool 12	Pool 11	Pool 10	Pool 9	Pool 8	Pool 7	Pool 6	Pool 5	Pool 4	Pool 3	Pool 2	Dix Dam	Buckhorn	Carr Fork
1-Dec	910.5	917.3	850.0	595.4	290.5	452.4	59.9	146.1	77.4	69.4	78.2	96.9	113.6	0.0	81.4	800.0
2-Dec	364.1	366.7	409.0	502.7	614.1	389.8	50.0	49.9	49.9	54.9	64.2	97.6	99.9	0.0	30.0	307.5
3-Dec	77.2	104.9	171.9	240.3	352.5	239.5	49.8	49.6	49.8	91.4	150.1	184.6	169.9	0.0	30.0	5.0
4-Dec	64.2	71.3	93.6	117.6	184.2	49.8	47.0	48.8	49.3	51.0	65.5	183.2	212.9	0.0	30.0	5.0
5-Dec	50.0	60.4	71.6	82.4	119.6	166.8	48.6	49.3	49.5	74.4	108.3	205.9	234.5	0.0	30.0	5.0
6-Dec	50.0	54.2	64.1	68.1	92.6	96.0	49.1	49.4	49.6	50.0	60.6	196.5	233.8	0.0	30.0	5.0
7-Dec	50.0	52.5	59.0	60.0	78.5	68.5	49.3	49.5	49.6	57.8	66.9	199.4	234.3	0.0	30.0	5.0
8-Dec	49.9	52.9	57.3	58.0	74.7	49.7	48.1	49.2	49.4	80.6	125.2	196.6	208.9	0.0	30.0	5.0
9-Dec	49.9	52.6	56.3	56.8	70.7	385.0	1136.7	592.2	106.0	63.3	65.8	156.2	188.8	0.0	30.0	5.0
10-Dec	49.9	53.5	56.9	57.1	73.4	49.5	48.1	49.9	50.0	140.5	201.5	364.5	386.6	0.0	30.0	5.0
11-Dec	49.9	54.1	57.8	59.3	77.2	49.6	48.0	49.8	50.0	65.3	94.8	276.4	346.0	0.0	30.0	5.0
12-Dec	49.8	54.5	58.7	61.2	81.2	49.5	47.6	49.8	49.9	87.9	144.2	238.8	271.6	0.0	30.0	5.0
13-Dec	49.8	55.5	60.3	65.0	89.1	48.9	45.4	49.2	49.6	50.0	60.3	164.8	206.7	0.0	30.0	5.0
14-Dec	49.8	55.8	61.2	66.8	93.7	49.5	47.0	49.6	49.8	301.8	677.5	247.9	79.6	0.0	30.0	5.0
15-Dec	49.7	57.3	63.5	72.4	106.3	49.9	47.7	49.9	49.9	109.9	209.5	310.3	353.4	0.0	30.0	10.1
16-Dec	49.6	54.8	61.5	66.1	94.3	50.0	47.6	49.9	49.9	50.0	64.9	208.0	264.8	0.0	30.0	22.4
17-Dec	49.4	52.7	58.4	59.4	80.2	49.4	45.5	49.3	49.6	63.9	83.9	177.0	210.3	0.0	30.0	14.5
18-Dec	49.2	51.7	56.0	56.6	70.5	49.7	46.4	49.6	49.7	67.8	94.3	182.9	210.0	0.0	30.0	11.6
19-Dec	49.1	51.8	55.2	55.9	68.3	49.7	46.0	49.5	49.7	62.3	82.6	203.4	240.6	0.0	30.0	5.0
20-Dec	49.1	51.5	54.5	55.0	66.3	49.3	44.5	49.1	49.5	50.1	62.1	152.9	187.0	0.0	30.0	5.0
21-Dec	49.1	51.5	54.2	54.3	65.5	49.2	43.9	49.0	49.4	49.9	49.9	156.6	190.9	0.0	30.0	5.0
22-Dec	49.3	53.1	55.9	55.2	71.1	49.6	45.3	49.4	49.6	56.6	63.7	135.4	163.8	0.0	30.0	5.0
23-Dec	49.4	53.7	57.2	56.3	75.3	49.8	45.8	49.5	49.6	50.0	51.9	142.9	170.4	0.0	30.0	5.0
24-Dec	49.6	54.5	58.7	59.8	80.8	135.0	47.7	62.8	49.9	65.1	74.7	155.5	183.5	0.0	30.0	5.0
25-Dec	49.8	55.2	60.0	63.9	87.2	49.7	45.9	49.6	49.6	49.9	49.9	262.9	316.8	0.0	30.0	5.0
26-Dec	77.8	61.9	66.4	66.4	92.3	43.9	43.9	49.1	49.4	49.9	51.0	247.9	317.0	0.0	30.0	5.0
27-Dec	136.0	127.0	94.5	76.2	93.8	49.5	44.3	49.2	49.4	49.9	50.0	241.6	308.4	0.0	30.0	5.0
28-Dec	149.4	151.8	143.9	122.0	111.2	49.8	45.3	49.5	49.6	50.0	54.5	148.5	190.2	0.0	30.0	5.0
29-Dec	139.3	144.7	150.9	150.0	147.9	100.4	46.4	49.8	49.7	50.0	58.6	126.1	151.9	0.0	30.0	5.0
30-Dec	143.3	146.9	150.2	151.2	164.7	182.5	47.5	70.9	49.8	50.0	59.4	160.2	181.8	0.0	30.0	5.0
31-Dec	149.0	153.1	155.7	156.7	174.7	112.4	47.7	67.0	49.8	50.0	60.6	158.6	182.7	0.0	30.0	5.0

Simulated Storage Values (MG) - 1953 Baseline Deficit Analysis

Tabulated values denote the predicted storages occurring at the listed location in the 1953 baseline deficit simulation.
 Storage values are instantaneous storages occurring at the end of the day for the listed impoundment.

Date	Pool 14	Pool 13	Pool 12	Pool 11	Pool 10	Pool 9	Pool 8	Pool 7	Pool 6	Pool 5	Pool 4	Pool 3	Dix Dam	Jackson	Buckhorn	Carr Fork
1-Jan	1218.1	1127.0	2321.1	2457.7	3150.1	3730.6	3183.4	4419.1	4046.7	2585.4	2932.3	3651.2	1966.8	139873.6	610.7	3436.1
2-Jan	1238.9	1159.3	2365.4	2480.8	3130.1	3655.3	3041.6	4170.0	3885.4	2496.8	2832.7	3485.8	1879.3	139873.6	610.7	3436.1
3-Jan	1286.2	1185.3	2403.8	2525.0	3219.9	3727.6	3092.9	4216.9	3888.0	2508.1	2859.4	3528.2	1901.1	139873.6	610.7	3436.1
4-Jan	1347.9	1238.2	2482.5	2602.0	3331.5	3804.6	3139.1	4288.7	3938.8	2521.8	2855.6	3539.6	1907.4	139873.6	610.7	3436.1
5-Jan	1342.2	1239.1	2477.3	2604.3	3384.6	3873.6	3213.7	4438.3	4057.9	2572.1	2888.2	3564.1	1914.4	139873.6	610.7	3436.1
6-Jan	1328.2	1227.0	2460.2	2587.5	3363.6	3874.0	3239.2	4513.6	4136.8	2607.2	2914.3	3675.0	1985.8	139873.6	610.7	3436.1
7-Jan	1783.7	1562.8	2936.8	3082.4	4039.5	4283.6	3416.3	4721.2	4206.5	2625.1	2912.3	3652.4	1973.7	141340.3	610.7	3436.1
8-Jan	2384.6	2086.1	3527.4	3787.8	5436.5	5442.4	4437.5	6452.5	5594.6	3291.8	3604.0	4805.0	2567.1	143877.7	610.7	3436.1
9-Jan	2702.3	2404.5	3836.8	4070.6	5788.8	5795.9	4938.9	7332.5	6348.0	3669.3	4239.1	6585.9	3403.3	144746.7	610.7	3782.3
10-Jan	2293.6	2219.8	3681.2	3946.6	5839.1	6012.1	5275.6	8263.9	6788.5	3902.5	5120.8	7990.4	3975.9	145071.5	610.7	3478.6
11-Jan	1901.3	1834.6	3278.9	3484.9	5151.8	5345.8	4571.5	7585.9	6657.2	3842.1	5152.5	8232.8	4098.5	145048.3	610.7	3436.1
12-Jan	1723.7	1613.3	2988.7	3137.3	4437.3	4816.3	4138.5	6297.0	5742.8	3450.0	3895.6	6467.2	3453.8	144646.9	610.7	3436.1
13-Jan	1544.0	1453.4	2765.0	2908.4	4041.4	4470.8	3769.6	5632.6	5101.9	3127.5	3529.3	4796.4	2600.3	144066.1	610.7	3436.1
14-Jan	1450.2	1356.9	2646.5	2795.1	3845.1	4282.5	3573.0	5234.4	4741.2	2940.9	3322.2	4336.6	2351.4	143382.7	610.7	3436.1
15-Jan	1400.3	1300.9	2566.5	2703.8	3624.5	4093.5	3412.5	4959.7	4515.5	2827.1	3195.9	4117.1	2225.0	142626.2	610.7	3436.1
16-Jan	1357.0	1259.2	2506.8	2642.9	3506.0	4004.8	3356.6	4874.4	4441.6	2787.1	3148.1	4007.2	2160.0	141827.7	610.7	3436.1
17-Jan	1347.0	1246.3	2491.3	2624.4	3449.8	3933.7	3269.7	4709.6	4292.6	2722.4	3094.6	4082.0	2225.9	141032.8	610.7	3436.1
18-Jan	1782.3	1566.3	2941.9	3092.8	4095.7	4408.0	3636.3	5215.4	4662.5	2879.6	3230.1	4184.8	2257.3	142124.8	610.7	3436.1
19-Jan	1894.6	1722.8	3098.4	3272.2	4620.8	4820.2	3971.3	5823.1	5193.1	3127.4	3468.8	4516.8	2418.0	142083.8	610.7	3436.1
20-Jan	1674.1	1583.7	2925.2	3076.4	4380.9	4694.0	3918.5	5840.3	5304.2	3209.8	3586.3	4742.7	2553.3	141623.5	610.7	3436.1
21-Jan	1620.2	1495.5	2828.0	2952.2	4019.8	4435.0	3711.4	5479.9	4976.5	3055.1	3433.7	4536.4	2449.9	141015.9	610.7	3436.1
22-Jan	1970.1	1721.5	3105.0	3219.3	4207.7	4505.2	3690.7	5314.7	4764.5	2935.9	3294.9	4284.0	2315.0	140332.6	610.7	3436.1
23-Jan	1935.1	1773.3	3137.9	3277.3	4561.9	4753.0	3874.0	5608.4	5004.2	3031.6	3360.4	4285.6	2288.4	139873.6	610.7	3436.1
24-Jan	1724.5	1625.6	2982.6	3129.8	4457.2	4731.8	3935.4	5856.0	5312.1	3215.8	3592.8	4688.6	2510.6	140644.4	610.7	3436.1
25-Jan	1775.4	1626.9	3011.4	3175.5	4490.9	4773.6	3992.7	5932.5	5352.3	3237.1	3626.8	4901.7	2639.5	141424.2	610.7	3436.1
26-Jan	1749.0	1615.0	2976.7	3133.8	4401.7	4707.3	3931.9	5839.5	5271.9	3193.4	3577.1	4807.8	2600.8	141215.5	610.7	3436.1
27-Jan	1616.5	1511.6	2839.8	2981.4	4146.7	4523.5	3769.3	5576.6	5051.3	3086.0	3459.8	4576.3	2473.5	140771.2	610.7	3436.1
28-Jan	1597.7	1477.2	2809.0	2953.6	4070.1	4445.2	3685.1	5393.1	4869.1	3011.8	3401.5	4586.5	2493.8	140703.4	610.7	3436.1
29-Jan	1877.4	1660.4	3037.8	3169.0	4233.6	4539.5	3730.9	5399.9	4848.2	2983.8	3358.4	4415.8	2391.3	140478.6	610.7	3436.1
30-Jan	1807.4	1669.4	3019.6	3160.2	4393.5	4669.3	3854.8	5668.1	5097.4	3092.6	3446.5	4502.1	2416.6	139986.2	610.7	3436.1
31-Jan	1617.1	1518.5	2842.2	2971.4	4121.9	4516.5	3776.4	5540.4	5041.0	3081.6	3450.8	4531.8	2443.7	139873.6	610.7	3436.1

Date	Pool 14	Pool 13	Pool 12	Pool 11	Pool 10	Pool 9	Pool 8	Pool 7	Pool 6	Pool 5	Pool 4	Pool 3	Pool 2	Dix Dam	Jacobson	Buckhorn	Carr Fork	
1-Feb	1505.1	1402.6	2698.5	2826.5	3839.0	4287.7	3587.1	5175.9	4708.1	2931.2	3312.7	4322.5	2339.1	139873.6	610.7	3436.1	5308.2	
2-Feb	1437.2	1334.7	2607.7	2738.4	3669.9	4145.4	3472.8	4957.6	4515.7	2822.1	3185.3	4091.6	2208.8	139873.6	610.7	3436.1	5308.2	
3-Feb	1383.9	1284.2	2539.0	2671.7	3550.7	4047.9	3397.3	4821.0	4399.4	2763.2	3118.0	3976.2	2147.1	139873.6	610.7	3436.1	5308.2	
4-Feb	1347.4	1249.1	2492.6	2626.9	3468.9	3965.5	3311.9	4651.5	4252.6	2687.4	3036.1	3834.3	2071.1	139873.6	610.7	3436.1	5308.2	
5-Feb	1320.9	1222.0	2453.4	2583.3	3372.2	3897.6	3277.1	4608.9	4226.6	2673.2	3018.6	3793.1	2043.9	139873.6	610.7	3436.1	5308.2	
6-Feb	1299.4	1201.4	2424.3	2553.9	3315.3	3854.7	3250.8	4565.0	4188.5	2651.6	2992.4	3735.1	2010.5	139873.6	610.7	3436.1	5308.2	
7-Feb	1310.9	1208.4	2435.6	2558.4	3289.3	3784.8	3128.6	4308.8	3977.5	2547.9	2889.8	3598.7	1946.2	139873.6	610.7	3436.1	5308.2	
8-Feb	1380.3	1262.5	2512.8	2621.7	3319.1	3819.3	3192.7	4437.6	4073.9	2586.4	2912.2	3583.1	1921.1	139873.6	610.7	3436.1	5308.2	
9-Feb	1398.6	1283.9	2536.1	2650.2	3404.2	3896.8	3249.6	4511.6	4121.5	2609.3	2935.9	3616.8	1940.7	139873.6	610.7	3436.1	5308.2	
10-Feb	1360.1	1256.8	2495.7	2618.7	3410.2	3915.3	3269.5	4556.1	4164.9	2634.4	2966.3	3672.0	1971.4	139873.6	610.7	3436.1	5308.2	
11-Feb	1335.2	1233.3	2466.7	2591.3	3367.0	3872.7	3226.7	4483.6	4113.5	2610.8	2945.0	3655.7	1967.7	139873.6	610.7	3436.1	5308.2	
12-Feb	1382.4	1275.5	2540.3	2678.8	3536.8	3990.8	3306.2	4637.9	4211.5	2656.7	2988.7	3690.9	1977.2	139873.6	610.7	3436.1	5308.2	
13-Feb	1524.2	1385.1	2692.0	2822.4	3702.0	4111.4	3398.4	4809.4	4357.3	2732.7	3073.8	-	3826.6	2048.6	139873.6	610.7	3436.1	5308.2
14-Feb	1549.6	1421.4	2722.8	2851.1	3790.1	4201.7	3478.0	4925.5	4459.4	2782.4	3123.6	3911.1	2094.7	139873.6	610.7	3436.1	5308.2	
15-Feb	1519.1	1402.6	2696.5	2823.7	3779.1	4208.1	3494.8	4965.1	4504.1	2809.7	3158.0	3981.6	2136.8	139873.6	610.7	3436.1	5308.2	
16-Feb	1577.2	1438.9	2751.4	2872.8	3803.0	4211.8	3485.2	4938.1	4475.0	2793.6	3140.6	3961.8	2128.5	139873.6	610.7	3436.1	5308.2	
17-Feb	1661.8	1507.5	2835.8	2956.6	3919.0	4293.1	3534.6	4986.1	4502.3	2805.6	3151.5	3969.6	2130.6	139873.6	610.7	3436.1	5308.2	
18-Feb	1576.5	1461.4	2763.6	2887.3	3893.0	4303.1	3571.1	5090.6	4613.9	2861.0	3207.4	4052.5	2170.3	139873.6	610.7	3436.1	5308.2	
19-Feb	1511.8	1400.3	2693.2	2817.1	3783.1	4221.2	3511.7	4990.7	4534.6	2828.2	3181.1	4043.0	2175.6	139873.6	610.7	3436.1	5308.2	
20-Feb	1469.1	1360.0	2642.3	2771.5	3708.0	4157.5	3459.6	4893.7	4449.6	2784.1	3134.2	3967.0	2135.1	139873.6	610.7	3436.1	5308.2	
21-Feb	1839.3	1625.8	3012.2	3173.3	4323.9	4560.8	3678.6	5200.2	4602.1	2846.0	3186.8	4058.0	2181.0	140842.5	610.7	3436.1	5308.2	
22-Feb	2383.1	2062.5	3479.8	3664.1	5077.9	5173.2	4212.2	6074.3	5332.6	3190.7	3538.8	4533.6	2408.9	141222.6	610.7	3436.1	5308.2	
23-Feb	2073.0	1955.1	3339.2	3501.9	5044.8	5149.7	4281.9	6435.0	5831.4	3436.4	3788.9	5082.1	2719.4	140801.5	610.7	3436.1	5308.2	
24-Feb	1694.4	1620.8	2987.3	3126.9	4492.2	4811.4	4073.8	6173.3	5658.9	3384.9	3767.9	5117.9	2735.8	140213.5	610.7	3436.1	5308.2	
25-Feb	1560.2	1457.7	2780.3	2914.5	4016.3	4449.0	3739.5	5520.5	5018.4	3075.9	3454.6	4591.4	2485.0	139873.6	610.7	3436.1	5308.2	
26-Feb	1480.1	1376.6	2665.4	2799.2	3787.8	4228.6	3543.2	5088.5	4626.5	2876.5	3239.3	4172.5	2256.5	139873.6	610.7	3436.1	5308.2	
27-Feb	1426.0	1324.3	2596.1	2731.5	3665.9	4130.1	3446.0	4894.5	4455.1	2789.7	3144.1	4004.9	2160.5	139873.6	610.7	3436.1	5308.2	
28-Feb	1380.0	1280.5	2535.5	2670.2	3551.0	4035.2	3369.5	4756.0	4342.0	2731.5	3080.5	3886.6	2094.5	139873.6	610.7	3436.1	5308.2	

Date	Pool 14	Pool 13	Pool 12	Pool 11	Pool 10	Pool 9	Pool 8	Pool 7	Pool 6	Pool 5	Pool 4	Pool 3	Pool 2	Dix Dam	Jacobson	Buckhorn	Carr Fork
1-Mar	1342.3	1244.6	2486.2	2621.4	3461.6	3957.1	3301.8	4630.7	4236.7	2677.5	3022.1	3788.6	2041.4	139873.6	610.7	3436.1	5308.2
2-Mar	1542.8	1411.1	2750.0	2927.6	4040.7	4338.9	3501.6	4909.0	4358.3	2725.5	3060.5	3780.0	2021.6	140779.4	610.7	3436.1	5308.2
3-Mar	1925.7	1727.4	3153.1	3396.3	4943.9	5115.6	4296.1	6385.5	5702.0	3410.5	3802.3	5776.9	3044.8	145576.7	610.7	3436.1	5308.2
4-Mar	2388.6	2118.7	3573.3	3841.1	5569.4	5709.7	5210.5	8162.7	6758.9	3949.8	5573.8	9838.0	4866.1	146882.5	610.7	3436.1	5308.2
5-Mar	2415.2	2219.8	3658.3	3884.7	5604.2	5663.5	4967.0	7741.7	6585.9	3844.6	5315.3	9395.8	4726.4	147627.7	610.7	3436.1	5308.2
6-Mar	2041.8	1951.8	3382.9	3585.4	5268.0	5392.7	4611.6	7523.2	6571.9	3802.2	4975.4	8197.9	4134.0	147468.3	610.7	3436.1	5308.2
7-Mar	1690.4	1616.9	2991.3	3148.2	4550.2	4899.3	4217.0	6459.4	5956.2	3520.3	4023.6	6727.4	3555.4	147041.2	610.7	3436.1	5308.2
8-Mar	1562.6	1458.4	2781.1	2914.9	4011.3	4462.6	3779.3	5657.7	5134.1	3152.5	3559.5	4942.4	2728.6	146483.9	610.7	3436.1	5308.2
9-Mar	1493.9	1386.4	2678.3	2808.9	3788.2	4235.3	3537.5	5177.9	4693.4	2918.1	3303.5	4325.6	2348.2	145828.4	610.7	3436.1	5308.2
10-Mar	1430.2	1328.3	2598.7	2731.5	3659.7	4119.4	3427.9	4973.9	4516.8	2829.6	3201.1	4148.7	2245.4	145106.0	610.7	3436.1	5308.2
11-Mar	1387.6	1286.6	2543.8	2676.8	3556.5	4038.4	3371.0	4885.9	4446.4	2787.1	3146.5	4042.3	2184.8	144338.1	610.7	3436.1	5308.2
12-Mar	1358.8	1257.6	2503.4	2633.7	3463.8	3959.4	3306.4	4783.0	4359.9	2743.0	3096.7	3946.7	2132.7	145337.2	610.7	3436.1	5308.2
13-Mar	1344.9	1243.3	2484.7	2614.5	3421.0	3929.6	3295.0	4770.9	4349.3	2738.3	3092.7	3925.0	2117.3	142739.9	610.7	3436.1	5308.2
14-Mar	1333.7	1233.8	2472.8	2605.5	3412.2	3924.4	3295.1	4771.0	4346.7	2766.4	3163.5	3966.4	2133.2	141946.1	610.7	3436.1	5308.2
15-Mar	1381.2	1286.5	2569.9	2742.1	3759.6	4250.3	3626.8	5341.6	4828.7	3008.2	3428.2	4653.4	2519.6	141690.3	610.7	3436.1	5335.1
16-Mar	1474.4	1356.1	2660.4	2813.1	3798.1	4271.7	3634.3	5368.7	4865.1	3011.9	3416.8	4788.4	2626.2	141332.9	610.7	3436.1	5363.5
17-Mar	1457.7	1351.7	2637.5	2783.4	3762.2	4226.0	3560.1	5226.5	4733.3	2936.3	3316.7	4406.6	2406.1	140726.5	610.7	3436.1	5390.5
18-Mar	1457.6	1353.4	2648.3	2803.6	3832.7	4261.7	3557.3	5183.3	4680.7	2903.9	3271.9	4286.7	2322.1	140422.5	610.7	3436.1	5427.9
19-Mar	1598.2	1454.0	2787.8	2935.0	3965.7	4370.3	3661.8	5358.7	4841.3	2982.6	3353.9	4392.4	2371.4	140284.5	610.7	3436.1	5505.2
20-Mar	1640.5	1502.9	2832.9	2973.9	4040.0	4416.7	3669.0	5348.0	4821.3	2967.8	3330.5	4357.5	2353.7	139873.6	610.7	3436.1	5557.9
21-Mar	1549.1	1441.8	2745.7	2881.0	3921.5	4351.5	3632.7	5246.1	4759.9	2943.1	3309.0	4182.4	2242.7	139873.6	610.7	3436.1	5600.2
22-Mar	1475.4	1371.3	2657.7	2790.0	3769.4	4221.2	3526.8	5051.4	4592.6	2865.6	3234.5	4198.1	2265.3	139873.6	610.7	3436.1	5640.8
23-Mar	1429.7	1325.7	2597.6	2730.4	3651.6	4126.4	3456.5	4925.0	4485.3	2803.0	3157.6	4028.1	2173.1	139873.6	610.7	3436.1	5676.6
24-Mar	1433.4	1321.3	2593.9	2721.0	3591.6	4050.9	3366.4	4754.8	4331.4	2732.1	3089.6	3922.4	2119.3	139873.6	610.7	3436.1	5727.9
25-Mar	1580.2	1425.0	2735.8	2845.7	3636.6	4083.5	3393.7	4788.0	4357.3	2735.3	3081.7	3975.9	2139.8	139873.6	610.7	3436.1	5770.8
26-Mar	1678.1	1517.7	2834.4	2959.8	3890.0	4270.2	3523.3	4961.6	4471.4	2785.9	3124.9	3910.6	2097.3	139873.6	610.7	3436.1	5813.9
27-Mar	1596.4	1478.4	2784.7	2907.2	3921.7	4317.4	3571.3	5078.3	4592.0	2846.5	3187.5	4025.3	2156.7	139873.6	610.7	3436.1	5857.2
28-Mar	1515.7	1405.2	2697.0	2818.0	3781.9	4223.5	3516.5	5006.6	4553.2	2838.7	3193.2	4071.2	2192.4	139873.6	610.7	3436.1	5900.6
29-Mar	1460.5	1352.4	2629.2	2733.9	3668.9	4127.8	3436.8	4858.9	4424.0	2773.6	3126.4	3974.0	2143.2	139873.6	610.7	3436.1	5941.3
30-Mar	1415.1	1310.0	2572.4	2698.9	3572.9	4049.2	3375.3	4750.8	4334.6	2727.3	3075.3	3882.7	2092.7	139873.6	610.7	3436.1	5974.7
31-Mar	1388.4	1283.0	2536.6	2661.9	3495.6	3985.2	3327.1	4668.6	4267.7	2694.2	3040.9	3811.5	2052.1	139873.6	610.7	3436.1	6003.1

Date	Pool 14	Pool 13	Pool 12	Pool 11	Pool 10	Pool 9	Pool 8	Pool 7	Pool 6	Pool 5	Pool 4	Pool 3	Pool 2	Dix Dam	Jacobson	Buckhorn	Carr Fork
1-Apr	1408.8	1298.9	2566.2	2697.5	3555.7	4020.4	3345.6	4653.2	4239.7	2680.6	3029.3	3799.0	2046.8	139998.9	610.7	3436.1	6034.4
2-Apr	1430.6	1315.3	2584.7	2708.1	3541.8	4015.7	3352.8	4689.0	4281.1	2697.1	3039.7	3799.4	2040.4	140213.4	610.7	3595.4	6062.2
3-Apr	1396.3	1292.0	2548.1	2677.1	3532.1	4015.0	3351.4	4684.4	4272.2	2692.8	3034.1	3804.9	2047.8	140364.1	610.4	3759.6	6087.0
4-Apr	1360.5	1259.3	2503.9	2632.8	3460.0	3960.5	3312.5	4628.6	4235.7	2675.5	3017.6	3781.7	2036.8	140481.8	610.4	3928.7	6105.9
5-Apr	1329.0	1229.9	2463.6	2593.6	3391.7	3902.2	3263.2	4541.7	4165.3	2638.6	2976.6	3710.5	1998.2	140579.8	610.1	4102.8	6122.3
6-Apr	1312.7	1216.1	2449.0	2585.6	3392.4	3900.4	3263.0	4533.2	4151.7	2646.9	3008.3	3893.5	2118.0	140681.0	609.9	4268.7	6138.6
7-Apr	1337.1	1252.7	2525.7	2707.4	3736.0	4169.7	3469.4	4839.9	4359.4	2737.3	3089.2	3928.2	2119.2	141395.1	609.6	4463.0	6182.5
8-Apr	1411.9	1303.8	2589.7	2741.4	3683.9	4151.3	3497.2	4970.4	4532.3	2827.1	3185.0	4073.1	2192.2	141951.1	609.6	4656.2	6246.6
9-Apr	1459.3	1343.2	2631.5	2771.0	3693.1	4142.2	3462.9	4884.7	4439.9	2784.1	3141.1	4002.0	2159.8	142422.2	609.4	4851.2	6299.8
10-Apr	1444.6	1346.1	2638.1	2801.2	3853.8	4263.9	3536.6	4978.9	4493.5	2799.0	3143.1	3953.9	2121.2	143133.3	609.2	5051.6	6347.4
11-Apr	1442.4	1336.0	2621.1	2765.1	3729.9	4199.4	3536.4	5045.2	4600.6	2866.5	3230.6	4151.0	2235.4	143647.5	608.8	5257.5	6387.3
12-Apr	1456.2	1348.4	2640.3	2790.3	3783.2	4224.8	3534.9	5010.3	4540.5	2826.3	3176.0	4045.6	2178.1	144312.4	608.3	5469.0	6427.4
13-Apr	1480.2	1372.1	2676.6	2836.4	3892.2	4320.5	3623.4	5171.5	4680.5	2895.1	3246.7	4138.4	2221.2	145068.5	608.0	5686.1	6473.7
14-Apr	1472.1	1364.5	2658.9	2806.7	3813.0	4254.1	3562.0	5074.3	4608.7	2864.5	3220.6	4131.9	2227.3	145527.6	607.9	5908.9	6513.9
15-Apr	1429.4	1328.2	2604.3	2746.5	3705.4	4180.0	3516.5	5009.2	4561.3	2841.2	3196.2	4093.1	2206.3	145873.7	607.7	6137.5	6547.5
16-Apr	1404.2	1304.7	2576.5	2722.7	3672.6	4139.9	3467.4	4901.0	4456.2	2790.2	3144.9	3994.3	2153.6	146209.7	607.4	6371.9	6587.3
17-Apr	1388.5	1286.7	2549.4	2688.1	3582.0	4064.0	3405.2	4798.2	4378.9	2747.8	3095.5	3923.1	2114.5	146475.5	607.1	6612.3	6620.9
18-Apr	1361.1	1276.6	2550.3	2726.9	3772.8	4192.5	3467.5	4845.9	4371.9	2767.0	3148.7	4137.0	2252.3	147225.7	606.9	6658.7	6653.5
19-Apr	1388.1	1300.4	2595.7	2782.8	3891.5	4356.3	3703.4	5452.9	4947.0	3034.9	3413.2	4523.7	2437.9	147653.7	606.3	7111.2	6719.3
20-Apr	1483.9	1359.1	2660.5	2799.4	3725.9	4195.3	3547.9	5108.5	4652.9	2895.1	3266.2	4290.8	2331.9	148084.3	605.9	7369.8	6777.0
21-Apr	1458.6	1352.1	2634.5	2776.6	3738.9	4192.2	3510.6	4977.9	4515.6	2818.2	3174.6	4086.7	2210.9	148503.5	605.9	7634.7	6826.5
22-Apr	1408.2	1308.9	2576.0	2715.8	3649.1	4121.1	3448.4	4872.0	4437.2	2780.4	3134.7	4011.8	2168.1	148810.2	605.7	7906.0	6862.3
23-Apr	1369.4	1270.6	2523.6	2660.3	3537.0	4034.8	3387.8	4775.3	4363.3	2740.4	3087.3	3923.9	2118.3	149043.3	605.3	8166.4	6894.6
24-Apr	1340.5	1243.3	2486.9	2625.1	3473.8	3978.6	3388.9	4662.5	4281.2	2701.4	3048.8	3849.4	2077.9	149227.3	605.0	8394.5	6922.7
25-Apr	1320.7	1223.1	2458.0	2592.8	3401.8	3918.5	3291.7	4660.4	4220.1	2670.3	3016.6	3792.4	2045.3	149374.7	604.8	8586.8	6945.1
26-Apr	1302.8	1205.9	2433.2	2566.9	3350.5	3875.1	3256.0	4540.5	4166.5	2640.4	2980.9	3720.1	2003.6	149512.7	604.4	8755.8	6967.4
27-Apr	1288.9	1192.6	2414.6	2547.8	3313.7	3843.5	3230.2	4494.4	4128.4	2619.3	2955.6	3671.0	1975.3	149636.0	604.1	8907.4	6989.4
28-Apr	1274.3	1179.4	2396.0	2530.2	3285.1	3816.2	3202.9	4442.3	4085.2	2596.3	2929.9	3639.5	1960.3	149748.8	603.8	9052.6	7007.7
29-Apr	1259.7	1166.6	2379.0	2515.8	3267.4	3781.0	3142.5	4310.9	3977.6	2539.0	2866.3	3547.8	1914.1	149848.0	603.7	9174.3	7023.4
30-Apr	1250.4	1157.2	2365.3	2500.3	3233.5	3771.1	3164.6	4376.1	4030.7	2565.6	2891.4	3546.1	1902.3	149958.4	603.6	9286.2	7045.2

Date	Pool 14	Pool 13	Pool 12	Pool 11	Pool 10	Pool 9	Pool 8	Pool 7	Pool 6	Pool 5	Pool 4	Pool 3	Pool 2	Dix Dam	Jackson	Buckhorn	Carr Fork	
1-May	1259.3	1163.0	2372.5	2500.2	3207.3	3731.3	3111.1	4270.0	3950.6	2527.5	2857.4	3514.6	1892.5	150337.3	603.2	9468.8	7090.1	
2-May	1322.7	1211.8	2439.8	2544.5	3182.1	3693.1	3072.5	4204.9	3902.1	2497.5	2817.2	3441.5	1850.1	150802.3	603.0	9855.3	7127.2	
3-May	1350.7	1242.3	2482.9	2602.8	3341.9	3824.0	3161.1	4289.9	3929.4	2504.3	2816.6	3419.4	1834.0	151115.9	602.4	10176.2	7154.0	
4-May	1321.8	1221.7	2450.0	2577.2	3347.2	3857.5	3217.4	4443.1	4071.4	2584.2	2907.9	3537.3	1888.1	151297.3	601.8	10419.5	7176.0	
5-May	1324.4	1229.4	2474.7	2621.5	3481.6	4018.3	3428.3	4866.1	4432.5	2783.9	3144.9	3933.8	2102.0	152255.1	601.4	10643.8	7202.3	
6-May	1677.5	1480.6	2824.0	2939.5	3711.1	4124.3	3475.9	4907.3	4462.1	2804.2	3180.9	4154.2	2250.6	152994.1	601.2	10643.8	7334.3	
7-May	2660.5	2180.4	3575.6	3692.7	4712.8	4780.6	3761.5	5073.2	4419.8	2750.5	3095.4	3948.2	2137.3	153007.7	601.0	11721.6	7432.3	
8-May	2575.0	2351.7	3722.2	3862.9	5535.8	5292.9	4316.3	6322.9	5624.3	3309.3	3625.0	4623.1	2421.0	153007.7	600.7	12935.4	7432.3	
9-May	2286.5	2148.7	3595.0	3763.7	5372.5	5417.8	4517.8	6839.6	6210.4	3604.4	3977.7	5880.0	3034.9	153007.7	600.5	12424.9	7432.3	
10-May	1927.0	1835.8	3247.2	3412.3	4915.3	5117.9	4343.1	6584.7	6058.9	3556.7	3994.9	6158.5	3222.3	153007.7	600.2	11124.0	7432.3	
11-May	1662.3	1568.4	2915.3	3042.1	4247.3	4641.4	3923.3	5819.4	5316.2	3238.9	3646.2	4978.4	2721.7	153007.7	599.8	10643.8	7432.3	
12-May	1503.5	1404.6	2694.8	2813.6	3801.8	4281.7	3613.7	5240.9	4778.7	2955.7	3331.8	4353.9	2353.6	153007.7	599.2	10643.8	7432.3	
13-May	1434.2	1333.4	2607.8	2741.6	3689.2	4158.0	3478.8	4942.5	4492.1	2808.2	3163.9	4044.1	2184.8	153007.7	598.9	10643.8	7432.3	
14-May	1402.1	1302.2	2570.8	2713.2	3646.5	4117.8	3446.8	4903.4	4459.0	2783.4	3126.6	3958.7	2129.9	153007.7	598.5	10643.8	7432.3	
15-May	1382.2	1295.3	2577.1	2753.7	3819.8	4263.1	3574.5	5204.6	4697.2	2905.5	3258.9	4099.4	2188.8	153007.7	598.2	10643.8	7432.3	
16-May	1377.7	1286.2	2563.8	2730.6	3745.8	4216.0	3555.7	5154.2	4684.8	2928.5	3325.0	4326.8	2335.5	153128.9	598.0	10643.8	7432.3	
17-May	1375.4	1288.9	2572.9	2753.2	3824.4	4318.1	3693.1	5482.6	4973.3	3122.0	3598.0	5030.7	2731.5	153540.1	597.7	10643.8	7432.3	
18-May	1416.1	1333.3	2651.2	2862.2	4101.4	4503.1	3792.3	5608.9	5044.9	3102.6	3528.0	4902.8	2675.0	155816.0	597.4	10643.8	7432.3	
19-May	2016.5	1744.6	3167.1	3359.2	4659.4	4895.3	4106.2	6049.1	5401.8	3229.6	3592.1	4878.4	2642.1	159993.0	597.2	10933.4	7917.9	
20-May	2650.7	2274.1	3686.6	3879.6	5349.7	5443.8	4521.7	6677.2	5873.0	3447.3	3796.6	5506.3	2944.4	163306.7	597.0	11455.9	8203.4	
21-May	2688.2	2426.7	3833.9	4010.4	5607.5	5622.3	4742.3	7188.1	6304.6	4973.3	5122.0	3598.0	5030.7	2731.5	153540.1	597.7	10643.8	7432.3
22-May	2023.6	1978.1	3380.7	3525.6	5090.2	5227.7	4430.9	7102.3	6419.8	3711.3	4482.8	6968.0	3550.9	164560.6	596.4	10643.8	7432.3	
23-May	1556.6	1509.6	2844.4	2981.2	4271.8	4725.0	4093.3	6303.1	5827.0	3471.3	3835.3	6337.4	3380.7	164386.5	595.8	10643.8	7432.3	
24-May	1448.9	1352.2	2642.0	2774.7	3775.0	4270.8	3618.6	5379.4	4881.8	3430.6	4672.3	2548.9	3796.6	163834.6	595.3	10643.8	7432.3	
25-May	1386.4	1290.0	2550.1	2690.1	3610.1	4095.2	3432.3	5001.6	4544.2	2840.2	3218.0	4148.4	2249.6	163090.5	594.8	10643.8	7432.3	
26-May	1338.1	1242.7	2484.2	2622.4	3478.5	3989.5	3353.6	4877.5	4446.0	2784.4	3138.7	3995.8	2152.3	162298.5	594.5	10643.8	7432.3	
27-May	1293.3	1198.7	2420.6	2555.9	3346.6	3862.8	3225.0	4659.0	4259.9	2693.3	3044.7	3841.7	2075.2	161423.8	593.8	10643.8	7432.3	
28-May	1255.5	1162.8	2370.7	2507.7	3259.0	3782.0	3149.4	4536.6	4157.0	2636.5	3271.9	3713.9	2000.4	160522.6	593.0	10643.8	7432.3	
29-May	1226.4	1135.1	2332.3	2469.9	3188.1	3718.3	3093.1	4454.5	4089.9	2599.5	2934.1	3638.3	1958.3	159620.9	592.5	10643.8	7432.3	
30-May	1213.2	1120.5	2309.9	2441.0	3115.6	3657.4	3047.4	4398.5	4046.7	2575.5	2905.4	3582.8	1926.5	158671.2	591.9	10643.8	7432.3	
31-May	1206.9	1113.0	2296.8	2422.6	3065.4	3585.0	2932.4	4239.6	3920.6	2510.5	2836.5	3499.0	1887.7	157726.5	591.3	10643.8	7432.3	

Date	Pool 14	Pool 13	Pool 12	Pool 11	Pool 10	Pool 9	Pool 8	Pool 7	Pool 6	Pool 5	Pool 4	Pool 3	Pool 2	Dix Dam	Jacobson	Buckhorn	Carr Fork
1-Jun	1193.7	1099.0	2278.0	2399.7	2998.3	3556.2	2978.3	4311.9	3964.4	2515.5	2812.5	3351.3	1783.2	156770.8	590.5	10643.8	7432.3
2-Jun	1188.8	1095.8	2276.7	2400.0	2995.4	3519.3	2922.5	4235.3	3896.0	2496.2	2815.8	3445.8	1858.0	155814.4	589.5	10643.8	7432.3
3-Jun	1179.0	1085.7	2259.8	2382.7	2969.5	3492.3	2893.1	4132.9	3809.8	2443.5	2752.1	3296.0	1765.3	155100.5	588.8	10643.8	7432.3
4-Jun	1170.5	1078.9	2252.7	2377.9	2961.9	3520.8	2944.9	3980.7	3731.4	2400.1	2705.0	3237.5	1736.0	155100.5	588.0	10643.8	7432.3
5-Jun	1169.0	1076.1	2244.5	2365.6	2937.1	3500.0	2931.6	3966.8	3715.0	2384.5	2672.3	3175.1	1700.4	155094.8	587.3	10643.8	7430.7
6-Jun	1158.7	1066.7	2231.9	2355.4	2921.4	3507.9	2951.8	4018.5	3762.4	2413.5	2708.7	3202.9	1706.4	155100.5	586.4	10643.8	7432.3
7-Jun	1262.6	1166.4	2394.5	2511.7	3134.0	3597.2	2960.4	4253.5	3900.5	2487.9	2785.3	3297.3	1749.7	155421.0	585.6	10643.8	7432.3
8-Jun	1253.4	1160.7	2383.7	2517.5	3215.6	3760.2	3150.0	4456.8	4080.3	2577.3	2886.9	3475.8	1849.1	155100.5	585.2	10643.8	7432.3
9-Jun	1209.9	1122.0	2330.4	2472.0	3161.3	3723.9	3127.4	4345.9	4022.0	2557.9	2880.3	3519.9	1890.4	155100.5	584.6	10643.8	7432.3
10-Jun	1250.7	1153.8	2367.1	2486.5	3128.1	3641.2	3031.8	4231.4	3909.8	2501.3	2817.6	3423.9	1840.1	155100.5	583.8	10643.8	7432.3
11-Jun	1240.4	1151.3	2377.0	2517.4	3224.6	3781.1	3175.3	4574.8	4195.8	2638.7	2952.8	3561.0	1885.3	155100.5	583.0	10643.8	7432.3
12-Jun	1197.0	1112.6	2324.2	2471.9	3169.6	3742.3	3149.6	4410.1	4082.3	2599.2	2936.8	3625.4	1953.3	155100.5	582.5	10643.8	7432.3
13-Jun	1196.9	1106.7	2301.8	2432.7	3071.3	3646.0	3068.7	4226.4	3976.8	2539.9	2867.0	3504.1	1883.0	155100.5	581.8	10643.8	7432.3
14-Jun	1188.7	1096.6	2280.7	2407.4	3019.9	3586.4	3010.4	4169.0	3879.8	2486.2	2804.3	3387.4	1816.7	155100.5	581.0	10643.8	7432.3
15-Jun	1174.0	1082.6	2260.2	2388.0	2987.0	3562.5	2993.8	4121.6	3843.4	2459.3	2764.6	3312.1	1772.4	155100.5	580.7	10643.8	7431.1
16-Jun	1179.1	1140.6	2459.9	2676.6	3613.6	4027.0	3300.2	4408.5	3935.8	2493.9	2793.4	3313.3	1762.7	155100.5	579.8	10643.8	7431.3
17-Jun	1225.3	1175.5	2504.3	2713.9	3669.6	4170.5	3492.5	5012.5	4611.4	2841.2	3173.0	3923.0	2063.6	155100.5	578.9	10643.8	7432.3
18-Jun	1199.8	1120.7	2350.5	2505.1	3243.1	3830.1	3238.2	4611.3	4292.4	2716.3	3063.6	3918.1	2130.4	155100.5	578.3	10643.8	7432.3
19-Jun	1172.2	1084.2	2272.0	2409.6	3052.7	3656.7	3091.6	4319.9	4029.2	2569.9	2903.4	3612.1	1956.6	155100.5	577.5	10643.8	7432.3
20-Jun	1161.0	1073.7	2255.8	2390.1	3001.7	3543.4	2958.6	4036.0	3778.1	2439.2	2761.3	3361.7	1815.0	155100.5	576.9	10643.8	7430.8
21-Jun	1159.4	1070.8	2246.7	2376.7	2971.0	3545.9	2978.9	4060.8	3790.3	2425.2	2717.8	3238.1	1733.8	155100.5	576.1	10643.8	7428.3
22-Jun	1155.5	1069.1	2249.4	2383.3	2983.3	3576.7	3016.7	4142.9	3868.3	2464.8	2756.8	3271.3	1741.3	155100.5	575.2	10642.3	7428.0
23-Jun	1152.5	1061.9	2227.9	2354.3	2931.2	3536.2	2987.0	4105.5	3846.9	2459.5	2761.0	3305.6	1767.5	155098.4	574.6	10636.6	7427.5
24-Jun	1140.7	1051.4	2214.8	2342.8	2907.8	3418.0	2825.7	3823.5	3612.5	2351.1	2657.3	3198.8	1723.2	155092.1	573.7	10629.5	7425.8
25-Jun	1135.6	1046.9	2207.7	2334.9	2893.2	3428.4	2825.2	3733.0	3506.6	2338.6	2632.5	3118.4	1670.4	155078.6	572.9	10620.1	7425.0
26-Jun	1130.6	1041.1	2196.0	2321.5	2869.3	3407.1	2806.8	3641.9	3393.7	2313.8	2595.9	3108.8	1667.2	155058.1	572.1	10606.3	7422.5
27-Jun	1167.2	1074.0	2233.4	2343.6	2879.5	3470.6	2917.6	3813.6	3466.8	2317.6	2690.9	3074.4	1643.7	155060.2	571.1	10605.8	7423.4
28-Jun	1189.2	1098.8	2286.3	2409.4	2995.1	3545.6	2967.5	4004.0	3673.9	2321.8	2589.1	3066.3	1637.0	155046.3	570.8	10608.3	7420.4
29-Jun	1309.6	1206.8	2458.9	2581.7	3256.4	3752.6	3123.8	4261.2	3927.3	2499.1	2798.9	3241.4	1686.9	155100.5	570.0	10643.8	7425.3
30-Jun	1263.9	1176.1	2413.0	2558.5	3314.6	3824.3	3186.6	4500.8	4102.3	2690.0	2920.6	3555.0	1898.1	155100.5	569.1	10643.8	7432.3

