US Army Corps of Engineers

Northwestern Division
Missouri River Basin
Water Management Division

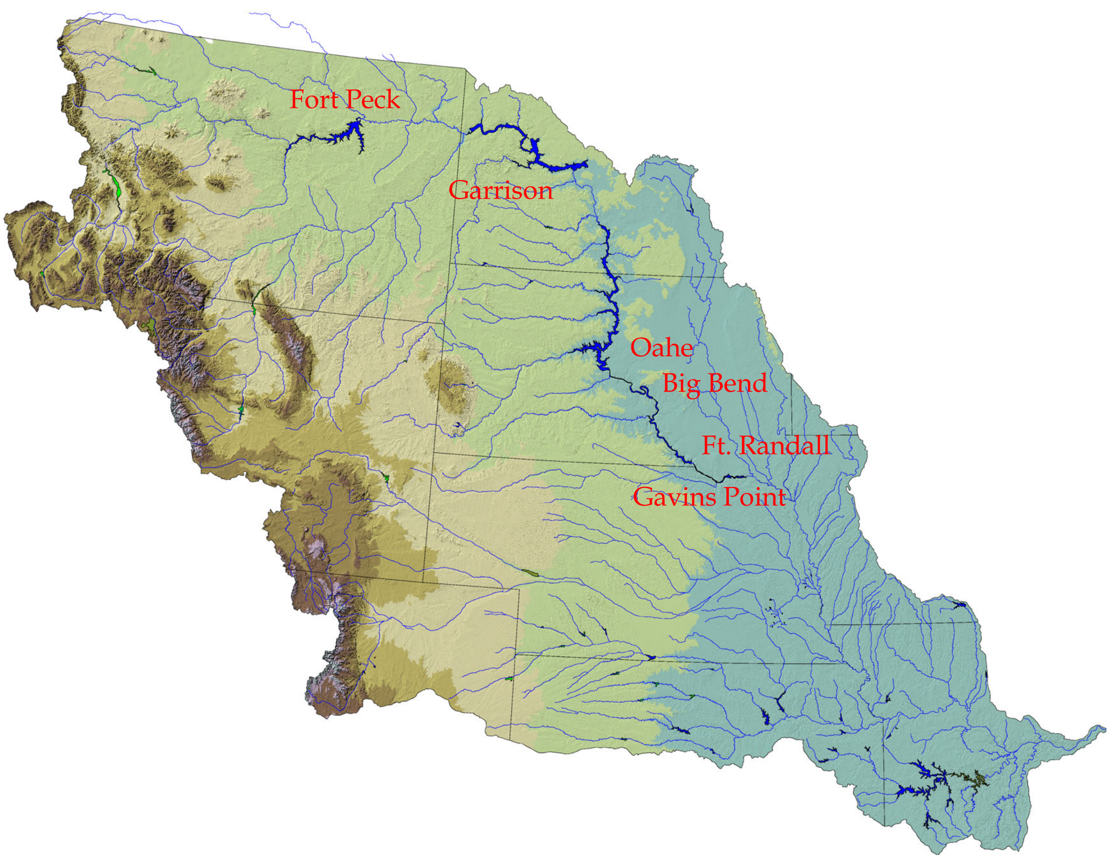
Final

AOP

2004-2005

Missouri River Mainstem System

2004-2005 Annual Operating Plan



Annual Operating Plan Process
52 Years Serving the Misssouri River Basin

December 2004

DEPARTMENT OF THE ARMY
NORTHWESTERN DIVISION, CORPS OF ENGINEERS
12565 WEST CENTER ROAD
OMAHA, NEBRASKA 68144-3869

REPLY TO
ATTENTION OF:

December 2004

This Annual Operating Plan (AOP) presents information regarding the Corps of Engineers' regulation of the Missouri River Mainstem Reservoir System (System) through December 2005. The information provided in this AOP is based on water management guidelines designed to meet the regulation objectives of the Missouri River Master Water Control Manual dated March 19, 2004. These guidelines are applied to computer simulations of System regulation assuming inflow scenarios based on water supply records from 1898 to 1997. This approach provides a wide range of water management simulations for dry, average, and wet conditions.

The AOP provides a framework for the development of detailed monthly, weekly, and daily regulation schedules for the System's six individual dams during the upcoming year to serve its Congressionally authorized project purposes. In addition, 5-year extensions to the AOP water management simulations, through March 2011, are presented to serve as guides for longer range planning. System water management is provided by my staff at the Missouri River Basin Water Management Division, Northwestern Division, U.S. Army Corps of Engineers located in Omaha, Nebraska.

On December 16, 2003, and in response to the Corps's request for the reinitiation of consultation, the U.S. Fish and Wildlife Service (USFWS) issued an amendment to its 2000 Biological Opinion (2003 Amended BiOp). The 2003 Amended BiOp includes a "reasonable and prudent alternative" (RPA) that calls for a "spring pulse" and a low summer release from the Mainstem Reservoir System. The 2003 Amended BiOp allows a two-year period of study prior to implementing the spring pulse to establish an acceptable flow management plan, which will likely avoid jeopardy to the continued existence of the pallid sturgeon and will not result in the destruction or adverse modification of critical habitat in the Missouri River. While a spring pulse is planned for 2006, the USFWS confirmed in their November 30, 2004 letter, that a spring pulse is not planned for 2005. The 2003 Amended BiOp includes a provision that the low summer release may be modified, in consultation with the USFWS, if 1200 acres of shallow water habitat (SWH) for the endangered pallid sturgeon is constructed. In their letter, the USFWS also affirmed the Corps' plan to provide minimum service flow support in the summer of 2005 based on the construction of over 1200 acres of shallow water habitat during 2004.

A "steady release - flow-to-target" schedule is planned during the 2005 nesting season of the interior least tern and piping plover, which are listed for protection under the Endangered Species Act. The initial steady release (SR) will be based on hydrologic conditions and the availability of habitat at that time. Once the majority of the birds have nested on the newly constructed, high elevation habitat, releases will be made to meet downstream targets (FTT). The purpose of this regulation is to continue to meet the project purposes while minimizing the loss of nesting threatened and endangered species and conserving water in the upper three reservoirs. It also provided certainty for downstream users that releases could be increased if needed to meet flow targets.

The ability to provide steady to rising pool levels in the upper three reservoirs during the spring fish spawn period is very dependent on the volume, timing, and distribution of runoff. The reservoir regulation simulations presented in this AOP for the Upper Decile, Upper Quartile, and Median runoff scenarios show that steady to rising pool levels would occur for the upper three System reservoirs. For Lower Quartile and Lower Decile runoff scenarios, the Corps will, to the extent reasonably possible, set releases to result in steady to rising pools at Oahe during April and May, and steady to rising pools at Fort Peck during May and June. In 2004, we initiated a strategy to rotate emphasis among the upper three System reservoirs on a yearly basis during their forage fish spawns. Even though this strategy has been modified for the 2005 AOP, we intend to continue to use this strategy during drought, in an attempt to maximize the benefit to fish species in those reservoirs.

A draft of this AOP was made available to the public in September 2004. Seven fall public meetings on the Draft 2004-2005 AOP were held as follows: October 12, 2004 in Williston, North Dakota; October 13, 2004 in Glasgow, Montana and Pierre, South Dakota; October 14, 2004 in Kansas City, Missouri; October 26, 2004 in Omaha, Nebraska; October 27, 2004 in New Orleans, Louisiana; and October 28, 2004 in St. Louis, Missouri. The primary purposes of these meetings were to present a synopsis of the Draft AOP and to allow those in attendance to make comments in person to Corps of Engineers' staff. Attendees included representatives from the Tribes, Missouri River basin states, public and industry interest groups and private citizens. Copies of the comment letters received on the Draft AOP and a report on the comments received at the seven meetings are available upon request, as outlined below.

In addition to the AOP, two separate documents are also available entitled: "System Description and Operation" and "Summary of Actual Calendar Year 2004 Operations." To receive copies of those documents you may contact the Water Management Division at 12565 West Center Road, Omaha, Nebraska 68144-3869, phone (402) 697-2676. The System Description and Operation document is now available at the "Reports and Publications" link on our web site at: www.nwd.usace.army.mil/rcc while the Summary of Actual Calendar Year 2004 Operations will be available in April 2005 at the same site.

We thank you for your interest in the regulation of the System. During this extended drought, the Corps is attempting to balance the needs of the entire basin. We believe our recently revised Master Manual and this AOP provide an appropriate balance of benefits to the various Congressionally authorized System project purposes. The basin must work together as a team - Federal, State and local agencies, as well as, the diverse stakeholders - and remain committed to preserving the Missouri River as a National treasure, allowing everyone to enjoy its beauty and many resources.

William T. Grisoli
Brigadier General, U.S. Army
Division Engineer

MISSOURI RIVER MAINSTEM RESERVOIR SYSTEM

Annual Operating Plan
2004 - 2005

TABLES

PLATES

ABBREVIATIONS

AOP	-	annual operating plan
ac.ft.	-	acre-feet
AF	-	acre-feet
B	-	Billion
cfs	-	cubic feet per second
COE	-	Corps of Engineers
CY	-	calendar year (January 1 to December 31)
elev	-	elevation
ft	-	feet
FY	-	fiscal year (October 1 to September 30)
GIS	-	Geographic Information System
GWh	-	gigawatt hour
KAF	-	1,000 acre-feet
Kcfs	-	1,000 cubic feet per second
kW	-	kilowatt
kWh	-	kilowatt hour
M	-	million
MAF	-	million acre-feet
MRBA	-	Missouri River Basin Association
MRNRC	-	Missouri River Natural Resources Committee
msl	-	mean sea level
MW	-	megawatt
MWh	-	megawatt hour
plover	-	piping plover
pp	-	powerplant
RCC	-	Reservoir Control Center
RM	-	river mile
tern	-	interior least tern
tw	-	tailwater
USFWS	-	United States Fish and Wildlife Service
USGS	-	United States Geological Survey
yr	-	year

DEFINITION OF TERMS

Acre-foot (AF, ac-ft) is the quantity of water required to cover 1 acre to a depth of 1 foot and is equivalent to 43,560 cubic feet or 325,850 gallons.

Cubic foot per second (cfs) is the rate of discharge representing a volume of 1 cubic foot passing a given point during 1 second and is equivalent to approximately 7.48 gallons per second or 448.8 gallons per minute. The volume of water represented by a flow of 1 cubic foot per second for 24 hours is equivalent to 86,400 cubic feet, approximately 1.983 acre-feet, or 646,272 gallons.

Discharge is the volume of water (or more broadly, volume of fluid plus suspended sediment) that passes a given point within a given period of time.

Drainage area of a stream at a specific location is that area, measured in a horizontal plane, enclosed by a topographic divide from which direct surface runoff from precipitation normally drains by gravity into the river above the specified point. Figures of drainage area given herein include all closed basins, or noncontributing areas, within the area unless otherwise noted.

Drainage basin is a part of the surface of the earth that is occupied by drainage system, which consists of a surface stream or body of impounded surface water together with all tributary surface streams and bodies of impounded water.

Gaging station is a particular site on a stream, canal, lake, or reservoir where systematic observations of hydrologic data are obtained.

Runoff in inches shows the depth to which the drainage area would be covered if all the runoff for a given time period were uniformly distributed on it.

Streamflow is the discharge that occurs in a natural channel. Although the term "discharge" can be applied to the flow of a canal, the word "streamflow" uniquely describes the discharge in a surface stream course. The term "streamflow" is more general than "runoff" as streamflow may be applied to discharge whether or not it is affected by diversion or regulation.

MISSOURI RIVER MAINSTEM RESERVOIR SYSTEM

Annual Operating Plan
2004 – 2005

I. FOREWORD

This Annual Operating Plan (AOP) presents pertinent information and plans for regulating the Missouri River Mainstem Reservoir System (System) through December 2005 under widely varying water supply conditions. It provides a framework for the development of detailed monthly, weekly, and daily regulation schedules for the System's six individual dams during the coming year to serve the Congressionally authorized project purposes. Regulation is directed by the Reservoir Control Center in the Missouri River Basin Water Management Division, Northwestern Division, U. S. Army Corps of Engineers (Corps). A map of the Missouri River basin is shown on ***Plate 1*** and the summary of engineering data for the six System projects is shown on ***Plate 2***.

This plan may require adjustments when substantial departures from expected runoff occur, to meet emergencies, or to meet the provisions of applicable laws, including the Endangered Species Act (ESA).

Prior to the 1998-1999 AOP, a System description and discussion of the typical System regulation, a historic summary of the previous year's regulation, and the plan for future System regulation was included in one document. Since the 1998-1999 AOP, this information has been published in separate reports available upon request. This document provides the plan for future regulation of the System. To receive a copy of either the updated version of the "System Description and Operation," dated Spring 2002, or the "Summary of Actual Calendar Year 2003 Operations," dated April 2004, contact the Missouri River Basin Water Management Division at 12565 West Center Road, Omaha, Nebraska 68144-3869, phone (402) 697-2676. Both reports are currently available at the "Reports and Publications" link on our web site at: **www.nwd-mr.usace.army.mil/rcc**. The "Summary of Actual Calendar Year 2004 Regulation" will be available at the same site in the spring of 2005.

II. PURPOSE AND SCOPE

Beginning in 1953, projected System reservoir regulation for the year ahead was developed annually as a basis for advance coordination with the various interested Federal, State, and local agencies and private citizens. Also beginning in 1953, a coordinating committee was organized to make recommendations on each upcoming year's System regulation. The Coordinating Committee on Missouri River Mainstem Reservoir Operations held meetings semiannually until 1981 and provided recommendations to the Corps. In 1982, the Committee was dissolved because it did not conform to the provisions of the Federal Advisory Committee Act. Since 1982, to continue providing a forum for public participation, one or more open public meetings are held semiannually in the spring and fall. The fall public meeting is conducted to take public input on a draft of the AOP, which typically is published in early October each year. The spring meetings are conducted to update the public on the current hydrologic conditions and projected System regulation for the remainder of the year as it relates to implementing the Final AOP.

Last spring's public meetings were held at the following locations and dates: April 5, 2004 at Omaha, Nebraska; April 6, 2004 at Lewistown, Montana; April 7, 2004 at Bismarck, North Dakota; and April 8, 2004 at Kansas City, Missouri. The attendees were given an update regarding the outlook for 2004 runoff and projected Mainstem reservoir regulation for the remainder of 2004. Preliminary Draft 2004-2005 AOP data was presented to the Missouri River Basin Association (MRBA) and to the Missouri River Natural Resources Committee (MRNRC) on August 12, 2004. Seven fall public meetings on the Draft 2004-2005 AOP were held as follows: October 12, 2004 in Williston, North Dakota; October 13, 2004 in Glasgow, Montana and Pierre, South Dakota; October 14, 2004 in Kansas City, Missouri; October 26, 2004 in Omaha, Nebraska; October 27, 2004 in New Orleans, Louisiana; and October 28, 2004 in St. Louis, Missouri. In the spring of 2005, public meetings will be held to discuss the basin's hydrologic conditions and the effects those conditions are expected to have on the implementation of the 2004-2004 Final AOP.

III. MAINSTEM MASTER MANUAL REVIEW AND UPDATE AND ESA CONSULTATIONS

The Missouri River Master Water Control Manual (Master Manual) presents the water control plan and operational objectives for the integrated regulation of the Mainstem Reservoir System. First published in 1960 and subsequently revised during the 1970's, the Master Manual was revised again in March 2004 following the release of the U.S. Fish and Wildlife Service (USFWS) 2003 Amendment to the 2000 Biological Opinion (2003 Amended BiOp).

The "reasonable and prudent alternative" (RPA) presented in the 2003 Amended BiOp calls for a low summer release from the Mainstem Reservoir System of 25,000 cubic feet per second (cfs) each year beginning no later than July 1 and lasting for a minimum of 30 days. The 2003 Amended BiOp includes a provision that this low summer release may be modified, in consultation with the USFWS, if 1200 acres of shallow water habitat (SWH) for the endangered pallid sturgeon is constructed. During the summer of 2004 the Corps, in cooperation with the USFWS, other Federal agencies, and the states of Nebraska, Iowa, Kansas and Missouri, constructed more than 1200 acres of new SWH from Ponca State Park on the Nebraska-South Dakota border to the mouth of the Osage River in central Missouri to comply with the ESA. Therefore, this AOP and future AOPs will not include provisions for a low summer release.

The 2003 Amended BiOp also calls for a "spring pulse" from the System, but allows a two-year period of study to establish an acceptable flow management plan, which will likely avoid jeopardy to the continued existence of the pallid sturgeon and will not result in the destruction or adverse modification of critical habitat in the Missouri River. Although a spring rise is not planned in 2005, the Corps will be working closely with basin stakeholders over the coming year to develop a spring rise for inclusion in the 2005-2006 AOP.

IV. <u>FUTURE WATER SUPPLY - AUGUST 2004 - DECEMBER 2005</u>

Water supply (runoff) into the six System reservoirs is typically low and relatively stable during the August-to-February period. The August 1 calendar year runoff forecast is used as input to the Basic reservoir regulation simulation (Simulation) in the AOP studies for the period August 2004 to February 2005. Two other runoff scenarios based on the August 1 runoff forecast were developed for the same period. These are the 80 percent and 120 percent of the August 1 runoff forecast scenarios, which are input to the 80 percent and 120 percent of Basic Simulations for the August 2004 to February 2005 period.

Simulations for the March 1, 2005 to February 28, 2006 time period use five statistically derived inflow scenarios based on an analysis of water supply records from 1898 to 1997. This approach provides a good range of simulation for dry, average, and wet conditions, and eliminates the need to forecast future precipitation, which is very difficult.

The five statistically derived inflows are identified as the Upper Decile, Upper Quartile, Median, Lower Quartile and Lower Decile runoff conditions. Upper Decile runoff (34.5 million acre-feet (MAF)) has a 1 in 10 chance of being exceeded, Upper Quartile (30.6 MAF) has a 1 in 4 chance of being exceeded, and Median (24.6 MAF) has a 1 in 2 chance of being exceeded. Lower Quartile runoff (19.5 MAF) has a 1 in 4 chance of the occurrence of less runoff, and Lower Decile (15.5 MAF) has a 1 in 10 chance of the occurrence of less runoff. There is still a 20 percent chance that a runoff condition may occur that has not been simulated; i.e., a 10 percent chance runoff could be lower than Lower Decile, and a 10 percent chance runoff could be greater than Upper Decile.

The Upper Decile and Upper Quartile simulations extend from the end of the 120 percent of Basic simulation through February 2006. Likewise, the Median simulation extends from the end of the Basic simulation, and the Lower Quartile and Lower Decile simulations extend from the end of the 80 percent of Basin simulation through February 2006.

The estimated natural flow at Sioux City, the corresponding post-1949 water use effects, and the net flow available above Sioux City are shown in ***Table I,*** where water supply conditions are quantified for the period August 2004 through February 2006. The natural water supply for calendar year (CY) 2003 totaled 17.6 MAF.

TABLE I
NATURAL AND GROSS WATER SUPPLY AT SIOUX CITY
(Volumes in 1,000 Acre-Feet)

	Natural 1/	**Post-1949 Depletions**	**Net 2/**
		(Volumes in 1,000 Acre-Feet)	
August 2004 through February 2005 (Basic Runoff Scenario)			
Basic	5,800	-300	5,500
120% Basic	6,900	-100	6,800
80% Basic	4,600	-100	4,500
Runoff Year March 2005 through February 2006 (Statistical Analysis of Past Records)			
Upper Decile	34,500	-2,500	32,000
Upper Quartile	30,600	-2,600	28,000
Median	24,600	-2,600	22,000
Lower Quartile	19,500	-2,700	16,800
Lower Decile	15,500	-2,500	13,000

1/ The word "Natural" is used to designate flows adjusted to the 1949 level of basin development, except that regulation and evaporation effects of the Fort Peck reservoir have also been eliminated during its period of regulation prior to 1949.

2/ The word "Net" represents the total streamflow after deduction of the post-1949 irrigation, upstream storage, and other use effects.

V. ANNUAL OPERATING PLAN FOR 2004-2005

A. General. The anticipated regulation described in this AOP is designed to meet the regulation objectives presented in the March 2004 Master Manual. Consideration has been given to all of the authorized project purposes, and to the needs of threatened and endangered (T&E) species. The plan relies on a wealth of regulation experience. Reservoir regulation experience available for preparation of the 2004-2005 AOP includes 13 years of regulation at Fort Peck (1940) by itself, plus 51 years of System experience as Fort Randall (1953), Garrison (1955), Gavins Point (1955), Oahe (1962), and Big Bend (1964) have been brought progressively into System regulation. This regulation experience includes lessons learned during the six consecutive years of drought from 1987 through 1992, the high runoff period that followed, and the current five-year drought that began in 2000. Runoff during the period 1993 to 1999 was greater than the Upper Quartile level in five of those seven years, including the record 49.0 MAF of runoff in 1997. In addition to the long period of actual System reservoir regulation experience, many background regulation studies for the completed System are available for reference.

As described in the Master Manual, flow support for navigation and other downstream purposes is defined based on service level. A "full-service" level of 35,000 cfs results in target flows of 31,000 cfs at Sioux City and Omaha, 37,000 cfs at Nebraska City and 41,000 cfs at Kansas City. Similarly, a "minimum service" level of 29,000 cfs results in target values of 6,000 cfs less than the full service levels. Selection of the appropriate service level is based on the actual volume of water-in-storage (storage) in the System on March 15 and July 1.

The relation of System storage to navigation service level is presented in ***Table II***. The volumes presented in ***Table II*** were derived from long-range model simulations that helped identify how the System should be regulated to meet authorized purposes during significant multi-year droughts. Straight-line interpolation defines intermediate service levels between full and minimum service. These service level determinations are for conservation and normal System regulation. During years when flood evacuation is required, the service level is calculated monthly to facilitate a smooth transition in System release.

As shown in ***Table II***, the water control plan calls for suspension of navigation service if System storage is at or below 31 MAF on March 15 of any year. It should be noted that the occurrence of System storage at or below 31 MAF would likely coincide with a national drought emergency. If any of the reservoir regulation studies performed for the development of an AOP indicate that System storage will be at or below 31 MAF by the upcoming March 15, the Corps will notify the Secretary of the Army. Per the revised Master Manual, the Corps will obtain approval from the Secretary of the Army prior to implementation of back-to-back non-navigation years.

TABLE II
RELATION OF SYSTEM STORAGE TO NAVIGATION SERVICE LEVEL

Date	System Storage (MAF)	Navigation Service Level
March 15	54.5 or more	35,000 cfs (full-service)
March 15	49.0 to 31	29,000 cfs (minimum-service)
March 15	31.0 or less	No navigation service
July 1	57.0 or more	35,000 cfs (full-service)
July 1	50.5 or less	29,000 cfs (minimum-service)

The System storage check for navigation season length is made on July 1 of each year. Assuming the System storage is above 31 MAF on March 15, a navigation season will be supported. A full 8-month navigation season will be provided if System storage is 51.5 MAF or above on July 1, unless the navigation season is extended to evacuate flood control storage. However, if System storage falls below 51.5 MAF on July 1, a shortened navigation season will be provided to conserve water. The specific technical criteria for season length are shown in ***Table III***. Straight-line interpolation between 51.5 and 46.8 MAF of storage on July 1 provides the closure date for a season length between 8 and 7 months. If System storage on July 1 is between 46.8 and 41.0 MAF, a 7-month navigation season is provided. A straight-line interpolation is again used between 41.0 and 36.5 MAF, providing season lengths between 7 and 6 months. For System storage on July 1 below 36.5 MAF, a 6-month season is provided.

TABLE III
RELATION OF SYSTEM STORAGE TO NAVIGATION SEASON LENGTH

Date	System Storage (MAF)	Season Closure Date at Mouth of the Missouri River	
July 1	51.5 or more	December 1	(8-month season)
July 1	46.8 through 41.0	November 1	(7-month season)
July 1	36.5 or less	October 1	(6-month season)

The System release required to meet minimum and full service target flows varies by month in response to downstream tributary flows. An analysis of the average monthly Gavins Point release needed to meet flow targets was completed in 1999. As part of that study, the relationship between annual runoff upstream of Sioux City and the average Gavins Point release required for the navigation season was analyzed. The study showed that generally more water was needed downstream to meet flow targets during years with below normal upper basin runoff than during years with higher upper basin runoff. Therefore, regulation studies performed since 1999 use two levels of System release requirements; one for Median, Upper Quartile, and Upper Decile runoff scenarios, and another for Lower Quartile and Lower Decile scenarios. The updated release requirements for full and minimum service flow support are given in ***Table IV***. Releases required for minimum service flow support are 6,000 cfs less than full service support. A final report detailing the procedures used in this study is available on our web site.

An examination of the data presented in ***Table IV*** reflects that, early in the season, the target location is generally at Sioux City with adequate tributary flows to meet the other downstream flow targets. As the runoff season progresses, tributary flows normally recede during the summer, and the target location moves from Sioux City to Nebraska City and then to Kansas City. This requires higher flow support from the System as the season progresses through summer. Often the target moves upstream during the fall when higher downstream tributary flows return. This seasonal tributary flow pattern is reflected in the Gavins Point release data presented below.

The releases presented in ***Table IV*** are average monthly values during the period studied for various runoff conditions and do not reflect the range of daily releases that may be required during any given month to meet flow targets. Actual regulation, therefore, requires daily adjustments to fully serve the Congressionally authorized project purpose of navigation. An additional analysis was conducted in the spring of 2003 that concluded a 30,000 cfs release would be needed to provide a 90 percent assurance of meeting minimum service flow targets in July and August. That study was based on runoff data from the period of record 1898 through 1997.

TABLE IV
GAVINS POINT RELEASES NEEDED TO MEET TARGET FLOWS
FOR INDICATED SERVICE LEVEL
1950 to 1996 Data
(Discharges in 1,000 cfs)

Median, Upper Quartile, Upper Decile Runoff

	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
Full Service	26.7	28.0	27.9	31.6	33.2	32.6	32.0	31.1
Minimum Service	20.7	22.0	21.9	25.6	27.2	26.6	26.0	25.1

Lower Quartile, Lower Decile Runoff

	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
Full Service	29.8	31.3	31.2	34.3	34.0	33.5	33.1	31.2
Minimum Service	23.8	25.3	25.2	28.3	28.0	27.5	27.1	25.2

In general, releases from Gavins Point are adjusted as needed to meet target flow levels on the lower Missouri River. However, during the nesting season of the endangered interior least tern (tern) and the threatened piping plover (plover), care must be taken to avoid impacts to nesting areas. These two bird species are listed as threatened and endangered under the ESA and are protected under that Act. Several scenarios have been used in past years to regulate the System during the nesting season. Under the Steady-Release (SR) scenario, when the birds begin to initiate nesting activities in early to mid-May, the release from Gavins Point is set to the level expected to be required to meet downstream flow targets through August and maintained at that level until the end of the nesting season. This regulation results in releases that exceed the amount necessary to meet downstream flow targets during the early portion of the nesting season, and may result in targets being missed if basin conditions are drier than expected during the summer. The SR scenario prevents the birds from nesting at low elevations that would subsequently be inundated if higher releases were required later in the nesting season. One tradeoff of the SR scenario is availability of habitat. Although the full habitat potential of the reach is not made available during the current nesting season, the SR scenario conserves habitat over the long run by preventing seed germination and by reducing erosion.

Gavins Point releases, under the Flow-to-Target (FTT) scenario, are adjusted as needed throughout the nesting season to meet downstream flow targets and would typically result in increasing releases as the nesting season progresses. This is due to reduced tributary inflows downstream as the summer heat builds, evaporation increases, and precipitation wanes. Increasing releases as the nesting season progresses can inundate nests and chicks on low-lying emergent sandbar habitat. Compared to the SR scenario, this scenario conserves more water in the System, which keeps the pool levels at the upper three System projects at relatively higher levels. However, this scenario also increases the risk of inundating nests. The FTT scenario also ensures that targets on the lower river are met throughout the nesting season.

A third scenario for Gavins Point releases, which combines features of the other two options, was used during the 2003 nesting season. This scenario, called the Steady Release – Flow-to-Target (SR-FTT) scenario, sets Gavins Point releases at an initial steady rate, and then allows releases to be adjusted upward or downward during the nesting season to meet downstream flow targets, if necessary. Compared to the SR scenario, this regulation may make a larger amount of habitat available early in the nesting season and save additional water in the upper three reservoirs depending on where the initial steady release is set. As with the SR scenario, the full habitat potential of the reach is not made available during the current nesting season, however, the SR-FTT scenario conserves habitat over the long run by preventing seed germination and by reducing erosion. The SR-FTT scenario also reduces the potential for flooding nests when compared to the FTT scenario. The SR-FTT regulation also provides certainty for downstream users that releases could be increased if needed to meet Missouri River flow targets.

B. <u>2004-2005 AOP Simulations</u>. AOP simulations for the five runoff scenarios are shown in the final section of this AOP as studies 4 through 8. Results of the simulations are shown in ***Plates 3 and 4*** for the System storage and the Fort Peck, Garrison and Oahe pool elevations. The March 15 and July 1 System storage checks from ***Tables II*** and ***III*** were used to determine the level of flow support and the navigation season length. For modeling purposes in this AOP, the SR regulation scenario is shown during the 2005 nesting season. The August minimum service release shown in ***Table IV*** was used for June through August. The May minimum service release shown in ***Table IV*** was used for two-thirds of the days in May and the August minimum service release was used for the other third to reflect every third day peaking from Gavins Point. However, the planned regulation for the 2005 nesting season will be SR-FTT. This regulation is expected to use slightly less water than indicated in the AOP model runs depending on actual hydrologic conditions in the summer of 2005. The initial steady release (SR) will be based on hydrologic conditions and the availability of habitat at that time. Once the majority of the birds have nested on the newly constructed, high elevation habitat, releases will be made to meet downstream targets (FTT). It is anticipated that sufficient habitat will be available above the planned release rates to provide for successful nesting. The purpose of this regulation is to continue to meet the project purposes while minimizing the loss of nesting T&E species and conserving water in the upper three reservoirs.

Table IV values were used in all the AOP studies for navigation support during the spring and fall months. Winter 2004-2005 and winter 2005-2006 releases of 12,500 cfs are shown in the simulations. This is lower than recent actual winter releases required for downstream powerplants and water supply intakes, but on-going modification of intakes will permit lower winter releases as a conservation measure when System storage is low. Non-winter, non-navigation releases were modeled at 11,000 cfs as a further water conservation measure, although the goal is to reduce Gavins Point releases to as low as 9,000 cfs, as described in the 2004 Mainstem Master Manual, provided downstream tributary flows are adequate to serve water supply requirements. Adequate tributary flows in the Missouri River reach below the System allowed this goal to be achieved in the fall of 2004.

The Gavins Point releases shown in this and previous AOPs are not absolute. Adjustments are made as necessary based on hydrologic conditions to meet the Missouri River target flows whose values are determined by the March 15 and July 1 storage checks.

Application of the July 1 storage check shown on ***Table III*** indicates the navigation season will be shortened 27 days for Upper Decile, 31 days for Upper Quartile and Median, 56 days for Lower Quartile, and the maximum 61 days for Lower Decile runoff. Minimum service navigation flows are provided for all runoff conditions due to low System storage. None of the simulations reach the desired 57.1 MAF System storage level on March 1, 2006.

Intrasystem releases are adjusted to best serve the multiple purposes of the projects with special emphasis placed on regulation for non-listed fisheries starting in early April and for T&E bird species beginning in early May and continuing through August. During the late 1980 to early 1990 drought years, a two-day-down, one-day-up peaking cycle from Gavins Point was utilized during the nesting season. This regulation provided for lower flows for two out of three days to conserve water in the System while ensuring that T&E bird species did not nest on low-lying habitat. This cycling was successfully utilized in May 2004 during nest initiation as a water conservation measure. Depending on hydrologic conditions, a peaking cycle may be used to conserve water at the beginning of the nesting season in 2005. It may also be necessary to cycle releases for flood control regulation during the T&E species' nesting season.

The Median, Upper Quartile, and Upper Decile simulations include releases that provide a steady to rising pool level in the three large upper reservoirs during the spring fish spawn period. Similar regulation in the past has resulted in a higher fish reproduction success.

Actual System regulation from January 1 through July 31, 2004 and the regulating plans for each project for CY 2005 using the five runoff scenarios described on page 5 are presented on ***Plates 5 through 10***, inclusive. An exception is the omission of Big Bend, since storage at that project is relatively constant and average monthly releases are essentially the same as those at Oahe. These plates also show, on a condensed scale, actual regulation since 1953.

Plate 11 illustrates for Fort Peck, Garrison, Oahe, and Gavins Point the actual releases (Regulated Flow) as well as the Missouri River flows (Unregulated Flow) that would have resulted if the reservoirs were not in place during the period January 2003 through July 2004. ***Plate 12*** presents past and simulated gross average monthly power generation, and gross peaking capability for the System.

C. <u>Regulation for the Balance of the 2004 Navigation Season and Fall of 2004.</u> The regulation of the System for the period of August though November 2004 is presented in the following paragraphs.

<u>Fort Peck Dam.</u> Releases averaged near 7,000 cfs during August and the first half of September. In mid-September they were gradually reduced to the minimum of 4,000 cfs. The 4,000 cfs release rate will be held until late November. The Fort Peck pool fell to a new record low level of 2199.7 feet mean sea level (msl) in October. The record low elevation during the previous drought was 2208.7 feet msl set in April 1991.

<u>Garrison Dam.</u> Releases continued at 17,000 cfs until mid-September when irrigation ceased, then they were reduced to 12,000 cfs. In early October releases were further reduced to 11,500 cfs and held at that rate until late November as a water conservation measure. The Garrison pool level declined to a record low elevation of 1812.6 feet msl in November. The record low during the previous drought was 1815.0 in May 1991.

<u>Oahe Dam.</u> Releases averaged 23,900 cfs in August, and only 12,900 cfs in September to initiate an early fall drawdown of the Fort Randall pool as the navigation season closed early in 2004. The average daily release in October was a record low

7,000 cfs. Low release will continue in November to maintain Fort Randall at a low pool elevation until they are increased in the winter for power generation.

Big Bend Dam. Releases will parallel those from Oahe. Big Bend will generally fluctuate between 1420.0 and 1421.0 feet msl for weekly cycling during high power load periods.

Fort Randall Dam. Releases averaged 24,300 cfs in August and 22,900 cfs in September to back up the releases from Gavins Point Dam. When the navigation season ended in early October, releases were gradually lowered to as low as 7,000 cfs in November. The majority of the Fort Randall fall pool drawdown was accomplished by mid-October this year due to the shortening of the navigation season.

Gavins Point Dam. Releases from Gavins Point Dam averaged 25,000 cfs in August, and 24,400 cfs in September. They continued to support downstream minimum service flows until the first week of October when they were reduced by 3,000 cfs per day, reaching 12,000 cfs on October 10. From there, releases were reduced at a rate of 500 cfs every 5 to 7 days which allowed sufficient travel time for the release changes to reach the critical downstream intake locations prior to the next reduction. The minimum release of 9,000 cfs was reached on November 15. Intakes were closely monitored during this period to ensure their operability. Releases will be increased to the winter System release rate prior to significant river ice formation. It was understood that 9,000 cfs might be less than is required for downstream water supply intakes without sufficient incremental tributary inflow below the System. Tributary inflow was adequate in 2004 to allow a reduction to the 9,000 cfs level. We believe that this 9,000 cfs minimum spring-fall flow represents a reasonable long-term goal for water intake owners to strive for as they make improvements to their facilities. The navigation season was shortened 47 days in 2004 in accordance with the July 1 System storage check given in the Master Manual. The Gavins Point pool level was raised 1.5 feet to elevation 1207.5 feet msl in July when it was determined that T&E species were not nesting along the reservoir. The pool level will remain near that elevation during the fall and winter months.

D. Regulation Plan for Winter 2004-2005. The September 1 System storage check is used to determine the amount of the winter System release. During the winter of 2004-2005, we will strive to average 12,000 cfs System release. If mild weather conditions prevail, System releases may be set lower than 12,000 cfs, but only if downstream water supply intakes can remain operable. Conversely, 12,000 cfs may be less than is required for downstream water supply intakes without sufficient incremental tributary inflow below the System, and therefore, releases may need to be set at levels higher than 12,000 cfs at times to ensure downstream water supply intakes are operable. However, we believe that this minimum winter flow represents a reasonable long-term goal for water intake owners to strive for as they make improvements to their facilities. It may be necessary at times to increase Gavins Point releases to provide adequate downstream flows if ice jams or blockages form which temporarily restrict flows, therefore the model results indicate an average winter System release of 12,500 cfs to allow for these increases. Based on past experiences, these events are expected to occur infrequently and be of short duration. It is anticipated that this year's winter release will be adequate to serve all downstream water intakes except for very short periods during significant river ice formation or ice jamming.

Fort Peck Dam. Releases are expected to average 6,500 cfs December through January, 3,500 to 5,000 cfs below the 1967-2003 average. The Basic simulation shows that the Fort Peck pool level will fall 2.2 feet by the end of the winter period. Carryover multiple purpose storage in the three large upper reservoirs will be near a balanced condition on March 1, 2005. The pool level is expected to rise nearly 1 foot to elevation 2198.1 feet msl by March 31, 33.7 feet below normal.

Garrison Dam. Releases will be adjusted to serve winter power loads and balance System storage. Releases will be scheduled at 16,000 to 17,000 cfs at the time of normal freeze-in and may have to be reduced for a short period during the freeze-in in the Bismarck area to prevent exceeding a targeted 13-foot stage at the Bismarck gage. Flood stage is 16 feet. Garrison releases are expected to average 16,000 cfs at the beginning of the winter period and increase very slightly to 17,000 cfs in January and February, 6,700 to 8,000 cfs less than normal. The Garrison pool level is expected to fall from near elevation 1812.1 feet msl to elevation 1807.1 feet msl by March 1, 27.4 feet below the base of the annual flood control storage zone. The Median simulation indicates the pool level will rise to elevation 1808.8 feet msl by March 31, which would be 26.3 feet below normal.

Oahe Dam. Releases for the winter season will provide backup for the Fort Randall and Gavins Point releases plus fill the recapture space available in the Fort Randall reservoir consistent with anticipated winter power loads. Monthly average releases may vary substantially with fluctuations in power loads occasioned by weather conditions but, in general, are expected to average 15,000 cfs. Daily releases will vary widely to best meet power loads. Peak hourly releases, as well as daily energy generation, will be constrained to prevent urban flooding in the Pierre and Fort Pierre areas if severe ice problems develop downstream of Oahe Dam. This potential reduction has been coordinated with the Western Area Power Administration.

The Oahe pool level is expected to gradually rise from elevation 1574.0 feet msl at the end of the 2004 navigation season to elevation 1575.7 feet msl by March 1, then rise to elevation 1578.7 feet msl by the end of March, 27.1 feet below normal.

Big Bend Dam. The Big Bend pool level will be maintained in the normal 1420.0 to 1421.0 feet msl range during the winter.

Fort Randall Dam. Releases will average near 11,000 cfs. The Fort Randall pool level is expected to rise from a low elevation of 1337.5 feet msl to near elevation 1350.0 feet msl, the seasonal base of flood control, by March 1. However, if the plains snowpack flood potential downstream of Oahe Dam is quite low at that time, measures will be taken to raise the Fort Randall pool level to near elevation 1353.0 feet msl by March 1. It is likely that a pool level above elevation 1353.0 feet msl, to as high as 1355.2, will be reached by the end of the winter period on March 31, if runoff conditions permit. The Fort Randall pool level above the White River delta near Chamberlain, South Dakota will likely remain at a higher elevation than the pool level below the delta from early October through December, due to the damming effect of this delta area.

Gavins Point Dam. Releases are discussed in the first paragraph of this section. The Gavins Point pool level will be near elevation 1207.5 feet msl until late February when it will be lowered to elevation 1206.0 feet msl to create additional capacity to store spring runoff, primarily from the Niobrara River and Ponca Creek along the Fort Randall to Gavins Point reach.

System storage for all five runoff conditions will be substantially below the base of the annual flood control zone by March 1, 2005, the beginning of next year's runoff season.

E. Regulation Plan During the 2005 Navigation Season. The Upper Decile, Upper Quartile, Median, Lower Quartile, and Lower Decile runoff scenarios modeled for this year's AOP follow the specific technical criteria presented in the March 2004 Master Manual for navigation service flow support. The normal 8-month navigation season is shortened as a water conservation measure for all runoff scenarios as shown in ***Table V***. Releases from Fort Peck, Garrison, and Fort Randall will follow repetitive daily patterns from early May, at the beginning of the T&E species' nesting season, to the end of the nesting in late August. As previously stated, the model runs included in this AOP have Gavins Point releases cycling two days down and one day up during May to keep birds from nesting at low elevations, then increasing on June 1 to the release required to meet downstream minimum service support to navigation flows through August. The planned regulation for the 2005 nesting season will be SR-FTT. The initial steady release (SR) will be based on hydrologic conditions and the availability of habitat at that time. Once the majority of the birds have nested on the newly constructed, high elevation habitat, releases will be made to meet downstream targets (FTT). The purpose of this regulation is to continue to meet the project purposes while minimizing the loss of nesting T&E species and conserving water in the upper three reservoirs.

TABLE V
NAVIGATION SERVICE SUPPORT
FOR THE 2005 SEASON

	Runoff Scenario (MAF)	System Storage March 15 (MAF)	System Storage July 1 (MAF)	Flow Level Above or Below Full Service (cfs) Spring	Flow Level Above or Below Full Service (cfs) Summer/Fall	Season Shortening (Days)
U.D.	34.5	37.9	47.5	-6,000	-6,000	27
U.Q	30.6	37.7	45.4	-6,000	-6,000	31
Med	24.6	35.7	41.3	-6,000	-6,000	31
L.Q.	19.5	34.4	37.2	-6,000	-6,000	56
L.D.	15.5	34.2	35.1	-6,000	-6,000	61

The reservoir regulation simulations presented in this AOP for the Upper Decile, Upper Quartile, and Median runoff scenarios show that steady to rising pool levels would occur during the spring fish spawn period for the upper three System reservoirs. The studies show that inflows are sufficient to maintain steady to rising pools at Fort Peck and Garrison in April and May for Lower Quartile and Lower Decile runoff scenarios, however Oahe would fall during this period. The ability to provide steady to rising pool levels in the upper three reservoirs in low runoff years is very dependent on the volume, timing, and distribution of that runoff. If runoff is not sufficient to keep all the pool levels rising during the fish spawn in 2005, the Corps will, to the extent reasonably possible, set releases to result in steady to rising pools at Oahe during April and May, and steady to rising pools at Fort Peck during May and June. This will be accomplished by setting Fort Peck releases at a level that would maintain the rising pool, but no less than the minimum required to supply downstream irrigation. Oahe pool levels will be maintained by local runoff and releases from Garrison Dam. Adjustments to Garrison’s releases, however, may be limited when the terns and plovers begin nesting. If the drought continues, emphasis during the fish spawn will be rotated between Garrison and Oahe. In years when Oahe is favored, Fort Peck releases will be set at a level that would maintain the rising pool, but no less than the minimum required to supply downstream irrigation. Management of the reservoirs during the fish spawn will continue with consideration of other Congressionally authorized project purposes, be opportunistic with regard to runoff potential, and will continue to evolve as additional information becomes available.

All five runoff scenarios studied for this year's AOP provide gradually increasing Gavins Point releases to meet navigation season flow rates at the mouth of the Missouri near St. Louis by April 1, 2005, the normal navigation season opening date. The corresponding dates at upstream locations are Sioux City, March 23; Omaha, March 25; Nebraska City, March 26; and Kansas City, March 28. However, if there is no commercial navigation scheduled to use the upper reaches of the navigation channel, outside the tern and plover nesting season, we will consider eliminating flow support for targets in those reaches to conserve water in the System, as was done in 2004. The studies illustrated on ***Plates 5 through 10*** and summarized in ***Table V*** are based on providing minimum service flows (except May through July when flows may exceed minimum service) and a shortened navigation season for all runoff scenarios. Navigation season shortening is shown as 27 days from the normal 8-month season for Upper Decile, 31 days for Upper Quartile and Median, 56 days for Lower Quartile, and 61 days for Lower Decile.

Navigation flow support for the 2005 season will be determined by actual System storage on March 15 and July 1. Although all runoff scenarios modeled indicate minimum service flow support throughout the navigation season, if the July 1 System storage check indicates an increase in service level, any increase greater than 2,000 cfs will be delayed until the end of the T&E bird species' nesting season. Gavins Point releases may be quite variable during the 2005 navigation season but are expected to range from 22,000 to 28,000 cfs. Release reductions necessary to minimize downstream flooding are not reflected in these monthly averages but will be instituted as conditions warrant. Simulated storages and releases for the System and individual reservoirs within the System are shown on ***Plates 5 through 10.*** Ample storage space exists in the System to control flood inflows under all conditions studied.

Two modified reservoir regulation plans shown in previous AOPs, the Fort Peck "mini-test" and unbalancing the upper three reservoirs, will not be implemented in 2005 due to low System storage. When System storage recovers sufficiently, the Corps anticipates that both these plans will be implemented.

The first of these two modified plans is a test of flow modifications for the endangered pallid sturgeon. When Fort Peck has adequate water above the spillway crest by mid to late May of any year, a flow modification "mini-test" will be conducted in early June to monitor effects of higher spring releases and warmer water released from the spillway. The purposes of the "mini-test" are to allow for an evaluation of the integrity of the spillway structure, to test data collection methodology, and to gather information on river water temperatures with various combinations of flow from the spillway and powerhouse. Streambank erosion and fishing impacts will also be monitored. Stop protocol for the "mini-test" is identified in the Fort Peck Flow Modification Mini-Test Environmental Assessment, dated March 2004. Before either test is run, the Corps will fully coordinate with the Tribes of the Fort Peck Reservation, the State of Montana, and any other potentially affected stakeholders.

During the Fort Peck "mini-test," which will last about four weeks, flows will vary from 8,000 to 15,000 cfs as various combinations of spillway and powerplant releases are monitored. The maximum spillway release of 11,000 cfs will combine with a minimum powerplant release of 4,000 cfs for six days. This test will be timed to avoid lowering the pool level during the forage fish spawn. The "mini-test" will not be conducted if sufficient flows will not pass over the spillway crest (elevation 2225 feet msl). A minimum pool level of about 2229 feet msl is needed during the test to avoid unstable flows over the spillway. Results of the AOP simulations show that this elevation will not be achieved in 2005 for any of the five runoff scenarios. A more extensive test with a combined 23,000 cfs release from Fort Peck is scheduled to be conducted beginning in early June in the year following the "mini-test" to allow further tests of the integrity of the spillway and to determine if warm water releases will benefit the native river fishery. Peak outflows during the full test would be maintained for two weeks within the four-week test period.

The second modified regulation plan involves unbalancing the three large upper reservoirs as shown on ***Table VI*** to benefit reservoir fishery and the three protected species. Reservoir unbalancing is computed based on the percentage of the carryover multiple purpose pool that remains in Fort Peck, Garrison and Oahe Reservoirs. The unbalancing would alternate at each project; high one year, float (normal regulation) the next year, and low the third year, as shown on ***Table VI***. ***Table VII*** shows the pool levels proposed by the MRNRC at which the unbalancing would be terminated. ***Table VII*** indicates that no reservoir unbalancing should occur for any of the five runoff scenarios in 2005.

TABLE VI
RESERVOIR UNBALANCING SCHEDULE

	Fort Peck		**Garrison**		**Oahe**	
Year	***March 1***	***Rest of Year***	***March 1***	***Rest of Year***	***March 1***	***Rest of year***
1	High	Float	Low	Hold Peak	Raise & hold during spawn	Float
2	Raise & hold during spawn	Float	High	Float	Low	Hold peak
3	Low	Hold peak	Raise & hold during spawn	Float	High	Float

Notes: Float year: Normal regulation, then unbalance 1 foot during low pool years or 3 feet when System storage is near 57.1 MAF on March 1.

Low year: Begin low, then hold peak the remainder of the year.

High year: Begin high, raise and hold pool during spawn, then float.

TABLE VII
MRNRC RECOMMENDED
RESERVOIR ELEVATION GUIDELINES
FOR UNBALANCING

	Fort Peck	**Garrison**	**Oahe**
Implement unbalancing if March 1 pool is above this level.	2234 feet msl	1837.5 feet msl	1607.5 feet msl
Implement unbalancing if March 1 pool level is in this range **and** the pool is expected to raise more than 3 feet after March 1.	2227-2234 feet msl	1827-1837.5 feet msl	1600-1607.5 feet msl
Scheduling Criteria	Avoid pool level decline during spawn period which ranges from April 15 – May 30	Schedule after spawn period of April 20 – May 20	Schedule after spawn period of April 8 – May 15

<u>Summary of Reservoir Regulation Activities for T&E Species and Fish Propagation Enhancement</u>

As discussed in the previous section, the 2004-2005 AOP includes no provisions for unbalancing the Fort Peck, Garrison, and Oahe reservoirs for any of the runoff scenarios. The criteria for unbalancing are based on recommendations provided by the MRNRC and the USFWS. Under all simulations, System storage will be below the minimum levels under which unbalancing is recommended by either the MRNRC or the USFWS.

Fort Peck Dam. Releases during the tern and plover nesting season will follow a repetitive daily pattern from early May to the end of the nesting season in late August. This regulation should result in habitat conditions for nesting terns and plovers similar to what was available in 2004. The State of Montana has requested that releases be restricted to 8,000 cfs or less. The 2004-2005 AOP studies show that releases from Fort Peck would not exceed 9,000 cfs. While it is possible to restrict releases to 8,000 cfs, this would not affect the annual volume of water released because intrasystem regulation is designed to balance the upper three reservoirs by the beginning of March of each year. Limiting releases to 8,000 cfs or less during the summer would result in relatively higher releases during the spring and fall when power demands are generally low, which would contribute to the upward pressure on hydropower rates paid by WAPA customers.

If flood flows enter the Missouri River below the project during the nesting season, hourly releases will be lowered to no less than 3,000 cfs in order to keep traditional riverine fish rearing areas continuously inundated while helping to lower river stages at downstream nesting sites. April releases should be adequate for trout spawning below the project. If runoff is not sufficient to keep all the pool levels rising during the fish spawn in 2005, the Corps will, to the extent reasonably possible, set releases to result in a steady to rising pool at Fort Peck during May and June. This will be accomplished by setting releases at a level that would maintain the rising pool, but no less than the minimum required to supply downstream irrigation. A rising pool in May and June will be dependent upon the daily inflow pattern to the reservoir but appears possible with all runoff simulations. The T&E flow modification "mini-test" will not be run under any runoff scenario. The Fort Peck pool level must be at elevation 2229 msl to allow releases required for the "mini-test" through the spillway.

Garrison Dam. Daily average releases from Garrison will be much less than full powerplant capacity during the tern and plover nesting season under all runoff scenarios. Monthly average releases will decline 500 to 1,000 cfs during the summer nesting season. Hourly peaking will be limited to no more than 30,000 cfs for six hours if the daily average release is lower than 28,000 cfs. This will limit peak stages below the project for nesting birds.

Garrison elevations will not reach levels considered necessary for optimum fish spawning during the month of May for any of the runoff scenarios. The pool level may again approach a level that jeopardizes the volume of cold-water habitat in 2005. Given Median or higher runoff, the pool level should rise during the fish spawn season, however, the actual timing of the rise in pool level will be dependent upon the pattern of inflow at that time and the Garrison releases needed to support a steady or rising Oahe pool during its fish spawn.

Oahe Dam. Releases in the spring and summer will back up those from Gavins Point Dam. Given Median or higher runoff, the pool level should be steady to rising in the spring. If runoff is not sufficient to keep all the pool levels rising during the fish spawn in 2005, the Corps will, to the extent reasonably possible, set releases to result in a steady to rising pool at Oahe during April and May. Oahe pool levels will be maintained by local runoff and releases from Garrison Dam. Adjustments to Garrison's releases, however, may be limited when the terns and plovers begin nesting. Under all AOP simulations, the Oahe pool will fall during the summer.