Date	Pool 14	Pool 13	Pool 12	Pool 11	Pool 10	Pool 9	Pool 8	Pool 7	Pool 6	Pool 5	Pool 4	Pool 3	Pool 2	Dix Dam	Jacobson	Buckhorn	Carr Fork
1-Jul	1224.4	1139.3	2364.3	2511.6	3238.8	3783.3	3171.0	4464.4	4111.8	2607.8	2939.0	3638.8	1959.7	154901.3	568.8	10643.8	7432.3
2-Jul	1208.6	1118.9	2323.1	2458.3	3125.0	3684.1	3092.7	4334.6	4012.8	2556.6	2881.3	3548.0	1911.7	154702.7	568.1	10643.8	7432.3
3-Jul	1182.9	1094.9	2288.6	2426.2	3071.4	3629.5	3042.3	4233.2	3923.9	2508.6	2827.1	3432.2	1842.6	154504.8	567.4	10643.8	7432.3
4-Jul	1171.3	1086.6	2282.5	2423.1	3064.9	3573.1	2960.1	4264.5	3910.5	2500.6	2812.3	3379.4	1805.6	155435.2	566.6	10643.8	7432.3
5-Jul	1194.3	1110.0	2321.3	2461.2	3122.2	3656.5	3053.9	4398.7	4032.7	2558.3	2872.1	3458.9	1841.7	154924.5	565.9	10643.8	7432.3
6-Jul	1209.8	1118.7	2319.8	2448.2	3088.9	3663.6	3083.9	4476.8	4122.1	2600.6	2912.6	3526.2	1877.4	154164.5	565.4	10643.8	7432.3
7-Jul	1259.9	1168.4	2407.0	2543.3	3243.9	3766.5	3146.8	4509.2	4137.2	2616.1	2939.4	3611.1	1937.9	153719.3	564.9	10643.8	7432.3
8-Jul	1216.7	1129.1	2341.8	2484.2	3184.3	3743.1	3142.5	4445.4	4094.4	2592.7	2913.6	3579.2	1923.1	153244.4	563.9	10643.8	7432.3
9-Jul	1232.4	1141.8	2360.3	2494.1	3171.2	3712.5	3109.3	4360.1	4027.7	2558.9	2877.0	3522.9	1893.7	153330.2	563.4	10643.8	7432.3
10-Jul	1184.2	1096.9	2293.4	2435.5	3100.1	3671.1	3084.8	4318.4	3994.9	2539.6	2852.0	3460.3	1853.7	153136.5	562.6	10643.8	7432.3
11-Jul	1174.1	1083.0	2261.1	2389.2	2995.7	3577.8	3011.7	4208.8	3916.0	2501.2	2814.0	3413.8	1832.7	152943.5	561.9	10643.8	7431.3
12-Jul	1163.0	1071.9	2243.3	2370.0	2954.8	3525.8	2959.6	4111.5	3832.5	2452.3	2754.3	3314.3	1778.2	152751.0	561.2	10643.8	7429.6
13-Jul	1152.0	1060.0	2222.2	2346.2	2911.0	3520.6	2974.6	4145.3	3867.2	2464.3	2756.2	3288.6	1756.1	152559.0	560.7	10643.8	7426.1
14-Jul	1141.4	1050.8	2210.6	2335.7	2890.8	3498.5	2955.9	4121.4	3854.2	2462.8	2763.4	3315.6	1774.0	152367.7	560.0	10638.0	7422.9
15-Jul	1129.6	1040.6	2197.3	2323.8	2872.5	3480.3	2940.5	4094.0	3832.3	2451.9	2752.8	3289.1	1757.7	152176.9	559.4	10628.6	7418.6
16-Jul	1121.7	1032.7	2183.7	2308.8	2847.1	3415.6	2867.0	3984.4	3737.1	2402.4	2700.9	3222.1	1725.8	151986.7	558.6	10617.9	7414.6
17-Jul	1119.5	1030.8	2179.2	2303.3	2834.5	3373.9	2807.2	3922.7	3674.8	2373.7	2676.3	3182.6	1703.0	151797.1	557.9	10607.0	7410.7
18-Jul	1138.9	1046.1	2192.8	2308.9	2833.7	3450.1	2911.1	4034.2	3781.2	2426.3	2725.5	3211.3	1706.1	151608.0	557.4	10596.5	7408.9
19-Jul	1127.3	1037.8	2191.5	2315.0	2844.8	3397.9	2847.1	4093.0	3800.3	2444.1	2755.2	3315.1	1777.0	151419.4	557.0	10583.7	7407.2
20-Jul	1142.4	1049.1	2197.0	2313.2	2839.8	3449.2	2911.0	4077.4	3816.0	2439.7	2736.1	3257.6	1739.8	151231.4	556.4	10572.3	7405.5
21-Jul	1130.1	1039.8	2191.9	2314.1	2842.6	3440.4	2903.2	4051.2	3795.3	2433.8	2735.4	3267.4	1747.0	151043.9	556.0	10560.7	7401.6
22-Jul	1159.8	1072.1	2245.7	2369.0	2931.5	3493.0	2929.8	4062.4	3799.2	2434.1	2733.4	3249.3	1733.9	150857.0	555.2	10557.1	7398.6
23-Jul	1166.7	1080.0	2265.5	2398.1	3001.9	3566.1	2899.7	4161.2	3862.5	2466.0	2765.0	3298.0	1739.6	150670.6	554.6	10557.3	7397.6
24-Jul	1122.1	1040.2	2213.5	2354.2	2950.7	3501.5	2922.4	4053.6	3770.0	2423.9	2729.8	3276.6	1757.4	150484.7	554.1	10550.2	7404.3
25-Jul	1113.5	1028.9	2187.3	2320.1	2884.2	3487.7	2942.2	4091.0	3815.8	2443.6	2743.7	3260.2	1738.1	150299.3	553.3	10538.6	7403.9
26-Jul	1135.4	1042.3	2187.3	2306.7	2843.7	3445.5	2908.7	4050.5	3794.2	2433.4	2735.1	3261.1	1742.2	150114.4	552.6	10524.5	7402.2
27-Jul	1155.1	1059.9	2206.4	2313.4	2826.3	3422.8	2889.2	4019.6	3770.9	2448.7	2715.7	3234.4	1729.3	149930.1	551.9	10506.9	7399.0
28-Jul	1138.0	1045.8	2198.7	2318.3	2841.5	3423.5	2881.2	3999.4	3753.3	2410.1	2707.8	3213.2	1715.3	149746.2	551.2	10486.4	7394.6
29-Jul	1127.0	1035.6	2184.3	2305.9	2832.5	3386.7	2832.7	3937.1	3694.0	2373.8	2661.9	3166.1	1695.9	149562.8	550.4	10466.7	7390.2
30-Jul	1120.3	1031.4	2180.1	2303.0	2829.5	3449.2	2914.8	4036.5	3784.1	2419.1	2701.8	3167.6	1681.9	149380.0	549.7	10446.0	7385.1
31-Jul	1121.8	1031.7	2177.8	2299.9	2824.5	3434.8	2904.9	4038.1	3789.1	2431.2	2732.9	3244.9	1728.0	149197.6	549.0	10427.2	7381.0

Date	Pool 14	Pool 13	Pool 12	Pool 11	Pool 10	Pool 9	Pool 8	Pool 7	Pool 6	Pool 5	Pool 4	Pool 3	Pool 2	Dix Dam	Jacobson	Buckhorn	Carr Fork
1-Aug	1124.3	10374	2194.6	2321.0	2858.2	3377.4	2810.1	3913.9	3675.6	2374.3	2677.7	3202.1	1717.9	149015.7	548.4	10406.1	7375.8
2-Aug	1120.2	1028.6	2171.6	2294.6	2822.1	3431.7	2886.0	4033.5	3768.9	2411.8	2695.9	3168.5	1686.6	148703.8	547.6	10385.8	7372.1
3-Aug	1113.8	1025.6	2173.2	2296.4	2817.9	3418.5	2886.9	4051.3	3790.6	2423.2	2710.2	3214.6	1714.6	148393.4	547.0	10366.1	7378.9
4-Aug	1123.8	1038.3	2198.5	2327.0	2870.1	3446.9	2899.3	4058.4	3796.9	2508.6	2900.6	3501.6	1865.7	148084.3	546.4	10349.0	7380.0
5-Aug	1129.0	1040.0	2195.4	2321.9	2869.4	3436.0	2878.8	4021.2	3758.1	2423.5	2739.5	3304.8	1775.9	147776.5	545.8	10331.5	7380.6
6-Aug	1132.6	1042.8	2196.3	2319.7	2861.3	3428.4	2871.9	4011.8	3747.9	2407.4	2705.4	3224.2	1726.2	147470.0	545.0	10313.9	7382.5
7-Aug	1118.3	1029.0	2176.7	2300.6	2830.9	3444.2	2909.0	4068.6	3802.3	2434.6	2731.1	3247.6	1733.0	147164.8	544.6	10294.9	7382.8
8-Aug	1119.8	1030.0	2175.8	2298.4	2822.9	3429.6	2898.6	4063.9	3804.5	2439.1	2741.8	3281.8	1755.8	146860.9	544.1	10273.6	7379.7
9-Aug	1114.3	1025.8	2173.4	2297.2	2819.7	3406.2	2871.0	4026.8	3771.7	2419.1	2716.5	3249.4	1740.9	146558.1	543.4	10251.2	7376.5
10-Aug	1116.2	1026.8	2173.6	2297.5	2820.8	3422.0	2888.2	4047.3	3789.5	2425.4	2717.9	3235.8	1729.4	146256.6	542.6	10232.6	7374.0
11-Aug	1118.5	1028.3	2173.1	2295.5	2816.1	3378.6	2877.6	3919.6	3737.3	2399.9	2694.8	3212.1	1719.4	145956.2	542.2	10213.3	7370.6
12-Aug	1115.4	1025.6	2170.6	2292.7	2810.6	3425.0	2893.4	4055.6	3797.3	2430.1	2722.8	3218.0	1712.8	145657.0	541.6	10193.8	7366.8
13-Aug	1117.6	1027.3	2171.8	2293.4	2810.7	3412.0	2882.8	4045.3	3789.4	2427.2	2723.1	3241.7	1731.5	145359.0	541.1	10173.8	7363.0
14-Aug	1114.6	1025.2	2171.1	2293.7	2811.2	3367.5	2804.7	3965.2	3708.9	2387.8	2686.7	3202.7	1715.1	145062.0	540.5	10152.9	7357.9
15-Aug	1102.4	1018.6	2163.3	2287.2	2804.1	3429.2	2896.9	4053.1	3797.8	2425.4	2707.1	3192.1	1700.4	144766.0	514.8	10131.4	7352.8
16-Aug	1099.4	1014.8	2158.6	2283.0	2798.1	3390.8	2864.1	4019.9	3767.5	2419.3	2720.4	3223.5	1724.7	144471.2	514.1	10108.8	7347.1
17-Aug	1111.4	1018.6	2157.3	2279.7	2790.8	3321.0	2754.0	3939.9	3675.8	2367.8	2662.8	3180.4	1706.3	144177.3	513.4	10086.5	7342.0
18-Aug	1115.1	1022.7	2159.8	2278.9	2784.3	3279.6	2672.9	3940.9	3671.9	2354.7	2628.6	3128.8	1678.7	143884.4	487.6	10064.7	7339.0
19-Aug	1114.0	1022.0	2159.4	2277.7	2778.7	3348.3	2737.3	4008.9	3766.8	2411.0	2691.0	3142.6	1667.5	143592.5	462.0	10042.7	7333.7
20-Aug	1108.7	1020.3	2159.6	2279.3	2780.6	3376.1	2788.9	4006.1	3766.0	2415.6	2711.7	3217.5	1715.1	143301.5	452.0	10020.2	7328.2
21-Aug	1111.0	1020.4	2158.3	2278.4	2780.8	3368.2	2814.2	3992.5	3748.0	2402.8	2693.1	3206.0	1715.5	143011.5	451.2	9997.9	7322.9
22-Aug	1110.3	1020.6	2159.2	2279.1	2781.8	3329.7	2747.1	3951.6	3693.6	2376.5	2670.7	3179.9	1702.7	142722.3	450.5	9976.1	7317.1
23-Aug	1104.7	1019.0	2160.3	2281.9	2787.5	3356.5	2759.1	3987.4	3738.3	2396.3	2680.6	3164.8	1689.5	142434.0	424.8	9959.9	7314.4
24-Aug	1101.5	1016.0	2158.5	2281.5	2789.9	3386.9	2814.7	4000.2	3759.8	2407.3	2693.5	3196.6	1707.3	142146.5	403.8	9934.8	7307.7
25-Aug	1096.7	1013.6	2156.1	2279.5	2788.4	3380.3	2843.3	3994.6	3748.7	2404.9	2698.2	3204.8	1711.4	141859.8	402.7	9910.7	7303.6
26-Aug	1086.3	1012.7	2154.7	2277.8	2785.6	3344.9	2778.7	3952.3	3695.0	2377.6	2672.0	3174.2	1698.0	141574.0	401.7	9888.5	7299.7
27-Aug	1088.7	1012.4	2153.9	2276.4	2783.1	3359.6	2795.8	3986.2	3738.9	2396.6	2681.2	3166.6	1690.5	141288.8	376.0	9868.3	7296.1
28-Aug	1082.1	1012.0	2153.0	2274.7	2780.5	3365.7	2821.1	3993.1	3748.6	2403.7	2693.8	3197.5	1707.6	141004.4	368.2	9847.4	7291.9
29-Aug	1071.3	1012.1	2153.4	2274.9	2780.2	3362.9	2830.1	3988.4	3742.6	2402.1	2695.6	3202.2	1710.7	140720.7	367.7	9825.2	7286.8
30-Aug	1067.5	1012.0	2153.2	2274.6	2779.7	3362.5	2829.0	3984.9	3738.1	2398.7	2690.4	3195.6	1708.2	140437.7	360.4	9802.2	7281.2
31-Aug	1063.2	1011.1	2151.3	2271.6	2775.4	3362.4	2838.3	3992.6	3746.5	2400.6	2687.0	3194.3	1708.6	140155.3	343.5	9778.6	7275.1

Date	Pool 14	Pool 13	Pool 12	Pool 11	Pool 10	Pool 9	Pool 8	Pool 7	Pool 6	Pool 5	Pool 4	Pool 3	Pool 2	Dix Dam	Jacobson	Buckhorn	Carr Fork
1-Sep	1059.2	1010.0	2147.8	2267.3	2767.9	3369.0	2849.5	4003.4	3756.8	2408.0	2698.8	3205.0	1712.0	139873.6	339.3	9755.6	7269.4
2-Sep	1054.3	1010.8	2148.9	2268.2	2767.2	3363.4	2838.9	3879.8	3687.3	2373.5	2667.4	3172.4	1698.1	139851.7	338.7	9733.3	7264.1
3-Sep	1048.8	1010.7	2149.1	2268.3	2766.7	3359.8	2819.4	3832.2	3640.1	2336.4	2613.8	3104.8	1663.5	139828.3	321.8	9709.9	7258.3
4-Sep	1046.0	1010.8	2149.3	2268.4	2766.7	3361.9	2809.5	3813.5	3621.5	2342.4	2630.4	3075.5	1638.9	139804.1	296.2	9686.2	7252.4
5-Sep	1102.0	1013.1	2154.6	2275.0	2776.1	3278.2	2706.7	3705.8	3498.1	2332.6	2620.1	3087.0	1646.9	139779.4	270.5	9662.2	7248.0
6-Sep	1116.2	1020.2	2154.1	2272.1	2773.1	3330.7	2725.8	3744.3	3519.3	2323.1	2606.3	3072.4	1640.7	139756.9	244.9	9639.5	7243.6
7-Sep	1119.1	1026.7	2162.9	2277.3	2774.1	3369.2	2779.3	3815.6	3580.5	2314.2	2593.3	3078.1	1645.3	139736.0	219.4	9618.4	7241.7
8-Sep	1117.7	1025.1	2161.8	2277.9	2771.0	3318.0	2708.0	3746.2	3495.3	2313.8	2593.9	3073.4	1641.8	139714.6	218.9	9598.3	7239.7
9-Sep	1115.9	1024.4	2163.6	2280.4	2777.1	3353.5	2731.6	3791.4	3524.4	2314.2	2595.2	3068.3	1638.8	139696.9	193.5	9580.0	7237.5
10-Sep	1116.2	1023.8	2161.3	2278.7	2776.9	3372.6	2774.0	3834.5	3575.7	2317.1	2598.4	3071.5	1639.4	139672.3	172.8	9557.7	7232.2
11-Sep	1112.9	1021.6	2159.6	2277.9	2776.1	3366.6	2796.9	3838.1	3618.1	2318.5	2598.7	3072.3	1640.1	139652.1	172.3	9537.2	7227.8
12-Sep	1126.2	1031.2	2164.6	2277.9	2773.7	3375.4	2833.5	3853.1	3658.0	2329.6	2578.6	3080.1	1646.0	139628.7	171.9	9474.8	7222.3
13-Sep	1129.1	1036.1	2176.8	2288.8	2783.5	3346.5	2783.2	3794.3	3594.2	2335.4	2605.4	3060.7	1632.3	139604.0	171.4	9373.0	7216.2
14-Sep	1129.5	1036.8	2180.1	2295.7	2797.1	3384.6	2828.4	3838.5	3643.4	2329.4	2599.4	3064.8	1634.0	139584.7	145.9	9272.0	7211.7
15-Sep	1134.3	1041.6	2186.1	2300.9	2809.4	3347.5	2746.7	3748.5	3537.9	2330.4	2607.5	3065.3	1633.4	139564.5	145.6	9171.6	7206.9
16-Sep	1133.0	1041.0	2188.1	2305.0	2819.1	3390.8	2776.3	3781.7	3554.9	2327.2	2605.5	3069.6	1637.2	139543.2	125.4	9072.1	7201.8
17-Sep	1135.4	1042.7	2188.7	2304.6	2820.7	3415.9	2851.1	3830.3	3596.4	2322.2	2602.3	3086.0	1648.4	139517.3	125.1	8973.2	7195.1
18-Sep	1142.0	1048.3	2194.9	2308.5	2822.8	3368.9	2800.4	3770.6	3519.8	2322.1	2604.5	3086.8	1650.2	139500.0	124.6	8875.1	7191.2
19-Sep	1133.0	1041.2	2190.0	2309.0	2828.0	3415.6	2857.2	3826.1	3558.1	2322.5	2604.9	3075.7	1643.2	139477.4	124.5	8777.7	7185.4
20-Sep	1130.7	1038.4	2184.7	2302.8	2822.6	3368.4	2785.6	3747.9	3456.3	2328.6	2607.5	3071.1	1638.7	139459.3	124.2	8688.0	7181.3
21-Sep	1132.5	1039.8	2184.9	2301.3	2817.4	3399.0	2822.1	3467.2	3230.8	2359.7	2608.6	3081.2	1646.5	139435.5	124.1	8585.0	7175.1
22-Sep	1133.0	1040.8	2187.4	2303.9	2819.7	3424.4	2848.7	3873.3	3544.3	2308.4	2583.4	3088.9	1652.2	139417.8	123.7	8489.8	7171.0
23-Sep	1135.0	1041.6	2185.2	2300.2	2812.5	3419.0	2887.6	3919.6	3674.4	2324.9	2577.6	3080.5	1647.0	139397.6	123.6	8395.2	7166.1
24-Sep	1132.6	1039.7	2184.1	2299.2	2809.5	3416.4	2886.3	3927.7	3709.7	2379.9	2645.1	3082.2	1641.4	139377.9	123.4	8301.4	7161.3
25-Sep	1135.9	1042.9	2187.5	2301.5	2812.0	3369.0	2824.3	3836.2	3636.1	2352.3	2649.8	3120.3	1659.4	139363.4	123.2	8208.3	7156.9
26-Sep	1143.1	1049.3	2196.0	2308.8	2819.9	3410.4	2866.5	3871.9	3668.2	2354.8	2634.7	3104.8	1658.2	139340.8	123.2	8115.9	7126.7
27-Sep	1140.9	1047.0	2194.5	2310.2	2824.3	3421.9	2884.5	3908.4	3690.8	2370.3	2653.4	3116.6	1659.6	139320.3	122.9	8024.1	7096.5
28-Sep	1138.9	1045.3	2191.8	2307.3	2822.8	3369.2	2804.8	3806.8	3600.3	2340.2	2634.4	3120.6	1667.6	139299.3	122.6	7933.1	7066.4
29-Sep	1136.7	1043.4	2188.7	2304.1	2818.1	3405.7	2849.0	3836.9	3633.5	2334.3	2617.8	3097.7	1657.1	139279.6	122.4	7842.8	7036.3
30-Sep	1137.3	1043.9	2189.3	2303.3	2815.8	3364.7	2775.0	3751.6	3529.8	2326.2	2607.9	3091.5	1652.8	139258.6	122.2	7753.2	7006.4

Date	Pool 14	Pool 13	Pool 12	Pool 11	Pool 10	Pool 9	Pool 8	Pool 7	Pool 6	Pool 5	Pool 4	Pool 3	Pool 2	Dix Dam	Jacobson	Buckhorn	Carr Fork
1-Oct	1141.5	1048.0	2195.8	2310.0	2822.8	3404.3	2823.4	3787.7	3553.9	2322.5	2603.7	3077.8	1646.9	139241.9	122.0	7664.2	6976.5
2-Oct	1140.5	1047.1	2195.6	2312.2	2829.6	3435.4	2894.3	3892.9	3646.3	2327.7	2604.7	3075.5	1642.5	139227.5	122.0	7576.0	6946.6
3-Oct	1140.3	1046.7	2194.4	2310.6	2829.2	3433.4	2897.8	3937.9	3710.2	2381.6	2658.7	3095.6	1643.8	139213.0	122.0	7488.4	6916.9
4-Oct	1140.0	1046.6	2194.4	2310.5	2828.7	3427.6	2891.4	3933.3	3713.1	2387.9	2681.5	3161.7	1681.6	139198.6	122.0	7401.5	6887.2
5-Oct	1139.8	1046.1	2192.9	2308.4	2825.0	3420.3	2882.9	3918.3	3701.3	2382.5	2677.6	3164.2	1687.9	139184.2	122.0	7315.3	6857.6
6-Oct	1138.7	1045.2	2191.6	2307.0	2822.0	3374.6	2824.9	3830.7	3628.4	2350.3	2649.3	3136.6	1676.7	139169.7	122.0	7229.8	6828.0
7-Oct	1138.3	1045.0	2191.6	2307.1	2821.9	3330.7	2703.4	3701.9	3481.1	2332.3	2621.1	3095.9	1655.0	139155.3	122.0	7144.9	6798.5
8-Oct	1137.9	1044.3	2189.7	2305.7	2818.3	3384.6	2721.7	3725.2	3492.0	2325.9	2607.7	3064.2	1637.0	139140.8	122.0	7060.7	6769.1
9-Oct	1137.5	1044.2	2190.2	2304.9	2817.9	3413.5	2799.3	3780.9	3525.1	2326.2	2605.4	3063.8	1632.1	139126.4	122.0	6977.2	6739.7
10-Oct	1137.1	1043.9	2189.7	2304.9	2817.9	3419.7	2873.3	3849.7	3575.1	2329.6	2608.9	3066.5	1633.4	139112.0	122.0	6894.4	6710.5
11-Oct	1137.6	1044.0	2188.6	2303.3	2814.7	3413.4	2878.1	3895.8	3659.0	2342.2	2616.2	3062.0	1630.1	139097.5	122.0	6812.2	6681.3
12-Oct	1137.4	1044.4	2191.1	2306.2	2819.0	3414.8	2878.6	3907.2	3690.7	2368.4	2642.8	3084.4	1637.6	139083.1	122.0	6730.7	6652.1
13-Oct	1137.3	1044.0	2190.0	2305.5	2819.3	3377.7	2831.2	3837.1	3634.5	2344.7	2631.8	3107.6	1657.7	139068.6	122.0	6649.8	6623.1
14-Oct	1137.0	1043.8	2189.5	2304.7	2818.1	3404.1	2857.4	3856.4	3652.9	2343.0	2614.5	3091.4	1652.5	139054.2	122.0	6649.6	6594.0
15-Oct	1136.8	1043.6	2189.3	2304.5	2817.5	3414.9	2877.0	3893.0	3678.1	2358.7	2628.9	3092.1	1649.5	139039.7	122.0	6490.0	6565.1
16-Oct	1140.2	1046.6	2193.5	2308.2	2821.9	3422.3	2887.0	3920.0	3701.1	2374.5	2653.6	3117.2	1659.6	139025.3	122.0	6411.1	6536.3
17-Oct	1138.1	1044.9	2191.8	2307.8	2823.1	3370.9	2817.6	3824.0	3621.4	2345.7	2641.4	3121.6	1665.9	139010.9	122.0	6332.8	6507.5
18-Oct	1137.1	1044.0	2190.1	2305.9	2821.1	3399.2	2841.6	3832.1	3632.4	2337.0	2619.8	3086.7	1648.5	138996.4	122.0	6255.2	6478.7
19-Oct	1136.9	1043.7	2189.5	2304.9	2818.9	3416.8	2876.4	3882.3	3667.9	2350.3	2619.0	3077.0	1641.4	138982.0	122.0	6178.2	6450.1
20-Oct	1135.8	1042.9	2188.5	2304.0	2817.5	3421.4	2887.4	3919.1	3699.1	2373.5	2651.7	3106.2	1651.6	138967.5	122.0	6101.9	6421.5
21-Oct	1135.4	1042.1	2186.5	2301.6	2813.1	3414.1	2880.7	3916.9	3700.7	2380.7	2673.2	3145.3	1672.7	138953.1	122.0	6026.2	6393.0
22-Oct	1135.0	1042.0	2186.9	2301.4	2812.1	3368.6	2816.1	3825.1	3624.3	2348.5	2647.0	3130.3	1672.0	138938.7	122.0	5951.1	6364.5
23-Oct	1135.5	1042.5	2187.2	2301.9	2812.3	3314.8	2814.8	3697.8	3480.4	2337.0	2628.5	3095.8	1653.6	138924.2	122.0	5876.7	6336.1
24-Oct	1134.4	1041.5	2186.5	2301.7	2812.5	3359.5	2698.3	3711.3	3481.5	2330.2	2615.6	3068.9	1638.7	138909.8	122.0	5802.9	6307.8
25-Oct	1134.9	1041.9	2186.5	2301.3	2812.1	3399.6	2748.6	3761.0	3509.7	2327.2	2608.2	3067.0	1634.3	138895.3	122.0	5729.7	6279.6
26-Oct	1134.7	1041.8	2186.6	2301.5	2812.2	3409.8	2825.6	3808.8	3540.4	2323.1	2604.4	3066.5	1633.6	138880.9	122.0	5657.1	6251.4
27-Oct	1133.6	1040.7	2185.6	2301.0	2811.8	3421.4	2885.3	3890.0	3633.5	2333.8	2613.4	3070.3	1636.6	138866.4	122.0	5585.2	6223.3
28-Oct	1134.2	1041.5	2187.0	2302.6	2814.7	3415.6	2882.6	3915.7	3694.3	2373.6	2653.7	3093.9	1642.1	138852.0	122.0	5513.8	6195.3
29-Oct	1133.9	1042.1	2189.7	2307.2	2823.6	3422.5	2887.1	3924.7	3707.0	2383.4	2674.7	3145.2	1671.6	138837.6	122.0	5443.1	6167.3
30-Oct	1133.8	1040.7	2185.6	2301.6	2816.8	3414.2	2878.3	3911.6	3696.4	2380.7	2677.2	3159.3	1683.7	138823.1	122.0	5373.0	6139.4
31-Oct	1133.6	1040.6	2185.2	2300.6	2812.7	3405.7	2870.3	3896.9	3685.8	2373.0	2666.2	3150.9	1682.1	138808.7	122.0	5303.5	6111.5

Date	Pool 14	Pool 13	Pool 12	Pool 11	Pool 10	Pool 9	Pool 8	Pool 7	Pool 6	Pool 5	Pool 4	Pool 3	Pool 2	Dix Dam	Jacobson	Buckhorn	Carr Fork
1-Nov	1138.1	1044.7	2188.9	2303.1	2817.3	3411.5	2882.2	3909.1	3686.8	2371.9	2664.2	3145.3	1677.8	138794.9	122.0	5234.6	6083.8
2-Nov	1127.4	1035.9	2182.8	2303.0	2824.4	3409.8	2869.2	3893.3	3680.1	2369.8	2662.9	3139.9	1674.1	138781.0	122.0	5166.3	6081.1
3-Nov	1126.9	1034.1	2176.2	2295.5	2815.1	3408.0	2870.4	3890.1	3675.3	2366.1	2658.6	3132.5	1670.2	138767.1	122.0	5098.7	6078.5
4-Nov	1126.7	1033.9	2175.0	2292.8	2807.8	3405.3	2877.0	3901.3	3681.2	2365.9	2652.8	3129.0	1669.4	138753.2	122.0	5031.6	6075.8
5-Nov	1126.4	1033.5	2174.0	2290.8	2801.7	3396.6	2867.5	3893.9	3679.7	2369.5	2662.5	3134.4	1669.6	138739.3	122.0	4965.1	6073.2
6-Nov	1125.0	1032.5	2172.7	2289.2	2797.3	3388.8	2857.3	3878.9	3671.1	2365.1	2659.4	3132.8	1669.9	138725.4	122.0	4899.2	6070.7
7-Nov	1124.6	1032.1	2172.0	2288.5	2796.4	3316.8	2594.9	3738.0	3603.9	2340.2	2636.6	3115.4	1663.8	138711.5	122.0	4833.9	6067.9
8-Nov	1124.1	1031.8	2171.5	2287.9	2795.5	3362.0	2647.4	3779.4	3614.3	2333.8	2625.5	3087.8	1649.0	138697.6	122.0	4769.1	6065.1
9-Nov	1123.7	1031.3	2170.5	2286.3	2791.6	3390.8	2738.4	3832.3	3631.5	2334.0	2618.6	3084.1	1645.0	138683.7	122.0	4705.0	6062.2
10-Nov	1120.9	1029.3	2169.0	2285.5	2791.0	3321.8	2506.9	3711.9	3582.4	2331.9	2620.4	3085.6	1645.0	138669.8	122.0	4641.4	6059.3
11-Nov	1119.9	1027.6	2166.1	2282.7	2786.0	3356.7	2551.3	3748.4	3591.2	2326.9	2611.5	3063.6	1635.1	138655.9	122.0	4578.4	6056.4
12-Nov	1121.2	1028.5	2165.9	2282.0	2784.7	3379.4	2623.4	3804.2	3605.0	2321.5	2602.4	3066.8	1633.6	138642.0	122.0	4516.0	6053.6
13-Nov	1121.9	1029.2	2166.6	2281.7	2781.7	3394.7	2745.6	3853.5	3641.4	2323.1	2592.9	3066.1	1634.1	138628.0	122.0	4454.2	6050.8
14-Nov	1121.8	1029.5	2167.6	2282.9	2783.4	3395.5	2853.7	3870.9	3662.6	2349.3	2609.2	3067.8	1634.5	138614.1	122.0	4392.9	6048.0
15-Nov	1121.5	1029.3	2167.7	2283.3	2785.0	3388.5	2872.0	3893.9	3674.8	2359.6	2636.8	3084.2	1639.5	138600.2	122.0	4332.2	6045.2
16-Nov	1121.3	1029.1	2167.4	2283.3	2785.6	3365.7	2795.3	3831.9	3646.9	2348.3	2631.7	3113.4	1660.9	138586.3	122.0	4272.1	6042.4
17-Nov	1120.0	1028.2	2167.1	2284.0	2788.9	3389.2	2867.1	3867.9	3657.3	2351.2	2635.8	3097.5	1652.3	138572.4	122.0	4212.5	6039.6
18-Nov	1120.6	1028.3	2166.3	2283.0	2787.8	3384.1	2863.4	3883.9	3669.5	2360.5	2648.1	3107.2	1653.7	138558.5	122.0	4153.5	6036.9
19-Nov	1120.4	1028.2	2166.2	2282.7	2786.8	3386.2	2869.8	3895.8	3678.4	2363.9	2649.5	3121.0	1663.1	138544.6	122.0	4095.1	6034.4
20-Nov	1121.3	1028.9	2166.7	2282.8	2786.5	3389.8	2876.8	3908.5	3687.6	2371.3	2660.8	3135.4	1670.6	138530.7	122.0	4037.2	6031.8
21-Nov	1120.3	1028.3	2166.7	2283.1	2786.8	3396.8	2888.8	3929.4	3701.2	2377.5	2665.8	3146.1	1677.4	138516.8	122.0	3979.8	6029.0
22-Nov	1121.0	1029.0	2167.3	2284.0	2790.1	3404.9	2900.5	3952.0	3717.5	2396.9	2706.4	3190.5	1695.5	138502.9	122.0	3923.0	6026.5
23-Nov	1120.8	1029.0	2168.0	2285.0	2793.1	3367.3	2791.0	3844.0	3661.9	2361.1	2654.3	3148.2	1684.5	138489.0	122.0	3866.8	6024.8
24-Nov	1122.0	1030.4	2169.6	2287.0	2799.0	3407.3	2893.1	3904.5	3677.7	2363.0	2651.5	3123.3	1666.9	138475.1	122.0	3811.1	6022.8
25-Nov	1120.3	1030.2	2171.4	2291.9	2813.1	3404.7	2878.2	3911.7	3690.5	2375.4	2670.1	3147.5	1676.2	138461.2	122.0	3755.9	6026.2
26-Nov	1119.3	1029.7	2171.7	2294.7	2824.1	3367.4	2721.8	3802.6	3633.5	2357.9	2666.7	3168.8	1693.4	138447.3	122.0	3701.3	6026.8
27-Nov	1119.4	1027.3	2166.6	2285.4	2802.3	3370.4	2674.4	3786.9	3615.5	2319.5	2599.8	3117.9	1672.6	138433.4	122.0	3647.2	6026.5
28-Nov	1121.9	1029.6	2167.4	2284.4	2796.2	3363.3	2565.7	3742.6	3590.6	2338.9	2632.7	3114.8	1664.0	138419.6	122.0	3593.6	6025.0
29-Nov	1123.6	1031.2	2169.4	2284.8	2791.6	3291.6	2302.3	3599.7	3534.1	2337.7	2632.4	3091.4	1649.6	138405.8	122.0	3540.6	6023.3
30-Nov	1120.8	1029.4	2169.4	2286.3	2793.9	3285.8	2178.7	3536.7	3507.2	2316.7	2595.6	3085.9	1650.0	138392.0	122.0	3488.1	6021.6

Date	Pool 14	Pool 13	Pool 12	Pool 11	Pool 10	Pool 9	Pool 8	Pool 7	Pool 6	Pool 5	Pool 4	Pool 3	Pool 2	Dix Dam	Jacobson	Buckhorn	Carr Fork
1-Dec	1224.6	1125.9	2300.7	2378.9	2856.4	3495.6	2831.1	3864.7	2333.6	2617.0	3058.6	1632.4	138378.5	122.0	3436.1	5505.9	
2-Dec	1164.2	1069.5	2234.5	2364.9	2944.6	3481.2	2808.4	3753.9	3596.0	2327.5	2610.2	3059.1	1629.0	138365.0	122.0	3417.3	5308.2
3-Dec	1113.6	1027.7	2184.9	2317.5	2875.5	3441.6	2776.9	3657.2	3550.6	2341.6	2638.0	3095.9	1645.3	138351.5	122.0	3398.6	5306.0
4-Dec	1107.5	1018.8	2159.9	2286.1	2817.4	3297.0	2276.7	3373.2	3437.8	2325.9	2611.6	3095.5	1653.7	138338.1	122.0	3379.8	5303.6
5-Dec	1100.6	1013.0	2151.2	2273.4	2787.7	3418.1	2552.4	3531.0	3490.1	2335.7	2627.0	3102.7	1657.3	138244.6	122.0	3361.0	5301.0
6-Dec	1098.3	1009.8	2145.1	2266.4	2771.9	3388.2	2640.2	3581.1	3497.8	2323.2	2606.2	3099.7	1657.2	138311.0	122.0	3342.3	5298.7
7-Dec	1094.8	1008.9	2141.1	2262.5	2762.0	3372.0	2695.2	3628.8	3504.7	2328.7	2613.2	3100.6	1657.3	138297.5	122.0	3323.7	5296.1
8-Dec	1089.9	1009.1	2139.7	2261.5	2759.3	3277.0	2460.6	3517.1	3454.1	2338.2	2632.4	3099.7	1652.9	138284.0	122.0	3305.2	5293.7
9-Dec	1082.6	1009.0	2138.9	2260.2	2756.5	3480.2	3030.3	4010.0	3645.0	2331.0	2612.0	3085.1	1649.0	138270.5	122.0	3286.7	5292.3
10-Dec	1083.4	1009.4	2139.3	2260.9	2758.4	3228.1	2466.3	3736.9	3614.4	2352.1	2649.4	3147.9	1680.3	138257.1	122.0	3268.3	5290.6
11-Dec	1085.2	1009.7	2140.1	2262.1	2761.1	3233.0	2440.5	3732.5	3608.3	2331.8	2622.5	3124.4	1674.5	138243.6	122.0	3250.1	5288.9
12-Dec	1077.9	1010.0	2140.8	2263.1	2763.9	3218.8	2368.5	3700.4	3592.4	2340.9	2636.7	3113.2	1663.4	138230.2	122.0	3231.8	5294.1
13-Dec	1076.4	1010.5	2142.1	2264.9	2769.5	3072.3	204.6	3496.6	3514.8	2323.5	2605.9	3088.6	1652.5	138216.8	122.0	3213.7	5296.5
14-Dec	1071.9	1010.6	2142.8	2265.8	2772.7	3221.9	2266.4	3658.8	3569.1	2377.1	2717.1	3116.0	1621.9	138203.5	122.0	3195.7	5300.8
15-Dec	1067.5	1011.4	2144.7	2268.5	2781.0	3311.4	2394.4	3743.2	3595.4	2345.5	2651.2	3133.5	1675.6	138190.7	122.0	3179.7	5308.2
16-Dec	1055.5	1010.1	2143.0	2265.5	2773.2	3336.4	2379.6	3745.3	3591.5	2324.8	2611.0	3103.3	1662.3	138177.9	122.0	3189.6	5308.2
17-Dec	1024.2	1009.0	2140.5	2262.2	2763.2	3194.6	2024.7	3546.6	3515.8	2331.3	2618.9	3093.5	1653.2	138165.3	122.0	3220.9	5308.2
18-Dec	1004.0	1008.5	2138.6	2259.8	2756.3	3227.8	2168.4	3639.3	3545.3	2332.9	2622.3	3095.4	1653.1	138152.8	122.0	3249.4	5308.2
19-Dec	993.0	1008.5	2138.0	2258.2	2754.8	3261.0	2106.6	3611.4	3531.2	2330.6	2618.4	3101.9	1658.3	138140.0	122.0	3265.8	5307.9
20-Dec	992.3	1008.4	2137.5	2256.1	2752.9	3164.1	1875.7	3484.1	3481.4	2325.5	2607.8	3083.8	1648.6	138127.2	122.0	3275.2	5307.5
21-Dec	993.8	1008.4	2137.3	2254.5	2751.7	3132.0	1785.5	3438.4	3461.1	2311.4	2584.6	3085.3	1649.4	138114.3	122.0	3275.8	5307.2
22-Dec	1010.1	1009.2	2138.5	2256.4	2756.8	3239.5	1991.1	3566.2	3503.4	2328.2	2609.6	3076.6	1644.1	138101.6	122.0	3271.8	5306.4
23-Dec	1022.1	1009.5	2139.6	2259.0	2759.8	3290.5	2068.5	3619.3	3518.7	2320.5	2596.5	3079.7	1645.4	138089.1	122.0	3265.0	5306.1
24-Dec	1046.2	1010.0	2140.8	2262.4	2763.6	3405.8	2396.4	3809.5	3585.4	2331.8	2615.8	3084.8	1647.9	138076.7	122.0	3255.9	5305.7
25-Dec	1075.2	1010.3	2141.8	2264.4	2768.1	3272.1	2094.6	3650.4	3520.2	2310.9	2585.3	3120.8	1670.3	138064.1	122.0	3245.4	5305.0
26-Dec	1113.9	1013.9	2143.4	2265.6	2771.7	3153.4	1785.6	3477.2	3454.0	2316.6	2595.5	3116.0	1670.4	138051.4	122.0	3233.9	5303.5
27-Dec	1128.0	1032.7	2160.3	2270.3	2772.8	3209.3	1847.1	3520.2	3465.8	2315.2	2593.7	3114.0	1669.1	138038.6	122.0	3222.0	5301.8
28-Dec	1130.5	1037.5	2176.8	2287.5	3283.5	3306.1	1993.4	3613.0	3495.6	2318.2	2599.4	3082.0	1649.2	138025.6	122.0	3210.1	5300.4
29-Dec	1128.6	1036.1	2178.8	2296.1	3280.2	3390.8	2165.2	3718.3	3529.4	2319.5	2603.9	3072.9	1641.7	138012.6	122.0	3198.6	5298.7
30-Dec	1129.4	1036.6	2178.6	2296.4	3280.9	3423.4	2360.0	3816.5	3559.3	2319.4	2604.9	3086.7	1647.6	137999.8	122.0	3187.6	5297.0
31-Dec	1130.4	1037.7	2180.2	2297.7	3281.5	3396.3	2388.4	3813.1	3564.9	2323.3	2606.2	3086.0	1647.8	137987.0	122.0	3176.2	5295.3

Simulated Deficit Values (MG) - 1953 Baseline Deficit Analysis

Tabulated values denote the predicted water supply deficits occurring at the listed location in the 1953 baseline deficit simulation.

Commission. This decision must consider the time of year, availability of other sources of supply, weather forecast, soil moisture, and public perception. Based on allowable withdrawals under Permit #0200 as listed in Condition 3, and assuming average daily demands, Kentucky-American should consider the following phase of the water shortage response program:

ALLOWABLE WITHDRAWAL (MGD)	LOCK 10 FLOW (CFS)	RESERVOIR LEVELS					
		> 60 DAYS	45-59 DAYS	30-44 DAYS	21-29 DAYS	14-20 DAYS	< 14 DAYS
60	> 140	Preliminary Watch	Preliminary Watch	Advisory	Advisory	Partial Alert	Partial Alert
55	130-140	Preliminary Watch	Advisory	Advisory	Partial Alert	Partial Alert	Full Alert
48	120-129.99	Advisory	Advisory	Partial Alert	Partial Alert	Full Alert	Full Alert
42	110-119.99	Advisory	Partial Alert	Partial Alert	Full Alert	Full Alert	Emergency
36	100-109.99	Partial Alert	Partial Alert	Full Alert	Full Alert	Emergency	Emergency
30	90-99.99	Partial Alert	Full Alert	Full Alert	Emergency	Emergency	Rationing
25	< 90	Full Alc,t	Full Alert	Emergency	Emergency	Rationing	Rationing

9. Kentucky-American Water Company and the Division of Water recognize that all permitted water withdraws are equals without seniority, priority or privilege given to any permit holder along the Kentucky River.
10. Kentucky-American Water Company recognizes its role as the largest water purveyor in demonstrating leadership in protecting the Kentucky River as source of supply of the Central Kentucky Region.

APPENDIX E

Tabulated Daily Flows, Storages, and Deficits for Main Stem Pools

1930 Baseline Deficit Analysis Results

Date	Daily Flow		Storage		Deficit	
	Flow	Storage	Flow	Storage	Flow	Storage
1930-01-01	0.000	0.000	0.000	0.000	0.000	0.000
1930-01-02	0.000	0.000	0.000	0.000	0.000	0.000
1930-01-03	0.000	0.000	0.000	0.000	0.000	0.000
1930-01-04	0.000	0.000	0.000	0.000	0.000	0.000
1930-01-05	0.000	0.000	0.000	0.000	0.000	0.000
1930-01-06	0.000	0.000	0.000	0.000	0.000	0.000
1930-01-07	0.000	0.000	0.000	0.000	0.000	0.000
1930-01-08	0.000	0.000	0.000	0.000	0.000	0.000
1930-01-09	0.000	0.000	0.000	0.000	0.000	0.000
1930-01-10	0.000	0.000	0.000	0.000	0.000	0.000
1930-01-11	0.000	0.000	0.000	0.000	0.000	0.000
1930-01-12	0.000	0.000	0.000	0.000	0.000	0.000
1930-01-13	0.000	0.000	0.000	0.000	0.000	0.000
1930-01-14	0.000	0.000	0.000	0.000	0.000	0.000
1930-01-15	0.000	0.000	0.000	0.000	0.000	0.000
1930-01-16	0.000	0.000	0.000	0.000	0.000	0.000
1930-01-17	0.000	0.000	0.000	0.000	0.000	0.000
1930-01-18	0.000	0.000	0.000	0.000	0.000	0.000
1930-01-19	0.000	0.000	0.000	0.000	0.000	0.000
1930-01-20	0.000	0.000	0.000	0.000	0.000	0.000
1930-01-21	0.000	0.000	0.000	0.000	0.000	0.000
1930-01-22	0.000	0.000	0.000	0.000	0.000	0.000
1930-01-23	0.000	0.000	0.000	0.000	0.000	0.000
1930-01-24	0.000	0.000	0.000	0.000	0.000	0.000
1930-01-25	0.000	0.000	0.000	0.000	0.000	0.000
1930-01-26	0.000	0.000	0.000	0.000	0.000	0.000
1930-01-27	0.000	0.000	0.000	0.000	0.000	0.000
1930-01-28	0.000	0.000	0.000	0.000	0.000	0.000
1930-01-29	0.000	0.000	0.000	0.000	0.000	0.000
1930-01-30	0.000	0.000	0.000	0.000	0.000	0.000
1930-01-31	0.000	0.000	0.000	0.000	0.000	0.000

Simulated Flow Values (cfs) - 1930 Baseline Deficit Analysis

Tabulated values denote the predicted flows occurring at the listed location in the 1930 baseline deficit simulation.

Flow values denote instantaneous flows at the end of the day occurring at the most downstream point of the listed reach.

Ex: The predicted flow over lock and dam 12 on January 3rd for 1930 baseline conditions was 4230 cfs.

Date	Pool 14	Pool 13	Pool 12	Pool 11	Pool 10	Pool 9	Pool 8	Pool 7	Pool 6	Pool 5	Pool 4	Pool 3	Pool 2	Dix Dam	Buckhorn	Carr Fork
1-Jan	3301.2	3393.6	3945.0	4725.4	5938.5	6622.1	8892.7	9606.2	9433.6	10245.0	11323.7	12038.5	12145.7	0.0	482.6	90.2
2-Jan	3300.2	3522.7	3737.2	4277.5	5522.7	5691.9	6228.7	6701.1	6745.5	7259.6	8257.7	10421.3	11126.1	0.0	397.6	74.0
3-Jan	3403.7	3808.9	4230.0	5217.9	7595.7	7563.0	7672.5	7551.7	7238.3	7904.2	8932.1	10277.8	10823.1	0.0	430.6	80.2
4-Jan	4014.4	4179.5	4516.1	5097.9	6396.7	6447.9	6767.2	7097.8	7364.8	8003.2	9019.6	10128.8	10494.5	0.0	520.6	96.9
5-Jan	3951.3	4143.7	4325.1	4761.8	5828.4	5988.7	6452.9	6836.1	7025.7	7272.9	7689.8	8958.5	9281.4	0.0	484.6	90.2
6-Jan	3342.3	3593.4	3720.3	4135.9	5319.7	5558.3	6073.0	6480.5	6640.8	6889.4	7239.8	7833.3	8080.3	0.0	412.6	76.8
7-Jan	2969.7	3180.9	3330.2	3725.6	4826.3	5000.2	5402.5	5729.2	5863.0	6059.6	6362.6	7976.2	8459.9	0.0	367.7	68.5
8-Jan	2611.2	2929.7	3182.2	3852.1	5575.2	5651.8	5870.0	5937.2	5842.0	7604.9	9966.5	14566.2	16186.0	0.0	322.7	60.1
9-Jan	2652.7	3135.3	3628.9	4781.9	7583.4	9452.3	13641.5	15789.4	16912.6	17018.5	17643.9	33712.5	38312.3	0.0	265.7	49.6
10-Jan	2395.1	2802.4	3184.6	4088.3	6375.6	7152.8	8869.6	10121.5	10361.1	11129.8	12036.1	23475.1	28473.2	0.0	238.7	44.5
11-Jan	1951.7	2254.9	2504.5	3145.2	4830.0	5458.9	6801.5	7781.3	8217.3	8478.3	9046.5	12249.7	1380.1	0.0	225.3	42.0
12-Jan	1585.6	1817.0	2009.7	2513.9	3836.5	4206.0	5011.8	5633.1	5897.2	6461.7	7213.3	9566.7	10481.1	0.0	211.8	39.5
13-Jan	1632.5	1846.6	2076.4	2580.3	3825.4	4041.0	4638.0	5025.3	5152.3	6368.4	8081.6	12837.3	14394.0	0.0	187.8	35.1
14-Jan	1632.3	1947.3	2269.6	3016.4	4830.6	5174.6	6057.1	6492.9	6541.8	7893.4	9947.9	16899.4	19087.4	0.0	199.8	37.3
15-Jan	1835.7	2194.9	2597.5	3473.9	5580.7	6230.4	7807.0	8686.9	8982.2	9048.1	9468.9	15788.3	17737.6	0.0	187.8	35.1
16-Jan	1609.0	1933.1	2239.2	2977.7	4833.3	5304.0	6373.8	7130.8	7408.2	8128.1	9041.2	12023.8	13511.0	0.0	187.8	35.1
17-Jan	1439.8	1677.8	1907.3	2449.6	3833.7	4181.8	4986.4	5612.6	5901.0	6409.1	7228.1	9355.0	10107.9	0.0	175.8	32.8
18-Jan	1371.5	1549.5	1728.8	2138.4	3180.1	3519.3	4334.1	4933.0	5198.3	5343.2	5610.5	7189.8	7692.2	0.0	175.8	32.8
19-Jan	1051.1	1202.4	1335.3	1692.3	2610.9	2813.3	3270.0	3652.7	3821.9	4227.0	4879.4	5753.7	6183.4	0.0	148.2	27.7
20-Jan	723.9	859.8	992.4	1335.5	2192.7	2389.6	2838.2	3196.2	3346.2	3585.5	3970.0	4872.3	5145.5	0.0	121.8	22.8
21-Jan	1045.6	1151.0	1278.4	1495.9	2053.8	2208.3	2744.8	3135.4	3287.4	3466.2	3734.1	4494.5	4737.4	0.0	137.4	25.7
22-Jan	1052.3	1191.6	1336.5	1660.3	2456.7	2607.8	3071.7	3319.6	3350.9	3365.3	3424.7	3953.6	4114.5	0.0	158.4	29.6
23-Jan	1022.3	1142.7	1266.2	1544.8	2250.9	2394.6	2807.5	3123.2	3241.6	3194.3	3135.2	3483.6	3585.0	0.0	175.8	32.8
24-Jan	932.4	1040.9	1149.4	1404.9	2052.3	2209.8	2637.7	2958.4	3075.6	3097.2	3112.3	3454.9	3573.2	0.0	199.8	37.3
25-Jan	1373.3	1440.4	1553.6	1697.3	2045.8	2084.0	2413.5	2673.0	2775.6	2906.2	3088.5	3318.2	3414.0	0.0	211.8	39.5
26-Jan	1130.9	1224.3	1301.2	1521.4	2087.8	2219.6	2555.1	2771.8	2812.6	2922.4	3095.3	3229.8	3266.2	0.0	238.7	44.5
27-Jan	1698.9	1794.1	1968.9	2218.7	2759.6	2717.6	2943.2	3032.1	3014.7	3022.6	3071.7	3252.0	3286.4	0.0	292.7	54.6
28-Jan	4879.4	4969.5	5789.3	7144.4	9492.4	9627.5	10644.3	10471.6	9799.4	9484.6	9163.6	8915.6	8587.6	0.0	430.6	80.2
29-Jan	5847.4	6218.2	6764.4	8068.4	10837.8	11344.2	12748.3	13517.7	13731.4	13713.6	13762.9	15085.1	15395.3	0.0	595.5	110.8
30-Jan	4392.7	4993.4	5260.4	6161.6	8718.0	9299.7	10494.6	11479.8	11942.9	12074.7	12171.0	13547.2	14081.6	0.0	367.7	68.5
31-Jan	3893.1	4179.4	4412.7	4909.9	6366.9	6753.7	7547.6	8254.6	8656.3	9262.1	10017.8	10817.9	11304.5	0.0	337.7	62.9

Date	Pool 14	Pool 13	Pool 12	Pool 11	Pool 10	Pool 9	Pool 8	Pool 7	Pool 6	Pool 5	Pool 4	Pool 3	Pool 2	Dix Dam	Buckhorn	Carr Fork
1-Feb	2917.6	3234.2	3365.0	3862.6	5322.1	5589.2	6055.3	6492.1	6673.2	6875.7	7251.3	8538.8	8896.1	0.0	293.6	54.6
2-Feb	2484.7	2693.0	2838.7	3229.5	4338.6	4537.4	4939.8	5325.0	5530.6	5886.8	6370.1	7302.5	7691.1	0.0	280.3	52.1
3-Feb	2416.3	2842.6	3253.7	4252.2	6687.1	6344.9	5722.7	5026.3	4474.4	4887.8	5595.0	5929.8	6166.6	0.0	266.8	49.6
4-Feb	4140.6	4574.2	5401.1	7006.1	10469.6	10135.8	9823.7	9262.1	8720.4	10406.0	12819.7	13401.3	13734.6	0.0	521.6	96.9
5-Feb	20683.4	18006.9	19351.1	22629.6	27014.0	29034.3	32393.1	31810.0	30774.9	32921.0	34097.1	39305.9	40546.5	0.0	2140.6	397.5
6-Feb	18097.4	19806.0	19703.3	21654.6	27139.8	27690.5	29346.7	30625.1	30485.3	31222.6	33681.3	42277.4	45220.1	0.0	1690.9	314.0
7-Feb	10863.0	12967.5	13580.7	14783.1	19706.6	20534.6	22521.3	24519.9	25908.4	27034.4	29406.1	35193.8	37111.5	0.0	1100.3	204.3
8-Feb	7217.8	8146.3	8561.5	9202.7	11767.0	12982.5	15081.4	16810.2	17990.2	19072.2	20315.2	24472.7	26036.5	0.0	701.5	130.3
9-Feb	4868.9	5458.6	5609.5	6122.7	8032.4	8589.5	9554.4	10547.7	10991.5	11358.0	11997.9	14739.0	15796.1	0.0	485.7	90.2
10-Feb	3840.7	4157.0	4303.6	4702.5	6053.3	6296.6	6673.3	7134.1	7382.8	8079.5	9001.7	10571.3	11337.7	0.0	431.7	80.2
11-Feb	2918.6	3204.4	3320.9	3753.5	5073.5	5309.6	5702.2	6077.6	6260.8	6629.3	7237.4	8191.5	8498.2	0.0	383.7	71.3
12-Feb	2484.7	2693.5	2836.8	3230.3	4338.0	4546.9	4973.7	5343.7	5524.3	5533.7	5601.3	6964.6	7334.3	0.0	338.8	62.9
13-Feb	4440.2	4394.1	4821.1	5358.2	6139.4	5936.5	6020.4	5874.7	5699.9	6483.3	7549.0	9954.1	10864.3	0.0	638.6	118.6
14-Feb	19433.3	16085.3	16572.0	17535.8	15660.5	15085.7	14830.4	13126.0	11987.8	10904.7	9994.8	11447.7	11533.0	0.0	2308.5	428.7
15-Feb	17801.9	18811.5	18215.3	19090.2	21600.3	21016.5	20701.7	20834.9	20391.3	19837.3	18899.2	17678.0	17353.1	0.0	1738.9	322.9
16-Feb	17906.4	17726.9	17949.5	17558.8	17214.3	18619.5	20720.1	21546.1	22532.8	22514.0	22492.0	23460.6	23667.7	0.0	1142.2	212.1
17-Feb	10456.4	11797.6	11174.4	10613.4	10803.1	11397.8	12855.3	14631.7	15539.5	16438.3	17332.9	19742.3	20691.6	0.0	806.5	149.8
18-Feb	7259.3	7739.4	7432.8	7904.0	8318.9	8871.6	9714.8	10060.8	10607.0	11450.8	13072.5	13756.2	0.0	596.6	110.8	
19-Feb	5197.2	5556.5	5491.1	5535.1	6267.4	6686.1	7314.1	7921.5	8209.7	8513.9	8975.7	10153.8	10556.5	0.0	467.7	86.9
20-Feb	4118.7	4321.1	4318.8	4417.2	5056.8	5374.6	5900.1	6372.0	6596.1	6837.4	7186.5	8134.5	8490.8	0.0	398.7	74.0
21-Feb	3177.3	3371.1	3380.2	3573.2	4332.8	4525.6	4811.5	5094.8	5208.3	5370.7	5621.0	6597.6	6944.9	0.0	353.7	65.7
22-Feb	2724.0	2864.5	2927.6	3146.1	3838.2	3839.1	3818.6	3900.3	3951.7	4658.0	5621.2	5641.0	5837.2	0.0	308.8	57.3
23-Feb	2030.7	2197.8	2254.9	2540.9	3395.0	3514.9	3689.6	3884.1	3958.1	4311.4	4897.2	5437.1	5510.6	0.0	293.8	54.6
24-Feb	2726.9	2789.1	2996.5	3227.4	3827.1	3750.9	3811.5	3855.2	3852.8	4084.6	4467.0	4993.5	5147.3	0.0	353.7	65.7
25-Feb	5071.5	4782.0	5074.3	5233.1	4880.2	4550.3	4525.8	4463.2	4414.6	4544.9	4782.4	5012.4	5052.5	0.0	383.7	71.3
26-Feb	4492.2	4678.6	4668.8	4923.5	5568.1	5520.7	5497.9	5483.1	5333.1	6956.1	9143.3	18607.8	21195.3	0.0	383.7	71.3
27-Feb	3898.2	4099.1	4178.4	4448.7	5326.4	5505.4	5864.4	6155.0	6262.4	6359.9	6858.2	9123.1	10171.9	0.0	353.7	65.7
28-Feb	2917.9	3135.0	3163.3	3424.3	4334.8	4656.5	5218.4	5703.7	5933.2	5974.4	6006.3	7916.8	8507.8	0.0	308.8	57.3

Date	Pool 14	Pool 13	Pool 12	Pool 11	Pool 10	Pool 9	Pool 8	Pool 7	Pool 6	Pool 5	Pool 4	Pool 3	Pool 2	Dix Dam	Buckhorn	Carr Fork
1-Mar	2483.0	2642.6	2732.6	3010.6	3837.2	3958.4	4206.5	4442.6	4545.1	5004.7	5610.2	6738.3	7300.8	0.0	280.3	52.1
2-Mar	2413.8	2557.5	2695.4	3014.9	3834.5	3810.0	3846.7	3905.2	3913.9	4283.5	4871.7	5850.6	6188.4	0.0	279.9	52.1
3-Mar	2303.4	2460.6	2603.5	2951.4	3836.6	3940.5	4246.1	4467.2	4527.9	4644.1	4858.3	5637.7	5828.6	0.0	266.4	49.6
4-Mar	1968.7	2122.9	2229.4	2543.5	3391.1	3470.7	3662.2	3873.8	3966.6	4354.6	4891.2	5554.1	5844.2	0.0	252.9	47.0
5-Mar	1792.7	1935.8	2058.6	2371.7	3186.6	3297.2	3596.0	3839.0	3927.6	4074.4	4331.5	4984.3	5154.7	0.0	239.4	44.5
6-Mar	1613.3	1753.2	1874.0	2184.9	2988.0	3397.0	4333.3	4948.7	5180.2	4736.6	4128.6	4713.7	4752.8	0.0	225.9	42.0
7-Mar	1738.3	1965.2	2215.4	2766.1	4080.6	4644.2	6022.4	6735.7	6893.7	6046.5	4827.2	6824.5	7306.9	0.0	293.4	54.6
8-Mar	3043.2	3358.2	3941.3	5019.5	7313.9	7313.3	7728.6	7618.3	7215.0	7607.3	8026.6	9560.6	10424.2	0.0	368.4	68.5
9-Mar	5371.9	5332.5	5879.9	6691.8	7971.6	8084.3	8836.3	9198.0	9370.9	9530.3	9948.1	11698.2	12155.3	0.0	596.2	110.8
10-Mar	5787.2	5979.5	6227.0	6871.7	8205.7	8300.4	8744.0	9059.3	9119.4	9324.8	9615.4	10902.5	11388.6	0.0	659.2	122.5
11-Mar	5724.9	6007.3	6270.8	6907.9	8487.6	8559.2	8838.2	9041.4	9051.1	9020.7	9050.3	10502.8	10934.1	0.0	638.2	118.6
12-Mar	7830.9	7666.2	8069.2	8654.6	9510.8	9480.8	9754.1	9762.5	9724.4	9762.7	9841.2	10847.4	11222.5	0.0	953.0	177.1
13-Mar	8330.9	8445.9	8609.3	9123.2	10133.6	10209.7	10589.2	10798.5	10830.0	10691.1	10547.8	11515.5	11765.0	0.0	1015.9	188.7
14-Mar	7543.6	7880.8	8007.2	8429.4	9694.4	9885.1	10348.1	10750.0	10908.3	10785.5	10585.4	11881.2	12284.7	0.0	827.1	153.7
15-Mar	5804.8	6259.1	6318.9	6666.2	8029.7	8476.8	9314.9	10047.2	10440.0	10314.2	10082.4	11044.3	11386.9	0.0	638.2	54.8
16-Mar	4307.5	4664.5	4723.0	5029.0	6263.8	6564.7	7031.4	7545.3	7791.4	8160.1	8550.6	9227.9	9645.6	0.0	521.3	32.9
17-Mar	3225.1	3519.6	3610.5	3990.1	5254.0	5525.6	5968.4	6371.9	6558.5	6791.4	7157.9	7806.6	8023.4	0.0	398.3	9.8
18-Mar	3643.8	3686.4	3850.7	4056.2	4525.5	4664.8	5133.9	5522.3	5747.6	5784.2	5864.7	6628.2	6846.5	0.0	398.3	9.5
19-Mar	9111.3	8033.2	8423.6	8521.3	6875.8	6048.0	5534.5	5008.0	4797.3	4993.8	5321.2	5735.2	5976.1	0.0	1057.9	131.7
20-Mar	11858.7	11395.4	11338.4	11654.4	11401.3	10813.9	10041.7	9160.6	8382.4	8175.9	8036.2	7766.8	7534.4	0.0	1225.8	162.6
21-Mar	9283.7	9945.5	9802.3	10026.4	11271.7	11286.4	11413.5	11748.3	11927.8	11852.8	11743.5	11943.4	11861.4	0.0	1015.9	123.4
22-Mar	6639.8	7257.4	7324.6	7599.8	9133.6	9457.2	9936.7	10564.3	10938.5	11024.3	11035.1	12241.7	12602.4	0.0	764.1	76.4
23-Mar	4861.9	5294.4	5381.8	5721.0	7125.2	7503.2	8104.2	8711.2	9052.4	9253.4	9465.8	10784.8	11288.5	0.0	596.2	44.9
24-Mar	3771.1	4046.3	4119.8	4410.6	5491.5	5766.4	6212.5	6679.9	6937.8	7018.4	7131.2	8060.1	8427.8	0.0	431.3	14.0
25-Mar	4203.1	4233.2	4394.1	4591.7	5028.5	5080.2	5358.5	5600.5	5736.9	5624.5	5481.5	6513.0	6843.3	0.0	431.3	13.8
26-Mar	5826.4	5699.0	5968.6	6322.3	6682.0	6474.4	6442.0	6250.4	6045.5	5791.8	5469.2	6194.4	6432.7	0.0	413.3	10.2
27-Mar	4980.7	5347.5	5454.8	6007.2	7488.4	7471.8	7502.5	7540.3	7412.0	7366.4	7275.5	7558.0	7667.0	0.0	383.3	5.0
28-Mar	3777.3	4117.2	4217.1	4623.2	5997.2	6251.4	6666.6	7122.2	7402.5	7322.4	7204.6	8190.7	8445.9	0.0	338.4	5.0
29-Mar	3298.8	3533.9	3691.7	4098.5	5279.6	5432.3	5740.2	6029.9	6168.1	6248.6	6303.0	6940.0	7241.8	0.0	293.4	5.0
30-Mar	2926.8	3138.0	3286.2	3686.8	4784.4	4823.0	4922.4	5076.4	5145.6	5319.8	5562.3	6228.4	6497.3	0.0	279.9	5.0
31-Mar	2437.1	2650.9	2782.3	3183.3	4292.9	4211.8	4345.2	4462.1	4519.1	4798.4	5194.1	5337.3	5438.7	0.0	266.4	5.0

Date	Pool 14	Pool 13	Pool 12	Pool 11	Pool 10	Pool 9	Pool 8	Pool 7	Pool 6	Pool 5	Pool 4	Pool 3	Pool 2	Dix Dam	Buckhorn	Carr Fork	
1-Apr	1997.6	2148.1	2236.5	2519.3	3331.6	3396.5	3520.2	3737.4	3894.8	4278.8	4817.4	5883.5	6230.1	0.0	234.4	5.0	
2-Apr	1559.2	1691.2	1770.8	2044.2	2800.5	2956.9	3274.8	3562.4	3692.9	3912.5	4245.9	5243.3	5555.5	0.0	30.0	5.0	
3-Apr	1579.4	1713.7	1856.0	2168.6	2944.4	2960.4	3118.6	3226.5	3252.3	3376.3	3586.9	4465.8	4768.8	0.0	30.0	5.0	
4-Apr	2076.8	2198.8	2407.7	2754.1	3518.1	3399.7	3401.2	3365.4	3305.0	3514.4	3840.6	4767.1	5091.3	0.0	30.0	5.0	
5-Apr	4033.8	3835.0	4099.4	4198.6	3889.3	3546.0	3453.8	3485.2	3729.4	4103.7	5124.8	5455.3	0.0	30.0	5.0		
6-Apr	3553.4	3696.4	3699.8	3912.8	4455.7	4478.2	4582.7	4619.3	4502.4	4617.8	4817.3	5958.5	6288.6	0.0	30.0	5.0	
7-Apr	3622.6	3726.4	3854.4	4107.1	4751.8	4723.7	4786.3	4816.1	4786.1	4787.0	4841.7	6033.2	6407.3	0.0	30.0	5.0	
8-Apr	2903.0	3122.4	3194.6	3553.1	4531.8	4612.2	4741.5	4879.6	4905.9	4913.8	4924.5	6059.9	6435.6	0.0	30.0	5.0	
9-Apr	2319.5	2475.9	2538.9	2790.6	3579.0	3689.5	3874.5	4134.5	4294.7	4429.8	4595.2	5640.2	6027.7	0.0	30.0	5.0	
10-Apr	1789.5	1942.0	2020.9	2314.8	3149.4	3246.3	3418.8	3601.4	3684.6	3856.4	4094.8	5036.1	5381.7	0.0	30.0	5.0	
11-Apr	1543.9	1629.4	1689.3	1867.0	2375.0	2561.2	2979.9	3368.6	3566.4	3570.6	3574.8	4444.7	4701.3	0.0	30.0	5.0	
12-Apr	1376.5	1458.6	1525.6	1708.6	2193.4	2401.7	2908.9	3264.9	3394.2	3397.9	3389.3	4204.6	4484.0	0.0	30.0	5.0	
13-Apr	1223.0	1302.8	1371.6	1554.2	2030.9	2187.6	2587.1	2881.1	2993.0	2875.5	2875.5	2717.6	3389.0	3614.1	0.0	30.0	5.0
14-Apr	1092.0	1168.0	1237.5	1415.5	1874.3	1979.2	2272.9	2507.6	2599.6	2592.9	2570.0	3182.7	3410.8	0.0	30.0	5.0	
15-Apr	1128.0	1202.7	1283.1	1450.7	1875.1	1887.7	2038.5	2173.8	2226.9	2372.7	2580.8	3192.0	3425.6	0.0	30.0	5.0	
16-Apr	956.8	1031.3	1099.5	1280.5	1743.3	1840.0	2102.5	2304.0	2359.1	2369.6	2394.0	3005.4	3186.3	0.0	30.0	5.0	
17-Apr	923.3	985.1	1048.0	1189.3	1557.0	1672.8	2011.7	2277.1	2372.9	2467.5	2596.8	3225.5	3436.3	0.0	30.0	5.0	
18-Apr	870.3	914.8	959.7	1062.8	1340.5	1507.7	1944.1	2268.2	2382.7	2262.7	2093.4	2638.3	2798.0	0.0	30.0	5.0	
19-Apr	899.5	942.3	987.6	1077.5	1316.7	1430.9	1794.0	2055.5	2149.4	2010.5	1805.1	2260.8	2416.4	0.0	30.0	5.0	
20-Apr	712.3	750.0	789.1	896.6	1167.5	1130.8	1102.0	1183.9	1266.2	1390.9	1557.7	1898.4	2053.7	0.0	30.0	5.0	
21-Apr	599.9	634.6	674.0	767.3	1004.4	1008.0	1180.0	1204.2	1321.6	1496.3	1905.9	2039.7	0.0	30.0	5.0		
22-Apr	694.4	721.2	747.0	786.5	920.2	916.4	1030.2	1153.8	1190.0	1241.8	1321.6	1691.5	1808.2	0.0	30.0	5.0	
23-Apr	504.6	536.9	580.2	682.2	916.3	999.3	1244.2	1399.7	1415.6	1316.0	1173.4	1514.6	1618.0	0.0	30.0	5.0	
24-Apr	596.9	620.7	640.5	671.8	793.9	821.3	991.1	1167.7	1245.2	1243.2	1233.7	1556.6	1659.8	0.0	30.0	5.0	
25-Apr	425.1	455.5	501.1	595.6	808.8	837.1	975.6	1090.3	1122.5	1056.0	962.5	1240.5	1335.2	0.0	30.0	5.0	
26-Apr	512.9	537.9	556.3	589.6	720.7	675.0	690.6	785.4	842.1	909.0	999.0	1267.7	1353.0	0.0	30.0	5.0	
27-Apr	329.8	360.0	411.0	508.1	716.3	728.9	829.8	903.4	898.6	870.0	836.7	1099.0	1185.3	0.0	30.0	5.0	
28-Apr	423.1	458.6	484.5	540.1	722.9	681.7	721.8	801.0	830.4	797.0	745.2	963.0	1030.6	0.0	30.0	5.0	
29-Apr	507.5	528.1	541.7	565.7	668.1	646.0	715.0	800.0	816.8	827.4	845.3	1108.2	1184.4	0.0	30.0	5.0	
30-Apr	368.4	391.4	429.2	502.1	663.1	665.6	755.4	836.7	846.9	807.7	753.7	973.5	1042.6	0.0	30.0	5.0	

Date	Pool 1	Pool 2	Pool 3	Pool 4	Pool 5	Pool 6	Pool 7	Pool 8	Pool 9	Pool 10	Pool 11	Pool 12	Pool 13	Pool 14
1-May	607.5	629.0	633.4	622.0	677.7	637.4	723.7	821.5	846.1	813.2	764.2	993.0	1058.8	0.0
2-May	430.0	453.6	492.6	573.1	744.5	725.7	783.7	835.4	835.2	795.5	744.7	978.0	1047.9	0.0
3-May	388.6	412.8	442.2	500.2	657.7	654.1	739.6	838.2	859.9	824.3	769.0	992.6	1055.8	0.0
4-May	262.9	295.6	345.2	435.8	636.8	633.2	722.1	814.2	835.0	802.2	755.2	991.1	1061.1	0.0
5-May	352.2	374.7	385.7	415.3	545.4	500.9	517.7	607.6	650.6	611.5	547.2	719.2	777.6	0.0
6-May	357.0	371.3	385.8	410.8	495.1	474.4	541.7	618.6	628.3	587.1	530.8	722.0	777.2	0.0
7-May	278.8	288.7	311.7	343.0	418.9	406.2	466.2	554.3	580.2	529.6	451.8	603.0	648.0	0.0
8-May	235.4	256.7	285.5	333.4	450.4	423.8	491.8	564.1	574.0	457.6	289.6	412.6	457.6	0.0
9-May	284.9	300.4	308.7	330.3	423.3	376.7	395.6	467.6	493.0	412.1	289.8	413.9	442.2	0.0
10-May	346.8	367.0	378.3	400.5	489.8	421.6	433.1	470.9	470.0	390.2	277.6	409.5	443.3	0.0
11-May	492.8	510.7	513.8	512.9	566.1	476.8	458.7	480.3	473.2	541.0	649.1	871.8	904.5	0.0
12-May	2131.3	2019.2	2140.2	1893.4	1063.7	639.7	480.1	459.6	451.6	449.3	448.8	606.5	663.2	0.0
13-May	2558.1	2560.5	2635.3	2719.0	2781.7	2595.3	2446.9	1915.0	1434.9	1233.7	1077.3	1577.9	1720.1	0.0
14-May	1519.8	1728.4	1794.9	2204.2	3331.4	3418.7	3484.4	3420.9	3244.8	3125.5	2975.7	3736.8	3901.3	0.0
15-May	1452.2	1512.8	1572.2	1699.1	2083.3	2243.6	2641.4	3092.5	3366.5	3530.8	3713.2	4580.6	4876.3	0.0
16-May	1580.5	1636.2	1710.4	1839.9	2157.0	2178.5	2388.3	2548.8	2607.6	2599.8	2609.6	3287.8	3532.0	0.0
17-May	1421.6	1468.3	1499.1	1597.9	1879.7	1923.2	2076.9	2246.2	2316.2	2402.2	2517.8	3114.8	3327.2	0.0
18-May	2196.3	2373.6	2682.7	3219.3	4344.7	4019.2	3675.2	3072.3	2646.5	2709.1	2913.5	3701.8	3980.7	0.0
19-May	4847.4	4906.0	5587.0	6681.6	8563.1	7867.4	6966.6	5912.3	5109.0	4989.0	5001.8	6322.0	6674.5	0.0
20-May	7390.0	7039.7	7336.0	7684.3	7649.5	7294.5	7086.0	7052.8	7284.1	7086.1	6875.0	8641.2	9078.0	0.0
21-May	6171.6	6554.9	6531.8	6924.8	8080.1	8089.1	8191.9	8349.5	8327.9	8111.4	7704.6	9448.0	9991.1	0.0
22-May	3260.2	3799.3	3743.7	4154.2	5926.9	6275.4	6652.2	7198.3	7499.9	7629.0	7708.7	9311.8	9953.1	0.0
23-May	1982.0	2197.4	2234.0	2516.2	3589.4	3830.5	4087.8	4517.2	4841.1	5347.8	5983.4	7286.9	7888.6	0.0
24-May	1289.2	1420.3	1483.8	1760.6	2560.1	2703.4	2921.0	3210.6	3397.0	3611.7	3947.3	4838.7	5144.6	0.0
25-May	1019.2	1101.5	1169.6	1368.2	1895.9	1952.1	2098.6	2327.7	2469.8	2726.7	3083.5	3793.7	4064.9	0.0
26-May	688.9	740.8	792.6	949.2	1345.6	1499.2	1828.0	2133.7	2264.1	2188.4	2082.7	2625.2	2778.8	0.0
27-May	528.3	575.1	631.2	761.2	1082.5	1045.0	1028.2	1144.9	1251.2	1442.5	1698.4	2067.7	2241.6	0.0
28-May	484.2	517.4	655.2	635.8	855.2	879.3	1006.9	1147.1	1183.6	1124.0	1035.5	1350.1	1457.8	0.0
29-May	298.9	332.3	388.4	492.4	727.0	791.5	994.0	1160.7	1205.0	1093.1	923.5	1198.8	1284.5	0.0
30-May	346.8	369.8	388.2	428.3	573.3	507.3	461.7	568.2	658.4	705.2	759.1	953.5	1020.7	0.0
31-May	397.4	414.2	425.0	446.2	535.3	548.6	697.8	786.7	769.3	689.7	585.1	888.9	910.9	0.0

Date	Pool 14	Pool 13	Pool 12	Pool 11	Pool 10	Pool 9	Pool 8	Pool 7	Pool 6	Pool 5	Pool 4	Pool 3	Pool 2	Dix Dam	Buckhorn	Carr Fork
1-Jun	432.4	458.2	508.0	541.1	577.3	446.5	409.1	461.3	487.1	510.6	540.0	685.5	732.6	0.0	30.0	5.0
2-Jun	374.9	377.4	390.8	403.9	452.0	390.7	386.1	408.0	389.5	415.4	450.4	600.0	658.7	0.0	30.0	5.0
3-Jun	288.3	282.4	283.6	286.3	314.9	290.8	322.5	391.2	405.6	387.6	361.5	488.9	543.2	0.0	30.0	5.0
4-Jun	159.5	174.8	219.8	251.5	291.0	216.3	215.7	273.1	288.6	227.2	159.2	241.8	276.9	0.0	30.0	5.0
5-Jun	112.7	134.8	182.7	220.7	276.3	142.3	97.4	115.9	93.1	111.0	121.9	185.3	198.7	0.0	30.0	5.0
6-Jun	192.3	211.8	242.5	266.4	308.8	194.3	149.2	130.9	101.9	85.6	78.5	172.3	202.7	0.0	30.0	5.0
7-Jun	194.1	205.7	230.9	247.8	283.6	193.8	168.2	158.4	119.8	156.7	193.7	314.6	349.2	0.0	30.0	5.0
8-Jun	170.6	179.3	201.3	214.5	246.6	175.7	167.5	181.2	155.7	82.3	55.3	130.0	163.2	0.0	30.0	5.0
9-Jun	210.1	213.8	217.4	211.7	225.3	129.1	109.6	132.5	113.6	68.8	49.9	87.3	98.0	0.0	30.0	5.0
10-Jun	341.5	350.3	345.7	317.4	287.3	226.9	235.7	259.7	266.3	215.9	84.0	209.5	253.5	0.0	30.0	5.0
11-Jun	208.8	210.2	231.3	252.4	274.7	206.2	200.9	236.8	236.0	186.9	122.9	182.1	199.6	0.0	30.0	5.0
12-Jun	156.7	177.0	222.9	254.4	294.0	160.8	116.7	131.7	111.1	128.8	139.3	179.4	0.0	30.0	5.0	
13-Jun	104.3	112.9	138.2	158.2	204.5	85.7	51.1	54.9	49.9	105.2	175.7	214.4	211.9	0.0	30.0	5.0
14-Jun	78.2	97.2	132.3	153.8	191.1	69.6	49.9	49.9	49.7	117.5	198.9	249.6	257.3	0.0	30.0	5.0
15-Jun	79.2	94.2	126.4	149.5	187.9	63.9	49.8	49.9	49.6	80.8	122.7	175.0	192.6	0.0	30.0	5.0
16-Jun	103.8	101.3	104.9	107.3	137.2	60.6	49.6	49.8	49.4	74.7	107.6	157.1	167.7	0.0	30.0	5.0
17-Jun	122.1	129.5	139.6	135.7	144.7	60.1	49.5	49.7	49.3	67.9	92.7	136.8	145.4	0.0	30.0	5.0
18-Jun	86.0	98.6	120.5	129.5	143.2	60.0	49.5	49.8	49.2	50.0	55.9	85.5	90.6	0.0	30.0	5.0
19-Jun	69.3	83.4	111.3	126.2	148.6	60.0	49.5	49.7	49.1	49.8	49.9	76.3	79.8	0.0	30.0	5.0
20-Jun	61.6	71.0	91.5	102.7	130.1	60.1	49.5	49.8	49.1	49.6	49.6	69.7	70.7	0.0	30.0	5.0
21-Jun	106.2	109.0	121.2	129.3	149.5	60.0	49.5	49.8	49.1	49.4	49.4	79.4	81.5	0.0	30.0	5.0
22-Jun	225.1	220.9	192.1	158.9	150.5	60.0	49.4	49.8	49.0	49.3	49.2	98.4	108.9	0.0	30.0	5.0
23-Jun	156.6	160.5	172.7	161.6	60.0	49.4	49.8	48.9	49.2	49.1	97.9	111.2	0.0	30.0	5.0	
24-Jun	101.7	116.9	151.2	168.0	185.5	60.5	49.3	49.8	48.8	49.2	49.1	97.9	111.3	0.0	30.0	5.0
25-Jun	126.2	148.0	190.8	220.6	254.1	112.3	49.4	49.8	48.8	49.1	49.4	69.2	75.3	0.0	30.0	5.0
26-Jun	73.1	98.3	149.1	188.2	241.2	128.3	49.5	49.8	48.7	49.0	48.8	90.6	95.8	0.0	30.0	5.0
27-Jun	104.5	113.1	139.8	163.7	213.1	96.9	49.5	49.7	48.5	49.0	48.9	102.3	116.5	0.0	30.0	5.0
28-Jun	87.8	108.9	148.6	175.5	215.3	128.3	49.7	49.7	48.5	49.0	48.9	129.8	154.1	0.0	30.0	5.0
29-Jun	84.8	87.5	101.4	112.4	147.7	88.5	49.8	49.7	48.4	49.0	48.9	112.2	135.4	0.0	30.0	5.0
30-Jun	84.5	78.4	72.7	69.8	89.3	62.5	49.8	49.7	48.3	49.1	49.1	118.3	140.6	0.0	30.0	5.0

Date	Pool 14	Pool 13	Pool 12	Pool 11	Pool 10	Pool 9	Pool 8	Pool 7	Pool 6	Pool 5	Pool 4	Pool 3	Pool 2	Dix Dam	Buckhorn	Carr Fork		
1-Jul	90.6	98.2	106.5	95.1	97.1	60.3	49.8	49.7	48.3	49.1	49.1	62.4	75.9	0.0	30.0	5.0		
2-Jul	92.2	94.2	100.3	95.2	96.9	59.4	49.7	48.1	49.2	49.2	65.2	64.6	0.0	30.0	5.0			
3-Jul	75.2	81.3	93.4	91.8	96.6	59.9	49.7	48.1	49.2	49.2	60.7	59.4	0.0	30.0	5.0			
4-Jul	82.6	85.0	92.2	90.8	97.7	59.9	49.6	49.8	48.0	49.2	49.2	64.1	0.0	30.0	5.0			
5-Jul	82.1	78.3	74.6	70.4	76.7	57.0	49.6	49.8	47.9	49.2	49.2	74.1	71.2	0.0	30.0	5.0		
6-Jul	60.3	70.4	81.1	74.0	77.3	55.3	49.5	49.8	47.8	49.2	49.2	60.8	59.9	0.0	30.0	5.0		
7-Jul	69.0	68.0	71.8	69.0	72.3	53.2	49.4	49.8	47.8	49.1	49.1	61.7	59.8	0.0	30.0	5.0		
8-Jul	65.9	65.4	66.0	57.9	64.1	52.4	49.4	49.8	47.7	49.2	49.2	95.8	99.6	0.0	30.0	5.0		
9-Jul	64.9	69.0	74.2	66.1	66.8	58.9	49.6	49.6	47.9	49.3	49.4	169.8	210.4	0.0	30.0	5.0		
10-Jul	53.9	67.9	87.3	87.3	87.8	59.8	49.8	100.3	48.1	49.0	49.0	61.5	66.1	0.0	30.0	5.0		
11-Jul	61.9	65.8	79.3	84.0	93.1	50.0	49.6	57.2	47.9	48.8	48.8	68.3	62.6	0.0	30.0	5.0		
12-Jul	50.0	57.1	69.1	70.0	82.8	52.4	49.5	58.7	47.9	48.7	48.7	59.5	57.5	0.0	30.0	5.0		
13-Jul	55.9	56.8	67.8	68.4	79.8	87.7	49.9	160.3	48.4	48.6	48.6	135.8	150.2	0.0	30.0	5.0		
14-Jul	54.9	57.0	63.9	60.8	70.4	49.9	49.6	58.8	48.2	48.5	48.4	78.0	85.6	0.0	30.0	5.0		
15-Jul	49.9	55.3	64.6	62.2	69.4	49.9	49.6	59.9	48.2	48.4	48.4	48.3	51.5	51.4	0.0	30.0	5.0	
16-Jul	49.6	56.6	68.5	69.6	77.2	52.5	49.6	71.6	48.3	48.3	48.3	48.2	55.2	53.1	0.0	30.0	5.0	
17-Jul	49.4	52.1	61.3	60.0	67.9	58.7	49.6	66.5	48.3	48.3	48.3	63.0	65.4	0.0	30.0	5.0		
18-Jul	49.2	58.0	71.1	74.2	83.4	59.8	49.7	87.1	48.5	48.2	48.1	84.2	94.3	0.0	30.0	5.0		
19-Jul	49.3	54.2	66.4	67.0	78.1	59.9	49.8	88.7	48.6	48.2	48.1	107.9	123.9	0.0	30.0	5.0		
20-Jul	49.5	53.8	64.3	64.1	74.5	59.2	49.8	70.5	48.6	48.4	48.3	112.9	137.3	0.0	30.0	5.0		
21-Jul	49.7	53.8	63.4	62.4	71.8	59.8	49.8	67.1	48.6	48.3	48.3	59.3	66.7	0.0	30.0	5.0		
22-Jul	50.0	51.3	57.7	56.7	64.4	59.9	49.9	77.6	48.7	48.3	48.3	63.3	70.2	0.0	30.0	5.0		
23-Jul	74.7	62.1	57.3	54.5	62.6	60.0	50.4	92.3	48.9	48.4	48.4	112.7	131.0	0.0	30.0	5.0		
24-Jul	76.9	71.8	62.8	53.4	60.4	60.0	66.9	121.0	49.1	48.6	48.6	156.2	196.8	0.0	30.0	5.0		
25-Jul	84.0	81.4	70.6	54.0	58.8	60.0	68.0	124.3	49.3	49.1	49.3	177.9	228.8	0.0	30.0	5.0		
26-Jul	67.0	71.2	73.5	56.2	58.3	53.5	52.3	86.5	49.4	49.2	49.4	68.1	85.8	0.0	30.0	5.0		
27-Jul	59.5	69.4	82.6	73.7	65.6	49.9	49.9	56.4	49.3	49.2	49.2	49.4	49.9	0.0	30.0	5.0		
28-Jul	50.6	57.4	67.3	65.6	64.9	50.0	49.9	55.6	49.3	49.2	49.4	49.4	49.9	0.0	30.0	5.0		
29-Jul	49.9	53.7	62.9	58.3	64.0	56.6	58.1	102.6	49.6	49.1	49.2	49.9	50.0	0.0	30.0	5.0		
30-Jul	51.6	55.0	64.3	62.6	66.3	49.9	49.9	63.8	49.5	49.0	49.2	63.1	60.9	0.0	30.0	5.0		
31-Jul	62.9	58.9	61.4	57.1	63.7	49.9	49.8	57.1	49.5	49.2	49.4	80.2	87.8	0.0	30.0	5.0		