Fort Randall Dam. Fort Randall will be regulated to provide for a pool elevation near 1355 feet msl during the fish spawn period, provided water can be supplied from other reservoirs for downstream uses, and the pool will not be drawn down below elevation 1337.5 feet msl in the fall to ensure adequate supply for water intakes. Hourly releases from Fort Randall during the 2005 nesting season will be limited to 37,000 cfs for six hours. Daily average flows may be increased every third day to preserve the capability of increasing releases later in the summer if conditions turn dry.

Gavins Point Dam. Based on 2003 and 2004 nesting season results with the SR-FTT regulation and planned habitat development activities, it is anticipated that sufficient habitat will be available above the planned release rates to provide for successful nesting. All reasonable measures to minimize the loss of nesting T&E bird species will be used. These measures include, but are not limited to, such things as a relatively high initial SR during the peak of nest initiation, the use of the Kansas River basin reservoirs, moving nests to higher ground when possible, and monitoring nest fledge dates to determine if delaying an increase a few days might allow threatened chicks to fledge. The location of tows and river conditions at intakes would also be monitored to determine if an increase could be temporarily delayed with little or no impact. Cycling releases every third day may be used to conserve water during the month of May if extremely dry conditions develop. In addition, cycling may be used for downstream flood control regulation.

The Gavins Point pool will be regulated near 1206.0 feet msl in the spring and early summer with day-to-day variations due to rainfall runoff. Greater fluctuations occur in the river, increasing the risk of nest inundation in the upper end of the Gavins Point pool. Several factors contribute to the increased risk of nest inundation in the upper end of the Gavins Point pool. First, because there are greater numbers of T&E bird species nesting below the Gavins Point project, Gavins Point releases are restricted during the nesting season, to minimize loss of nests or chicks. Second, rainfall runoff between Fort Randall Dam and Gavins Point Dam can result in sudden pool rises because the Gavins Point project has a smaller storage capacity than the other System reservoirs. Third, the regulation of Gavins Point for downstream flood control may necessitate sudden release reductions to prevent downstream T&E bird species losses. And finally, high releases required in wet years make nest inundation more likely.

When combined, all these factors make it difficult and sometimes impossible to prevent inundation of nests in the upper end of the Gavins Point reservoir. The pool will be increased to elevation 1207.5 feet msl if it is determined that there are no terns or plovers nesting along the reservoir.

VI. SUMMARY OF RESULTS EXPECTED IN 2005

With regulation of the System in accordance with the 2004-2005 AOP outlined in the preceding pages, the following results can be expected.

A. Flood Control. All runoff scenarios studied will begin the March 1, 2005 runoff season substantially below the desired 57.1 MAF base of annual flood control and multiple use zone. Therefore, the entire System flood control zone, plus an additional 7.8 to 26.0 MAF of the carryover multiple use zone, will be available to store runoff. The System will be available to significantly reduce peak discharges and store a significant volume of water for all floods that may originate above the System.

Remaining storage in the carryover multiple use zone will be adequate to provide support for all of the other multiple purposes of the System, though at reduced levels.

B. Water Supply and Water Quality Control. Although below normal winter releases are being provided for all five runoff scenarios, all water supply and water quality requirements on the Missouri River both below Gavins Point Dam and between System reservoirs should be met for all flow conditions studied. It is possible with the low winter releases that ice formation or ice jams may temporarily reduce river stages to levels below which some intakes can draw water. Therefore, during severe cold spells, experience has shown that for brief periods it may be necessary to increase Gavins Point releases to help alleviate water supply problems along the lower river.

If the drought continues, reservoir pool levels and releases may continue to fall below their previous historic lows creating the potential for water supply problems at intakes, particularly those located on the upper three reservoirs. These intakes are primarily for the purposes of municipal and rural water supplies, nuclear and thermal powerplant cooling, and irrigation supplies. During the non-navigation periods in the spring and fall, System releases as low as 9,000 cfs are possible with adequate downstream tributary flow as occurred in the fall of 2004, to conserve water in the System for future use by all authorized purposes. If a non-navigation year would occur, summer releases as low as 18,000 cfs from the System are possible during the summer months. These lower release rates will result in reduced river levels that may impact some downstream intakes that have marginal access to the Missouri River. Historically, water access problems have been associated with an intakes' ability to access the river or reservoir rather than insufficient water supply. The lower flows associated with a non-navigation summer may also result in negative impacts to thermal powerplants given the restrictions of their water quality and safety permits. As with water supply in river reaches, the Corps will strive to provide, to the extent reasonably possible, releases that allow thermal powerplants to meet their water quality and safety permit requirements. The Corps continues to encourage intake operators throughout the System and along the lower river to make necessary modifications to their intakes to allow efficient operation over the widest possible range of hydrologic conditions.

C. Irrigation. Scheduled releases from the System reservoirs will be sufficient to meet the volumes of flow required for irrigation diversions from the Missouri River. Some access problems may be experienced, however, if drought conditions persist. Tributary irrigation water usage is fully accounted for in the estimates of water supply.

D. Navigation. Service to navigation in 2005 will be scheduled at minimum service flow support for all runoff scenarios. Although the AOP simulations provide a comparison of typical flow support under varying runoff conditions, the actual rate of flow support for the 2005 navigation season will be based on actual System storage on March 15 and July 1, 2005.

All simulations have a shortened navigation season. The anticipated service level and season length for all runoff conditions simulated are shown in ***Table V***.

E. Power. ***Tables VIII and IX*** give the estimated monthly System load requirements and hydropower supply of the Eastern Division, Pick-Sloan Missouri Basin Program (P-S MBP), from August 2004 through December 2005. Estimates of monthly peak demands and energy include customer requirements for firm, short-term firm, summer firm, peaking, and various other types of power sales, System losses, and the effects of diversity. Also included in the estimated requirements are deliveries of power to the Western Division, P-S MBP, to help meet its firm power commitments.

F. Recreation, Fish and Wildlife. The regulation of the System will continue to provide recreation and fish and wildlife opportunities in the project areas and along the Missouri River as well as other benefits of a managed system. As a result of the drought, reservoir levels will remain well below normal and recreation access will be limited at several locations. Special regulation adjustments incorporating specific objectives for these purposes will be accomplished whenever possible. Conditions in the lower three reservoirs should be favorable for the many visitors who enjoy the camping, boating, fishing, hunting, swimming, picnicking, and other recreational activities associated with the System reservoirs and for increasing usage of the regulated reaches of the Missouri River downstream of the reservoirs.

TABLE VIII
PEAKING CAPABILITY AND SALES
(1,000 kW at plant)

2004	Estimated Committed Sales*	Expected C of E Capability					Expected Bureau Capability					Expected Total System Capability				
			120%	Basic	80%			120%	Basic	80%			120%	Basic	80%	
Aug	2182		1994	1991	1987			181	178	178			2175	2169	2165	
Sep	1862		1976	1969	1955			183	181	178			2159	2150	2133	
Oct	1658		1958	1948	1938			187	184	181			2145	2132	2119	
Nov	1767		1965	1949	1936			187	186	180			2152	2135	2116	
Dec	1929		1942	1918	1909			183	186	178			2125	2104	2087	
2005																
Jan	2036		1958	1933	1924			181	186	176			2139	2119	2100	
Feb	1877		1971	1943	1918			178	185	174			2149	2128	2092	
		U.D.	U.Q.	Med	L.Q.	L.D.	U.D.	U.Q.	Med	L.Q.	L.D.	U.D.	U.Q.	Med	L.Q.	L.D.
Mar	1778	2048	2039	2000	1970	1965	193	193	188	176	176	2241	2232	2188	2146	2141
Apr	1668	2077	2062	2012	1968	1961	197	198	189	177	177	2274	2260	2201	2145	2138
May	1647	2105	2085	2027	1969	1953	196	201	197	184	184	2301	2286	2224	2153	2137
Jun	1912	2154	2128	2066	1997	1960	208	211	206	192	192	2362	2339	2272	2189	2152
Jul	2187	2169	2139	2066	1987	1941	213	213	209	195	194	2382	2352	2275	2182	2135
Aug	2182	2162	2137	2056	1969	1918	209	209	207	195	193	2371	2346	2263	2164	2111
Sep	1862	2165	2128	2045	1932	1883	209	208	205	197	195	2374	2336	2250	2129	2078
Oct	1658	2132	2100	2011	1932	1881	207	207	204	200	198	2339	2307	2215	2132	2079
Nov	1767	2144	2109	2015	1932	1880	206	204	203	199	197	2350	2313	2218	2131	2077
Dec	1929	2131	2095	1992	1913	1849	199	197	198	196	194	2330	2292	2190	2109	2043

* Estimated sales, including system reserves. Power in addition to hydro production needed for these load requirements wil be obtained from other power systems by interchange or purchase.
** Total output of Canyon Ferry and 1/2 of the output of Yellowtail powerplant.

TABLE IX
ENERGY GENERATION AND SALES
(Million kWh at plant)

2004	Estimated Committed Sales*	Expected C of E Generation					Expected Bureau Generation **					Expected Total System Generation				
			120%	Basic	80%			120%	Basic	80%			120%	Basic	80%	
Aug	836		662	671	680			38	31	31			701	702	711	
Sep	714		519	528	505			37	29	30			557	557	535	
Oct	720		353	352	385			38	30	30			391	382	415	
Nov	776		328	329	334			48	29	29			375	357	362	
Dec	886		478	453	485			49	30	29			527	483	514	
2005																
Jan	898		457	452	478			49	30	30			506	482	507	
Feb	857		411	408	432			44	27	26			454	435	458	
		U.D.	U.Q.	Med	L.Q.	L.D.	U.D.	U.Q.	Med	L.Q.	L.D.	U.D.	U.Q.	Med	L.Q.	L.D.
Mar	791	404	435	426	428	424	48	48	29	29	29	452	483	456	457	452
Apr	740	461	496	511	597	583	66	61	44	26	26	527	556	554	624	610
May	684	585	629	646	699	689	85	78	54	30	30	670	707	700	729	719
Jun	748	664	695	706	709	702	101	88	55	32	32	765	783	761	741	733
Jul	835	741	766	783	780	768	130	115	74	48	38	871	881	856	828	806
Aug	842	758	743	738	738	720	99	93	73	48	38	857	836	811	787	758
Sep	713	629	571	582	494	442	95	89	77	47	37	724	660	659	541	479
Oct	721	448	510	504	319	310	98	90	77	48	44	546	600	581	367	354
Nov	779	363	376	364	354	337	92	85	73	52	47	455	461	438	406	384
Dec	887	552	564	518	525	479	93	88	76	56	48	645	651	594	581	527
CY TOT	9495	6473	6651	6637	6504	6362	999	927	688	472	424	7472	7578	7325	7025	6786

* Estimated sales including system reserves and losses. Power in addition to hydro production needed for these load requirements will be obtained from other systems by interchange or purchase.
** Total output Canyon Ferry and 1/2 output of Yellowtail powerplant.

Boat ramps that were lowered and low water ramps that were constructed during the drought of the late 1980's to early 1990's and the further improvements made in 2003 and 2004 should provide adequate reservoir access this year even under the Lower Decile runoff scenario. However, boat ramps in some areas where the ramps cannot be extended may become unusable. This will affect the normal use patterns, as visitors will have to seek out areas with usable boat ramps. Boat ramp elevations for Fort Peck, Garrison, Oahe and Fort Randall reservoirs are available on the Missouri River Basin Water Management Division web site at www.nwd-mr.usace.army.mil/rcc.

The effects of the simulated System regulation during 2005 on fish and wildlife are included in the section entitled, "Summary of Reservoir Regulation Activities for T&E Species and Fish Propagation Enhancement."

G. System Storage. If presently anticipated runoff estimates based upon the August 1, 2004 Basic runoff forecast materialize, System storage will total about 34.8 MAF by the close of CY 2004, breaking the 2003 previous record low end-of-year storage of 38.7 MAF. This end-of-year storage is 19.7 MAF less than the 1967 to 2003 average. The previous record low storage was 40.8 MAF in January 1991 during the 1988-1992 drought. The end-of-year System storages have ranged from a maximum of 60.9 MAF, which occurred in 1975, to the 2003 minimum of 38.7 MAF. Forecasted System storage on December 31, 2005 is presented in ***Table X*** for the runoff scenarios simulated.

H. Summary of Water Use by Functions. Anticipated water use in CY 2004, under the regulation plan with the Basic Forecast of water supply is shown in ***Table XI***. Actual water use data for CY 2003 are included for information and comparison. Under the simulated reservoir regulation scenarios, estimated water use in CY 2005 also is shown in ***Table XI.***

TABLE X
ANTICIPATED DECEMBER 31, 2005 SYSTEM STORAGE

Water Supply Condition	Total (12/31/05)	Carryover Storage Remaining 1/	Unfilled Carryover Storage 2/	Total Change CY 2005
	(Volumes in 1,000 Acre-Feet)			
Upper Decile	49,300	31,200	7,800	13,400
Upper Quartile	46,200	28,100	10,900	10,300
Median	39,600	21,500	17,500	4,800
Lower Quartile	34,300	16,200	22,800	300
Lower Decile	31,100	13,000	26,000	-2,800

1/ Net usable storage above 18.1 MAF System minimum pool level established for power, recreation, irrigation diversions, and other purposes.

2/ System base of annual flood control zone containing 57.1 MAF.

TABLE XI
MISSOURI RIVER MAINSTEM SYSTEM
WATER USE FOR CALENDAR YEARS 2003, 2004, AND 2005 ABOVE SIOUX CITY, IOWA
in Million Acre-Feet (MAF)

		CY 2003 Actual	CY 2004 Basic Simulation	Simulations for Calendar Year 2005 Upper Decile	Upper Quartile	Median	Lower Quartile	Lower Decile
Upstream Depletions	(1)							
Irrigation, Tributary Reservoir Evaporation & Other Uses		2.0	2.3					
Tributary Reservoir Storage Change		0.0	0.0					
Total Upstream Depletions		2.0	2.3	2.5	2.6	2.7	2.8	2.7
System Reservoir Evaporation	(2)	2.6	2.6	1.0	1.1	1.5	1.8	1.7
Sioux City Flows								
Navigation Season								
Unregulated Flood Inflows Between Gavins Point & Sioux City	(3)	0.0	0.0					
Navigation Service Requirement		12.5	10.2	13.6	12.9	11.6	10.7	10.4
Supplementary Releases								
T&E Species	(4)	0.5	1.0	0.5	0.5	0.5	0.2	0.2
Flood Evacuation	(5)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Non-navigation Season								
Flows		3.8	4.1	3.3	3.2	3.4	3.5	3.2
Flood Evacuation Releases	(6)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
System Storage Change		- 4.0	- 4.0	13.6	10.3	4.9	0.5	-2.7
Total		17.4	16.2	34.5	30.6	24.6	19.5	15.5
Project Releases								
Fort Peck		5.4	5.0	4.3	5.1	5.1	5.0	5.0
Garrison		12.9	12.2	12.8	12.8	12.5	12.3	11.7
Oahe		14.9	13.0	11.2	11.7	12.4	13.1	13.0
Big Bend		13.8	12.3	11.1	11.6	12.3	12.9	12.8
Fort Randall		14.9	13.1	12.4	12.6	13.1	13.2	13.1
Gavins Point		16.0	14.3	14.5	14.4	14.4	14.3	14.1

(1) Tributary uses above the 1949 level of development including agricultural depletions and tributary storage effects.
(2) Net evaporation is shown for 2005.
(3) Incremental inflows to reach which exceed those usable in support of navigation at the target level, even if Gavins Point releases were held to as low as 6,000 cfs.
(4) Increased releases required to maintain navigation release flexibility during the T&E species' nesting season.
(5) Includes flood control releases for flood control storage evacuation and releases used to extend the navigation season beyond the normal December 1 closing date at the mouth of the Missouri River.
(6) Releases for flood control storage evacuation in excess of a 15,000 cfs Fort Randall release.

VII. TENTATIVE PROJECTION OF REGULATION THROUGH MARCH 2011

The five-year extensions to the AOP (March 2006 to March 2011) have been prepared to serve as a guide for the Western Area Power Administration's marketing activities and to provide data to allow basin interests to conduct long term planning. Due to the severity of the ongoing drought and record low System storage, all five statistically derived inflows are used in the extensions. Previous AOPs have not included Upper Decile and Upper Quartile extensions because System storage normally recovers rapidly with these high inflows. The record low System storage associated with the current drought results in a longer recovery period. These extensions provide additional information for planning purposes on the recovery of the reservoir levels in the large upper three reservoirs and total System storage. The five inflows are identified as Upper Decile, Upper Quartile, Median, Lower Quartile and Lower Decile runoff conditions. Upper Decile (34.5 MAF) has a 1 in 10 chance of being exceeded, Upper Quartile (30.6 MAF) has a 1 in 4 chance of being exceeded, Median (24.6 MAF) has a 1 in 2 chance of being exceeded. Lower Quartile runoff (19.5 MAF) has a 1 in 4 chance of the occurrence of less runoff, and Lower Decile (15.5 MAF) has a 1 in 10 chance of the occurrence of less runoff.

The navigation service level and season length criteria described in Section V, Chapter A were applied to the extensions. The March 15 and July 1 System storage checks shown in ***Tables II and III*** were used to determine the flow support for navigation and other downstream uses, and the navigation season length. ***Table IV*** releases, as computed by the March 15 and July 1 System storage checks, were used in the extension studies. It is expected that releases closer to those shown in ***Table IV*** will be provided in future years during the tern and plover nesting season as additional emergent sandbar habitat becomes available. The September 1 System storage check was used to determine the winter System release.

The extensions show a cycled release from Gavins Point in May and a steady release from June 1 through August 31 during the T&E species' nesting season. Navigation service support and season length, end of year System storage, and the winter release rate for the extensions are shown on ***Table XII***.

TABLE XII
NAVIGATION SERVICE SUPPORT, AOP EXTENSIONS

	2006	2007	2008	2009	2010
UPPER DECILE					
Flow Level Below Full Service					
Spring (kcfs)	-3.6	-0.7	**	**	**
Summer/Fall (kcfs)	0	**	**	**	**
Season Length (Months)	8	8+10 days	8+10 days	8+10 days	8+10 days
Dec 31 Storage (MAF)	55.1	57.5	57.8	57.9	57.9
Winter Release (kcfs)	16.2	20.0	23.0	22.5	22.0
UPPER QUARTILE					
Flow Level Below Full Service					
Spring (kcfs)	-6.0	-1.1	0	**	**
Summer/Fall (kcfs)	-2.7	0	0	**	**
Season Length (Months)	8	8	8+10 days	8+10 days	8+10 days
Dec 31 Storage (MAF)	52.1	55.4	57.2	57.6	57.6
Winter Release (kcfs)	12.5	17.0	17.0	20.0	20.0
MEDIAN					
Flow Level Below Full Service					
Spring (kcfs)	-6.0	-5.5	-2.3	-0.6	0
Summer/Fall (kcfs)	-6.0	-5.5	-2.3	-0.6	0
Season Length (Months)	7	8–3 days	8	8	8
Dec 31 Storage (MAF)	44.6	48.5	50.9	52.1	52.8
Winter Release (kcfs)	12.5	12.5	12.5	12.7	14.0
LOWER QUARTILE					
Flow Level Below Full Service					
Spring (kcfs)	-6.0	-6.0	-6.0	-6.0	-6.0
Summer/Fall (kcfs)	-6.0	-6.0	-6.0	-6.0	-6.0
Season Length (Months)	8-51 days	8-36 days	7	7	7
Dec 31 Storage (MAF)	35.8	37.5	39.4	41.2	43.7
Winter Release (kcfs)	12.5	12.5	12.5	12.5	12.5
LOWER DECILE					
Flow Level Below Full Service					
Spring (kcfs)	-6.0	*	-6.0	-6.0	-6.0
Summer/Fall (kcfs)	-6.0	*	-6.0	-6.0	-6.0
Season Length (Months)	6	0	6	6	6
Dec 31 Storage (MAF)	29.2	32.0	31.6	31.9	32.4
Winter Release (kcfs)	12.5	12.5	12.5	12.5	12.5

No navigation service support in 2007 under Lower Decile runoff conditions.
** Releases exceed full service flow to evacuate excess flood control storage.

A. Upper Decile Runoff. Studies 9 through 13 present the computer simulation results for Upper Decile runoff (34.5 MAF) from 2006 through 2010. System storage on March 1, 2006 is 50.1 MAF, rising to the desired base of the annual flood control and multiple use storage of 57.1 MAF by March 1, 2008. Releases from the summer of 2007 through the 2010 navigation season exceed full service navigation flow requirements to evacuate excess flood control storage. A 10-day extension to the navigation season from 2007 through 2010 is also shown to evacuate excess flood control storage. Winter releases increase from 16,200 cfs during the winter of 2006-2007 to 23,000 cfs during the winter of 2008-2009. Releases during the last two winters of the simulations are slightly less due to decreasing runoff. Under Upper Decile runoff scenarios, the Fort Peck "mini-test" could be conducted in June of 2006 with releases averaging 12,800 cfs. The full test is shown in June of 2007 with releases averaging 18,200 cfs. The test includes a 19,000 cfs spillway release for five days. Unbalancing of reservoir storage at Fort Peck, Garrison, and Oahe would occur as shown in ***Table XIII***. The pattern of "high", "float", "low" as described in ***Table VI*** would be followed. The amount of unbalancing was generally 4 feet at Fort Peck and 3 feet at Garrison and Oahe.

B. Upper Quartile Runoff. Simulations for Upper Quartile runoff (30.6 MAF) are shown as studies 14 through 18. March 1 System storage does not fully recover to 57.1 MAF until 2009. Full service support to navigation flows resumes in the summer of 2007. Releases during the 2009 and 2010 navigation season are in excess of full service to evacuate flood control storage. A 10-day extension to the navigation season is shown from 2008 through 2010. Winter releases are 12,500 cfs during winter of 2006-2007, 17,000 cfs in the winter of 2007-2008 and the winter of 2008-2009 and 20,000 cfs for the remaining two winter periods. The Fort Peck "mini-test" is shown in June of 2007 and the full test is shown in June of 2008. Reservoir unbalancing is shown each March 1 for all extension years.

C. Median Runoff. Studies 19 through 23 present the results of simulations for Median runoff (24.6 MAF) from 2006 through 2010. The March 1, 2006 System storage would be 39.8 MAF and would rise to 52.8 MAF by March 1, 2011, 4.3 MAF below the desired March 1 storage of 57.1 MAF, the base of the annual flood control and multiple use pool. Winter System releases would increase slightly from an average of the minimum 12,500 cfs to 12,700 cfs beginning the winter of 2009-2010. The winter releases of 2010-2011 would be 14,000 cfs. Fort Peck, Garrison, and Oahe pools rise to the elevation criteria described in ***Table VII*** for initiation of unbalancing by March 1, 2009. The Fort Peck "mini-test" could be conducted in 2009 by unbalancing the upper three reservoirs as shown in ***Table XIII***. The Fort Peck release would average 12,800 cfs in June of 2009. Fort Peck would be favored again in 2010 to accommodate the full test.

TABLE XIII
MARCH 1 RESERVOIR UNBALANCING, AOP EXTENSIONS
(Feet)

Upper Decile Runoff

Year	Fort Peck	Garrison	Oahe
2007	0.0	+3.0	-3.0
2008	-4.7	0.0	+3.0
2009	+4.2	-3.0	0.0
2010	0.0	+3.0	-3.0
2011	-4.6	0.0	+3.0

Upper Quartile Runoff

Year	Fort Peck	Garrison	Oahe
2007	+4.3	-3.0	0.0
2008	0.0	+3.0	-3.0
2009	-4.8	0.0	+3.0
2010	+4.2	-3.0	0.0
2011	0.0	+3.0	-3.0

Median Runoff

Year	Fort Peck	Garrison	Oahe
2009	+4.3	-3.0	0.0
2010	+4.2	-3.0	0.0
2011	0.0	+3.0	-3.0

D. Lower Quartile Runoff. Studies 24 through 28 show the results of Lower Quartile runoff extensions. System storage on March 1, 2006 is 34.1 MAF and rises to 43.8 MAF by March of 2011 with navigation service levels remaining at minimum service during the simulation period. The navigation season is shortened 51 days in 2006, 36 days in 2007 and 31 days from 2008 through 2010 as System storage increases. A 12,500 cfs average winter release is shown for the entire study period. Since the upper three reservoirs do not refill under Lower Quartile runoff, their percent of remaining carryover multiple use storage is balanced each March 1.

E. **Lower Decile Runoff.** Studies 29 through 33 show the results of Lower Decile runoff extensions. System storage is 30.8 MAF on March 1, 2006, reaching a low of 29.0 MAF on February 1, 2007, then rising to 32.5 MAF by March of 2011. The navigation season is shortened two months in 2006. March 15, 2007 Lower Decile System storage is 29.8 MAF, less than the 31 MAF March 15 navigation preclude and there would be no support to navigation flows in 2007. June through September releases from Gavins Point are shown at 18,000 cfs from June through September, but would be adjusted as needed to meet downstream water supply requirements. March 15 System storage is above 31 MAF in succeeding years and navigation service levels are minimum service with a minimum 6-month season length. A 12,500 cfs average winter release is shown for the entire study period.

Plate 13 presents System storage, Gavins Point, and System peaking capability for Upper Decile, Upper Quartile, Median, Lower Quartile, and Lower Decile runoff for the period 2006 through March of 2011. Peak power, or peaking capability, is the amount of power available when all powerplants are operating at maximum.

Plate 14 presents reservoir pool elevations for Fort Peck, Garrison, Oahe, and Fort Randall for Upper Decile, Upper Quartile, Median, Lower Quartile, and Lower Decile runoff for the period 2006 through March of 2011.

MISSOURI RIVER BASIN

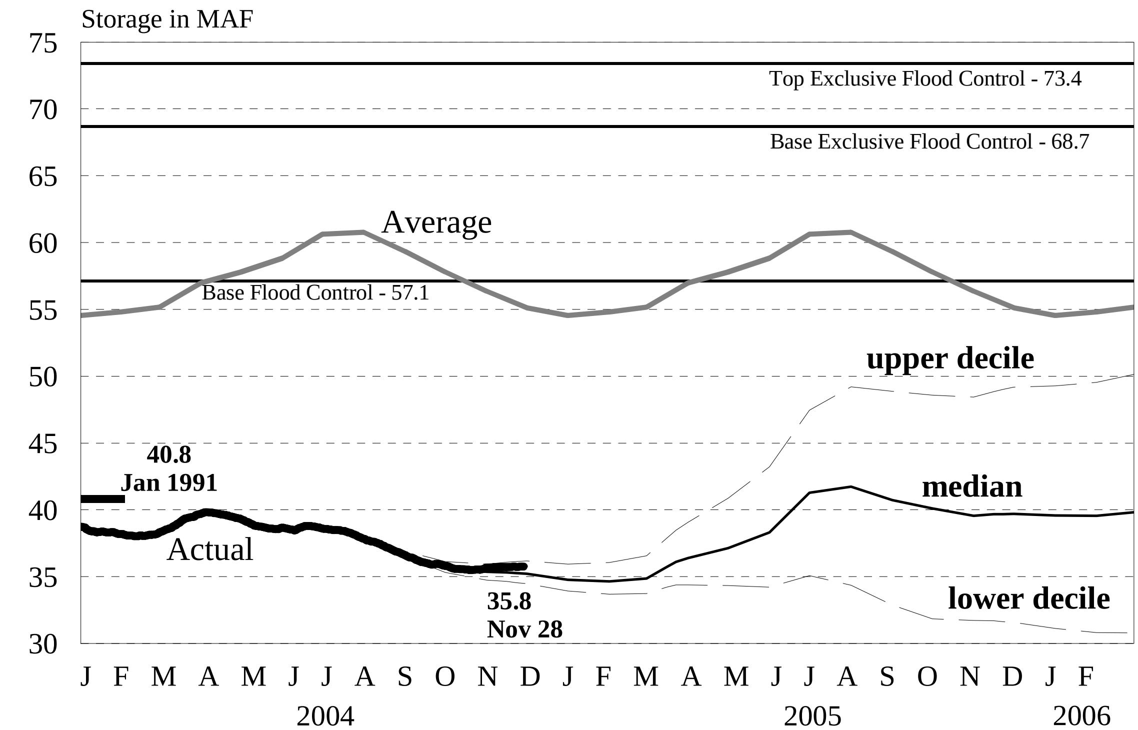
PLATE 1

Item No.	Subject	Fort Peck Dam - Fort Peck Lake	Garrison Dam - Lake Sakakawea	Oahe Dam - Lake Oahe
	Summary of Engineering Data -- Missouri River Mainstem System			
1	Location of Dam	Near Glasgow, Montana	Near Garrison, ND	Near Pierre, SD
2	River Mile - 1960 Mileage	Mile 1771.5	Mile 1389.9	Mile 1072.3
3	Total & incremental drainage areas in square miles	57,500	181,400 (2) 123,900	243,490 (1) 62,090
4	Approximate length of full reservoir (in valley miles)	134, ending near Zortman, MT	178, ending near Trenton, ND	231, ending near Bismarck, ND
5	Shoreline in miles (3)	1520 (elevation 2234)	1340 (elevation 1837.5)	2250 (elevation 1607.5)
6	Average total & incremental inflow in cfs	10,200	25,600 15,400	28,900 3,300
7	Max. discharge of record near damsite in cfs	137,000 (June 1953)	348,000 (April 1952)	440,000 (April 1952)
8	Construction started - calendar yr.	1933	1946	1948
9	In operation (4) calendar yr.	1940	1955	1962
	Dam and Embankment			
10	Top of dam, elevation in feet msl	2280.5	1875	1660
11	Length of dam in feet	21,026 (excluding spillway)	11,300 (including spillway)	9,300 (excluding spillway)
12	Damming height in feet (5)	220	180	200
13	Maximum height in feet (5)	250.5	210	245
14	Max. base width, total & w/o berms in feet	3500, 2700	3400, 2050	3500, 1500
15	Abutment formations (under dam & embankment)	Bearpaw shale and glacial fill	Fort Union clay shale	Pierre shale
16	Type of fill	Hydraulic & rolled earth fill	Rolled earth filled	Rolled earth fill & shale berms
17	Fill quantity, cubic yards	125,628,000	66,500,000	55,000,000 & 37,000,000
18	Volume of concrete, cubic yards	1,200,000	1,500,000	1,045,000
19	Date of closure	24 June 1937	15 April 1953	3 August 1958
	Spillway Data			
20	Location	Right bank - remote	Left bank - adjacent	Right bank - remote
21	Crest elevation in feet msl	2225	1825	1596.5
22	Width (including piers) in feet	820 gated	1336 gated	456 gated
23	No., size and type of gates	16 - 40' x 25' vertical lift gates	28 - 40' x 29' Tainter	8 - 50' x 23.5' Tainter
24	Design discharge capacity, cfs	275,000 at elev 2253.3	827,000 at elev 1858.5	304,000 at elev 1644.4
25	Discharge capacity at maximum operating pool in cfs	230,000	660,000	80,000
	Reservoir Data (6)			
26	Max. operating pool elev. & area	2250 msl 246,000 acres	1854 msl 380,000 acres	1620 msl 374,000 acres
27	Max. normal op. pool elev. & area	2246 msl 240,000 acres	1850 msl 364,000 acres	1617 msl 360,000 acres
28	Base flood control elev & area	2234 msl 212,000 acres	1837.5 msl 307,000 acres	1607.5 msl 312,000 acres
29	Min. operating pool elev. & area	2160 msl 90,000 acres	1775 msl 128,000 acres	1540 msl 117,000 acres
	Storage allocation & capacity			
30	Exclusive flood control	2250-2246 975,000 a.f.	1854-1850 1,489,000 a.f.	1620-1617 1,102,000 a.f.
31	Flood control & multiple use	2246-2234 2,717,000 a.f.	1850-1837.5 4,222,000 a.f.	1617-1607.5 3,201,000 a.f.
32	Carryover multiple use	2234-2160 10,785,000 a.f.	1837.5-1775 13,130,000 a.f.	1607.5-1540 13,461,000 a.f.
33	Permanent	2160-2030 4,211,000 a.f.	1775-1673 4,980,000 a.f.	1540-1415 5,373,000 a.f.
34	Gross	2250-2030 18,688,000 a.f.	1854-1673 23,821,000 a.f.	1620-1415 23,137,000 a.f.
35	Reservoir filling initiated	November 1937	December 1953	August 1958
36	Initially reached min. operating pool	27 May 1942	7 August 1955	3 April 1962
37	Estimated annual sediment inflow	18,100 a.f. 1030 yrs.	25,900 a.f. 920 yrs.	19,800 a.f. 1170 yrs.
	Outlet Works Data			
38	Location	Right bank	Right Bank	Right Bank
39	Number and size of conduits	2 - 24' 8" diameter (nos. 3 & 4)	1 - 26' dia. and 2 - 22' dia.	6 - 19.75' dia. upstream, 18.25' dia. downstream
40	Length of conduits in feet (8)	No. 3 - 6,615, No. 4 - 7,240	1529	3496 to 3659
41	No., size, and type of service gates	1 - 28' dia. cylindrical gate 6 ports, 7.6' x 8.5' high (net opening) in each control shaft	1 - 18' x 24.5' Tainter gate per conduit for fine regulation	1 - 13' x 22' per conduit, vertical lift, 4 cable suspension and 2 hydraulic suspension (fine regulation)
42	Entrance invert elevation (msl)	2095	1672	1425
43	Avg. discharge capacity per conduit & total	Elev. 2250 22,500 cfs - 45,000 cfs	Elev. 1854 30,400 cfs - 98,000 cfs	Elev. 1620 18,500 cfs - 111,000 cfs
44	Present tailwater elevation (ft msl)	2032-2036 5,000 - 35,000 cfs	1670-1680 15,000- 60,000 cfs	1423-1428 20,000-55,000 cfs
	Power Facilities and Data			
45	Avg. gross head available in feet (14)	194	161	174
46	Number and size of conduits	No. 1-24'8" dia., No. 2-22'4" dia.	5 - 29' dia., 25' penstocks	7 - 24' dia., imbedded penstocks
47	Length of conduits in feet (8)	No. 1 - 5,653, No. 2 - 6,355	1829	From 3,280 to 4,005
48	Surge tanks	PH#1: 3-40' dia., PH#2: 2-65' dia.	65' dia. - 2 per penstock	70' dia., 2 per penstock
49	No., type and speed of turbines	5 Francis, PH#1-2: 128.5 rpm, 1-164 rpm , PH#2-2: 128.6 rpm	5 Francis, 90 rpm	7 Francis, 100 rpm
50	Discharge cap. at rated head in cfs	PH#1, units 1&3 170', 2-140' 8,800 cfs, PH#2-4&5 170'-7,200 cfs	150' 41,000 cfs	185' 54,000 cfs
51	Generator nameplate rating in kW	1&3: 43,500; 2: 18,250; 4&5: 40,000	3 - 109,250, 2 - 95,000	112,290
52	Plant capacity in kW	185,250	517,750	786,030
53	Dependable capacity in kW (9)	181,000	388,000	534,000
54	Avg. annual energy, million kWh (12)	1,122	2,387	2,820
55	Initial generation, first and last unit	July 1943 - June 1961	January 1956 - October 1960	April 1962 - June 1963
56	Estimated cost September 1999 completed project (13)	$158,428,000	$305,274,000	$346,521,000

Summary of Engineering Data -- Missouri River Mainstem System

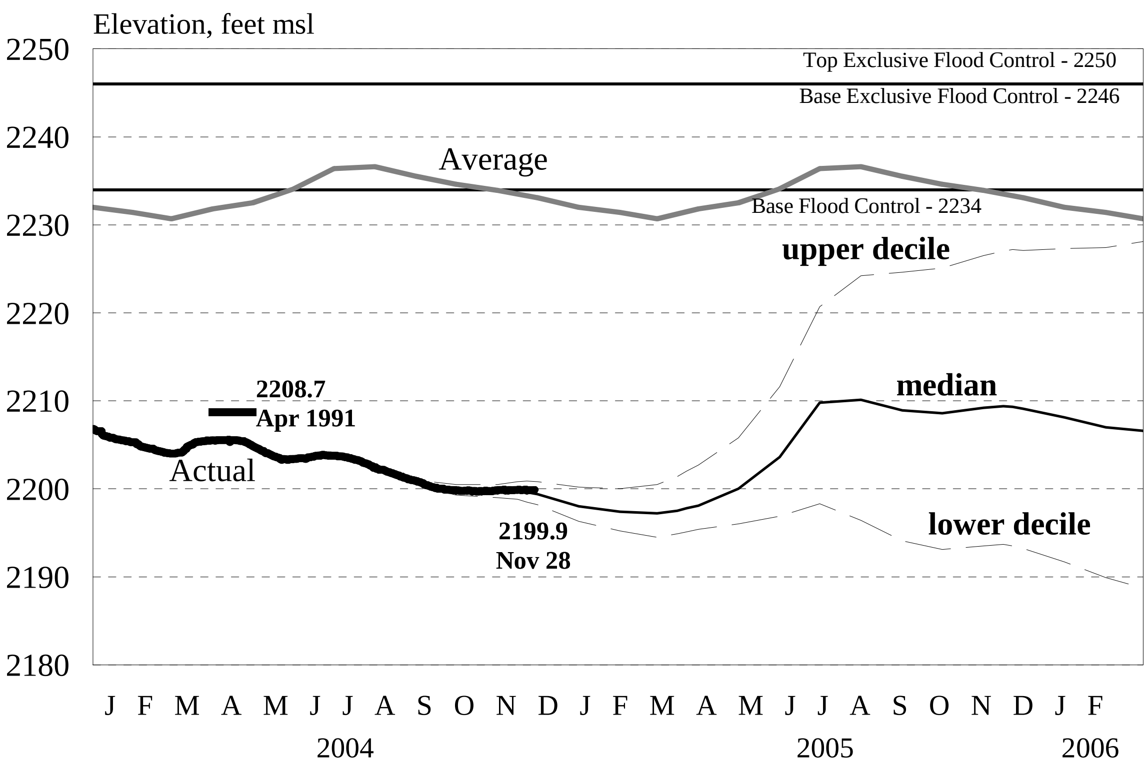
	Big Bend Dam - Lake Sharpe	Fort Randall Dam - Lake Francis Case	Gavins Point Dam - Lewis & Clark Lake	Total	Item No.	Remarks
	21 miles upstream Chamberlain, SD	Near Lake Andes, SD	Near Yankton, SD		1	(1) Includes 4,280 square miles of non-contributing areas.
	Mile 987.4	Mile 880.0	Mile 811.1		2	
	249,330 (1) 5,840	263,480 (1) 14,150	279,480 (1) 16,000		3	
	80, ending near Pierre, SD	107, ending at Big Bend Dam	25, ending near Niobrara, NE	755 miles	4	(2) Includes 1,350 square miles of non-contributing areas.
	200 (elevation 1420)	540 (elevation 1350)	90 (elevation 1204.5)	5,940 miles	5	(3) With pool at base of flood control.
	28,900	30,000 1,100	32,000 2,000		6	
	440,000 (April 1952)	447,000 (April 1952)	480,000 (April 1952)		7	(4) Storage first available for regulation of flows.
	1959	1946	1952		8	(5) Damming height is height from low water to maximum operating pool. Maximum height is from average streambed to top of dam.
	1964	1953	1955		9	
	1440	1395	1234		10	
	10,570 (including spillway)	10,700 (including spillway)	8,700 (including spillway)	71,596	11	(6) Based on latest available storage data.
	78	140	45	863 feet	12	
	95	165	74		13	(7) River regulation is attained by flows over low-crested spillway and through turbines.
	1200, 700	4300, 1250	850, 450		14	
	Pierre shale & Niobrara chalk	Niobrara chalk	Niobrara chalk & Carlile shale		15	
	Rolled earth, shale, chalk fill	Rolled earth fill & chalk berms	Rolled earth & chalk fill		16	(8) Length from upstream face of outlet or to spiral case.
	17,000,000	28,000,000 & 22,000,000	7,000,000	358,128,000 cu. yds	17	(9) Based on 8th year (1961) of drought drawdown (From study 8-83-1985).
	540,000	961,000	308,000	5,554,000 cu. yds.	18	
	24 July 1963	20 July 1952	31 July 1955		19	
	Left bank - adjacent	Left bank - adjacent	Right bank - adjacent		20	(10) Affected by level of Lake Francis case. Applicable to pool at elevation 1350.
	1385	1346	1180		21	
	376 gated	1000 gated	664 gated		22	(11) Spillway crest.
	8 - 40' x 38' Tainter	21 - 40' x 29' Tainter	14 - 40' x 30' Tainter		23	(12) 1967-2003 Average
	390,000 at elev 1433.6	620,000 at elev 1379.3	584,000 at elev 1221.4		24	(13) Source: Annual Report on Civil Works Activities of the Corps of Engineers. Extract Report Fiscal Year 1999.
	270,000	508,000	345,000		25	
	1423 msl 61,000 acres	1375 msl 102,000 acres	1210 msl 31,000 acres	1,194,000 acres	26	(14) Based on Study 8-83-1985
	1422 msl 60,000 acres	1365 msl 95,000 acres	1208 msl 28,000 acres	1,147,000 acres	27	
	1420 msl 57,000 acres	1350 msl 77,000 acres	1204.5 msl 24,000 acres	989,000 acres	28	
	1415 msl 51,000 acres	1320 msl 38,000 acres	1204.5 msl 24,000 acres	450,000 acres	29	
	1423-1422 60,000 a.f.	1375-1365 985,000 a.f.	1210-1208 59,000 a.f.	4,670,000 a.f.	30	
	1422-1420 117,000 a.f.	1365-1350 1,309,000 a.f.	1208-1204.5 90,000 a.f.	11,656,000 a.f.	31	
		1350-1320 1,607,000 a.f.		38,983,000 a.f.	32	
	1420-1345 1,682,000 a.f.	1320-1240 1,517,000 a.f.	1204.5-1160 321,000 a.f.	18,084,000 a.f.	33	
	1423-1345 1,859,000 a.f.	1375-1240 5,418,000 a.f.	1210-1160 470,000 a.f.	73,393,000 a.f.	34	
	November 1963	January 1953	August 1955		35	
	25 March 1964	24 November 1953	22 December 1955		36	
	4,300 a.f. 430 yrs.	18,300 a.f. 250 yrs.	2,600 a.f. 180 yrs.	92,500 a.f.	37	
		Left Bank			38	
	None (7)	4 - 22' diameter	None (7)		39	
		1013			40	
		2 - 11' x 23' per conduit, vertical lift, cable suspension			41	
	1385 (11)	1229	1180 (11)		42	
		Elev 1375 32,000 cfs - 128,000 cfs			43	
	1351-1355(10) 25,000-100,000 cfs	1228-1239 5,000-60,000 cfs	1155-1163 15,000-60,000 cfs		44	
	70	117	48	764 feet	45	
	None: direct intake	8 - 28' dia., 22' penstocks	None: direct intake		46	
		1,074		55,083	47	
	None	59' dia, 2 per alternate penstock	None		48	
	8 Fixed blade, 81.8 rpm	8 Francis, 85.7 rpm	3 Kaplan, 75 rpm	36 units	49	
	67' 103,000 cfs	112' 44,500 cfs	48' 36,000 cfs		50	
	3 - 67,276, 5 - 58,500	40,000	44,100		51	
	494,320	320,000	132,300	2,435,650 kw	52	
	497,000	293,000	74,000	1,967,000 kw	53	Corps of Engineers, U.S. Army
	1,030	1,824	752	9,935 million kWh	54	Compiled by
	October 1964 - July 1966	March 1954 - January 1956	September 1956 - January 1957	July 1943 - July 1966	55	Northwestern Division
	$107,498,000	$199,066,000	$49,617,000	$1,166,404,000	56	Missouri River Region January 2004

System Storage
2004-2005 Final AOP



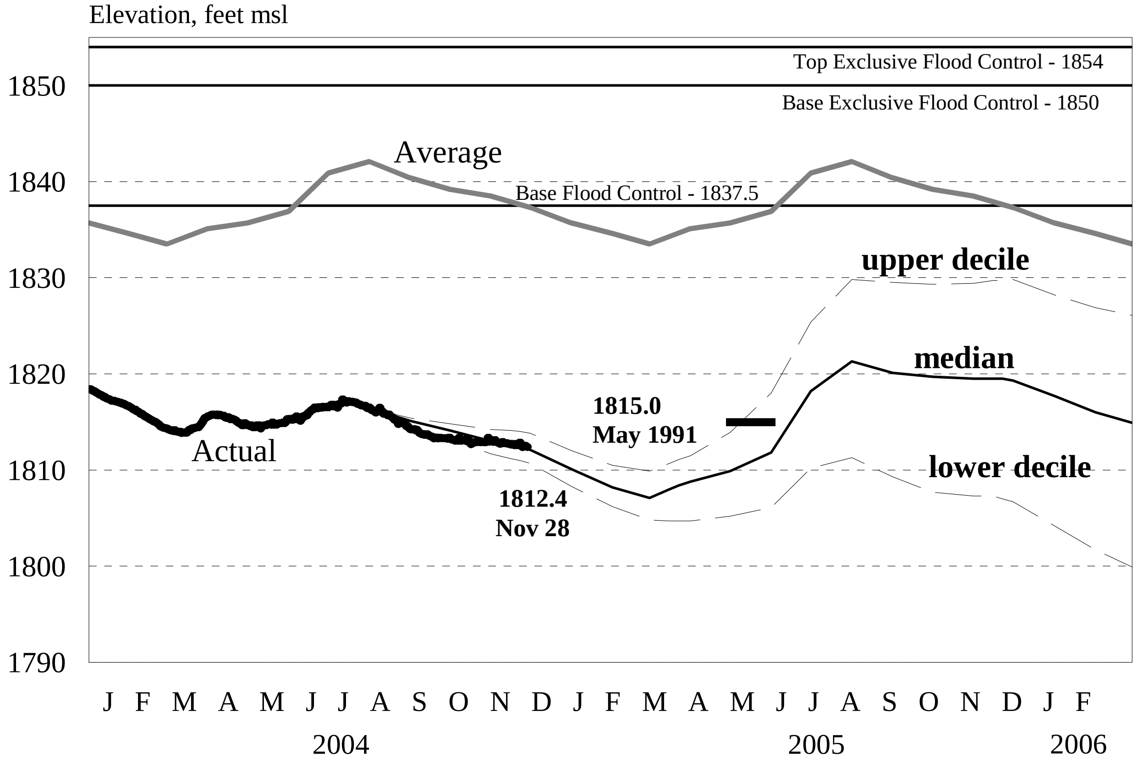
Average: 1967-2003

Fort Peck
2004-2005 Final AOP



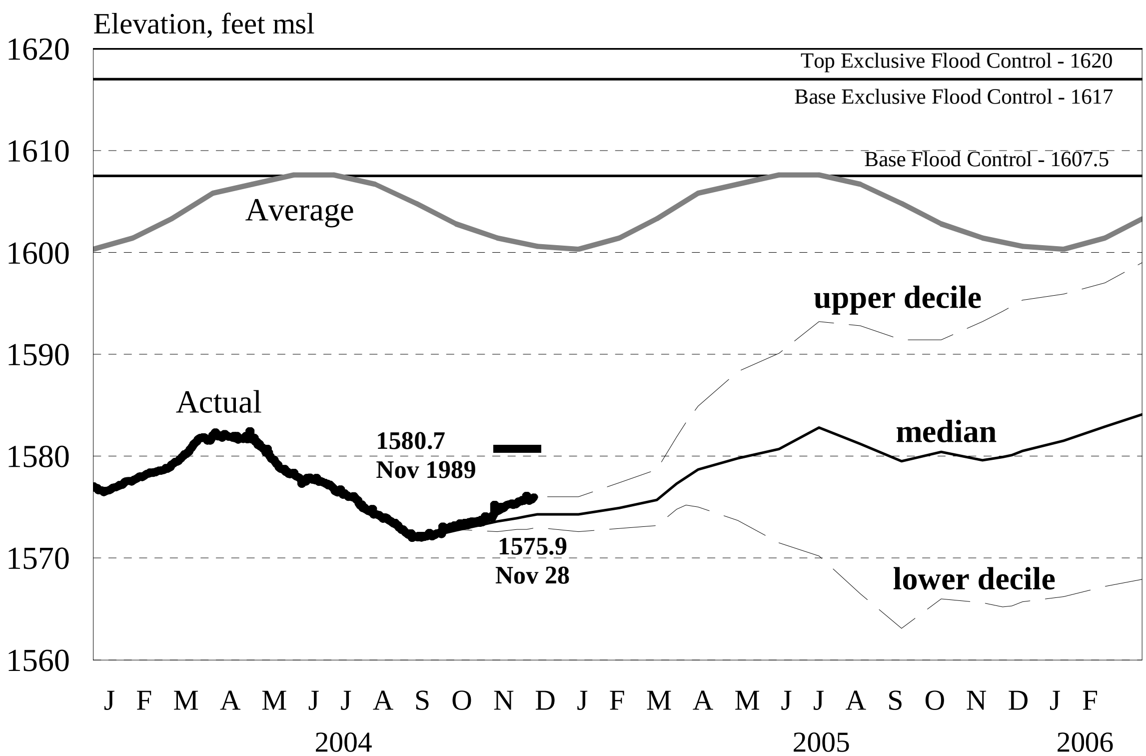
Average: 1967-2003

Garrison
2004-2005 Final AOP



Average: 1967-2003

Oahe
2004-2005 Final AOP



Average: 1967-2003

System Storage

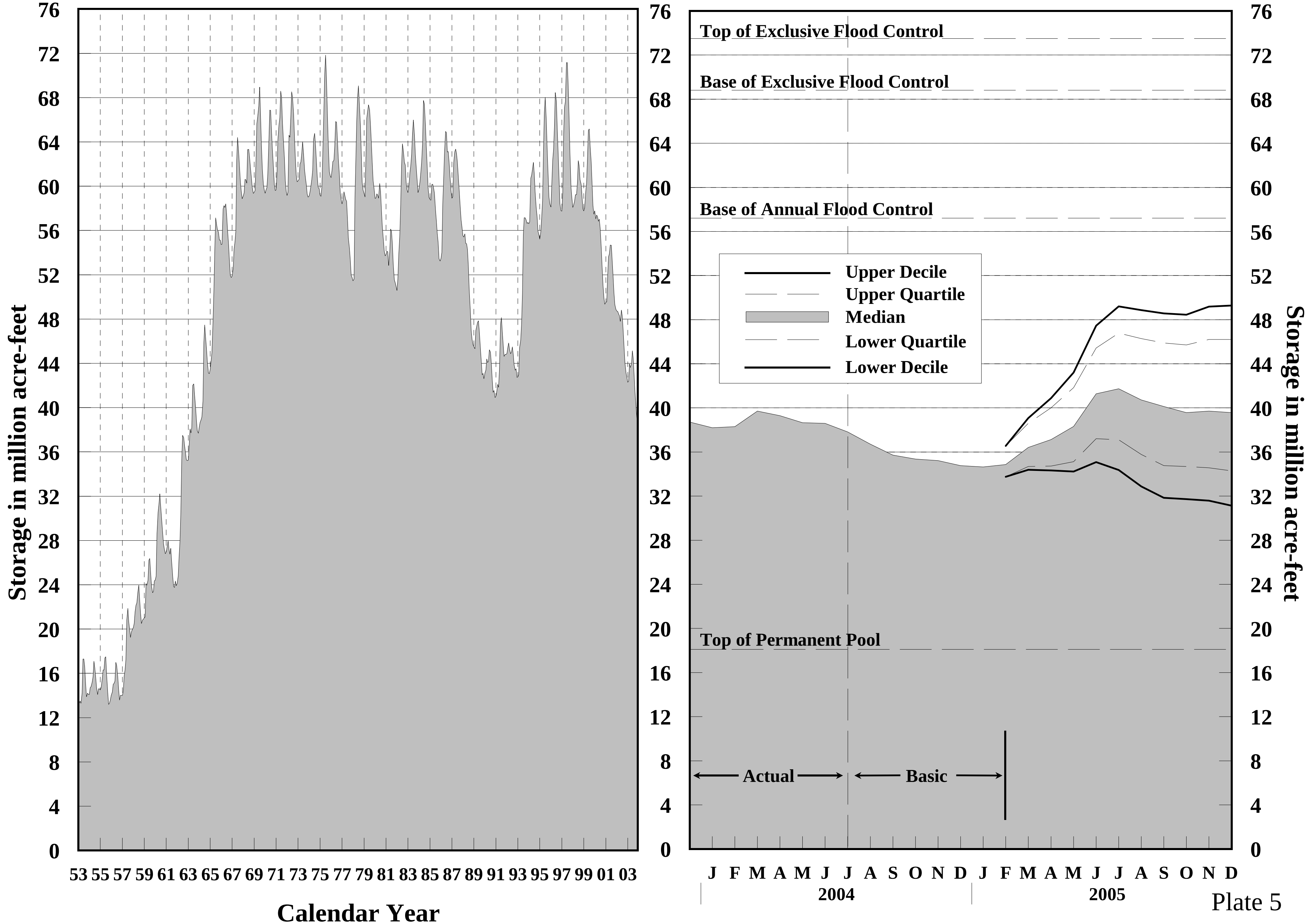
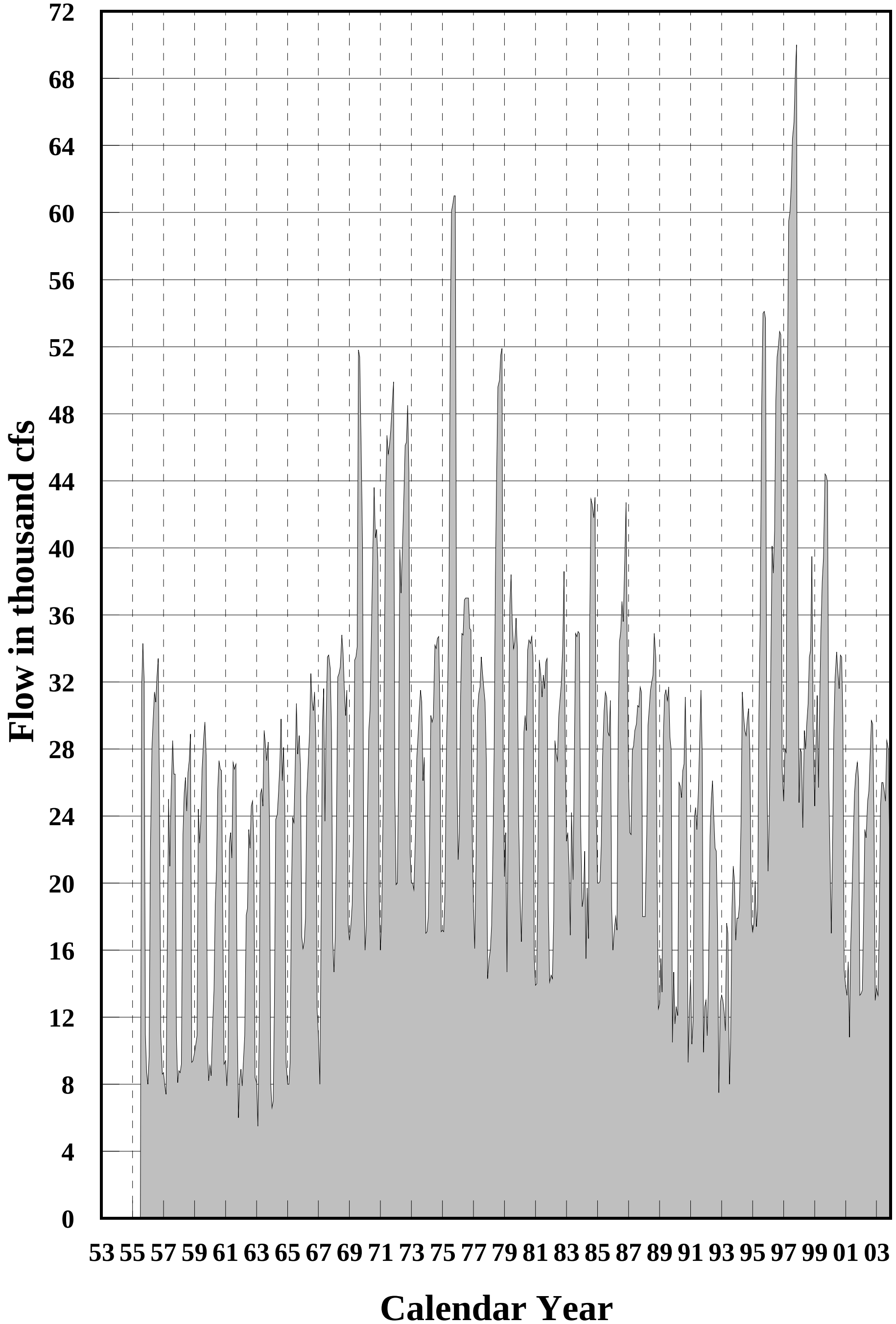