Date	Pool 14	Pool 13	Pool 12	Pool 11	Pool 10	Pool 9	Pool 8	Pool 7	Pool 6	Pool 5	Pool 4	Pool 3	Pool 2	Dix Dam	Buckhorn	Carr Fork
1-Aug	57.5	62.4	66.8	61.9	64.7	55.7	50.8	95.9	49.7	49.2	49.4	75.5	86.9	0.0	30.0	5.0
2-Aug	49.8	56.1	65.7	62.0	64.8	50.0	49.9	60.6	49.6	49.0	49.2	56.3	57.2	0.0	30.0	5.0
3-Aug	49.7	52.1	59.8	57.0	63.0	55.5	49.9	67.8	49.7	49.1	49.2	75.6	80.8	0.0	30.0	5.0
4-Aug	49.7	53.4	60.8	57.2	63.1	50.0	49.8	56.6	49.6	49.0	49.1	58.2	61.1	0.0	30.0	5.0
5-Aug	49.7	53.2	60.5	57.2	62.7	50.0	49.8	53.1	49.6	48.9	49.0	49.9	50.0	0.0	30.0	5.0
6-Aug	49.7	52.8	59.8	56.9	62.7	50.0	49.7	52.3	49.5	49.0	49.2	69.0	74.6	0.0	30.0	5.0
7-Aug	49.8	55.1	64.0	62.7	65.8	92.6	101.3	173.2	66.4	49.0	49.1	121.1	144.7	0.0	30.0	5.0
8-Aug	137.4	88.9	66.2	57.9	63.5	62.4	65.4	116.7	105.4	49.7	49.7	226.4	285.2	0.0	30.0	5.0
9-Aug	109.6	112.9	103.1	75.3	63.6	49.9	49.9	57.0	50.0	60.9	65.1	78.2	96.3	0.0	30.0	5.0
10-Aug	89.7	95.9	105.3	93.1	75.3	52.7	49.9	65.0	52.7	91.3	123.1	103.7	94.4	0.0	30.0	5.0
11-Aug	91.9	90.4	91.2	86.8	78.9	58.8	49.9	64.7	56.5	72.6	91.9	114.2	116.0	0.0	30.0	5.0
12-Aug	80.3	82.9	87.4	81.7	78.9	59.8	50.8	73.1	71.5	71.0	72.8	117.6	131.0	0.0	30.0	5.0
13-Aug	50.0	60.2	69.5	67.0	69.0	59.9	65.7	98.9	109.3	61.6	51.5	101.1	113.3	0.0	30.0	5.0
14-Aug	50.0	57.4	70.6	70.4	76.2	60.0	88.1	142.7	166.5	92.7	49.9	116.5	134.6	0.0	30.0	5.0
15-Aug	79.7	65.9	66.1	62.3	68.4	58.6	57.0	96.5	98.6	129.7	114.2	159.6	173.1	0.0	30.0	5.0
16-Aug	94.3	86.4	68.8	56.5	62.0	58.9	54.1	78.0	80.2	101.7	121.9	144.8	151.4	0.0	30.0	5.0
17-Aug	95.0	95.9	91.4	68.8	62.8	50.0	49.9	56.2	50.0	83.8	120.4	146.0	152.2	0.0	30.0	5.0
18-Aug	82.5	82.4	82.4	71.1	62.7	50.0	49.8	52.2	49.9	84.9	122.1	143.1	149.0	0.0	30.0	5.0
19-Aug	75.8	76.5	77.9	69.3	62.9	49.9	49.8	50.5	49.9	68.0	88.7	108.2	117.5	0.0	30.0	5.0
20-Aug	77.4	74.5	71.3	60.9	61.9	56.2	50.6	87.2	72.0	83.7	108.3	187.6	212.0	0.0	30.0	5.0
21-Aug	74.8	73.0	69.7	57.1	59.3	51.8	50.0	70.6	59.9	50.0	54.7	98.3	114.0	0.0	30.0	5.0
22-Aug	74.8	75.4	74.5	61.3	60.8	49.9	49.8	51.9	49.9	72.1	80.3	103.9	117.1	0.0	30.0	5.0
23-Aug	78.7	76.4	73.4	62.3	61.2	53.2	49.9	66.1	50.0	57.4	65.4	86.0	93.9	0.0	30.0	5.0
24-Aug	70.3	72.0	73.2	63.1	62.3	58.9	50.9	88.6	94.0	50.0	49.9	76.4	84.8	0.0	30.0	5.0
25-Aug	75.3	73.9	72.8	63.1	62.6	63.6	105.7	170.9	216.0	50.0	49.4	62.4	64.1	0.0	30.0	5.0
26-Aug	68.0	70.8	72.3	63.4	62.6	49.9	49.9	58.7	50.0	219.1	333.2	325.8	314.3	0.0	30.0	5.0
27-Aug	69.3	68.4	68.8	59.0	61.7	49.8	49.7	50.4	49.9	50.0	63.8	56.5	59.5	0.0	30.0	5.0
28-Aug	55.6	61.5	65.3	56.9	60.1	49.8	49.7	51.5	49.8	49.9	49.9	49.9	49.9	0.0	30.0	5.0
29-Aug	49.8	54.2	61.8	56.2	60.5	50.0	49.8	72.8	50.0	49.9	49.9	49.9	49.9	0.0	30.0	5.0
30-Aug	49.5	52.3	59.1	55.4	61.6	56.6	63.2	133.8	167.4	49.8	49.5	50.0	49.9	0.0	30.0	5.0
31-Aug	49.4	52.3	58.5	55.1	62.5	59.4	90.7	164.3	205.6	49.8	48.9	84.6	72.1	0.0	30.0	5.0

Date	Pool 14	Pool 13	Pool 12	Pool 11	Pool 10	Pool 9	Pool 8	Pool 7	Pool 6	Pool 5	Pool 4	Pool 3	Pool 2	Dix Dam	Buckhorn	Carr Fork	
1-Sep	49.3	52.6	59.1	55.1	62.6	52.3	94.5	99.6	50.0	48.6	97.7	107.1	0.0	30.0	5.0		
2-Sep	49.3	52.9	59.9	55.5	62.6	50.0	50.1	60.2	50.0	48.5	61.1	69.4	0.0	30.0	5.0		
3-Sep	49.2	54.6	63.6	58.8	64.7	50.0	49.9	55.0	50.0	49.9	48.4	50.0	52.8	0.0	30.0	5.0	
4-Sep	49.2	52.4	60.4	57.0	63.1	50.0	49.8	56.7	50.0	48.6	80.4	86.3	0.0	30.0	5.0		
5-Sep	49.1	51.3	57.5	55.7	62.7	50.0	49.8	52.1	49.9	52.6	48.7	62.0	68.9	0.0	30.0	5.0	
6-Sep	49.1	53.8	61.7	57.1	64.4	53.0	49.8	57.1	49.9	56.1	48.8	62.4	67.9	0.0	30.0	5.0	
7-Sep	49.0	53.2	61.6	58.4	64.2	58.9	49.9	81.0	67.3	65.4	49.0	96.8	113.0	0.0	30.0	5.0	
8-Sep	49.0	51.3	58.1	56.1	62.9	57.1	49.9	69.7	60.5	52.2	49.0	75.0	84.9	0.0	30.0	5.0	
9-Sep	48.9	53.7	61.7	58.0	64.6	50.0	49.8	56.7	50.0	49.9	48.8	49.9	49.9	0.0	30.0	5.0	
10-Sep	48.9	51.4	58.2	56.1	63.0	50.5	49.8	55.1	49.9	49.8	48.7	49.8	49.9	0.0	30.0	5.0	
11-Sep	48.9	52.0	58.6	55.8	62.7	-	56.2	49.8	57.4	49.9	49.7	48.6	49.8	49.9	0.0	30.0	5.0
12-Sep	48.8	55.2	65.0	63.0	67.0	50.0	49.7	52.7	49.9	49.7	48.6	56.1	58.1	0.0	30.0	5.0	
13-Sep	48.7	54.8	66.3	66.6	73.0	51.9	49.7	51.2	49.8	49.7	48.6	54.3	56.4	0.0	30.0	5.0	
14-Sep	48.7	50.9	59.3	57.5	65.6	53.0	49.6	50.4	49.8	49.9	48.8	68.1	75.0	0.0	30.0	5.0	
15-Sep	48.6	52.3	60.0	57.1	65.1	54.1	49.6	50.8	49.7	49.9	48.9	61.9	66.5	0.0	30.0	5.0	
16-Sep	48.5	52.6	60.6	57.9	64.8	50.0	49.5	50.0	49.7	50.0	49.0	62.1	67.4	0.0	30.0	5.0	
17-Sep	48.4	52.4	60.7	58.2	64.6	50.0	49.5	50.0	49.6	50.0	49.0	55.7	58.8	0.0	30.0	5.0	
18-Sep	48.4	50.8	57.4	56.0	63.0	58.2	49.5	53.7	49.7	49.9	49.0	50.0	52.2	0.0	30.0	5.0	
19-Sep	48.3	51.5	58.0	55.5	62.7	58.4	49.5	55.0	49.6	49.9	48.9	50.1	50.5	0.0	30.0	5.0	
20-Sep	48.2	50.0	55.2	53.9	62.1	50.0	49.4	50.0	49.5	49.8	48.8	50.0	50.0	0.0	30.0	5.0	
21-Sep	48.2	50.8	55.9	53.0	62.6	57.8	49.6	67.8	49.7	49.8	48.8	59.2	60.0	0.0	30.0	5.0	
22-Sep	48.1	50.9	56.3	52.6	62.6	59.6	49.6	74.5	49.7	49.7	48.8	82.1	84.6	0.0	30.0	5.0	
23-Sep	48.0	50.8	56.3	52.2	62.6	59.9	49.7	85.6	49.9	49.6	48.7	78.4	88.8	0.0	30.0	5.0	
24-Sep	48.0	50.7	56.3	52.0	62.6	71.5	56.7	146.2	158.0	49.7	48.5	139.5	167.6	0.0	30.0	5.0	
25-Sep	47.9	55.3	65.5	56.4	66.8	61.3	63.4	118.5	137.1	90.2	48.7	148.5	182.0	0.0	30.0	5.0	
26-Sep	47.9	52.7	63.2	58.9	65.5	60.2	63.6	106.2	119.5	157.7	49.3	112.1	140.6	0.0	30.0	5.0	
27-Sep	47.8	50.8	59.2	56.8	63.4	50.0	49.9	58.5	50.0	78.3	49.7	59.3	63.3	0.0	30.0	5.0	
28-Sep	47.7	50.0	56.3	55.2	62.8	56.2	50.5	71.5	68.7	57.2	49.7	51.8	54.7	0.0	30.0	5.0	
29-Sep	47.7	50.9	57.2	54.8	62.7	54.5	50.1	61.9	54.7	50.0	49.7	52.8	53.9	0.0	30.0	5.0	
30-Sep	47.6	51.1	57.8	54.6	62.6	56.7	50.1	61.6	53.8	49.9	49.6	50.0	50.1	0.0	30.0	5.0	

Date	Pool 14	Pool 13	Pool 12	Pool 11	Pool 10	Pool 9	Pool 8	Pool 7	Pool 6	Pool 5	Pool 4	Pool 3	Pool 2	Dix Dam	Buckhorn	Carr Fork	
1-Oct	47.7	50.0	54.8	52.7	60.3	59.5	70.7	106.6	125.5	49.9	124.1	141.5	0.0	30.0	5.0	5.0	
2-Oct	47.7	50.0	55.0	52.1	60.9	59.9	63.8	104.3	110.4	57.0	94.3	105.6	0.0	30.0	5.0	5.0	
3-Oct	47.7	50.0	54.8	51.6	60.8	59.9	74.9	119.3	139.8	136.3	110.3	135.7	142.6	0.0	30.0	5.0	
4-Oct	47.7	50.0	54.5	51.0	60.3	60.0	76.9	128.6	149.1	145.1	133.4	176.4	184.8	0.0	30.0	5.0	
5-Oct	47.7	50.0	54.3	50.5	59.8	49.9	49.9	56.2	50.0	49.9	53.2	53.8	0.0	30.0	5.0	5.0	
6-Oct	47.8	50.0	54.2	50.3	59.3	59.3	97.5	158.0	204.9	215.7	199.1	276.2	295.6	0.0	46.6	5.0	
7-Oct	48.4	49.9	50.0	49.9	50.0	50.0	56.3	64.7	119.7	134.7	126.3	116.2	173.9	193.3	0.0	131.5	5.0
8-Oct	48.9	49.9	50.0	49.9	50.4	59.4	72.9	122.0	147.7	145.8	135.0	177.9	195.4	0.0	130.4	5.0	
9-Oct	49.4	49.9	50.0	49.9	51.5	49.9	50.4	68.6	64.7	58.0	60.1	67.9	77.7	0.0	129.4	5.0	
10-Oct	49.9	49.9	50.0	49.9	50.0	49.9	51.7	86.9	168.0	250.6	328.5	346.3	338.5	427.4	453.1	0.0	
11-Oct	124.9	71.5	50.0	49.9	51.0	49.8	49.9	59.7	50.0	50.0	50.0	54.3	56.5	0.0	128.4	5.0	
12-Oct	140.4	136.3	97.7	50.9	51.0	50.0	69.9	130.9	167.9	175.2	153.7	219.6	237.3	0.0	127.3	5.0	
13-Oct	139.8	139.7	134.2	88.6	56.8	58.1	72.9	128.6	158.1	154.3	144.7	195.9	214.3	0.0	126.3	5.0	
14-Oct	138.7	139.0	139.1	124.1	81.2	59.7	67.7	111.5	130.2	126.7	117.8	154.8	169.2	0.0	125.3	5.0	
15-Oct	137.8	138.0	138.5	129.4	107.6	64.6	84.6	134.2	160.0	157.4	148.2	200.8	215.2	0.0	124.3	5.0	
16-Oct	99.4	106.5	118.3	120.0	117.1	79.0	96.2	159.0	184.8	179.9	167.9	235.8	250.6	0.0	123.3	5.0	
17-Oct	125.7	121.2	114.6	106.5	108.6	63.0	70.2	124.8	137.1	130.2	118.2	170.1	184.0	0.0	122.3	5.0	
18-Oct	126.4	126.2	124.2	111.9	105.3	72.5	89.8	150.3	173.2	171.7	161.0	230.1	243.4	0.0	121.4	5.0	
19-Oct	125.6	125.7	125.8	116.1	108.5	64.7	76.3	135.7	154.4	150.1	139.6	199.2	212.8	0.0	120.5	5.0	
20-Oct	124.8	124.9	125.2	116.5	110.6	77.8	96.5	160.8	188.4	186.8	176.9	248.8	265.1	0.0	119.5	5.0	
21-Oct	123.2	123.5	124.1	115.8	111.0	120.3	172.2	261.7	318.1	320.8	312.9	415.3	441.8	0.0	118.5	5.0	
22-Oct	121.7	122.0	122.6	114.4	110.2	75.5	100.6	184.0	218.7	212.5	201.3	270.6	294.0	0.0	117.5	5.0	
23-Oct	156.9	152.6	140.9	122.2	111.7	207.5	335.1	486.2	602.8	627.4	643.5	817.7	868.0	0.0	116.7	5.0	
24-Oct	158.4	158.2	155.6	140.5	124.0	50.0	49.9	77.8	69.2	57.1	57.8	59.9	65.7	0.0	115.7	42.1	
25-Oct	157.8	157.9	157.8	147.9	136.0	158.1	194.7	243.7	308.5	332.7	331.3	412.9	429.2	0.0	114.7	44.0	
26-Oct	156.7	164.3	177.5	176.8	172.1	144.8	181.1	269.1	312.5	302.4	287.4	367.1	392.4	0.0	113.9	43.8	
27-Oct	155.7	155.9	158.9	156.9	161.6	147.3	181.8	267.7	312.0	310.3	302.6	379.4	398.8	0.0	113.0	43.7	
28-Oct	154.0	155.1	157.5	149.6	151.5	76.7	72.3	128.4	135.0	125.9	116.0	157.1	170.0	0.0	112.0	43.6	
29-Oct	153.3	154.8	157.7	150.5	149.5	160.5	206.0	271.2	317.0	327.5	324.5	428.4	449.4	0.0	111.0	43.5	
30-Oct	152.4	154.0	157.3	150.8	149.5	163.1	225.6	336.9	401.9	404.9	399.5	501.8	533.3	0.0	110.3	43.4	
31-Oct	151.4	153.0	156.4	150.0	149.2	127.9	163.7	265.0	319.5	320.4	315.8	401.9	429.7	0.0	109.3	43.3	

Date	Pool 14	Pool 13	Pool 12	Pool 11	Pool 10	Pool 9	Pool 8	Pool 7	Pool 6	Pool 5	Pool 4	Pool 3	Pool 2	Dix Dam	Buckhorn	Carr Fork	
1-Nov	156.6	162.5	166.2	168.3	186.3	124.9	133.3	201.6	225.1	222.6	219.4	288.4	310.9	0.0	107.6	43.0	
2-Nov	115.7	123.6	140.7	150.1	174.0	157.9	228.1	278.7	266.6	260.2	194.0	346.2	357.0	0.0	106.7	5.0	
3-Nov	113.3	116.8	123.2	128.6	154.0	99.9	86.2	164.1	193.6	237.2	121.1	118.3	161.9	173.1	0.0	105.8	5.0
4-Nov	112.1	115.6	119.6	120.1	141.3	80.2	58.1	106.4	122.1	121.1	118.3	161.9	173.1	0.0	104.8	5.0	
5-Nov	110.4	114.1	118.1	117.5	134.7	159.0	331.2	355.2	293.8	286.8	308.7	430.3	434.4	0.0	103.9	5.0	
6-Nov	110.5	113.8	117.3	116.2	131.7	115.4	185.9	300.1	333.8	339.0	335.5	435.7	457.4	0.0	103.6	5.0	
7-Nov	109.0	112.6	116.5	115.4	130.3	64.7	50.6	121.2	160.4	158.6	153.8	200.2	224.0	0.0	102.4	5.0	
8-Nov	108.3	111.8	115.6	114.6	129.3	134.7	267.1	289.3	253.5	252.0	277.1	387.4	395.4	0.0	101.8	5.0	
9-Nov	107.5	110.9	114.8	113.7	128.4	64.2	49.9	103.6	139.6	135.4	116.3	160.3	185.1	0.0	100.9	5.0	
10-Nov	106.6	110.1	113.9	112.9	127.5	151.2	319.8	321.9	270.5	269.2	297.2	405.8	408.8	0.0	100.0	5.0	
11-Nov	105.7	111.4	116.5	119.2	140.3	119.2	192.1	300.6	327.3	327.4	317.7	420.3	443.0	0.0	99.1	5.0	
12-Nov	103.4	108.4	114.4	116.7	138.6	101.8	134.7	221.4	250.2	249.4	250.3	326.7	347.2	0.0	98.2	5.0	
13-Nov	102.0	106.7	112.3	114.3	136.3	162.2	340.0	420.2	394.9	398.3	424.7	564.4	583.7	0.0	97.7	5.0	
14-Nov	103.0	107.2	111.6	113.0	134.4	82.9	79.5	188.6	246.4	245.6	230.2	295.7	325.1	0.0	97.4	5.0	
15-Nov	101.4	106.1	111.1	112.5	133.4	117.9	200.5	253.4	248.4	248.0	263.1	354.9	368.1	0.0	96.5	5.0	
16-Nov	233.9	227.0	184.5	145.3	142.2	63.3	49.7	76.5	100.6	96.4	86.5	109.8	132.2	0.0	95.6	5.0	
17-Nov	128.2	141.5	170.2	185.9	189.2	171.9	238.0	206.5	176.2	178.3	195.2	272.1	272.2	0.0	95.4	5.0	
18-Nov	126.0	130.0	139.0	147.5	178.8	143.9	166.8	230.4	230.6	221.6	207.7	285.4	300.4	0.0	95.6	5.0	
19-Nov	124.3	126.7	130.5	130.6	150.7	91.6	65.2	127.4	151.2	146.1	133.9	172.8	188.2	0.0	95.3	5.0	
20-Nov	122.7	124.4	126.9	123.2	135.2	112.5	158.5	189.2	175.5	172.9	178.9	248.2	251.2	0.0	94.4	5.0	
21-Nov	116.8	119.1	122.7	119.2	127.3	97.1	134.6	200.3	204.2	203.5	203.2	283.8	296.0	0.0	93.0	5.0	
22-Nov	116.2	117.8	119.9	115.4	122.3	88.1	119.6	187.3	197.4	198.0	201.0	279.1	294.5	0.0	92.2	5.0	
23-Nov	118.0	119.2	120.2	114.3	119.3	66.4	66.3	129.5	148.2	146.7	143.5	205.8	223.6	0.0	91.3	5.0	
24-Nov	117.6	119.1	120.7	114.8	118.5	61.5	52.8	100.3	109.7	108.0	108.9	162.9	174.2	0.0	90.5	5.0	
25-Nov	116.9	118.4	120.2	114.7	118.4	119.3	249.1	273.6	231.3	229.7	254.0	370.5	379.1	0.0	89.6	5.0	
26-Nov	116.5	118.0	119.7	114.2	118.1	61.5	49.7	84.0	112.5	103.9	84.1	118.7	143.4	0.0	88.8	5.0	
27-Nov	116.5	117.9	119.5	113.9	117.7	60.2	49.4	53.0	56.9	52.5	54.8	58.0	62.0	0.0	88.0	5.0	
28-Nov	116.1	117.6	119.3	113.6	117.4	60.0	49.3	52.2	50.0	50.0	53.4	61.7	62.1	0.0	90.4	5.0	
29-Nov	115.6	117.1	118.8	113.3	117.2	60.0	49.1	50.8	50.0	50.0	53.1	70.7	67.5	0.0	91.8	5.0	
30-Nov	115.0	116.6	118.3	112.8	116.8	113.1	49.8	111.7	87.5	88.4	107.9	191.1	194.7	0.0	93.1	5.0	

Date	Pool 14	Pool 13	Pool 12	Pool 11	Pool 10	Pool 9	Pool 8	Pool 7	Pool 6	Pool 5	Pool 4	Pool 3	Pool 2	Dix Dam	Buckhorn	Carr Fork
1-Dec	910.2	919.5	860.4	618.0	314.7	177.5	171.8	178.8	157.0	142.5	134.7	218.1	233.4	0.0	91.4	800.0
2-Dec	350.5	354.7	400.6	500.2	627.0	486.5	252.7	156.4	129.0	105.0	78.4	104.3	118.9	0.0	30.0	301.3
3-Dec	69.3	97.9	166.2	236.6	354.9	482.0	747.9	842.3	715.7	639.8	560.7	548.9	488.4	0.0	30.0	5.0
4-Dec	58.0	68.8	91.5	119.7	195.5	211.2	272.3	443.8	540.5	582.1	620.4	740.1	755.3	0.0	30.0	5.0
5-Dec	54.1	61.6	72.0	85.3	131.0	164.0	302.4	428.8	457.0	476.1	511.8	667.4	716.1	0.0	30.0	5.0
6-Dec	50.0	56.1	66.3	73.0	103.1	49.9	49.1	53.2	81.7	83.2	79.9	95.3	126.5	0.0	30.0	5.0
7-Dec	49.7	57.9	66.3	77.6	117.0	53.9	49.2	61.8	69.5	68.3	65.7	101.8	109.4	0.0	30.0	5.0
8-Dec	49.6	62.1	71.4	90.7	150.9	200.4	290.0	273.8	237.9	256.2	308.1	457.4	465.5	0.0	30.0	8.7
9-Dec	473.9	419.3	218.5	113.3	105.9	49.9	48.9	49.9	50.0	50.0	50.0	54.9	71.4	0.0	30.0	14.4
10-Dec	270.5	261.8	276.0	257.0	132.3	52.8	49.1	52.4	55.0	50.0	49.9	61.9	67.3	0.0	30.0	13.5
11-Dec	85.4	96.3	135.9	151.6	128.5	107.5	49.6	95.5	84.4	85.6	86.8	148.6	148.4	0.0	30.0	8.9
12-Dec	305.8	295.1	229.3	171.0	149.5	80.2	49.6	79.5	77.9	77.1	75.3	133.4	143.4	0.0	30.0	6.4
13-Dec	96.6	112.0	157.8	184.1	167.7	94.8	49.7	82.3	77.6	82.9	92.2	165.5	175.1	0.0	30.0	5.8
14-Dec	63.8	74.8	98.9	118.1	153.7	60.7	48.9	49.9	49.9	49.9	49.9	55.6	60.2	0.0	30.0	5.4
15-Dec	129.2	112.1	94.0	88.0	104.2	178.7	97.7	152.1	114.6	164.9	248.0	393.5	391.3	0.0	30.0	5.1
16-Dec	135.6	147.1	147.2	143.4	170.2	101.0	92.5	138.0	134.6	109.3	91.3	246.0	300.7	0.0	30.0	5.0
17-Dec	69.3	89.8	118.6	143.9	187.7	113.3	79.9	120.0	121.0	110.1	92.0	143.6	162.4	0.0	30.0	5.0
18-Dec	104.2	103.0	104.9	118.3	167.0	165.1	253.1	273.7	230.6	233.2	256.9	377.3	382.0	0.0	30.0	5.0
19-Dec	110.3	120.8	125.8	136.7	189.4	171.2	257.3	344.1	344.8	337.9	326.9	452.1	479.0	0.0	30.0	5.0
20-Dec	110.8	120.6	130.2	143.7	192.7	233.7	439.5	557.9	547.8	557.0	583.4	784.2	824.4	0.0	30.0	5.0
21-Dec	111.5	112.7	116.3	117.9	141.8	99.2	88.0	213.5	289.2	283.8	258.2	316.8	352.5	0.0	30.0	5.0
22-Dec	111.6	115.7	119.4	120.3	140.5	202.1	457.7	543.1	494.9	512.4	579.0	796.4	831.6	0.0	30.0	5.0
23-Dec	112.2	112.0	113.5	110.0	116.2	99.6	144.5	288.0	359.1	354.1	327.0	421.0	460.4	0.0	30.0	5.0
24-Dec	113.2	118.5	122.0	121.4	137.5	94.9	127.9	213.4	242.3	245.7	256.7	341.4	360.8	0.0	30.0	5.0
25-Dec	113.7	119.6	125.2	129.5	151.4	50.0	49.1	50.0	54.3	52.3	51.8	55.5	66.9	0.0	30.0	5.0
26-Dec	108.9	122.7	135.7	154.9	205.6	203.7	106.7	153.1	138.5	150.6	180.9	259.2	248.7	0.0	30.0	5.0
27-Dec	180.9	184.2	171.8	173.6	220.6	125.4	56.2	86.4	90.8	94.1	101.1	200.0	228.2	0.0	30.0	5.0
28-Dec	134.1	144.5	163.3	175.8	207.8	129.4	62.5	77.8	74.9	73.2	69.8	131.1	149.3	0.0	30.0	5.0
29-Dec	132.4	141.2	152.0	167.4	214.4	146.1	102.6	102.4	81.2	80.9	86.8	165.6	175.7	0.0	30.0	5.0
30-Dec	328.7	327.4	281.5	228.9	219.4	170.1	186.2	193.5	153.7	147.1	153.7	260.2	277.3	0.0	30.0	5.0
31-Dec	290.5	292.5	299.6	297.2	277.0	144.5	54.0	93.9	1'6.4	96.1	77.4	125.9	146.2	0.0	30.0	5.0

Simulated Storage Values (MG) - 1930 Baseline Deficit Analysis

Tabulated values denote the predicted storages occurring at the listed location in the 1930 baseline deficit simulation.
 Storage values are instantaneous storages occurring at the end of the day for the listed impoundment.

Date	Pool 14	Pool 13	Pool 12	Pool 11	Pool 10	Pool 9	Pool 8	Pool 7	Pool 6	Pool 5	Pool 4	Pool 3	Pool 2	Dix Dam	Jackson	Buckhorn	Carr Fork
1-Jan	1407.5	1296.4	2590.6	2751.3	3684.2	4182.1	3592.3	5134.4	4626.2	2901.3	3299.3	4269.7	2296.3	139856.3	610.7	3436.1	5308.2
2-Jan	1407.5	1303.9	2574.7	2719.6	3639.5	4104.5	3436.0	4853.2	4409.7	2782.3	3172.1	4156.7	2258.1	139841.9	610.7	3436.1	5308.2
3-Jan	1414.3	1320.3	2611.7	2784.9	3854.2	4257.0	3523.0	4939.0	4450.9	2809.1	3201.3	4146.5	2246.6	139827.4	610.7	3436.1	5308.2
4-Jan	1453.6	1341.1	2632.5	2776.8	3732.5	4167.8	3469.2	4893.7	4461.3	2813.2	3205.0	4135.8	2233.9	139812.9	610.7	3436.1	5308.2
5-Jan	1449.6	1339.1	2618.7	2753.8	3672.5	4129.7	3449.9	4867.1	4433.2	2782.9	3146.9	4049.8	2186.1	139798.4	610.7	3436.1	5308.2
6-Jan	1410.2	1308.0	2573.5	2709.4	3617.2	4093.1	3426.2	4830.4	4400.9	2766.6	3126.4	3963.8	2136.7	139784.0	610.7	3436.1	5308.2
7-Jan	1385.3	1283.8	2542.9	2679.1	3562.0	4044.1	3382.9	4750.7	4334.1	2730.4	3085.2	3974.9	2152.5	139769.5	610.7	3436.1	5308.2
8-Jan	1360.6	1268.6	2531.0	2688.5	3645.2	4101.1	3413.3	4773.1	4332.2	2796.8	3244.7	4437.5	2438.5	139755.0	610.7	3436.1	5308.2
9-Jan	1363.5	1281.1	2566.4	2755.2	3852.9	4398.8	3835.9	5657.1	5163.9	3138.7	3529.8	6040.8	3365.2	139740.5	610.7	3436.1	5308.2
10-Jan	1345.2	1260.8	2331.2	2705.9	3730.3	4224.7	3591.0	5181.3	4697.2	2934.5	3327.1	4973.2	2788.6	139726.1	610.7	3436.1	5308.2
11-Jan	1312.4	1225.8	2473.7	2634.2	3562.5	4084.5	3471.3	4961.7	4530.5	2832.4	3206.2	4284.1	2358.9	139711.6	610.7	3436.1	5308.2
12-Jan	1283.7	1196.0	2428.3	2582.0	3445.6	3971.2	3356.9	4740.3	4337.1	2748.1	3125.2	4094.9	2233.4	139697.1	610.7	3436.1	5308.2
13-Jan	1287.5	1198.1	2434.6	2587.7	3444.3	3955.4	3331.2	4672.8	4270.9	2744.0	3164.3	4323.8	2377.0	139682.7	610.7	3436.1	5308.2
14-Jan	1287.4	1205.1	2452.6	2623.9	3562.5	4059.6	3425.2	4831.7	4320.5	2808.7	3243.9	4585.0	2534.0	139668.2	610.7	3436.1	5308.2
15-Jan	1303.5	1221.9	2481.8	2659.9	3645.8	4149.9	3530.8	5048.8	4591.1	2855.1	3224.0	4515.5	2490.1	139653.7	610.7	3436.1	5308.2
16-Jan	1285.6	1204.2	2449.8	2620.7	3562.8	4071.0	3445.0	4897.0	4464.9	2818.3	3206.0	4268.7	2345.8	139639.2	610.7	3436.1	5308.2
17-Jan	1271.7	1186.1	2418.4	2576.5	3445.3	3968.8	3355.2	4738.0	4337.4	2745.8	3125.9	4079.3	2218.9	139634.8	610.7	3436.1	5308.2
18-Jan	1266.0	1176.7	2400.7	2548.8	3363.0	3904.1	3309.8	4662.3	4275.0	2697.8	3048.2	3912.8	2120.2	139610.3	610.7	3436.1	5308.2
19-Jan	1237.9	1149.9	2359.1	2506.6	3286.6	3830.1	3230.2	4509.1	4145.7	2664.2	3010.4	3793.3	2053.2	139595.8	610.7	3436.1	5308.2
20-Jan	1206.0	1120.7	2318.9	2469.9	3226.8	3782.5	3195.2	4450.0	4098.1	2611.0	2960.6	3714.9	2003.8	139581.3	610.7	3436.1	5308.2
21-Jan	1237.4	1145.7	2352.7	2486.8	3206.2	3761.3	3187.4	4441.9	4092.1	2604.7	2947.0	3679.8	1983.5	139566.9	610.7	3436.1	5308.2
22-Jan	1238.0	1149.0	2359.2	2503.5	3265.0	3807.4	3214.4	4466.2	4098.6	2599.3	2928.6	3627.9	1951.1	139552.4	610.7	3436.1	5308.2
23-Jan	1235.2	1145.0	2351.3	2491.8	3235.4	3783.1	3192.6	4440.2	4087.4	2590.0	2910.9	3580.7	1922.3	139537.9	610.7	3436.1	5308.2
24-Jan	1226.7	1136.6	2337.8	2477.3	3205.9	3761.4	3178.3	4418.1	4070.2	2584.6	2909.4	3577.7	1921.6	139523.4	610.7	3436.1	5308.2
25-Jan	1266.2	1168.5	2382.7	2507.1	3204.9	3746.3	3158.8	4378.4	4038.3	2573.9	2908.0	3563.5	1912.6	139509.0	610.7	3436.1	5308.2
26-Jan	1245.0	1151.7	2355.2	2489.4	3211.2	3762.6	3171.2	4392.4	4042.3	2574.8	2908.4	3554.3	1904.2	139494.5	610.7	3436.1	5308.2
27-Jan	1292.8	1194.4	2424.4	2556.1	3307.0	3819.6	3203.9	4428.0	4063.8	2580.4	2906.9	3556.6	1905.4	139480.0	610.7	3436.1	5308.2
28-Jan	1506.8	1383.9	2720.1	2908.1	4035.9	4411.5	3686.2	5212.7	4654.4	2872.1	3211.2	4046.6	2157.8	139465.6	610.7	3436.1	5308.2
29-Jan	1564.0	1448.2	2782.8	2963.4	4158.6	4531.4	3792.5	5473.7	4943.6	3027.1	3392.3	4470.9	2411.6	139451.1	610.7	3436.1	5308.2
30-Jan	1477.1	1385.1	2684.6	2846.8	3963.0	4387.7	3678.4	5301.4	4814.9	2969.0	3334.1	4371.0	2366.0	139436.6	610.7	3436.1	5308.2
31-Jan	1445.9	1341.1	2625.1	2764.0	3729.4	4192.7	3515.7	5007.6	4565.4	2863.5	3246.8	4184.9	2264.9	139422.1	610.7	3436.1	5308.2

Date	Pool 14	Pool 13	Pool 12	Pool 11	Pool 10	Pool 9	Pool 8	Pool 7	Pool 6	Pool 5	Pool 4	Pool 3	Pool 2	Dix Dam	Jackson	Buckhorn	Carr Fork
1-Feb	1381.8	1286.9	2545.7	2689.3	3617.5	4095.7	3425.0	4831.6	4403.6	2766.0	3126.9	4018.1	2170.5	139409.4	610.7	3436.1	5308.2
2-Feb	1351.6	1254.0	2502.5	2640.9	3505.7	4002.1	3352.0	4706.4	4304.8	2722.6	3085.6	3921.8	2120.1	139396.4	610.7	3436.1	5308.2
3-Feb	1346.7	1263.3	2536.8	2717.8	3762.5	4159.4	3403.8	4672.9	4208.4	2676.3	3047.4	3808.4	2052.4	139383.5	610.7	3436.1	5308.2
4-Feb	1461.5	1362.7	2694.2	2899.6	4125.4	4447.9	3642.9	5102.7	4570.5	2907.4	3357.1	4361.4	2353.7	139370.5	610.7	3436.1	5308.2
5-Feb	2312.0	1973.4	3429.9	3685.6	5254.6	5415.8	4609.4	6795.6	6045.2	3612.6	4275.8	6846.1	3485.6	139357.6	610.7	3436.1	5308.2
6-Feb	2196.7	2047.7	3445.6	3642.4	5261.3	5358.2	4495.7	6717.6	6027.7	3565.3	4239.1	7252.6	3722.5	139344.6	610.7	3436.1	5308.2
7-Feb	1837.3	1759.7	3159.1	3321.5	4836.4	5033.0	4227.2	6302.9	5746.5	3446.0	3871.0	6254.2	3298.4	139331.6	610.7	3436.1	5308.2
8-Feb	1641.8	1542.1	2890.9	3028.7	4240.9	4633.7	3903.8	5737.0	5236.4	3204.9	3618.8	5029.4	2733.3	139318.7	610.7	3436.1	5308.2
9-Feb	1506.2	1409.5	2708.2	2844.3	3897.0	4335.3	3628.5	5219.4	4744.5	2942.9	3235.6	4448.6	2425.3	139305.7	610.7	3436.1	5308.2
10-Feb	1442.5	1339.9	2617.1	2749.7	3696.5	4155.4	3463.5	4897.4	4462.8	2816.3	3204.3	4167.4	2266.1	139292.8	610.7	3436.1	5308.2
11-Feb	1381.8	1285.2	2542.2	2681.2	3589.9	4071.5	3402.5	4788.1	4368.5	2755.4	3126.3	3991.5	2154.1	139279.8	610.7	3436.1	5308.2
12-Feb	1351.6	1254.0	2502.4	2640.9	3505.7	4003.0	3354.3	4708.4	4304.2	2706.6	3047.7	3894.6	2104.7	139266.9	610.7	3436.1	5308.2
13-Feb	1480.1	1352.9	2654.2	2794.4	3705.5	4125.3	3422.8	4766.4	4319.7	2749.1	3140.5	4123.1	2248.1	139253.9	610.7	3436.1	5308.2
14-Feb	2255.7	1893.0	3303.3	3454.0	4564.8	4754.0	3892.1	5441.2	4818.1	2926.1	3245.8	4229.0	2273.5	139240.9	610.7	3436.1	5308.2
15-Feb	2183.8	2006.7	3379.0	3526.3	4951.1	5056.1	4151.6	6039.6	5395.0	3229.1	3572.2	4632.9	2477.5	139228.0	610.7	3436.1	5308.2
16-Feb	2188.4	1961.7	3366.9	3455.0	4674.7	4939.0	4152.4	6091.3	5533.3	3311.8	3688.7	4972.4	2676.4	139215.0	610.7	3436.1	5308.2
17-Feb	1816.1	1708.5	3035.5	3106.6	4155.4	4534.9	3797.8	5564.7	5070.0	3119.6	3519.2	4757.1	2584.9	139202.1	610.7	3436.1	5308.2
18-Feb	1644.1	1523.3	2842.5	2925.6	3884.5	4314.9	3591.1	5144.4	4674.4	2915.0	3303.5	4339.5	2354.5	139189.1	610.7	3436.1	5308.2
19-Feb	1525.9	1414.6	2700.3	2806.1	3719.0	4187.3	3502.0	4975.3	4529.9	2833.9	3203.2	4137.6	2236.3	139176.1	610.7	3436.1	5308.2
20-Feb	1460.1	1348.9	2618.3	2729.6	3588.0	4077.1	3415.2	4819.1	4397.1	2764.4	3124.0	3987.2	2153.8	139163.2	610.7	3436.1	5308.2
21-Feb	1399.3	1295.0	2546.9	2667.5	3505.1	4001.0	3343.2	4680.6	4275.9	2699.1	3048.7	3864.5	2087.6	139150.2	610.7	3436.1	5308.2
22-Feb	1368.4	1264.6	2510.1	2634.2	3445.8	3935.8	3272.3	4540.0	4158.4	2665.3	3048.7	3783.4	2037.1	139137.3	610.7	3436.1	5308.2
23-Feb	1318.4	1222.1	2451.2	2584.3	3390.6	3703.6	3262.6	4538.0	4159.0	2648.3	3011.4	3765.6	2021.5	139124.3	610.7	3436.1	5308.2
24-Feb	1368.7	1260.0	2515.8	2644.4	3444.5	3925.2	3271.8	4534.4	4148.8	2636.9	2988.3	3726.0	2003.9	139111.4	610.7	3436.1	5308.2
25-Feb	1518.4	1373.9	2671.8	2786.0	3568.2	4003.3	3323.4	4607.8	4202.8	2659.8	3005.3	3727.7	1999.2	139098.4	610.7	3436.1	5308.2
26-Feb	1483.3	1368.3	2643.5	2764.9	3644.4	4089.9	3389.2	4723.9	4287.2	2769.5	3210.3	4689.3	2600.6	139085.4	610.7	3436.1	5308.2
27-Feb	1446.2	1336.6	2608.0	2731.8	3618.0	4088.5	3412.9	4796.3	4368.7	3108.7	4062.1	2221.4	139072.5	610.7	3436.1	5308.2	
28-Feb	1381.8	1281.0	2529.5	2656.1	3505.3	4013.0	3370.7	4748.0	4340.2	2726.6	3067.8	3970.3	2154.5	139059.5	610.7	3436.1	5308.2

Date	Pool 14	Pool 13	Pool 12	Pool 11	Pool 10	Pool 9	Pool 8	Pool 7	Pool 6	Pool 5	Pool 4	Pool 3	Pool 2	Dix Dam	Jacobson	Buckhorn	Carr Fork
1-Mar	1351.5	1250.8	2493.6	2623.4	3445.7	3947.4	3300.7	4605.4	4215.0	2681.9	3048.2	3876.1	2103.3	139046.3	610.7	3436.1	5308.2
2-Mar	1346.5	1245.4	2490.4	2623.7	3445.4	3932.9	3274.4	4540.6	4154.7	2646.9	3010.0	3801.6	2053.4	139032.8	610.7	3436.1	5308.2
3-Mar	1338.6	1239.2	2482.4	2618.6	3445.6	3945.7	3303.6	4608.3	4213.4	2664.6	3009.3	3783.2	2036.7	139019.3	610.7	3436.1	5308.2
4-Mar	1313.7	1217.1	2448.9	2584.5	3390.1	3899.2	3260.5	4536.7	4159.8	2650.4	3011.1	3775.8	2037.4	139005.8	610.7	3436.1	5308.2
5-Mar	1300.1	1204.3	2432.9	2569.7	3363.8	3881.4	3255.5	4532.4	4156.1	2636.4	2980.9	3725.1	2004.3	138992.3	610.7	3436.1	5308.2
6-Mar	1285.9	1191.5	2415.1	2553.1	3337.8	3891.6	3309.8	4664.1	4273.4	2669.1	2969.5	3700.4	1984.2	138978.8	610.7	3436.1	5308.2
7-Mar	1295.9	1206.3	2447.6	2603.3	3475.1	4011.9	3423.0	4856.8	4422.2	2729.8	3007.7	3883.2	2103.5	138965.3	610.7	3436.1	5308.2
8-Mar	1390.3	1294.3	2590.3	2771.5	3826.1	4237.4	3526.3	4945.6	4449.0	2796.9	3161.9	4094.4	2231.2	138951.8	610.7	3436.1	5308.2
9-Mar	1536.2	1403.0	2726.1	2880.2	3891.1	4297.1	3589.1	5096.7	4621.4	2873.9	3243.9	4246.3	2296.6	138938.3	610.7	3436.1	5308.2
10-Mar	1560.5	1436.2	2748.6	2891.4	3913.9	4313.5	3584.0	5083.8	4601.8	2865.9	3230.2	4190.9	2268.0	138924.8	610.7	3436.1	5308.2
11-Mar	1556.9	1437.6	2751.5	2893.6	3941.0	4333.0	3589.2	5082.2	4596.5	2854.0	3206.4	4162.5	2250.8	138911.4	610.7	3436.1	5308.2
12-Mar	1675.7	1519.2	2862.1	2997.5	4037.6	4400.9	3639.2	5148.7	4648.7	2882.9	3239.5	4187.0	2261.8	138897.9	610.7	3436.1	5308.2
13-Mar	1703.0	1556.2	2893.6	3024.2	4094.9	4453.2	3683.4	5241.7	4732.5	2918.1	3268.4	4233.7	2282.1	138884.4	610.7	3436.1	5308.2
14-Mar	1659.9	1529.5	2858.4	2984.5	4054.5	4430.0	3670.7	5237.4	4738.3	2921.7	3269.9	4258.9	2301.4	138870.9	610.7	3436.1	5308.2
15-Mar	1561.6	1450.3	2754.6	2878.6	3896.7	4326.8	3615.4	5174.5	4703.2	2903.9	3249.5	4200.9	2268.0	138857.4	610.7	3436.1	5349.4
16-Mar	1471.9	1367.6	2647.3	2772.2	3718.6	4177.4	3485.2	4938.4	4496.2	2819.6	3184.9	4069.9	2200.7	138843.9	610.7	3436.1	5390.8
17-Mar	1402.5	1303.7	2565.0	2698.7	3610.0	4090.3	3419.5	4819.1	4394.0	2762.4	3122.6	3961.7	2134.3	138830.4	610.7	3436.1	5442.3
18-Mar	1429.9	1313.3	2583.4	2703.6	3527.6	4013.8	3365.1	4728.1	4323.9	2718.0	3060.9	3867.0	2083.3	138816.9	610.7	3436.1	5474.0
19-Mar	1745.0	1536.7	2882.9	2989.8	3781.8	4134.7	3391.6	4670.8	4238.5	2681.4	3033.4	3791.7	2043.6	138803.4	610.7	3436.1	5515.9
20-Mar	1888.8	1690.7	3044.2	3162.2	4208.7	4495.6	3654.5	5093.2	4543.7	2820.2	3162.3	3958.6	2113.4	138789.9	610.7	3436.1	5557.9
21-Mar	1754.2	1625.5	2961.1	3074.6	4197.2	4527.6	3725.8	5324.6	4813.8	2961.0	3315.8	4263.2	2285.7	138776.4	610.7	3436.1	5600.2
22-Mar	1609.4	1499.5	2817.4	2935.6	4002.3	4399.2	3649.0	5220.9	4740.6	2930.6	3287.9	4283.5	2313.0	138762.9	610.7	3436.1	5642.6
23-Mar	1505.8	1401.0	2692.9	2818.3	3807.1	4252.3	3547.9	5051.1	4596.6	2863.2	3223.9	4182.5	2264.3	138749.5	610.7	3436.1	5685.2
24-Mar	1438.1	1333.7	2603.7	2729.1	3636.1	4110.9	3434.9	4851.0	4425.9	2772.1	3121.4	3981.4	2151.2	138736.0	610.7	3436.1	5727.9
25-Mar	1465.4	1344.1	2623.8	2741.9	3584.9	4051.2	3380.0	4736.7	4323.0	2710.7	3041.7	3857.6	2083.1	138722.5	610.7	3436.1	5770.8
26-Mar	1562.8	1421.9	2731.9	2857.0	3762.0	4170.0	3449.2	4806.4	4349.9	2718.3	3041.0	3830.9	2064.6	138709.0	610.7	3436.1	5813.9
27-Mar	1512.9	1403.7	2697.8	2836.9	3843.5	4249.8	3513.1	4937.9	4465.2	2786.8	3128.0	3942.1	2119.1	138695.5	610.7	3436.1	5856.7
28-Mar	1438.5	1337.7	2610.8	2744.1	3690.5	4151.6	3463.1	4896.2	4464.4	2785.0	3124.8	3991.5	2152.0	138682.0	610.7	3436.1	5894.2
29-Mar	1407.4	1304.5	2571.3	2706.6	3612.8	4082.2	3404.9	4783.0	4360.5	2738.7	3082.3	3892.6	2100.7	138668.5	610.7	3436.1	5926.2
30-Mar	1382.4	1281.2	2539.4	2676.1	3557.3	4028.2	3350.8	4678.5	4270.3	2696.7	3045.8	3833.7	2067.6	138655.0	610.7	3436.1	5956.6
31-Mar	1348.2	1251.3	2497.8	2637.2	3500.4	3981.1	3310.6	4607.7	4212.6	2672.1	3026.9	3756.8	2018.1	138641.5	610.7	3436.1	5985.4