Plate 5

Gavins Point Releases



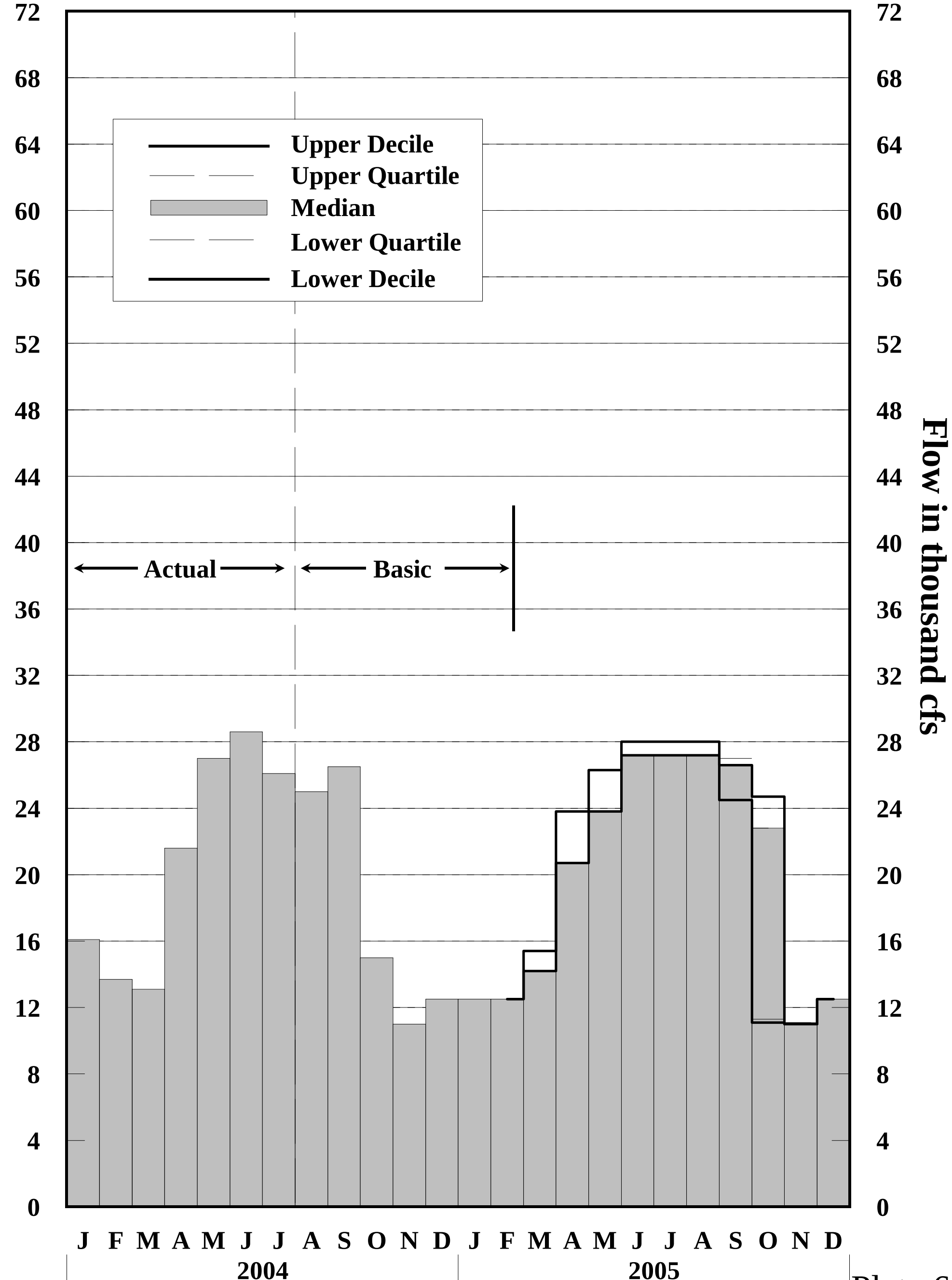


Plate 6

Fort Peck
Elevations and Releases

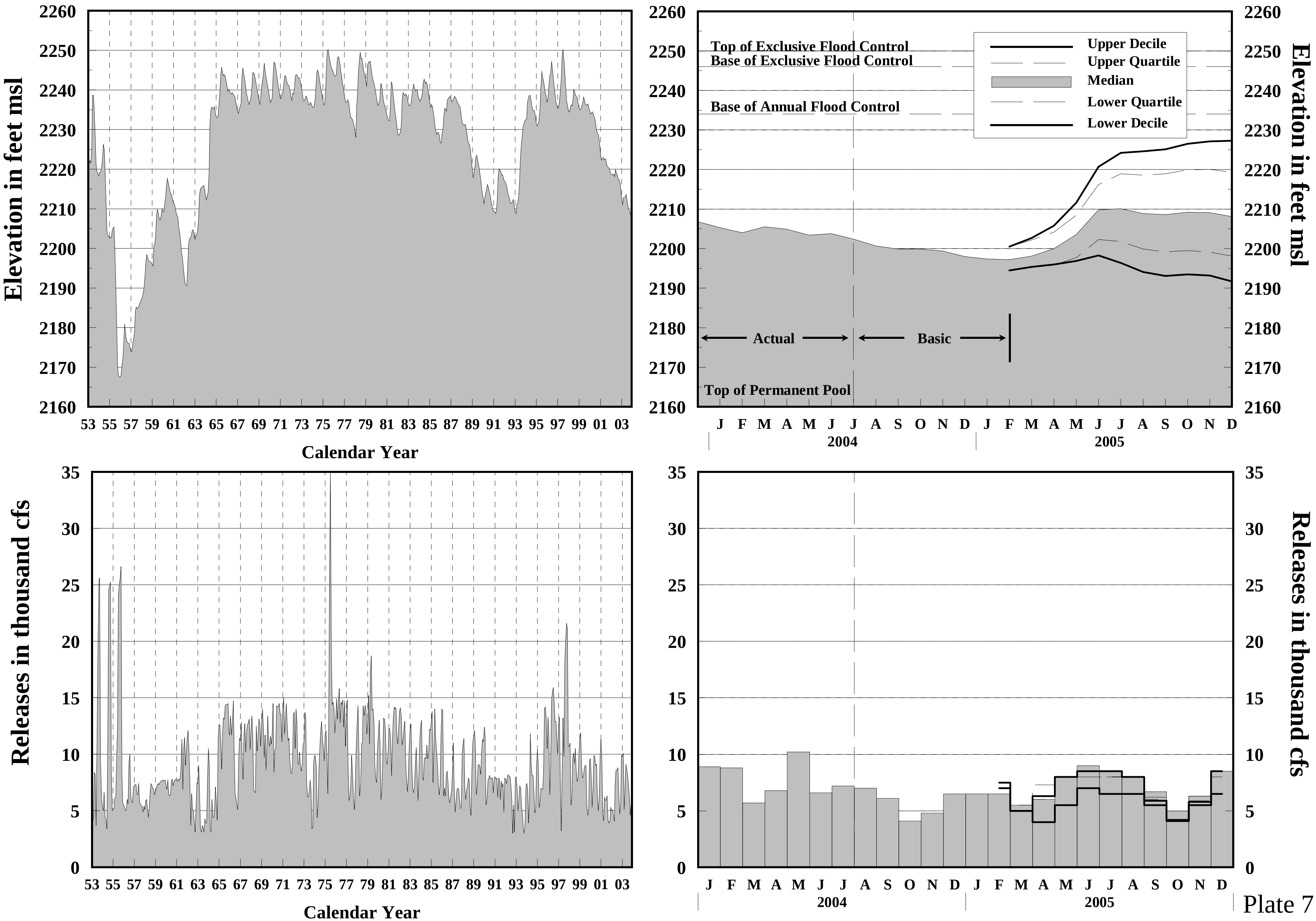


Plate 7

Garrison
Elevations and Releases

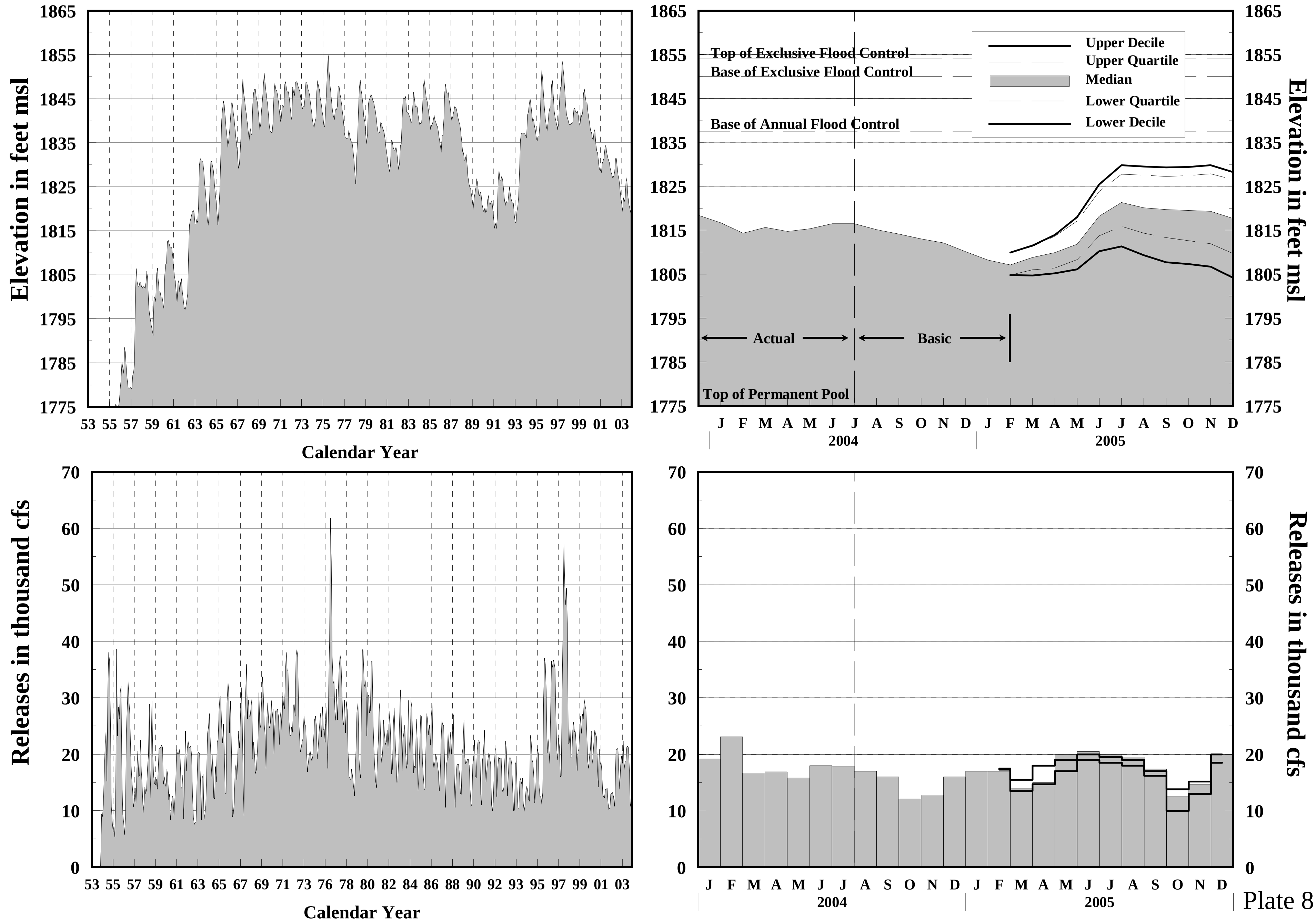


Plate 8

Oahe
Elevations and Releases

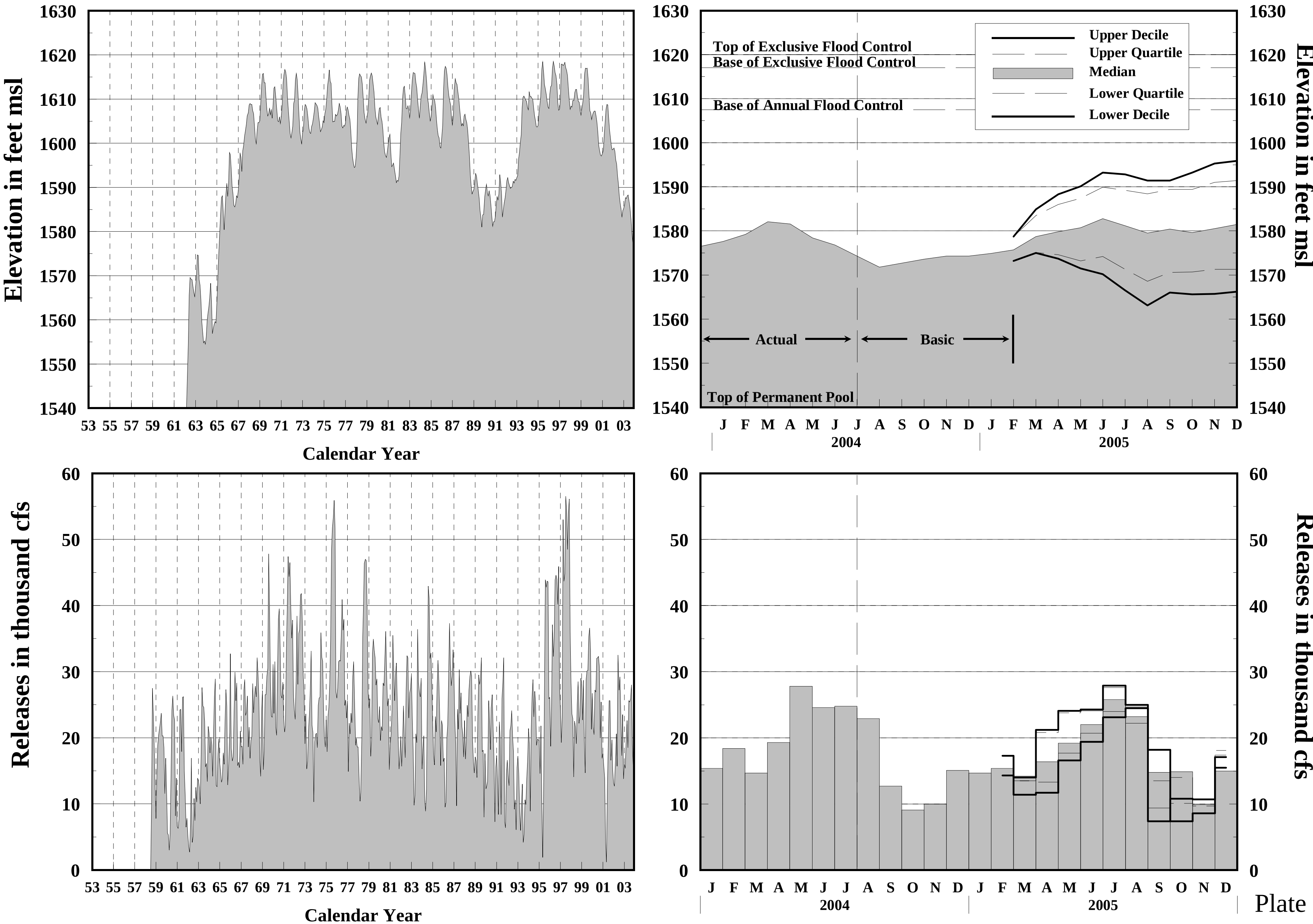


Plate 9

Fort Randall
Elevations and Releases

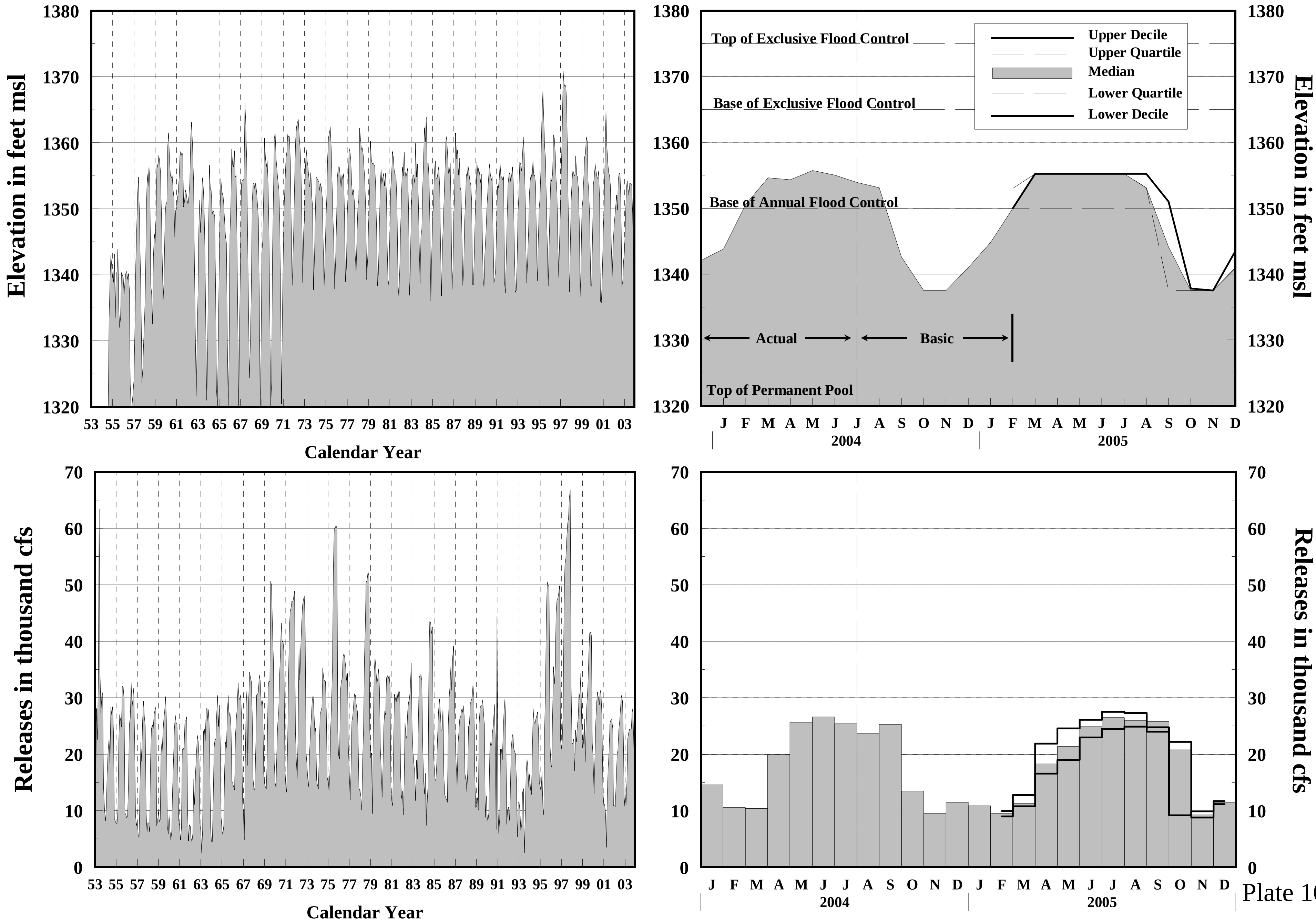
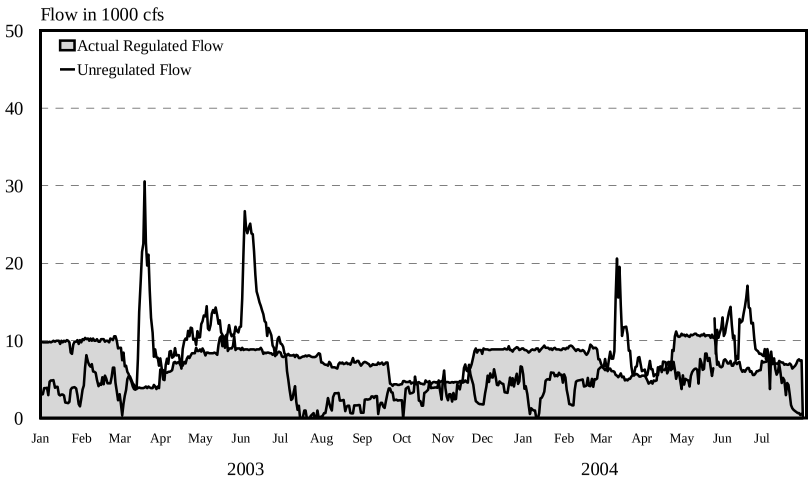


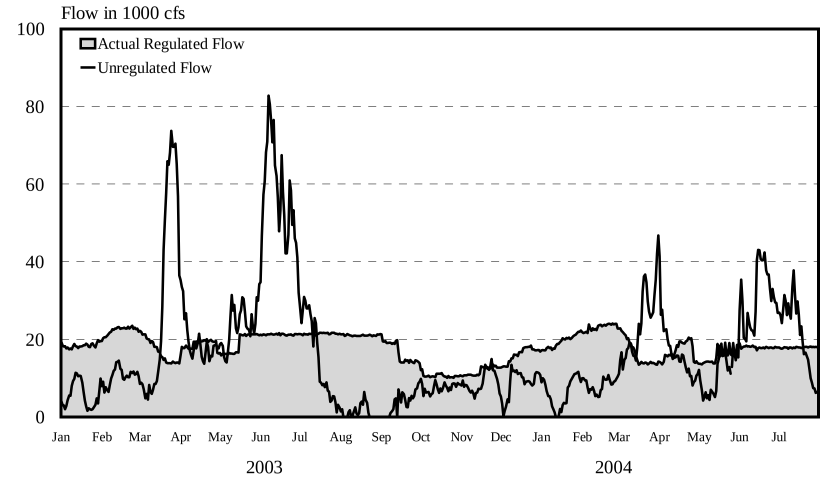
Plate 10

Reservoir Release and Unregulated Flow

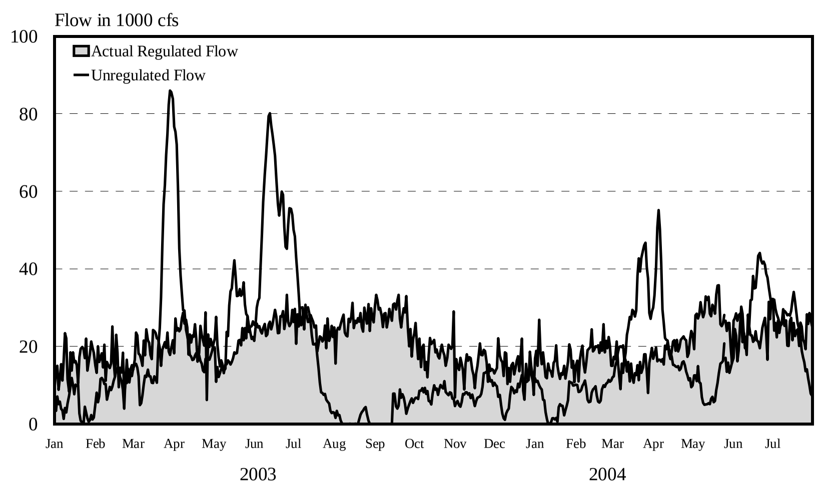
Fort Peck



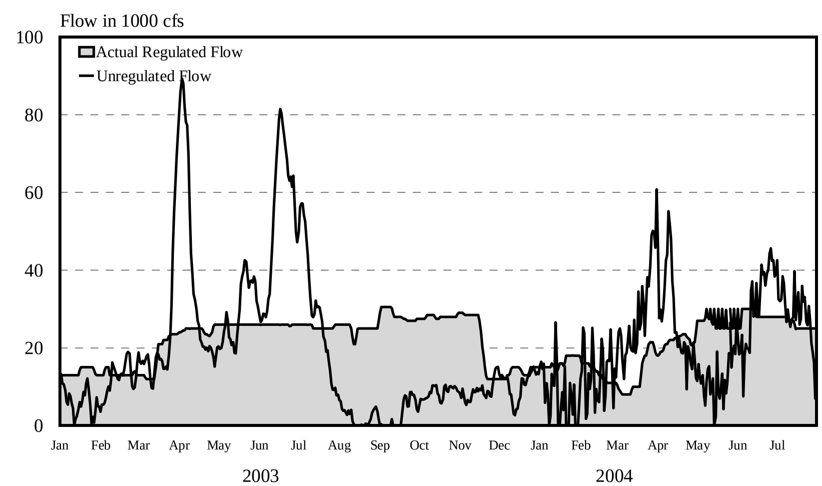
Garrison



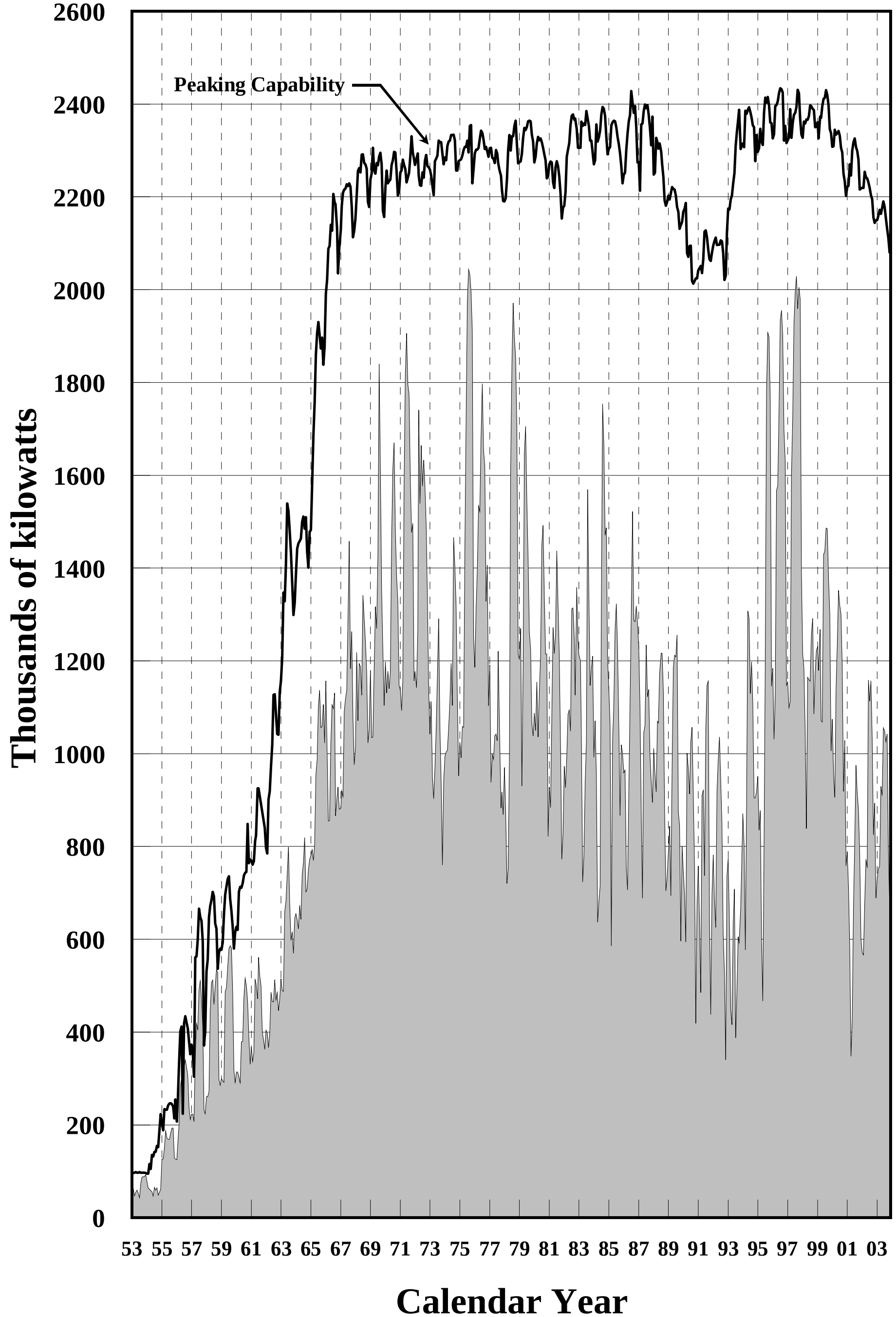
Oahe



Gavins Point



System Gross Capability and Average Monthly Generation



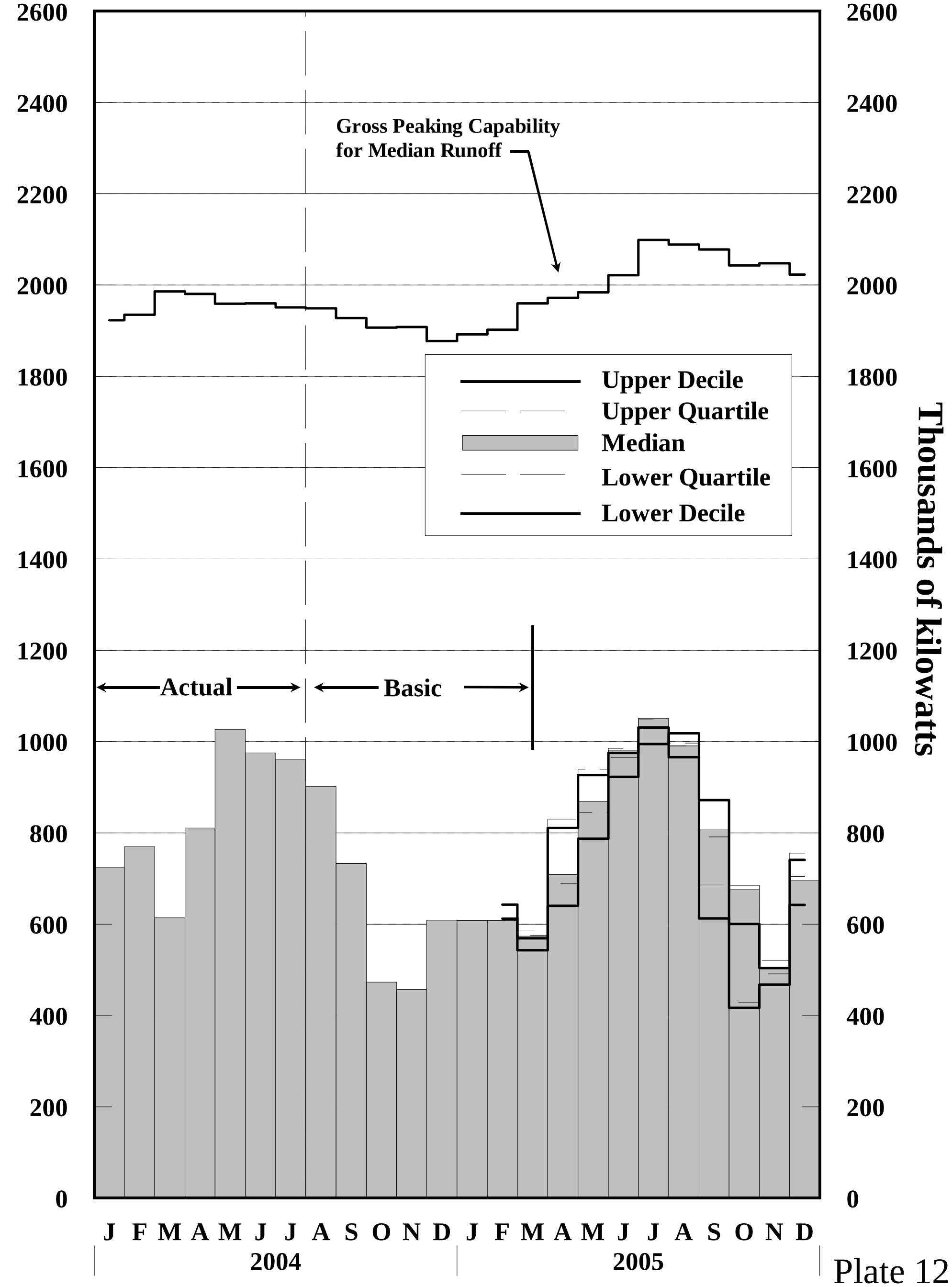


Plate 12

Tentative Five Year Extensions of 2004-2005 AOP

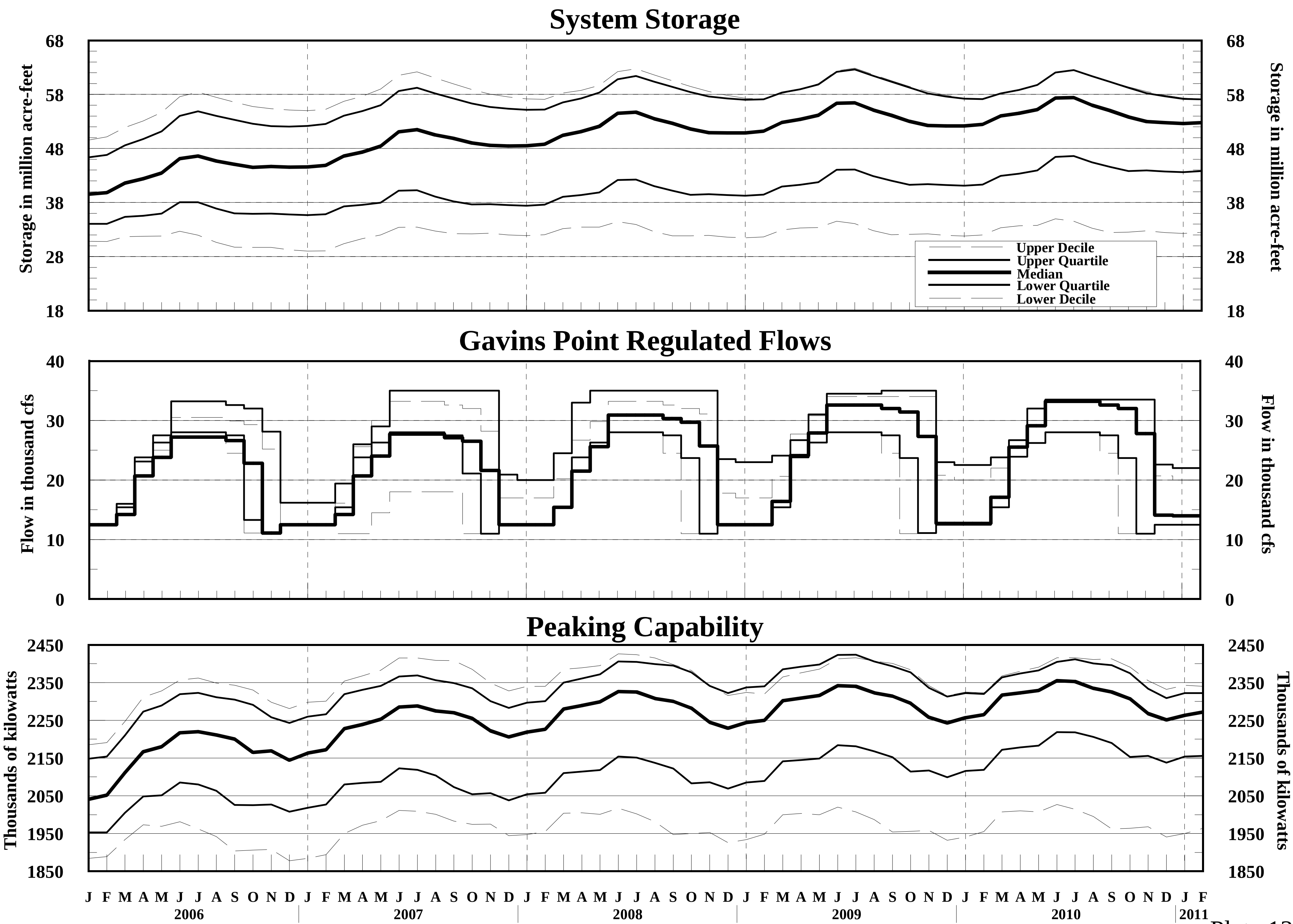


Plate 13

Tentative Five Year Extensions of 2004-2005 AOP

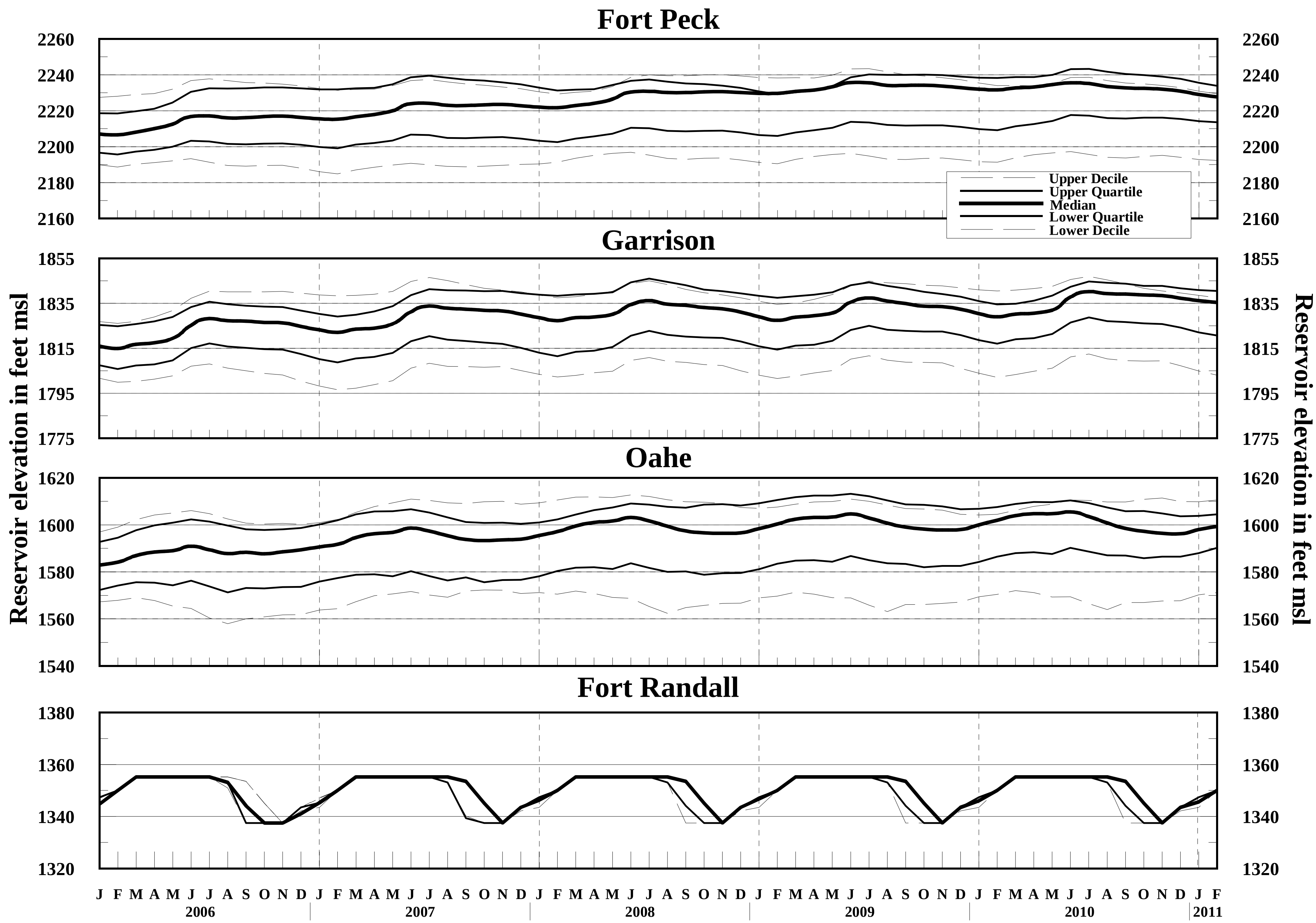


Plate 14

SHORTEN NAVIGATION SEASON 47-DAYS
VALUES IN 1000 AF EXCEPT AS INDICATED

	31JUL04 INI-SUM	31AUG	2004 30SEP	31OCT	15NOV	22NOV	30NOV	31DEC	2005 31JAN	28FEB
--FORT PECK--										
NAT INFLOW	1980	250	250	280	140	65	75	240	315	365
DEPLETION	-39	18	-67	-38	4	2	2	5	7	28
EVAPORATION	301	62	77	67	30	14	16	35		
MOD INFLOW	1718	170	240	251	106	49	56	200	308	337
RELEASE	2492	430	364	251	122	69	95	400	400	361
STOR CHANGE	-774	-260	-124	0	-16	-20	-39	-199	-92	-24
STORAGE	9357	9097	8973	8973	8957	8937	8898	8699	8607	8583
ELEV FTMSL	2202.4	2200.7	2199.9	2199.9	2199.7	2199.6	2199.4	2198.0	2197.4	2197.2
DISCH KCFS	7.2	7.0	6.1	4.1	4.1	5.0	6.0	6.5	6.5	6.5
POWER										
AVE POWER MW		83	72	48	48	59	70	76	76	75
PEAK POW MW		129	128	128	127	127	127	125	124	124
ENERGY GWH	353.5	61.7	51.9	35.8	17.4	9.9	13.5	56.5	56.2	50.6
--GARRISON--										
NAT INFLOW	2250	430	340	380	150	70	80	180	260	360
DEPLETION	20	56	-80	83	-40	-19	-21	4	18	19
CHAN STOR	7	2	10	22	0	-10	-11	-6		
EVAPORATION	353	73	91	79	35	16	19	40		
REG INFLOW	4377	733	702	492	277	132	167	530	642	702
RELEASE	6478	1045	952	744	360	180	222	984	1045	944
STOR CHANGE	-2101	-312	-250	-253	-83	-49	-55	-453	-404	-242
STORAGE	12401	12089	11839	11587	11503	11454	11399	10946	10542	10300
ELEV FTMSL	1816.4	1815.1	1814.1	1813.0	1812.6	1812.4	1812.1	1810.1	1808.2	1807.1
DISCH KCFS	17.9	17.0	16.0	12.1	12.1	13.0	14.0	16.0	17.0	17.0
POWER										
AVE POWER MW		184	172	129	129	138	148	167	175	173
PEAK POW MW		312	309	306	305	304	303	297	292	289
ENERGY GWH	825.4	136.8	123.6	96.2	46.3	23.1	28.4	124.6	130.2	116.2
--OAHE--										
NAT INFLOW	280	35	65	40	20	9	11		10	90
DEPLETION	175	90	23	-6	3	1	1	14	19	30
CHAN STOR	5	5	6	21	0	-5	-5	-11	-5	0
EVAPORATION	294	59	74	66	30	14	16	35		
REG INFLOW	6294	936	926	746	348	170	210	924	1031	1004
RELEASE	6007	1407	758	563	294	140	161	927	903	855
STOR CHANGE	287	-471	168	183	54	30	49	-3	128	150
STORAGE	10540	10069	10237	10421	10474	10504	10553	10550	10677	10827
ELEV FTMSL	1574.2	1571.8	1572.7	1573.6	1573.9	1574.1	1574.3	1574.3	1574.9	1575.7
DISCH KCFS	24.8	22.9	12.7	9.1	9.9	10.1	10.1	15.1	14.7	15.4
POWER										
AVE POWER MW		242	135	97	106	108	109	162	158	166
PEAK POW MW		526	530	535	537	538	539	539	542	546
ENERGY GWH	775.5	180.2	97.0	72.5	38.0	18.2	20.8	120.2	117.3	111.4
--BIG BEND--										
EVAPORATION	97	20	25	22	10	5	5	11		
REG INFLOW	5910	1387	733	541	284	136	155	916	903	855
RELEASE	5938	1415	733	541	284	137	155	916	903	855
STORAGE	1710	1682	1682	1682	1682	1681	1681	1682	1682	1682
ELEV FTMSL	1420.5	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0
DISCH KCFS	22.2	23.0	12.3	8.8	9.5	9.8	9.8	14.9	14.7	15.4
POWER										
AVE POWER MW		109	61	45	48	50	50	75	72	74
PEAK POW MW		518	538	538	538	538	538	538	538	529
ENERGY GWH	352.5	80.8	44.2	33.2	17.4	8.4	9.5	55.6	53.8	49.6
--FORT RANDALL--										
NAT INFLOW	151	30	30	7	4	2	2	7	20	50
DEPLETION	34	15	7	1	1	0	1	3	3	3
EVAPORATION	97	24	27	19	8	4	4	10		
REG INFLOW	5957	1405	729	527	278	134	152	910	920	902
RELEASE	6263	1458	1504	831	278	134	152	707	670	528
STOR CHANGE	-305	-53	-775	-304	0	0	0	203	250	374
STORAGE	3428	3375	2600	2296	2296	2296	2296	2499	2749	3123
ELEV FTMSL	1353.8	1353.1	1342.6	1337.5	1337.5	1337.5	1337.5	1341.0	1344.8	1350.0
DISCH KCFS	25.4	23.7	25.3	13.5	9.4	9.7	9.6	11.5	10.9	9.5
POWER										
AVE POWER MW		197	200	101	68	70	70	85	84	76
PEAK POW MW		348	306	283	283	283	283	300	317	338
ENERGY GWH	592.1	146.7	144.1	74.9	24.6	11.8	13.5	63.4	62.1	51.0
--GAVINS POINT--										
NAT INFLOW	665	100	80	80	50	23	27	80	100	125
DEPLETION	28	10	-5	2	5	2	3	10	1	
CHAN STOR	29	3	-3	22	8	-1	0	-4	1	3
EVAPORATION	36	7	9	8	4	2	2	4		
REG INFLOW	6893	1544	1577	922	327	153	175	769	770	655
RELEASE	6925	1537	1577	922	327	153	175	769	770	694
STOR CHANGE	-32	7								-39
STORAGE	390	397	397	397	397	397	397	397	397	358
ELEV FTMSL	1207.2	1207.5	1207.5	1207.5	1207.5	1207.5	1207.5	1207.5	1207.5	1206.0
DISCH KCFS	26.1	25.0	26.5	15.0	11.0	11.0	11.0	12.5	12.5	12.5
POWER										
AVE POWER MW		88	93	53	39	39	39	44	45	44
PEAK POW MW		117	117	117	117	117	117	78	78	76
ENERGY GWH	295.6	65.2	66.9	39.5	14.1	6.6	7.5	33.1	33.1	29.6
--GAVINS POINT - SIOUX CITY--										
NAT INFLOW	465	110	80	60	30	14	16	35	35	85
DEPLETION	114	34	22	9	6	3	3	12	13	13
REGULATED FLOW AT SIOUX CITY										
KAF	7276	1613	1635	973	352	164	188	792	792	766
KCFS		26.2	27.5	15.8	11.8	11.8	11.8	12.9	12.9	13.8
--TOTAL--										
NAT INFLOW	5791	955	845	847	394	184	210	542	740	1075
DEPLETION	332	223	-100	51	-22	-10	-12	48	61	93
CHAN STOR	42	10	12	65	7	-15	-16	-20	-4	3
EVAPORATION	1179	246	304	260	117	55	62	135		
STORAGE	37826	36709	35728	35355	35309	35269	35225	34771	34654	34872
SYSTEM POWER										
AVE POWER MW		902	733	473	438	464	486	609	608	608
PEAK POW MW		1949	1928	1907	1907	1907	1908	1877	1892	1902
ENERGY GWH	3194.6	671.4	527.7	352.1	157.7	78.0	93.3	453.3	452.7	408.4
DAILY GWH		21.7	17.6	11.4	10.5	11.1	11.7	14.6	14.6	14.6
	INI-SUM	31AUG	30SEP	31OCT	15NOV	22NOV	30NOV	31DEC	31JAN	28FEB