Date	Pool 14	Pool 13	Pool 12	Pool 11	Pool 10	Pool 9	Pool 8	Pool 7	Pool 6	Pool 5	Pool 4	Pool 3	Pool 2	Dix Dam	Jacobson	Buckhorn	Carr Fork
1-Apr	1315.9	1218.8	2449.5	2582.5	3382.5	3891.6	3249.7	4519.7	4152.9	2646.6	3007.2	3804.4	2055.4	138618.3	610.7	3436.1	609.0
2-Apr	1281.6	1187.0	2404.9	2540.2	3312.6	3845.6	3230.6	4497.5	4133.0	2628.1	2976.1	3748.4	2023.7	138597.3	610.3	3551.8	6029.4
3-Apr	1283.2	1188.7	2413.3	2551.6	3332.0	3846.0	3218.2	4454.0	4088.5	2599.9	2938.3	3677.2	1985.1	138576.3	610.1	3676.2	6051.4
4-Apr	1321.9	1222.1	2465.1	2602.3	3406.2	3891.9	3240.5	4472.2	4093.9	2607.3	2953.1	3705.3	2001.2	138555.3	609.7	3835.5	6079.8
5-Apr	1454.8	1321.8	2602.1	2713.9	3452.1	3906.8	3244.5	4483.6	4112.2	2618.6	2968.1	3737.8	2018.9	138534.3	609.4	4061.6	6120.7
6-Apr	1424.1	1313.9	2571.9	2693.0	3519.5	3996.6	3232.7	4626.2	4211.0	2663.3	3007.2	3810.8	2058.1	138513.3	609.0	4258.6	6156.2
7-Apr	1428.5	1315.6	2583.7	2707.3	3553.6	4019.2	3341.5	4648.9	4237.4	2671.5	3008.5	3817.2	2063.5	138492.2	608.6	4436.3	6188.1
8-Apr	1380.8	1280.3	2532.0	2664.5	3528.3	4009.0	3338.4	4656.2	4248.4	2677.6	3012.8	3819.5	2064.7	138471.2	608.3	4595.6	6216.5
9-Apr	1339.8	1240.2	2476.7	2605.4	3413.8	3921.1	3276.4	4568.6	4191.4	2654.1	2995.2	3783.4	2046.0	138450.2	608.0	4737.4	6241.8
10-Apr	1299.9	1204.8	2429.3	2564.6	3359.0	3876.2	3241.8	4502.5	4132.1	2625.2	2967.6	3729.8	2015.4	138429.2	607.6	4870.5	6265.4
11-Apr	1280.3	1182.6	2396.7	2533.6	3253.3	3802.1	3206.9	4472.6	4120.4	2610.2	2937.6	3675.2	1981.6	138408.2	607.1	4994.9	6287.4
12-Apr	1266.5	1169.9	2379.7	2508.2	3226.9	3783.9	3201.1	4459.0	4103.0	2601.1	2926.5	3652.3	1970.5	138387.1	606.5	5119.3	6309.3
13-Apr	1253.3	1157.9	2363.1	2492.8	3202.6	3758.8	3173.9	4407.4	4061.5	2572.2	2884.2	3570.9	1923.9	138366.1	605.9	5235.0	6329.7
14-Apr	1241.5	1147.1	2348.1	2478.4	3178.6	3733.4	3146.3	4354.8	4019.2	2555.8	2874.4	3549.3	1912.4	138345.1	605.3	5335.2	6347.2
15-Apr	1244.8	1149.9	2353.2	2482.1	3178.8	3722.0	3124.6	4305.4	3977.3	2542.6	2875.1	3550.3	1913.3	138324.1	604.7	5427.6	6363.2
16-Apr	1229.0	1135.7	2332.0	2463.9	3157.9	3715.9	3130.6	4325.0	3992.4	2542.4	2862.5	3530.2	1899.5	138303.1	604.2	5520.0	6379.3
17-Apr	1225.8	1131.8	2325.7	2453.8	3127.5	3694.3	3122.0	4320.9	3994.0	2548.3	2876.2	3533.8	1913.9	138282.0	603.6	5604.7	6393.9
18-Apr	1220.7	1125.7	2314.8	2439.3	3090.5	3672.1	3115.6	4319.6	3995.1	2555.8	2841.2	3489.6	1876.3	138261.0	603.0	5679.3	6406.6
19-Apr	1223.6	1128.1	2318.3	2441.0	3086.2	3661.4	3101.0	4287.2	3968.4	2519.9	2819.7	3445.5	1852.4	138240.0	602.5	5743.6	6411.7
20-Apr	1204.7	1110.6	2292.6	2419.3	3059.2	3617.5	3026.2	4138.3	3857.8	2477.6	2800.1	3400.7	1828.2	138219.0	602.2	5804.6	6427.7
21-Apr	1192.7	1099.3	2276.6	2402.6	3028.2	3598.2	3023.6	4137.5	3849.3	2472.3	2795.0	3401.7	1827.3	138198.0	601.7	5862.2	6437.3
22-Apr	1202.9	1107.8	2286.8	2405.1	3011.5	3583.4	3017.4	4132.4	3847.3	2466.3	2780.3	3373.7	1811.0	138176.9	601.3	5912.9	6445.6
23-Apr	1181.9	1089.2	2262.5	2391.1	3010.7	3596.9	3042.8	4178.1	3877.8	2471.9	2767.2	3349.5	1797.0	138155.9	601.0	5960.4	6453.3
24-Apr	1192.3	1097.8	2271.6	2389.6	2985.2	3367.3	3012.6	4135.1	3854.9	2466.4	2772.6	3355.2	1800.1	138134.9	600.7	6004.4	6460.3
25-Apr	1172.1	1080.1	2250.0	2378.9	2988.5	3569.9	3010.7	4119.9	3837.9	2451.7	2747.3	3309.7	1774.9	138113.9	600.1	6042.6	6466.3
26-Apr	1182.8	1089.3	2258.9	2378.0	2969.1	3540.8	2972.4	4056.0	3796.2	2439.5	2705.8	3313.9	1776.3	138092.9	599.9	6077.8	6471.8
27-Apr	1159.5	1068.7	2234.8	2365.7	2968.2	3550.7	2991.8	4081.8	3804.8	2436.1	2734.4	3288.1	1762.5	138071.9	599.5	6110.2	6476.7
28-Apr	1171.9	1080.5	2247.3	2370.5	2969.6	3542.1	2976.9	4059.4	3794.4	2429.7	2724.7	3266.0	1749.0	138050.8	599.1	6139.8	6481.0
29-Apr	1182.2	1088.2	2256.7	2374.4	2957.3	3535.2	2976.0	4059.2	3792.3	2432.5	2735.3	3289.6	1762.4	138029.8	598.5	6175.1	6486.5
30-Apr	1164.8	1072.5	2238.1	2364.8	2956.1	3539.0	2981.5	4067.3	3796.9	2430.7	2725.7	3267.7	1750.1	138008.8	597.9	6210.4	6491.9

Date	Pool 14	Pool 13	Pool 12	Pool 11	Pool 10	Pool 9	Pool 8	Pool 7	Pool 6	Pool 5	Pool 4	Pool 3	Pool 2	Dix Dam	Jacobson	Buckhorn	Carr Fork
1-May	1193.5	1098.7	2270.5	2382.7	2959.5	3533.6	2977.2	4063.9	3796.8	2431.2	2726.9	3270.9	1751.5	137983.9	597.3	6240.3	6495.5
2-May	1172.7	1079.9	2248.6	2375.5	2974.3	3550.2	2985.5	4067.0	3795.1	2429.6	2724.9	3268.4	1750.5	137959.3	596.6	6267.7	6498.6
3-May	1167.6	1075.1	2240.4	2364.5	2954.8	3536.8	2979.4	4067.6	3798.9	2432.2	2727.4	3270.8	1751.2	137934.6	596.0	6290.0	6500.7
4-May	1149.9	1060.2	2223.0	2354.0	2949.9	3532.8	2977.0	4062.3	3795.1	2430.2	2725.9	3270.6	1751.7	137909.9	595.3	6309.8	6502.4
5-May	1162.6	1070.5	2230.3	2350.6	2927.9	3506.0	2945.9	4013.8	3765.2	2412.2	2701.6	3223.1	1725.0	137885.2	594.6	6327.1	6503.6
6-May	1163.3	1070.0	2230.3	2349.8	2915.2	3500.5	2949.7	4016.6	3761.3	2409.7	2699.5	3223.6	1725.0	137860.5	593.9	6341.8	6504.4
7-May	1152.4	1059.2	2216.3	2337.8	2894.6	3485.0	2937.3	4000.5	3752.8	2403.8	2689.5	3200.7	1711.5	137835.9	593.1	6354.1	6504.6
8-May	1145.6	1054.9	2211.0	2336.0	2903.4	3489.0	2941.8	4002.9	3751.7	2396.0	2665.1	3159.2	1689.4	137811.2	592.4	6364.0	6504.5
9-May	1153.3	1060.8	2215.7	2335.5	2895.9	3478.2	2925.0	3977.1	3737.1	2390.8	2665.1	3159.5	1687.5	137786.5	591.7	6371.6	6503.9
10-May	1161.9	1069.5	2228.9	2348.1	2913.8	3488.5	2931.5	3978.0	3732.6	2388.3	2663.0	3158.5	1687.6	137761.8	590.9	6393.9	6506.1
11-May	1180.5	1086.3	2252.1	2366.4	2933.2	3501.0	2936.0	3980.5	3733.3	2405.0	2713.9	3250.4	1737.4	137737.2	590.2	6452.7	6515.0
12-May	1325.9	1210.0	2440.6	2526.1	3039.8	3534.0	2939.7	3974.9	3729.1	2395.0	2689.1	3201.4	1713.2	137712.5	589.5	6676.5	6554.5
13-May	1356.8	1245.6	2485.1	2599.4	3310.1	3806.0	3161.8	4265.0	3880.4	2465.7	2758.2	3358.1	1804.5	137687.8	588.8	6910.0	6559.9
14-May	1278.3	1189.8	2407.3	2554.8	3382.5	3893.9	3246.9	4479.4	4087.7	2586.2	2900.9	3606.4	1939.7	137663.1	588.2	7058.3	6621.4
15-May	1272.7	1174.0	2384.6	2507.3	3210.6	3765.5	3178.6	4436.1	4100.2	2608.1	2945.8	3687.9	1990.5	137638.4	587.7	7243.3	6653.8
16-May	1283.3	1183.1	2398.8	2521.0	3221.5	3757.7	3156.5	4360.8	4020.1	2556.2	2877.0	3560.3	1919.3	137613.8	587.1	7365.4	6674.5
17-May	1270.2	1170.6	2376.9	2497.2	3179.5	3726.4	3128.2	4316.3	3987.5	2544.3	2870.8	3542.0	1907.7	137589.1	586.6	7463.3	66690.7
18-May	1330.7	1233.6	2489.2	2640.0	3506.5	3953.3	3261.5	4433.4	4024.3	2562.5	2860.8	3606.4	1944.0	137564.4	585.9	7569.0	6708.3
19-May	1504.9	1380.5	2706.7	2879.6	3948.2	4280.5	3483.1	4770.4	4267.0	2681.2	3016.9	3841.6	2075.6	137539.7	585.3	7781.9	6764.4
20-May	1651.4	1488.9	2818.1	2940.7	3859.5	4235.9	3488.4	4889.1	4454.6	2775.0	3109.5	4025.9	2177.9	137515.1	584.6	8528.1	6882.4
21-May	1582.7	1465.1	2768.1	2894.6	3901.7	4297.5	3552.9	5016.7	4539.4	2817.6	3147.5	4086.1	2214.3	137490.4	584.1	8889.5	6947.5
22-May	1404.8	1319.8	2575.3	2710.7	3683.0	4153.6	3462.2	4903.8	4472.4	2797.8	3147.7	4076.1	2212.8	137465.7	583.5	9103.7	6985.3
23-May	1314.7	1222.0	2449.3	2582.2	3415.1	3934.9	3292.1	4614.2	4242.5	2698.0	3066.7	3920.6	2128.6	137441.0	582.7	9251.9	7010.8
24-May	1259.0	1167.0	2375.2	2513.3	3279.5	3818.0	3202.1	4451.9	4103.3	2612.4	2959.3	3711.8	2003.8	137416.3	582.1	9382.8	7033.1
25-May	1234.9	1141.7	2340.2	2473.4	3182.0	3730.0	3130.3	4328.5	4004.8	2563.6	2907.7	3612.1	1948.5	137391.7	581.5	9465.1	7046.5
26-May	1202.3	1109.7	2293.1	2425.7	3091.4	3670.9	3104.3	4299.2	3981.6	2531.2	2840.4	3488.1	1875.2	137367.0	581.0	9520.4	7054.7
27-May	1184.6	1093.2	2270.2	2401.8	3043.4	3604.2	3017.2	4130.7	3855.7	2481.2	2811.4	3421.9	1840.9	137342.3	580.4	9562.1	7060.5
28-May	1179.4	1087.0	2258.8	2384.6	3577.1	3998.1	3014.6	4131.1	3846.4	2457.1	2754.2	3326.0	1784.7	137317.6	579.8	9592.2	7064.0
29-May	1155.3	1065.2	2230.8	2363.3	2970.5	3562.0	3013.0	4133.8	3849.4	2454.7	2743.3	3303.4	1770.8	137292.9	579.1	9617.0	7066.7
30-May	1161.9	1069.9	2230.7	2352.7	2935.0	3507.4	2936.5	4004.0	3766.5	2421.2	2726.3	3264.5	1748.1	137268.3	578.6	9639.3	7068.8
31-May	1075.3	2237.4	2355.7	2925.4	3516.0	2973.5	4056.3	3784.7	2419.8	2706.4	3239.8	1735.9	137243.6	578.1	9656.6	7070.0	

Date	Pool 14	Pool 13	Pool 12	Pool 11	Pool 10	Pool 9	Pool 8	Pool 7	Pool 6	Pool 5	Pool 4	Pool 3	Pool 2	Dix Dam	Jacobson	Buckhorn	Carr Fork
1-Jun	1173.0	1080.4	2251.2	2370.6	2936.0	3494.2	2927.3	3975.4	2401.9	3736.0	2700.7	3216.7	1720.5	137220.1	577.6	9670.5	7071.3
2-Jun	1165.7	1070.8	2231.2	2348.7	2903.8	3481.4	2923.1	3959.9	3717.0	23912	2689.3	3200.1	1712.7	137196.8	576.8	9678.3	7071.3
3-Jun	1153.8	1058.4	2210.6	2327.1	2864.0	3456.4	2910.8	3954.9	3720.2	2388.0	2676.4	3176.9	1699.8	137173.4	576.0	9680.7	7070.4
4-Jun	1132.4	1041.9	2196.5	2319.8	2856.6	3434.9	2887.2	3916.8	3695.3	2366.7	2640.0	3114.1	1664.3	137150.1	575.1	9679.4	7068.8
5-Jun	1122.5	1034.2	2187.8	2313.4	2851.5	3408.9	2851.5	3848.2	3640.8	2345.8	2631.5	3096.1	1650.9	137126.8	574.2	9676.0	7066.8
6-Jun	1138.5	1047.9	2201.9	2323.0	2862.1	3427.4	2869.3	3857.0	3643.6	2340.3	2617.1	3091.6	1651.7	137103.5	573.3	9672.2	7064.7
7-Jun	1138.9	1046.9	2199.1	2319.1	2854.0	3427.2	2875.1	3870.3	3649.5	2355.5	2647.6	3134.6	1675.0	137080.1	572.6	9668.4	7062.6
8-Jun	1134.5	1042.7	2192.2	2312.1	2841.1	3421.1	2875.0	3880.7	3661.3	2338.9	2600.3	3074.5	1644.0	137056.8	572.0	9669.0	7061.4
9-Jun	1141.6	1048.2	2195.9	2311.4	2833.7	3403.3	2856.7	3857.9	3647.5	2333.3	2575.5	3052.8	1628.5	137033.5	571.5	9668.5	7059.9
10-Jun	1161.1	1067.5	2223.1	2333.1	2855.3	3438.0	2892.2	3911.9	3690.4	2364.9	2618.9	3103.8	1660.4	137010.1	570.9	9663.5	7057.6
11-Jun	1141.4	1047.6	2199.2	2320.0	2850.9	3431.4	2883.5	3903.1	3682.7	2360.3	2631.8	3095.1	1651.1	136986.8	570.2	9656.0	7054.9
12-Jun	1131.9	1042.3	2197.3	2320.5	2857.5	3416.1	2859.1	3857.4	3646.6	2349.6	2635.6	3094.2	1647.1	136963.5	569.4	9645.8	7051.6
13-Jun	1120.5	1029.8	2175.2	2298.1	2825.7	3382.2	2823.3	3793.6	3583.9	2344.6	2643.6	3105.4	1653.5	136940.2	568.6	9633.3	7047.9
14-Jun	1114.0	1025.7	2173.5	2297.0	2820.3	3372.7	2805.7	3767.9	3542.4	2347.2	2648.8	3116.6	1661.0	136916.8	567.7	9619.4	7043.9
15-Jun	1114.2	1024.9	2171.8	2295.9	2818.9	3367.4	2782.7	3743.9	3501.8	2338.3	2631.7	3092.7	1649.7	136893.5	566.7	9604.2	7039.7
16-Jun	1120.3	1026.8	2164.3	2282.9	2796.6	3363.2	2749.8	3710.7	3452.8	2335.8	2626.7	3085.5	1644.8	136870.2	565.8	9588.0	7035.4
17-Jun	1124.8	1033.2	2175.6	2291.9	2800.4	3362.5	2726.5	3691.0	3416.3	2332.9	2621.8	3077.2	1640.3	136846.8	540.3	9572.7	7031.2
18-Jun	1115.9	1026.0	2170.1	2289.9	2799.6	3362.4	2726.8	3701.4	3407.9	2319.7	2601.0	3051.8	1625.9	136823.5	514.5	9561.8	7027.7
19-Jun	1109.9	1022.1	2166.9	2288.8	2802.4	3362.4	2716.4	3698.5	3386.8	2298.1	2575.7	3046.1	1622.0	136800.2	512.5	9557.2	7025.5
20-Jun	1106.2	1018.6	2159.1	2281.4	2793.0	3362.6	2719.1	3712.6	3381.1	2265.5	2537.5	3042.1	1618.7	136776.9	500.2	9560.0	7024.7
21-Jun	1120.9	1028.8	2170.3	2289.8	2802.8	3362.4	2718.4	3722.4	3371.6	2229.0	2494.4	3048.1	1622.6	136753.5	497.1	9562.4	7023.7
22-Jun	1144.0	1049.3	2190.0	2298.3	2803.4	3362.4	2712.4	3725.2	3355.9	2204.4	2465.8	3045.6	1631.2	136730.2	490.3	9558.5	7021.7
23-Jun	1131.8	1039.2	2185.1	2301.7	2808.2	3362.4	2703.6	3724.4	3336.9	2188.0	2447.3	3059.3	1631.8	136706.9	483.0	9549.7	7018.6
24-Jun	1119.8	1030.8	2178.9	2300.6	2817.9	3363.1	2683.6	3708.8	3304.5	2187.5	2448.3	3059.3	1631.8	136683.5	478.1	9537.4	7015.0
25-Jun	1125.8	1036.8	2189.7	2313.4	2843.8	3396.2	2697.5	3718.9	3295.7	2171.5	2430.3	3041.8	1620.4	136660.2	473.9	9523.1	7011.0
26-Jun	1111.7	1026.0	2178.3	2305.6	2839.3	3402.9	2721.1	3706.7	3266.5	2156.4	2413.5	3054.8	1627.8	136636.9	472.9	9506.3	7006.5
27-Jun	1120.5	1029.8	2175.7	2299.5	2829.2	3388.7	2724.3	3678.4	3222.6	2156.8	2415.6	3061.9	1633.1	136613.6	472.0	9487.6	7001.6
28-Jun	1116.4	1028.7	2178.2	2302.4	2830.1	3403.0	2766.5	3698.0	3222.2	2164.9	2427.5	3074.4	1642.2	136590.2	471.1	9468.7	6996.7
29-Jun	1115.6	1023.2	2163.0	2284.5	2801.9	3383.8	2790.5	3698.6	3204.6	2161.0	2424.5	3067.2	1637.8	136566.9	470.2	9449.3	6991.8
30-Jun	1115.6	1020.8	2151.7	2267.2	2769.6	3365.6	2788.9	3698.8	3186.5	2178.9	2448.4	3069.7	1639.1	136543.6	469.1	9430.0	6986.8

Date	Pool 14	Pool 13	Pool 12	Pool 11	Pool 10	Pool 9	Pool 8	Pool 7	Pool 6	Pool 5	Pool 4	Pool 3	Pool 2	Dix Dam	Jacobson	Buckhorn	Carr Fork
1-Jul	1117.1	1026.0	2165.0	2279.0	2775.1	3362.9	2779.7	3688.8	3166.5	2181.4	2452.4	3036.3	1620.6	136517.3	450.0	9409.0	6981.6
2-Jul	1117.5	1024.9	2162.5	2279.0	2775.0	3361.7	2762.2	3683.5	3137.5	2191.1	2466.2	3039.4	1616.5	136493.8	424.2	9389.2	6976.4
3-Jul	1112.7	1021.6	2159.8	2277.9	2774.8	3362.3	2753.9	3688.1	3119.6	2194.3	2472.1	3032.8	1612.6	136470.2	398.6	9369.0	6971.0
4-Jul	1115.1	1022.5	2159.4	2277.4	2775.5	3362.4	2750.7	3703.2	3107.7	2196.2	2476.6	3042.1	1616.3	136446.7	373.0	9348.5	6965.7
5-Jul	1115.0	1020.8	2152.4	2267.5	2760.7	3358.7	2736.2	3706.9	3082.9	2192.6	2474.8	3044.8	1618.9	136423.2	347.3	9327.7	6960.2
6-Jul	1105.6	1018.3	2155.0	2269.3	2761.1	3356.6	2725.4	3711.1	3064.9	2183.0	2465.0	3032.9	1613.1	136399.7	321.3	9306.3	6954.7
7-Jul	1109.7	1017.1	2151.3	2266.8	2757.7	3353.9	2713.2	3714.7	3046.5	2176.1	2458.6	3034.8	1613.0	136376.2	295.4	9284.0	6949.0
8-Jul	1108.3	1015.7	2146.7	2261.5	2749.6	3352.9	2705.5	3725.2	3034.5	2188.4	2475.8	3058.0	1628.9	136552.7	269.4	9261.4	6943.1
9-Jul	1107.8	1017.6	2152.3	2265.4	2753.6	3361.1	2752.7	3802.1	3085.8	2213.4	2508.6	3090.6	1653.2	136329.1	243.5	9238.5	6937.2
10-Jul	1102.6	1017.0	2157.4	2275.7	2768.6	3362.2	2776.8	3839.2	3125.6	2152.6	2436.6	3034.4	1617.0	136305.6	239.3	9215.5	6931.2
11-Jul	1106.4	1015.9	2154.3	2274.1	2772.3	3359.6	2733.9	3800.3	3087.7	2121.2	2400.6	3041.3	1615.8	136282.1	221.1	9192.2	6925.2
12-Jul	1095.2	1011.3	2149.1	2267.4	2765.0	3352.9	2723.6	3804.4	3079.8	2112.0	2391.0	3030.4	1610.7	136258.6	195.2	9168.9	6919.2
13-Jul	1103.5	1011.2	2148.1	2266.6	2762.9	3383.3	2799.6	3871.1	3195.0	2102.1	2380.3	3076.8	1641.4	136235.1	169.3	9145.4	6913.1
14-Jul	1103.0	1011.2	2145.0	2262.9	2756.3	3334.7	2751.6	3805.0	3159.8	2073.1	2346.7	3047.2	1624.1	136211.6	168.6	9121.7	6907.3
15-Jul	1083.2	1010.4	2145.5	2263.6	2755.6	3335.2	2739.9	3807.0	3151.3	2058.3	2329.7	3014.1	1604.5	136188.0	143.1	9102.2	6902.1
16-Jul	1047.7	1011.1	2148.7	2267.2	2761.1	3353.1	2742.7	3817.0	3164.3	2050.1	2320.7	3021.7	1606.1	136164.5	125.4	6897.5	6897.5
17-Jul	1025.8	1008.7	2142.9	2262.5	2754.5	3360.9	2744.4	3812.7	3172.9	2044.8	2314.4	3037.4	1616.8	136141.0	125.0	9066.2	6892.3
18-Jul	1005.9	1011.8	2150.7	2269.4	2765.5	3362.2	2771.0	3820.5	3214.7	2035.1	2302.7	3051.0	1627.2	136117.5	124.5	9045.6	6886.9
19-Jul	1010.4	1009.8	2147.0	2265.9	2761.7	3362.4	2778.2	3831.9	3239.5	2030.3	2297.9	3065.4	1634.9	136094.0	124.0	9024.4	6881.4
20-Jul	1038.5	1009.6	2145.3	2264.5	2759.2	3361.4	2753.2	3816.1	3243.8	2057.1	2331.3	3067.5	1638.3	136070.5	123.5	9002.0	6875.7
21-Jul	1061.5	1009.6	2144.6	2263.7	2757.3	3362.2	2777.9	3253.3	2054.3	2327.9	3030.0	1617.3	136046.9	122.9	8979.4	6869.8	
22-Jul	1099.0	1008.3	2140.0	2259.9	2750.0	3362.4	2793.1	3822.3	3227.8	2050.4	2323.4	3038.2	1618.5	136023.4	122.4	8956.6	6863.9
23-Jul	1112.4	1013.9	2139.7	2254.8	2747.4	3362.4	2813.8	3834.5	3317.0	2062.2	2338.2	3067.4	1636.7	135999.9	121.9	8933.5	6858.1
24-Jul	1113.5	1019.1	2144.1	2252.3	2744.1	3362.4	2836.5	3851.2	3381.8	2098.3	2383.1	3085.1	1650.5	135976.4	121.4	8910.9	6852.2
25-Jul	1115.4	1021.6	2150.3	2253.8	2741.6	3362.4	2837.3	3853.1	3439.1	2179.0	2483.0	3093.8	1656.4	135952.9	121.0	8887.9	6846.2
26-Jul	1108.8	1018.7	2152.0	2258.7	2740.9	3354.4	2825.3	3829.9	3461.2	2198.1	2506.7	3041.2	1624.2	135929.4	120.5	8864.6	6840.2
27-Jul	1105.2	1017.8	2155.6	2269.1	2751.8	3334.9	2800.0	3798.0	3441.4	2189.1	2495.6	2993.0	1598.7	135905.8	120.0	8841.2	6834.2
28-Jul	1101.0	1011.5	2147.7	2265.2	2750.8	3337.3	2792.4	3795.6	3435.3	2190.4	2497.1	2992.2	1597.7	135882.3	119.5	8817.6	6828.2
29-Jul	1092.4	1009.5	2144.2	2261.7	2749.5	3358.2	2829.8	3840.5	3499.1	2174.5	2477.6	3002.2	1601.9	135858.8	118.8	8794.2	6822.1
30-Jul	1101.5	1010.2	2145.3	2263.7	2752.9	3334.9	2798.8	3810.3	3481.0	2165.7	2467.6	3037.7	1614.2	135835.3	118.3	8770.6	6816.2
31-Jul	1106.8	1012.3	2143.0	2260.9	2748.9	3332.3	2786.8	3799.9	3471.7	2190.8	3048.5	1624.9	135811.8	117.9	8750.1	6810.9	

Date	Pool 14	Pool 13	Pool 12	Pool 11	Pool 10	Pool 9	Pool 8	Pool 7	Pool 6	Pool 5	Pool 4	Pool 3	Pool 2	Dix Dam	Jacobson	Buckhorn	Carr Fork	
1-Aug	1104.3	1014.1	2147.3	2263.4	2750.5	3357.0	2819.5	3836.6	3527.7	2191.5	2498.9	3045.7	1624.6	135787.6	117.5	8728.2	6805.2	
2-Aug	1076.4	1010.8	2146.4	2263.5	2750.6	3343.0	2797.9	3807.6	3516.6	2165.3	2466.9	3024.0	1610.4	135763.4	117.1	8706.0	6799.3	
3-Aug	1063.1	1008.7	2141.7	2260.7	2748.0	3356.9	2803.0	3813.8	3530.1	2168.9	2471.0	3045.7	1622.4	135739.1	116.6	8685.3	6793.8	
4-Aug	1064.2	1009.4	2142.5	2261.1	2748.1	3348.9	2789.2	3798.6	3517.5	2161.6	2461.6	3027.7	1614.4	135714.9	116.2	8664.5	6788.2	
5-Aug	1066.9	1009.2	2142.2	2261.1	2747.5	3343.5	2775.1	3788.4	3502.7	2146.3	2442.5	3000.5	1600.5	135690.6	115.7	8643.3	6782.5	
6-Aug	1068.2	1009.1	2141.7	2260.4	2747.4	3343.4	2766.0	3786.1	3492.5	2165.3	2465.5	3041.7	1620.1	135666.4	115.2	8624.3	6777.3	
7-Aug	1077.6	1010.3	2145.0	2263.8	2752.1	3386.2	2853.1	3877.0	3625.4	2153.2	2448.0	3070.8	1640.1	135642.2	114.8	8605.0	6772.0	
8-Aug	1128.3	1023.5	2146.8	2261.5	2748.7	3365.5	2835.3	3848.6	3644.8	2271.4	2557.9	3109.2	1665.6	135617.9	114.3	8582.5	6766.1	
9-Aug	1121.7	1029.8	2163.6	2269.9	2748.9	3334.5	2799.1	3799.7	3606.3	2330.0	2330.0	3047.3	1621.2	1628.0	135593.7	113.8	8559.9	6760.0
10-Aug	1116.9	1025.4	2164.5	2278.3	2759.7	3353.3	2804.4	3811.4	3617.4	2341.6	2631.9	3062.8	1627.3	135569.4	113.4	8539.5	6754.6	
11-Aug	1117.4	1023.9	2159.0	2275.5	2762.3	3361.0	2807.0	3811.1	3619.6	2334.9	2621.5	3068.0	1633.0	135545.2	113.0	8518.3	6748.9	
12-Aug	1114.5	1022.0	2157.5	2273.0	2762.3	3362.2	2819.1	3818.4	3628.4	2334.2	2615.2	3069.4	1636.7	135520.9	112.8	8497.5	6743.3	
13-Aug	1097.3	1012.9	2149.5	2265.9	2755.3	3362.4	2835.6	3838.3	3646.1	2330.3	2596.1	3061.2	1632.3	135496.7	112.5	8478.7	6738.1	
14-Aug	1097.6	1011.5	2150.4	2267.5	2760.4	3362.4	2847.5	3863.1	3664.8	2341.9	2579.7	3069.0	1637.6	135472.4	112.1	8460.6	6733.1	
15-Aug	1114.4	1016.0	2146.7	2263.6	2754.9	3360.7	2828.9	3836.9	3642.5	2349.8	2628.9	3086.5	1645.9	135448.2	111.8	8439.9	6727.5	
16-Aug	1118.0	1022.9	2148.9	2259.4	2746.5	3361.1	2826.7	3822.6	3633.4	2343.8	2631.5	3080.4	1641.6	135423.9	111.5	8418.9	6721.9	
17-Aug	1118.2	1025.4	2159.0	2266.7	2747.7	3345.0	2805.6	3797.3	3608.5	2339.6	2631.0	3080.9	1641.8	135399.7	111.1	8400.0	6716.7	
18-Aug	1115.1	1021.8	2155.5	2267.9	2747.5	3338.2	2790.1	3785.9	3591.5	2340.0	2631.5	3079.8	1641.2	135375.5	110.7	8378.8	6711.0	
19-Aug	1113.0	1020.3	2153.7	2267.0	2747.8	3335.4	2778.3	3781.1	3577.1	2333.0	2620.5	3065.5	1633.4	135351.2	110.4	8356.9	6705.2	
20-Aug	1113.7	1019.8	2150.9	2262.9	2746.2	3337.7	2816.7	3830.6	3628.7	2339.5	2627.0	3096.8	1653.5	135327.0	110.1	8334.7	6699.4	
21-Aug	1112.5	1019.4	2149.6	2260.9	2742.3	3352.2	2808.6	3816.2	3621.6	2323.9	2599.7	3059.5	1632.5	135302.7	109.8	8312.1	6693.4	
22-Aug	1112.5	1020.0	2152.4	2263.1	2744.7	3328.9	2779.8	3785.0	3590.3	2334.7	2617.7	3062.9	1633.3	135278.5	109.6	8289.4	6687.5	
23-Aug	1114.1	1020.3	2152.0	2263.6	2745.3	3353.9	2797.1	3812.3	3614.0	2328.6	2611.5	3052.1	1622.1	135254.2	109.3	8266.6	6681.4	
24-Aug	1110.3	1019.1	2151.9	2264.0	2746.9	3361.1	2821.0	3831.8	3641.1	2321.2	2585.7	3046.2	1623.8	135230.0	109.0	8243.6	6675.3	
25-Aug	1112.7	1019.6	2151.7	2264.0	2747.3	3367.0	2855.0	3876.0	3677.6	2323.4	2505.8	3036.3	1616.3	135205.7	108.7	8220.4	6669.1	
26-Aug	1109.3	1018.5	2151.5	2264.1	2747.4	3318.7	2795.5	3804.7	3609.5	2365.4	2672.2	3137.6	1670.0	135181.5	108.4	8196.9	6662.8	
27-Aug	1109.9	1017.3	2148.9	2262.0	2746.0	3301.5	2770.5	3780.9	3581.6	2322.8	2609.8	3024.3	1612.8	135157.2	108.0	8173.2	6656.7	
28-Aug	1103.4	1013.6	2146.1	2260.4	2743.6	3303.8	2764.5	3783.8	3573.9	2309.3	2590.2	3004.5	1599.7	135133.0	107.6	8149.7	6650.4	
29-Aug	1072.1	1009.8	2143.3	2258.9	2744.3	3337.6	2788.0	3818.1	3606.8	2300.4	2579.4	3006.2	1599.3	135108.7	107.2	8126.2	6644.2	
30-Aug	1042.1	1008.8	2141.1	2257.0	2745.9	3358.2	2833.7	3858.6	3665.1	2284.9	2519.1	3007.8	1599.4	135084.5	106.8	8102.5	6637.9	
31-Aug	1025.7	1008.8	2140.7	2256.3	2747.1	3361.8	2848.6	3873.0	3674.9	2299.6	2429.0	3051.2	1619.2	135060.3	106.4	8078.7	6631.6	

Date	Pool 14	Pool 13	Pool 12	Pool 11	Pool 10	Pool 9	Pool 8	Pool 7	Pool 6	Pool 5	Pool 4	Pool 3	Pool 2	Dix Dam	Jacobson	Buckhorn	Carr Fork
1-Sep	1017.1	1008.9	2141.1	2256.2	2747.4	3352.9	2826.0	3835.8	3642.9	2318.6	2383.3	3059.2	1630.8	13035.6	106.1	8054.6	6624.9
2-Sep	1011.2	1009.1	2141.8	2257.1	2747.4	3345.6	2809.9	3810.5	3621.7	2319.1	2367.1	3033.6	1618.2	135010.7	105.7	8030.2	6618.2
3-Sep	1004.9	1010.0	2144.8	2261.9	2750.6	3337.4	2792.2	3793.9	3603.7	2307.2	2352.3	3010.2	1605.8	134985.9	105.3	8005.8	6611.5
4-Sep	998.6	1008.8	2142.2	2260.7	2748.1	3346.1	2790.3	3798.9	3603.8	2323.6	2380.2	3048.6	1624.4	134961.0	105.0	7981.4	6604.9
5-Sep	992.6	1008.3	2139.9	2257.6	2747.5	3338.2	2773.6	3785.5	3585.3	2326.5	2392.6	3035.5	1618.1	134936.1	104.6	7957.0	6598.2
6-Sep	986.8	1009.6	2143.2	2260.8	2750.1	3353.7	2778.7	3799.9	3592.7	2328.0	2409.0	3036.2	1617.7	134911.3	104.3	7932.6	6591.5
7-Sep	981.1	1009.3	2143.1	2261.7	2749.7	3361.1	2804.4	3825.2	3625.9	2331.9	2433.8	3058.6	1632.3	134886.4	103.9	7908.2	6584.8
8-Sep	975.6	1008.3	2140.3	2258.6	2747.8	3358.8	2802.7	3815.5	3621.9	2326.4	2435.4	3045.4	1623.8	134861.5	103.6	7883.8	6578.1
9-Sep	970.0	1009.5	2143.2	2261.5	2750.3	3350.0	2788.5	3798.8	3606.9	2303.2	2406.4	2996.6	1599.9	134836.7	103.3	7859.3	6571.4
10-Sep	964.4	1008.3	2140.5	2258.6	2747.9	3350.5	2779.6	3794.4	3598.4	2284.9	2384.6	2980.8	1592.1	134811.8	103.0	7834.9	6564.7
11-Sep	959.1	1008.6	2140.8	2257.9	2747.5	3357.7	2781.5	3800.9	3600.5	2272.7	2370.5	2980.4	1591.3	134787.0	102.7	7810.5	6558.0
12-Sep	951.2	1010.3	2145.9	2263.9	2753.9	3349.6	2766.8	3787.4	3582.7	2280.6	2380.9	3023.4	1611.3	134762.1	102.4	7786.0	6551.4
13-Sep	944.0	1010.1	2146.9	2265.7	2758.1	3352.3	2756.5	3783.2	3569.7	2282.5	2384.2	3019.8	1609.6	134737.2	102.0	7761.9	6544.9
14-Sep	936.5	1008.1	2141.3	2261.3	2751.8	3353.7	2748.5	3780.8	3557.0	2302.0	2409.0	3041.2	1620.3	134712.4	101.7	7737.8	6538.4
15-Sep	928.4	1008.8	2141.8	2260.9	2751.1	3355.1	2743.6	3781.8	3547.3	2313.2	2424.8	3035.2	1617.2	134687.5	101.4	7714.0	6532.0
16-Sep	919.5	1008.9	2142.3	2261.5	2750.6	3349.6	2730.3	3773.8	3528.7	2320.8	2441.8	3035.8	1617.5	134662.7	101.0	7690.7	6525.7
17-Sep	911.6	1008.9	2142.4	2261.6	2750.3	3349.0	2719.5	3770.5	3514.4	2319.8	2446.0	3022.7	1612.0	134637.8	100.8	7667.5	6519.3
18-Sep	904.2	1008.0	2139.8	2258.2	2747.9	3360.2	2730.2	3790.3	3522.6	2313.9	2439.8	3011.1	1605.3	134612.9	100.5	7644.0	6512.8
19-Sep	896.9	1008.4	2140.2	2257.3	2747.5	3360.4	2731.7	3794.0	3519.2	2300.8	2424.8	3011.4	1603.5	134588.1	100.2	7620.3	6506.3
20-Sep	889.8	1007.6	2138.0	2253.5	2746.7	3345.3	2712.0	3775.6	3493.6	2290.3	2413.0	3009.2	1602.4	134563.2	99.9	7596.5	6499.8
21-Sep	882.8	1008.0	2138.6	2251.5	2747.3	3359.7	2739.9	3813.7	3526.6	2289.1	2412.5	3029.1	1612.5	134538.4	99.6	7572.7	6493.3
22-Sep	875.9	1008.0	2138.9	2250.4	2747.4	3362.0	2750.7	3819.6	3545.0	2278.7	2400.9	3049.7	1623.7	134513.5	99.3	7548.9	6486.8
23-Sep	869.1	1008.0	2138.9	2249.6	2747.4	3362.3	2771.3	3829.2	3580.3	2264.3	2384.2	3047.4	1625.3	134488.6	99.0	7525.0	6480.3
24-Sep	862.5	1007.9	2138.9	2249.0	2747.4	3373.8	2828.7	3864.7	3662.0	2271.3	2368.5	3078.3	1644.8	134463.8	98.7	7501.0	6473.7
25-Sep	856.6	1010.3	2146.2	2259.4	2753.7	3364.1	2833.8	3849.7	3655.2	2341.4	2394.6	3082.0	1647.6	134438.9	98.3	7477.0	6467.1
26-Sep	851.2	1009.0	2144.4	2261.9	2751.8	3362.7	2834.0	3842.6	3649.4	2355.6	2490.3	3067.2	1639.1	134414.1	98.0	7452.9	6460.5
27-Sep	844.6	1008.0	2141.2	2260.1	2748.5	3339.8	2804.2	3804.0	3612.8	2337.3	2543.2	3029.9	1616.0	134389.2	97.7	7428.6	6453.9
28-Sep	838.5	1007.5	2138.9	2256.6	2747.6	3357.6	2815.1	3817.0	3626.7	2328.5	2551.8	3014.9	1607.9	134364.3	97.5	7404.5	6447.3
29-Sep	833.4	1008.0	2139.6	2255.6	2747.4	3355.6	2810.4	3808.7	3618.6	2323.6	2548.0	3016.8	1607.1	134339.5	97.3	7380.4	6440.6
30-Sep	828.3	1008.1	2140.1	2255.2	2747.4	3358.3	2810.6	3808.5	3618.0	2315.3	2534.9	3009.5	1603.1	134314.6	97.1	7356.1	6434.0

Date	Pool 14	Pool 13	Pool 12	Pool 11	Pool 10	Pool 9	Pool 8	Pool 7	Pool 6	Pool 5	Pool 4	Pool 3	Pool 2	Dix Dam	Jackson	Buckhorn	Carr Fork
1-Oct	837.4	1007.2	2137.7	2250.6	2744.0	3361.8	2839.4	3842.8	3651.4	2346.7	2576.0	3072.0	1639.3	134297.9	96.9	7336.7	6430.8
2-Oct	834.4	1007.3	2137.9	2249.3	2744.7	3362.3	2834.1	3841.5	3646.4	2343.8	2602.2	3057.1	1630.4	134283.5	96.9	7317.5	6427.6
3-Oct	832.6	1007.3	2137.7	2248.1	2744.6	3362.4	2841.9	3850.2	3656.1	2351.2	2627.6	3076.8	1639.6	134269.0	96.9	7298.3	6424.4
4-Oct	831.0	1007.1	2137.5	2246.8	2743.9	3362.4	2842.8	3855.6	3659.1	2353.0	2634.3	3093.3	1648.2	134254.6	96.9	7279.1	6421.2
5-Oct	829.5	1006.9	2137.3	2245.6	2743.1	3320.5	2795.9	3797.5	3604.9	2317.4	2590.5	3017.5	1606.9	134240.2	96.9	7259.8	6418.0
6-Oct	838.8	1006.7	2137.2	2245.1	2742.4	3361.5	2851.5	3870.1	3674.7	2364.8	2648.9	3124.4	1667.3	134225.7	96.9	7229.8	6414.8
7-Oct	902.6	999.7	2124.8	2234.4	2726.2	3357.8	2834.8	3850.4	3654.4	2349.0	2629.6	3092.3	1649.8	134211.3	96.9	7144.9	6411.5
8-Oct	965.3	1000.0	2127.2	2235.4	2729.0	3361.7	2841.1	3851.7	3658.6	2353.2	2634.6	3093.8	1650.3	134196.8	96.9	7060.7	6408.3
9-Oct	1026.8	1000.4	2129.1	2236.8	2730.6	3334.3	2814.2	3814.5	3624.4	2328.8	2605.6	3041.1	1621.2	134182.4	96.9	6977.2	6405.1
10-Oct	1086.8	1000.8	2130.1	2237.8	2730.9	3382.8	2875.1	3908.4	3704.0	2382.9	2673.0	3162.7	1688.9	134168.0	96.9	6894.4	6401.9
11-Oct	1125.5	1018.9	2132.4	2238.3	2729.9	3304.5	2793.8	3806.8	3611.4	2317.4	2591.8	3019.9	1609.7	134153.5	96.9	6812.2	6398.7
12-Oct	1128.8	1034.5	2161.5	2246.5	2729.9	3348.4	2838.8	3856.9	3665.2	2358.4	2638.8	3107.0	1657.7	134139.1	96.9	6730.7	6395.4
13-Oct	1128.7	1035.2	2174.0	2276.4	2738.6	3360.1	2841.1	3855.6	3662.0	2355.0	2636.8	3099.5	1654.0	134124.6	96.9	6649.8	6392.2
14-Oct	1128.5	1035.0	2175.4	2288.2	2763.9	3362.0	2837.1	3845.6	3652.9	2349.1	2630.1	3084.5	1645.1	134110.2	96.9	6569.6	6389.0
15-Oct	1128.3	1034.8	2175.3	2289.3	2781.6	3368.3	2846.1	3858.9	3662.7	2355.6	2637.5	3101.1	1654.1	134095.7	96.9	6490.0	6385.8
16-Oct	1119.2	1028.1	2169.4	2286.9	2786.4	3378.2	2851.0	3870.6	3669.6	2359.2	2641.9	3112.2	1659.9	134081.3	96.9	6411.1	6382.5
17-Oct	1125.7	1031.6	2168.2	2282.6	2782.1	3366.3	2839.0	3853.4	3655.2	2349.9	2630.2	3090.7	1648.0	134066.9	96.9	6332.8	6379.3
18-Oct	1125.9	1032.6	2171.2	2284.3	2780.4	3374.4	2848.2	3866.6	3666.6	2357.9	2640.4	3110.4	1658.7	134052.4	96.9	6255.2	6376.1
19-Oct	1125.7	1032.5	2171.6	2285.6	2782.1	3368.4	2842.5	3859.7	3660.8	2354.1	2635.6	3100.5	1653.7	134038.0	96.9	6178.2	6372.9
20-Oct	1125.5	1032.3	2171.4	2285.8	2783.2	3377.5	2851.1	3871.4	3670.5	2360.3	2643.9	3116.3	1662.3	134023.5	96.9	6101.9	6369.6
21-Oct	1125.1	1032.1	2171.1	2285.5	2783.3	3399.6	2876.1	3912.7	3701.7	2379.6	2669.1	3159.9	1687.4	134009.1	96.9	6026.2	6366.4
22-Oct	1124.7	1031.8	2170.7	2285.1	2782.9	3376.2	2852.8	3882.0	3678.2	2364.3	2649.3	3122.9	1667.1	133994.7	96.9	5951.1	6363.3
23-Oct	1131.9	1037.7	2176.0	2287.6	2783.7	3431.9	2913.3	3982.2	3756.8	2413.8	2713.2	3241.0	1734.0	133980.2	96.9	5876.7	6336.1
24-Oct	1132.2	1038.7	2180.2	2293.4	2789.9	3348.8	2803.3	3822.4	3627.0	2328.4	2603.1	3031.1	1616.9	133965.8	96.9	5802.9	6307.8
25-Oct	1132.1	1038.7	2180.8	2295.6	2796.0	3415.1	2881.9	3905.8	3699.6	2381.2	2672.0	3159.3	1685.8	133951.3	96.9	5729.7	6279.6
26-Oct	1131.9	1039.9	2186.5	2302.7	2812.5	3409.9	2878.4	3915.5	3700.5	2377.2	2664.7	3148.6	1681.1	133936.9	96.9	5657.1	6251.4
27-Oct	1131.7	1038.3	2181.2	2297.8	2808.2	3410.9	2878.6	3915.0	3700.4	2378.2	2667.3	3151.5	1681.9	133922.4	96.9	5585.2	6223.3
28-Oct	1131.4	1038.1	2180.8	2296.0	2803.8	3376.8	2840.6	3855.5	3654.5	2348.9	2629.5	3085.5	1645.3	133908.0	96.9	5513.8	6195.3
29-Oct	1131.2	1038.1	2180.8	2296.2	2802.8	3416.0	2884.8	3916.2	3701.5	2380.5	2671.0	3162.9	1688.4	133893.6	96.9	5443.1	6167.3
30-Oct	1131.1	1037.9	2180.7	2296.3	2802.8	3416.8	2889.8	3938.2	3719.4	2390.0	2681.9	3179.6	1698.6	133879.1	96.9	5373.0	6139.4
31-Oct	1130.9	1037.7	2180.4	2296.1	2802.7	3402.8	2873.9	3914.0	3702.0	2379.5	2669.6	3156.7	1685.9	133864.7	96.9	5303.5	6111.5

Rule Curve for Buckhorn Reservoir

Values in table denote the daily desired water level (ft) in reservoir.