TIME OF STUDY 10:44:39 SHORTEN NAVIGATION SEASON 47-DAYS STUDY NO 2

VALUES IN 1000 AF EXCEPT AS INDICATED

31JUL04	INI-SUM	31AUG	2004 30SEP	31OCT	15NOV	22NOV	30NOV	31DEC	2005 31JAN	28FEB
--FORT PECK--										
NAT INFLOW	2376	300	300	336	168	78	90	288	378	438
DEPLETION	-230	36	-41	5	-18	-8	-9	-74	-75	-46
EVAPORATION	206	46	58	51	12	6	6	27		
MOD INFLOW	2400	218	283	280	173	81	92	335	453	484
RELEASE	2689	430	358	275	134	69	95	430	480	417
STOR CHANGE	-289	-213	-75	5	40	11	-3	-95	-27	67
STORAGE	9357	9144	9069	9074	9114	9125	9122	9027	9001	9068
ELEV FTMSL	2202.4	2201.0	2200.5	2200.5	2200.8	2200.9	2200.9	2200.2	2200.0	2200.5
DISCH KCFS	7.2	7.0	6.0	4.5	4.5	5.0	6.0	7.0	7.8	7.5
POWER										
AVE POWER MW		83	71	53	53	59	71	83	92	88
PEAK POW MW		129	128	128	129	129	129	128	128	128
ENERGY GWH	384.0	61.8	51.2	39.4	19.2	9.9	13.6	61.4	68.2	59.3
--GARRISON--										
NAT INFLOW	2700	516	408	456	180	84	96	216	312	432
DEPLETION	-44	80	-82	48	-52	-24	-28	-16	5	25
CHAN STOR	-3	2	11	17	0	-5	-11	-11	-9	3
EVAPORATION	244	55	69	60	14	7	8	31		
REG INFLOW	5186	813	789	640	351	166	200	621	778	827
RELEASE	6695	1045	953	768	372	194	238	1045	1107	972
STOR CHANGE	-1510	-232	-164	-128	-20	-29	-38	-425	-329	-145
STORAGE	12401	12169	12005	11877	11856	11828	11790	11365	11036	10891
ELEV FTMSL	1816.4	1815.4	1814.8	1814.2	1814.1	1814.0	1813.8	1812.0	1810.5	1809.9
DISCH KCFS	17.9	17.0	16.0	12.5	12.5	14.0	15.0	17.0	18.0	17.5
POWER										
AVE POWER MW		184	173	134	134	150	160	180	188	182
PEAK POW MW		313	311	309	309	309	308	303	299	297
ENERGY GWH	861.5	136.9	124.3	100.0	48.3	25.2	30.8	134.0	140.1	122.0
--OAHE--										
NAT INFLOW	336	42	78	48	24	11	13		12	108
DEPLETION	175	90	23	-6	3	1	1	14	19	30
CHAN STOR	3	5	5	19	0	-8	-5	-11	-5	3
EVAPORATION	203	45	56	50	12	6	7	27		
REG INFLOW	6656	957	958	791	381	191	238	994	1094	1053
RELEASE	5763	1367	721	534	268	131	148	983	815	797
STOR CHANGE	893	-410	237	258	113	59	90	11	280	256
STORAGE	10540	10130	10367	10625	10738	10797	10887	10898	11178	11433
ELEV FTMSL	1574.2	1572.1	1573.3	1574.7	1575.2	1575.5	1576.0	1576.0	1577.4	1578.7
DISCH KCFS	24.8	22.2	12.1	8.7	9.0	9.5	9.3	16.0	13.2	14.3
POWER										
AVE POWER MW		236	129	93	97	102	101	173	144	157
PEAK POW MW		527	534	541	544	545	548	548	555	562
ENERGY GWH	750.2	175.3	92.5	69.2	35.0	17.2	19.3	128.7	107.2	105.7
--BIG BEND--										
EVAPORATION	66	15	19	16	4	2	2	9		
REG INFLOW	5697	1352	702	517	265	130	146	974	815	797
RELEASE	5725	1380	702	517	265	130	146	974	815	797
STORAGE	1710	1682	1682	1682	1681	1681	1681	1682	1682	1682
ELEV FTMSL	1420.5	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0
DISCH KCFS	22.2	22.4	11.8	8.4	8.9	9.3	9.2	15.8	13.2	14.3
POWER										
AVE POWER MW		106	59	43	45	47	46	79	65	69
PEAK POW MW		518	538	538	538	538	538	538	538	529
ENERGY GWH	339.5	78.8	42.4	31.7	16.3	7.9	8.9	58.7	48.5	46.3
--FORT RANDALL--										
NAT INFLOW	180	36	36	8	4	2	2	8	24	60
DEPLETION	34	15	7	1	1	0	1	3	3	3
EVAPORATION	67	18	20	15	3	1	2	8		
REG INFLOW	5804	1383	711	509	265	129	145	972	836	854
RELEASE	6108	1436	1486	813	266	129	145	689	646	500
STOR CHANGE	-305	-53	-775	-303	-1	1	0	283	190	354
STORAGE	3428	3375	2600	2296	2296	2296	2296	2579	2769	3123
ELEV FTMSL	1353.8	1353.1	1342.6	1337.5	1337.5	1337.5	1337.5	1342.2	1345.1	1350.0
DISCH KCFS	25.4	23.4	25.0	13.2	8.9	9.3	9.2	11.2	10.5	9.0
POWER										
AVE POWER MW		194	198	99	65	68	67	84	81	72
PEAK POW MW		348	306	283	283	283	283	305	318	338
ENERGY GWH	578.7	144.5	142.4	73.3	23.5	11.4	12.9	62.1	60.3	48.4
--GAVINS POINT--										
NAT INFLOW	798	120	96	96	60	28	32	96	120	150
DEPLETION	28	10	-5	2	5	2	3	10	1	
CHAN STOR	30	4	-3	22	8	-1	0	-4	1	3
EVAPORATION	25	6	7	6	1	1	1	3		
REG INFLOW	6884	1544	1577	922	327	153	174	768	766	653
RELEASE	6916	1537	1577	922	327	153	174	768	766	692
STOR CHANGE	-32	7								-39
STORAGE	390	397	397	397	397	397	397	397	397	358
ELEV FTMSL	1207.2	1207.5	1207.5	1207.5	1207.5	1207.5	1207.5	1207.5	1207.5	1206.0
DISCH KCFS	26.1	25.0	26.5	15.0	11.0	11.0	11.0	12.5	12.5	12.5
POWER										
AVE POWER MW		88	93	53	39	39	39	44	44	44
PEAK POW MW		117	117	117	117	117	117	78	78	76
ENERGY GWH	295.2	65.2	66.9	39.5	14.1	6.6	7.5	33.0	32.9	29.5
--GAVINS POINT - SIOUX CITY--										
NAT INFLOW	558	132	96	72	36	17	19	42	42	102
DEPLETION	114	34	22	9	6	3	3	12	13	13
REGULATED FLOW AT SIOUX CITY										
KAF	7360	1635	1651	985	358	167	190	798	795	781
KCFS		26.6	27.7	16.0	12.0	12.0	12.0	13.0	12.9	14.1
--TOTAL--										
NAT INFLOW	6948	1146	1014	1016	472	220	252	650	888	1290
DEPLETION	77	265	-76	59	-56	-26	-30	-51	-34	25
CHAN STOR	29	11	13	57	8	-14	-16	-25	-13	9
EVAPORATION	810	185	230	198	47	22	25	104		
STORAGE	37826	36897	36120	35952	36082	36125	36174	35949	36063	36556
SYSTEM POWER										
AVE POWER MW		891	722	475	435	464	485	642	615	612
PEAK POW MW		1952	1934	1917	1920	1921	1923	1900	1916	1930
ENERGY GWH	3209.3	662.5	519.7	353.1	156.5	77.9	93.2	477.9	457.3	411.2
DAILY GWH		21.4	17.3	11.4	10.4	11.1	11.6	15.4	14.8	14.7
	INI-SUM	31AUG	30SEP	31OCT	15NOV	22NOV	30NOV	31DEC	31JAN	28FEB

SHORTEN NAVIGATION SEASON 47-DAYS
VALUES IN 1000 AF EXCEPT AS INDICATED

31JUL04 INI-SUM		2004 31AUG	30SEP	31OCT	15NOV	22NOV	30NOV	31DEC	2005 31JAN	28FEB
--FORT PECK--										
NAT INFLOW	1584	200	200	224	112	52	60	192	252	292
DEPLETION	-183	2	-90	-66	-5	-2	-3	-12	-12	5
EVAPORATION	373	77	96	83	37	17	20	43		
MOD INFLOW	1394	121	194	207	80	37	43	161	264	287
RELEASE	2563	430	353	246	119	69	95	430	430	389
STOR CHANGE	-1169	-309	-159	-39	-39	-32	-53	-269	-166	-102
STORAGE	9357	9048	8889	8850	8810	8778	8725	8456	8290	8188
ELEV FTMSL	2202.4	2200.4	2199.3	2199.0	2198.8	2198.5	2198.2	2196.3	2195.2	2194.5
DISCH KCFS	7.2	7.0	5.9	4.0	4.0	5.0	6.0	7.0	7.0	7.0
POWER										
AVE POWER MW		83	70	47	47	58	70	81	80	80
PEAK POW MW		128	127	127	126	126	126	123	121	120
ENERGY GWH	360.5	61.7	50.3	34.9	16.9	9.8	13.4	60.3	59.7	53.5
--GARRISON--										
NAT INFLOW	1800	344	272	304	120	56	64	144	208	288
DEPLETION	-78	57	-86	72	-59	-27	-31	-25	7	14
CHAN STOR	2	2	12	21		-11	-11	-11		
EVAPORATION	439	92	114	97	43	20	23	49		
REG INFLOW	4004	628	609	402	254	121	156	539	631	663
RELEASE	6584	1045	959	738	357	180	222	1045	1076	961
STOR CHANGE	-2580	-418	-350	-336	-103	-59	-66	-506	-445	-298
STORAGE	12401	11983	11634	11297	11194	11135	11070	10564	10119	9821
ELEV FTMSL	1816.4	1814.7	1813.2	1811.7	1811.2	1811.0	1810.7	1808.3	1806.2	1804.8
DISCH KCFS	17.9	17.0	16.1	12.0	12.0	13.0	14.0	17.0	17.5	17.3
POWER										
AVE POWER MW		184	172	127	126	136	146	175	177	173
PEAK POW MW		311	306	302	301	300	299	292	286	282
ENERGY GWH	830.2	136.5	123.9	94.6	45.5	22.9	28.1	130.6	132.0	116.1
--OAHE--										
NAT INFLOW	224	28	52	32	16	7	9		8	72
DEPLETION	175	90	23	-6	3	1	1	14	19	30
CHAN STOR	3	5	5	23		-5	-5	-16	-3	1
EVAPORATION	367	74	93	82	37	17	20	43		
REG INFLOW	6269	914	900	716	333	164	204	972	1062	1004
RELEASE	6473	1446	642	743	308	149	169	1053	1006	958
STOR CHANGE	-204	-532	258	-26	25	15	35	-81	57	46
STORAGE	10540	10008	10266	10239	10264	10280	10315	10234	10290	10336
ELEV FTMSL	1574.2	1571.5	1572.8	1572.7	1572.8	1572.9	1573.1	1572.6	1572.9	1573.2
DISCH KCFS	24.8	23.5	10.8	12.1	10.4	10.7	10.7	17.1	16.4	17.3
POWER										
AVE POWER MW		249	114	128	110	114	113	181	173	183
PEAK POW MW		524	531	530	531	531	532	530	532	533
ENERGY GWH	830.1	185.0	82.2	95.4	39.6	19.1	21.8	135.0	129.0	123.1
--BIG BEND--										
EVAPORATION	121	25	31	27	12	6	7	14		
REG INFLOW	6352	1421	611	716	296	143	163	1038	1006	958
RELEASE	6381	1449	611	716	297	143	163	1038	1006	958
STORAGE	1710	1682	1682	1682	1681	1681	1681	1681	1681	1681
ELEV FTMSL	1420.5	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0
DISCH KCFS	22.2	23.6	10.3	11.6	10.0	10.3	10.2	16.9	16.4	17.3
POWER										
AVE POWER MW		111	52	59	51	52	52	84	80	82
PEAK POW MW		518	538	538	538	538	538	538	538	518
ENERGY GWH	377.4	82.8	37.4	43.8	18.2	8.7	10.0	62.4	59.3	54.8
--FORT RANDALL--										
NAT INFLOW	122	24	24	6	3	1	2	6	16	40
DEPLETION	34	15	7	1	1	0	1	3	3	3
EVAPORATION	120	31	33	23	10	5	5	13		
REG INFLOW	6341	1428	587	697	289	139	158	1028	1019	995
RELEASE	6408	1481	1522	849	289	139	158	726	689	555
STOR CHANGE	-67	-53	-935	-151	0	0	0	303	330	440
STORAGE	3428	3375	2440	2288	2288	2288	2288	2591	2921	3361
ELEV FTMSL	1353.8	1353.1	1340.0	1337.3	1337.3	1337.3	1337.3	1342.4	1347.3	1353.0
DISCH KCFS	25.4	24.1	25.6	13.8	9.7	10.0	10.0	11.8	11.2	10.0
POWER										
AVE POWER MW		200	200	102	71	73	73	88	87	82
PEAK POW MW		348	294	283	283	283	283	306	328	348
ENERGY GWH	605.7	148.9	144.2	75.6	25.5	12.3	14.0	65.4	65.0	54.9
--GAVINS POINT--										
NAT INFLOW	532	80	64	64	40	19	21	64	80	100
DEPLETION	28	10	-5	2	5	2	3	10	1	
CHAN STOR	29	2	-3	22	8	-1	0	-3	1	2
EVAPORATION	45	9	12	10	5	2	2	5		
REG INFLOW	6895	1544	1577	922	327	153	175	771	769	658
RELEASE	6927	1537	1577	922	327	153	175	771	769	697
STOR CHANGE	-32	7								-39
STORAGE	390	397	397	397	397	397	397	397	397	358
ELEV FTMSL	1207.2	1207.5	1207.5	1207.5	1207.5	1207.5	1207.5	1207.5	1207.5	1206.0
DISCH KCFS	26.1	25.0	26.5	15.0	11.0	11.0	11.0	12.5	12.5	12.5
POWER										
AVE POWER MW		88	93	53	39	39	39	45	44	44
PEAK POW MW		117	117	117	117	117	117	78	78	76
ENERGY GWH	295.7	65.2	66.9	39.5	14.1	6.6	7.5	33.1	33.0	29.7
--GAVINS POINT - SIOUX CITY--										
NAT INFLOW	372	88	64	48	24	11	13	28	28	68
DEPLETION	114	34	22	9	6	3	3	12	13	13
REGULATED FLOW AT SIOUX CITY										
KAF	7185	1591	1619	961	346	161	184	787	784	752
KCFS		25.9	27.2	15.6	11.6	11.6	11.6	12.8	12.7	13.5
--TOTAL--										
NAT INFLOW	4634	764	676	678	315	147	168	434	592	860
DEPLETION	90	208	-129	12	-50	-23	-26	2	31	65
CHAN STOR	26	10	6	66	8	-17	-16	-31	-2	3
EVAPORATION	1466	308	378	323	145	68	77	167		
STORAGE	37826	36493	35307	34754	34635	34559	34476	33923	33698	33745
SYSTEM POWER										
AVE POWER MW		914	701	516	444	473	493	654	642	643
PEAK POW MW		1946	1913	1897	1896	1895	1895	1868	1883	1878
ENERGY GWH	3299.6	680.1	504.9	383.8	159.8	79.4	94.7	486.9	477.8	432.1
DAILY GWH		21.9	16.8	12.4	10.7	11.3	11.8	15.7	15.4	15.4
	INI-SUM	31AUG	30SEP	31OCT	15NOV	22NOV	30NOV	31DEC	31JAN	28FEB

TIME OF STUDY 10:44:39

SHORTEN NAVIGATION SEASON 27-DAYS
VALUES IN 1000 AF EXCEPT AS INDICATED

STUDY NO 4

	28FEB05 INI-SUM	15MAR	2005 22MAR	31MAR	30APR	31MAY	30JUN	31JUL	31AUG	30SEP	31OCT	15NOV	22NOV	2006 30NOV	31DEC	31JAN	28FEB
--FORT PECK--																	
NAT INFLOW	9600	319	149	192	797	1604	2491	1219	456	379	531	210	98	112	346	297	400
DEPLETION	398	6	3	3	85	319	486	163	-70	-113	-67	-24	-11	-13	-125	-150	-95
EVAPORATION	275							18	57	72	64	15	7	8	34		
MOD INFLOW	8927	314	146	188	712	1285	2005	1038	469	420	534	218	102	116	437	447	495
RELEASE	4204	179	56	71	238	338	417	400	400	327	259	126	76	127	400	430	361
STOR CHANGE	4723	135	91	117	474	947	1588	639	70	93	275	93	25	-11	37	17	134
STORAGE	9068	9203	9294	9411	9885	10832	12420	13059	13128	13221	13496	13589	13614	13603	13641	13657	13791
ELEV FTMSL	2200.5	2201.4	2202.0	2202.7	2205.8	2211.6	2220.7	2224.2	2224.6	2225.1	2226.5	2227.0	2227.2	2227.1	2227.3	2227.4	2228.1
DISCH KCFS	7.5	6.0	4.0	4.0	4.0	5.5	7.0	6.5	6.5	5.5	4.2	4.2	5.5	8.0	6.5	7.0	6.5
POWER																	
AVE POWER MW		71	48	48	48	68	89	85	86	73	56	56	73	107	87	93	87
PEAK POW MW		129	130	131	134	141	151	155	155	156	157	157	157	157	157	157	158
ENERGY GWH	660.6	25.5	8.0	10.3	34.7	50.4	64.2	63.5	64.0	52.5	41.8	20.3	12.3	20.5	64.6	69.6	58.4
--GARRISON--																	
NAT INFLOW	14199	515	240	309	1376	1934	3530	2647	841	574	652	260	121	139	278	348	434
DEPLETION	1071	41	19	25	-5	128	859	637	67	-122	-25	-107	-50	-57	-135	-124	-80
CHAN STOR	12	17	22			-16	-16	5		10	13		-13	-26	15	-5	5
EVAPORATION	309							20	65	82	71	17	8	9	37		
REG INFLOW	17035	670	299	356	1619	2128	3071	2395	1109	952	878	475	227	288	791	897	880
RELEASE	13079	476	208	268	1071	1168	1190	1199	1168	1012	846	409	208	286	1230	1230	1111
STOR CHANGE	3955	193	91	88	548	959	1881	1196	-59	-60	33	66	18	2	-439	-333	-231
STORAGE	10891	11085	11176	11264	11812	12771	14652	15848	15789	15729	15762	15828	15846	15848	15409	15077	14846
ELEV FTMSL	1809.9	1810.7	1811.1	1811.5	1813.9	1818.0	1825.4	1829.8	1829.5	1829.3	1829.4	1829.7	1829.7	1829.8	1828.2	1826.9	1826.1
DISCH KCFS	17.5	16.0	15.0	15.0	18.0	19.0	20.0	19.5	19.0	17.0	13.8	13.8	15.0	18.0	20.0	20.0	20.0
POWER																	
AVE POWER MW		166	157	157	190	205	225	227	224	200	163	163	177	213	235	232	231
PEAK POW MW		299	300	302	309	320	342	438	437	436	437	438	438	438	432	428	425
ENERGY GWH	1804.5	59.9	26.4	34.0	137.0	152.8	161.9	168.7	166.7	144.3	120.9	58.6	29.8	40.8	174.6	173.0	155.1
--OAHE--																	
NAT INFLOW	3850	559	261	335	474	347	881	297	123	163	102	109	51	58	22	10	59
DEPLETION	597	22	10	13	46	65	126	147	96	24	-8	2	1	1	11	16	25
CHAN STOR	-11	8	5	0	-15	-5	-5	2	2	9	15		-6	-14	-9		
EVAPORATION	283							19	59	74	65	16	7	9	36		
REG INFLOW	16039	1020	463	589	1484	1445	1940	1333	1139	1086	906	501	245	321	1196	1224	1145
RELEASE	11140	320	173	209	694	1018	1157	1423	1508	1085	457	233	131	147	1051	914	619
STOR CHANGE	4899	700	290	380	790	427	783	-90	-369	1	449	268	114	173	145	310	526
STORAGE	11433	12133	12423	12804	13594	14021	14805	14715	14345	14347	14796	15064	15178	15351	15497	15806	16332
ELEV FTMSL	1578.7	1582.0	1583.3	1584.9	1588.3	1590.1	1593.2	1592.8	1591.4	1591.4	1593.2	1594.2	1594.7	1595.3	1595.9	1597.0	1599.0
DISCH KCFS	14.3	10.8	12.5	11.7	11.7	16.6	19.4	23.1	24.5	18.2	7.4	7.8	9.4	9.3	17.1	14.9	11.1
POWER																	
AVE POWER MW		120	141	133	135	194	231	276	291	216	89	94	114	113	207	181	137
PEAK POW MW		579	586	595	613	621	637	635	628	628	637	642	644	647	650	656	665
ENERGY GWH	1602.4	43.1	23.7	28.8	97.0	144.2	166.0	205.4	216.5	155.5	66.1	34.0	19.2	21.6	154.2	134.9	92.3
--BIG BEND--																	
EVAPORATION	71							5	15	19	16	4	2	2	9		
REG INFLOW	11069	320	173	209	694	1018	1157	1418	1493	1066	441	229	129	145	1042	914	619
RELEASE	11069	320	173	209	694	1018	1157	1418	1493	1066	441	229	129	145	1042	914	619
STORAGE	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682
ELEV FTMSL	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0
DISCH KCFS	14.3	10.8	12.5	11.7	11.7	16.6	19.4	23.1	24.3	17.9	7.2	7.7	9.3	9.2	17.0	14.9	11.1
POWER																	
AVE POWER MW		51	58	55	55	78	91	108	114	85	36	39	47	46	84	72	54
PEAK POW MW		517	509	509	509	509	509	509	509	525	538	538	538	538	538	538	529
ENERGY GWH	639.1	18.4	9.8	11.8	39.3	57.7	65.6	80.3	84.6	61.5	27.1	14.1	7.9	8.9	62.3	53.9	36.0
--FORT RANDALL--																	
NAT INFLOW	1501	190	89	114	298	159	224	111	72	92	60	5	2	3	23	10	49
DEPLETION	80	1	1	1	4	9	12	18	15	7	1	1	0	1	3	3	3
EVAPORATION	78							6	19	23	16	3	1	2	8		
REG INFLOW	12407	509	261	322	988	1168	1369	1505	1531	1128	478	230	129	146	1055	921	665
RELEASE	12406	217	127	322	988	1168	1369	1505	1531	1475	1365	248	130	146	689	664	461
STOR CHANGE	1	292	134	0			0	0	0	-347	-887	-18	0	0	366	257	204
STORAGE	3123	3415	3549	3549	3549	3549	3549	3549	3549	3202	2315	2297	2297	2297	2663	2920	3124
ELEV FTMSL	1350.0	1353.6	1355.2	1355.2	1355.2	1355.2	1355.2	1355.2	1355.2	1351.0	1337.8	1337.5	1337.5	1337.5	1343.5	1347.2	1350.0
DISCH KCFS	9.0	7.3	9.2	18.0	16.6	19.0	23.0	24.5	24.9	24.8	22.2	8.3	9.3	9.2	11.2	10.8	8.3
POWER																	
AVE POWER MW		61	78	153	141	161	194	206	210	205	171	61	68	67	84	85	67
PEAK POW MW		350	355	355	355	355	355	355	355	341	284	283	284	284	311	328	338
ENERGY GWH	1230.0	21.8	13.1	33.0	101.3	119.6	139.8	153.5	156.1	147.9	127.2	22.0	11.5	12.9	62.5	63.0	45.0
--GAVINS POINT--																	
NAT INFLOW	2252	107	50	64	246	319	281	211	170	135	157	60	28	32	95	106	191
DEPLETION	114	0	0	0	5	19	24	39	10	-5	2	5	2	3	10	1	
CHAN STOR	0	3	-4	-17	3	-5	-8	-3	-1	0	5	26	-2	0	-4	1	5
EVAPORATION	26							2	5	7	6	1	1	1	3		
REG INFLOW	14518	328	174	370	1232	1463	1619	1672	1685	1609	1519	327	153	175	767	770	657
RELEASE	14518	328	174	370	1232	1463	1619	1672	1672	1583	1519	327	153	175	767	770	696
STOR CHANGE									13	26							-39
STORAGE	358	358	358	358	358	358	358	358	371	397	397	397	397	397	397	397	358
ELEV FTMSL	1206.0	1206.0	1206.0	1206.0	1206.0	1206.0	1206.0	1206.0	1206.5	1207.5	1207.5	1207.5	1207.5	1207.5	1207.5	1207.5	1206.0
DISCH KCFS	12.5	11.0	12.5	20.7	20.7	23.8	27.2	27.2	27.2	26.6	24.7	11.0	11.0	11.0	12.5	12.5	12.5
POWER																	
AVE POWER MW		39	44	71	71	82	93	93	93	92	87	39	39	39	44	44	44
PEAK POW MW		114	114	114	114	114	114	114	115	117	117	117	117	117	78	78	76
ENERGY GWH	608.8	13.9	7.4	15.4	51.4	60.7	66.8	69.0	69.3	66.6	64.5	14.1	6.6	7.5	33.0	33.1	29.7
--GAVINS POINT - SIOUX CITY--																	
NAT INFLOW	3100	195	91	117	1006	553	318	246	184	127	66	26	12	14	30	12	105
DEPLETION	248	6	3	4	20	34	30	37	34	22	9	6	3	3	12	13	13
REGULATED FLOW AT SIOUX CITY																	
KAF	17370	516	262	483	2218	1982	1907	1881	1822	1688	1576	347	162	185	785	769	788
KCFS		17.3	18.9	27.0	37.3	32.2	32.0	30.6	29.6	28.4	25.6	11.7	11.7	11.7	12.8	12.5	14.2
--TOTAL--																	
NAT INFLOW	34502	1885	879	1131	4197	4916	7725	4731	1846	1470	1568	670	312	357	794	783	1238
DEPLETION	2508	76	36	46	155	574	1537	1041	152	-187	-88	-118	-55	-63	-224	-241	-134
CHAN STOR	-4	28	24	-17	-12	-26	-29	5	1	20	28	26	-21	-39	3	-4	10
EVAPORATION	1042							69	219	276	239	57	27	30	126		
STORAGE	36556	37876	38482	39067	40879	43213	47466	49210	48864	48578	48447	48855	49013	49178	49288	49539	50133
SYSTEM POWER																	
AVE POWER MW		508	525	618	640	787	923	995	1018	872	601	453	519	584	741	709	620
PEAK POW MW		1988	1994	2007	2034	2061	2108	2207	2199	2203	2169	2175	2178	2181	2167	2185	2191
ENERGY GWH	6546.8	182.7	88.2	133.4	460.7	585.3	664.2	740.4	757.3	629.2	447.5	163.1	87.4	112.3	551.2	527.4	416.5
DAILY GWH		12.2	12.6	14.8	15.4	18.9	22.1	23.9	24.4	21.0	14.4	10.9	12.5	14.0	17.8	17.0	14.9
	INI-SUM	15MAR	22MAR	31MAR	30APR	31MAY	30JUN	31JUL	31AUG	30SEP	31OCT	15NOV	22NOV	30NOV	31DEC	31JAN	28FEB

SHORTEN NAVIGATION SEASON 31-DAYS
VALUES IN 1000 AF EXCEPT AS INDICATED

	28FEB05		2005											2006			
	INI-SUM	15MAR	22MAR	31MAR	30APR	31MAY	30JUN	31JUL	31AUG	30SEP	31OCT	15NOV	22NOV	30NOV	31DEC	31JAN	28FEB
--FORT PECK--																	
NAT INFLOW	8901	296	138	178	739	1487	2309	1130	423	351	492	195	91	104	321	276	371
DEPLETION	398	6	3	3	85	319	486	151	-66	-126	-65	-23	-11	-12	-120	-142	-91
EVAPORATION	285							17	54	68	60	27	13	15	31		
MOD INFLOW	8218	290	135	174	654	1168	1823	962	435	409	497	190	89	101	410	418	462
RELEASE	5262	179	69	89	357	492	506	492	492	357	308	149	97	127	523	553	472
STOR CHANGE	2956	112	66	85	297	676	1317	470	-57	52	189	42	-8	-25	-113	-135	-10
STORAGE	9068	9180	9246	9331	9628	10304	11621	12092	12035	12086	12275	12317	12308	12283	12170	12034	12024
ELEV FTMSL	2200.5	2201.2	2201.7	2202.2	2204.2	2208.4	2216.2	2218.9	2218.6	2218.9	2219.9	2220.2	2220.1	2220.0	2219.3	2218.6	2218.5
DISCH KCFS	7.5	6.0	5.0	5.0	6.0	8.0	8.5	8.0	8.0	6.0	5.0	5.0	7.0	8.0	8.5	9.0	8.5
POWER																	
AVE POWER MW		71	59	59	72	97	106	103	103	77	65	65	91	104	110	116	109
PEAK POW MW		129	130	130	132	137	141	149	149	149	150	151	150	150	150	149	149
ENERGY GWH	806.1	25.5	10.0	12.9	51.7	72.2	76.5	76.3	76.7	55.8	48.3	23.4	15.3	19.9	81.8	86.3	73.5
--GARRISON--																	
NAT INFLOW	12901	482	225	289	1250	1723	3207	2405	764	522	593	236	110	126	260	316	394
DEPLETION	1128	41	19	25	23	169	820	607	60	-129	-14	-102	-48	-54	-120	-105	-64
CHAN STOR	-10	17	11		-11	-22	-5	5		21	10	0	-21	-10	-5	-5	5
EVAPORATION	331							19	63	80	70	32	15	17	36		
REG INFLOW	16693	636	286	353	1573	2024	2887	2276	1133	949	856	455	219	280	861	969	935
RELEASE	13091	476	208	268	1041	1199	1220	1230	1199	1012	801	387	194	286	1199	1261	1111
STOR CHANGE	3602	160	78	86	532	825	1668	1046	-66	-62	54	69	25	-6	-338	-291	-175
STORAGE	10891	11051	11129	11214	11746	12571	14238	15284	15218	15156	15210	15279	15304	15298	14960	14669	14493
ELEV FTMSL	1809.9	1810.6	1810.9	1811.3	1813.6	1817.1	1823.8	1827.7	1827.5	1827.2	1827.4	1827.7	1827.8	1827.8	1826.5	1825.4	1824.8
DISCH KCFS	17.5	16.0	15.0	15.0	17.5	19.5	20.5	20.0	19.5	17.0	13.0	13.0	14.0	18.0	19.5	20.5	20.0
POWER																	
AVE POWER MW		166	157	157	185	210	228	230	227	198	152	152	164	210	226	236	229
PEAK POW MW		299	300	301	308	318	338	431	430	429	429	430	431	431	426	422	420
ENERGY GWH	1788.7	59.9	26.3	33.9	133.0	156.2	164.5	170.9	168.7	142.4	113.1	54.7	27.5	40.3	168.2	175.4	153.7
--OAHE--																	
NAT INFLOW	3200	460	214	276	394	285	749	246	103	135	85	91	42	48	18	5	49
DEPLETION	597	22	10	13	46	65	126	147	96	24	-8	2	1	1	11	16	25
CHAN STOR	-11	8	5	0	-13	-10	-5	2	2	12	19	0	-5	-19	-7	-5	2
EVAPORATION	300							18	56	71	63	29	13	15	34		
REG INFLOW	15383	921	417	530	1377	1409	1838	1313	1152	1063	850	447	218	299	1165	1245	1137
RELEASE	11690	500	86	246	792	1090	1230	1477	1366	804	861	278	140	158	1068	918	677
STOR CHANGE	3693	421	332	284	584	319	608	-164	-214	260	-10	169	78	141	97	327	460
STORAGE	11433	11854	12186	12470	13055	13374	13982	13819	13604	13864	13853	14022	14101	14241	14339	14666	15126
ELEV FTMSL	1578.7	1580.7	1582.2	1583.5	1586.0	1587.4	1589.9	1589.2	1588.4	1589.4	1589.4	1590.1	1590.4	1591.0	1591.4	1592.7	1594.5
DISCH KCFS	14.3	16.8	6.2	13.8	13.3	17.7	20.7	24.0	22.2	13.5	14.0	9.4	10.0	10.0	17.4	14.9	12.2
POWER																	
AVE POWER MW		186	69	156	152	204	241	281	259	158	164	110	119	118	206	178	146
PEAK POW MW		572	580	587	601	608	621	617	613	618	618	621	623	626	628	634	643
ENERGY GWH	1650.6	67.0	11.6	33.6	109.5	152.1	173.4	209.1	192.7	113.8	122.2	39.7	19.9	22.6	152.9	132.1	98.4
--BIG BEND--																	
EVAPORATION	78							5	15	19	16	7	3	4	9		
REG INFLOW	11613	500	86	246	792	1090	1230	1472	1352	785	844	271	136	154	1060	918	677
RELEASE	11613	500	86	246	792	1090	1230	1472	1352	785	844	271	136	154	1060	918	677
STORAGE	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682
ELEV FTMSL	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0
DISCH KCFS	14.3	16.8	6.2	13.8	13.3	17.7	20.7	23.9	22.0	13.2	13.7	9.1	9.8	9.7	17.2	14.9	12.2
POWER																	
AVE POWER MW		79	29	65	62	83	97	112	104	65	69	46	50	49	85	73	58
PEAK POW MW		510	509	509	509	509	509	509	518	538	538	538	538	538	538	538	529
ENERGY GWH	673.9	28.4	4.9	13.9	44.9	61.7	69.7	83.4	77.4	46.9	51.6	16.6	8.3	9.4	63.4	54.2	39.3
--FORT RANDALL--																	
NAT INFLOW	1200	142	66	85	239	150	195	89	65	64	38	3	1	1	18	5	39
DEPLETION	80	1	1	1	4	9	12	18	15	7	1	1	0	1	3	3	3
EVAPORATION	80							6	19	21	15	6	3	3	8		
REG INFLOW	12653	641	151	330	1027	1231	1413	1537	1383	821	867	267	134	152	1067	920	713
RELEASE	12653	232	134	330	1027	1231	1413	1538	1557	1496	1270	267	134	152	701	683	489
STOR CHANGE	0	409	17					0	-174	-675	-403	0	0	0	366	237	224
STORAGE	3123	3532	3549	3549	3549	3549	3549	3549	3375	2700	2297	2297	2297	2297	2662	2899	3123
ELEV FTMSL	1350.0	1355.0	1355.2	1355.2	1355.2	1355.2	1355.2	1355.2	1353.1	1344.1	1337.5	1337.5	1337.5	1337.5	1343.5	1347.0	1350.0
DISCH KCFS	9.0	7.8	9.7	18.5	17.3	20.0	23.7	25.0	25.3	25.1	20.6	9.0	9.7	9.6	11.4	11.1	8.8
POWER																	
AVE POWER MW		65	82	157	146	169	200	211	212	200	154	66	70	70	85	87	71
PEAK POW MW		354	355	355	355	355	355	355	348	313	283	283	283	283	311	327	338
ENERGY GWH	1244.3	23.4	13.8	33.8	105.3	125.9	144.1	156.8	157.4	144.4	114.7	23.6	11.8	13.4	63.6	64.6	47.7
--GAVINS POINT--																	
NAT INFLOW	1899	93	44	56	207	257	237	178	144	114	132	51	24	27	86	89	161
DEPLETION	114	0	0	0	5	19	24	39	10	-5	2	5	2	3	10	1	
CHAN STOR	-1	2	-4	-17	2	-5	-7	-2	-1	0	8	22	-1	0	-3	1	4
EVAPORATION	28							2	5	7	6	3	1	1	3		
REG INFLOW	14409	328	174	370	1232	1463	1619	1672	1685	1609	1402	331	153	175	770	771	654
RELEASE	14409	328	174	370	1232	1463	1619	1672	1672	1583	1402	331	153	175	770	771	693
STOR CHANGE									13	26							-39
STORAGE	358	358	358	358	358	358	358	358	371	397	397	397	397	397	397	397	358
ELEV FTMSL	1206.0	1206.0	1206.0	1206.0	1206.0	1206.0	1206.0	1206.0	1206.5	1207.5	1207.5	1207.5	1207.5	1207.5	1207.5	1207.5	1206.0
DISCH KCFS	12.5	11.0	12.6	20.7	20.7	23.8	27.2	27.2	27.2	26.6	22.8	11.1	11.0	11.0	12.5	12.5	12.5
POWER																	
AVE POWER MW		39	44	71	71	82	93	93	93	92	80	40	39	39	45	45	44
PEAK POW MW		114	114	114	114	114	114	114	115	117	117	117	117	117	78	78	76
ENERGY GWH	604.3	13.9	7.4	15.4	51.4	60.7	66.8	69.0	69.3	66.6	59.7	14.3	6.6	7.5	33.1	33.1	29.6
--GAVINS POINT - SIOUX CITY--																	
NAT INFLOW	2500	181	85	109	811	406	252	199	148	97	53	21	10	11	24	10	84
DEPLETION	248	6	3	4	20	34	30	37	34	22	9	6	3	3	12	13	13
REGULATED FLOW AT SIOUX CITY																	
KAF	16661	503	256	475	2023	1835	1841	1834	1786	1658	1446	346	160	183	782	768	764
KCFS		16.9	18.4	26.6	34.0	29.8	30.9	29.8	29.1	27.9	23.5	11.6	11.5	11.5	12.7	12.5	13.8
--TOTAL--																	
NAT INFLOW	30601	1654	772	992	3640	4308	6949	4247	1647	1283	1393	595	278	317	727	701	1098
DEPLETION	2565	76	36	46	183	615	1498	999	149	-207	-75	-112	-52	-59	-204	-214	-114
CHAN STOR	-22	27	13	-17	-21	-37	-17	5	2	33	38	22	-27	-29	-16	-9	12
EVAPORATION	1102							67	212	265	230	104	48	55	121		
STORAGE	36556	37657	38150	38604	40017	41838	45431	46783	46284	45884	45714	45993	46088	46198	46210	46347	46807
SYSTEM POWER																	
AVE POWER MW		606	440	664	689	845	965	1028	997	791	685	478	532	590	756	733	658
PEAK POW MW		1978	1988	1996	2019	2041	2083	2176	2173	2165	2135	2141	2142	2145	2131	2148	2154
ENERGY GWH	6767.9	218.1	74.0	143.5	495.8	628.8	695.0	765.4	742.2	569.8	509.4	172.3	89.5	113.2	563.1	545.7	442.1
DAILY GWH		14.5	10.6	15.9	16.5	20.3	23.2	24.7	23.9	19.0	16.4	11.5	12.8	14.2	18.2	17.6	15.8
	INI-SUM	15MAR	22MAR	31MAR	30APR	31MAY	30JUN	31JUL	31AUG	30SEP	31OCT	15NOV	22NOV	30NOV	31DEC	31JAN	28FEB

DATE OF STUDY 11/15/04

TIME OF STUDY 10:56:22

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SHORTEN NAVIGATION SEASON 31-DAYS STUDY NO 6

VALUES IN 1000 AF EXCEPT AS INDICATED

28FEB05	INI-SUM	2005 15MAR	22MAR	31MAR	30APR	31MAY	30JUN	31JUL	31AUG	30SEP	31OCT	15NOV	22NOV	30NOV	2006 31DEC	31JAN	28FEB
--FORT PECK--																	
NAT INFLOW	7400	264	123	158	628	1210	1851	829	324	319	398	188	88	100	310	261	349
DEPLETION	234	37	17	22	-5	171	315	240	-42	-113	-76	-23	-11	-12	-94	-117	-77
EVAPORATION	349							21	66	83	73	33	15	18	38		
MOD INFLOW	6817	227	106	136	633	1039	1536	568	300	349	401	177	83	94	366	378	426
RELEASE	5392	179	69	89	357	492	536	523	492	398	309	149	97	127	523	553	500
STOR CHANGE	1426	48	36	47	276	547	1000	45	-192	-50	92	28	-15	-33	-157	-175	-74
STORAGE	8583	8631	8668	8715	8991	9538	10538	10584	10391	10341	10434	10462	10447	10415	10258	10082	10008
ELEV FTMSL	2197.2	2197.5	2197.8	2198.1	2200.0	2203.6	2209.8	2210.1	2208.9	2208.6	2209.2	2209.4	2209.3	2209.1	2208.1	2207.0	2206.6
DISCH KCFS	6.5	6.0	5.0	5.0	6.0	8.0	9.0	8.5	8.0	6.7	5.0	5.0	7.0	8.0	8.5	9.0	9.0
POWER																	
AVE POWER MW		70	58	58	70	95	109	105	99	82	62	62	86	98	104	110	109
PEAK POW MW		125	125	126	128	132	139	139	138	138	138	138	138	138	137	136	135
ENERGY GWH	792.5	25.1	9.8	12.6	50.6	70.6	78.7	78.1	73.4	59.3	46.0	22.2	14.5	18.9	77.6	81.7	73.5
--GARRISON--																	
NAT INFLOW	11001	469	219	282	853	1423	2958	2066	581	497	454	192	89	102	253	237	326
DEPLETION	1282	48	23	29	78	226	766	565	99	-130	-9	-94	-44	-50	-102	-79	-44
CHAN STOR	-28	6	11		-11	-22	-11	5	5	14	18	0	-21	-11	-5	-5	
EVAPORATION	404							24	77	97	85	38	18	20	44		
REG INFLOW	14680	605	277	342	1121	1667	2716	2005	902	942	705	396	191	248	829	864	870
RELEASE	12942	417	194	250	893	1230	1220	1230	1199	1034	775	378	208	286	1230	1261	1139
STOR CHANGE	1737	189	83	92	228	437	1497	775	-297	-92	-70	18	-17	-37	-401	-397	-269
STORAGE	10300	10489	10571	10663	10891	11328	12825	13600	13303	13211	13140	13159	13141	13104	12703	12306	12037
ELEV FTMSL	1807.1	1808.0	1808.4	1808.8	1809.9	1811.8	1818.2	1821.3	1820.1	1819.7	1819.5	1819.5	1819.5	1819.3	1817.7	1816.0	1814.9
DISCH KCFS	17.0	14.0	14.0	14.0	15.0	20.0	20.5	20.0	19.5	17.4	12.6	12.7	15.0	18.0	20.0	20.5	20.5
POWER																	
AVE POWER MW		143	143	144	155	208	220	220	216	192	140	140	166	198	219	221	219
PEAK POW MW		291	292	294	297	302	321	407	403	401	400	401	400	400	394	388	384
ENERGY GWH	1689.5	51.3	24.1	31.1	111.5	154.9	158.3	164.0	161.0	138.4	103.9	50.6	27.8	38.1	162.6	164.7	147.3
--OAHE--																	
NAT INFLOW	2300	317	148	190	364	236	689	162	33	118	14	5	2	3	-20		40
DEPLETION	597	22	10	13	46	65	126	147	96	24	-8	2	1	1	11	16	25
CHAN STOR	-18	16			-5	-26	-3	3	3	11	25	0	-12	-16	-10	-3	
EVAPORATION	349							21	66	83	73	33	15	18	39		
REG INFLOW	14279	727	332	426	1205	1375	1780	1226	1072	1056	749	348	183	254	1150	1242	1154
RELEASE	12497	403	212	258	977	1183	1310	1589	1427	878	918	285	143	162	924	942	886
STOR CHANGE	1781	323	120	168	228	191	470	-363	-354	178	-169	63	40	93	225	300	268
STORAGE	10827	11150	11270	11438	11666	11858	12328	11965	11610	11788	11619	11683	11722	11815	12040	12341	12608
ELEV FTMSL	1575.7	1577.3	1577.9	1578.7	1579.8	1580.7	1582.8	1581.2	1579.5	1580.4	1579.6	1579.9	1580.1	1580.5	1581.5	1582.9	1584.1
DISCH KCFS	15.4	13.6	15.3	14.5	16.4	19.2	22.0	25.8	23.2	14.8	14.9	9.6	10.3	10.2	15.0	15.3	15.9
POWER																	
AVE POWER MW		147	167	159	181	213	246	289	257	164	166	106	114	113	168	172	181
PEAK POW MW		555	558	562	568	572	584	575	566	571	566	568	569	571	577	584	590
ENERGY GWH	1682.7	53.0	28.0	34.3	130.5	158.8	177.3	215.0	191.3	117.8	123.2	38.3	19.2	21.8	124.8	128.1	121.4
--BIG BEND--																	
EVAPORATION	103							6	20	25	22	10	5	5	11		
REG INFLOW	12394	403	212	258	977	1183	1310	1583	1407	853	896	275	138	156	913	942	886
RELEASE	12394	403	212	258	977	1183	1310	1583	1407	853	896	275	138	156	913	942	886
STORAGE	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682
ELEV FTMSL	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0
DISCH KCFS	15.4	13.6	15.3	14.5	16.4	19.2	22.0	25.7	22.9	14.3	14.6	9.2	10.0	9.9	14.8	15.3	15.9
POWER																	
AVE POWER MW		64	71	68	77	90	103	120	108	71	74	47	50	50	74	75	77
PEAK POW MW		517	509	509	509	509	509	509	518	538	538	538	538	538	538	538	529
ENERGY GWH	720.0	23.1	12.0	14.6	55.4	67.0	74.2	89.6	80.6	51.0	54.7	16.9	8.5	9.6	55.4	56.1	51.4
--FORT RANDALL--																	
NAT INFLOW	900	122	57	73	115	140	185	74	57	42	2	2	1	1	10		19
DEPLETION	80	1	1	1	4	9	12	18	15	7	1	1	0	1	3	3	3
EVAPORATION	107							8	25	28	20	8	4	4	10		
REG INFLOW	13108	524	268	331	1088	1314	1483	1631	1424	860	878	268	135	152	910	939	902
RELEASE	13107	232	134	331	1088	1314	1483	1631	1598	1536	1281	268	135	152	707	689	528
STOR CHANGE	1	292	134				0	0	-174	-675	-403	0	0	0	203	250	374
STORAGE	3123	3415	3549	3549	3549	3549	3549	3549	3375	2700	2297	2297	2296	2296	2499	2749	3123
ELEV FTMSL	1350.0	1353.6	1355.2	1355.2	1355.2	1355.2	1355.2	1355.2	1353.1	1344.1	1337.5	1337.5	1337.5	1337.5	1341.0	1344.8	1350.0
DISCH KCFS	9.5	7.8	9.7	18.5	18.3	21.4	24.9	26.5	26.0	25.8	20.8	9.0	9.7	9.6	11.5	11.2	9.5
POWER																	
AVE POWER MW		65	82	157	155	181	210	223	217	206	155	66	71	70	85	86	76
PEAK POW MW		350	355	355	355	355	355	355	348	313	283	283	283	283	300	317	338
ENERGY GWH	1286.5	23.3	13.8	33.9	111.4	134.3	151.2	166.1	161.5	148.1	115.7	23.7	11.9	13.5	63.4	63.8	51.0
--GAVINS POINT--																	
NAT INFLOW	1450	92	43	55	148	174	166	86	103	77	122	50	23	27	77	79	127
DEPLETION	114	0	0	0	5	19	24	39	10	-5	2	5	2	3	10	1	
CHAN STOR	-1	3	-4	-17	0	-6	-7	-3	1	0	9	22	-1	0	-4	1	3
EVAPORATION	38							2	7	9	8	4	2	2	4		
REG INFLOW	14404	328	174	370	1232	1463	1619	1672	1685	1609	1402	331	153	175	766	767	658
RELEASE	14404	328	174	370	1232	1463	1619	1672	1672	1583	1402	331	153	175	766	767	697
STOR CHANGE									13	26							-39
STORAGE	358	358	358	358	358	358	358	358	371	397	397	397	397	397	397	397	358
ELEV FTMSL	1206.0	1206.0	1206.0	1206.0	1206.0	1206.0	1206.0	1206.0	1206.5	1207.5	1207.5	1207.5	1207.5	1207.5	1207.5	1207.5	1206.0
DISCH KCFS	12.5	11.0	12.5	20.7	20.7	23.8	27.2	27.2	27.2	26.6	22.8	11.1	11.0	11.0	12.5	12.5	12.5
POWER																	
AVE POWER MW		39	44	71	71	82	93	93	93	92	80	40	39	39	44	44	44
PEAK POW MW		114	114	114	114	114	114	114	115	117	117	117	117	117	78	78	76
ENERGY GWH	604.1	13.9	7.4	15.4	51.4	60.7	66.8	69.0	69.3	66.6	59.7	14.3	6.6	7.5	32.9	33.0	29.7
--GAVINS POINT - SIOUX CITY--																	
NAT INFLOW	1550	169	79	102	199	310	224	129	96	60	42	16	7	9	21	5	82
DEPLETION	248	6	3	4	20	34	30	37	34	22	9	6	3	3	12	13	13
REGULATED FLOW AT SIOUX CITY																	
KAF	15706	491	250	467	1411	1739	1813	1764	1734	1621	1435	342	158	180	775	759	766
KCFS		16.5	18.0	26.2	23.7	28.3	30.5	28.7	28.2	27.2	23.3	11.5	11.4	11.4	12.6	12.3	13.8
--TOTAL--																	
NAT INFLOW	24601	1435	669	860	2307	3493	6073	3346	1194	1113	1032	452	211	241	651	582	943
DEPLETION	2555	115	54	69	148	524	1273	1046	212	-195	-81	-104	-48	-55	-160	-163	-80
CHAN STOR	-46	25	8	-17	-16	-54	-20	5	9	25	52	22	-35	-26	-19	-7	3
EVAPORATION	1348							83	262	325	280	126	59	67	146		
STORAGE	34872	35725	36098	36405	37137	38313	41280	41737	40732	40119	39568	39678	39686	39708	39579	39557	39817
SYSTEM POWER																	
AVE POWER MW		527	566	657	709	869	981	1051	991	807	676	461	527	569	695	709	706
PEAK POW MW		1952	1953	1960	1972	1984	2022	2099	2089	2078	2043	2045	2046	2048	2023	2041	2052
ENERGY GWH	6775.7	189.8	95.1	142.0	510.7	646.4	706.5	781.8	737.1	581.1	503.2	165.9	88.5	109.3	516.8	527.3	474.2
DAILY GWH		12.7	13.6	15.8	17.0	20.9	23.6	25.2	23.8	19.4	16.2	11.1	12.6	13.7	16.7	17.0	16.9
	INI-SUM	15MAR	22MAR	31MAR	30APR	31MAY	30JUN	31JUL	31AUG	30SEP	31OCT	15NOV	22NOV	30NOV	31DEC	31JAN	28FEB