Day	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	757.0	757.0	757.0	757.0	782.0	782.0	782.0	782.0	782.0	773.8	765.2	757.0
2	757.0	757.0	757.0	757.8	782.0	782.0	782.0	782.0	781.7	773.5	765.0	757.0
3	757.0	757.0	757.0	758.7	782.0	782.0	782.0	782.0	781.5	773.2	764.7	757.0
4	757.0	757.0	757.0	759.5	782.0	782.0	782.0	782.0	781.2	772.9	764.4	757.0
5	757.0	757.0	757.0	760.3	782.0	782.0	782.0	782.0	780.9	772.7	764.1	757.0
6	757.0	757.0	757.0	761.2	782.0	782.0	782.0	782.0	780.6	772.4	763.9	757.0
7	757.0	757.0	757.0	762.0	782.0	782.0	782.0	782.0	780.4	772.1	763.6	757.0
8	757.0	757.0	757.0	762.8	782.0	782.0	782.0	782.0	780.1	771.8	763.3	757.0
9	757.0	757.0	757.0	763.7	782.0	782.0	782.0	782.0	779.8	771.6	763.0	757.0
10	757.0	757.0	757.0	764.5	782.0	782.0	782.0	782.0	779.5	771.3	762.8	757.0
11	757.0	757.0	757.0	765.3	782.0	782.0	782.0	782.0	779.3	771.0	762.5	757.0
12	757.0	757.0	757.0	766.2	782.0	782.0	782.0	782.0	779.0	770.7	762.2	757.0
13	757.0	757.0	757.0	767.0	782.0	782.0	782.0	782.0	778.7	770.5	761.9	757.0
14	757.0	757.0	757.0	767.8	782.0	782.0	782.0	782.0	778.4	770.2	761.7	757.0
15	757.0	757.0	757.0	768.7	782.0	782.0	782.0	782.0	778.2	769.9	761.4	757.0
16	757.0	757.0	757.0	769.5	782.0	782.0	782.0	782.0	777.9	769.6	761.1	757.0
17	757.0	757.0	757.0	770.3	782.0	782.0	782.0	782.0	777.6	769.4	760.8	757.0
18	757.0	757.0	757.0	771.2	782.0	782.0	782.0	782.0	777.3	769.1	760.6	757.0
19	757.0	757.0	757.0	772.0	782.0	782.0	782.0	782.0	777.1	768.8	760.3	757.0
20	757.0	757.0	757.0	772.8	782.0	782.0	782.0	782.0	776.8	768.5	760.0	757.0
21	757.0	757.0	757.0	773.7	782.0	782.0	782.0	782.0	776.5	768.3	759.7	757.0
22	757.0	757.0	757.0	774.5	782.0	782.0	782.0	782.0	776.2	768.0	759.5	757.0
23	757.0	757.0	757.0	775.3	782.0	782.0	782.0	782.0	776.0	767.7	759.2	757.0
24	757.0	757.0	757.0	776.2	782.0	782.0	782.0	782.0	775.7	767.4	758.9	757.0
25	757.0	757.0	757.0	777.0	782.0	782.0	782.0	782.0	775.4	767.2	758.6	757.0
26	757.0	757.0	757.0	777.8	782.0	782.0	782.0	782.0	775.1	766.9	758.4	757.0
27	757.0	757.0	757.0	778.7	782.0	782.0	782.0	782.0	774.9	766.6	758.1	757.0
28	757.0	757.0	757.0	779.5	782.0	782.0	782.0	782.0	774.6	766.3	757.8	757.0
29	757.0	757.0	757.0	780.3	782.0	782.0	782.0	782.0	774.3	766.1	757.5	757.0
30	757.0	757.0	757.0	781.2	782.0	782.0	782.0	782.0	774.0	765.8	757.3	757.0
31	757.0	757.0	757.0	782.0						765.5		757.0

Rule Curve for Carr Fork Reservoir

Values in table denote the daily desired water level (ft) in reservoir.

Day	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	1017.0	1017.0	1017.0	1020.8	1027.0	1027.0	1027.0	1027.0	1027.0	1025.0	1020.9	1017.0
2	1017.0	1017.0	1017.0	1021.0	1027.0	1027.0	1027.0	1027.0	1027.0	1024.9	1020.7	1017.0
3	1017.0	1017.0	1017.0	1021.3	1027.0	1027.0	1027.0	1027.0	1027.0	1024.7	1020.6	1017.0
4	1017.0	1017.0	1017.0	1021.5	1027.0	1027.0	1027.0	1027.0	1027.0	1024.6	1020.5	1017.0
5	1017.0	1017.0	1017.0	1021.7	1027.0	1027.0	1027.0	1027.0	1027.0	1024.5	1020.3	1017.0
6	1017.0	1017.0	1017.0	1021.9	1027.0	1027.0	1027.0	1027.0	1027.0	1024.3	1020.2	1017.0
7	1017.0	1017.0	1017.0	1022.1	1027.0	1027.0	1027.0	1027.0	1027.0	1024.2	1020.1	1017.0
8	1017.0	1017.0	1017.0	1022.3	1027.0	1027.0	1027.0	1027.0	1027.0	1024.1	1019.9	1017.0
9	1017.0	1017.0	1017.0	1022.5	1027.0	1027.0	1027.0	1027.0	1027.0	1023.9	1019.8	1017.0
10	1017.0	1017.0	1017.0	1022.7	1027.0	1027.0	1027.0	1027.0	1027.0	1023.8	1019.7	1017.0
11	1017.0	1017.0	1017.0	1023.0	1027.0	1027.0	1027.0	1027.0	1027.0	1023.7	1019.5	1017.0
12	1017.0	1017.0	1017.0	1023.2	1027.0	1027.0	1027.0	1027.0	1027.0	1023.5	1019.4	1017.0
13	1017.0	1017.0	1017.0	1023.4	1027.0	1027.0	1027.0	1027.0	1027.0	1023.4	1019.3	1017.0
14	1017.0	1017.0	1017.0	1023.6	1027.0	1027.0	1027.0	1027.0	1027.0	1023.3	1019.1	1017.0
15	1017.0	1017.0	1017.2	1023.8	1027.0	1027.0	1027.0	1027.0	1027.0	1023.1	1019.0	1017.0
16	1017.0	1017.0	1017.4	1024.0	1027.0	1027.0	1027.0	1027.0	1027.0	1023.0	1018.9	1017.0
17	1017.0	1017.0	1017.6	1024.2	1027.0	1027.0	1027.0	1027.0	1026.9	1022.9	1018.7	1017.0
18	1017.0	1017.0	1017.9	1024.4	1027.0	1027.0	1027.0	1027.0	1026.7	1022.7	1018.6	1017.0
19	1017.0	1017.0	1018.1	1024.7	1027.0	1027.0	1027.0	1027.0	1026.6	1022.6	1018.5	1017.0
20	1017.0	1017.0	1018.3	1024.9	1027.0	1027.0	1027.0	1027.0	1026.5	1022.5	1018.3	1017.0
21	1017.0	1017.0	1018.5	1025.1	1027.0	1027.0	1027.0	1027.0	1026.3	1022.3	1018.2	1017.0
22	1017.0	1017.0	1018.7	1025.3	1027.0	1027.0	1027.0	1027.0	1026.2	1022.2	1018.1	1017.0
23	1017.0	1017.0	1018.9	1025.5	1027.0	1027.0	1027.0	1027.0	1026.1	1022.1	1017.9	1017.0
24	1017.0	1017.0	1019.1	1025.7	1027.0	1027.0	1027.0	1027.0	1025.9	1021.9	1017.8	1017.0
25	1017.0	1017.0	1019.3	1025.9	1027.0	1027.0	1027.0	1027.0	1025.8	1021.8	1017.7	1017.0
26	1017.0	1017.0	1019.6	1026.1	1027.0	1027.0	1027.0	1027.0	1025.7	1021.7	1017.5	1017.0
27	1017.0	1017.0	1019.8	1026.4	1027.0	1027.0	1027.0	1027.0	1025.5	1021.5	1017.4	1017.0
28	1017.0	1017.0	1020.0	1026.6	1027.0	1027.0	1027.0	1027.0	1025.4	1021.4	1017.3	1017.0
29	1017.0		1020.2	1026.8	1027.0	1027.0	1027.0	1027.0	1025.3	1021.3	1017.1	1017.0
30	1017.0		1020.4	1027.0	1027.0	1027.0	1027.0	1027.0	1025.1	1021.1	1017.0	1017.0
31	1017.0		1020.6		1027.0		1027.0	1027.0		1021.0		1017.0

Rule Curve for Herrington Lake / Dix Dam

Values in table denote the daily desired water level (ft) in reservoir.

Day	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	720.0	720.0	720.0	720.6	737.5	740.0	739.8	732.5	720.0	720.0	720.0	720.0
2	720.0	720.0	720.0	721.1	737.5	740.0	739.5	732.1	720.0	720.0	720.0	720.0
3	720.0	720.0	720.0	721.7	737.5	740.0	739.3	731.7	720.0	720.0	720.0	720.0
4	720.0	720.0	720.0	722.3	737.5	740.0	739.1	731.3	720.0	720.0	720.0	720.0
5	720.0	720.0	720.0	722.8	737.5	740.0	738.8	730.9	720.0	720.0	720.0	720.0
6	720.0	720.0	720.0	723.4	737.5	740.0	738.6	730.5	720.0	720.0	720.0	720.0
7	720.0	720.0	720.0	724.0	737.5	740.0	738.4	730.1	720.0	720.0	720.0	720.0
8	720.0	720.0	720.0	724.5	737.5	740.0	738.1	729.7	720.0	720.0	720.0	720.0
9	720.0	720.0	720.0	725.1	737.5	740.0	737.9	729.3	720.0	720.0	720.0	720.0
10	720.0	720.0	720.0	725.6	737.5	740.0	737.7	728.9	720.0	720.0	720.0	720.0
11	720.0	720.0	720.0	726.2	737.5	740.0	737.4	728.5	720.0	720.0	720.0	720.0
12	720.0	720.0	720.0	726.8	737.5	740.0	737.2	728.1	720.0	720.0	720.0	720.0
13	720.0	720.0	720.0	727.3	737.5	740.0	737.0	727.7	720.0	720.0	720.0	720.0
14	720.0	720.0	720.0	727.9	737.5	740.0	736.7	727.3	720.0	720.0	720.0	720.0
15	720.0	720.0	720.0	728.5	737.5	740.0	736.5	726.9	720.0	720.0	720.0	720.0
16	720.0	720.0	720.0	729.0	737.6	740.0	736.3	726.5	720.0	720.0	720.0	720.0
17	720.0	720.0	720.0	729.6	737.8	740.0	736.0	726.0	720.0	720.0	720.0	720.0
18	720.0	720.0	720.0	730.2	737.9	740.0	735.8	725.6	720.0	720.0	720.0	720.0
19	720.0	720.0	720.0	730.7	738.1	740.0	735.5	725.2	720.0	720.0	720.0	720.0
20	720.0	720.0	720.0	731.3	738.2	740.0	735.3	724.8	720.0	720.0	720.0	720.0
21	720.0	720.0	720.0	731.9	738.4	740.0	735.1	724.4	720.0	720.0	720.0	720.0
22	720.0	720.0	720.0	732.4	738.5	740.0	734.8	724.0	720.0	720.0	720.0	720.0
23	720.0	720.0	720.0	733.0	738.7	740.0	734.6	723.6	720.0	720.0	720.0	720.0
24	720.0	720.0	720.0	733.5	738.8	740.0	734.4	723.2	720.0	720.0	720.0	720.0
25	720.0	720.0	720.0	734.1	739.0	740.0	734.1	722.8	720.0	720.0	720.0	720.0
26	720.0	720.0	720.0	734.7	739.1	740.0	733.9	722.4	720.0	720.0	720.0	720.0
27	720.0	720.0	720.0	735.2	739.3	740.0	733.7	722.0	720.0	720.0	720.0	720.0
28	720.0	720.0	720.0	735.8	739.4	740.0	733.4	721.6	720.0	720.0	720.0	720.0
29	720.0	720.0	720.0	736.4	739.6	740.0	733.2	721.2	720.0	720.0	720.0	720.0
30	720.0	720.0	720.0	736.9	739.7	740.0	733.0	720.8	720.0	720.0	720.0	720.0
31	720.0	720.0		739.9			732.7	720.4		720.0		

APPENDIX D

Ky-American Water Company Withdrawal Permit

1992 Revision

**COMMONWEALTH OF KENTUCKY
NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION
DIVISION OF WATER
FRANKFORT, KENTUCKY 40601**

PERMIT TO WITHDRAW PUBLIC WATER

Permit Number: # 0200

**Issued to: Kentucky-American Water Company
2300 Richmond Road
Lexington, Kentucky 40502**

The Natural Resources and Environmental Protection Cabinet authorizes the above named party to withdraw Public Water of the Commonwealth of Kentucky. This permit has been issued under provisions of KRS Chapter 151.125, 151.140 and 151.150 and regulations promulgated with respect to the withdrawal of public waters. Issuance of this permit does not relieve the permittee from the responsibility of obtaining any other permits or licenses required by this Cabinet, or other state, federal or local agencies. Withdrawals are restricted to the stated quantities, times and locations specified below. This permit represents a limited right of use and does not vest ownership nor absolute right to withdrawal or use of Public Water, nor does it guarantee that requested amounts will be available for use at all times. In times of drought or emergency, the Cabinet may temporarily alter the conditions of this permit. Any violation of the Water Resources Act of 1966 as amended is subject to penalties as set forth in KRS 151.950 and other applicable provisions of law.

The location of the authorized water withdrawal is as follows:

A surface water intake located at river mile 167.3 (pool 9) of the Kentucky River, latitude 37° 54'07" North, longitude 84°22'39" West, Fayette County.

Water withdrawals are limited to the following rates from the specified location:

Jan.	60.0 MGD	April	60.0 MGD	July	63.0 MGD	Oct.	63.0 MGD
Feb.	60.0 MGD	May	63.0 MGD	Aug.	63.0 MGD	Nov.	60.0 MGD
March	60.0 MGD	June	63.0 MGD	Sept.	63.0 MGD	Dec.	60.0 MGD

Conditions to this permit are as follows:

1. Withdrawal rates must be accurately measured by meter or other device approved by the Cabinet.
2. This permit is subject to revision if data collected pursuant to permit condition No. 6 indicate that withdrawals negatively impact the quantity and quality of water below the intake.

For additional conditions see attached sheets

Issued: July 19, 1966

Latest Revision: September 17, 1999

J. D. Legg/Smothers
Manager, Water Resources Branch

Division of Water

ХРОНОЛОГИЧЕСКИЙ
СОВЕТ ПО РАЗВИТИЮ
АСТРОНОМИИ И АСТРОФИЗИКИ
ПОСТАНОВЛЕНИЕ
СЕССИИ № 10
1994 ГОДА
ОБРАЩЕНИЕ

СТАВРИКАУСУ ВАСИЛИЮ СЕРГЕЕВИЧУ

Председателю Комиссии по астрономии

Национальной Академии Наук
Болгарии
София, Болгария

Совет, заслушав предложение о присуждении звания «Заслуженный деятель науки и техники Болгарии» профессору Василию Сергеевичу Ставрикаусу, постановил:

Василию Сергеевичу Ставрикаусу присвоить звание «Заслуженный деятель науки и техники Болгарии».

Постановление о присуждении звания «Заслуженный деятель науки и техники Болгарии» Василию Сергеевичу Ставрикаусу подписано в Софии 29 апреля 1994 года.

Председатель Совета по развитию астрономии и астрофизики

Председатель Совета по развитию астрономии и астрофизики и астрономии и астрофизики

Председатель Совета по развитию астрономии и астрофизики и астрономии и астрофизики

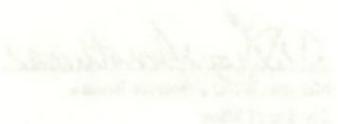
Секретарь Совета	Секретарь Совета	Секретарь Совета	Секретарь Совета
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С. С. Ставрикаус	С. С. Ставрикаус	С. С. Ставрикаус	С. С. Ставрикаус

Постановление о присуждении звания «Заслуженный деятель науки и техники Болгарии» Василию Сергеевичу Ставрикаусу подписано в Софии 29 апреля 1994 года.

Председатель Совета по развитию астрономии и астрофизики

Председатель Совета по развитию астрономии и астрофизики

Председатель Совета по развитию астрономии и астрофизики



3. When flows measured at Lock 10 are 140 cfs or less for four (4) consecutive days, Kentucky-American's withdrawals shall conform to the following schedule:

<u>Lock 10 Flow</u>	<u>Allowable Withdrawals Under This Permit</u>
> 140.00 cfs	Full Permitted Amount*
139.99 - 120.00 cfs	58.0 MGD
119.99 - 90.00 cfs	54.0 MGD
89.99 - 60.00 cfs	50.0 MGD
59.99 - 30.00 cfs	48.0 MGD
29.99 - 0.00 cfs	45.0 MGD
Drought Phase 2	45.0 MGD
Drought Phase 3	42.0 MGD
Drought Phase 4	40.0 MGD
Drought Phase 5	35.0 MGD
Drought Phase 6	30.0 MGD

- 3.1 The full permitted amount is 60.0 MGD for the months November through April and 63.0 MGD for the months May through October.
- 3.2 Drought phase 2 shall exist between the time that Trigger 2 is met but before Trigger 3 is declared. Drought phase 3 shall exist between the time that Trigger 3 is met but before Trigger 4 is declared, and so on.

The revised Flow Schedule shall remain in effect under the condition that the valves and the valve operating plan are maintained by the Kentucky River Authority or some other entity approved by the Division of Water. If maintenance of the valves and valve operating plan is discontinued for any reason, the flow schedule will revert to that incorporated in permit # 0200 as issued on December 14, 1992.

4. Pursuant to Lexington-Fayette County Urban County Government Ordinance 135-88 Section 11-9 (e), Kentucky-American shall prepare administrative regulations governing water usage and submit these to the Division of Water for approval by November 15, 1999.
5. Kentucky-American shall obtain continuous gaging information for flows at the United States Geological Survey gage at Lock 10. Gage and water withdrawal data shall be reported to the Division of Water daily, Monday through Friday, when flows are below 140 cfs. The Division may specify reasonable reporting intervals, no more frequently than hourly, as flows decrease. Compliance with the permit will be based on a running four day average of withdrawals and not the monthly average withdrawal.
6. Whenever streamflow drops below 120 cfs for four consecutive days at Lock 10, Kentucky-American shall collect dissolved oxygen, temperature, pH and specific conductance samples at the locations noted below. Sampling shall continue each week thereafter until flows return to rates greater than 120 cfs, except it shall be continued as long as the valve operating plan is in effect. Measurements at locations (a), (b), and (c) shall be made three times per week on Monday, Wednesday, and Friday mornings. Measurements at location (d) shall be made one time per week except during the months of June, July, and August and whenever the ambient air temperature is at or above 90° F. Data must be collected at four locations across the river at each site, with measurements taken at the surface, mid-depth, and bottom. These values must be reported at each point.
- (a) About 0.25 miles above the current Kentucky-American intake
 - (b) Just above lock 9
 - (c) In the vicinity of river mile 156 in the upper end of pool 8
 - (d) In the lower third of pool 8
7. The pumpage to the Water Treatment Plant shall not exceed the plant's rated capacity.
8. Kentucky-American shall draft a revised Demand Management Plan to conform to the limits of this permit.

9. Kentucky-American shall notify the Natural Resources and Environmental Protection Cabinet and the Kentucky River Authority as each Management Phase is declared in the Demand Management Plan adopted above, beginning with the Advisory Phase.
10. Kentucky-American Water Company and the Division of Water recognize that all permitted water withdrawers are equals without seniority, priority, or privilege given to any permit holder along the Kentucky River.
11. Kentucky-American Water Company recognizes its role as the largest water purveyor in demonstrating leadership in protecting the Kentucky River as source of supply of the Central Kentucky Region.

COMMONWEALTH OF KENTUCKY
NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION
DIVISION OF WATER
FRANKFORT, KENTUCKY 40601

PERMIT TO WITHDRAW PUBLIC WATER

Permit Number: # 0200

Issued to: Kentucky-American Water Company
2300 Richmond Road
Lexington, Kentucky 40502

The Natural Resources and Environmental Protection Cabinet authorizes the above named party to withdraw Public Water of the Commonwealth of Kentucky. This permit has been issued under provisions of KRS Chapter 151.125, 151.140 and 151.150 and regulations promulgated with respect to the withdrawal of public waters. Issuance of this permit does not relieve the permittee from the responsibility of obtaining any other permits or licenses required by this Cabinet, or other state, federal or local agencies. Withdrawals are restricted to the stated quantities, times and locations specified below. This permit represents a limited right of use and does not vest ownership nor absolute right to withdrawal or use of Public Water, nor does it guarantee that requested amounts will be available for use at all times. In times of drought or emergency, the Cabinet may temporarily alter the conditions of the permit. Any violation of the Water Resources Act of 1966 as amended is subject to penalties as set forth in KRS 151.990 and other applicable provisions of law.

The location of the authorized water withdrawal is as follows:

A surface water intake located at river mile 167.3 (Pool 9) of the Kentucky River; latitude 37°54'07" North, longitude 84°22'39" West, Fayette County.

Water withdrawals are limited to the following rates from the specified location:

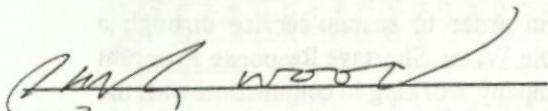
Jan.	60.0 MGD	April	60.0 MGD	July	60.0 MGD	Oct.	60.0 MGD
Feb.	60.0 MGD	May	60.0 MGD	Aug.	60.0 MGD	Nov.	60.0 MGD
March	60.0 MGD	June	60.0 MGD	Sept.	60.0 MGD	Dec.	60.0 MGD

Conditions to this permit are as follows:

1. Withdrawal rates must be accurately measured by meter or other device approved by the Cabinet.
2. This permit is subject to revision if data collected pursuant to permit condition No. 6 indicate that withdrawals negatively impact the quantity and quality of water below the intake.

For additional conditions see attached sheet.

Issued: July 19, 1966 Latest Revision: December 14, 1992



Manager, Water Resources Branch
Division of Water

3. When flows measured at Lock 10 are 140 cfs or less for four (4) consecutive days, Kentucky-American's withdrawals shall conform to the following schedule.

<u>Lock 10 Flow</u>	<u>Allowable Withdrawals Under This Permit</u>
> 140.00 cfs	60 MGD
130.00 - 140.00 cfs	55 MGD
120.00 - 129.99 cfs	48 MGD
110.00 - 119.99 cfs	42 MGD
100.00 - 109.99 cfs	36 MGD
90.00 - 99.99 cfs	30 MGD
< 90.00 cfs	25 MGD

4. Pursuant to Lexington-Fayette Urban County Government Ordinance 135-88 Section 11-9 (e), Kentucky-American shall prepare draft administrative regulations governing water usage and submit these to the Division of Water for approval by February 1, 1993.
5. Kentucky-American shall obtain continuous gaging information for flows at the United States Geological Survey gage at Lock 10. Gage and water withdrawal data shall be reported to the Division of Water daily, Monday through Friday, when flows are below 140 cfs. The Division may specify reasonable reporting intervals, no more frequently than hourly, as flows decrease.
6. Whenever streamflow drops below 120 cfs for four consecutive days at lock 10 and each week thereafter until flows return to rates greater 120 cfs, Kentucky-American shall collect dissolved oxygen, temperature, pH and specific conductance samples at the locations noted below. Measurements at locations (a.) and (b.) shall be made three times per week, on Monday, Wednesday and Friday mornings. Measurements at locations (c.) and (d.) shall be made twice per week. Data must be collected at four locations across the river at each site, with measurements taken at the surface, mid-depth, and bottom. These values must be reported at each point.
- a. About 0.25 miles above the current Kentucky-American intake
b. Just above lock 9
c. Just above lock 8
d. About 0.25 miles above the confluence with the Dix River
7. Kentucky-American shall notify the Natural Resources and Environmental Protection Cabinet and the Kentucky River Authority as each Management Phase is declared, beginning with the Advisory Phase.
8. Kentucky-American Water Company has issued a Demand Management Plan which includes a Water Shortage Response Program. The Water Shortage Response Program is a guideline for implementing temporary customer demand reduction requests based on the Kentucky River flows, reservoir levels, and customer demands. The purpose of the customer demand reduction requests would be to maintain adequate source of supply levels in order to sustain service through a drought period. The decision to implement any level of the Water Shortage Response Program is the sole responsibility of Kentucky-American Water Company working in conjunction with the Lexington-Fayette Urban County Government, the Division of Water, and the Public Service

Date	Pool 14	Pool 13	Pool 12	Pool 11	Pool 10	Pool 9	Pool 8	Pool 7	Pool 6	Pool 5	Pool 4	Pool 3	Pool 2	Dix Dam	Jacobson	Buckhorn	Carr Fork
1-Nov	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2-Nov	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
3-Nov	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4-Nov	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5-Nov	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
6-Nov	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
7-Nov	0.000	0.000	0.000	0.000	0.000	0.000	0.000	36.995	3.276	1.589	0.368	0.000	0.000	0.000	0.000	0.000	0.000
8-Nov	0.000	0.000	0.000	0.000	0.000	0.000	2.722	3.276	1.589	0.552	0.000	0.000	0.000	0.000	0.000	0.000	0.000
9-Nov	0.000	0.000	0.000	0.000	0.000	0.000	0.000	3.276	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
10-Nov	0.000	0.000	0.000	0.000	0.000	0.000	36.995	3.276	1.589	0.552	0.000	0.000	0.000	0.000	0.000	0.000	0.000
11-Nov	0.000	0.000	0.000	0.000	0.000	0.000	5.257	3.276	1.589	0.552	0.000	0.000	0.000	0.000	0.000	0.000	0.000
12-Nov	0.000	0.000	0.000	0.000	0.000	0.000	0.000	3.276	1.059	0.552	2.233	6.421	0.000	0.000	0.000	0.000	0.000
13-Nov	0.000	0.000	0.000	0.000	0.000	0.000	0.000	3.276	0.000	2.830	6.421	0.000	0.000	0.000	0.000	0.000	0.000
14-Nov	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.761	0.000	0.000	0.000	0.000	0.000	0.000
15-Nov	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
16-Nov	0.000	0.000	0.000	0.000	0.000	0.000	20.497	3.276	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
17-Nov	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
18-Nov	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
19-Nov	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
20-Nov	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
21-Nov	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
22-Nov	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
23-Nov	0.000	0.000	0.000	0.000	0.000	0.000	14.746	2.184	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
24-Nov	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
25-Nov	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
26-Nov	0.000	0.000	0.000	0.000	0.000	0.000	7.529	1.059	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
27-Nov	0.000	0.000	0.000	0.000	0.000	0.000	3.276	1.589	0.368	3.125	4.281	0.000	0.000	0.000	0.000	0.000	0.000
28-Nov	0.000	0.000	0.000	0.000	0.000	0.000	32.747	3.276	1.589	0.552	0.000	0.000	0.000	0.000	0.000	0.000	0.000
29-Nov	0.000	0.000	0.000	0.000	0.000	0.000	36.995	3.276	1.589	0.552	0.000	0.000	0.000	0.000	0.000	0.000	0.000
30-Nov	0.000	0.000	0.000	0.000	0.000	0.000	36.995	3.276	1.589	0.552	4.004	4.281	0.000	0.000	0.000	0.000	0.000

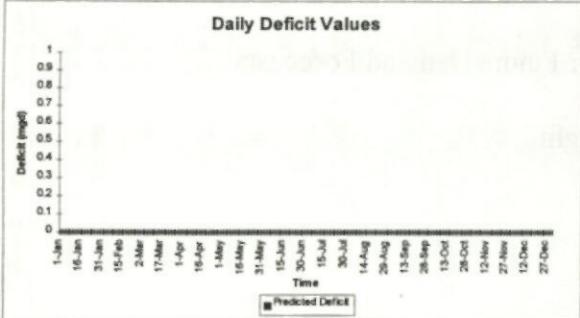
APPENDIX G

Main Stem Deficit Distributions for Future Demand Forecasts

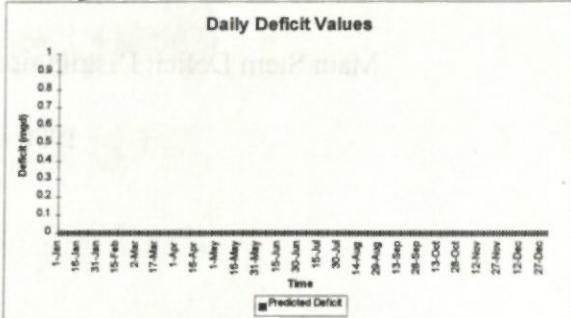
1930 Drought

Deficit Distributions - Pool 2

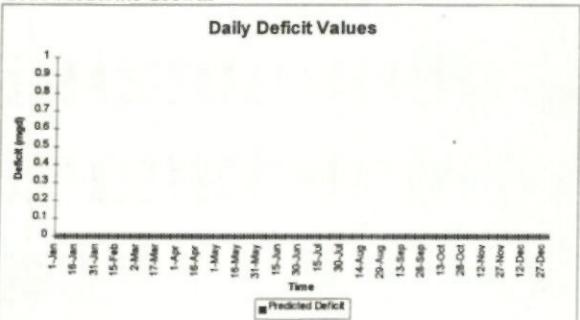
2000 Moderate Growth



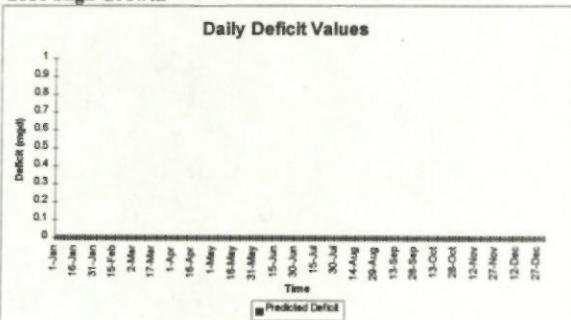
2000 High Growth



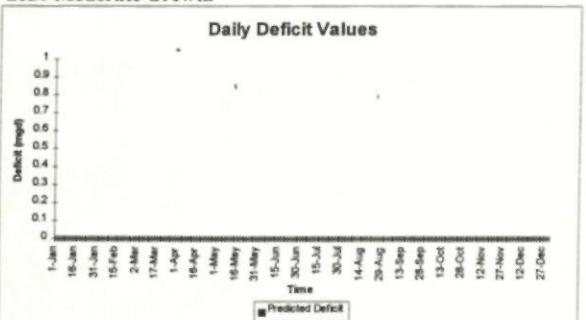
2010 Moderate Growth



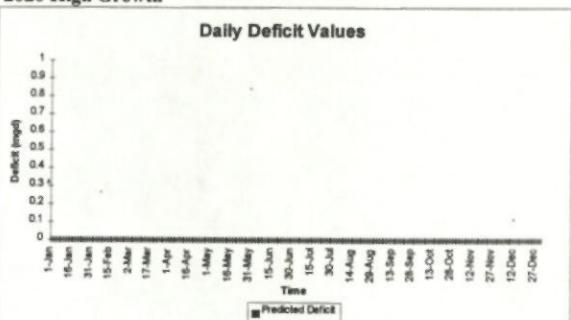
2010 High Growth



2020 Moderate Growth

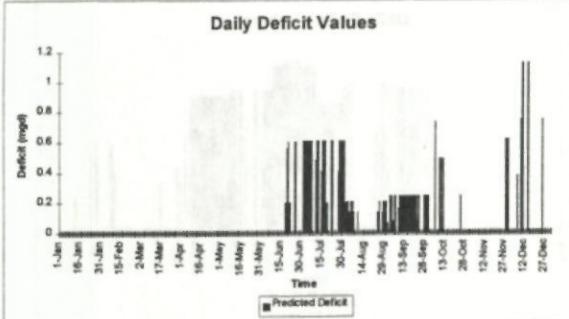


2020 High Growth

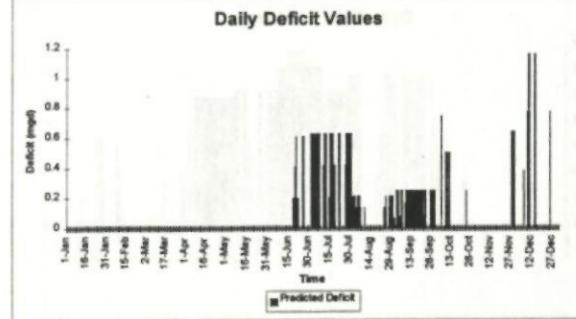


Deficit Distributions - Pool 3

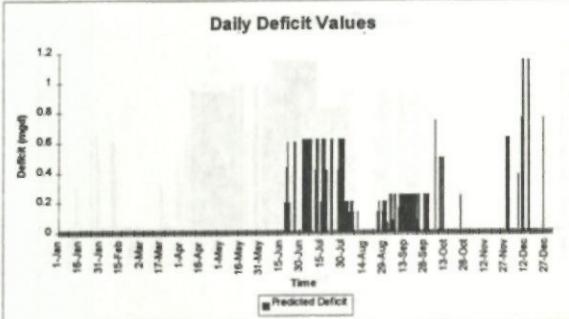
2000 Moderate Growth



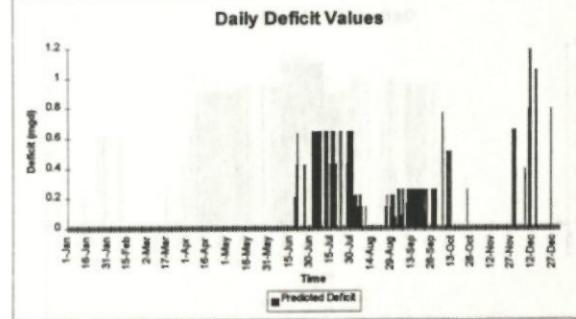
2000 High Growth



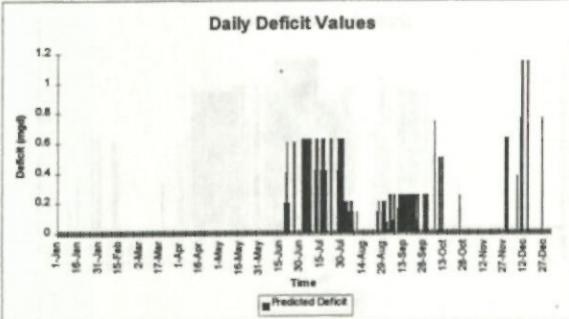
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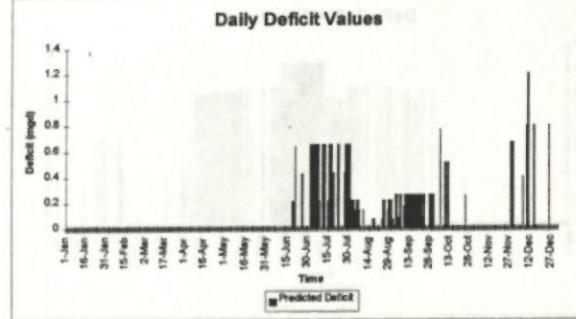
2010 High Growth



2020 Moderate Growth

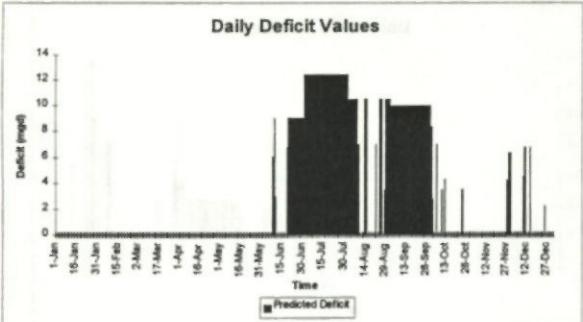


2020 High Growth

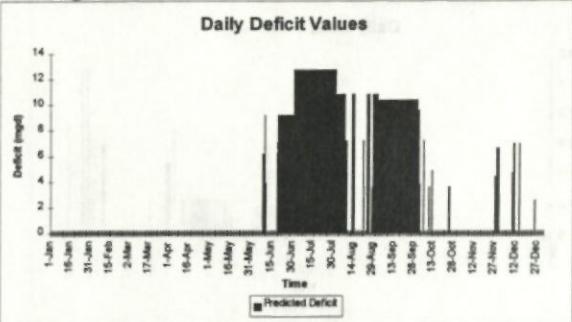


Deficit Distributions - Pool 4

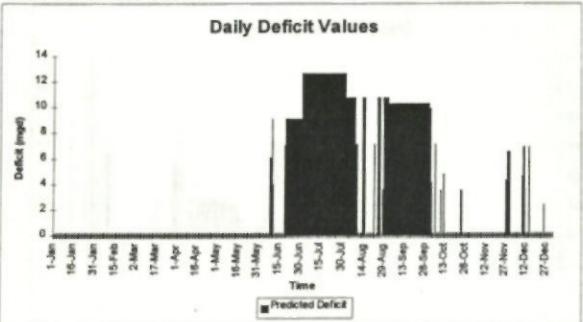
2000 Moderate Growth



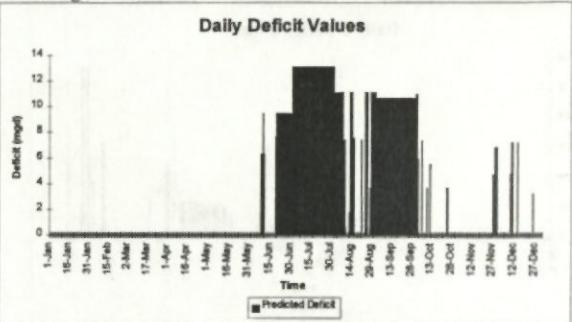
2000 High Growth



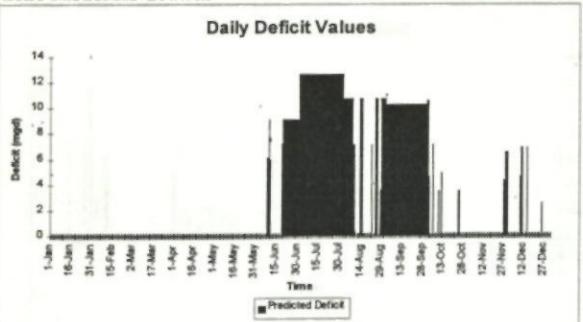
2010 Moderate Growth



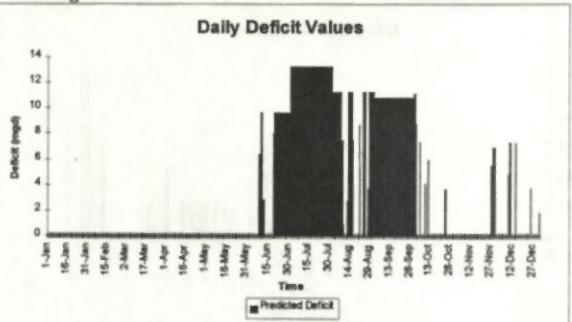
2010 High Growth



2020 Moderate Growth

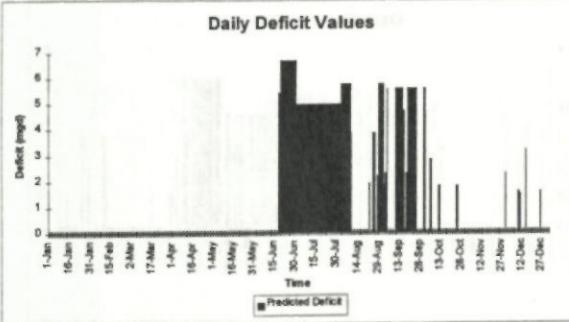


2020 High Growth

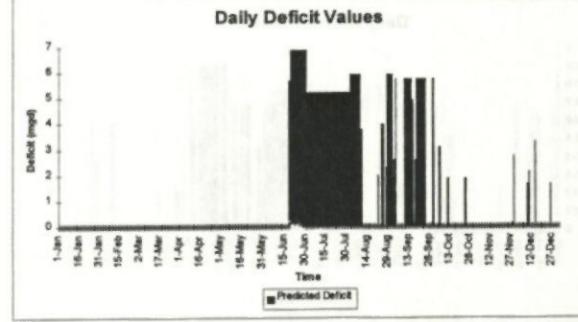


Deficit Distributions - Pool 5

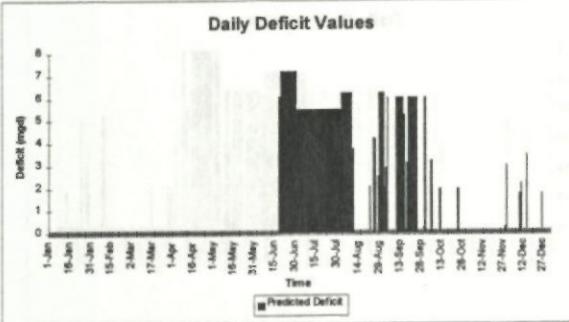
2000 Moderate Growth



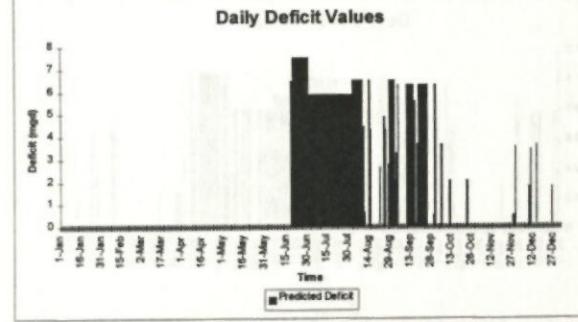
2000 High Growth



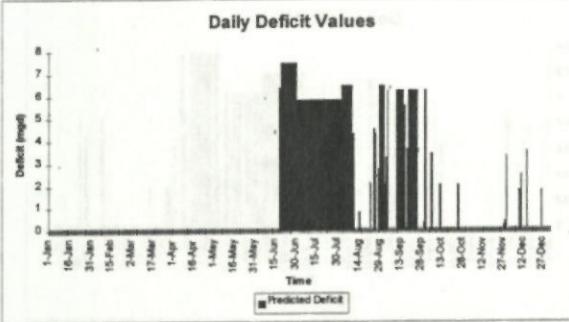
2010 Moderate Growth



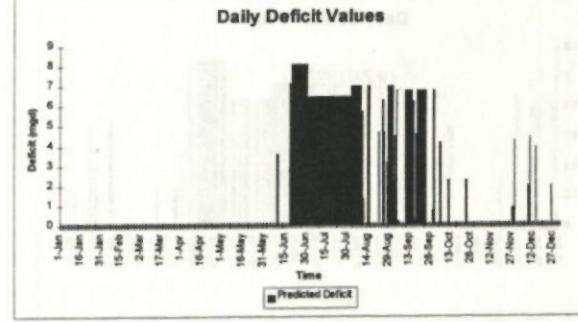
2010 High Growth



2020 Moderate Growth

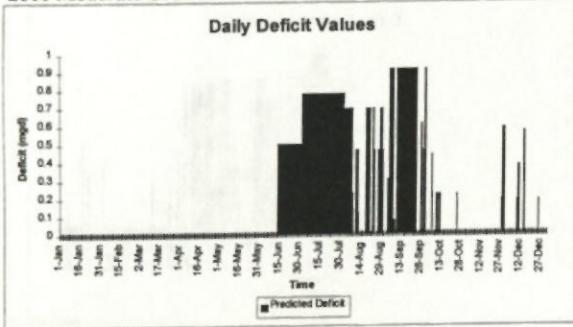


2020 High Growth

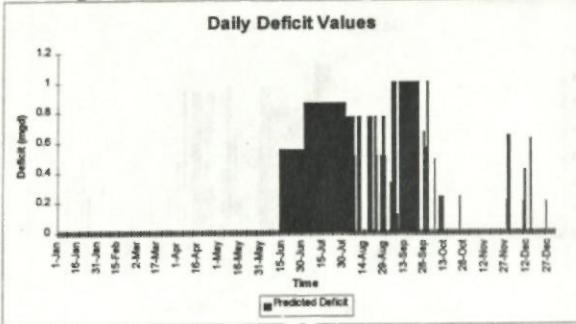


Deficit Distributions - Pool 6

2000 Moderate Growth



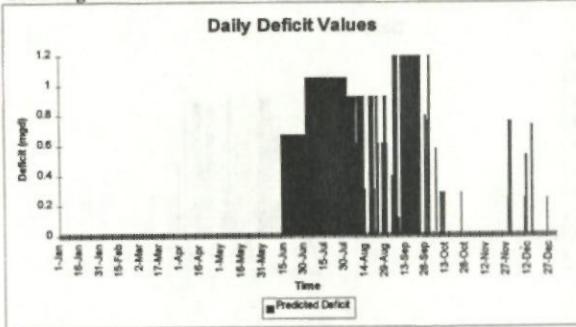
2000 High Growth



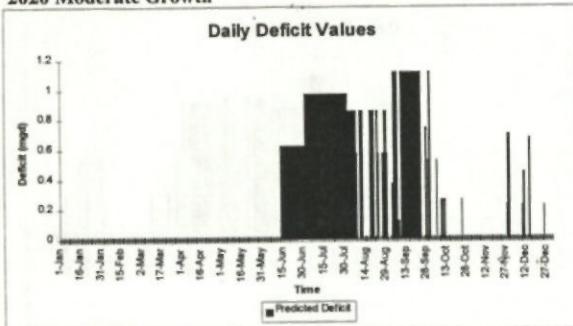
2010 Moderate Growth



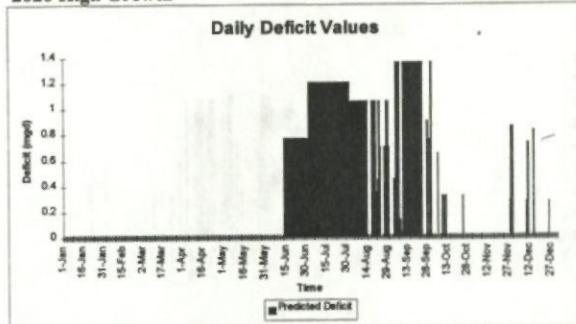
2010 High Growth



2020 Moderate Growth

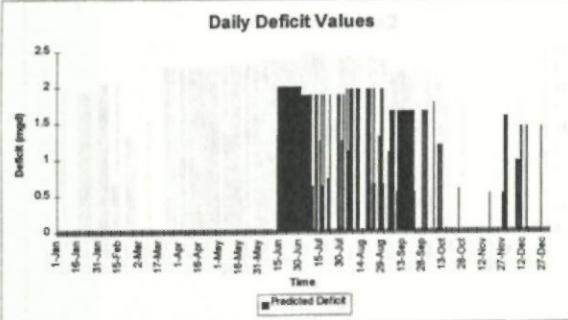


2020 High Growth

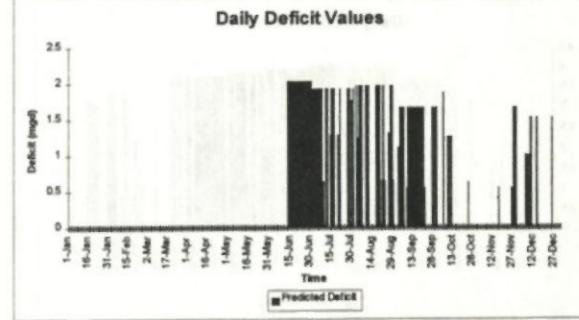


Deficit Distributions - Pool 7

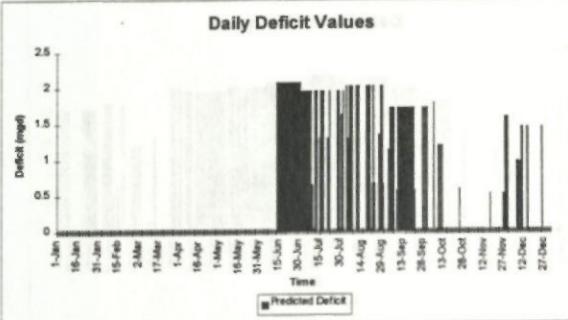
2000 Moderate Growth



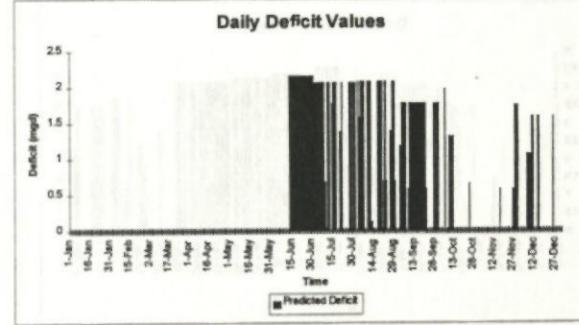
2000 High Growth



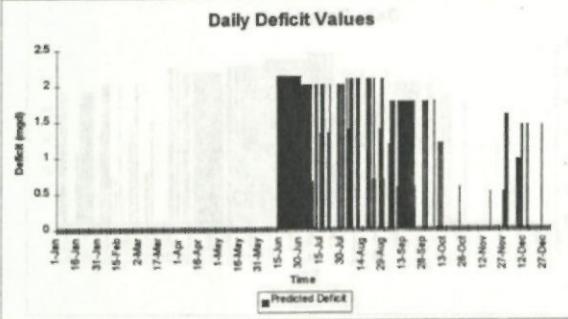
2010 Moderate Growth



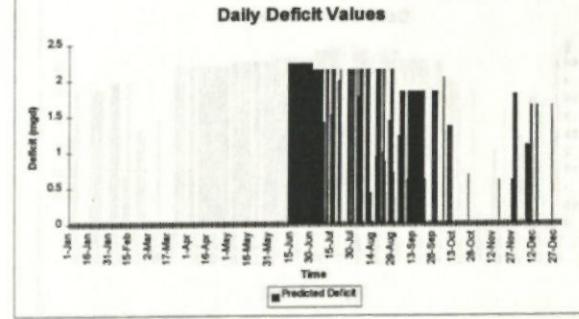
2010 High Growth



2020 Moderate Growth

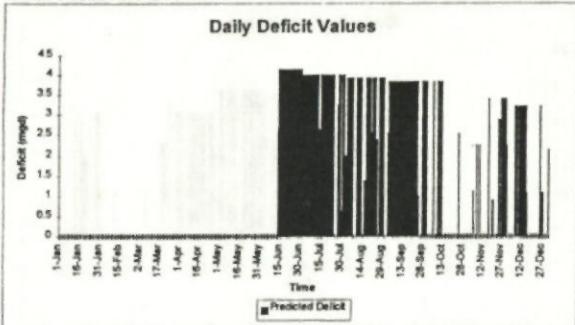


2020 High Growth

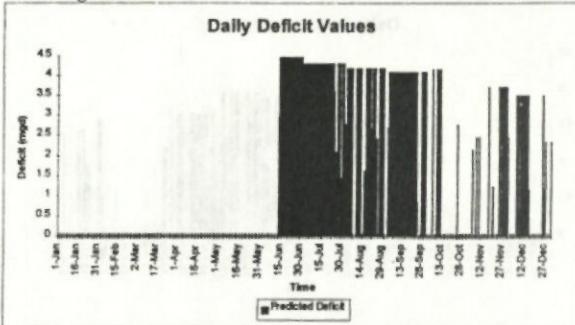


Deficit Distributions - Pool 8

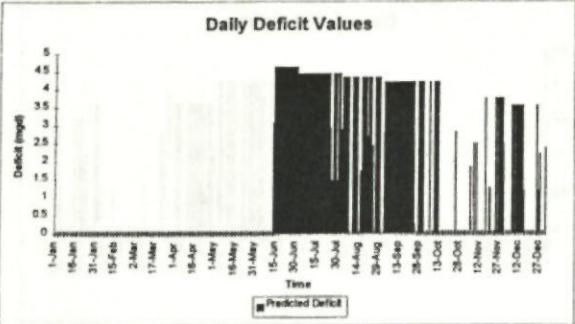
2000 Moderate Growth



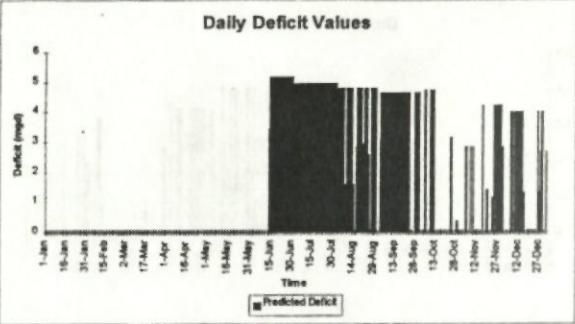
2000 High Growth



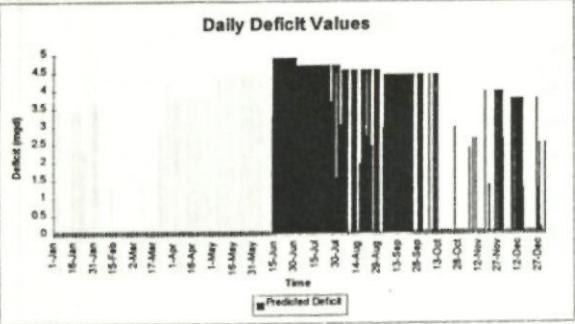
2010 Moderate Growth



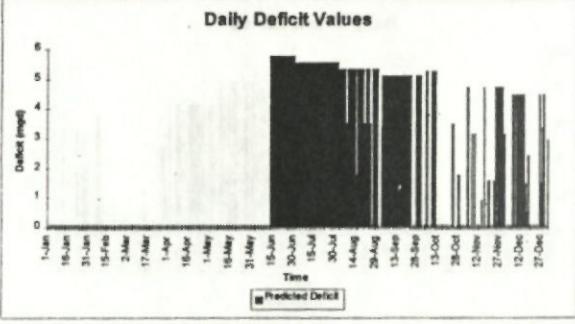
2010 High Growth



2020 Moderate Growth

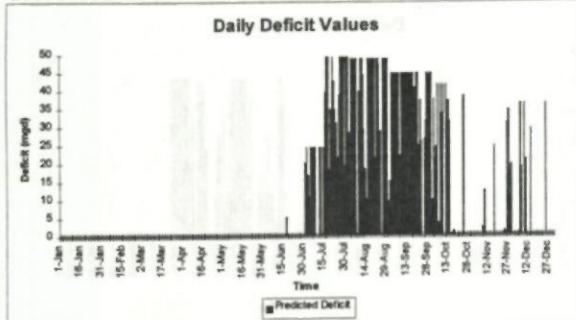


2020 High Growth

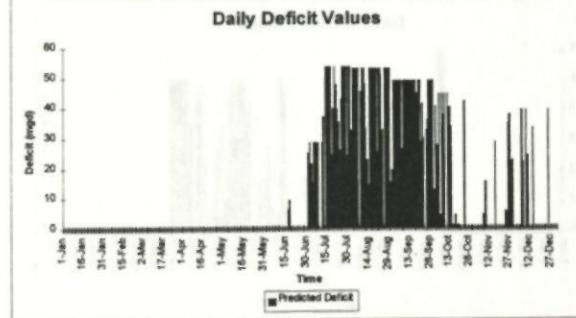


Deficit Distributions - Pool 9

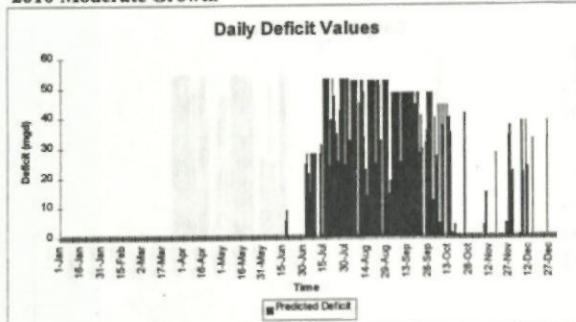
2000 Moderate Growth



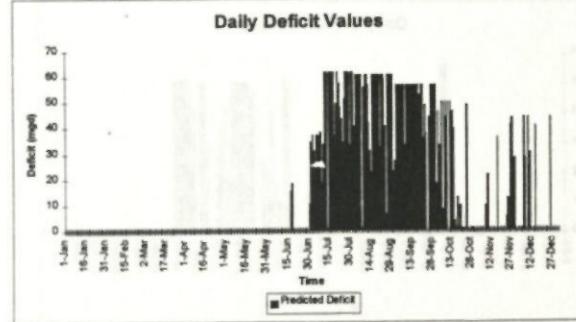
2000 High Growth



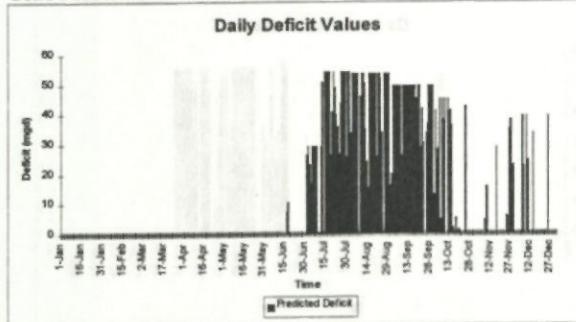
2010 Moderate Growth



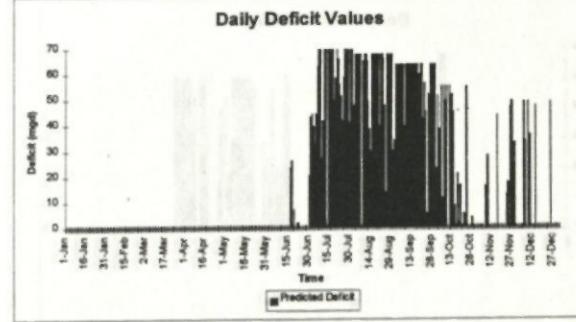
2010 High Growth



2020 Moderate Growth

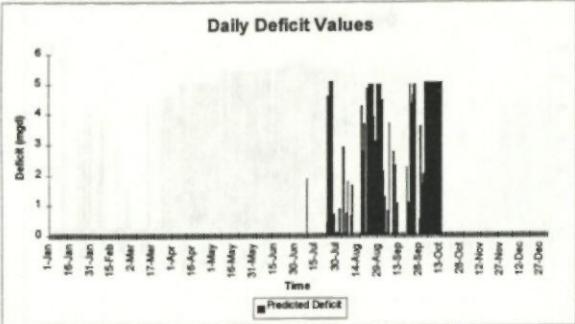


2020 High Growth

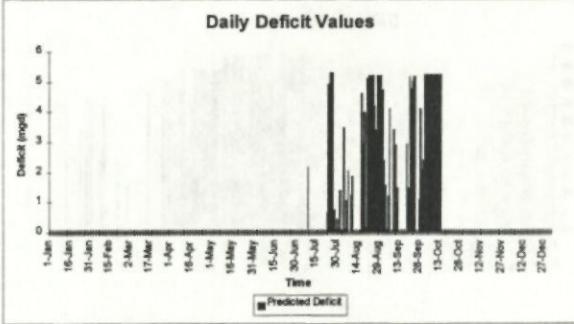


Deficit Distributions - Pool 10

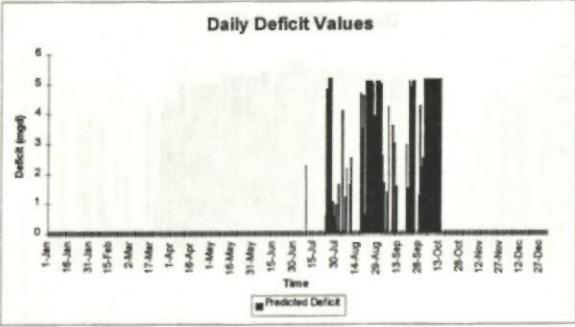
2000 Moderate Growth



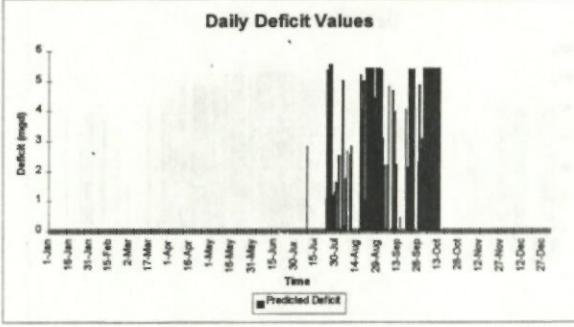
2000 High Growth



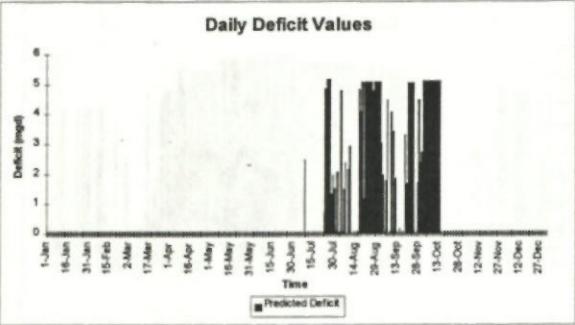
2010 Moderate Growth



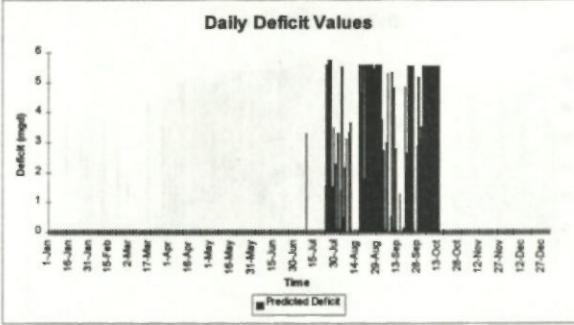
2010 High Growth



2020 Moderate Growth

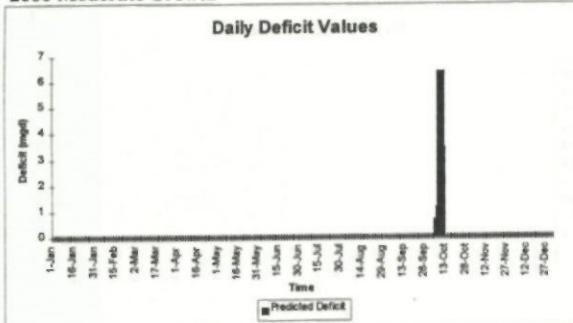


2020 High Growth

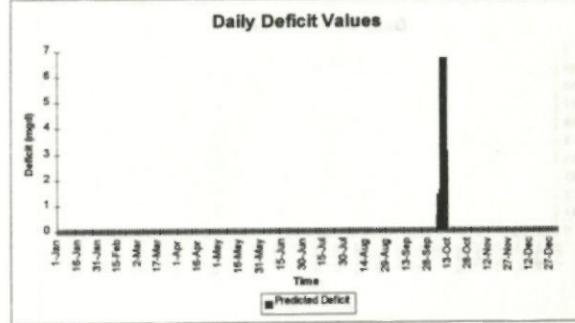


Deficit Distributions - Pool 11

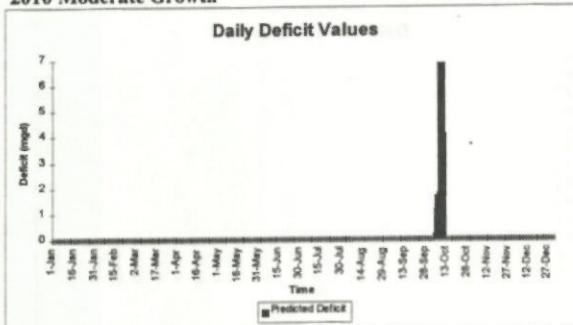
2000 Moderate Growth



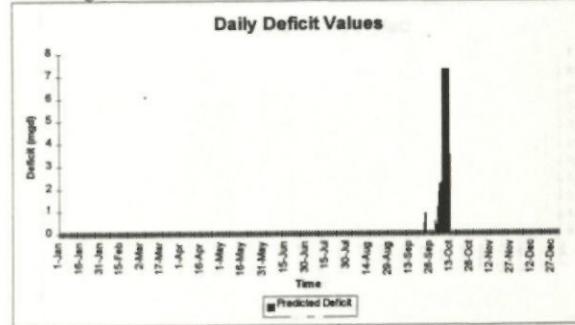
2000 High Growth



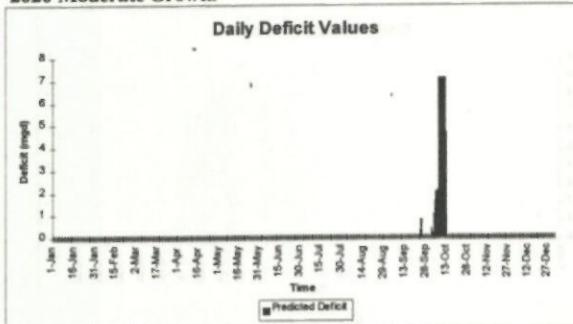
2010 Moderate Growth



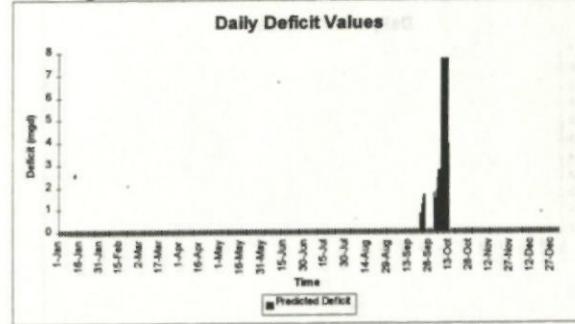
2010 High Growth



2020 Moderate Growth

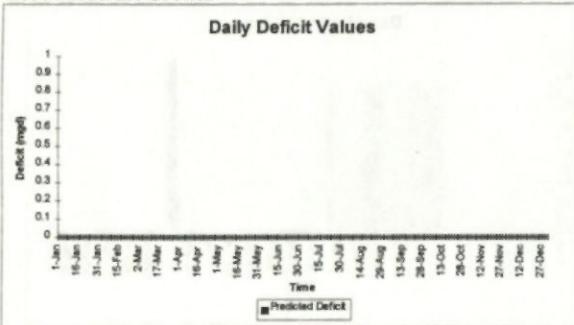


2020 High Growth

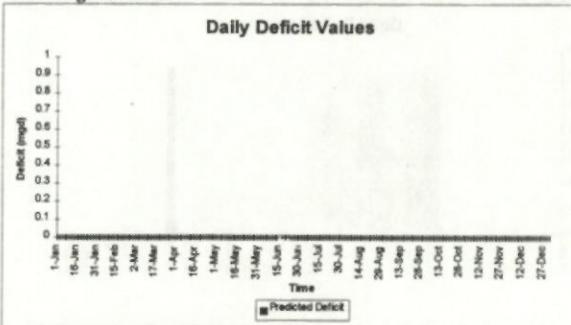


Deficit Distributions - Pool 12

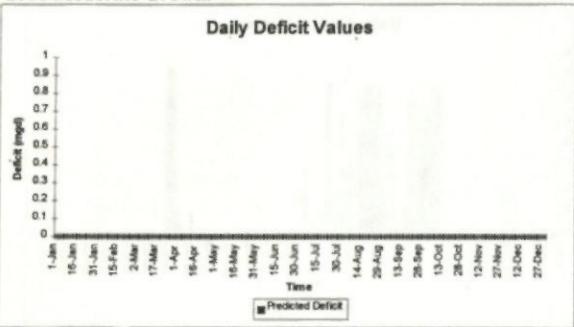
2000 Moderate Growth



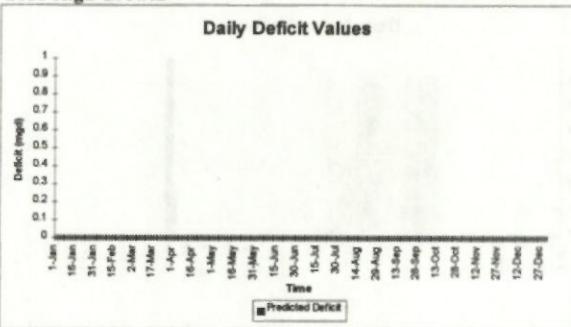
2000 High Growth



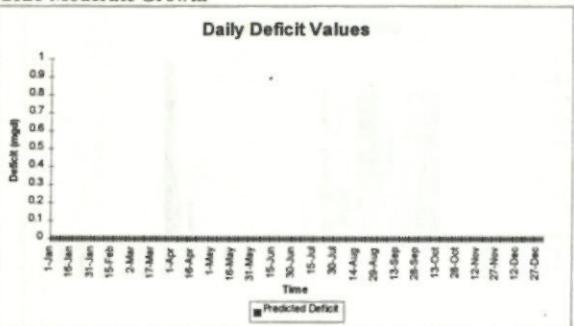
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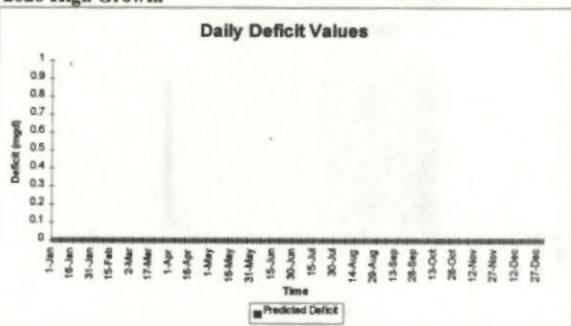
2010 High Growth



2020 Moderate Growth

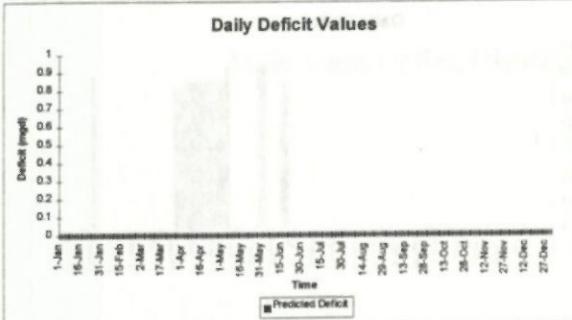


2020 High Growth

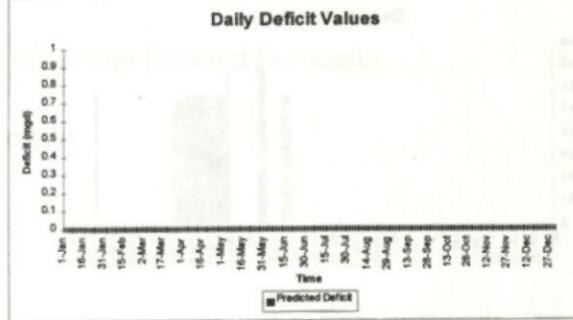


Deficit Distributions - Pool 13

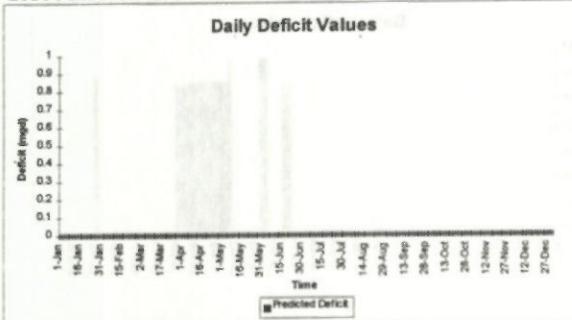
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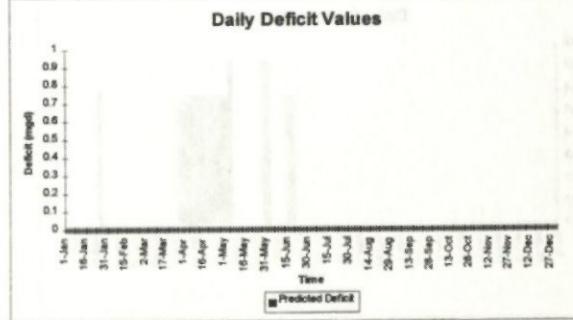
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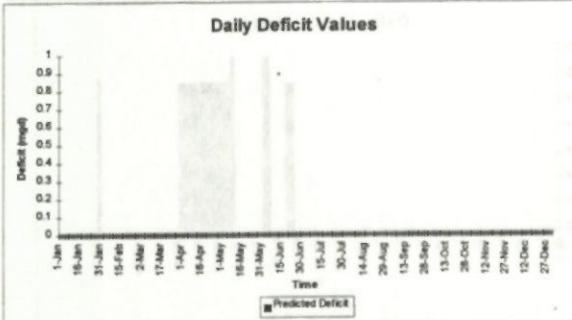
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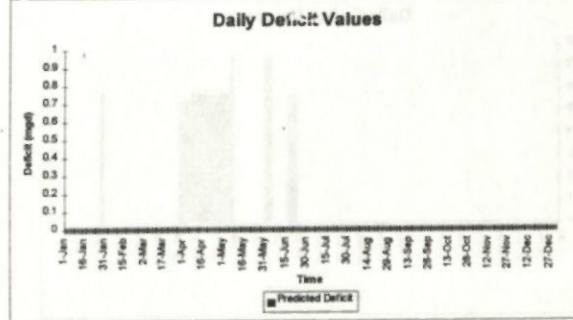
2010 High Growth



2020 Moderate Growth

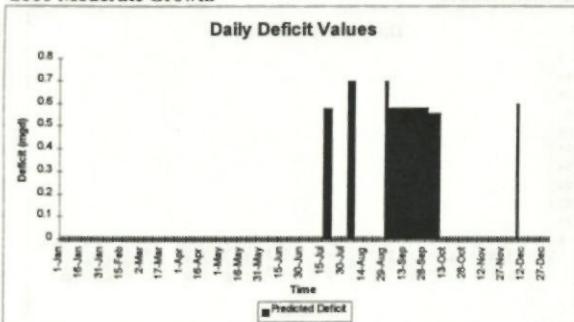


2020 High Growth

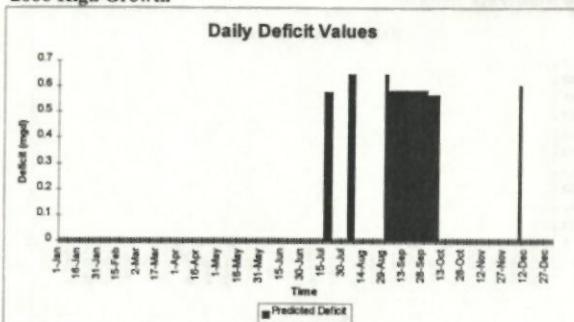


Deficit Distributions - Pool 14

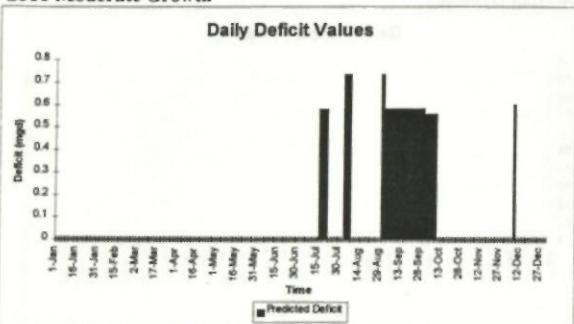
2000 Moderate Growth



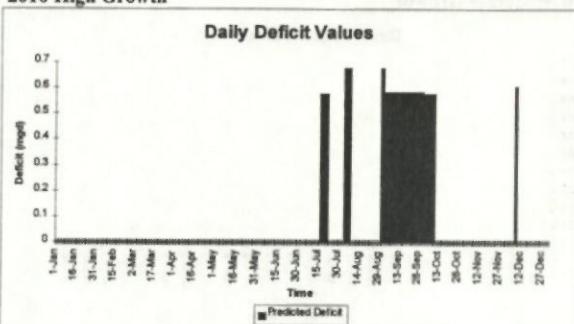
2000 High Growth



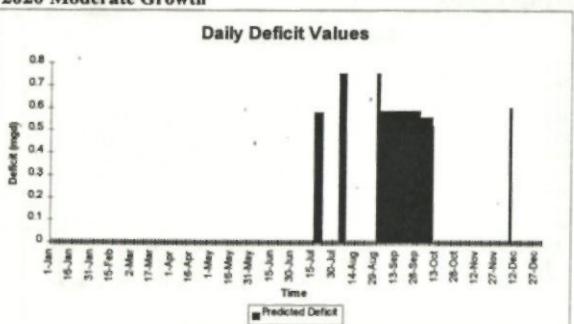
2010 Moderate Growth



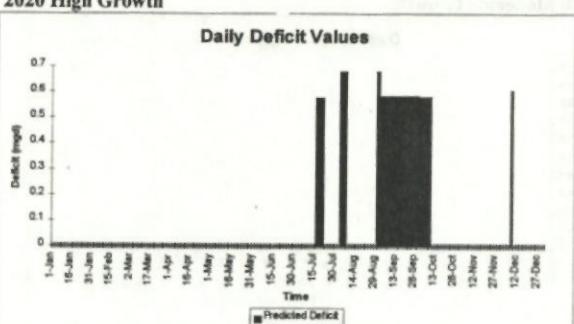
2010 High Growth



2020 Moderate Growth



2020 High Growth



APPENDIX H

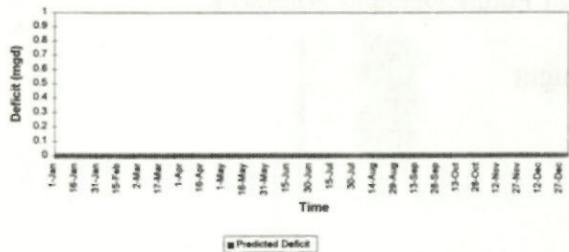
Main Stem Deficit Distributions for Future Demand Forecasts