TIME OF STUDY 10:56:38

SHORTEN NAVIGATION SEASON 56-DAYS STUDY NO 7

VALUES IN 1000 AF EXCEPT AS INDICATED

28FEB05	INI-SUM	2005 15MAR	22MAR	31MAR	30APR	31MAY	30JUN	31JUL	31AUG	30SEP	31OCT	15NOV	22NOV	2006 30NOV	31DEC	31JAN	28FEB
--FORT PECK--																	
NAT INFLOW	6000	242	113	145	525	925	1454	633	263	252	324	167	78	89	295	212	283
DEPLETION	280	23	11	14	48	162	288	189	-23	-99	-67	-16	-7	-8	-93	-100	-41
EVAPORATION	398							24	76	95	83	38	18	20	43		
MOD INFLOW	5322	219	102	131	477	763	1166	420	210	256	308	145	68	77	345	312	324
RELEASE	5162	149	69	89	434	492	476	492	492	370	261	126	97	127	492	523	472
STOR CHANGE	160	70	33	42	43	271	690	-72	-282	-114	47	18	-30	-50	-147	-211	-148
STORAGE	8188	8258	8291	8333	8376	8647	9337	9265	8982	8869	8915	8933	8904	8854	8707	8496	8348
ELEV FTMSL	2194.5	2195.0	2195.2	2195.5	2195.8	2197.7	2202.3	2201.8	2199.9	2199.2	2199.5	2199.6	2199.4	2199.1	2198.1	2196.6	2195.6
DISCH KCFS	7.0	5.0	5.0	5.0	7.3	8.0	8.0	8.0	8.0	6.2	4.2	4.2	7.0	8.0	8.0	8.5	8.5
POWER																	
AVE POWER MW		57	57	57	84	92	94	95	94	73	50	50	82	94	93	98	97
PEAK POW MW		121	121	122	122	125	130	130	128	127	127	127	127	127	125	123	122
ENERGY GWH	727.0	20.5	9.6	12.4	60.1	68.5	67.6	70.7	70.2	52.5	37.1	18.0	13.8	18.0	69.4	73.1	65.5
--GARRISON--																	
NAT INFLOW	9400	443	207	266	712	1197	2521	1765	496	417	400	164	76	87	222	165	262
DEPLETION	1344	40	19	24	70	153	607	495	123	-54	70	-71	-33	-38	-43	-19	1
CHAN STOR	-17	23			-26	-8				20	22		-30	-11		-6	0
EVAPORATION	471							29	92	114	98	44	21	23	50		
REG INFLOW	12730	575	258	331	1050	1528	2390	1733	773	746	514	316	156	217	707	701	733
RELEASE	12535	446	208	268	952	1138	1190	1199	1168	961	675	327	236	286	1199	1199	1083
STOR CHANGE	195	129	49	64	98	390	1200	534	-395	-214	-161	-10	-81	-68	-492	-498	-350
STORAGE	9821	9950	9999	10063	10161	10552	11751	12286	11891	11676	11516	11505	11425	11356	10864	10366	10016
ELEV FTMSL	1804.8	1805.4	1805.7	1806.0	1806.4	1808.3	1813.7	1815.9	1814.3	1813.3	1812.6	1812.6	1812.2	1811.9	1809.7	1807.4	1805.8
DISCH KCFS	17.3	15.0	15.0	15.0	16.0	18.5	20.0	19.5	19.0	16.1	11.0	11.0	17.0	18.0	19.5	19.5	19.5
POWER																	
AVE POWER MW		150	150	151	161	187	208	208	203	171	116	116	178	188	202	198	195
PEAK POW MW		284	284	285	287	292	308	388	381	378	375	375	374	373	365	356	350
ENERGY GWH	1567.8	53.9	25.2	32.5	115.9	139.5	150.0	154.5	150.9	123.2	86.4	41.7	29.9	36.1	149.9	147.2	130.8
--OAHE--																	
NAT INFLOW	1449	154	72	92	229	130	577	102	24	65	9				-35	-6	36
DEPLETION	597	22	10	13	46	65	126	147	96	24	-8	2	1	1	11	16	25
CHAN STOR	-12	13		0	-5	-14	-8	3	3	16	29	0	-34	-6	-8		
EVAPORATION	378							23	71	89	80	36	17	19	42		
REG INFLOW	12997	591	270	347	1130	1189	1633	1133	1028	929	641	289	185	260	1103	1177	1094
RELEASE	12797	278	185	367	1237	1461	1432	1695	1520	557	619	314	146	167	1110	981	727
STOR CHANGE	200	312	85	-20	-107	-272	201	-561	-492	372	22	-25	39	93	-8	196	367
STORAGE	10336	10648	10733	10713	10605	10333	10534	9973	9480	9852	9874	9849	9888	9981	9973	10169	10536
ELEV FTMSL	1573.2	1574.8	1575.2	1575.1	1574.6	1573.2	1574.2	1571.3	1568.6	1570.6	1570.7	1570.6	1570.8	1571.3	1571.3	1572.3	1574.2
DISCH KCFS	17.3	9.4	13.3	20.6	20.8	23.8	24.1	27.6	24.7	9.4	10.1	10.6	10.5	10.5	18.1	16.0	13.1
POWER																	
AVE POWER MW		100	143	221	223	253	256	291	256	97	106	111	110	111	189	168	139
PEAK POW MW		542	544	543	540	533	539	523	509	520	520	519	521	523	523	529	539
ENERGY GWH	1635.4	36.1	24.0	47.7	160.4	188.1	184.2	216.3	190.7	70.2	78.5	39.8	18.5	21.3	140.9	125.0	93.6
--BIG BEND--																	
EVAPORATION	129							8	24	31	27	12	6	7	14		
REG INFLOW	12668	278	185	367	1237	1461	1432	1687	1496	526	592	302	140	161	1096	981	727
RELEASE	12668	278	185	367	1237	1461	1432	1687	1496	526	592	302	140	161	1096	981	727
STORAGE	1681	1681	1681	1681	1681	1681	1681	1681	1681	1681	1681	1681	1681	1681	1681	1681	1681
ELEV FTMSL	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0
DISCH KCFS	17.3	9.4	13.3	20.6	20.8	23.8	24.1	27.4	24.3	8.8	9.6	10.1	10.1	10.1	17.8	16.0	13.1
POWER																	
AVE POWER MW		44	62	96	97	111	113	128	115	45	49	51	51	51	88	78	63
PEAK POW MW		514	510	509	509	509	509	509	518	538	538	538	538	538	538	538	529
ENERGY GWH	733.2	15.9	10.5	20.8	70.1	82.8	81.1	95.5	85.6	32.2	36.3	18.5	8.6	9.8	65.5	57.8	42.2
--FORT RANDALL--																	
NAT INFLOW	500	68	32	41	64	51	130	26	49	23	1				5	-5	15
DEPLETION	80	1	1	1	4	9	12	18	15	7	1	1	0	1	3	3	3
EVAPORATION	129							10	31	32	22	10	5	5	13		
REG INFLOW	12950	345	216	407	1297	1503	1550	1685	1499	501	570	291	135	155	1085	973	739
RELEASE	13189	232	158	390	1297	1503	1550	1685	1673	1580	570	291	135	155	719	701	550
STOR CHANGE	-239	113	58	17	0	0		0	-174	-1079	0	0	0	0	366	272	189
STORAGE	3361	3474	3532	3549	3549	3549	3549	3549	3375	2296	2296	2295	2295	2295	2661	2933	3122
ELEV FTMSL	1353.0	1354.3	1355.0	1355.2	1355.2	1355.2	1355.2	1355.2	1353.1	1337.5	1337.5	1337.5	1337.5	1337.5	1343.5	1347.4	1350.0
DISCH KCFS	10.0	7.8	11.4	21.8	21.8	24.4	26.1	27.4	27.2	26.5	9.3	9.8	9.7	9.7	11.7	11.4	9.9
POWER																	
AVE POWER MW		66	96	184	184	206	219	231	227	205	68	71	71	71	88	89	80
PEAK POW MW		352	354	355	355	355	355	355	348	282	283	283	283	283	311	329	338
ENERGY GWH	1298.8	23.6	16.2	39.8	132.5	153.3	157.9	171.5	168.9	147.9	50.4	25.7	11.9	13.7	65.2	66.5	53.7
--GAVINS POINT--																	
NAT INFLOW	1251	91	43	55	124	138	143	81	80	58	105	47	22	25	70	68	101
DEPLETION	114	0	0	0	5	19	24	39	10	-5	2	5	2	3	10	1	
CHAN STOR	-1	4	-7	-20	0	-5	-3	-3	0	1	32	-1	0	0	-4	1	3
EVAPORATION	47							3	9	11	10	5	2	2	5		
REG INFLOW	14278	328	194	425	1416	1617	1666	1722	1735	1633	695	327	153	175	770	769	654
RELEASE	14278	328	194	425	1416	1617	1666	1722	1722	1607	695	327	153	175	770	769	693
STOR CHANGE									13	26							-39
STORAGE	358	358	358	358	358	358	358	358	371	397	397	397	397	397	397	397	358
ELEV FTMSL	1206.0	1206.0	1206.0	1206.0	1206.0	1206.0	1206.0	1206.0	1206.5	1207.5	1207.5	1207.5	1207.5	1207.5	1207.5	1207.5	1206.0
DISCH KCFS	12.5	11.0	14.0	23.8	23.8	26.3	28.0	28.0	28.0	27.0	11.3	11.0	11.0	11.0	12.5	12.5	12.5
POWER																	
AVE POWER MW		39	49	82	82	90	95	95	96	94	40	39	39	39	45	44	44
PEAK POW MW		114	114	114	114	114	114	114	115	117	117	117	117	117	78	78	76
ENERGY GWH	597.4	13.9	8.2	17.6	58.7	66.8	68.6	70.9	71.3	67.5	29.9	14.1	6.6	7.5	33.1	33.0	29.6
--GAVINS POINT - SIOUX CITY--																	
NAT INFLOW	900	115	54	69	90	174	125	75	56	35	24	13	6	7	13	-3	48
DEPLETION	248	6	3	4	20	34	30	37	34	22	9	6	3	3	12	13	13
REGULATED FLOW AT SIOUX CITY																	
KAF	14930	437	245	490	1486	1757	1761	1760	1744	1620	710	334	156	178	771	753	728
KCFS		14.7	17.6	27.5	25.0	28.6	29.6	28.6	28.4	27.2	11.5	11.2	11.2	11.2	12.5	12.2	13.1
--TOTAL--																	
NAT INFLOW	19500	1114	520	668	1744	2615	4950	2682	968	850	863	390	182	208	570	431	745
DEPLETION	2663	92	43	55	193	442	1087	925	255	-105	7	-73	-34	-39	-100	-86	1
CHAN STOR	-39	40	-7	-20	-31	-27	-11	0	3	28	82	-1	-64	-17	-12	-5	3
EVAPORATION	1551							97	303	373	321	145	68	77	168		
STORAGE	33745	34370	34595	34697	34731	35120	37211	37111	35781	34771	34679	34662	34590	34565	34284	34044	34063
SYSTEM POWER																	
AVE POWER MW		455	558	791	830	940	985	1048	991	686	428	438	532	554	705	676	618
PEAK POW MW		1926	1928	1929	1928	1928	1955	2018	2000	1962	1962	1960	1960	1961	1941	1953	1953
ENERGY GWH	6559.7	163.9	93.7	170.8	597.8	699.0	709.5	779.4	737.6	493.6	318.6	157.8	89.4	106.4	524.2	502.6	415.4
DAILY GWH		10.9	13.4	19.0	19.9	22.5	23.7	25.1	23.8	16.5	10.3	10.5	12.8	13.3	16.9	16.2	14.8
	INI-SUM	15MAR	22MAR	31MAR	30APR	31MAY	30JUN	31JUL	31AUG	30SEP	31OCT	15NOV	22NOV	30NOV	31DEC	31JAN	28FEB

DATE OF STUDY 11/15/04 — 2004-2005 AOP LOWER DECILE RUNOFF SIMULATION — 99001 9901 9901 PAGE 1

TIME OF STUDY 10:57:00 — SHORTEN NAVIGATION SEASON 61-DAYS — STUDY NO 8

VALUES IN 1000 AF EXCEPT AS INDICATED

28FEB05	INI-SUM	2005 15MAR	22MAR	31MAR	30APR	31MAY	30JUN	31JUL	31AUG	30SEP	31OCT	15NOV	22NOV	30NOV	2006 31DEC	31JAN	28FEB
--FORT PECK--																	
NAT INFLOW	5100	234	109	140	515	783	996	439	253	242	320	159	74	85	271	205	275
DEPLETION	352	23	11	14	48	162	288	172	18	-64	-66	-26	-12	-14	-85	-74	-43
EVAPORATION	374							23	72	89	78	35	17	19	40		
MOD INFLOW	4374	212	99	127	467	621	708	244	163	217	308	149	69	79	316	279	318
RELEASE	5157	149	69	89	375	492	506	523	492	351	251	119	97	127	523	523	472
STOR CHANGE	-783	63	29	38	92	129	202	-279	-329	-135	57	30	-28	-48	-207	-244	-154
STORAGE	8188	8251	8280	8317	8410	8539	8741	8462	8133	7998	8055	8085	8057	8009	7802	7559	7405
ELEV FTMSL	2194.5	2194.9	2195.1	2195.4	2196.0	2196.9	2198.3	2196.4	2194.1	2193.1	2193.5	2193.7	2193.5	2193.2	2191.7	2189.9	2188.7
DISCH KCFS	7.0	5.0	5.0	5.0	6.3	8.0	8.5	8.5	8.0	5.9	4.1	4.0	7.0	8.0	8.5	8.5	8.5
POWER																	
AVE POWER MW		57	57	57	72	92	98	98	91	67	46	45	79	90	95	94	93
PEAK POW MW		121	121	121	122	124	126	123	120	118	119	119	119	118	116	113	112
ENERGY GWH	706.5	20.5	9.6	12.4	52.0	68.4	70.9	73.1	67.8	48.0	34.3	16.3	13.3	17.3	70.6	69.8	62.3
--GARRISON--																	
NAT INFLOW	7299	270	126	162	700	903	2020	1277	361	277	390	161	75	86	108	160	223
DEPLETION	1141	40	19	24	70	153	507	407	89	-73	53	-63	-29	-33	-28	-3	9
CHAN STOR	-17	23			-15	-19	-6	0	6	23	20	1	-34	-11	-6		0
EVAPORATION	438							27	86	106	91	41	19	22	46		
REG INFLOW	10860	402	177	227	990	1223	2013	1365	684	619	517	302	149	213	607	686	686
RELEASE	11814	417	180	232	875	1045	1131	1138	1107	966	615	298	208	270	1138	1168	1027
STOR CHANGE	-954	-15	-4	-5	115	177	883	228	-423	-347	-98	5	-60	-57	-531	-483	-341
STORAGE	9821	9806	9803	9798	9913	10091	10973	11201	10778	10431	10333	10338	10279	10222	9691	9209	8867
ELEV FTMSL	1804.8	1804.7	1804.7	1804.7	1805.2	1806.1	1810.2	1811.3	1809.3	1807.7	1807.3	1807.3	1807.0	1806.7	1804.2	1801.7	1799.9
DISCH KCFS	17.3	14.0	13.0	13.0	14.7	17.0	19.0	18.5	18.0	16.2	10.0	10.0	15.0	17.0	18.5	19.0	18.5
POWER																	
AVE POWER MW		139	129	129	147	170	194	191	185	165	101	101	151	170	183	184	176
PEAK POW MW		282	282	282	283	286	298	370	363	358	356	356	355	354	345	336	329
ENERGY GWH	1432.2	50.2	21.8	28.0	105.5	126.5	139.5	142.3	138.0	118.9	75.5	36.4	25.4	32.7	136.2	136.9	118.3
--OAHE--																	
NAT INFLOW	1049	197	92	118	183	100	215	82	21	64	5	-5	-2	-3	-48	-12	41
DEPLETION	597	22	10	13	46	65	126	147	96	24	-8	2	1	1	11	16	25
CHAN STOR	-7	18	5		-9	-13	-11	3	3	10	36		-29	-12	-9	-3	3
EVAPORATION	349							22	66	83	74	33	15	18	39		
REG INFLOW	11911	610	268	337	1003	1068	1208	1053	969	934	590	258	161	237	1031	1137	1046
RELEASE	12889	286	201	377	1262	1484	1447	1713	1537	440	666	319	148	169	952	966	920
STOR CHANGE	-978	324	67	-40	-259	-417	-239	-659	-568	494	-76	-61	13	68	79	171	126
STORAGE	10336	10659	10726	10686	10427	10010	9771	9112	8544	9038	8962	8901	8914	8981	9061	9232	9358
ELEV FTMSL	1573.2	1574.8	1575.2	1575.0	1573.7	1571.5	1570.2	1566.5	1563.1	1566.0	1565.6	1565.2	1565.3	1565.7	1566.2	1567.2	1567.9
DISCH KCFS	17.3	9.6	14.5	21.1	21.2	24.1	24.3	27.9	25.0	7.4	10.8	10.7	10.7	10.7	15.5	15.7	16.6
POWER																	
AVE POWER MW		103	156	227	227	255	254	285	250	75	110	108	108	108	157	160	170
PEAK POW MW		542	544	543	536	524	517	498	481	496	494	492	492	494	497	502	505
ENERGY GWH	1609.1	37.1	26.1	49.0	163.1	189.5	182.6	212.3	186.1	53.7	81.8	39.0	18.1	20.8	116.7	119.1	114.0
--BIG BEND--																	
EVAPORATION	129							8	24	31	27	12	6	7	14		
REG INFLOW	12760	286	201	377	1262	1484	1447	1705	1513	409	639	306	142	163	938	966	920
RELEASE	12760	286	201	377	1262	1484	1447	1705	1513	409	639	306	142	163	938	966	920
STORAGE	1681	1681	1681	1681	1681	1681	1681	1681	1681	1681	1681	1681	1681	1681	1681	1681	1681
ELEV FTMSL	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0
DISCH KCFS	17.3	9.6	14.5	21.1	21.2	24.1	24.3	27.7	24.6	6.9	10.4	10.3	10.3	10.3	15.3	15.7	16.6
POWER																	
AVE POWER MW		45	68	99	99	113	114	130	116	35	53	52	52	52	76	77	80
PEAK POW MW		514	510	509	509	509	509	509	518	538	538	538	538	538	538	538	529
ENERGY GWH	739.4	16.3	11.4	21.4	71.5	84.1	82.0	96.5	86.6	25.1	39.1	18.8	8.7	10.0	56.9	57.5	53.4
--FORT RANDALL--																	
NAT INFLOW	300	55	26	33	43	35	120	13	36	-10	-52	-3	-1	-1		-6	12
DEPLETION	80	1	1	1	4	9	12	18	15	7	1	1	0	1	3	3	3
EVAPORATION	128							10	31	32	22	10	5	5	12		
REG INFLOW	12841	340	226	410	1301	1510	1555	1690	1503	350	563	293	136	156	922	957	929
RELEASE	13080	235	160	393	1301	1510	1555	1690	1677	1429	564	293	136	156	719	707	555
STOR CHANGE	-239	105	66	17				0	-174	-1079	0	0	0	0	203	250	374
STORAGE	3361	3466	3532	3549	3549	3549	3549	3549	3375	2296	2295	2295	2295	2295	2498	2748	3122
ELEV FTMSL	1353.0	1354.2	1355.0	1355.2	1355.2	1355.2	1355.2	1355.2	1353.1	1337.5	1337.5	1337.5	1337.5	1337.5	1340.9	1344.8	1350.0
DISCH KCFS	10.0	7.9	11.5	22.0	21.9	24.6	26.1	27.5	27.3	24.0	9.2	9.9	9.8	9.8	11.7	11.5	10.0
POWER																	
AVE POWER MW		67	97	186	185	207	220	231	228	186	67	72	72	72	87	88	80
PEAK POW MW		352	354	355	355	355	355	355	348	282	283	283	283	283	299	317	338
ENERGY GWH	1286.2	23.9	16.4	40.1	132.9	154.0	158.4	172.0	169.3	134.0	49.8	25.9	12.0	13.8	64.5	65.5	53.6
--GAVINS POINT--																	
NAT INFLOW	1200	87	41	52	120	131	138	76	76	55	104	45	21	24	67	65	98
DEPLETION	114	0	0	0	5	19	24	39	10	-5	2	5	2	3	10	1	
CHAN STOR	-1	4	-7	-20	0	-5	-3	-3	0	6	27	-1	0	0	-4	0	3
EVAPORATION	47							3	9	11	10	5	2	2	5		
REG INFLOW	14118	327	194	425	1416	1617	1666	1722	1735	1484	683	327	153	175	768	771	656
RELEASE	14118	327	194	425	1416	1617	1666	1722	1722	1458	683	327	153	175	768	771	695
STOR CHANGE									13	26							-39
STORAGE	358	358	358	358	358	358	358	358	371	397	397	397	397	397	397	397	358
ELEV FTMSL	1206.0	1206.0	1206.0	1206.0	1206.0	1206.0	1206.0	1206.0	1206.5	1207.5	1207.5	1207.5	1207.5	1207.5	1207.5	1207.5	1206.0
DISCH KCFS	12.5	11.0	14.0	23.8	23.8	26.3	28.0	28.0	28.0	24.5	11.1	11.0	11.0	11.0	12.5	12.5	12.5
POWER																	
AVE POWER MW		38	49	82	82	90	95	95	96	85	40	39	39	39	44	45	44
PEAK POW MW		114	114	114	114	114	114	114	115	117	117	117	117	117	78	78	76
ENERGY GWH	591.0	13.9	8.2	17.6	58.7	66.8	68.6	70.9	71.3	61.5	29.4	14.1	6.6	7.5	33.0	33.2	29.7
--GAVINS POINT - SIOUX CITY--																	
NAT INFLOW	550	36	17	22	77	144	106	47	22	15	14	10	4	5	10	-5	26
DEPLETION	248	6	3	4	20	34	30	37	34	22	9	6	3	3	12	13	13
REGULATED FLOW AT SIOUX CITY																	
KAF	14420	357	208	443	1473	1727	1742	1732	1710	1451	688	331	155	177	766	753	708
KCFS		12.0	15.0	24.8	24.8	28.1	29.3	28.2	27.8	24.4	11.2	11.1	11.1	11.1	12.5	12.3	12.8
--TOTAL--																	
NAT INFLOW	15498	880	411	528	1638	2096	3595	1934	769	643	781	367	171	195	408	407	675
DEPLETION	2532	92	43	55	193	442	987	820	262	-89	-9	-75	-35	-40	-77	-44	7
CHAN STOR	-36	45	-2	-20	-24	-37	-20	0	9	30	84	0	-63	-23	-18	-3	6
EVAPORATION	1464							93	287	352	302	137	64	73	157		
STORAGE	33745	34222	34380	34390	34338	34228	35074	34364	32882	31841	31725	31698	31623	31586	31131	30826	30791
SYSTEM POWER																	
AVE POWER MW		450	556	780	811	927	975	1031	966	613	417	418	501	531	642	648	642
PEAK POW MW		1925	1925	1924	1920	1912	1919	1970	1947	1909	1907	1905	1904	1905	1873	1884	1889
ENERGY GWH	6364.1	161.9	93.4	168.4	583.7	689.3	702.0	767.1	719.0	441.3	310.0	150.5	84.1	102.0	478.0	482.0	431.4
DAILY GWH		10.8	13.3	18.7	19.5	22.2	23.4	24.8	23.2	14.7	10.0	10.0	12.0	12.8	15.4	15.6	15.4
	INI-SUM	15MAR	22MAR	31MAR	30APR	31MAY	30JUN	31JUL	31AUG	30SEP	31OCT	15NOV	22NOV	30NOV	31DEC	31JAN	28FEB

DATE OF STUDY 11/15/04 2004-2005 AOP EXTENSIONS, UPPER DECILE RUNOFF SIMULATION 99001 9901 9901

STUDY NO 9

TIME OF STUDY 10:44:39

VALUES IN 1000 AF EXCEPT AS INDICATED

28FEB06	INI-SUM	15MAR	2006 22MAR	31MAR	30APR	31MAY	30JUN	31JUL	31AUG	30SEP	31OCT	15NOV	22NOV	2007 30NOV	31DEC	31JAN	28FEB
--FORT PECK--																	
NAT INFLOW	8634	287	134	172	717	1443	2240	1096	410	341	477	189	88	101	311	267	360
DEPLETION	398	6	3	3	85	319	486	163	-70	-113	-67	-24	-11	-13	-125	-150	-95
EVAPORATION	315							21	67	83	72	17	8	9	37		
MOD INFLOW	7921	282	131	169	632	1124	1754	912	413	371	472	195	91	104	399	417	455
RELEASE	7288	179	83	143	536	615	762	676	646	595	517	250	125	143	615	738	666
STOR CHANGE	633	103	48	26	96	509	992	236	-232	-224	-45	-55	-34	-39	-216	-321	-211
STORAGE	13791	13895	13943	13969	14065	14574	15567	15802	15570	15346	15300	15246	15212	15173	14957	14636	14425
ELEV FTMSL	2228.1	2228.6	2228.8	2229.0	2229.5	2232.0	2236.7	2237.7	2236.7	2235.6	2235.4	2235.2	2235.0	2234.8	2233.8	2232.3	2231.3
DISCH KCFS	6.5	6.0	6.0	8.0	9.0	10.0	12.8	11.0	10.5	10.0	8.4	8.4	9.0	9.0	10.0	12.0	12.0
POWER																	
AVE POWER MW		80	81	107	121	134	174	151	144	137	115	115	123	123	136	162	162
PEAK POW MW		158	158	159	205	207	210	211	210	210	209	209	209	209	208	207	206
ENERGY GWH	1197.2	29.0	13.5	23.2	86.8	100.1	125.1	112.2	107.2	98.5	85.5	41.3	20.6	23.6	101.2	120.8	108.7
--GARRISON--																	
NAT INFLOW	12574	457	213	274	1218	1713	3126	2344	744	509	578	230	107	123	246	308	384
DEPLETION	1071	41	19	25	-5	128	859	637	67	-122	-25	-107	-50	-57	-135	-124	-80
CHAN STOR	-57	5		-21	-10	-10	-28	18	5	5	16	0	-6		-10	-20	
EVAPORATION	357							23	75	94	82	20	9	10	43		
REG INFLOW	18378	599	277	371	1748	2190	3000	2378	1253	1137	1053	568	267	312	943	1150	1130
RELEASE	14856	476	236	303	1220	1383	1369	1383	1353	1160	1049	508	250	301	1230	1383	1250
STOR CHANGE	3522	123	41	68	528	806	1632	995	-100	-24	4	60	17	11	-287	-233	-119
STORAGE	14846	14970	15011	15079	15607	16413	18045	19040	18940	18916	18920	18980	18997	19008	18721	18488	18369
ELEV FTMSL	1826.1	1826.5	1826.7	1827.0	1828.9	1831.8	1837.3	1840.4	1840.1	1840.1	1840.1	1840.3	1840.3	1840.3	1839.5	1838.7	1838.3
DISCH KCFS	20.0	16.0	17.0	17.0	20.5	22.5	23.0	22.5	22.0	19.5	17.1	17.1	18.0	19.0	20.0	22.5	22.5
POWER																	
AVE POWER MW		185	197	197	239	266	279	281	277	246	215	215	227	240	251	281	280
PEAK POW MW		426	427	428	435	445	466	477	476	476	476	476	477	477	473	471	469
ENERGY GWH	2211.3	66.6	33.1	42.6	171.9	197.9	201.1	208.9	206.1	176.8	160.2	77.6	38.2	46.0	187.1	209.2	188.3
--OAHE--																	
NAT INFLOW	3025	439	205	263	372	273	692	233	97	128	80	86	40	46	17	8	47
DEPLETION	597	22	10	13	46	65	126	147	96	24	-8	2	1	1	11	16	25
CHAN STOR	-10	17	-4		-15	-8	-2	2	2	10	10		-4	-4	-4	-11	
EVAPORATION	322							22	69	85	73	17	8	9	38		
REG INFLOW	16952	910	426	553	1531	1583	1933	1449	1287	1190	1075	574	277	333	1193	1365	1272
RELEASE	16006	437	233	292	956	1348	1627	1858	1927	1693	1200	583	269	249	1297	1162	875
STOR CHANGE	945	474	193	261	575	235	306	-409	-640	-503	-126	-9	8	84	-103	203	396
STORAGE	16332	16806	16999	17260	17835	18070	18376	17968	17328	16825	16699	16690	16698	16782	16678	16881	17277
ELEV FTMSL	1599.0	1600.7	1601.3	1602.2	1604.2	1605.0	1606.0	1604.7	1602.5	1600.7	1600.3	1600.3	1600.3	1600.6	1600.2	1600.9	1602.3
DISCH KCFS	11.1	14.7	16.8	16.4	16.1	21.9	27.3	30.2	31.3	28.5	19.5	19.6	19.4	15.7	21.1	18.9	15.8
POWER																	
AVE POWER MW		182	210	206	203	279	349	385	395	355	243	244	241	196	262	236	198
PEAK POW MW		674	678	683	693	697	703	695	684	675	672	672	672	674	672	676	683
ENERGY GWH	2437.2	65.6	35.2	44.4	146.4	207.7	251.3	286.4	294.1	256.0	180.9	87.8	40.5	37.6	195.2	175.2	132.9
--BIG BEND--																	
EVAPORATION	71							5	15	19	16	4	2	2	9		
REG INFLOW	15936	437	233	292	956	1348	1627	1853	1912	1675	1184	579	267	247	1288	1162	875
RELEASE	15936	437	233	292	956	1348	1627	1853	1912	1675	1184	579	267	247	1288	1162	875
STORAGE	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682
ELEV FTMSL	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0
DISCH KCFS	11.1	14.7	16.8	16.4	16.1	21.9	27.3	30.1	31.1	28.1	19.3	19.5	19.3	15.6	21.0	18.9	15.8
POWER																	
AVE POWER MW		70	78	77	75	103	128	141	146	133	94	98	97	78	103	92	76
PEAK POW MW		517	509	509	509	509	509	509	509	517	538	538	538	538	538	538	529
ENERGY GWH	919.5	25.0	13.2	16.6	54.1	76.4	92.1	104.9	108.3	96.0	70.3	35.1	16.3	15.1	76.9	68.4	50.8
--FORT RANDALL--																	
NAT INFLOW	1144	145	67	87	227	121	171	85	55	70	46	4	2	2	17	8	37
DEPLETION	80	1	1	1	4	9	12	18	15	7	1	1	0	1	3	3	3
EVAPORATION	82							6	19	24	18	4	2	2	8		
REG INFLOW	16919	580	300	378	1179	1460	1786	1914	1933	1714	1211	579	267	247	1294	1167	909
RELEASE	16918	289	166	378	1179	1460	1786	1914	1933	1858	1848	883	412	269	928	910	705
STOR CHANGE	0	291	134					0	0	-144	-637	-304	-145	-22	366	257	204
STORAGE	3124	3415	3549	3549	3549	3549	3549	3549	3549	3405	2768	2464	2319	2297	2663	2920	3124
ELEV FTMSL	1350.0	1353.6	1355.2	1355.2	1355.2	1355.2	1355.2	1355.2	1355.2	1353.5	1345.1	1340.4	1337.9	1337.5	1343.5	1347.2	1350.0
DISCH KCFS	8.3	9.7	11.9	21.2	19.8	23.8	30.0	31.1	31.4	31.2	30.0	29.7	29.7	17.0	15.1	14.8	12.7
POWER																	
AVE POWER MW		80	101	179	167	200	252	261	264	260	240	224	217	123	113	116	102
PEAK POW MW		350	355	355	355	355	355	355	355	349	318	297	285	284	312	328	338
ENERGY GWH	1671.8	28.9	16.9	38.7	120.6	149.0	181.5	194.4	196.3	187.4	178.7	80.6	36.4	23.7	84.0	86.0	68.7
--GAVINS POINT--																	
NAT INFLOW	1814	86	40	52	198	257	226	170	137	109	126	49	23	26	77	85	154
DEPLETION	114	0	0	0	5	19	24	39	10	-5	2	5	2	3	10	1	
CHAN STOR	-10	-3	-4	-18	3	-8	-12	-2	-1	0	2	1	0	24	3	1	4
EVAPORATION	26							2	5	7	6	1	1	1	3		
REG INFLOW	18583	373	202	413	1374	1691	1976	2041	2054	1966	1968	925	432	315	996	995	863
RELEASE	18583	373	202	413	1374	1691	1976	2041	2041	1940	1968	925	432	315	996	995	902
STOR CHANGE									13	26							-39
STORAGE	358	358	358	358	358	358	358	358	371	397	397	397	397	397	397	397	358
ELEV FTMSL	1206.0	1206.0	1206.0	1206.0	1206.0	1206.0	1206.0	1206.0	1206.5	1207.5	1207.5	1207.5	1207.5	1207.5	1207.5	1207.5	1206.0
DISCH KCFS	12.5	12.5	14.5	23.1	23.1	27.5	33.2	33.2	33.2	32.6	32.0	31.1	31.1	19.9	16.2	16.2	16.2
POWER																	
AVE POWER MW		44	51	79	79	94	108	108	109	109	108	106	106	70	57	57	57
PEAK POW MW		114	114	114	114	114	114	114	115	117	117	117	117	117	78	78	76
ENERGY GWH	759.5	15.8	8.5	17.1	57.1	69.7	77.9	80.5	80.8	78.3	80.6	38.2	17.8	13.4	42.6	42.6	38.4
--GAVINS POINT - SIOUX CITY--																	
NAT INFLOW	2309	145	68	87	749	412	237	183	137	95	49	19	9	10	22	9	78
DEPLETION	248	6	3	4	20	34	30	37	34	22	9	6	3	3	12	13	13
REGULATED FLOW AT SIOUX CITY																	
KAF	20644	511	267	496	2103	2069	2183	2187	2144	2013	2008	939	438	322	1006	991	967
KCFS		17.2	19.2	27.8	35.3	33.6	36.7	35.6	34.9	33.8	32.7	31.6	31.6	20.3	16.4	16.1	17.4
--TOTAL--																	
NAT INFLOW	29500	1559	727	935	3481	4219	6692	4111	1580	1252	1356	576	269	307	690	685	1060
DEPLETION	2508	76	36	46	155	574	1537	1041	152	-187	-88	-118	-55	-63	-224	-241	-134
CHAN STOR	-76	20	-9	-39	-22	-26	-43	18	6	16	28	1	-10	20	-11	-30	4
EVAPORATION	1171							79	249	311	269	63	29	33	138		
STORAGE	50133	51125	51541	51896	53096	54646	57576	58398	57439	56570	55766	55458	55305	55339	55098	55004	55234
SYSTEM POWER																	
AVE POWER MW		642	717	845	885	1076	1290	1327	1334	1240	1016	1002	1011	830	923	944	875
PEAK POW MW		2240	2242	2247	2311	2328	2357	2362	2349	2343	2330	2309	2298	2298	2281	2298	2301
ENERGY GWH	9196.5	231.0	120.4	182.6	636.9	800.7	928.8	987.4	992.8	893.0	756.1	360.7	169.9	159.3	687.0	702.2	587.7
DAILY GWH		15.4	17.2	20.3	21.2	25.8	31.0	31.9	32.0	29.8	24.4	24.0	24.3	19.9	22.2	22.7	21.0
	INI-SUM	15MAR	22MAR	31MAR	30APR	31MAY	30JUN	31JUL	31AUG	30SEP	31OCT	15NOV	22NOV	30NOV	31DEC	31JAN	28FEB

STUDY NO 10

TIME OF STUDY 10:44:40

VALUES IN 1000 AF EXCEPT AS INDICATED

	28FEB07 INI-SUM	15MAR	2007 22MAR	31MAR	30APR	31MAY	30JUN	31JUL	31AUG	30SEP	31OCT	15NOV	22NOV	2008 30NOV	31DEC	31JAN	29FEB
--FORT PECK--																	
NAT INFLOW	8363	278	130	167	694	1397	2170	1062	398	330	462	183	85	98	301	259	349
DEPLETION	398	6	3	3	85	319	486	163	-70	-113	-67	-24	-11	-13	-125	-150	-95
EVAPORATION	312							21	66	83	72	17	8	9	37		
MOD INFLOW	7653	272	127	163	609	1078	1684	878	402	360	457	190	88	101	389	409	444
RELEASE	8044	208	97	143	565	676	1083	738	707	595	602	291	136	159	615	738	690
STOR CHANGE	-391	64	30	21	44	402	601	140	-305	-235	-145	-102	-47	-58	-226	-329	-246
STORAGE	14425	14489	14519	14539	14583	14985	15586	15726	15420	15186	15041	14939	14892	14834	14609	14280	14034
ELEV FTMSL	2231.3	2231.6	2231.7	2231.8	2232.0	2233.9	2236.7	2237.4	2236.0	2234.9	2234.2	2233.7	2233.5	2233.2	2232.2	2230.5	2229.3
DISCH KCFS	12.0	7.0	7.0	8.0	9.5	11.0	18.2	12.0	11.5	10.0	9.8	9.8	9.8	10.0	10.0	12.0	12.0
POWER																	
AVE POWER MW		94	95	108	128	149	209	164	157	136	133	133	133	136	135	162	161
PEAK POW MW		207	207	207	207	208	210	211	210	209	208	208	208	208	207	206	205
ENERGY GWH	1292.9	34.0	15.9	23.3	92.4	110.8	150.5	122.3	117.1	98.3	99.2	47.9	22.3	26.0	100.7	120.2	111.9
--GARRISON--																	
NAT INFLOW	12238	444	207	266	1186	1667	3043	2281	724	495	562	224	105	119	240	300	374
DEPLETION	1071	41	19	25	-5	128	859	637	67	-122	-25	-107	-50	-57	-135	-124	-80
CHAN STOR	-2	49		-10	-15	-15	-71	60	5	14	2		0	-2	0	-20	
EVAPORATION	375							25	81	100	85	20	9	11	43		
REG INFLOW	18835	661	285	375	1741	2201	3196	2416	1288	1127	1106	602	281	323	946	1142	1144
RELEASE	19096	565	264	428	1607	1783	1726	1783	1783	1726	1655	801	333	317	1230	1599	1496
STOR CHANGE	-261	96	21	-54	135	417	1471	633	-495	-599	-550	-199	-52	5	-283	-456	-351
STORAGE	18369	18464	18486	18432	18567	18984	20455	21088	20593	19994	19444	19245	19193	19199	18915	18459	18108
ELEV FTMSL	1838.3	1838.6	1838.7	1838.5	1839.0	1840.3	1844.7	1846.5	1845.1	1843.3	1841.7	1841.1	1840.9	1840.9	1840.1	1838.6	1837.5
DISCH KCFS	22.5	19.0	19.0	24.0	27.0	29.0	29.0	29.0	29.0	29.0	26.9	26.9	24.0	20.0	20.0	26.0	26.0
POWER																	
AVE POWER MW		237	237	299	336	362	367	373	374	370	341	340	303	253	252	325	322
PEAK POW MW		471	471	470	472	477	499	500	499	497	481	479	479	479	476	470	466
ENERGY GWH	2917.1	85.3	39.9	64.6	241.9	269.6	264.2	277.6	277.9	266.7	253.8	122.5	50.9	48.5	187.8	241.7	224.3
--OAHE--																	
NAT INFLOW	2854	414	193	248	351	257	653	220	91	121	76	81	38	43	16	7	44
DEPLETION	597	22	10	13	46	65	126	147	96	24	-8	2	1	1	11	16	25
CHAN STOR	-15	15		-21	-12	-8					8		11	15	0	-23	
EVAPORATION	362							24	76	95	83	20	9	11	44		
REG INFLOW	20976	972	447	643	1899	1967	2253	1832	1702	1728	1664	860	372	364	1191	1566	1515
RELEASE	18462	556	283	350	1149	1456	1753	1980	2046	1845	1393	704	325	516	1570	1403	1133
STOR CHANGE	2514	416	163	293	751	511	499	-148	-344	-117	271	156	47	-151	-379	163	382
STORAGE	17277	17693	17857	18150	18901	19412	19912	19763	19419	19301	19573	19729	19777	19625	19246	19410	19792
ELEV FTMSL	1602.3	1603.7	1604.3	1605.3	1607.7	1609.3	1610.9	1610.4	1609.3	1609.0	1609.8	1610.3	1610.4	1610.0	1608.8	1609.3	1610.5
DISCH KCFS	15.8	18.7	20.4	19.6	19.3	23.7	29.5	32.2	33.3	31.0	22.7	23.7	23.4	32.5	25.5	22.8	19.7
POWER																	
AVE POWER MW		236	259	250	248	308	385	422	434	403	296	310	307	425	333	297	258
PEAK POW MW		691	693	699	712	720	728	726	720	718	723	725	726	724	717	720	726
ENERGY GWH	2907.3	85.0	43.5	53.9	178.9	228.8	277.2	313.8	322.9	290.3	220.0	111.5	51.5	81.5	247.8	221.2	179.5
--BIG BEND--																	
EVAPORATION	71							5	15	19	16	4	2	2	9		
REG INFLOW	18391	556	283	350	1149	1456	1753	1976	2032	1827	1377	700	323	514	1562	1403	1133
RELEASE	18391	556	283	350	1149	1456	1753	1976	2032	1827	1377	700	323	514	1562	1403	1133
STORAGE	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682
ELEV FTMSL	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0
DISCH KCFS	15.8	18.7	20.4	19.6	19.3	23.7	29.5	32.1	33.0	30.7	22.4	23.5	23.3	32.4	25.4	22.8	19.7
POWER																	
AVE POWER MW		89	96	92	90	111	138	150	155	145	110	118	116	161	125	111	94
PEAK POW MW		517	509	509	509	509	509	509	509	517	538	538	538	538	538	538	529
ENERGY GWH	1061.7	31.9	16.1	19.8	65.1	82.5	99.3	111.9	115.0	104.7	81.6	42.3	19.6	30.9	93.0	82.5	65.7
--FORT RANDALL--																	
NAT INFLOW	1087	138	64	83	216	115	162	81	52	67	44	4	2	2	16	7	35
DEPLETION	80	1	1	1	4	9	12	18	15	7	1	1	0	1	3	3	3
EVAPORATION	82							6	19	24	18	4	2	2	8		
REG INFLOW	19316	692	347	432	1361	1562	1903	2033	2050	1863	1401	699	322	512	1567	1407	1165
RELEASE	19316	402	213	432	1361	1562	1903	2033	2050	2007	2038	1003	467	534	1201	1150	961
STOR CHANGE	0	291	134					0	0	-144	-637	-304	-145	-22	366	257	204
STORAGE	3124	3415	3549	3549	3549	3549	3549	3549	3549	3405	2768	2464	2319	2297	2663	2920	3124
ELEV FTMSL	1350.0	1353.6	1355.2	1355.2	1355.2	1355.2	1355.2	1355.2	1355.2	1353.5	1345.1	1340.4	1337.9	1337.5	1343.5	1347.2	1350.0
DISCH KCFS	12.7	13.5	15.3	24.2	22.9	25.4	32.0	33.1	33.3	33.7	33.1	33.7	33.7	33.7	19.5	18.7	16.7
POWER																	
AVE POWER MW		112	129	204	193	214	268	277	279	281	264	254	245	242	146	146	134
PEAK POW MW		350	355	355	355	355	355	355	355	349	318	297	285	284	312	328	338
ENERGY GWH	1899.2	40.1	21.7	44.0	138.9	159.2	193.2	206.2	207.9	202.1	196.8	91.4	41.2	46.5	108.3	108.4	93.2
--GAVINS POINT--																	
NAT INFLOW	1731	82	38	49	189	245	216	162	131	104	121	46	21	25	73	81	147
DEPLETION	114	0	0	0	5	19	24	39	10	-5	2	5	2	3	10	1	
CHAN STOR	-9	-2	-4	-17	3	-5	-13	-2	-1	-1	1	-1	0	0	26	2	4
EVAPORATION	26							2	5	7	6	1	1	1	3		
REG INFLOW	20899	483	248	464	1547	1783	2083	2152	2165	2109	2152	1041	486	555	1287	1231	1111
RELEASE	20899	483	248	464	1547	1783	2083	2152	2152	2083	2152	1041	486	555	1287	1231	1150
STOR CHANGE									13	26							-39
STORAGE	358	358	358	358	358	358	358	358	371	397	397	397	397	397	397	397	358
ELEV FTMSL	1206.0	1206.0	1206.0	1206.0	1206.0	1206.0	1206.0	1206.0	1206.5	1207.5	1207.5	1207.5	1207.5	1207.5	1207.5	1207.5	1206.0
DISCH KCFS	16.2	16.2	17.9	26.0	26.0	29.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	20.9	20.0	20.0
POWER																	
AVE POWER MW		56	62	89	89	99	112	112	112	114	115	115	115	115	72	70	69
PEAK POW MW		114	114	114	114	114	114	114	115	117	117	117	117	117	78	78	76
ENERGY GWH	839.0	20.3	10.4	19.2	63.9	73.3	80.6	83.3	83.7	82.0	85.5	41.4	19.3	22.1	53.8	52.0	48.3
--GAVINS POINT - SIOUX CITY--																	
NAT INFLOW	2127	134	62	80	690	380	218	169	126	87	45	18	8	9	21	8	72
DEPLETION	248	6	3	4	20	34	30	37	34	22	9	6	3	3	12	13	13
REGULATED FLOW AT SIOUX CITY																	
KAF	22778	610	307	541	2217	2129	2271	2284	2244	2148	2188	1053	492	562	1296	1226	1209
KCFS		20.5	22.1	30.3	37.3	34.6	38.2	37.1	36.5	36.1	35.6	35.4	35.4	35.4	21.1	19.9	21.0
--TOTAL--																	
NAT INFLOW	28400	1491	695	894	3326	4061	6462	3975	1522	1204	1310	555	259	296	667	662	1021
DEPLETION	2508	76	36	46	155	574	1537	1041	152	-187	-88	-118	-55	-63	-224	-241	-134
CHAN STOR	-26	63	-4	-47	-24	-28	-83	57	4	14	11	-1	11	12	26	-42	4
EVAPORATION	1226							83	262	326	281	66	31	35	143		
STORAGE	55234	56101	56450	56710	57639	58969	61541	62165	61034	59965	58905	58457	58260	58034	57512	57147	57096
SYSTEM POWER																	
AVE POWER MW		824	878	1041	1085	1242	1479	1499	1512	1450	1259	1269	1219	1331	1064	1110	1039
PEAK POW MW		2348	2349	2354	2368	2383	2415	2415	2409	2408	2385	2364	2353	2349	2328	2340	2340
ENERGY GWH	10917.3	296.6	147.4	224.9	781.0	924.2	1065.1	1115.1	1124.6	1044.1	936.7	457.0	204.9	255.6	791.3	825.9	722.9
DAILY GWH		19.8	21.1	25.0	26.0	29.8	35.5	36.0	36.3	34.8	30.2	30.5	29.3	31.9	25.5	26.6	24.9
	INI-SUM	15MAR	22MAR	31MAR	30APR	31MAY	30JUN	31JUL	31AUG	30SEP	31OCT	15NOV	22NOV	30NOV	31DEC	31JAN	29FEB

DATE OF STUDY 11/15/04 2004-2005 AOP EXTENSIONS, UPPER DECILE RUNOFF SIMULATION 99001 9901 9901 PAGE 1

STUDY NO 11

TIME OF STUDY 10:44:40

VALUES IN 1000 AF EXCEPT AS INDICATED

29FEB08	INI-SUM	15MAR	2008 22MAR	31MAR	30APR	31MAY	30JUN	31JUL	31AUG	30SEP	31OCT	15NOV	22NOV	2009 30NOV	31DEC	31JAN	28FEB
--FORT PECK--																	
NAT INFLOW	8266	275	128	165	686	1381	2144	1050	393	326	457	181	84	97	298	256	345
DEPLETION	398	6	3	3	85	319	486	163	-70	-113	-67	-24	-11	-13	-125	-150	-95
EVAPORATION	329							22	69	86	76	18	8	10	40		
MOD INFLOW	7539	269	126	161	601	1062	1658	865	394	353	448	186	87	99	383	406	440
RELEASE	5677	179	83	125	446	523	565	553	523	357	320	155	72	111	553	584	528
STOR CHANGE	1862	91	42	36	155	539	1093	312	-128	-4	128	32	15	-12	-170	-178	-88
STORAGE	14034	14124	14166	14203	14358	14897	15990	16302	16173	16169	16297	16329	16343	16332	16161	15983	15896
ELEV FTMSL	2229.3	2229.8	2230.0	2230.2	2230.9	2233.5	2238.6	2240.0	2239.4	2239.4	2239.9	2240.1	2240.1	2240.1	2239.3	2238.5	2238.2
DISCH KCFS	12.0	6.0	6.0	7.0	7.5	8.5	9.5	9.0	8.5	6.0	5.2	5.2	5.2	7.0	9.0	9.5	9.5
POWER																	
AVE POWER MW		81	81	94	101	115	130	124	118	83	72	72	72	97	124	131	131
PEAK POW MW		205	205	205	206	208	212	213	212	212	213	213	213	213	212	212	211
ENERGY GWH	942.7	29.0	13.5	20.3	72.7	85.5	93.5	92.5	87.5	59.8	53.6	26.0	12.1	18.6	92.6	97.5	87.9
--GARRISON--																	
NAT INFLOW	12113	440	205	264	1174	1650	3012	2258	717	490	556	222	103	118	237	297	370
DEPLETION	1071	41	19	25	-5	128	859	637	67	-122	-25	-107	-50	-57	-135	-124	-80
CHAN STOR	24	60		-10	-5	-10	-10	5	5	24	8	0		-18	-20	-5	
EVAPORATION	364							25	79	97	83	19	9	10	42		
REG INFLOW	16379	637	269	354	1620	2035	2709	2154	1098	896	826	464	217	258	864	1000	978
RELEASE	17279	536	250	357	1309	1537	1636	1691	1691	1577	1312	635	305	317	1230	1506	1388
STOR CHANGE	-900	101	19	-3	311	498	1072	463	-592	-681	-487	-171	-89	-59	-366	-506	-411
STORAGE	18108	18209	18228	18225	18537	19034	20106	20570	19977	19296	18810	18638	18550	18491	18125	17618	17208
ELEV FTMSL	1837.5	1837.8	1837.9	1837.9	1838.9	1840.4	1843.7	1845.0	1843.3	1841.2	1839.7	1839.2	1838.9	1838.7	1837.5	1835.9	1834.5
DISCH KCFS	26.0	18.0	18.0	20.0	22.0	25.0	27.5	27.5	27.5	26.5	21.3	21.3	22.0	20.0	20.0	24.5	25.0
POWER																	
AVE POWER MW		224	224	248	274	313	348	352	351	335	269	267	275	250	249	301	304
PEAK POW MW		468	468	468	471	477	498	499	497	479	474	473	471	471	466	460	455
ENERGY GWH	2621.4	80.5	37.6	53.7	197.1	232.9	250.4	261.7	261.4	241.5	200.3	96.3	46.2	48.0	185.1	224.2	204.6
--OAHE--																	
NAT INFLOW	2793	405	189	243	344	252	639	215	90	118	74	79	37	42	16	7	43
DEPLETION	597	22	10	13	46	65	126	147	96	24	-8	2	1	1	11	16	25
CHAN STOR	4	31		-8	-8	-11	-9			4	20		-3	8	0	-18	-2
EVAPORATION	365							25	78	97	84	20	9	11	43		
REG INFLOW	19113	949	428	579	1600	1713	2140	1734	1607	1578	1331	693	330	356	1192	1480	1404
RELEASE	20072	672	362	481	1572	1829	1748	1985	2050	1849	1397	704	325	516	1733	1587	1262
STOR CHANGE	-959	277	66	98	28	-116	391	-251	-443	-271	-66	-12	5	-160	-541	-108	143
STORAGE	19792	20068	20135	20233	20261	20145	20537	20286	19843	19571	19505	19493	19498	19338	18797	18690	18833
ELEV FTMSL	1610.5	1611.3	1611.5	1611.8	1611.9	1611.6	1612.7	1612.0	1610.6	1609.8	1609.6	1609.6	1609.6	1609.1	1607.4	1607.0	1607.5
DISCH KCFS	19.7	22.6	26.1	26.9	26.4	29.7	29.4	32.3	33.3	31.1	22.7	23.7	23.4	32.5	28.2	25.8	22.7
POWER																	
AVE POWER MW		297	344	355	349	392	388	426	438	406	297	309	306	423	365	333	293
PEAK POW MW		730	731	733	733	732	738	734	727	723	722	721	722	719	710	708	710
ENERGY GWH	3180.0	107.0	57.7	76.7	251.0	291.6	279.4	317.2	325.9	292.5	221.0	111.3	51.3	81.2	271.6	247.6	197.1
--BIG BEND--																	
EVAPORATION	71							5	15	19	16	4	2	2	9		
REG INFLOW	20002	672	362	481	1572	1829	1748	1980	2036	1831	1381	701	323	514	1725	1587	1262
RELEASE	20002	672	362	481	1572	1829	1748	1980	2036	1831	1381	701	323	514	1725	1587	1262
STORAGE	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682
ELEV FTMSL	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0
DISCH KCFS	19.7	22.6	26.1	26.9	26.4	29.7	29.4	32.2	33.1	30.8	22.5	23.5	23.3	32.4	28.0	25.8	22.7
POWER																	
AVE POWER MW		107	122	126	124	139	138	151	155	146	110	118	117	161	138	125	109
PEAK POW MW		517	509	509	509	509	509	509	509	517	538	538	538	538	538	538	529
ENERGY GWH	1153.6	38.5	20.5	27.2	89.0	103.6	99.0	112.1	115.3	104.9	81.8	42.4	19.6	30.9	102.5	93.2	73.1
--FORT RANDALL--																	
NAT INFLOW	1065	135	63	81	212	113	159	79	51	65	43	4	2	2	16	7	34
DEPLETION	80	1	1	1	4	9	12	18	15	7	1	1	0	1	3	3	3
EVAPORATION	82							6	19	24	18	4	2	2	8		
REG INFLOW	20904	806	424	561	1780	1933	1895	2035	2053	1865	1404	699	323	513	1730	1591	1293
RELEASE	20904	515	290	561	1780	1933	1895	2035	2053	2009	2041	1003	468	535	1364	1334	1089
STOR CHANGE	0	291	134					0	0	-144	-637	-304	-145	-22	366	257	204
STORAGE	3124	3415	3549	3549	3549	3549	3549	3549	3549	3405	2768	2464	2319	2297	2663	2920	3124
ELEV FTMSL	1350.0	1353.6	1355.2	1355.2	1355.2	1355.2	1355.2	1355.2	1355.2	1353.5	1345.1	1340.4	1337.9	1337.5	1343.5	1347.2	1350.0
DISCH KCFS	16.7	17.3	20.9	31.4	29.9	31.4	31.9	33.1	33.4	33.8	33.2	33.7	33.7	33.7	22.2	21.7	19.6
POWER																	
AVE POWER MW		142	176	264	251	264	267	277	280	281	265	254	245	242	165	169	157
PEAK POW MW		350	355	355	355	355	355	355	355	349	318	297	285	284	312	328	338
ENERGY GWH	2054.1	51.3	29.5	56.9	180.9	196.3	192.4	206.5	208.2	202.3	197.0	91.4	41.2	46.5	122.7	125.5	105.4
--GAVINS POINT--																	
NAT INFLOW	1701	81	38	48	186	241	212	160	128	102	118	46	21	24	72	80	144
DEPLETION	114	0	0	0	5	19	24	39	10	-5	2	5	2	3	10	1	
CHAN STOR	-6	-1	-7	-20	3	-3	-1	-2	-1	-1	1	-1	0	0	21	1	4
EVAPORATION	26							2	5	7	6	1	1	1	3		
REG INFLOW	22459	595	321	589	1964	2152	2083	2152	2165	2109	2152	1041	486	555	1444	1414	1236
RELEASE	22459	595	321	589	1964	2152	2083	2152	2152	2083	2152	1041	486	555	1444	1414	1275
STOR CHANGE									13	26							-39
STORAGE	358	358	358	358	358	358	358	358	371	397	397	397	397	397	397	397	358
ELEV FTMSL	1206.0	1206.0	1206.0	1206.0	1206.0	1206.0	1206.0	1206.0	1206.5	1207.5	1207.5	1207.5	1207.5	1207.5	1207.5	1207.5	1206.0
DISCH KCFS	20.0	20.0	23.1	33.0	33.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	23.5	23.0	23.0
POWER																	
AVE POWER MW		69	79	108	108	112	112	112	112	114	115	115	115	115	78	77	76
PEAK POW MW		114	114	114	114	114	114	114	115	117	117	117	117	117	78	78	76
ENERGY GWH	887.3	24.8	13.3	23.3	77.6	83.3	80.6	83.3	83.7	82.0	85.5	41.4	19.3	22.1	58.3	57.5	51.3
--GAVINS POINT - SIOUX CITY--																	
NAT INFLOW	2062	129	60	77	669	368	211	164	122	85	44	17	8	9	20	8	70
DEPLETION	248	6	3	4	20	34	30	37	34	22	9	6	3	3	12	13	13
REGULATED FLOW AT SIOUX CITY																	
KAF	24273	718	379	663	2613	2486	2264	2279	2240	2146	2187	1053	491	562	1452	1409	1332
KCFS		24.1	27.3	37.1	43.9	40.4	38.0	37.1	36.4	36.1	35.6	35.4	35.4	35.4	23.6	22.9	24.0
--TOTAL--																	
NAT INFLOW	28000	1465	683	879	3271	4005	6377	3926	1501	1186	1292	548	256	292	659	655	1006
DEPLETION	2508	76	36	46	155	574	1537	1041	152	-187	-88	-118	-55	-63	-224	-241	-134
CHAN STOR	21	89	-7	-38	-10	-24	-20	2	4	27	29	-1	-2	-11	2	-22	2
EVAPORATION	1237							84	264	329	283	67	31	35	144		
STORAGE	57096	57856	58118	58250	58744	59665	62221	62746	61595	60520	59458	59003	58789	58536	57825	57290	57099
SYSTEM POWER																	
AVE POWER MW		920	1025	1195	1206	1335	1382	1443	1454	1365	1128	1135	1130	1288	1119	1136	1071
PEAK POW MW		2384	2383	2385	2389	2395	2426	2424	2415	2398	2382	2358	2346	2341	2316	2324	2320
ENERGY GWH	10839.1	331.1	172.2	258.1	868.2	993.2	995.4	1073.2	1082.0	983.0	839.2	408.7	189.8	247.3	832.9	845.5	719.4
DAILY GWH		22.1	24.6	28.7	28.9	32.0	33.2	34.6	34.9	32.8	27.1	27.2	27.1	30.9	26.9	27.3	25.7
	INI-SUM	15MAR	22MAR	31MAR	30APR	31MAY	30JUN	31JUL	31AUG	30SEP	31OCT	15NOV	22NOV	30NOV	31DEC	31JAN	28FEB