1953 Drought

Deficit Distributions - Pool 2

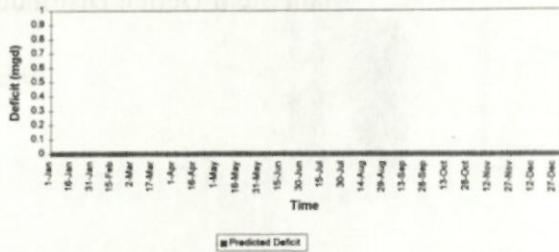
2000 Moderate Growth

Daily Deficit Values



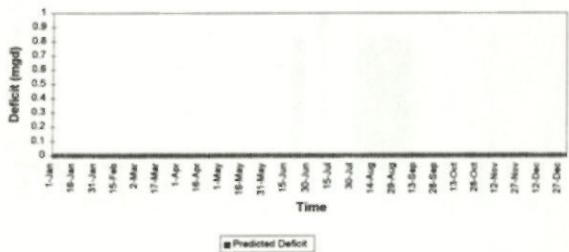
2000 High Growth

Daily Deficit Values



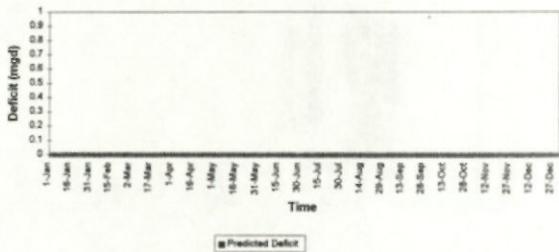
2010 Moderate Growth

Daily Deficit Values



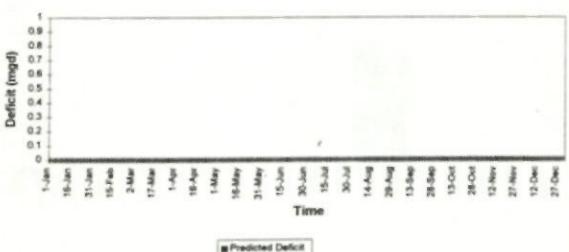
2010 High Growth

Daily Deficit Values



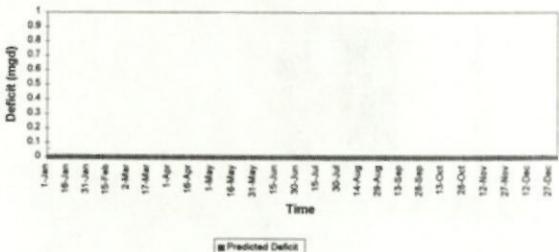
2020 Moderate Growth

Daily Deficit Values



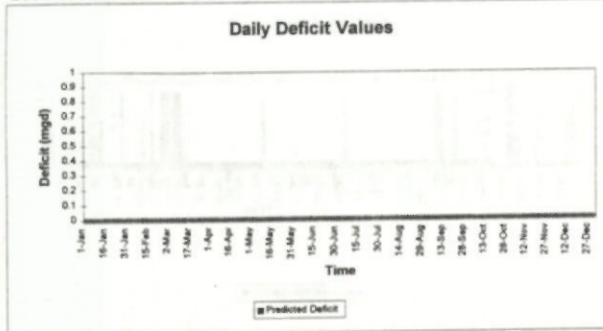
2020 High Growth

Daily Deficit Values

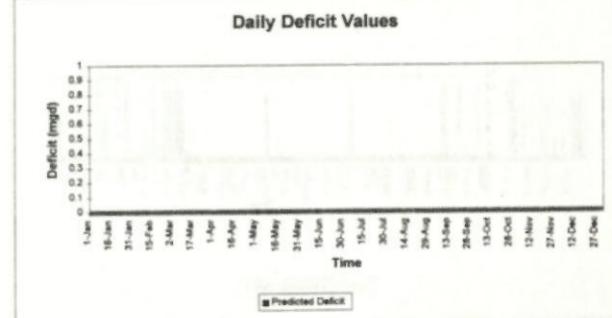


Deficit Distributions - Pool 3

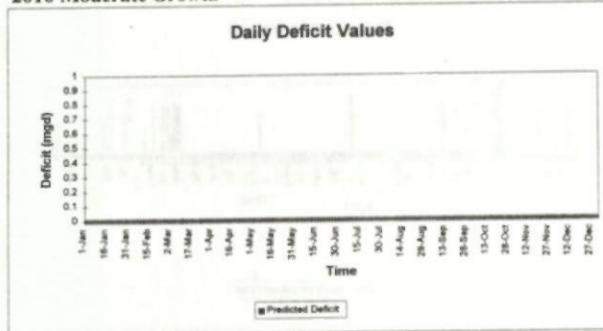
2000 Moderate Growth



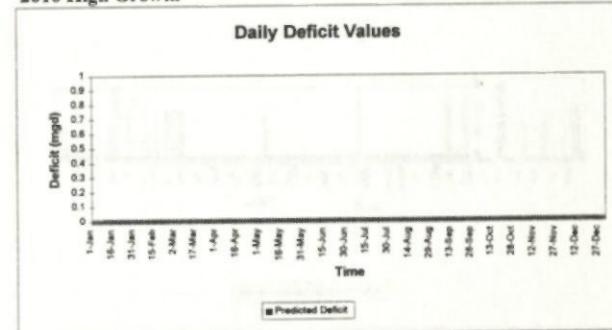
2000 High Growth



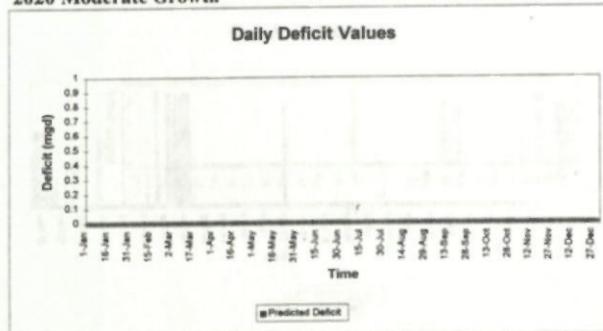
2010 Moderate Growth



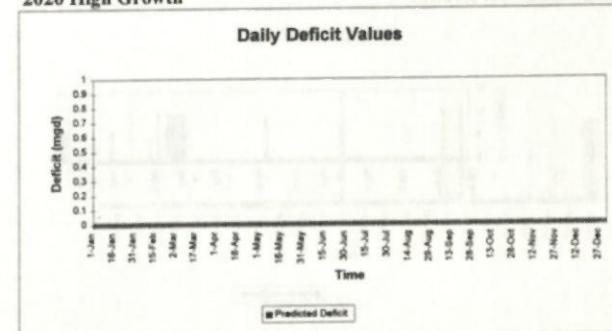
2010 High Growth



2020 Moderate Growth

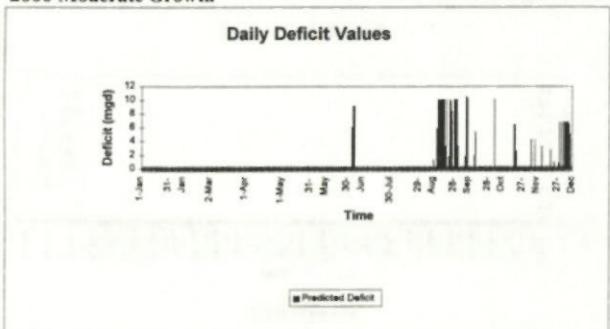


2020 High Growth

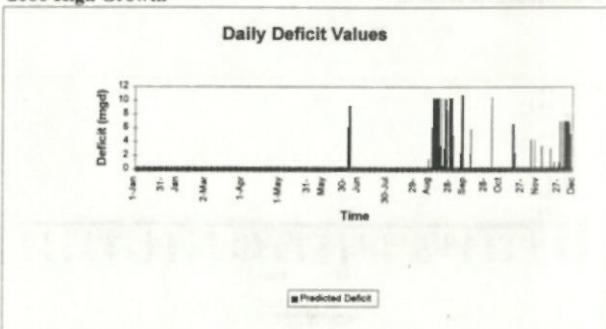


Deficit Distributions - Pool 4

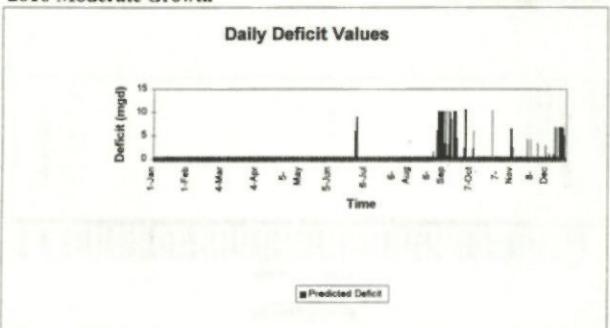
2000 Moderate Growth



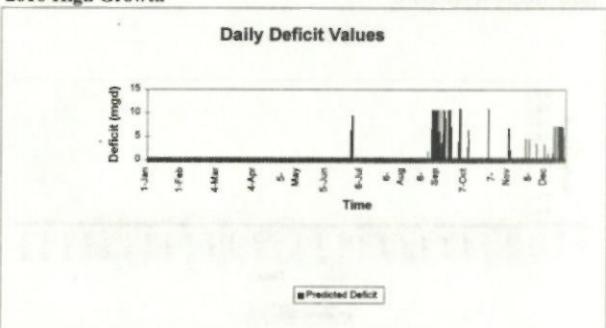
2000 High Growth



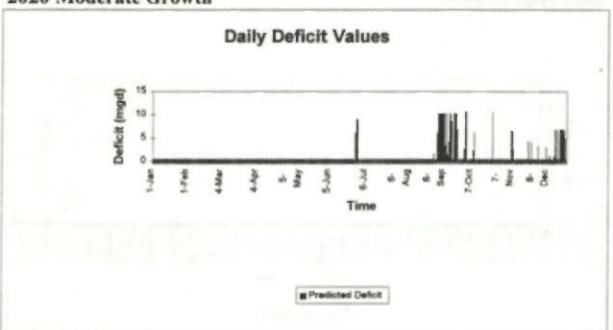
2010 Moderate Growth



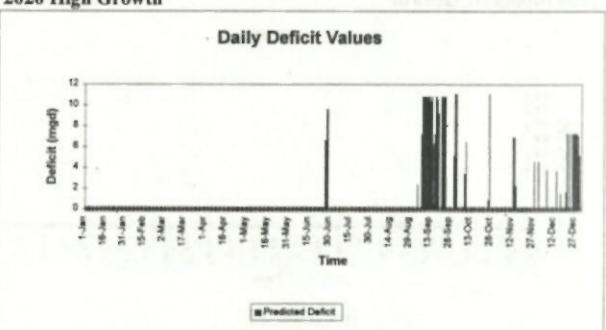
2010 High Growth



2020 Moderate Growth

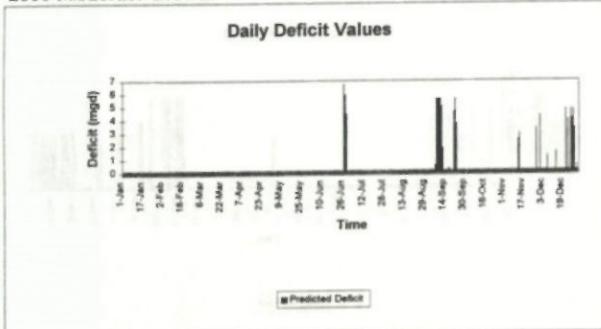


2020 High Growth

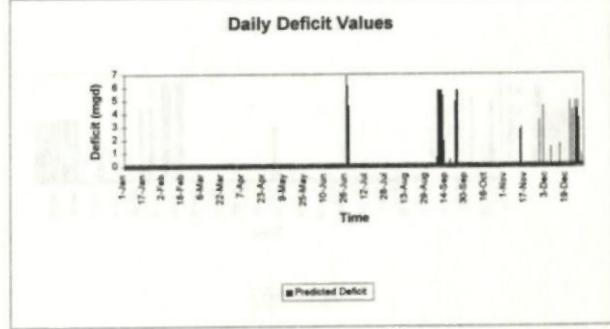


Deficit Distributions - Pool 5

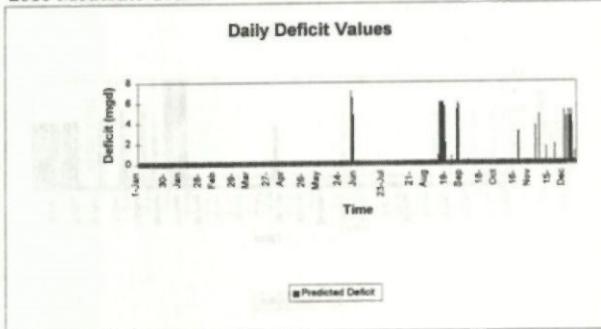
2000 Moderate Growth



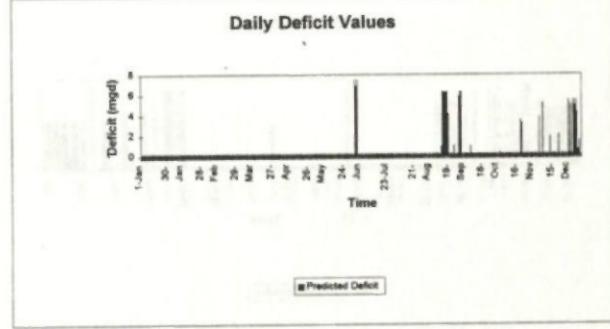
2000 High Growth



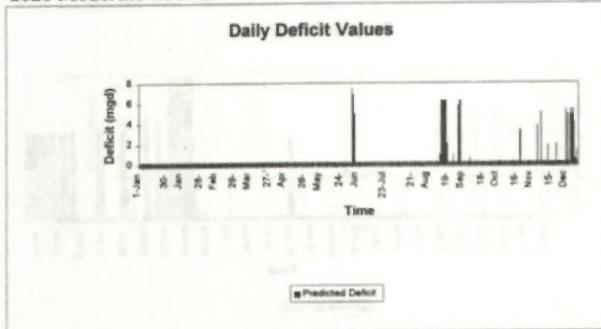
2010 Moderate Growth



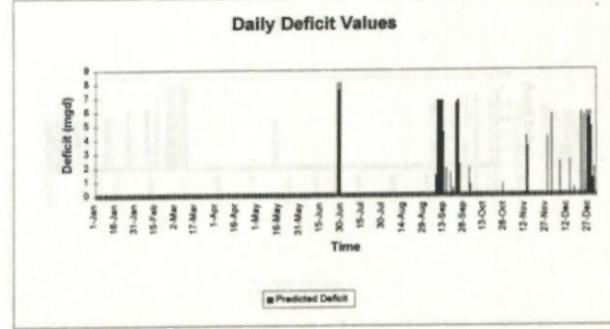
2010 High Growth



2020 Moderate Growth

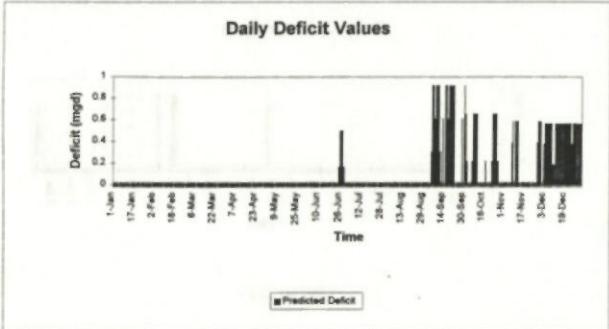


2020 High Growth

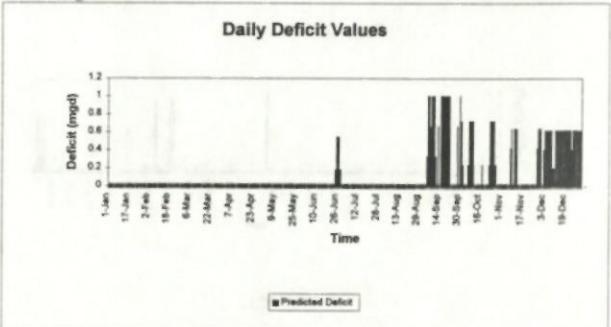


Deficit Distributions - Pool 6

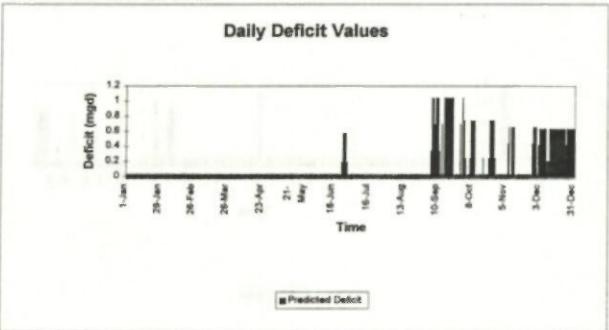
2000 Moderate Growth



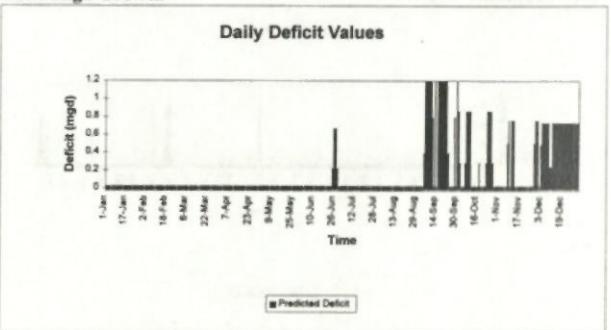
2000 High Growth



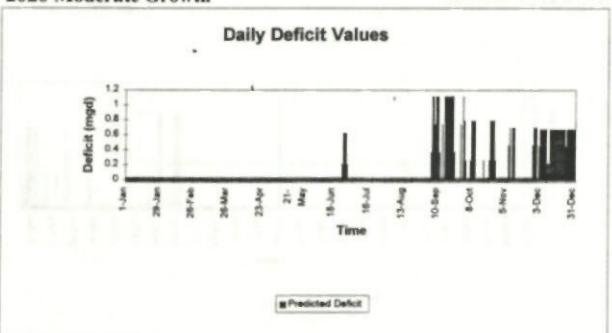
2010 Moderate Growth



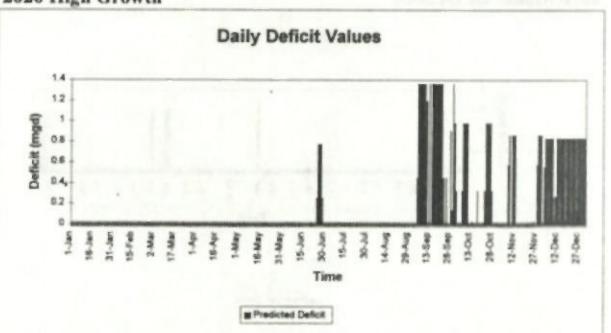
2010 High Growth



2020 Moderate Growth

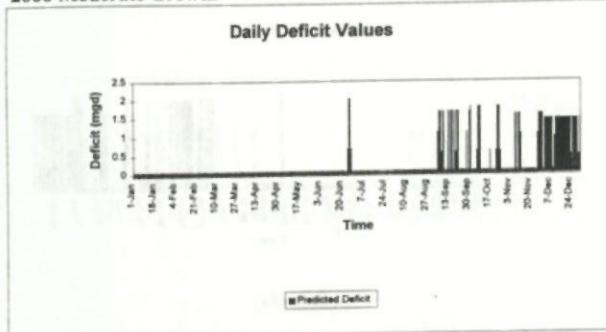


2020 High Growth

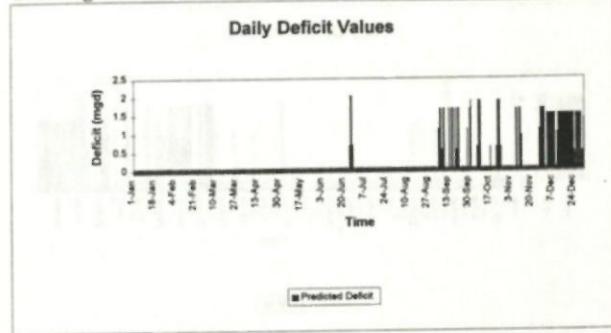


Deficit Distributions - Pool 7

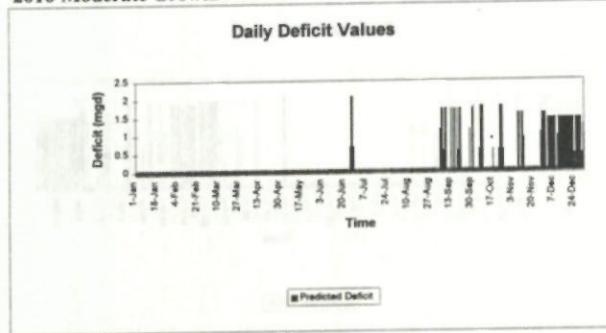
2000 Moderate Growth



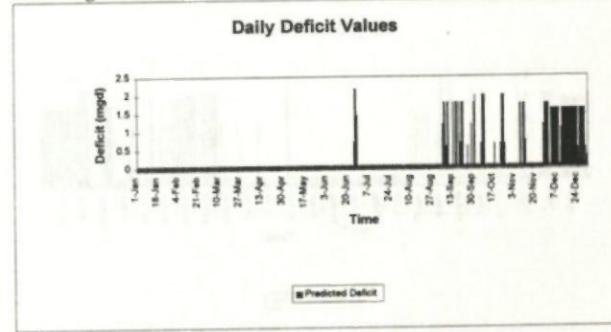
2000 High Growth



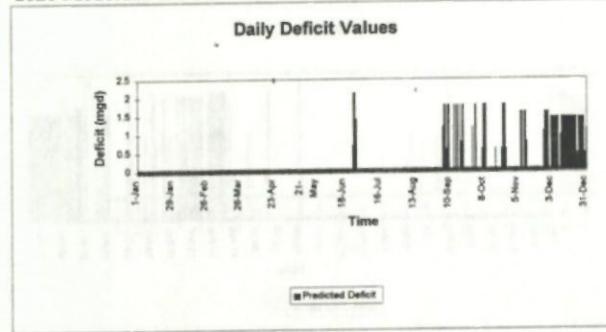
2010 Moderate Growth



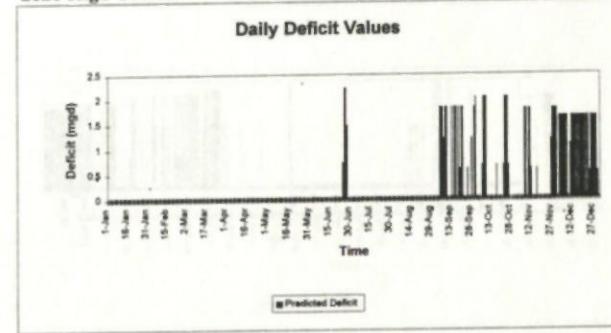
2010 High Growth



2020 Moderate Growth

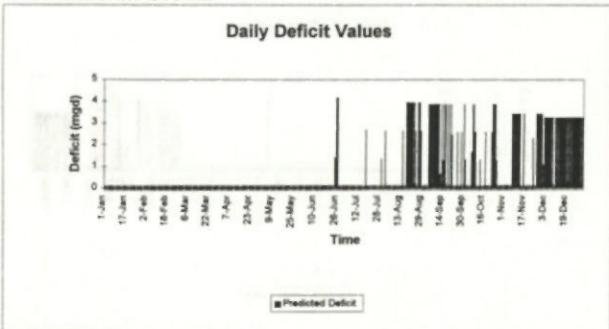


2020 High Growth

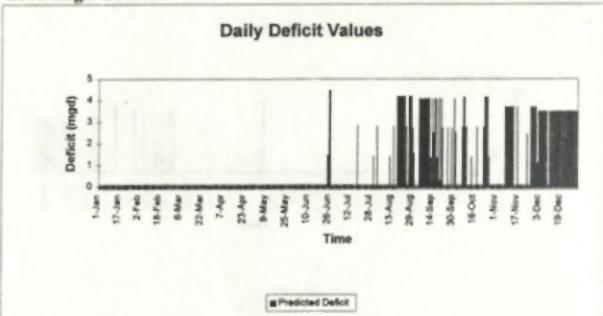


Deficit Distributions - Pool 8

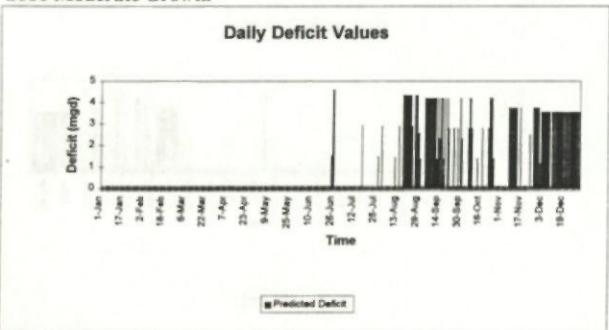
2000 Moderate Growth



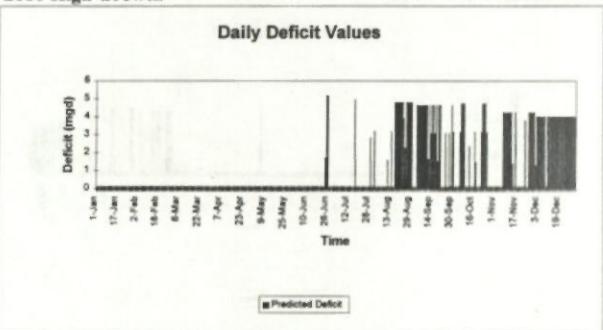
2000 High Growth



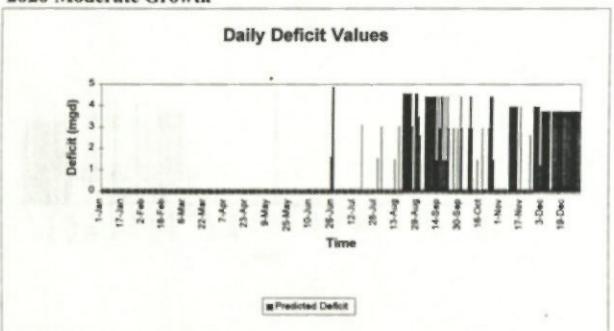
2010 Moderate Growth



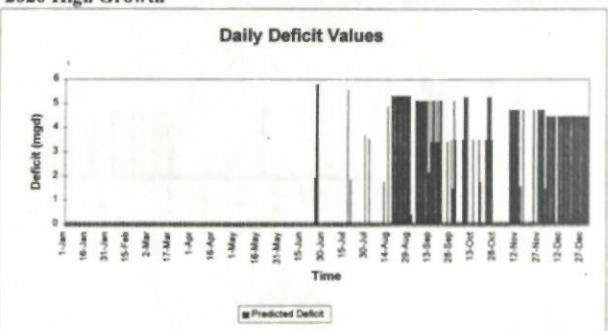
2010 High Growth



2020 Moderate Growth

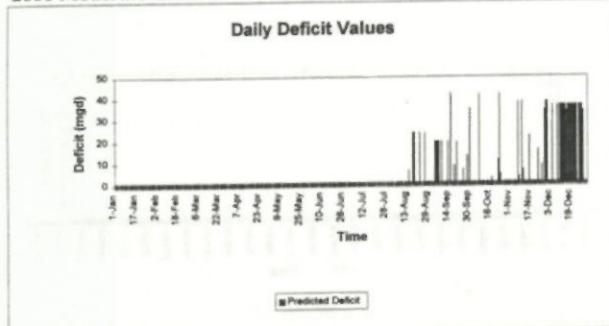


2020 High Growth

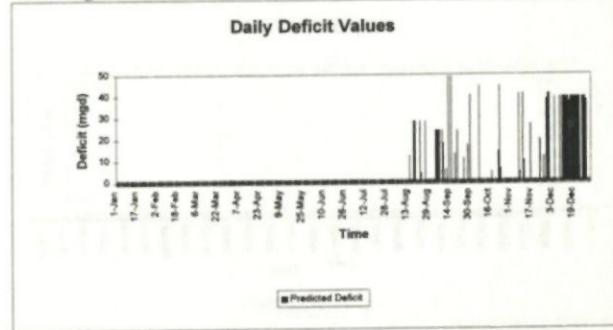


Deficit Distributions - Pool 9

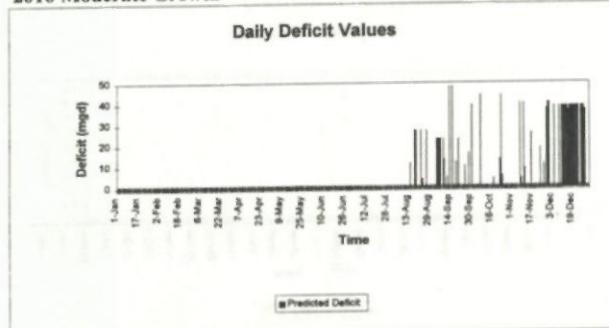
2000 Moderate Growth



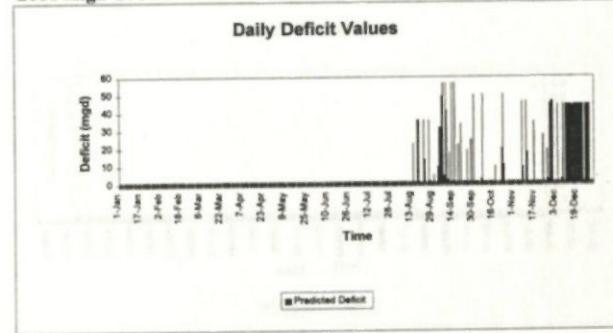
2000 High Growth



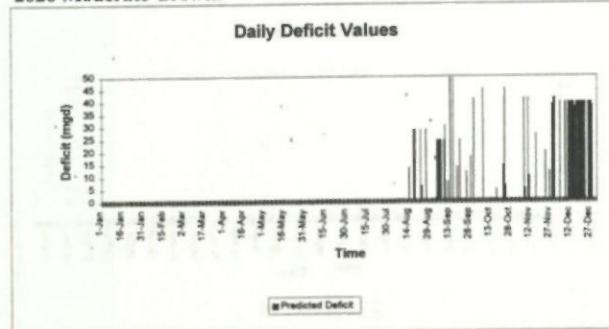
2010 Moderate Growth



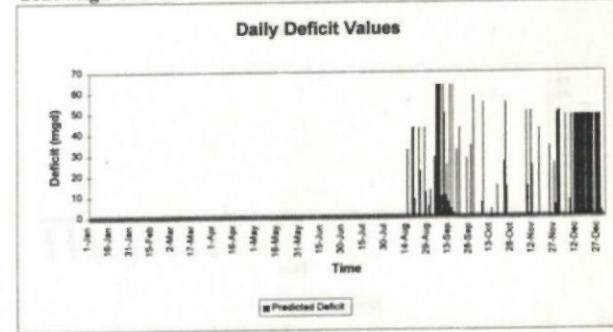
2010 High Growth



2020 Moderate Growth

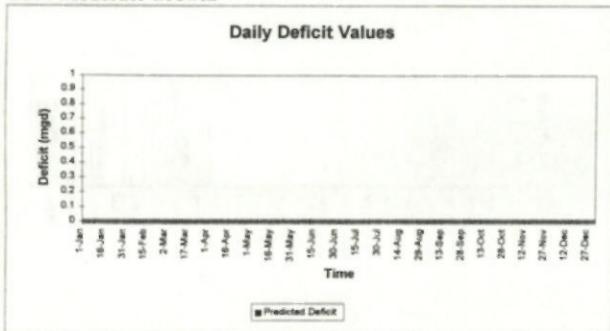


2020 High Growth

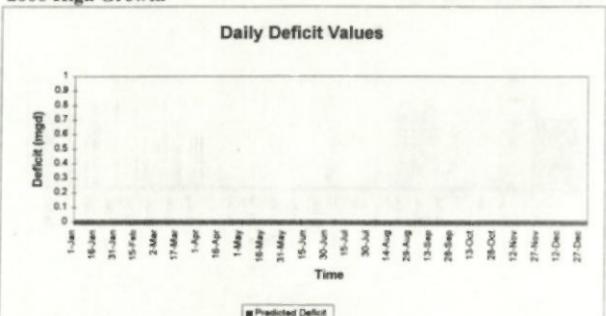


Deficit Distributions - Pool 10

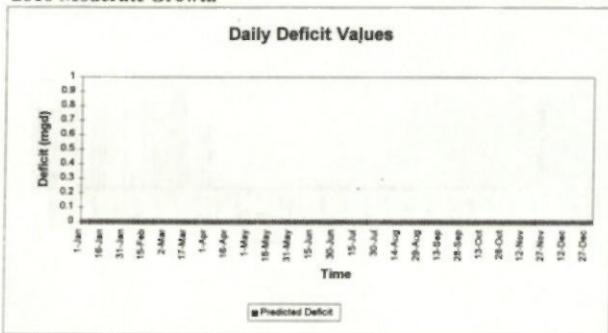
2000 Moderate Growth



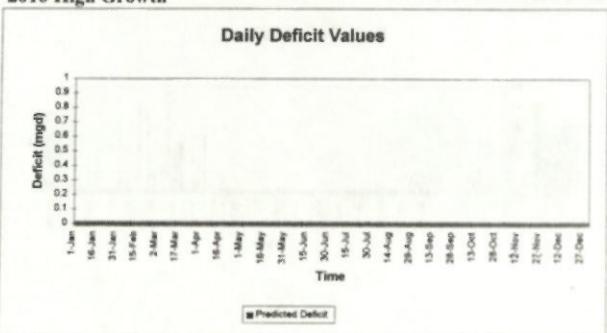
2000 High Growth



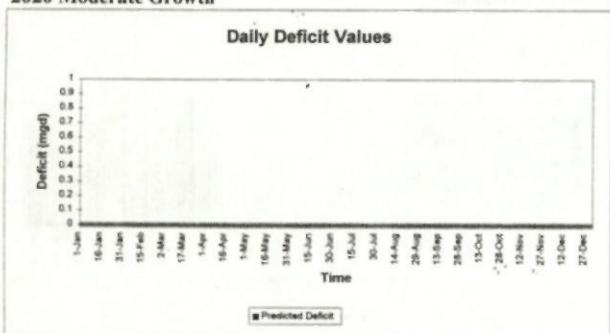
2010 Moderate Growth



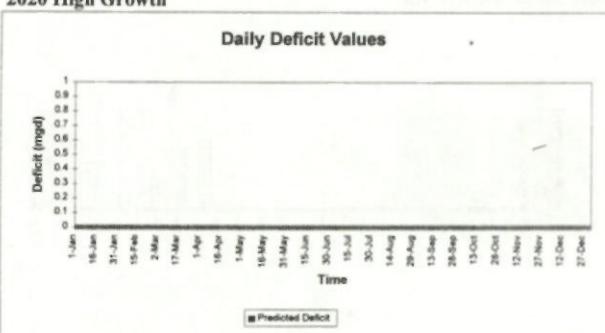
2010 High Growth



2020 Moderate Growth

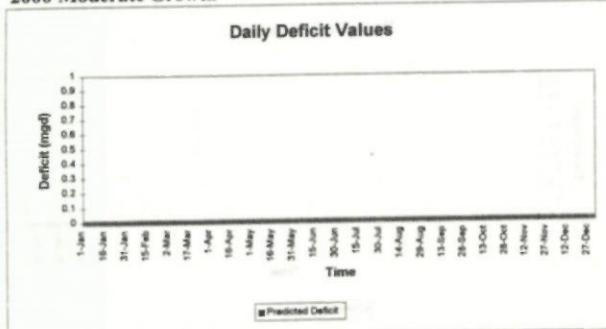


2020 High Growth

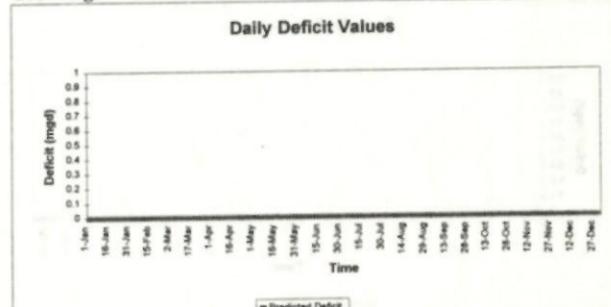


Deficit Distributions - Pool 11

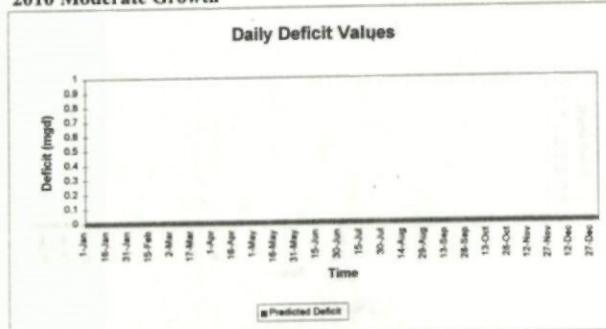
2000 Moderate Growth



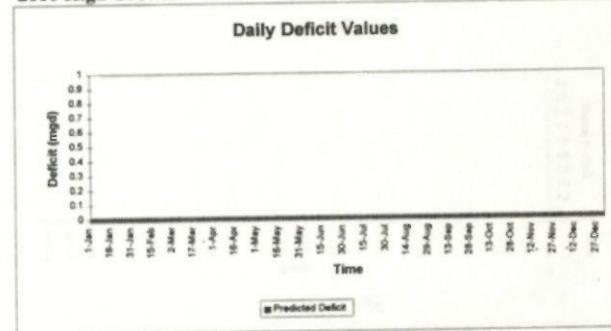
2000 High Growth



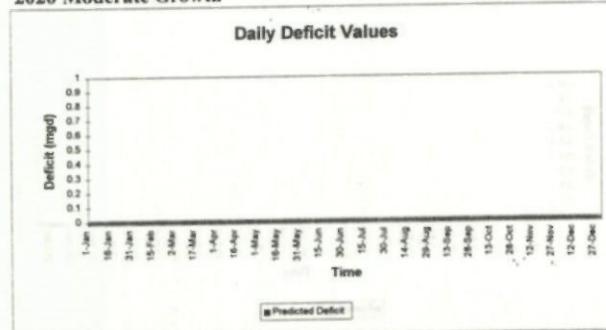
2010 Moderate Growth



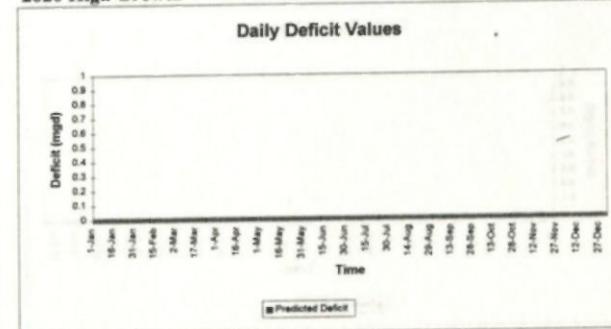
2010 High Growth



2020 Moderate Growth

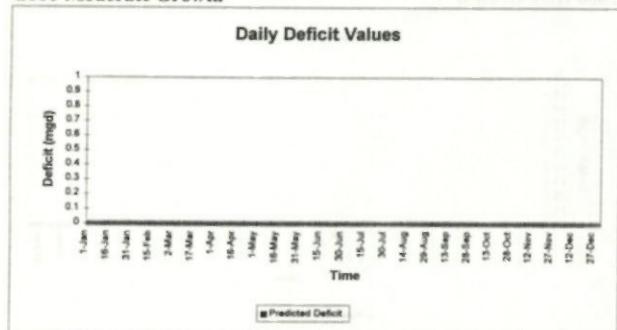


2020 High Growth

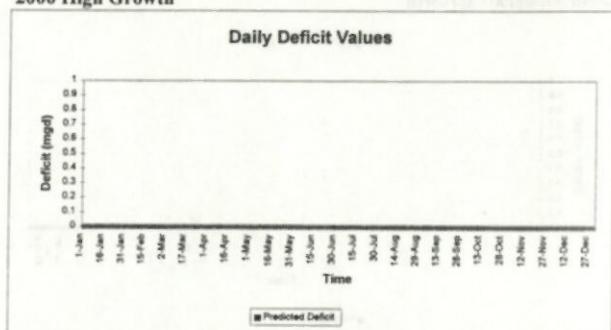


Deficit Distributions - Pool 12

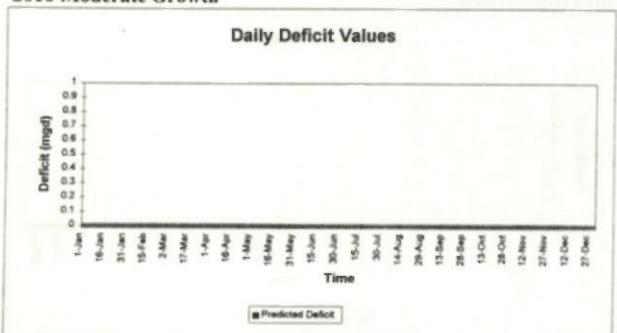
2000 Moderate Growth



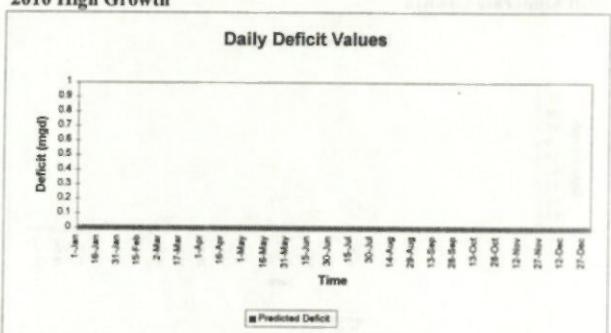
2000 High Growth



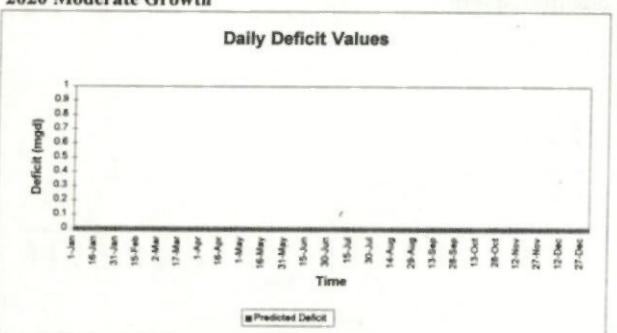
2010 Moderate Growth



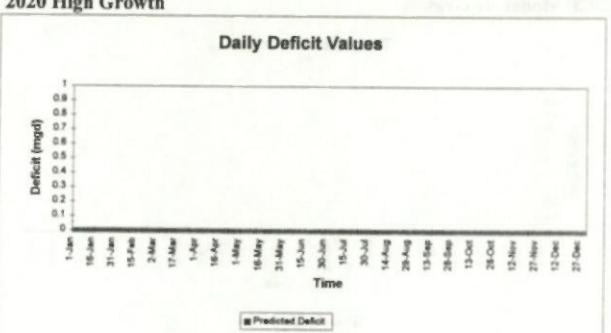
2010 High Growth



2020 Moderate Growth

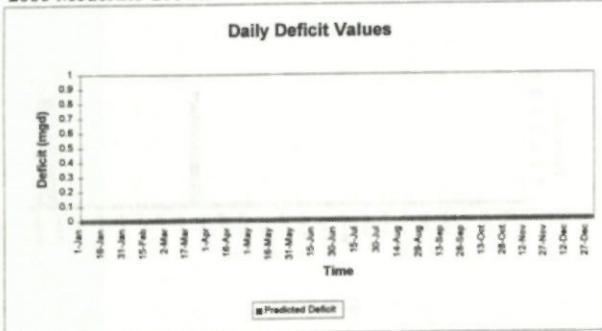


2020 High Growth

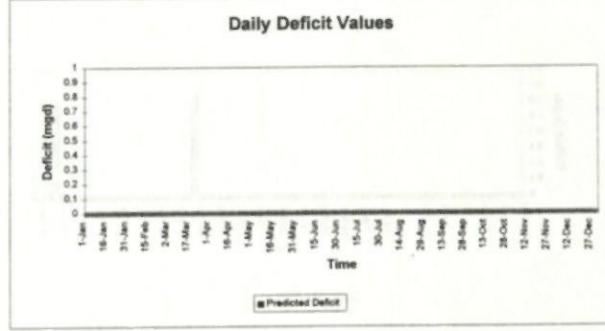


Deficit Distributions - Pool 13

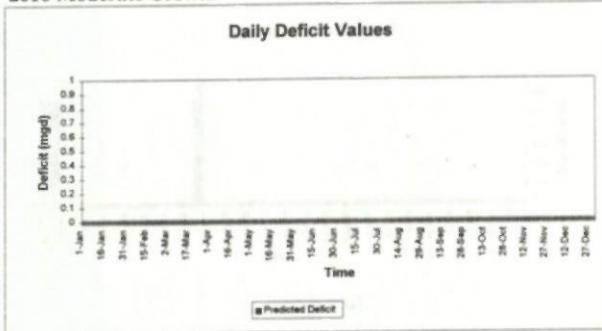
2000 Moderate Growth



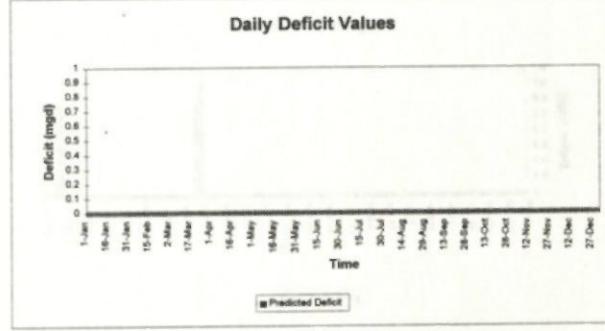
2000 High Growth



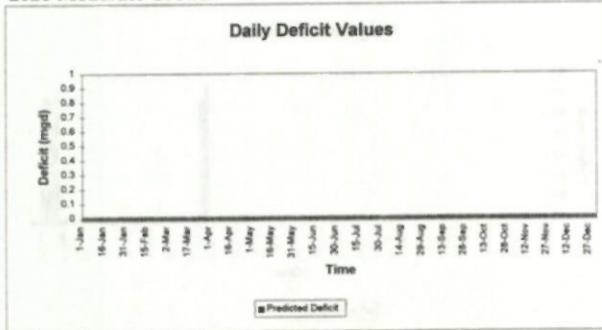
2010 Moderate Growth



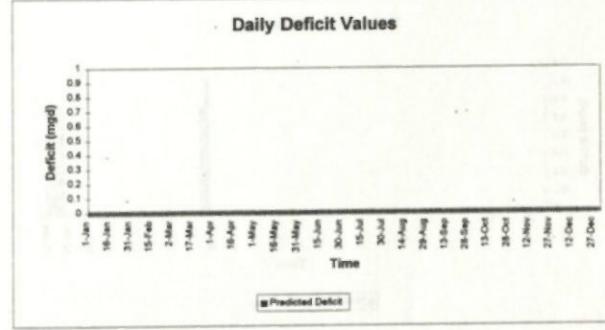
2010 High Growth



2020 Moderate Growth

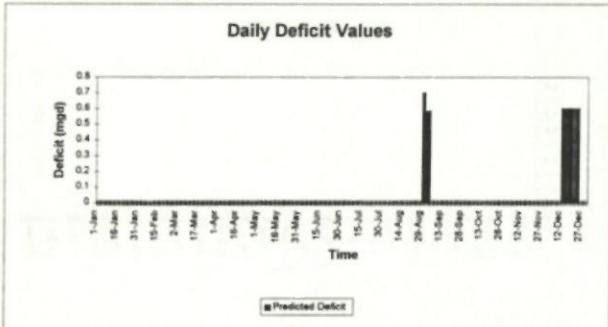


2020 High Growth

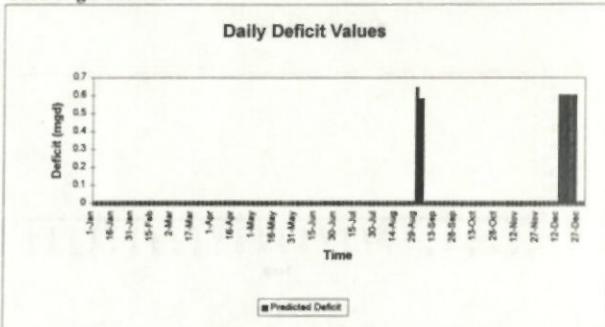


Deficit Distributions - Pool 14

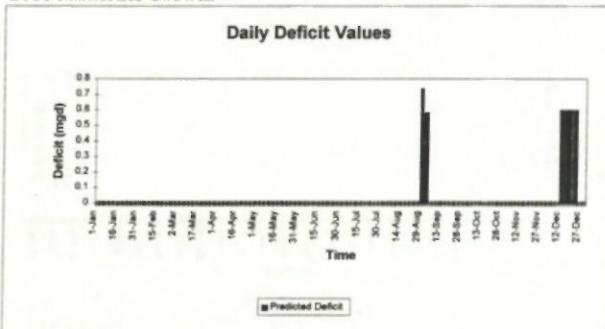
2000 Moderate Growth



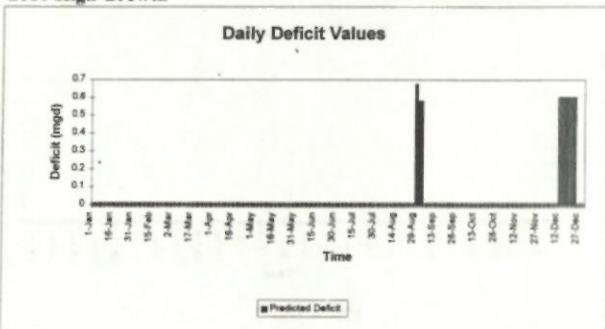
2000 High Growth



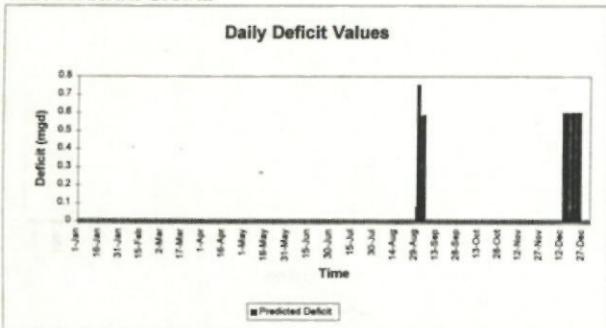
2010 Moderate Growth



2010 High Growth



2020 Moderate Growth



2020 High Growth