TIME OF STUDY 10:44:40 STUDY NO 12

VALUES IN 1000 AF EXCEPT AS INDICATED

28FEB09	INI-SUM	15MAR	2009 22MAR	31MAR	30APR	31MAY	30JUN	31JUL	31AUG	30SEP	31OCT	15NOV	22NOV	2010 30NOV	31DEC	31JAN	28FEB
--FORT PECK--																	
NAT INFLOW	8039	268	125	161	667	1343	2086	1021	382	317	444	176	82	94	290	249	335
DEPLETION	398	6	3	3	85	319	486	163	-70	-113	-67	-24	-11	-13	-125	-150	-95
EVAPORATION	332							23	71	88	76	18	8	9	39		
MOD INFLOW	7309	262	122	157	582	1024	1600	835	381	342	435	182	85	97	376	399	430
RELEASE	8239	238	111	161	595	676	803	799	769	714	614	297	139	159	615	799	750
STOR CHANGE	-930	24	11	-4	-13	348	797	36	-387	-372	-179	-116	-54	-62	-239	-400	-320
STORAGE	15896	15919	15930	15927	15914	16261	17058	17094	16707	16335	16156	16040	15986	15924	15685	15285	14965
ELEV FTMSL	2238.2	2238.3	2238.3	2238.3	2238.2	2239.8	2243.2	2243.4	2241.7	2240.1	2239.3	2238.8	2238.6	2238.3	2237.2	2235.4	2233.9
DISCH KCFS	9.5	8.0	8.0	9.0	10.0	11.0	13.5	13.0	12.5	12.0	10.0	10.0	10.0	10.0	10.0	13.0	13.5
POWER																	
AVE POWER MW		110	110	124	138	152	186	181	174	166	138	138	138	138	137	177	182
PEAK POW MW		211	211	211	211	213	215	215	214	213	212	212	212	211	211	209	208
ENERGY GWH	1373.0	39.7	18.5	26.8	99.1	112.8	134.1	134.6	129.5	119.7	102.7	49.6	23.2	26.4	102.2	131.8	122.3
--GARRISON--																	
NAT INFLOW	11830	430	200	258	1146	1611	2941	2205	700	479	543	217	101	115	232	290	362
DEPLETION	1071	41	19	25	-5	128	859	637	67	-122	-25	-107	-50	-57	-135	-124	-80
CHAN STOR	-40	15		-10	-10	-10	-25	5	5	5	19		0	0	0	-29	-5
EVAPORATION	375							25	79	99	86	20	10	11	45		
REG INFLOW	18583	642	292	384	1736	2149	2861	2347	1327	1220	1115	600	280	320	937	1184	1187
RELEASE	16728	536	250	339	1250	1476	1607	1629	1599	1369	1352	654	312	317	1230	1476	1333
STOR CHANGE	1855	106	42	45	486	674	1254	718	-272	-148	-237	-54	-32	3	-292	-292	-146
STORAGE	17208	17314	17356	17401	17887	18561	19815	20533	20261	20113	19876	19822	19789	19792	19500	19208	19062
ELEV FTMSL	1834.5	1834.9	1835.0	1835.1	1836.8	1838.9	1842.8	1844.9	1844.1	1843.7	1843.0	1842.8	1842.7	1842.7	1841.9	1841.0	1840.5
DISCH KCFS	25.0	18.0	18.0	19.0	21.0	24.0	27.0	26.5	26.0	23.0	22.0	22.0	22.5	20.0	20.0	24.0	24.0
POWER																	
AVE POWER MW		219	220	232	258	297	340	338	333	294	281	280	286	255	254	303	303
PEAK POW MW		457	457	458	464	472	491	499	499	498	492	490	488	489	482	479	477
ENERGY GWH	2553.5	79.0	36.9	50.1	185.5	221.3	244.9	251.7	247.8	211.8	208.7	100.8	48.1	48.9	189.0	225.7	203.4
--OAHE--																	
NAT INFLOW	2658	386	180	231	327	240	608	205	85	112	70	76	35	40	15	7	41
DEPLETION	597	22	10	13	46	65	126	147	96	24	-8	2	1	1	11	16	25
CHAN STOR	4	28		-4	-8	-12	-12	2	2	12	4		-2	10	0	-16	
EVAPORATION	350							24	75	92	80	19	9	10	41		
REG INFLOW	18443	927	419	553	1523	1639	2077	1665	1515	1376	1355	709	336	357	1193	1450	1349
RELEASE	19351	770	359	361	1215	1602	1740	1964	2027	1856	1403	706	326	517	1708	1557	1240
STOR CHANGE	-908	157	60	192	307	38	337	-299	-512	-480	-48	3	10	-160	-515	-106	109
STORAGE	18833	18989	19049	19242	19549	19587	19923	19625	19113	18632	18584	18587	18597	18437	17922	17816	17924
ELEV FTMSL	1607.5	1608.0	1608.2	1608.8	1609.7	1609.9	1610.9	1610.0	1608.4	1606.9	1606.7	1606.7	1606.7	1606.2	1604.5	1604.2	1604.5
DISCH KCFS	22.7	25.9	25.9	20.2	20.4	26.0	29.2	31.9	33.0	31.2	22.8	23.7	23.5	32.6	27.8	25.3	22.3
POWER																	
AVE POWER MW		335	335	263	267	340	383	418	428	402	294	305	302	417	354	321	284
PEAK POW MW		713	714	717	722	723	728	724	715	707	706	706	706	704	694	693	695
ENERGY GWH	3026.3	120.5	56.3	56.8	191.9	253.2	275.6	310.9	318.7	289.7	218.5	110.0	50.7	80.1	263.6	239.1	190.7
--BIG BEND--																	
EVAPORATION	71							5	15	19	16	4	2	2	9		
REG INFLOW	19281	770	359	361	1215	1602	1740	1959	2012	1838	1387	703	324	515	1699	1557	1240
RELEASE	19281	770	359	361	1215	1602	1740	1959	2012	1838	1387	703	324	515	1699	1557	1240
STORAGE	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682
ELEV FTMSL	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0
DISCH KCFS	22.7	25.9	25.9	20.2	20.4	26.0	29.2	31.9	32.7	30.9	22.6	23.6	23.3	32.4	27.6	25.3	22.3
POWER																	
AVE POWER MW		123	121	95	96	122	137	149	153	146	110	118	117	162	136	123	107
PEAK POW MW		517	509	509	509	509	509	509	509	517	538	538	538	538	538	538	529
ENERGY GWH	1112.8	44.1	20.3	20.4	68.8	90.7	98.6	110.9	113.9	105.3	82.2	42.5	19.6	31.0	101.0	91.4	71.9
--FORT RANDALL--																	
NAT INFLOW	1021	129	60	77	203	108	152	76	49	63	41	4	2	2	15	7	33
DEPLETION	80	1	1	1	4	9	12	18	15	7	1	1	0	1	3	3	3
EVAPORATION	82							6	19	24	18	4	2	2	8		
REG INFLOW	20139	898	419	438	1414	1701	1880	2011	2027	1870	1408	701	324	514	1704	1561	1270
RELEASE	20139	607	285	438	1414	1701	1880	2011	2027	2014	2045	1005	469	536	1338	1304	1066
STOR CHANGE	0	291	134					0	0	-144	-637	-304	-145	-22	366	257	204
STORAGE	3124	3415	3549	3549	3549	3549	3549	3549	3549	3405	2768	2464	2319	2297	2663	2920	3124
ELEV FTMSL	1350.0	1353.6	1355.2	1355.2	1355.2	1355.2	1355.2	1355.2	1355.2	1353.5	1345.1	1340.4	1337.9	1337.5	1343.5	1347.2	1350.0
DISCH KCFS	19.6	20.4	20.5	24.5	23.8	27.7	31.6	32.7	33.0	33.8	33.3	33.8	33.8	33.8	21.8	21.2	19.2
POWER																	
AVE POWER MW		168	172	207	200	233	265	274	276	282	265	254	246	243	162	165	154
PEAK POW MW		350	355	355	355	355	355	355	355	349	318	297	285	284	312	328	338
ENERGY GWH	1978.0	60.4	28.9	44.6	144.3	173.1	190.9	204.1	205.7	202.8	197.4	91.6	41.3	46.6	120.4	122.6	103.3
--GAVINS POINT--																	
NAT INFLOW	1633	77	36	46	178	232	204	153	123	98	114	44	20	23	69	77	138
DEPLETION	114	0	0	0	5	19	24	39	10	-5	2	5	2	3	10	1	
CHAN STOR	0	-2	0	-8	1	-7	-8	-2	0	-2	1	-1	0	0	22	1	4
EVAPORATION	26							2	5	7	6	1	1	1	3		
REG INFLOW	21632	683	321	477	1589	1906	2053	2121	2134	2109	2152	1041	486	555	1416	1381	1208
RELEASE	21632	683	321	477	1589	1906	2053	2121	2121	2083	2152	1041	486	555	1416	1381	1247
STOR CHANGE									13	26							-39
STORAGE	358	358	358	358	358	358	358	358	371	397	397	397	397	397	397	397	358
ELEV FTMSL	1206.0	1206.0	1206.0	1206.0	1206.0	1206.0	1206.0	1206.0	1206.5	1207.5	1207.5	1207.5	1207.5	1207.5	1207.5	1207.5	1206.0
DISCH KCFS	23.0	23.0	23.1	26.7	26.7	31.0	34.5	34.5	34.5	35.0	35.0	35.0	35.0	35.0	23.0	22.5	22.5
POWER																	
AVE POWER MW		79	79	91	91	103	111	111	111	114	115	115	115	115	77	76	75
PEAK POW MW		114	114	114	114	114	114	114	115	117	117	117	117	117	78	78	76
ENERGY GWH	864.0	28.4	13.3	19.7	65.6	76.8	79.9	82.5	82.9	82.0	85.5	41.4	19.3	22.1	57.6	56.6	50.5
--GAVINS POINT - SIOUX CITY--																	
NAT INFLOW	1919	121	56	72	622	343	197	152	114	79	41	16	7	9	18	7	65
DEPLETION	248	6	3	4	20	34	30	37	34	22	9	6	3	3	12	13	13
REGULATED FLOW AT SIOUX CITY																	
KAF	23303	798	374	545	2191	2215	2220	2236	2201	2140	2184	1052	491	561	1422	1375	1299
KCFS		26.8	27.0	30.5	36.8	36.0	37.3	36.4	35.8	36.0	35.5	35.4	35.4	35.4	23.1	22.4	23.4
--TOTAL--																	
NAT INFLOW	27100	1410	658	846	3143	3877	6188	3812	1453	1148	1253	531	248	283	639	637	974
DEPLETION	2508	76	36	46	155	574	1537	1041	152	-187	-88	-118	-55	-63	-224	-241	-134
CHAN STOR	-37	41	0	-22	-16	-29	-44	5	6	15	25	-1	-2	9	22	-45	-1
EVAPORATION	1236							84	264	329	283	66	31	35	144		
STORAGE	57099	57677	57925	58158	58939	59997	62385	62840	61682	60563	59462	58991	58770	58529	57849	57308	57116
SYSTEM POWER																	
AVE POWER MW		1033	1038	1011	1049	1247	1422	1471	1476	1405	1203	1210	1204	1329	1121	1166	1104
PEAK POW MW		2362	2361	2365	2376	2386	2413	2416	2407	2401	2384	2359	2347	2342	2315	2325	2323
ENERGY GWH	10907.7	372.0	174.3	218.4	755.2	927.9	1024.0	1094.6	1098.5	1011.4	895.1	435.8	202.2	255.1	833.7	867.2	742.1
DAILY GWH		24.8	24.9	24.3	25.2	29.9	34.1	35.3	35.4	33.7	28.9	29.1	28.9	31.9	26.9	28.0	26.5
	INI-SUM	15MAR	22MAR	31MAR	30APR	31MAY	30JUN	31JUL	31AUG	30SEP	31OCT	15NOV	22NOV	30NOV	31DEC	31JAN	28FEB

TIME OF STUDY 10:44:40 STUDY NO 13

VALUES IN 1000 AF EXCEPT AS INDICATED

28FEB10	INI-SUM	15MAR	2010 22MAR	31MAR	30APR	31MAY	30JUN	31JUL	31AUG	30SEP	31OCT	15NOV	22NOV	2011 30NOV	31DEC	31JAN	28FEB
--FORT PECK--																	
NAT INFLOW	7887	262	122	157	655	1318	2046	1002	375	311	436	173	81	92	284	244	329
DEPLETION	398	6	3	3	85	319	486	163	-70	-113	-67	-24	-11	-13	-125	-150	-95
EVAPORATION	315							21	67	83	72	17	8	9	37		
MOD INFLOW	7174	257	120	154	570	999	1560	818	378	341	431	179	84	95	372	394	424
RELEASE	8089	238	111	161	595	738	803	799	769	655	538	260	128	159	615	799	722
STOR CHANGE	-915	19	9	-7	-25	261	757	18	-391	-314	-107	-81	-44	-63	-243	-405	-298
STORAGE	14965	14984	14992	14986	14961	15222	15978	15997	15606	15292	15185	15104	15060	14997	14754	14348	14050
ELEV FTMSL	2233.9	2233.9	2234.0	2234.0	2233.8	2235.1	2238.5	2238.6	2236.8	2235.4	2234.9	2234.5	2234.3	2234.0	2232.8	2230.9	2229.4
DISCH KCFS	13.5	8.0	8.0	9.0	10.0	12.0	13.5	13.0	12.5	11.0	8.7	8.7	9.2	10.0	10.0	13.0	13.0
POWER																	
AVE POWER MW		109	109	122	136	163	183	178	172	150	119	119	125	136	136	175	174
PEAK POW MW		208	208	208	208	209	212	212	210	209	209	209	209	208	207	206	205
ENERGY GWH	1330.2	39.2	18.3	26.4	97.8	121.4	132.0	132.7	127.7	108.3	88.8	42.9	21.0	26.1	100.9	130.0	116.8
--GARRISON--																	
NAT INFLOW	11635	423	197	253	1127	1585	2893	2169	688	471	534	213	99	114	228	285	356
DEPLETION	1071	41	19	25	-5	128	859	637	67	-122	-25	-107	-50	-57	-135	-124	-80
CHAN STOR	4	54		-10	-10	-19	-15	5	5	14	22		-4	-8	0	-29	
EVAPORATION	375							26	81	100	86	20	9	11	43		
REG INFLOW	18282	673	289	380	1717	2175	2823	2311	1313	1162	1033	560	263	311	935	1179	1158
RELEASE	19220	565	264	393	1488	1845	1785	1845	1845	1785	1670	808	361	357	1230	1537	1444
STOR CHANGE	-938	108	25	-13	230	331	1038	466	-531	-624	-637	-248	-98	-46	-295	-358	-286
STORAGE	19062	19170	19195	19182	19412	19743	20780	21246	20715	20091	19455	19207	19110	19064	18769	18410	18124
ELEV FTMSL	1840.5	1840.8	1840.9	1840.9	1841.6	1842.6	1845.6	1847.0	1845.4	1843.6	1841.7	1841.0	1840.7	1840.5	1839.6	1838.5	1837.5
DISCH KCFS	24.0	19.0	19.0	22.0	25.0	30.0	30.0	30.0	30.0	30.0	27.2	27.2	26.0	22.5	20.0	25.0	26.0
POWER																	
AVE POWER MW		240	240	278	316	379	383	387	387	384	344	343	328	284	252	312	322
PEAK POW MW		479	479	479	481	487	500	501	500	498	481	479	478	477	474	470	466
ENERGY GWH	2949.5	86.4	40.4	60.0	227.5	282.2	275.6	288.1	288.0	276.2	256.2	123.5	55.0	54.5	187.3	232.1	216.5
--OAHE--																	
NAT INFLOW	2571	373	174	224	316	231	588	198	82	109	68	73	34	39	15	7	40
DEPLETION	597	22	10	13	46	65	126	147	96	24	-8	2	1	1	11	16	25
CHAN STOR	-9	20		-12	-12	-20					11	0	4	13	9	-19	-4
EVAPORATION	366							24	76	96	85	20	10	11	45		
REG INFLOW	20820	937	427	591	1746	1991	2247	1871	1754	1774	1672	859	389	397	1199	1509	1455
RELEASE	18936	762	356	365	1226	1675	1687	1908	1970	1771	1315	663	305	494	1686	1533	1219
STOR CHANGE	1884	175	71	226	519	316	560	-37	-216	3	357	196	84	-96	-488	-24	236
STORAGE	17924	18099	18170	18396	18916	19231	19792	19755	19539	19543	19900	20096	20180	20084	19596	19572	19808
ELEV FTMSL	1604.5	1605.1	1605.3	1606.1	1607.8	1608.8	1610.5	1610.4	1609.7	1609.7	1610.8	1611.4	1611.7	1611.4	1609.9	1609.8	1610.5
DISCH KCFS	22.3	25.6	25.7	20.4	20.6	27.2	28.3	31.0	32.0	29.8	21.4	22.3	22.0	31.1	27.4	24.9	22.0
POWER																	
AVE POWER MW		326	327	262	266	353	370	406	418	388	280	293	290	409	360	326	288
PEAK POW MW		698	699	703	712	717	726	726	722	722	728	731	732	731	723	723	726
ENERGY GWH	2986.9	117.3	55.0	56.6	191.3	262.6	266.2	302.1	311.3	279.5	208.6	105.6	48.8	78.6	267.6	242.5	193.3
--BIG BEND--																	
EVAPORATION	71							5	15	19	16	4	2	2	9		
REG INFLOW	18865	762	356	365	1226	1675	1687	1904	1955	1752	1298	659	304	492	1678	1533	1219
RELEASE	18865	762	356	365	1226	1675	1687	1904	1955	1752	1298	659	304	492	1678	1533	1219
STORAGE	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682
ELEV FTMSL	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0
DISCH KCFS	22.3	25.6	25.7	20.4	20.6	27.2	28.3	31.0	31.8	29.5	21.1	22.1	21.9	31.0	27.3	24.9	22.0
POWER																	
AVE POWER MW		121	120	96	96	128	133	145	149	140	103	111	110	154	134	121	105
PEAK POW MW		517	509	509	509	509	509	509	509	517	538	538	538	538	538	538	529
ENERGY GWH	1088.7	43.6	20.2	20.7	69.5	94.9	95.5	107.8	110.7	100.5	77.0	39.9	18.4	29.6	99.8	90.0	70.7
--FORT RANDALL--																	
NAT INFLOW	992	126	59	75	197	105	148	74	47	61	40	4	2	2	15	6	32
DEPLETION	80	1	1	1	4	9	12	18	15	7	1	1	0	1	3	3	3
EVAPORATION	82							6	19	24	18	4	2	2	8		
REG INFLOW	19695	886	414	440	1419	1771	1823	1954	1968	1783	1319	658	303	490	1682	1536	1248
RELEASE	19695	595	280	440	1419	1771	1823	1954	1968	1927	1956	962	448	512	1316	1279	1044
STOR CHANGE	0	291	134					0	0	-144	-637	-304	-145	-22	366	257	204
STORAGE	3124	3415	3549	3549	3549	3549	3549	3549	3549	3405	2768	2464	2319	2297	2663	2920	3124
ELEV FTMSL	1350.0	1353.6	1355.2	1355.2	1355.2	1355.2	1355.2	1355.2	1355.2	1353.5	1345.1	1340.4	1337.9	1337.5	1343.5	1347.2	1350.0
DISCH KCFS	19.2	20.0	20.2	24.6	23.9	28.8	30.6	31.8	32.0	32.4	31.8	32.3	32.3	32.3	21.4	20.8	18.8
POWER																	
AVE POWER MW		164	170	208	201	242	257	267	269	270	254	244	235	232	159	162	151
PEAK POW MW		350	355	355	355	355	355	355	355	349	318	297	285	284	312	328	338
ENERGY GWH	1935.8	59.2	28.5	44.8	144.8	180.1	185.2	198.3	199.8	194.2	189.0	87.7	39.6	44.6	118.5	120.3	101.2
--GAVINS POINT--																	
NAT INFLOW	1588	76	35	45	173	225	198	149	120	95	111	43	20	23	67	75	134
DEPLETION	114	0	0	0	5	19	24	39	10	-5	2	5	2	3	10	1	
CHAN STOR	0	-2	0	-9	1	-9	-4	-2	0	-1	1	-1	0	0	20	1	4
EVAPORATION	26							2	5	7	6	1	1	1	3		
REG INFLOW	21143	670	315	477	1589	1968	1993	2060	2073	2019	2060	997	465	532	1390	1354	1182
RELEASE	21143	670	315	477	1589	1968	1993	2060	2060	1993	2060	997	465	532	1390	1354	1221
STOR CHANGE									13	26							-39
STORAGE	358	358	358	358	358	358	358	358	371	397	397	397	397	397	397	397	358
ELEV FTMSL	1206.0	1206.0	1206.0	1206.0	1206.0	1206.0	1206.0	1206.0	1206.5	1207.5	1207.5	1207.5	1207.5	1207.5	1207.5	1207.5	1206.0
DISCH KCFS	22.5	22.5	22.7	26.7	26.7	32.0	33.5	33.5	33.5	33.5	33.5	33.5	33.5	33.5	22.6	22.0	22.0
POWER																	
AVE POWER MW		77	78	91	91	106	109	109	109	111	112	112	112	112	76	75	74
PEAK POW MW		114	114	114	114	114	114	114	115	117	117	117	117	117	78	78	76
ENERGY GWH	851.0	27.8	13.1	19.7	65.6	78.5	78.3	81.0	81.3	79.7	83.1	40.2	18.8	21.4	56.8	55.8	49.8
--GAVINS POINT - SIOUX CITY--																	
NAT INFLOW	1827	115	54	69	593	326	187	145	108	75	39	15	7	8	18	7	62
DEPLETION	248	6	3	4	20	34	30	37	34	22	9	6	3	3	12	13	13
REGULATED FLOW AT SIOUX CITY																	
KAF	22722	778	366	542	2162	2260	2150	2168	2134	2046	2090	1006	470	537	1396	1348	1270
KCFS		26.1	26.4	30.3	36.3	36.7	36.1	35.3	34.7	34.4	34.0	33.8	33.8	33.8	22.7	21.9	22.9
--TOTAL--																	
NAT INFLOW	26500	1374	641	824	3061	3790	6060	3737	1420	1122	1228	520	242	277	627	624	953
DEPLETION	2508	76	36	46	155	574	1537	1041	152	-187	-88	-118	-55	-63	-224	-241	-134
CHAN STOR	-5	73	0	-30	-20	-49	-18	3	4	14	34	-1	0	5	30	-48	0
EVAPORATION	1234							83	263	328	283	67	31	35	144		
STORAGE	57116	57708	57947	58153	58877	59785	62139	62586	61462	60410	59387	58950	58747	58520	57860	57329	57146
SYSTEM POWER																	
AVE POWER MW		1038	1044	1057	1106	1371	1435	1492	1504	1442	1213	1222	1200	1327	1117	1170	1114
PEAK POW MW		2365	2364	2368	2380	2391	2416	2416	2411	2413	2391	2370	2359	2355	2332	2343	2340
ENERGY GWH	11142.1	373.6	175.4	228.2	796.5	1019.7	1032.9	1110.0	1118.7	1038.4	902.7	439.8	201.6	254.9	830.9	870.7	748.3
DAILY GWH		24.9	25.1	25.4	26.5	32.9	34.4	35.8	36.1	34.6	29.1	29.3	28.8	31.9	26.8	28.1	26.7
	INI-SUM	15MAR	22MAR	31MAR	30APR	31MAY	30JUN	31JUL	31AUG	30SEP	31OCT	15NOV	22NOV	30NOV	31DEC	31JAN	28FEB

DATE OF STUDY 11/15/04 2004-2005 AOP EXTENSIONS, UPPER QUARTILE RUNOFF SIMULATION 99001 9901 9901 PAGE 1

STUDY NO 14

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VALUES IN 1000 AF EXCEPT AS INDICATED

28FEB06	INI-SUM	2006 15MAR	22MAR	31MAR	30APR	31MAY	30JUN	31JUL	31AUG	30SEP	31OCT	15NOV	22NOV	2007 30NOV	31DEC	31JAN	28FEB
--FORT PECK--																	
NAT INFLOW	8215	273	128	164	682	1373	2131	1043	390	324	454	180	84	96	296	254	343
DEPLETION	398	6	3	3	85	319	486	151	-66	-126	-65	-23	-11	-12	-120	-142	-91
EVAPORATION	333							20	63	80	70	32	15	17	37		
MOD INFLOW	7484	268	125	161	597	1054	1645	872	393	370	449	171	80	91	379	396	434
RELEASE	4980	179	69	89	357	430	476	461	430	357	316	155	90	111	492	523	444
STOR CHANGE	2504	89	55	71	240	624	1169	411	-38	13	133	16	-11	-20	-113	-127	-10
STORAGE	12024	12113	12169	12240	12480	13104	14273	14684	14646	14659	14792	14808	14798	14778	14665	14538	14528
ELEV FTMSL	2218.5	2219.0	2219.3	2219.7	2221.1	2224.5	2230.5	2232.5	2232.3	2232.4	2233.0	2233.1	2233.1	2233.0	2232.4	2231.8	2231.8
DISCH KCFS	8.5	6.0	5.0	5.0	6.0	7.0	8.0	7.5	7.0	6.0	5.1	5.2	6.5	7.0	8.0	8.5	8.0
POWER																	
AVE POWER MW		77	65	65	78	92	107	101	95	81	70	71	88	95	108	115	108
PEAK POW MW		149	150	150	197	201	206	207	207	207	208	208	208	208	207	207	207
ENERGY GWH	807.0	27.9	10.9	14.0	56.0	68.2	76.7	75.3	70.5	58.5	51.8	25.4	14.8	18.2	80.6	85.5	72.6
--GARRISON--																	
NAT INFLOW	12053	450	210	270	1168	1610	2996	2246	714	488	554	221	103	118	243	295	368
DEPLETION	1128	41	19	25	23	169	820	607	60	-129	-14	-102	-48	-54	-120	-105	-64
CHAN STOR	5	26	10		-10	-10	-10	5	5	10	9	-1	-13	-5	-10	-5	5
EVAPORATION	357							22	69	86	75	34	16	18	39		
REG INFLOW	15554	614	271	335	1492	1861	2642	2084	1021	898	818	443	212	260	806	918	881
RELEASE	14393	476	208	268	1160	1353	1369	1383	1353	1101	936	458	222	301	1230	1353	1222
STOR CHANGE	1161	138	62	67	331	508	1273	700	-332	-203	-118	-15	-10	-41	-424	-435	-340
STORAGE	14493	14631	14693	14760	15091	15600	16873	17573	17241	17038	16920	16905	16895	16853	16430	15994	15654
ELEV FTMSL	1824.8	1825.3	1825.5	1825.8	1827.0	1828.9	1833.3	1835.7	1834.6	1833.9	1833.5	1833.5	1833.4	1833.3	1831.8	1830.3	1829.1
DISCH KCFS	20.0	16.0	15.0	15.0	19.5	22.0	23.0	22.5	22.0	18.5	15.2	15.4	16.0	19.0	20.0	22.0	22.0
POWER																	
AVE POWER MW		183	172	173	225	256	273	273	268	225	185	187	194	230	240	261	259
PEAK POW MW		422	422	423	428	435	451	460	456	453	452	452	451	451	445	440	435
ENERGY GWH	2074.7	66.0	29.0	37.3	162.0	190.5	196.7	203.3	199.7	161.9	137.4	67.2	32.6	44.1	178.7	194.4	174.0
--OAHE--																	
NAT INFLOW	2764	397	185	238	340	246	647	213	89	117	73	78	36	42	16	4	43
DEPLETION	597	22	10	13	46	65	126	147	96	24	-8	2	1	1	11	16	25
CHAN STOR	-8	18	4	0	-20	-11	-4	2	2	15	14	-1	-3	-13	-4	-9	0
EVAPORATION	339							21	66	81	70	32	15	17	37		
REG INFLOW	16212	869	387	492	1435	1523	1885	1430	1282	1127	961	502	240	312	1193	1332	1240
RELEASE	14169	529	99	263	844	1213	1480	1711	1769	1554	1057	517	238	197	1070	925	704
STOR CHANGE	2044	340	289	230	590	310	405	-280	-487	-426	-96	-14	2	115	123	407	536
STORAGE	15126	15466	15755	15985	16575	16885	17290	17010	16523	16097	16000	15986	15988	16104	16227	16634	17170
ELEV FTMSL	1594.5	1595.8	1596.8	1597.7	1599.8	1600.9	1602.3	1601.4	1599.7	1598.1	1597.8	1597.7	1597.7	1598.1	1598.6	1600.1	1601.9
DISCH KCFS	12.2	17.8	7.1	14.7	14.2	19.7	24.9	27.8	28.8	26.1	17.2	17.4	17.1	12.4	17.4	15.0	12.7
POWER																	
AVE POWER MW		215	87	180	175	246	311	348	357	322	211	213	210	153	214	186	159
PEAK POW MW		649	655	659	670	676	683	678	669	661	659	659	659	661	663	671	681
ENERGY GWH	2123.5	77.4	14.6	38.9	126.3	182.7	224.0	259.0	265.7	231.5	157.2	76.7	35.3	29.3	159.5	138.7	106.6
--BIG BEND--																	
EVAPORATION	78							5	15	19	16	7	3	4	9		
REG INFLOW	14091	529	99	263	844	1213	1480	1706	1754	1535	1041	509	235	193	1062	925	704
RELEASE	14091	529	99	263	844	1213	1480	1706	1754	1535	1041	509	235	193	1062	925	704
STORAGE	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682
ELEV FTMSL	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0
DISCH KCFS	12.2	17.8	7.1	14.7	14.2	19.7	24.9	27.7	28.5	25.8	16.9	17.1	16.9	12.2	17.3	15.0	12.7
POWER																	
AVE POWER MW		83	33	69	66	92	116	130	133	122	83	86	85	61	85	73	61
PEAK POW MW		510	509	509	509	509	509	509	509	517	538	538	538	538	538	538	529
ENERGY GWH	812.7	30.0	5.6	14.9	47.8	68.7	83.8	96.6	99.3	88.0	61.9	30.9	14.3	11.8	63.5	54.6	40.9
--FORT RANDALL--																	
NAT INFLOW	1054	125	58	75	210	132	172	78	57	56	33	2	1	1	16	4	34
DEPLETION	80	1	1	1	4	9	12	18	15	7	1	1	0	1	3	3	3
EVAPORATION	88							6	19	24	18	7	3	3	8		
REG INFLOW	14978	652	156	337	1050	1336	1640	1760	1777	1561	1055	503	232	191	1067	926	735
RELEASE	14977	244	139	337	1050	1336	1640	1760	1777	1706	1691	807	377	213	701	689	511
STOR CHANGE	1	409	17					0	0	-145	-636	-304	-145	-22	366	237	224
STORAGE	3123	3532	3549	3549	3549	3549	3549	3549	3549	3404	2768	2464	2319	2297	2663	2900	3124
ELEV FTMSL	1350.0	1355.0	1355.2	1355.2	1355.2	1355.2	1355.2	1355.2	1355.2	1353.5	1345.1	1340.4	1337.9	1337.5	1343.5	1347.0	1350.0
DISCH KCFS	8.8	8.2	10.0	18.9	17.7	21.7	27.6	28.6	28.9	28.7	27.5	27.1	27.2	13.4	11.4	11.2	9.2
POWER																	
AVE POWER MW		68	85	160	149	183	232	241	243	239	220	205	199	98	85	88	74
PEAK POW MW		354	355	355	355	355	355	355	355	349	318	296	285	284	311	327	338
ENERGY GWH	1484.9	24.6	14.3	34.5	107.6	136.5	166.9	179.0	180.7	172.3	163.8	73.8	33.4	18.8	63.6	65.2	49.8
--GAVINS POINT--																	
NAT INFLOW	1684	83	39	50	184	228	210	158	127	101	117	45	21	24	76	79	143
DEPLETION	114	0	0	0	5	19	24	39	10	-5	2	5	2	3	10	1	
CHAN STOR	-2	1	-4	-17	2	-8	-11	-2	-1	0	2	1	0	25	4	0	4
EVAPORATION	28							2	5	7	6	3	1	1	3		
REG INFLOW	16516	328	175	370	1232	1537	1815	1875	1888	1805	1802	845	394	258	767	767	658
RELEASE	16516	328	175	370	1232	1537	1815	1875	1875	1779	1802	845	394	258	767	767	697
STOR CHANGE									13	26							-39
STORAGE	358	358	358	358	358	358	358	358	371	397	397	397	397	397	397	397	358
ELEV FTMSL	1206.0	1206.0	1206.0	1206.0	1206.0	1206.0	1206.0	1206.0	1206.5	1207.5	1207.5	1207.5	1207.5	1207.5	1207.5	1207.5	1206.0
DISCH KCFS	12.5	11.0	12.6	20.7	20.7	25.0	30.5	30.5	30.5	29.9	29.3	28.4	28.4	16.3	12.5	12.5	12.5
POWER																	
AVE POWER MW		39	44	71	71	86	102	102	103	102	102	99	99	58	44	44	44
PEAK POW MW		114	114	114	114	114	114	114	115	117	117	117	117	117	78	78	76
ENERGY GWH	686.3	13.9	7.4	15.4	51.4	63.6	73.5	75.9	76.3	73.8	75.8	35.8	16.7	11.0	33.0	33.0	29.7
--GAVINS POINT - SIOUX CITY--																	
NAT INFLOW	2030	147	69	88	658	330	205	161	120	79	43	17	8	9	20	8	68
DEPLETION	248	6	3	4	20	34	30	37	34	22	9	6	3	3	12	13	13
REGULATED FLOW AT SIOUX CITY																	
KAF	18298	469	240	454	1870	1833	1990	1999	1961	1836	1836	856	400	264	775	762	752
KCFS		15.8	17.3	25.4	31.4	29.8	33.4	32.5	31.9	30.9	29.9	28.8	28.8	16.6	12.6	12.4	13.5
--TOTAL--																	
NAT INFLOW	27800	1475	688	885	3242	3919	6361	3899	1497	1165	1274	543	253	289	667	644	999
DEPLETION	2565	76	36	46	183	615	1498	999	149	-207	-75	-112	-52	-59	-204	-214	-114
CHAN STOR	-4	46	11	-17	-28	-29	-26	5	7	26	25	-1	-16	8	-11	-13	9
EVAPORATION	1223							75	237	296	256	114	53	61	132		
STORAGE	46807	47782	48206	48573	49735	51177	54024	54855	54011	53277	52559	52242	52078	52110	52063	52146	52516
SYSTEM POWER																	
AVE POWER MW		666	487	718	765	955	1141	1195	1199	1092	871	861	875	694	778	768	705
PEAK POW MW		2199	2206	2210	2273	2289	2319	2323	2311	2305	2291	2270	2258	2258	2243	2260	2266
ENERGY GWH	7989.1	239.9	81.9	155.0	551.0	710.2	821.7	889.2	892.2	786.0	647.9	309.9	147.1	133.2	578.9	571.3	473.7
DAILY GWH		16.0	11.7	17.2	18.4	22.9	27.4	28.7	28.8	26.2	20.9	20.7	21.0	16.7	18.7	18.4	16.9
	INI-SUM	15MAR	22MAR	31MAR	30APR	31MAY	30JUN	31JUL	31AUG	30SEP	31OCT	15NOV	22NOV	30NOV	31DEC	31JAN	28FEB

VALUES IN 1000 AF EXCEPT AS INDICATED

28FEB07	INI-SUM	15MAR	22MAR (2007)	31MAR	30APR	31MAY	30JUN	31JUL	31AUG	30SEP	31OCT	15NOV	22NOV	30NOV (2008)	31DEC	31JAN	29FEB
--FORT PECK--																	
NAT INFLOW	8115	270	126	162	674	1356	2105	1031	386	320	449	178	83	95	292	251	338
DEPLETION	398	6	3	3	85	319	486	151	-66	-126	-65	-23	-11	-12	-120	-142	-91
EVAPORATION	351							22	68	85	73	33	15	18	38		
MOD INFLOW	7366	264	123	158	589	1037	1619	858	384	361	441	167	78	89	374	393	429
RELEASE	7475	179	83	143	536	615	762	676	646	595	537	259	125	159	615	799	748
STOR CHANGE	-110	86	40	16	53	422	857	182	-262	-234	-97	-92	-47	-70	-241	-406	-319
STORAGE	14528	14614	14654	14669	14723	15145	16002	16184	15923	15689	15593	15501	15454	15384	15144	14737	14418
ELEV FTMSL	2231.8	2232.2	2232.4	2232.4	2232.7	2234.7	2238.6	2239.4	2238.3	2237.2	2236.8	2236.4	2236.1	2235.8	2234.7	2232.8	2231.2
DISCH KCFS	8.0	6.0	6.0	8.0	9.0	10.0	12.8	11.0	10.5	10.0	8.7	8.7	9.0	10.0	10.0	13.0	13.0
POWER																	
AVE POWER MW		81	81	108	122	136	175	152	145	137	120	119	123	137	136	176	175
PEAK POW MW		207	207	207	207	209	212	212	211	211	210	210	210	210	209	207	206
ENERGY GWH	1233.3	29.2	13.7	23.4	87.7	101.0	125.9	112.8	107.7	98.9	89.2	42.9	20.7	26.2	101.5	130.8	121.7
--GARRISON--																	
NAT INFLOW	11925	445	208	267	1155	1593	2965	2223	706	482	548	218	102	116	240	292	365
DEPLETION	1128	41	19	25	23	169	820	607	60	-129	-14	-102	-48	-54	-120	-105	-64
CHAN STOR	-51	21		-21	-10	-10	-28	18	5	5	12	0	-3	-10	0	-29	
EVAPORATION	395							23	76	95	83	37	17	20	43		
REG INFLOW	17827	603	272	365	1657	2029	2878	2287	1221	1116	1029	542	254	300	932	1167	1177
RELEASE	15124	476	236	303	1220	1383	1398	1414	1383	1160	1098	533	250	301	1230	1414	1323
STOR CHANGE	2702	127	36	61	437	645	1480	872	-163	-44	-69	9	4	-2	-298	-247	-146
STORAGE	15654	15781	15817	15878	16316	16961	18441	19313	19151	19106	19037	19046	19050	19048	18750	18503	18356
ELEV FTMSL	1829.1	1829.5	1829.6	1829.9	1831.4	1833.7	1838.6	1841.3	1840.8	1840.7	1840.4	1840.5	1840.5	1840.5	1839.5	1838.8	1838.3
DISCH KCFS	22.0	16.0	17.0	17.0	20.5	22.5	23.5	23.0	22.5	19.5	17.9	17.9	18.0	19.0	20.0	23.0	23.0
POWER																	
AVE POWER MW		189	201	201	243	270	288	289	284	246	226	226	227	240	252	287	286
PEAK POW MW		437	438	438	444	452	470	480	478	478	477	477	477	477	474	471	469
ENERGY GWH	2266.0	67.9	33.7	43.4	175.0	200.7	207.4	214.8	211.6	177.4	167.9	81.4	38.2	46.1	187.2	213.8	199.3
--OAHE--																	
NAT INFLOW	2704	388	181	233	333	241	633	208	87	114	72	77	36	41	15	4	42
DEPLETION	597	22	10	13	46	65	126	147	96	24	-8	2	1	1	11	16	25
CHAN STOR	-4	25	-4		-14	-8	-4	2	2	12	7	0	0	-4	-4	-13	
EVAPORATION	355							22	69	85	74	33	15	18	38		
REG INFLOW	16872	867	403	523	1493	1551	1901	1455	1307	1178	1111	574	269	320	1191	1389	1340
RELEASE	16776	531	140	357	1142	1527	1644	1881	1938	1718	1224	598	276	265	1347	1201	987
STOR CHANGE	96	336	262	166	350	25	257	-426	-631	-541	-113	-24	-7	55	-156	188	353
STORAGE	17170	17506	17769	17935	18285	18310	18567	18141	17510	16969	16857	16833	16826	16881	16725	16913	17266
ELEV FTMSL	1601.9	1603.1	1604.0	1604.5	1605.7	1605.8	1606.6	1605.2	1603.1	1601.2	1600.8	1600.8	1600.7	1600.9	1600.4	1601.0	1602.3
DISCH KCFS	12.7	17.8	10.1	20.0	19.2	24.8	27.6	30.6	31.5	28.9	19.9	20.1	19.9	16.7	21.9	19.5	17.2
POWER																	
AVE POWER MW		225	128	254	245	318	354	391	399	362	249	251	248	208	273	244	215
PEAK POW MW		687	692	695	701	701	706	698	687	677	675	675	675	676	673	676	683
ENERGY GWH	2564.3	80.9	21.5	54.9	176.6	236.4	254.9	290.9	296.8	260.5	185.0	90.2	41.6	40.0	203.0	181.2	149.8
--BIG BEND--																	
EVAPORATION	78							5	15	19	16	7	3	4	9		
REG INFLOW	16698	531	140	357	1142	1527	1644	1876	1923	1700	1208	590	272	261	1338	1201	987
RELEASE	16698	531	140	357	1142	1527	1644	1876	1923	1700	1208	590	272	261	1338	1201	987
STORAGE	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682
ELEV FTMSL	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0
DISCH KCFS	12.7	17.8	10.1	20.0	19.2	24.8	27.6	30.5	31.3	28.6	19.6	19.8	19.6	16.4	21.8	19.5	17.2
POWER																	
AVE POWER MW		84	47	94	90	116	129	143	146	135	96	99	99	83	107	95	82
PEAK POW MW		510	509	509	509	509	509	509	509	517	538	538	538	538	538	538	529
ENERGY GWH	963.0	30.1	7.9	20.2	64.7	86.5	93.1	106.2	108.9	97.4	71.7	35.8	16.6	15.9	79.8	70.8	57.3
--FORT RANDALL--																	
NAT INFLOW	1036	122	57	73	206	130	168	77	56	55	33	2	1	1	16	4	34
DEPLETION	80	1	1	1	4	9	12	18	15	7	1	1	0	1	3	3	3
EVAPORATION	88							6	19	24	18	7	3	3	8		
REG INFLOW	17567	652	197	430	1344	1648	1800	1929	1945	1724	1222	584	270	258	1344	1202	1018
RELEASE	17567	244	180	430	1344	1648	1800	1929	1945	1868	1859	888	415	280	978	965	794
STOR CHANGE	0	408	17		0		0	0	0	-144	-637	-304	-145	-22	366	237	224
STORAGE	3124	3532	3549	3549	3549	3549	3549	3549	3549	3405	2768	2464	2319	2297	2663	2900	3124
ELEV FTMSL	1350.0	1355.0	1355.2	1355.2	1355.2	1355.2	1355.2	1355.2	1355.2	1353.5	1345.1	1340.4	1337.9	1337.5	1343.5	1347.0	1350.0
DISCH KCFS	9.2	8.2	12.9	24.1	22.6	26.8	30.3	31.4	31.6	31.4	30.2	29.9	29.9	17.7	15.9	15.7	13.8
POWER																	
AVE POWER MW		68	110	203	191	226	254	263	265	262	242	225	218	128	119	122	111
PEAK POW MW		354	355	355	355	355	355	355	355	349	318	297	285	284	312	327	338
ENERGY GWH	1735.4	24.6	18.4	43.8	137.3	167.8	182.9	195.9	197.5	188.4	179.7	81.1	36.7	24.7	88.4	91.1	77.1
--GAVINS POINT--																	
NAT INFLOW	1654	81	38	49	181	224	206	155	125	99	115	44	21	23	75	78	140
DEPLETION	114	0	0	0	5	19	24	39	10	-5	2	5	2	3	10	1	
CHAN STOR	-10	2	-9	-21	3	-8	-7	-2	0	0	2	1	0	23	3	0	4
EVAPORATION	28							2	5	7	6	3	1	1	3		
REG INFLOW	19068	328	209	457	1523	1845	1976	2041	2054	1966	1968	925	432	322	1043	1043	937
RELEASE	19068	328	209	457	1523	1845	1976	2041	2041	1940	1968	925	432	322	1043	1043	976
STOR CHANGE									13	26							-39
STORAGE	358	358	358	358	358	358	358	358	371	397	397	397	397	397	397	397	358
ELEV FTMSL	1206.0	1206.0	1206.0	1206.0	1206.0	1206.0	1206.0	1206.0	1206.5	1207.5	1207.5	1207.5	1207.5	1207.5	1207.5	1207.5	1206.0
DISCH KCFS	12.5	11.0	15.0	25.6	25.6	30.0	33.2	33.2	33.2	32.6	32.0	31.1	31.1	20.3	17.0	17.0	17.0
POWER																	
AVE POWER MW		39	52	88	87	101	108	108	109	109	108	106	106	72	60	60	60
PEAK POW MW		114	114	114	114	114	114	114	115	117	117	117	117	117	78	78	76
ENERGY GWH	778.3	13.9	8.8	18.9	63.0	75.1	77.9	80.5	80.8	78.3	80.6	38.2	17.8	13.7	44.6	44.6	41.5
--GAVINS POINT - SIOUX CITY--																	
NAT INFLOW	1966	143	67	86	638	319	198	156	116	76	42	17	8	9	19	8	66
DEPLETION	248	6	3	4	20	34	30	37	34	22	9	6	3	3	12	13	13
REGULATED FLOW AT SIOUX CITY																	
KAF	20786	464	272	539	2141	2130	2144	2160	2123	1994	2001	936	437	328	1050	1038	1029
KCFS		15.6	19.6	30.2	36.0	34.6	36.0	35.1	34.5	33.5	32.5	31.5	31.5	20.7	17.1	16.9	17.9
--TOTAL--																	
NAT INFLOW	27400	1450	676	870	3187	3863	6275	3850	1476	1146	1259	535	249	285	657	637	985
DEPLETION	2565	76	36	46	183	615	1498	999	149	-207	-75	-112	-52	-59	-204	-214	-114
CHAN STOR	-64	48	-13	-42	-22	-26	-39	18	6	18	22	1	-3	9	-1	-42	4
EVAPORATION	1295							80	252	314	271	121	56	64	139		
STORAGE	52516	53473	53828	54071	54912	56004	58599	59227	58185	57249	56333	55922	55727	55689	55361	55132	55205
SYSTEM POWER																	
AVE POWER MW		685	619	948	978	1166	1309	1346	1348	1251	1040	1027	1022	868	947	984	929
PEAK POW MW		2310	2315	2319	2331	2341	2366	2369	2356	2349	2335	2313	2302	2301	2283	2297	2301
ENERGY GWH	9540.3	246.7	104.1	204.7	704.3	867.4	942.2	1001.1	1003.2	901.0	774.1	369.8	171.6	166.6	704.5	732.3	646.6
DAILY GWH		16.4	14.9	22.7	23.5	28.0	31.4	32.3	32.4	30.0	25.0	24.7	24.5	20.8	22.7	23.6	22.3

INI-SUM 15MAR 22MAR 31MAR 30APR 31MAY 30JUN 31JUL 31AUG 30SEP 31OCT 15NOV 22NOV 30NOV 31DEC 31JAN 29FEB

STUDY NO 16

TIME OF STUDY 10:48:15

EXTENDED NAVIGATION SEASON
VALUES IN 1000 AF EXCEPT AS INDICATED

29FEB08	INI-SUM	15MAR	2008 22MAR	31MAR	30APR	31MAY	30JUN	31JUL	31AUG	30SEP	31OCT	15NOV	22NOV	2009 30NOV	31DEC	31JAN	28FEB
--FORT PECK--																	
NAT INFLOW	8014	267	124	160	665	1339	2079	1018	381	316	443	176	82	94	289	248	334
DEPLETION	398	6	3	3	85	319	486	151	-66	-126	-65	-23	-11	-12	-120	-142	-91
EVAPORATION	343							21	66	83	72	32	15	17	37		
MOD INFLOW	7273	261	122	156	580	1020	1593	846	381	359	436	166	77	88	372	390	425
RELEASE	7669	208	97	143	506	553	1083	676	646	595	505	247	115	159	615	799	722
STOR CHANGE	-397	53	24	14	74	467	510	170	-265	-236	-69	-81	-38	-70	-243	-409	-297
STORAGE	14418	14471	14496	14509	14583	15050	15560	15730	15465	15229	15160	15079	15041	14971	14728	14319	14022
ELEV FTMSL	2231.2	2231.5	2231.6	2231.7	2232.0	2234.3	2236.6	2237.4	2236.2	2235.1	2234.8	2234.4	2234.2	2233.9	2232.7	2230.7	2229.2
DISCH KCFS	13.0	7.0	7.0	8.0	8.5	9.0	18.2	11.0	10.5	10.0	8.2	8.3	8.3	10.0	10.0	13.0	13.0
POWER																	
AVE POWER MW		94	95	108	115	122	209	151	144	137	112	113	113	136	136	175	174
PEAK POW MW		206	207	207	207	208	210	211	210	209	209	209	208	208	207	206	205
ENERGY GWH	1231.4	34.0	15.9	23.3	82.7	90.8	150.6	112.2	107.0	98.3	83.3	40.7	19.0	26.1	100.9	130.0	116.8
--GARRISON--																	
NAT INFLOW	11798	440	205	264	1143	1576	2933	2199	698	477	542	216	101	115	238	289	361
DEPLETION	1128	41	19	25	23	169	820	607	60	-129	-14	-102	-48	-54	-120	-105	-64
CHAN STOR	-2	59		-10	-5	-5	-90	69	5	5	17	-1		-17	0	-29	
EVAPORATION	408							25	80	99	85	38	18	20	43		
REG INFLOW	17930	667	283	372	1621	1955	3106	2312	1208	1107	993	526	246	292	930	1164	1147
RELEASE	18181	536	250	357	1517	1722	1666	1722	1722	1607	1635	684	292	317	1230	1537	1388
STOR CHANGE	-251	131	34	15	103	234	1440	591	-513	-500	-641	-158	-45	-26	-300	-373	-241
STORAGE	18356	18488	18521	18537	18640	18874	20314	20904	20391	19891	19249	19091	19046	19020	18720	18347	18106
ELEV FTMSL	1838.3	1838.7	1838.8	1838.9	1839.2	1839.9	1844.3	1846.0	1844.5	1843.0	1841.1	1840.6	1840.5	1840.4	1839.4	1838.3	1837.5
DISCH KCFS	23.0	18.0	18.0	20.0	25.5	28.0	28.0	28.0	28.0	27.0	26.6	23.0	21.0	20.0	20.0	25.0	25.0
POWER																	
AVE POWER MW		225	225	250	318	350	354	360	360	344	336	290	265	252	251	312	310
PEAK POW MW		471	471	471	473	475	499	500	499	493	479	478	477	477	473	469	466
ENERGY GWH	2774.9	80.9	37.8	54.0	229.0	260.4	255.0	267.5	267.7	247.9	250.2	104.6	44.5	48.4	187.1	231.8	208.1
--OAHE--																	
NAT INFLOW	2645	380	177	228	325	235	619	204	85	112	70	75	35	40	15	4	41
DEPLETION	597	22	10	13	46	65	126	147	96	24	-8	2	1	1	11	16	25
CHAN STOR	-8	21		-8	-23	-10				4	2	14	8	4	0	-20	
EVAPORATION	388							24	74	92	81	37	17	20	43		
REG INFLOW	19833	914	417	563	1774	1882	2159	1755	1637	1606	1633	735	316	341	1191	1506	1404
RELEASE	17306	715	186	374	1216	1519	1651	1886	1941	1721	1227	598	276	460	1379	1201	955
STOR CHANGE	2527	199	231	189	557	363	508	-131	-304	-115	406	136	40	-119	-188	304	450
STORAGE	17266	17466	17697	17886	18443	18806	19314	19184	18880	18765	19171	19307	19347	19228	19040	19344	19793
ELEV FTMSL	1602.3	1603.0	1603.7	1604.4	1606.2	1607.4	1609.0	1608.6	1607.6	1607.3	1608.6	1609.0	1609.1	1608.8	1608.2	1609.1	1610.5
DISCH KCFS	17.2	24.0	13.4	21.0	20.4	24.7	27.7	30.7	31.6	28.9	20.0	20.1	19.9	29.0	22.4	19.5	17.2
POWER																	
AVE POWER MW		302	170	266	261	318	359	398	408	373	259	262	259	377	291	254	225
PEAK POW MW		686	690	694	704	710	719	716	711	709	716	718	719	717	714	719	726
ENERGY GWH	2706.5	108.8	28.5	57.5	188.2	236.5	258.7	296.2	303.6	268.6	192.5	94.3	43.6	72.3	216.7	189.2	151.4
--BIG BEND--																	
EVAPORATION	78							5	15	19	16	7	3	4	9		
REG INFLOW	17228	715	186	374	1216	1519	1651	1881	1926	1703	1211	591	273	456	1370	1201	955
RELEASE	17228	715	186	374	1216	1519	1651	1881	1926	1703	1211	591	273	456	1370	1201	955
STORAGE	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682
ELEV FTMSL	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0
DISCH KCFS	17.2	24.0	13.4	21.0	20.4	24.7	27.7	30.6	31.3	28.6	19.7	19.9	19.6	28.7	22.3	19.5	17.2
POWER																	
AVE POWER MW		113	63	98	96	116	130	143	147	136	97	100	99	143	110	95	82
PEAK POW MW		510	509	509	509	509	509	509	509	517	538	538	538	538	538	538	529
ENERGY GWH	993.6	40.6	10.5	21.2	68.9	86.0	93.5	106.5	109.0	97.6	71.9	35.8	16.6	27.5	81.7	70.8	55.4
--FORT RANDALL--																	
NAT INFLOW	1014	120	56	72	202	127	165	75	55	54	32	2	1	1	15	4	33
DEPLETION	80	1	1	1	4	9	12	18	15	7	1	1	0	1	3	3	3
EVAPORATION	88							6	19	24	18	7	3	3	8		
REG INFLOW	18073	833	241	445	1414	1637	1804	1932	1947	1726	1224	585	270	452	1375	1202	985
RELEASE	18073	425	224	445	1414	1637	1804	1932	1947	1870	1861	889	415	474	1009	965	761
STOR CHANGE	0	408	17		0		0	0	0	-144	-637	-304	-145	-22	366	237	224
STORAGE	3124	3532	3549	3549	3549	3549	3549	3549	3549	3405	2768	2464	2319	2297	2663	2900	3124
ELEV FTMSL	1350.0	1355.0	1355.2	1355.2	1355.2	1355.2	1355.2	1355.2	1355.2	1353.5	1345.1	1340.4	1337.9	1337.5	1343.5	1347.0	1350.0
DISCH KCFS	13.8	14.3	16.1	25.0	23.8	26.6	30.3	31.4	31.7	31.4	30.3	29.9	29.9	29.9	16.4	15.7	13.7
POWER																	
AVE POWER MW		119	137	210	200	224	255	264	266	262	242	225	218	215	123	122	110
PEAK POW MW		354	355	355	355	355	355	355	355	349	318	297	285	284	312	327	338
ENERGY GWH	1783.2	42.7	23.0	45.4	144.3	166.7	183.3	196.2	197.7	188.6	179.9	81.2	36.7	41.4	91.2	91.1	73.9
--GAVINS POINT--																	
NAT INFLOW	1626	80	37	48	177	220	203	152	123	97	113	44	20	23	74	77	138
DEPLETION	114	0	0	0	5	19	24	39	10	-5	2	5	2	3	10	1	
CHAN STOR	-1	-1	-4	-17	2	-5	-7	-2	0	0	2	1	0	0	25	1	4
EVAPORATION	28							2	5	7	6	3	1	1	3		
REG INFLOW	19556	505	258	477	1589	1832	1976	2041	2054	1966	1968	925	432	493	1095	1043	903
RELEASE	19556	505	258	477	1589	1832	1976	2041	2041	1940	1968	925	432	493	1095	1043	942
STOR CHANGE									13	26							-39
STORAGE	358	358	358	358	358	358	358	358	371	397	397	397	397	397	397	397	358
ELEV FTMSL	1206.0	1206.0	1206.0	1206.0	1206.0	1206.0	1206.0	1206.0	1206.5	1207.5	1207.5	1207.5	1207.5	1207.5	1207.5	1207.5	1206.0
DISCH KCFS	17.0	17.0	18.6	26.7	26.7	29.8	33.2	33.2	33.2	32.6	32.0	31.1	31.1	31.1	17.8	17.0	17.0
POWER																	
AVE POWER MW		59	64	91	91	100	108	108	109	109	108	106	106	106	63	60	60
PEAK POW MW		114	114	114	114	114	114	114	115	117	117	117	117	117	78	78	76
ENERGY GWH	798.0	21.2	10.8	19.7	65.6	74.7	77.9	80.5	80.8	78.3	80.6	38.2	17.8	20.4	46.8	44.6	40.0
--GAVINS POINT - SIOUX CITY--																	
NAT INFLOW	1903	138	65	83	617	309	192	151	113	74	40	16	7	9	18	7	64
DEPLETION	248	6	3	4	20	34	30	37	34	22	9	6	3	3	12	13	13
REGULATED FLOW AT SIOUX CITY																	
KAF	21211	637	320	556	2186	2107	2138	2155	2120	1992	1999	936	437	499	1101	1037	993
KCFS		21.4	23.0	31.1	36.7	34.3	35.9	35.1	34.5	33.5	32.5	31.5	31.5	31.5	17.9	16.9	17.9
--TOTAL--																	
NAT INFLOW	27000	1425	665	855	3129	3806	6191	3799	1455	1130	1240	528	246	282	649	629	971
DEPLETION	2565	76	36	46	183	615	1498	999	149	-207	-75	-112	-52	-59	-204	-214	-114
CHAN STOR	-12	79	-4	-35	-25	-20	-97	67	4	9	21	14	8	-14	25	-48	4
EVAPORATION	1333							82	259	323	279	125	58	66	142		
STORAGE	55205	55996	56302	56520	57255	58319	60777	61406	60337	59369	58427	58020	57832	57595	57230	56988	57084
SYSTEM POWER																	
AVE POWER MW		912	753	1024	1081	1230	1415	1423	1433	1360	1154	1097	1061	1230	974	1018	961
PEAK POW MW		2343	2347	2350	2361	2372	2406	2405	2399	2395	2377	2356	2345	2341	2322	2337	2340
ENERGY GWH	10287.6	328.2	126.5	221.1	778.6	915.1	1018.9	1059.0	1065.9	979.4	858.5	394.8	178.2	236.2	724.4	757.4	645.6
DAILY GWH		21.9	18.1	24.6	26.0	29.5	34.0	34.2	34.4	32.6	27.7	26.3	25.5	29.5	23.4	24.4	23.1
	INI-SUM	15MAR	22MAR	31MAR	30APR	31MAY	30JUN	31JUL	31AUG	30SEP	31OCT	15NOV	22NOV	30NOV	31DEC	31JAN	28FEB

VALUES IN 1000 AF EXCEPT AS INDICATED

28FEB09	INI-SUM	15MAR	2009 22MAR	31MAR	30APR	31MAY	30JUN	31JUL	31AUG	30SEP	31OCT	15NOV	22NOV	2010 30NOV	31DEC	31JAN	28FEB
--FORT PECK--																	
NAT INFLOW	7811	260	121	156	648	1305	2027	992	371	308	432	171	80	91	281	242	326
DEPLETION	398	6	3	3	85	319	486	151	-66	-126	-65	-23	-11	-12	-120	-142	-91
EVAPORATION	363							22	69	87	76	35	16	18	40		
MOD INFLOW	7050	254	119	152	563	986	1541	819	368	347	421	159	74	85	361	384	417
RELEASE	5173	179	69	89	357	461	476	461	430	357	373	179	97	127	523	523	472
STOR CHANGE	1877	76	49	63	206	525	1065	358	-63	-10	48	-20	-23	-42	-161	-139	-55
STORAGE	14022	14097	14146	14209	14415	14940	16005	16363	16301	16291	16338	16319	16296	16254	16092	15954	15899
ELEV FTMSL	2229.2	2229.6	2229.9	2230.2	2231.2	2233.7	2238.6	2240.2	2240.0	2239.9	2240.1	2240.0	2239.9	2239.8	2239.0	2238.4	2238.2
DISCH KCFS	13.0	6.0	5.0	5.0	6.0	7.5	8.0	7.5	7.0	6.0	6.1	6.0	7.0	8.0	8.5	8.5	8.5
POWER																	
AVE POWER MW		81	67	67	81	102	110	104	97	83	84	83	97	111	117	117	117
PEAK POW MW		205	205	205	206	208	212	213	213	213	213	213	213	213	212	212	211
ENERGY GWH	860.0	29.0	11.3	14.5	58.2	75.6	78.9	77.2	72.2	59.9	62.6	29.9	16.3	21.3	87.4	87.2	78.7
--GARRISON--																	
NAT INFLOW	11537	431	201	258	1118	1541	2868	2150	683	467	530	211	98	113	232	283	353
DEPLETION	1128	41	19	25	23	169	820	607	60	-129	-14	-102	-48	-54	-120	-105	-64
CHAN STOR	44	69	10		-10	-15	-5	5	5	10	-1	1	-10	-10	-5		0
EVAPORATION	399							25	78	97	83	37	17	20	42		
REG INFLOW	15227	638	261	323	1442	1818	2519	1984	980	866	833	455	216	264	828	911	889
RELEASE	16122	476	222	321	1250	1445	1517	1537	1506	1262	1308	631	292	317	1230	1476	1333
STOR CHANGE	-895	162	39	2	193	373	1002	447	-527	-396	-474	-176	-75	-53	-402	-565	-444
STORAGE	18106	18267	18306	18308	18500	18874	19875	20322	19796	19400	18925	18750	18675	18622	18220	17655	17211
ELEV FTMSL	1837.5	1838.0	1838.1	1838.1	1838.8	1839.9	1843.0	1844.3	1842.7	1841.6	1840.1	1839.5	1839.3	1839.1	1837.9	1836.0	1834.5
DISCH KCFS	25.0	16.0	16.0	18.0	21.0	23.5	25.5	25.0	24.5	21.2	21.3	21.2	21.0	20.0	20.0	24.0	24.0
POWER																	
AVE POWER MW		199	199	224	262	294	322	319	312	269	269	266	263	250	249	296	293
PEAK POW MW		468	469	469	471	475	493	499	489	481	476	474	473	472	468	461	455
ENERGY GWH	2446.2	71.6	33.5	48.4	188.4	218.7	232.1	237.3	232.5	193.6	199.9	95.8	44.2	48.1	185.5	220.0	196.6
--OAHE--																	
NAT INFLOW	2527	363	169	218	311	225	591	195	81	107	67	72	33	38	14	4	39
DEPLETION	597	22	10	13	46	65	126	147	96	24	-8	2	1	1	11	16	25
CHAN STOR	4	35		-8	-11	-9	-7	2	2	13	0	0	1	4	0	-16	
EVAPORATION	396							25	78	95	82	37	17	20	42		
REG INFLOW	17660	851	381	518	1503	1596	1975	1562	1416	1262	1300	664	308	339	1191	1448	1347
RELEASE	18618	722	196	398	1290	1593	1712	1942	1997	1811	1356	688	317	507	1568	1392	1128
STOR CHANGE	-958	129	185	120	213	2	263	-380	-581	-549	-56	-24	-9	-168	-377	56	219
STORAGE	19793	19922	20108	20228	20441	20444	20707	20327	19746	19197	19141	19116	19107	18939	18561	18617	18836
ELEV FTMSL	1610.5	1610.9	1611.4	1611.8	1612.4	1612.4	1613.2	1612.1	1610.4	1608.7	1608.5	1608.4	1608.4	1607.8	1606.6	1606.8	1607.5
DISCH KCFS	17.2	24.3	14.1	22.3	21.7	25.9	28.8	31.6	32.5	30.4	22.1	23.1	22.8	32.0	25.5	22.6	20.3
POWER																	
AVE POWER MW		319	186	294	287	343	381	418	427	396	287	300	297	413	329	291	262
PEAK POW MW		728	731	733	736	736	740	734	725	717	716	715	715	712	706	707	710
ENERGY GWH	2947.9	114.8	31.3	63.5	206.6	255.2	274.5	310.9	317.3	285.4	213.3	108.2	49.8	79.3	244.7	216.8	176.2
--BIG BEND--																	
EVAPORATION	78							5	15	19	16	7	3	4	9		
REG INFLOW	18540	722	196	398	1290	1593	1712	1937	1982	1792	1340	681	314	503	1560	1392	1128
RELEASE	18540	722	196	398	1290	1593	1712	1937	1982	1792	1340	681	314	503	1560	1392	1128
STORAGE	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682
ELEV FTMSL	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0
DISCH KCFS	17.2	24.3	14.1	22.3	21.7	25.9	28.8	31.5	32.2	30.1	21.8	22.9	22.6	31.7	25.4	22.6	20.3
POWER																	
AVE POWER MW		114	66	104	101	121	135	147	151	143	107	114	113	158	125	110	97
PEAK POW MW		510	509	509	509	509	509	509	509	517	538	538	538	538	538	538	529
ENERGY GWH	1069.7	41.0	11.1	22.5	73.1	90.2	96.9	109.7	112.2	102.7	79.4	41.2	19.0	30.3	92.8	81.9	65.4
--FORT RANDALL--																	
NAT INFLOW	978	116	54	69	194	122	159	73	53	52	31	2	1	1	15	4	32
DEPLETION	80	1	1	1	4	9	12	18	15	7	1	1	0	1	3	3	3
EVAPORATION	88							6	19	24	18	7	3	3	8		
REG INFLOW	19349	836	249	466	1480	1706	1859	1986	2001	1814	1352	675	311	500	1564	1393	1157
RELEASE	19349	428	232	466	1480	1706	1859	1986	2001	1958	1989	979	456	522	1198	1156	933
STOR CHANGE	0	408	17		0			0	0	-144	-637	-304	-145	-22	366	237	224
STORAGE	3124	3532	3549	3549	3549	3549	3549	3549	3549	3405	2768	2464	2319	2297	2663	2900	3124
ELEV FTMSL	1350.0	1355.0	1355.2	1355.2	1355.2	1355.2	1355.2	1355.2	1355.2	1353.5	1345.1	1340.4	1337.9	1337.5	1343.5	1347.0	1350.0
DISCH KCFS	13.7	14.4	16.7	26.1	24.9	27.8	31.2	32.3	32.5	32.9	32.3	32.9	32.9	32.9	19.5	18.8	16.8
POWER																	
AVE POWER MW		120	142	220	210	233	262	271	273	274	258	248	240	236	145	146	135
PEAK POW MW		354	355	355	355	355	355	355	355	349	318	297	285	284	312	327	338
ENERGY GWH	1903.8	43.0	23.8	47.5	150.9	173.7	188.8	201.6	203.1	197.2	192.1	89.2	40.3	45.4	108.0	108.8	90.4
--GAVINS POINT--																	
NAT INFLOW	1566	77	36	46	171	212	195	147	118	94	109	42	19	22	71	74	133
DEPLETION	114	0	0	0	5	19	24	39	10	-5	2	5	2	3	10	1	
CHAN STOR	-7	-1	-4	-18	2	-6	-7	-2	0	-1	1	-1	0	0	25	1	4
EVAPORATION	28							2	5	7	6	3	1	1	3		
REG INFLOW	20766	505	264	495	1648	1894	2023	2091	2104	2049	2091	1012	472	540	1280	1230	1070
RELEASE	20766	505	264	495	1648	1894	2023	2091	2091	2023	2091	1012	472	540	1280	1230	1109
STOR CHANGE									13	26							-39
STORAGE	358	358	358	358	358	358	358	358	371	397	397	397	397	397	397	397	358
ELEV FTMSL	1206.0	1206.0	1206.0	1206.0	1206.0	1206.0	1206.0	1206.0	1206.5	1207.5	1207.5	1207.5	1207.5	1207.5	1207.5	1207.5	1206.0
DISCH KCFS	17.0	17.0	19.0	27.7	27.7	30.8	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	20.8	20.0	20.0
POWER																	
AVE POWER MW		59	66	94	94	103	110	110	110	112	113	113	113	113	72	70	69
PEAK POW MW		114	114	114	114	114	114	114	115	117	117	117	117	117	78	78	76
ENERGY GWH	837.7	21.2	11.0	20.4	67.9	76.5	79.1	81.7	82.1	80.5	83.9	40.6	18.9	21.7	53.6	52.0	46.5
--GAVINS POINT - SIOUX CITY--																	
NAT INFLOW	1781	129	60	77	578	289	180	141	105	69	38	15	7	8	17	7	60
DEPLETION	248	6	3	4	20	34	30	37	34	22	9	6	3	3	12	13	13
REGULATED FLOW AT SIOUX CITY																	
KAF	22299	627	321	568	2206	2149	2173	2195	2162	2070	2120	1021	477	545	1285	1224	1156
KCFS		21.1	23.1	31.8	37.1	34.9	36.5	35.7	35.2	34.8	34.5	34.3	34.3	34.3	20.9	19.9	20.8
--TOTAL--																	
NAT INFLOW	26200	1376	642	825	3020	3694	6020	3698	1411	1097	1207	512	239	273	630	614	943
DEPLETION	2565	76	36	46	183	615	1498	999	149	-207	-75	-112	-52	-59	-204	-214	-114
CHAN STOR	40	103	5	-26	-19	-30	-19	5	6	22	0	0	-9	-7	20	-15	4
EVAPORATION	1352							84	264	328	283	126	58	66	143		
STORAGE	57084	57858	58148	58334	58946	59846	62176	62601	61444	60371	59251	58727	58474	58189	57615	57204	57109
SYSTEM POWER																	
AVE POWER MW		891	726	1004	1035	1196	1320	1369	1370	1277	1117	1125	1122	1281	1038	1031	973
PEAK POW MW		2381	2383	2385	2392	2398	2423	2424	2406	2393	2377	2353	2341	2336	2313	2322	2320
ENERGY GWH	10065.2	320.6	122.1	216.9	745.0	889.8	950.3	1018.4	1019.4	919.3	831.3	405.0	188.6	246.0	772.0	766.7	654.0
DAILY GWH		21.4	17.4	24.1	24.8	28.7	31.7	32.9	32.9	30.6	26.8	27.0	26.9	30.8	24.9	24.7	23.4
	INI-SUM	15MAR	22MAR	31MAR	30APR	31MAY	30JUN	31JUL	31AUG	30SEP	31OCT	15NOV	22NOV	30NOV	31DEC	31JAN	28FEB

DATE OF STUDY 11/15/04 2004-2005 AOP EXTENSIONS, UPPER QUARTILE RUNOFF SIMULATION 99001 9901 9901 PAGE 1

STUDY NO 18

TIME OF STUDY 10:48:15 EXTENDED NAVIGATION SEASON

VALUES IN 1000 AF EXCEPT AS INDICATED

28FEB10	INI-SUM	2010 15MAR	22MAR	31MAR	30APR	31MAY	30JUN	31JUL	31AUG	30SEP	31OCT	15NOV	22NOV	2011 30NOV	31DEC	31JAN	28FEB
--FORT PECK--																	
NAT INFLOW	7762	258	121	155	644	1297	2013	986	369	306	429	170	79	91	280	240	324
DEPLETION	398	6	3	3	85	319	486	151	-66	-126	-65	-23	-11	-12	-120	-142	-91
EVAPORATION	365							23	71	88	76	34	16	18	39		
MOD INFLOW	6999	253	118	152	559	978	1527	812	364	344	418	158	74	85	361	382	415
RELEASE	7941	179	83	143	565	707	774	769	738	655	536	260	121	159	615	861	778
STOR CHANGE	-942	74	35	9	-6	271	753	44	-374	-311	-119	-101	-47	-74	-254	-479	-363
STORAGE	15899	15973	16007	16016	16010	16281	17034	17078	16704	16394	16275	16173	16126	16052	15798	15319	14957
ELEV FTMSL	2238.2	2238.5	2238.7	2238.7	2238.7	2239.9	2243.1	2243.3	2241.7	2240.4	2239.8	2239.4	2239.2	2238.9	2237.7	2235.5	2233.8
DISCH KCFS	8.5	6.0	6.0	8.0	9.5	11.5	13.0	12.5	12.0	11.0	8.7	8.7	8.7	10.0	10.0	14.0	14.0
POWER																	
AVE POWER MW		83	83	110	131	159	180	174	167	153	121	121	120	138	138	189	188
PEAK POW MW		212	212	212	212	213	215	215	214	213	213	212	212	212	211	209	208
ENERGY GWH	1322.6	29.8	13.9	23.8	94.3	118.0	129.6	129.7	124.3	109.8	89.9	43.4	20.2	26.5	102.4	140.7	126.2
--GARRISON--																	
NAT INFLOW	11471	428	200	257	1111	1532	2852	2138	679	464	527	210	98	112	231	281	351
DEPLETION	1128	41	19	25	23	169	820	607	60	-129	-14	-102	-48	-54	-120	-105	-64
CHAN STOR	-55	25		-20	-15	-20	-15	5	5	10	22	0		-12	0	-39	
EVAPORATION	412							25	79	99	86	39	18	21	45		
REG INFLOW	17817	591	264	355	1638	2050	2791	2280	1282	1158	1013	533	249	292	921	1208	1193
RELEASE	15981	536	250	339	1220	1383	1488	1506	1476	1291	1367	536	250	301	1230	1476	1333
STOR CHANGE	1836	55	14	16	418	667	1303	773	-193	-134	-354	-3	-1	-9	-308	-268	-140
STORAGE	17211	17266	17280	17296	17714	18381	19684	20457	20264	20130	19777	19774	19773	19763	19455	19187	19047
ELEV FTMSL	1834.5	1834.7	1834.7	1834.8	1836.2	1838.4	1842.4	1844.7	1844.1	1843.7	1842.8	1842.7	1842.7	1842.7	1841.7	1840.9	1840.5
DISCH KCFS	24.0	18.0	18.0	19.0	20.5	22.5	25.0	24.5	24.0	21.7	22.2	18.0	18.0	19.0	20.0	24.0	24.0
POWER																	
AVE POWER MW		219	219	232	251	278	314	313	308	278	283	229	229	242	254	303	303
PEAK POW MW		456	456	456	462	470	486	499	499	498	488	488	488	487	481	479	477
ENERGY GWH	2437.2	79.0	36.9	50.0	180.6	206.9	226.4	232.5	228.9	200.0	210.8	82.6	38.5	46.4	188.8	225.7	203.3
--OAHE--																	
NAT INFLOW	2496	359	168	215	307	222	585	192	80	105	66	71	33	38	14	4	38
DEPLETION	597	22	10	13	46	65	126	147	96	24	-8	2	1	1	11	16	25
CHAN STOR	0	24		-4	-6	-8	-10	2	2	9	-2	17		-4	-4	-17	
EVAPORATION	378							24	74	91	79	35	16	19	40		
REG INFLOW	17502	896	407	537	1475	1533	1937	1529	1388	1291	1360	586	266	315	1189	1447	1346
RELEASE	18427	807	214	376	1235	1548	1687	1913	1968	1782	1327	673	310	499	1561	1392	1135
STOR CHANGE	-925	89	193	161	240	-15	250	-384	-580	-491	33	-87	-45	-184	-372	55	211
STORAGE	18836	18925	19118	19279	19519	19504	19754	19371	18790	18299	18332	18245	18200	18017	17644	17699	17911
ELEV FTMSL	1607.5	1607.8	1608.4	1608.9	1609.7	1609.6	1610.4	1609.2	1607.4	1605.8	1605.9	1605.6	1605.4	1604.8	1603.6	1603.8	1604.5
DISCH KCFS	20.3	27.1	15.4	21.1	20.8	25.2	28.3	31.1	32.0	29.9	21.6	22.6	22.3	31.5	25.4	22.6	20.4
POWER																	
AVE POWER MW		350	201	274	271	329	370	406	414	384	276	290	286	400	322	287	259
PEAK POW MW		712	715	718	722	722	726	719	710	701	702	700	699	696	690	691	694
ENERGY GWH	2873.8	126.1	33.7	59.2	195.0	244.5	266.7	301.9	308.1	276.6	205.7	104.3	48.0	76.8	239.6	213.2	174.3
--BIG BEND--																	
EVAPORATION	78							5	15	19	16	7	3	4	9		
REG INFLOW	18349	807	214	376	1235	1548	1687	1908	1953	1763	1310	666	307	495	1552	1392	1135
RELEASE	18349	807	214	376	1235	1548	1687	1908	1953	1763	1310	666	307	495	1552	1392	1135
STORAGE	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682
ELEV FTMSL	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0
DISCH KCFS	20.3	27.1	15.4	21.1	20.8	25.2	28.3	31.0	31.8	29.6	21.3	22.4	22.1	31.2	25.2	22.6	20.4
POWER																	
AVE POWER MW		127	72	99	97	118	133	145	149	140	104	112	111	155	124	110	98
PEAK POW MW		510	509	509	509	509	509	509	509	517	538	538	538	538	538	538	529
ENERGY GWH	1058.7	45.8	12.1	21.3	70.0	87.6	95.5	108.1	110.6	101.1	77.7	40.3	18.6	29.8	92.4	81.9	65.8
--FORT RANDALL--																	
NAT INFLOW	967	114	53	68	192	121	157	72	52	52	31	2	1	1	15	4	31
DEPLETION	80	1	1	1	4	9	12	18	15	7	1	1	0	1	3	3	3
EVAPORATION	88							6	19	24	18	7	3	3	8		
REG INFLOW	19147	920	267	444	1423	1660	1832	1956	1971	1785	1322	660	304	492	1557	1393	1163
RELEASE	19147	512	250	444	1423	1660	1832	1956	1971	1929	1959	964	449	514	1191	1156	939
STOR CHANGE	0	408	17					0	0	-144	-637	-304	-145	-22	366	237	224
STORAGE	3124	3532	3549	3549	3549	3549	3549	3549	3549	3405	2768	2464	2319	2297	2663	2900	3124
ELEV FTMSL	1350.0	1355.0	1355.2	1355.2	1355.2	1355.2	1355.2	1355.2	1355.2	1353.5	1345.1	1340.4	1337.9	1337.5	1343.5	1347.0	1350.0
DISCH KCFS	16.8	17.2	18.0	24.9	23.9	27.0	30.8	31.8	32.1	32.4	31.9	32.4	32.4	32.4	19.4	18.8	16.9
POWER																	
AVE POWER MW		143	152	209	202	227	258	267	269	270	254	244	236	233	144	146	135
PEAK POW MW		354	355	355	355	355	355	355	355	349	318	297	285	284	312	327	338
ENERGY GWH	1884.1	51.3	25.6	45.2	145.2	169.0	186.1	198.6	200.1	194.4	189.3	87.9	39.7	44.7	107.4	108.8	91.0
--GAVINS POINT--																	
NAT INFLOW	1551	76	36	46	169	210	193	146	117	93	108	42	19	22	70	73	131
DEPLETION	114	0	0	0	5	19	24	39	10	-5	2	5	2	3	10	1	
CHAN STOR	-1	-1	-2	-13	2	-6	-7	-2	0	-1	1	-1	0	0	24	1	4
EVAPORATION	28							2	5	7	6	3	1	1	3		
REG INFLOW	20555	588	284	477	1589	1845	1993	2060	2073	2019	2060	997	465	532	1272	1229	1073
RELEASE	20555	588	284	477	1589	1845	1993	2060	2060	1993	2060	997	465	532	1272	1229	1112
STOR CHANGE									13	26							-39
STORAGE	358	358	358	358	358	358	358	358	371	397	397	397	397	397	397	397	358
ELEV FTMSL	1206.0	1206.0	1206.0	1206.0	1206.0	1206.0	1206.0	1206.0	1206.5	1207.5	1207.5	1207.5	1207.5	1207.5	1207.5	1207.5	1206.0
DISCH KCFS	20.0	19.8	20.5	26.7	26.7	30.0	33.5	33.5	33.5	33.5	33.5	33.5	33.5	33.5	20.7	20.0	20.0
POWER																	
AVE POWER MW		68	71	91	91	101	109	109	109	111	112	112	112	112	72	70	69
PEAK POW MW		114	114	114	114	114	114	114	115	117	117	117	117	117	78	78	76
ENERGY GWH	832.5	24.6	11.9	19.7	65.6	75.1	78.3	81.0	81.3	79.7	83.1	40.2	18.8	21.4	53.3	52.0	46.6
--GAVINS POINT - SIOUX CITY--																	
NAT INFLOW	1753	127	59	76	568	285	177	139	104	68	37	15	7	8	17	7	59
DEPLETION	248	6	3	4	20	34	30	37	34	22	9	6	3	3	12	13	13
REGULATED FLOW AT SIOUX CITY																	
KAF	22060	709	341	549	2137	2096	2140	2162	2130	2039	2088	1006	469	536	1277	1223	1158
KCFS		23.8	24.5	30.8	35.9	34.1	36.0	35.2	34.6	34.3	34.0	33.8	33.8	33.8	20.8	19.9	20.9
--TOTAL--																	
NAT INFLOW	26000	1364	636	818	2991	3667	5977	3673	1401	1088	1198	509	237	271	627	609	934
DEPLETION	2565	76	36	46	183	615	1498	999	149	-207	-75	-112	-52	-59	-204	-214	-114
CHAN STOR	-57	48	-2	-37	-19	-34	-32	5	6	18	21	16	0	-17	20	-54	4
EVAPORATION	1349							83	263	327	282	126	58	66	143		
STORAGE	57109	57735	57994	58179	58831	59754	62061	62494	61360	60306	59230	58735	58497	58207	57639	57184	57078
SYSTEM POWER																	
AVE POWER MW		990	798	1015	1042	1211	1365	1414	1416	1336	1151	1108	1094	1280	1054	1105	1053
PEAK POW MW		2359	2361	2364	2374	2382	2405	2412	2401	2396	2375	2352	2340	2334	2309	2322	2322
ENERGY GWH	10409.0	356.5	134.1	219.3	750.6	901.1	982.5	1051.8	1053.4	961.6	856.4	398.7	183.8	245.8	783.9	822.3	707.3
DAILY GWH		23.8	19.2	24.4	25.0	29.1	32.8	33.9	34.0	32.1	27.6	26.6	26.3	30.7	25.3	26.5	25.3
	INI-SUM	15MAR	22MAR	31MAR	30APR	31MAY	30JUN	31JUL	31AUG	30SEP	31OCT	15NOV	22NOV	30NOV	31DEC	31JAN	28FEB

SHORTEN NAVIGATION SEASON 31-DAYS
VALUES IN 1000 AF EXCEPT AS INDICATED

	28FEB06 INI-SUM	15MAR	2006 22MAR	31MAR	30APR	31MAY	30JUN	31JUL	31AUG	30SEP	31OCT	15NOV	22NOV	2007 30NOV	31DEC	31JAN	28FEB
--FORT PECK--																	
NAT INFLOW	7400	264	123	158	628	1210	1851	829	324	319	398	188	88	100	310	261	349
DEPLETION	399	-21	-10	-12	18	338	630	215	-77	-155	-74	-39	-18	-21	-132	-145	-98
EVAPORATION	372							22	71	89	78	35	17	19	41		
MOD INFLOW	6629	285	133	171	610	872	1221	592	330	385	394	191	89	102	401	406	447
RELEASE	5175	179	69	89	298	461	506	523	523	357	299	145	68	111	523	553	472
STOR CHANGE	1454	107	64	82	312	411	715	69	-192	28	95	46	22	-9	-122	-147	-25
STORAGE	10008	10115	10179	10260	10573	10984	11699	11768	11575	11603	11698	11744	11766	11756	11635	11487	11462
ELEV FTMSL	2206.6	2207.2	2207.6	2208.1	2210.0	2212.5	2216.7	2217.1	2216.0	2216.1	2216.7	2216.9	2217.1	2217.0	2216.3	2215.5	2215.3
DISCH KCFS	9.0	6.0	5.0	5.0	5.0	7.5	8.5	8.5	8.5	6.0	4.9	4.9	4.9	7.0	8.5	9.0	8.5
POWER																	
AVE POWER MW		73	61	61	61	93	107	108	108	76	62	62	62	89	108	114	107
PEAK POW MW		136	136	137	183	186	192	192	191	191	191	192	192	192	191	190	190
ENERGY GWH	789.5	26.3	10.3	13.2	44.2	69.2	77.0	80.5	80.3	54.9	46.1	22.4	10.4	17.1	80.4	84.8	72.2
--GARRISON--																	
NAT INFLOW	11001	469	219	282	853	1423	2958	2066	581	497	454	192	89	102	253	237	326
DEPLETION	954	1	0	1	4	177	755	542	44	-131	-11	-98	-46	-52	-102	-82	-48
CHAN STOR	6	33	11			-27	-11	0		26	12	0	0	-22	-16	-5	5
EVAPORATION	437							26	84	105	92	41	19	22	47		
REG INFLOW	14790	680	299	370	1147	1680	2698	2020	976	906	684	393	183	221	815	867	851
RELEASE	13028	417	194	286	1012	1168	1220	1230	1199	982	824	398	186	286	1230	1261	1139
STOR CHANGE	1762	263	104	85	135	512	1478	791	-223	-76	-139	-5	-2	-64	-415	-393	-287
STORAGE	12037	12301	12405	12490	12625	13137	14615	15405	15182	15106	14966	14962	14960	14895	14480	14087	13800
ELEV FTMSL	1814.9	1816.0	1816.4	1816.8	1817.4	1819.4	1825.2	1828.2	1827.3	1827.1	1826.5	1826.5	1826.5	1826.3	1824.7	1823.2	1822.1
DISCH KCFS	20.5	14.0	14.0	16.0	17.0	19.0	20.5	20.0	19.5	16.5	13.4	13.4	13.4	18.0	20.0	20.5	20.5
POWER																	
AVE POWER MW		150	151	173	184	208	230	231	227	192	156	155	155	208	229	233	230
PEAK POW MW		388	389	391	393	400	422	432	429	428	426	426	426	425	419	414	410
ENERGY GWH	1784.6	54.1	25.4	37.4	132.7	154.5	165.6	172.0	168.9	138.1	115.8	55.8	26.0	39.9	170.6	173.0	154.9
--OAHE--																	
NAT INFLOW	2300	317	148	190	364	236	689	162	33	118	14	5	2	3	-20		40
DEPLETION	613	23	11	14	47	66	129	151	100	25	-8	2	1	1	11	16	26
CHAN STOR	1	32		-10	-5	-10	-7	2	2	15	15	0		-22	-10	-2	
EVAPORATION	391							24	75	94	82	37	17	20	43		
REG INFLOW	14325	743	331	452	1324	1329	1773	1219	1060	996	779	364	170	245	1146	1242	1153
RELEASE	12497	520	95	258	977	1183	1310	1589	1427	878	918	285	143	162	924	972	856
STOR CHANGE	1828	223	237	194	346	145	462	-370	-367	118	-139	79	27	84	221	270	297
STORAGE	12608	12832	13068	13262	13608	13754	14216	13846	13479	13597	13458	13537	13564	13648	13869	14140	14437
ELEV FTMSL	1584.1	1585.1	1586.1	1586.9	1588.4	1589.0	1590.9	1589.4	1587.8	1588.3	1587.7	1588.1	1588.2	1588.5	1589.4	1590.6	1591.7
DISCH KCFS	15.9	17.5	6.8	14.5	16.4	19.2	22.0	25.8	23.2	14.8	14.9	9.6	10.3	10.2	15.0	15.8	15.4
POWER																	
AVE POWER MW		199	79	167	191	224	258	303	270	172	174	112	120	119	176	186	182
PEAK POW MW		595	601	605	613	616	625	618	610	613	610	611	612	614	618	624	630
ENERGY GWH	1765.1	71.6	13.2	36.1	137.2	166.9	186.0	225.4	200.9	123.7	129.3	40.2	20.1	22.8	130.8	138.3	122.6
--BIG BEND--																	
EVAPORATION	103							6	20	25	22	10	5	5	11		
REG INFLOW	12393	520	95	258	977	1183	1310	1583	1407	853	897	275	138	156	913	972	856
RELEASE	12393	520	95	258	977	1183	1310	1583	1407	853	897	275	138	156	913	972	856
STORAGE	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682
ELEV FTMSL	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0
DISCH KCFS	15.9	17.5	6.8	14.5	16.4	19.2	22.0	25.7	22.9	14.3	14.6	9.2	10.0	9.9	14.8	15.8	15.4
POWER																	
AVE POWER MW		82	32	68	77	90	103	120	108	71	74	47	50	50	74	78	74
PEAK POW MW		510	509	509	509	509	509	509	518	538	538	538	538	538	538	538	529
ENERGY GWH	719.7	29.5	5.4	14.6	55.4	67.0	74.2	89.6	80.6	51.0	54.7	16.9	8.5	9.6	55.4	57.7	49.7
--FORT RANDALL--																	
NAT INFLOW	900	122	57	73	115	140	185	74	57	42	2	2	1	1	10		19
DEPLETION	80	1	1	1	4	9	12	18	15	7	1	1	0	1	3	3	3
EVAPORATION	107							8	25	28	20	8	4	4	10		
REG INFLOW	13107	641	151	331	1088	1314	1483	1631	1424	860	878	268	135	152	910	969	872
RELEASE	13107	232	134	331	1088	1314	1483	1631	1598	1536	1281	268	135	152	707	689	528
STOR CHANGE	0	409	17					0	-174	-675	-403	0	0	0	203	280	344
STORAGE	3123	3532	3549	3549	3549	3549	3549	3549	3375	2700	2297	2297	2297	2297	2500	2780	3124
ELEV FTMSL	1350.0	1355.0	1355.2	1355.2	1355.2	1355.2	1355.2	1355.2	1353.1	1344.1	1337.5	1337.5	1337.5	1337.5	1341.0	1345.3	1350.0
DISCH KCFS	9.5	7.8	9.7	18.5	18.3	21.4	24.9	26.5	26.0	25.8	20.8	9.0	9.7	9.6	11.5	11.2	9.5
POWER																	
AVE POWER MW		65	82	157	155	181	210	223	217	206	155	66	71	70	85	86	76
PEAK POW MW		354	355	355	355	355	355	355	348	313	283	283	283	283	300	319	338
ENERGY GWH	1287.0	23.4	13.8	33.9	111.4	134.3	151.2	166.1	161.5	148.1	115.7	23.7	11.9	13.5	63.4	64.0	51.1
--GAVINS POINT--																	
NAT INFLOW	1450	92	43	55	148	174	166	86	103	77	122	50	23	27	77	79	127
DEPLETION	114	0	0	0	5	19	24	39	10	-5	2	5	2	3	10	1	
CHAN STOR	-1	3	-4	-17	0	-6	-7	-3	1	0	9	22	-1	0	-4	1	3
EVAPORATION	38							2	7	9	8	4	2	2	4		
REG INFLOW	14404	328	174	370	1232	1463	1619	1672	1685	1609	1402	331	153	175	766	767	658
RELEASE	14404	328	174	370	1232	1463	1619	1672	1672	1583	1402	331	153	175	766	767	697
STOR CHANGE									13	26							-39
STORAGE	358	358	358	358	358	358	358	358	371	397	397	397	397	397	397	397	358
ELEV FTMSL	1206.0	1206.0	1206.0	1206.0	1206.0	1206.0	1206.0	1206.0	1206.5	1207.5	1207.5	1207.5	1207.5	1207.5	1207.5	1207.5	1206.0
DISCH KCFS	12.5	11.0	12.5	20.7	20.7	23.8	27.2	27.2	27.2	26.6	22.8	11.1	11.0	11.0	12.5	12.5	12.5
POWER																	
AVE POWER MW		39	44	71	71	82	93	93	93	92	80	40	39	39	44	44	44
PEAK POW MW		114	114	114	114	114	114	114	115	117	117	117	117	117	78	78	76
ENERGY GWH	604.1	13.9	7.4	15.4	51.4	60.7	66.8	69.0	69.3	66.6	59.7	14.3	6.6	7.5	32.9	33.0	29.7
--GAVINS POINT - SIOUX CITY--																	
NAT INFLOW	1550	169	79	102	199	310	224	129	96	60	42	16	7	9	21	5	82
DEPLETION	251	6	3	4	21	35	30	37	34	22	10	6	3	3	12	13	13
REGULATED FLOW AT SIOUX CITY																	
KAF	15703	491	250	467	1410	1738	1813	1764	1734	1621	1434	342	158	180	775	759	766
KCFS		16.5	18.0	26.2	23.7	28.3	30.5	28.7	28.2	27.2	23.3	11.5	11.4	11.4	12.6	12.3	13.8
--TOTAL--																	
NAT INFLOW	24601	1435	669	860	2307	3493	6073	3346	1194	1113	1032	452	211	241	651	582	943
DEPLETION	2411	10	5	6	99	644	1580	1002	126	-237	-80	-124	-58	-66	-198	-194	-104
CHAN STOR	6	68	7	-27	-4	-43	-25	-1	3	41	36	23	-1	-44	-29	-7	8
EVAPORATION	1449							89	281	350	301	135	63	72	157		
STORAGE	39817	40819	41240	41600	42394	43462	46118	46608	45664	45085	44497	44618	44664	44675	44562	44572	44862
SYSTEM POWER																	
AVE POWER MW		608	449	697	739	877	1001	1079	1023	809	701	481	497	575	717	740	714
PEAK POW MW		2098	2105	2111	2167	2180	2217	2220	2211	2200	2165	2168	2168	2169	2144	2163	2172
ENERGY GWH	6950.0	218.9	75.5	150.6	532.3	652.6	720.8	802.6	761.5	582.2	521.2	173.2	83.6	110.5	533.6	550.7	480.1
DAILY GWH		14.6	10.8	16.7	17.7	21.1	24.0	25.9	24.6	19.4	16.8	11.5	11.9	13.8	17.2	17.8	17.1
	INI-SUM	15MAR	22MAR	31MAR	30APR	31MAY	30JUN	31JUL	31AUG	30SEP	31OCT	15NOV	22NOV	30NOV	31DEC	31JAN	28FEB

DATE OF STUDY 11/15/04

TIME OF STUDY 10:56:23

SHORTEN NAVIGATION SEASON 3-DAYS
VALUES IN 1000 AF EXCEPT AS INDICATED

STUDY NO 20

	28FEB07 INI-SUM	15MAR	2007 22MAR	31MAR	30APR	31MAY	30JUN	31JUL	31AUG	30SEP	31OCT	15NOV	22NOV	2008 30NOV	31DEC	31JAN	29FEB
--FORT PECK--																	
NAT INFLOW	7400	264	123	158	628	1210	1851	829	324	319	398	188	88	100	310	261	349
DEPLETION	411	-4	-2	-3	43	349	565	223	-72	-155	-75	-39	-18	-21	-130	-143	-108
EVAPORATION	393							24	75	94	82	37	17	20	43		
MOD INFLOW	6596	269	125	161	585	861	1286	582	321	380	391	189	88	101	397	404	457
RELEASE	5469	179	69	89	357	492	565	553	523	387	315	152	83	111	523	553	518
STOR CHANGE	1127	90	56	72	228	369	721	29	-202	-7	76	37	5	-11	-126	-149	-61
STORAGE	11462	11552	11608	11680	11908	12277	12998	13027	12825	12818	12894	12931	12936	12925	12799	12650	12589
ELEV FTMSL	2215.3	2215.8	2216.2	2216.6	2217.9	2219.9	2223.9	2224.1	2223.0	2222.9	2223.3	2223.5	2223.6	2223.5	2222.8	2222.0	2221.7
DISCH KCFS	8.5	6.0	5.0	5.0	6.0	8.0	9.5	9.0	8.5	6.5	5.1	5.1	6.0	7.0	8.5	9.0	9.0
POWER																	
AVE POWER MW		76	64	64	77	103	124	118	111	85	67	67	79	92	111	117	117
PEAK POW MW		190	191	191	193	196	200	200	199	199	199	200	200	200	199	198	198
ENERGY GWH	861.4	27.4	10.7	13.8	55.2	76.5	89.0	88.0	82.9	61.3	50.0	24.1	13.2	17.6	82.8	87.4	81.5
--GARRISON--																	
NAT INFLOW	11001	469	219	282	853	1423	2958	2066	581	497	454	192	89	102	253	237	326
DEPLETION	957	2	1	1	14	177	766	560	45	-138	-19	-103	-48	-55	-106	-85	-57
CHAN STOR	-5	26	11		-11	-21	-16	5	5	20	14	0	-9	-10	-15	-5	
EVAPORATION	465							28	89	112	97	44	21	23	50		
REG INFLOW	15043	672	298	369	1185	1717	2742	2037	974	930	704	402	191	234	816	870	901
RELEASE	13663	476	222	286	1071	1199	1279	1291	1261	1041	836	405	222	286	1230	1322	1237
STOR CHANGE	1379	196	76	84	114	518	1462	745	-286	-111	-132	-3	-31	-51	-414	-452	-336
STORAGE	13800	13996	14072	14155	14270	14787	16250	16995	16709	16598	16466	16464	16432	16381	15967	15515	15179
ELEV FTMSL	1822.1	1822.8	1823.1	1823.5	1823.9	1825.9	1831.2	1833.8	1832.8	1832.4	1831.9	1831.9	1831.8	1831.6	1830.2	1828.6	1827.3
DISCH KCFS	20.5	16.0	16.0	16.0	18.0	19.5	21.5	21.0	20.5	17.5	13.6	13.6	16.0	18.0	20.0	21.5	21.5
POWER																	
AVE POWER MW		180	181	181	204	223	251	252	247	211	164	163	192	215	238	253	250
PEAK POW MW		413	414	415	417	424	443	453	449	448	446	446	446	445	439	434	429
ENERGY GWH	1944.1	64.9	30.4	39.1	147.0	165.7	180.9	187.4	184.0	151.6	121.7	58.8	32.2	41.3	176.8	188.0	174.2
--OAHE--																	
NAT INFLOW	2300	317	148	190	364	236	689	162	33	118	14	5	2	3	-20		40
DEPLETION	626	23	11	14	47	67	132	156	103	25	-9	2	1	1	12	17	26
CHAN STOR	-4	21			-9	-7	-9	2	2	14	18		-11	-9	-9	-7	
EVAPORATION	423							27	82	101	88	39	18	21	46		
REG INFLOW	14910	791	359	462	1379	1361	1827	1273	1110	1046	789	369	194	257	1143	1298	1251
RELEASE	13518	520	95	258	977	1196	1341	1620	1632	1442	923	434	144	159	1088	879	810
STOR CHANGE	1393	271	264	203	402	165	487	-347	-521	-396	-134	-66	50	98	55	419	441
STORAGE	14437	14708	14972	15176	15577	15743	16229	15883	15361	14965	14832	14766	14816	14914	14969	15389	15829
ELEV FTMSL	1591.7	1592.8	1593.9	1594.6	1596.2	1596.8	1598.6	1597.3	1595.4	1593.8	1593.3	1593.1	1593.2	1593.6	1593.9	1595.5	1597.1
DISCH KCFS	15.4	17.5	6.8	14.5	16.4	19.5	22.5	26.3	26.5	24.2	15.0	14.6	10.4	10.0	17.7	14.3	14.1
POWER																	
AVE POWER MW		208	82	174	199	237	276	323	322	292	180	175	124	121	212	173	172
PEAK POW MW		635	640	644	652	655	663	657	647	640	637	636	637	639	640	648	656
ENERGY GWH	1981.2	74.9	13.8	37.7	143.3	176.2	198.7	240.0	239.7	210.0	134.0	63.0	20.9	23.1	158.0	128.4	119.5
--BIG BEND--																	
EVAPORATION	103							6	20	25	22	10	5	5	11		
REG INFLOW	13414	520	95	258	977	1196	1341	1613	1612	1418	901	425	139	154	1076	879	810
RELEASE	13414	520	95	258	977	1196	1341	1613	1612	1418	901	425	139	154	1076	879	810
STORAGE	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682
ELEV FTMSL	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0
DISCH KCFS	15.4	17.5	6.8	14.5	16.4	19.5	22.5	26.2	26.2	23.8	14.7	14.3	10.0	9.7	17.5	14.3	14.1
POWER																	
AVE POWER MW		82	32	68	77	91	105	123	123	113	72	72	51	49	87	70	68
PEAK POW MW		510	509	509	509	509	509	509	509	517	538	538	538	538	538	538	529
ENERGY GWH	773.4	29.5	5.4	14.6	55.4	67.8	75.9	91.4	91.3	81.3	53.6	25.9	8.5	9.4	64.4	52.0	47.0
--FORT RANDALL--																	
NAT INFLOW	900	122	57	73	115	140	185	74	57	42	2	2	1	1	10		19
DEPLETION	80	1	1	1	4	9	12	18	15	7	1	1	0	1	3	3	3
EVAPORATION	118							8	25	31	25	10	4	4	10		
REG INFLOW	14117	641	151	331	1088	1327	1514	1661	1629	1421	877	416	136	150	1073	876	826
RELEASE	14116	232	134	331	1088	1327	1514	1661	1629	1565	1514	720	295	158	707	689	552
STOR CHANGE	1	408	17					0	0	-144	-637	-304	-159	-8	366	187	274
STORAGE	3124	3532	3549	3549	3549	3549	3549	3549	3549	3405	2768	2464	2305	2297	2663	2850	3124
ELEV FTMSL	1350.0	1355.0	1355.2	1355.2	1355.2	1355.2	1355.2	1355.2	1355.2	1353.5	1345.1	1340.4	1337.6	1337.5	1343.5	1346.3	1350.0
DISCH KCFS	9.5	7.8	9.7	18.5	18.3	21.6	25.4	27.0	26.5	26.3	24.6	24.2	21.2	9.9	11.5	11.2	9.6
POWER																	
AVE POWER MW		65	82	157	155	182	214	227	223	220	198	183	156	73	86	87	77
PEAK POW MW		354	355	355	355	355	355	355	355	349	318	296	284	284	311	324	338
ENERGY GWH	1401.8	23.4	13.8	33.9	111.4	135.6	154.3	169.2	165.9	158.3	147.0	66.0	26.2	14.0	64.2	65.0	53.7
--GAVINS POINT--																	
NAT INFLOW	1450	92	43	55	148	174	166	86	103	77	122	50	23	27	77	79	127
DEPLETION	114	0	0	0	5	19	24	39	10	-5	2	5	2	3	10	1	
CHAN STOR	-1	3	-4	-17	0	-6	-7	-3	1	0	3	1	5	21	-3	1	3
EVAPORATION	38							2	7	9	8	4	2	2	4		
REG INFLOW	15413	328	174	370	1232	1476	1648	1703	1716	1639	1629	762	319	201	767	767	682
RELEASE	15413	328	174	370	1232	1476	1648	1703	1703	1613	1629	762	319	201	767	767	721
STOR CHANGE									13	26							-39
STORAGE	358	358	358	358	358	358	358	358	371	397	397	397	397	397	397	397	358
ELEV FTMSL	1206.0	1206.0	1206.0	1206.0	1206.0	1206.0	1206.0	1206.0	1206.5	1207.5	1207.5	1207.5	1207.5	1207.5	1207.5	1207.5	1206.0
DISCH KCFS	12.5	11.0	12.5	20.7	20.7	24.0	27.7	27.7	27.7	27.1	26.5	25.6	23.0	12.7	12.5	12.5	12.5
POWER																	
AVE POWER MW		39	44	71	71	82	94	94	95	94	93	90	81	45	44	44	44
PEAK POW MW		114	114	114	114	114	114	114	115	117	117	117	117	117	78	78	76
ENERGY GWH	646.1	13.9	7.4	15.4	51.4	61.2	67.9	70.2	70.5	67.8	69.1	32.3	13.6	8.6	33.0	33.0	30.8
--GAVINS POINT - SIOUX CITY--																	
NAT INFLOW	1550	169	79	102	199	310	224	129	96	60	42	16	7	9	21	5	82
DEPLETION	254	6	3	4	21	35	30	37	35	23	10	6	3	3	12	13	14
REGULATED FLOW AT SIOUX CITY																	
KAF	16709	491	250	467	1410	1751	1842	1795	1764	1650	1661	772	324	206	776	759	789
KCFS		16.5	18.0	26.2	23.7	28.5	31.0	29.2	28.7	27.7	27.0	26.0	23.4	13.0	12.6	12.3	13.7
--TOTAL--																	
NAT INFLOW	24601	1435	669	860	2307	3493	6073	3346	1194	1113	1032	452	211	241	651	582	943
DEPLETION	2442	28	13	17	134	656	1529	1033	136	-243	-90	-128	-60	-68	-199	-194	-122
CHAN STOR	-11	51	7	-17	-19	-34	-32	4	8	34	35	1	-15	2	-27	-11	3
EVAPORATION	1539							95	298	373	322	144	67	76	166		
STORAGE	44862	45828	46240	46599	47344	48396	51066	51493	50497	49865	49039	48703	48568	48596	48477	48483	48761
SYSTEM POWER																	
AVE POWER MW		650	485	715	783	918	1065	1137	1121	1014	773	750	683	595	778	744	728
PEAK POW MW		2217	2223	2228	2239	2253	2285	2288	2275	2270	2255	2233	2221	2222	2206	2219	2226
ENERGY GWH	7608.0	233.9	81.4	154.5	563.6	683.0	766.8	846.1	834.3	730.4	575.5	270.0	114.7	114.1	579.1	553.8	506.7
DAILY GWH		15.6	11.6	17.2	18.8	22.0	25.6	27.3	26.9	24.3	18.6	18.0	16.4	14.3	18.7	17.9	17.5
	INI-SUM	15MAR	22MAR	31MAR	30APR	31MAY	30JUN	31JUL	31AUG	30SEP	31OCT	15NOV	22NOV	30NOV	31DEC	31JAN	29FEB

VALUES IN 1000 AF EXCEPT AS INDICATED

29FEB08	INI-SUM	15MAR	2008 22MAR	31MAR	30APR	31MAY	30JUN	31JUL	31AUG	30SEP	31OCT	15NOV	22NOV	2009 30NOV	31DEC	31JAN	28FEB
--FORT PECK--																	
NAT INFLOW	7400	264	123	158	628	1210	1851	829	324	319	398	188	88	100	310	261	349
DEPLETION	411	-4	-2	-3	43	349	565	223	-72	-155	-75	-39	-18	-21	-130	-143	-108
EVAPORATION	431							26	82	103	90	41	19	22	47		
MOD INFLOW	6558	269	125	161	585	861	1286	580	314	371	383	185	86	99	393	404	457
RELEASE	5029	179	69	89	357	430	506	492	461	368	296	143	83	127	492	492	444
STOR CHANGE	1530	90	56	72	228	431	780	88	-147	3	86	42	3	-28	-99	-88	13
STORAGE	12589	12679	12735	12807	13035	13466	14246	14334	14187	14190	14277	14319	14322	14293	14194	14106	14119
ELEV FTMSL	2221.7	2222.2	2222.5	2222.9	2224.1	2226.4	2230.4	2230.8	2230.1	2230.1	2230.5	2230.7	2230.7	2230.6	2230.1	2229.7	2229.7
DISCH KCFS	9.0	6.0	5.0	5.0	6.0	7.0	8.5	8.0	7.5	6.2	4.8	4.8	6.0	8.0	8.0	8.0	8.0
POWER																	
AVE POWER MW		78	65	66	79	93	114	108	101	83	65	65	81	108	108	107	107
PEAK POW MW		198	199	199	200	203	206	206	205	205	206	206	206	206	205	205	205
ENERGY GWH	813.7	28.2	11.0	14.2	56.8	68.9	81.7	80.1	75.1	59.9	48.3	23.3	13.6	20.7	80.0	79.9	72.1
--GARRISON--																	
NAT INFLOW	11001	469	219	282	853	1423	2958	2066	581	497	454	192	89	102	253	237	326
DEPLETION	940	1	1	1	12	187	799	574	52	-139	-23	-115	-53	-61	-125	-103	-68
CHAN STOR	10	31	10		-10	-10	-15	5	5	13	14	0	-12	-20			
EVAPORATION	473							29	92	114	99	44	21	24	51		
REG INFLOW	14627	678	298	370	1188	1656	2649	1960	903	903	688	405	193	246	819	832	838
RELEASE	14602	476	222	286	1131	1322	1398	1414	1383	1054	981	474	221	317	1230	1414	1277
STOR CHANGE	25	202	76	84	57	334	1251	546	-480	-151	-293	-70	-28	-71	-411	-582	-439
STORAGE	15179	15381	15457	15541	15598	15932	17183	17729	17249	17098	16805	16735	16707	16636	16225	15643	15204
ELEV FTMSL	1827.3	1828.1	1828.3	1828.6	1828.9	1830.1	1834.4	1836.2	1834.6	1834.1	1833.1	1832.9	1832.8	1832.5	1831.1	1829.0	1827.4
DISCH KCFS	21.5	16.0	16.0	16.0	19.0	21.5	23.5	23.0	22.5	17.7	15.9	15.9	15.9	20.0	20.0	23.0	23.0
POWER																	
AVE POWER MW		187	187	188	223	253	281	281	275	216	193	193	192	240	239	271	268
PEAK POW MW		432	433	434	435	439	455	462	456	454	450	449	449	448	443	435	429
ENERGY GWH	2110.1	67.2	31.5	40.5	160.4	188.1	202.4	208.8	204.5	155.3	143.9	69.3	32.3	46.1	177.8	201.8	180.1
--OAHE--																	
NAT INFLOW	2300	317	148	190	364	236	689	162	33	118	14	5	2	3	-20		40
DEPLETION	641	23	11	14	48	68	135	160	106	26	-9	2	1	1	12	17	27
CHAN STOR	-6	24			-13	-11	-8	2	2	21	8		0	-18	0	-13	
EVAPORATION	445							28	87	107	92	41	19	22	48		
REG INFLOW	15810	794	359	462	1434	1479	1944	1390	1225	1060	920	437	204	279	1150	1384	1290
RELEASE	14934	567	112	272	1025	1296	1534	1816	1829	1633	1120	530	244	212	1082	909	756
STOR CHANGE	877	227	247	190	409	183	410	-426	-604	-573	-200	-93	-40	67	68	475	535
STORAGE	15829	16056	16304	16493	16902	17086	17495	17069	16466	15893	15693	15600	15560	15627	15696	16171	16706
ELEV FTMSL	1597.1	1598.0	1598.9	1599.5	1601.0	1601.6	1603.1	1601.6	1599.4	1597.4	1596.6	1596.3	1596.1	1596.4	1596.6	1598.4	1600.3
DISCH KCFS	14.1	19.0	8.0	15.2	17.2	21.1	25.8	29.5	29.7	27.4	18.2	17.8	17.6	13.4	17.6	14.8	13.6
POWER																	
AVE POWER MW		233	99	188	214	264	324	370	369	337	222	217	214	163	214	181	169
PEAK POW MW		660	665	668	676	679	687	679	668	657	654	652	651	652	654	662	672
ENERGY GWH	2236.1	84.0	16.7	40.7	154.4	196.1	233.1	275.5	274.6	242.5	165.5	78.0	35.9	31.2	159.5	134.9	113.4
--BIG BEND--																	
EVAPORATION	103							6	20	25	22	10	5	5	11		
REG INFLOW	14830	567	112	272	1025	1296	1534	1810	1809	1608	1098	520	239	207	1070	909	756
RELEASE	14830	567	112	272	1025	1296	1534	1810	1809	1608	1098	520	239	207	1070	909	756
STORAGE	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682
ELEV FTMSL	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0
DISCH KCFS	14.1	19.0	8.0	15.2	17.2	21.1	25.8	29.4	29.4	27.0	17.9	17.5	17.2	13.0	17.4	14.8	13.6
POWER																	
AVE POWER MW		89	38	71	81	99	121	138	138	128	88	88	87	66	86	72	65
PEAK POW MW		510	509	509	509	509	509	509	509	517	538	538	538	538	538	538	529
ENERGY GWH	854.9	32.1	6.3	15.4	58.1	73.4	86.9	102.5	102.4	92.2	65.2	31.6	14.6	12.6	64.0	53.7	43.9
--FORT RANDALL--																	
NAT INFLOW	900	122	57	73	115	140	185	74	57	42	2	2	1	1	10		19
DEPLETION	80	1	1	1	4	9	12	18	15	7	1	1	0	1	3	3	3
EVAPORATION	118							8	25	31	25	10	4	4	10		
REG INFLOW	15533	688	168	344	1136	1427	1707	1858	1826	1612	1074	511	236	203	1067	906	772
RELEASE	15533	280	151	344	1136	1427	1707	1858	1826	1756	1711	815	381	225	701	689	528
STOR CHANGE	0	408	17					0	0	-144	-637	-304	-145	-22	366	217	244
STORAGE	3124	3532	3549	3549	3549	3549	3549	3549	3549	3405	2768	2464	2319	2297	2663	2880	3124
ELEV FTMSL	1350.0	1355.0	1355.2	1355.2	1355.2	1355.2	1355.2	1355.2	1355.2	1353.5	1345.1	1340.4	1337.9	1337.5	1343.5	1346.7	1350.0
DISCH KCFS	9.6	9.4	10.9	19.3	19.1	23.2	28.7	30.2	29.7	29.5	27.8	27.4	27.4	14.2	11.4	11.2	9.5
POWER																	
AVE POWER MW		78	93	163	161	196	241	254	249	246	223	207	201	103	85	88	76
PEAK POW MW		354	355	355	355	355	355	355	355	349	318	296	285	284	311	326	338
ENERGY GWH	1540.0	28.2	15.5	35.2	116.3	145.7	173.6	188.8	185.6	177.2	165.7	74.5	33.7	19.8	63.6	65.1	51.4
--GAVINS POINT--																	
NAT INFLOW	1450	92	43	55	148	174	166	86	103	77	122	50	23	27	77	79	127
DEPLETION	114	0	0	0	5	19	24	39	10	-5	2	5	2	3	10	1	
CHAN STOR	-1	0	-3	-16	0	-8	-11	-3	1	0	3	1	0	25	5	0	3
EVAPORATION	38							2	7	9	8	4	2	2	4		
REG INFLOW	16831	373	192	384	1279	1574	1839	1900	1913	1829	1826	857	400	271	769	767	658
RELEASE	16831	373	192	384	1279	1574	1839	1900	1900	1803	1826	857	400	271	769	767	697
STOR CHANGE									13	26							-39
STORAGE	358	358	358	358	358	358	358	358	371	397	397	397	397	397	397	397	358
ELEV FTMSL	1206.0	1206.0	1206.0	1206.0	1206.0	1206.0	1206.0	1206.0	1206.5	1207.5	1207.5	1207.5	1207.5	1207.5	1207.5	1207.5	1206.0
DISCH KCFS	12.5	12.5	13.8	21.5	21.5	25.6	30.9	30.9	30.9	30.3	29.7	28.8	28.8	17.1	12.5	12.5	12.5
POWER																	
AVE POWER MW		44	48	74	74	88	103	103	103	103	103	101	101	60	44	44	44
PEAK POW MW		114	114	114	114	114	114	114	115	117	117	117	117	117	78	78	76
ENERGY GWH	697.6	15.8	8.1	16.0	53.3	65.1	74.2	76.6	77.0	74.5	76.6	36.2	16.9	11.6	33.1	33.0	29.7
--GAVINS POINT - SIOUX CITY--																	
NAT INFLOW	1550	169	79	102	199	310	224	129	96	60	42	16	7	9	21	5	82
DEPLETION	255	6	3	4	21	35	30	38	35	23	10	6	3	3	12	13	14
REGULATED FLOW AT SIOUX CITY																	
KAF	18126	536	268	482	1457	1849	2033	1991	1961	1840	1858	867	405	277	778	759	765
KCFS		18.0	19.3	27.0	24.5	30.1	34.2	32.4	31.9	30.9	30.2	29.2	29.2	17.5	12.7	12.3	13.8
--TOTAL--																	
NAT INFLOW	24601	1435	669	860	2307	3493	6073	3346	1194	1113	1032	452	211	241	651	582	943
DEPLETION	2441	28	13	17	133	667	1565	1052	146	-243	-94	-140	-65	-75	-218	-212	-132
CHAN STOR	3	56	7	-16	-23	-29	-34	4	8	34	25	1	-12	-13	5	-13	3
EVAPORATION	1607							99	313	389	336	150	69	79	172		
STORAGE	48761	49688	50084	50430	51124	52072	54513	54721	53503	52664	51621	51196	50986	50932	50857	50879	51192
SYSTEM POWER																	
AVE POWER MW		710	530	750	832	991	1183	1253	1235	1113	894	870	875	740	777	764	730
PEAK POW MW		2269	2274	2280	2289	2299	2326	2325	2308	2300	2282	2259	2246	2245	2229	2244	2250
ENERGY GWH	8252.4	255.5	89.1	162.0	599.1	737.3	851.9	932.3	919.2	801.6	665.2	313.0	147.0	142.1	578.0	568.4	490.6
DAILY GWH		17.0	12.7	18.0	20.0	23.8	28.4	30.1	29.7	26.7	21.5	20.9	21.0	17.8	18.6	18.3	17.5
	INI-SUM	15MAR	22MAR	31MAR	30APR	31MAY	30JUN	31JUL	31AUG	30SEP	31OCT	15NOV	22NOV	30NOV	31DEC	31JAN	28FEB

DATE OF STUDY 11/15/04 | 2004-2005 AOP EXTENSIONS, MEDIAN RUNOFF SIMULATION 99001 9901 | 1 PAGE 1

STUDY NO 22

TIME OF STUDY 10:56:23

VALUES IN 1000 AF EXCEPT AS INDICATED

28FEB09	INI-SUM	2009 15MAR	22MAR	31MAR	30APR	31MAY	30JUN	31JUL	31AUG	30SEP	31OCT	15NOV	22NOV	2010 30NOV	31DEC	31JAN	28FEB
--FORT PECK--																	
NAT INFLOW	7400	264	123	158	628	1210	1851	829	324	319	398	188	88	100	310	261	349
DEPLETION	431	-5	-2	-3	42	351	574	236	-64	-156	-79	-41	-19	-22	-135	-147	-99
EVAPORATION	452							27	86	108	95	43	20	23	49		
MOD INFLOW	6517	269	126	161	586	859	1277	566	302	367	382	186	87	99	396	408	448
RELEASE	6138	179	83	107	417	492	762	615	584	385	341	208	111	159	584	584	528
STOR CHANGE	378	91	42	54	169	367	515	-49	-283	-19	41	-23	-24	-60	-188	-176	-80
STORAGE	14119	14209	14252	14306	14475	14842	15358	15308	15026	15007	15048	15025	15001	14941	14753	14577	14497
ELEV FTMSL	2229.7	2230.2	2230.4	2230.7	2231.5	2233.3	2235.7	2235.5	2234.1	2234.1	2234.2	2234.1	2234.0	2233.7	2232.8	2232.0	2231.6
DISCH KCFS	8.0	6.0	6.0	6.0	7.0	8.0	12.8	10.0	9.5	6.5	5.5	7.0	8.0	10.0	9.5	9.5	9.5
POWER																	
AVE POWER MW		81	81	81	94	108	174	137	129	88	76	95	109	136	129	128	128
PEAK POW MW		205	206	206	206	208	210	209	208	208	208	208	208	208	207	207	207
ENERGY GWH	1007.5	29.0	13.6	17.5	68.0	80.5	125.1	101.6	96.3	63.4	56.2	34.3	18.3	26.1	95.8	95.6	86.2

28FEB09	INI-SUM	15MAR	22MAR	31MAR	30APR	31MAY	30JUN	31JUL	31AUG	30SEP	31OCT	15NOV	22NOV	30NOV	31DEC	31JAN	28FEB
--GARRISON--																	
NAT INFLOW	11001	469	219	282	853	1423	2958	2066	581	497	454	192	89	102	253	237	326
DEPLETION	1014	-7	-3	-4	-4	218	841	620	57	-142	-27	-119	-55	-63	-126	-104	-68
CHAN STOR	-16	21			-10	-10	-49	28	5	30	9	-15	-10	-20	5		
EVAPORATION	479							29	93	116	100	45	21	24	51		
REG INFLOW	15630	675	305	393	1263	1687	2830	2060	1020	939	732	459	225	280	917	925	922
RELEASE	15202	476	222	286	1071	1353	1458	1476	1445	1264	1069	517	242	286	1230	1476	1333
STOR CHANGE	427	199	83	107	192	334	1372	584	-425	-326	-337	-58	-17	-6	-313	-551	-411
STORAGE	15204	15403	15487	15594	15786	16120	17491	18075	17650	17324	16987	16929	16912	16906	16593	16043	15631
ELEV FTMSL	1827.4	1828.1	1828.4	1828.8	1829.5	1830.7	1835.5	1837.4	1836.0	1834.9	1833.7	1833.5	1833.5	1833.5	1832.4	1830.4	1829.0
DISCH KCFS	23.0	16.0	16.0	16.0	18.0	22.0	24.5	24.0	23.5	21.2	17.4	17.4	17.4	18.0	20.0	24.0	24.0
POWER																	
AVE POWER MW		187	187	188	212	260	294	295	289	260	212	211	211	218	241	285	282
PEAK POW MW		432	433	435	437	442	459	466	461	457	453	452	452	452	448	440	435
ENERGY GWH	2210.1	67.2	31.5	40.6	152.5	193.3	212.0	219.3	215.1	187.0	157.4	75.8	35.4	41.8	179.1	212.4	189.7

28FEB09	INI-SUM	15MAR	22MAR	31MAR	30APR	31MAY	30JUN	31JUL	31AUG	30SEP	31OCT	15NOV	22NOV	30NOV	31DEC	31JAN	28FEB
--OAHE--																	
NAT INFLOW	2300	317	148	190	364	236	689	162	33	118	14	5	2	3	-20		40
DEPLETION	652	23	11	14	48	69	138	165	109	27	-10	1	0	1	12	17	27
CHAN STOR	-4	30			-8	-17	-10	2	2	10	17		0	-3	-9	-18	
EVAPORATION	454							29	89	109	94	42	20	22	49		
REG INFLOW	16392	799	359	462	1379	1503	1998	1446	1282	1255	1016	479	224	263	1140	1441	1346
RELEASE	15940	449	230	338	1179	1437	1634	1921	1933	1734	1224	580	268	231	1094	871	817
STOR CHANGE	452	350	129	123	199	66	364	-475	-651	-479	-208	-101	-44	32	46	570	529
STORAGE	16706	17056	17185	17308	17508	17574	17938	17464	16812	16334	16125	16024	15980	16012	16059	16629	17158
ELEV FTMSL	1600.3	1601.5	1602.0	1602.4	1603.1	1603.3	1604.6	1602.9	1600.7	1599.0	1598.2	1597.8	1597.7	1597.8	1598.0	1600.0	1601.9
DISCH KCFS	13.6	15.1	16.6	18.9	19.8	23.4	27.5	31.2	31.4	29.1	19.9	19.5	19.3	14.5	17.8	14.2	14.7
POWER																	
AVE POWER MW		189	208	238	250	295	348	395	393	360	245	240	236	179	219	175	184
PEAK POW MW		679	681	683	687	688	695	686	674	665	661	660	659	659	660	671	681
ENERGY GWH	2408.6	67.9	35.0	51.4	179.9	219.5	250.3	293.5	292.3	259.5	182.5	86.2	39.7	34.3	162.6	130.4	123.6

28FEB09	INI-SUM	15MAR	22MAR	31MAR	30APR	31MAY	30JUN	31JUL	31AUG	30SEP	31OCT	15NOV	22NOV	30NOV	31DEC	31JAN	28FEB
--BIG BEND--																	
EVAPORATION	103							6	20	25	22	10	5	5	11		
REG INFLOW	15836	449	230	338	1179	1437	1634	1915	1914	1709	1202	570	263	225	1083	871	817
RELEASE	15836	449	230	338	1179	1437	1634	1915	1914	1709	1202	570	263	225	1083	871	817
STORAGE	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682
ELEV FTMSL	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0
DISCH KCFS	13.6	15.1	16.6	18.9	19.8	23.4	27.5	31.1	31.1	28.7	19.6	19.2	18.9	14.2	17.6	14.2	14.7
POWER																	
AVE POWER MW		72	78	89	93	109	129	146	146	136	96	96	95	72	87	69	71
PEAK POW MW		517	510	509	509	509	509	509	509	517	538	538	538	538	538	538	529
ENERGY GWH	912.9	25.7	13.1	19.1	66.8	81.4	92.5	108.4	108.3	98.0	71.4	34.6	16.0	13.8	64.7	51.6	47.4

28FEB09	INI-SUM	15MAR	22MAR	31MAR	30APR	31MAY	30JUN	31JUL	31AUG	30SEP	31OCT	15NOV	22NOV	30NOV	31DEC	31JAN	28FEB
--FORT RANDALL--																	
NAT INFLOW	900	122	57	73	115	140	185	74	57	42	2	2	1	1	10		19
DEPLETION	80	1	1	1	4	9	12	18	15	7	1	1	0	1	3	3	3
EVAPORATION	118							8	25	31	25	10	4	4	10		
REG INFLOW	16539	570	287	411	1290	1568	1807	1963	1930	1713	1179	561	259	222	1079	868	833
RELEASE	16539	280	169	394	1290	1568	1807	1963	1930	1857	1816	865	404	244	713	701	539
STOR CHANGE	0	290	118	17				0	0	-144	-637	-304	-145	-22	366	167	294
STORAGE	3124	3414	3532	3549	3549	3549	3549	3549	3549	3405	2768	2464	2319	2297	2663	2830	3124
ELEV FTMSL	1350.0	1353.6	1355.0	1355.2	1355.2	1355.2	1355.2	1355.2	1355.2	1353.5	1345.1	1340.4	1337.9	1337.5	1343.5	1346.0	1350.0
DISCH KCFS	9.5	9.4	12.2	22.0	21.7	25.5	30.4	31.9	31.4	31.2	29.5	29.1	29.1	15.4	11.6	11.4	9.7
POWER																	
AVE POWER MW		78	103	186	183	215	255	268	263	260	236	220	213	112	87	89	78
PEAK POW MW		350	354	355	355	355	355	355	355	349	318	297	285	284	311	322	338
ENERGY GWH	1638.2	28.0	17.2	40.2	131.8	159.8	183.6	199.2	196.0	187.3	175.7	79.1	35.8	21.5	64.7	66.1	52.3

28FEB09	INI-SUM	15MAR	22MAR	31MAR	30APR	31MAY	30JUN	31JUL	31AUG	30SEP	31OCT	15NOV	22NOV	30NOV	31DEC	31JAN	28FEB
--GAVINS POINT--																	
NAT INFLOW	1450	92	43	55	148	174	166	86	103	77	122	50	23	27	77	79	127
DEPLETION	114	0	0	0	5	19	24	39	10	-5	2	5	2	3	10	1	
CHAN STOR	-2	0	-5	-19	1	-7	-9	-3	1	0	3	1	0	25	7	0	3
EVAPORATION	38							2	7	9	8	4	2	2	4		
REG INFLOW	17836	373	207	430	1434	1716	1940	2005	2018	1930	1931	907	423	291	783	779	669
RELEASE	17836	373	207	430	1434	1716	1940	2005	2005	1904	1931	907	423	291	783	779	708
STOR CHANGE									13	26							-39
STORAGE	358	358	358	358	358	358	358	358	371	397	397	397	397	397	397	397	358
ELEV FTMSL	1206.0	1206.0	1206.0	1206.0	1206.0	1206.0	1206.0	1206.0	1206.5	1207.5	1207.5	1207.5	1207.5	1207.5	1207.5	1207.5	1206.0
DISCH KCFS	12.5	12.5	14.9	24.1	24.1	27.9	32.6	32.6	32.6	32.0	31.4	30.5	30.5	18.4	12.7	12.7	12.7
POWER																	
AVE POWER MW		44	52	83	83	95	107	107	107	107	107	105	105	65	45	45	45
PEAK POW MW		114	114	114	114	114	114	114	115	117	117	117	117	117	78	78	76
ENERGY GWH	730.8	15.8	8.7	17.8	59.5	70.7	76.9	79.5	79.9	77.3	79.6	37.7	17.6	12.4	33.6	33.5	30.2

28FEB09	INI-SUM	15MAR	22MAR	31MAR	30APR	31MAY	30JUN	31JUL	31AUG	30SEP	31OCT	15NOV	22NOV	30NOV	31DEC	31JAN	28FEB
--GAVINS POINT - SIOUX CITY--																	
NAT INFLOW	1550	169	79	102	199	310	224	129	96	60	42	16	7	9	21	5	82
DEPLETION	262	7	3	4	22	35	31	38	36	23	10	6	3	3	13	14	14
REGULATED FLOW AT SIOUX CITY																	
KAF	19124	535	283	528	1611	1991	2133	2096	2065	1941	1963	917	428	297	791	770	776
KCFS		18.0	20.4	29.6	27.1	32.4	35.8	34.1	33.6	32.6	31.9	30.8	30.8	18.7	12.9	12.5	14.0

28FEB09	INI-SUM	15MAR	22MAR	31MAR	30APR	31MAY	30JUN	31JUL	31AUG	30SEP	31OCT	15NOV	22NOV	30NOV	31DEC	31JAN	28FEB
--TOTAL--																	
NAT INFLOW	24601	1435	669	860	2307	3493	6073	3346	1194	1113	1032	452	211	241	651	582	943
DEPLETION	2553	19	9	12	117	701	1620	1116	163	-246	-103	-147	-68	-78	-223	-216	-123
CHAN STOR	-22	51	-5	-19	-18	-34	-69	27	8	40	29	-14	-10	3	3	-17	3
EVAPORATION	1645							102	321	399	343	153	71	81	175		
STORAGE	51192	52123	52495	52796	53357	54125	56376	56436	55090	54149	53007	52521	52291	52235	52146	52157	52450
SYSTEM POWER																	
AVE POWER MW		649	709	864	915	1082	1306	1346	1328	1212	971	966	969	781	807	792	788
PEAK POW MW		2297	2299	2302	2309	2316	2342	2340	2323	2314	2295	2271	2259	2258	2243	2257	2265
ENERGY GWH	8908.2	233.8	119.1	186.6	658.4	805.2	940.6	1001.5	987.9	872.5	722.7	347.8	162.7	149.9	600.6	589.6	529.4
DAILY GWH		15.6	17.0	20.7	21.9	26.0	31.4	32.3	31.9	29.1	23.3	23.2	23.2	18.7	19.4	19.0	18.9
	INI-SUM	15MAR	22MAR	31MAR	30APR	31MAY	30JUN	31JUL	31AUG	30SEP	31OCT	15NOV	22NOV	30NOV	31DEC	31JAN	28FEB

TIME OF STUDY 10:56:23 STUDY NO 23

VALUES IN 1000 AF EXCEPT AS INDICATED

28FEB10	INI-SUM	2010 15MAR	22MAR	31MAR	30APR	31MAY	30JUN	31JUL	31AUG	30SEP	31OCT	15NOV	22NOV	2011 30NOV	31DEC	31JAN	28FEB
--FORT PECK--																	
NAT INFLOW	7400	264	123	158	628	1210	1851	829	324	319	398	188	88	100	310	261	349
DEPLETION	442	-5	-2	-3	42	352	578	244	-60	-156	-81	-42	-20	-22	-136	-147	-100
EVAPORATION	446							27	86	107	93	42	20	22	48		
MOD INFLOW	6512	269	126	161	586	858	1273	558	298	368	386	187	87	100	398	408	449
RELEASE	7283	179	69	89	476	553	1083	646	646	536	433	209	98	159	615	799	694
STOR CHANGE	-772	91	56	72	110	305	190	-88	-348	-168	-47	-22	-10	-59	-217	-391	-245
STORAGE	14497	14588	14644	14716	14826	15131	15321	15233	14885	14717	14670	14648	14638	14579	14362	13971	13726
ELEV FTMSL	2231.6	2232.1	2232.3	2232.7	2233.2	2234.6	2235.5	2235.1	2233.5	2232.7	2232.4	2232.3	2232.3	2232.0	2230.9	2229.0	2227.7
DISCH KCFS	9.5	6.0	5.0	5.0	8.0	9.0	18.2	10.5	10.5	9.0	7.0	7.0	7.0	10.0	10.0	13.0	12.5
POWER																	
AVE POWER MW		81	68	68	108	122	209	143	143	122	95	95	95	135	135	174	167
PEAK POW MW		207	207	207	208	209	209	209	208	207	207	207	207	207	206	205	204
ENERGY GWH	1164.0	29.2	11.4	14.6	78.1	91.0	150.4	106.5	106.2	87.8	70.9	34.3	16.0	25.9	100.3	129.3	112.0
--GARRISON--																	
NAT INFLOW	11001	469	219	282	853	1423	2958	2066	581	497	454	192	89	102	253	237	326
DEPLETION	1233	-7	-3	-4	-3	218	851	635	63	-145	-32	-97	-45	-51	-75	-51	-21
CHAN STOR	-32	36	10		-31	-10	-93	76		15	19	0	0	-29	0	-30	5
EVAPORATION	511							31	98	123	107	48	22	26	55		
REG INFLOW	16509	691	302	375	1301	1748	3097	2122	1065	1069	831	449	210	257	888	1058	1046
RELEASE	14670	476	222	321	1190	1353	1369	1383	1353	1135	960	464	236	286	1230	1414	1277
STOR CHANGE	1839	215	80	54	111	395	1728	739	-287	-66	-129	-15	-26	-28	-342	-357	-231
STORAGE	15631	15846	15926	15979	16090	16486	18214	18952	18665	18599	18470	18455	18429	18401	18059	17702	17471
ELEV FTMSL	1829.0	1829.7	1830.0	1830.2	1830.6	1832.0	1837.8	1840.2	1839.3	1839.1	1838.7	1838.6	1838.5	1838.4	1837.3	1836.2	1835.4
DISCH KCFS	24.0	16.0	16.0	18.0	20.0	22.0	23.0	22.5	22.0	19.1	15.6	15.6	17.0	18.0	20.0	23.0	23.0
POWER																	
AVE POWER MW		189	189	213	237	262	280	281	276	239	196	195	212	225	248	283	281
PEAK POW MW		438	439	440	441	446	468	476	473	472	471	470	470	470	466	461	459
ENERGY GWH	2178.4	67.9	31.8	46.0	170.6	194.8	201.6	209.1	205.3	172.0	145.5	70.3	35.7	43.1	184.8	210.7	189.1
--OAHE--																	
NAT INFLOW	2300	317	148	190	364	236	689	162	33	118	14	5	2	3	-20		40
DEPLETION	666	24	11	14	49	70	142	169	112	27	-10	1	0	1	12	17	27
CHAN STOR	4	34		-8	-8	-8	-4	2	2	12	15	0	-6	-4	-9	-13	
EVAPORATION	451							29	89	109	93	41	19	22	48		
REG INFLOW	15857	803	359	489	1497	1511	1912	1349	1186	1130	906	427	213	261	1141	1384	1290
RELEASE	16586	484	213	364	1263	1510	1669	1958	1970	1770	1261	598	276	236	1177	922	916
STOR CHANGE	-730	319	145	125	234	0	243	-608	-784	-640	-355	-171	-63	26	-36	461	374
STORAGE	17158	17477	17622	17747	17981	17982	18225	17616	16833	16192	15837	15666	15603	15629	15593	16055	16429
ELEV FTMSL	1601.9	1603.0	1603.5	1603.9	1604.7	1604.7	1605.5	1603.5	1600.8	1598.5	1597.2	1596.5	1596.3	1596.4	1596.2	1598.0	1599.3
DISCH KCFS	14.7	16.3	15.4	20.4	21.2	24.6	28.0	31.8	32.0	29.7	20.5	20.1	19.9	14.9	19.1	15.0	16.5
POWER																	
AVE POWER MW		205	195	258	270	312	357	404	401	367	252	245	242	181	233	184	204
PEAK POW MW		687	689	691	696	696	700	689	675	663	656	653	652	652	652	660	667
ENERGY GWH	2506.5	73.7	32.7	55.8	194.2	232.5	257.2	300.3	298.3	264.4	187.1	88.3	40.6	34.8	173.3	136.6	136.8
--BIG BEND--																	
EVAPORATION	103							6	20	25	22	10	5	5	11		
REG INFLOW	16483	484	213	364	1263	1510	1669	1952	1950	1745	1239	588	271	230	1166	922	916
RELEASE	16483	484	213	364	1263	1510	1669	1952	1950	1745	1239	588	271	230	1166	922	916
STORAGE	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682
ELEV FTMSL	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0
DISCH KCFS	14.7	16.3	15.4	20.4	21.2	24.6	28.0	31.7	31.7	29.3	20.2	19.8	19.5	14.5	19.0	15.0	16.5
POWER																	
AVE POWER MW		77	72	95	99	115	131	149	148	139	99	99	98	73	94	74	79
PEAK POW MW		515	510	509	509	509	509	509	509	517	538	538	538	538	538	538	529
ENERGY GWH	950.2	27.7	12.1	20.6	71.5	85.5	94.5	110.5	110.4	100.0	73.5	35.7	16.5	14.1	69.6	54.8	53.2
--FORT RANDALL--																	
NAT INFLOW	900	122	57	73	115	140	185	74	57	42	2	2	1	1	10		19
DEPLETION	80	1	1	1	4	9	12	18	15	7	1	1	0	1	3	3	3
EVAPORATION	118							8	25	31	25	10	4	4	10		
REG INFLOW	17186	605	270	436	1374	1641	1842	2000	1967	1749	1216	579	268	227	1162	919	932
RELEASE	17186	285	182	419	1374	1641	1842	2000	1967	1893	1853	883	413	249	796	782	608
STOR CHANGE	0	320	88	17				0	0	-144	-637	-304	-145	-22	366	137	324
STORAGE	3124	3444	3532	3549	3549	3549	3549	3549	3549	3405	2768	2464	2319	2297	2663	2800	3124
ELEV FTMSL	1350.0	1354.0	1355.0	1355.2	1355.2	1355.2	1355.2	1355.2	1355.2	1353.5	1345.1	1340.4	1337.9	1337.5	1343.5	1345.6	1350.0
DISCH KCFS	9.7	9.6	13.1	23.5	23.1	26.7	31.0	32.5	32.0	31.8	30.1	29.7	29.7	15.7	12.9	12.7	11.0
POWER																	
AVE POWER MW		79	111	198	195	225	260	273	268	265	241	224	217	114	97	99	88
PEAK POW MW		351	354	355	355	355	355	355	355	349	318	297	285	284	311	320	338
ENERGY GWH	1700.5	28.6	18.6	42.8	140.2	167.1	187.1	202.9	199.7	190.8	179.2	80.7	36.5	21.9	72.2	73.5	58.9
--GAVINS POINT--																	
NAT INFLOW	1450	92	43	55	148	174	166	86	103	77	122	50	23	27	77	79	127
DEPLETION	114	0	0	0	5	19	24	39	10	-5	2	5	2	3	10	1	
CHAN STOR	-4	0	-7	-20	1	-7	-8	-3	1	0	3	1	0	26	5	0	3
EVAPORATION	38							2	7	9	8	4	2	2	4		
REG INFLOW	18480	378	218	455	1517	1789	1976	2041	2054	1966	1968	925	432	297	864	861	739
RELEASE	18480	378	218	455	1517	1789	1976	2041	2041	1940	1968	925	432	297	864	861	778
STOR CHANGE									13	26							-39
STORAGE	358	358	358	358	358	358	358	358	371	397	397	397	397	397	397	397	358
ELEV FTMSL	1206.0	1206.0	1206.0	1206.0	1206.0	1206.0	1206.0	1206.0	1206.5	1207.5	1207.5	1207.5	1207.5	1207.5	1207.5	1207.5	1206.0
DISCH KCFS	12.7	12.7	15.7	25.5	25.5	29.1	33.2	33.2	33.2	32.6	32.0	31.1	31.1	18.7	14.1	14.0	14.0
POWER																	
AVE POWER MW		44	55	87	87	99	108	108	109	109	108	106	106	66	50	50	49
PEAK POW MW		114	114	114	114	114	114	114	115	117	117	117	117	117	78	78	76
ENERGY GWH	754.3	16.0	9.2	18.8	62.8	73.5	77.9	80.5	80.8	78.3	80.6	38.2	17.8	12.7	37.1	37.0	33.1
--GAVINS POINT - SIOUX CITY--																	
NAT INFLOW	1550	169	79	102	199	310	224	129	96	60	42	16	7	9	21	5	82
DEPLETION	263	7	3	4	22	35	31	38	36	24	10	6	3	3	13	14	14
REGULATED FLOW AT SIOUX CITY																	
KAF	19767	540	294	553	1694	2064	2169	2132	2101	1976	2000	935	436	302	872	852	846
KCFS		18.2	21.2	31.0	28.5	33.6	36.4	34.7	34.2	33.2	32.5	31.4	31.4	19.0	14.2	13.9	15.2
--TOTAL--																	
NAT INFLOW	24601	1435	669	860	2307	3493	6073	3346	1194	1113	1032	452	211	241	651	582	943
DEPLETION	2798	20	9	12	119	703	1638	1143	176	-248	-110	-126	-59	-67	-173	-163	-77
CHAN STOR	-31	70	4	-28	-38	-25	-106	75	3	28	38	1	-6	-7	-4	-43	8
EVAPORATION	1666							104	325	405	348	155	72	81	177		
STORAGE	52450	53394	53763	54031	54486	55187	57347	57390	55984	54992	53824	53312	53067	52984	52755	52606	52789
SYSTEM POWER																	
AVE POWER MW		675	689	920	996	1135	1345	1357	1345	1241	990	965	971	794	857	863	868
PEAK POW MW		2312	2314	2317	2323	2329	2355	2353	2335	2325	2307	2282	2269	2268	2251	2263	2272
ENERGY GWH	9253.9	243.1	115.8	198.7	717.3	844.4	968.5	1009.8	1000.8	893.4	736.9	347.4	163.1	152.5	637.2	641.8	583.1
DAILY GWH		16.2	16.5	22.1	23.9	27.2	32.3	32.6	32.3	29.8	23.8	23.2	23.3	19.1	20.6	20.7	20.8
	INI-SUM	15MAR	22MAR	31MAR	30APR	31MAY	30JUN	31JUL	31AUG	30SEP	31OCT	15NOV	22NOV	30NOV	31DEC	31JAN	28FEB

DATE OF STUDY 11/15/04

STUDY NO 24

TIME OF STUDY 10:56:38

SHORTEN NAVIGATION SEASON 51-DAYS
VALUES IN 1000 AF EXCEPT AS INDICATED

	28FEB06 INI-SUM	15MAR	2006 22MAR	31MAR	30APR	31MAY	30JUN	31JUL	31AUG	30SEP	31OCT	15NOV	22NOV	2007 30NOV	31DEC	31JAN	28FEB
--FORT PECK--																	
NAT INFLOW	6556	264	123	158	574	1011	1589	692	287	275	354	183	85	98	322	231	309
DEPLETION	621	8	4	5	85	332	587	215	-37	-122	-68	-33	-15	-18	-110	-125	-86
EVAPORATION	406							25	77	97	85	39	18	21	45		
MOD INFLOW	5529	257	120	154	489	679	1002	452	247	300	337	177	83	95	387	356	395
RELEASE	5015	134	62	80	357	430	506	492	461	335	281	136	83	111	492	553	500
STOR CHANGE	513	123	57	74	132	249	496	-40	-215	-35	55	41	-1	-16	-104	-197	-105
STORAGE	8348	8471	8528	8602	8734	8982	9478	9439	9224	9189	9244	9285	9285	9268	9164	8967	8862
ELEV FTMSL	2195.6	2196.4	2196.8	2197.3	2198.2	2199.9	2203.2	2202.9	2201.5	2201.3	2201.7	2201.9	2201.9	2201.8	2201.1	2199.8	2199.1
DISCH KCFS	8.5	4.5	4.5	4.5	6.0	7.0	8.5	8.0	7.5	5.6	4.6	4.6	6.0	7.0	8.0	9.0	9.0
POWER																	
AVE POWER MW		52	52	52	69	82	100	95	89	67	54	54	71	83	94	105	105
PEAK POW MW		123	124	124	167	169	174	173	171	171	171	172	172	172	171	169	168
ENERGY GWH	712.8	18.7	8.7	11.3	50.0	60.7	72.1	70.7	66.0	47.9	40.3	19.5	11.9	15.9	70.1	78.4	70.5
--GARRISON--																	
NAT INFLOW	10069	475	221	285	763	1282	2701	1891	532	446	428	175	82	93	238	177	280
DEPLETION	1124	27	13	16	54	171	749	584	70	-115	6	-103	-48	-55	-106	-84	-56
CHAN STOR	-5	45			-17	-11	-17	5	5	20	12		-16	-11	-11	-11	
EVAPORATION	483							29	93	116	101	46	21	24	52		
REG INFLOW	13473	627	271	349	1049	1530	2441	1775	835	800	614	368	176	224	773	803	836
RELEASE	12848	446	208	268	952	1138	1190	1261	1168	945	760	368	172	286	1230	1291	1166
STOR CHANGE	624	181	63	81	97	393	1251	515	-333	-145	-146	1	4	-62	-457	-488	-330
STORAGE	10016	10197	10260	10341	10438	10831	12082	12596	12263	12118	11973	11974	11977	11916	11459	10971	10641
ELEV FTMSL	1805.8	1806.6	1806.9	1807.3	1807.8	1809.6	1815.1	1817.2	1815.8	1815.2	1814.6	1814.6	1814.6	1814.4	1812.4	1810.2	1808.7
DISCH KCFS	19.5	15.0	15.0	15.0	16.0	18.5	20.0	20.5	19.0	15.9	12.4	12.4	12.4	18.0	20.0	21.0	21.0
POWER																	
AVE POWER MW		150	151	151	161	188	209	220	205	170	132	132	133	191	211	218	214
PEAK POW MW		354	355	356	358	364	385	392	387	385	383	383	383	382	375	367	361
ENERGY GWH	1625.4	53.9	25.3	32.6	116.3	139.9	150.5	163.9	152.5	122.7	98.5	47.5	22.3	36.8	156.8	161.9	144.1
--OAHE--																	
NAT INFLOW	1761	187	87	112	278	158	701	124	29	79	11				-42	-7	44
DEPLETION	613	23	11	14	47	66	129	151	100	25	-8	2	1	1	11	16	26
CHAN STOR	-8	24		0	-5	-13	-8	-3	8	17	19		0	-31	-11	-5	
EVAPORATION	392							24	74	93	82	37	17	20	43		
REG INFLOW	13596	635	285	366	1178	1216	1754	1207	1031	923	715	329	154	234	1122	1263	1184
RELEASE	12957	411	250	352	1211	1437	1385	1682	1501	577	737	307	145	165	1103	821	872
STOR CHANGE	639	224	35	15	-33	-221	369	-475	-470	347	-22	22	9	69	19	442	312
STORAGE	10536	10760	10795	10809	10776	10555	10924	10448	9979	10325	10303	10325	10334	10403	10422	10864	11176
ELEV FTMSL	1574.2	1575.4	1575.5	1575.6	1575.4	1574.3	1576.2	1573.8	1571.3	1573.1	1573.0	1573.1	1573.2	1573.5	1573.6	1575.9	1577.4
DISCH KCFS	13.1	13.8	18.0	19.7	20.4	23.4	23.3	27.4	24.4	9.7	12.0	10.3	10.4	10.4	17.9	13.3	15.7
POWER																	
AVE POWER MW		149	194	212	219	250	250	293	258	103	128	110	111	111	191	143	171
PEAK POW MW		544	545	546	545	539	549	536	523	533	532	533	533	535	535	547	555
ENERGY GWH	1677.0	53.5	32.6	45.8	157.8	186.3	179.9	217.7	191.6	73.9	94.9	39.5	18.7	21.3	142.1	106.7	114.7
--BIG BEND--																	
EVAPORATION	129							8	24	31	27	12	6	7	14		
REG INFLOW	12828	411	250	352	1211	1437	1385	1674	1477	546	710	295	139	159	1089	821	872
RELEASE	12828	411	250	352	1211	1437	1385	1674	1477	546	710	295	139	159	1089	821	872
STORAGE	1681	1681	1681	1681	1681	1681	1681	1681	1681	1681	1681	1681	1681	1681	1681	1681	1681
ELEV FTMSL	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0
DISCH KCFS	13.1	13.8	18.0	19.7	20.4	23.4	23.3	27.2	24.0	9.2	11.6	9.9	10.0	10.0	17.7	13.3	15.7
POWER																	
AVE POWER MW		65	84	92	95	109	109	127	114	46	58	50	51	51	88	66	75
PEAK POW MW		517	510	509	509	509	509	509	518	538	538	538	538	538	538	538	529
ENERGY GWH	743.3	23.6	14.2	19.9	68.6	81.4	78.5	94.8	84.6	33.5	43.5	18.0	8.5	9.7	65.1	48.8	50.6
--FORT RANDALL--																	
NAT INFLOW	643	88	41	53	82	66	167	33	63	30	2				6	-6	19
DEPLETION	80	1	1	1	4	9	12	18	15	7	1	1	0	1	3	3	3
EVAPORATION	129							10	31	32	22	10	5	5	13		
REG INFLOW	13254	497	290	403	1289	1494	1540	1679	1494	528	689	284	134	153	1079	812	888
RELEASE	13253	223	155	386	1289	1494	1540	1679	1668	1606	689	284	134	153	713	695	544
STOR CHANGE	1	274	135	17			0	0	-174	-1078	0	0	0	0	366	117	344
STORAGE	3122	3397	3532	3549	3549	3549	3549	3549	3375	2297	2297	2296	2296	2296	2662	2779	3123
ELEV FTMSL	1350.0	1353.4	1355.0	1355.2	1355.2	1355.2	1355.2	1355.2	1353.1	1337.5	1337.5	1337.5	1337.5	1337.5	1343.5	1345.3	1350.0
DISCH KCFS	9.9	7.5	11.1	21.6	21.7	24.3	25.9	27.3	27.1	27.0	11.2	9.5	9.7	9.6	11.6	11.3	9.8
POWER																	
AVE POWER MW		62	94	183	183	205	218	230	226	209	82	70	71	70	87	88	78
PEAK POW MW		349	354	355	355	355	355	355	348	282	284	283	283	283	311	319	338
ENERGY GWH	1302.2	22.4	15.8	39.4	131.7	152.4	156.9	170.9	168.4	150.4	60.8	25.1	11.9	13.5	64.7	65.3	52.7
--GAVINS POINT--																	
NAT INFLOW	1335	98	46	59	132	147	153	87	85	62	112	50	23	27	75	73	107
DEPLETION	114	0	0	0	5	19	24	39	10	-5	2	5	2	3	10	1	
CHAN STOR	-1	5	-7	-20	0	-5	-3	-3	0	0	29	3	0	0	-4	1	3
EVAPORATION	47							3	9	11	10	5	2	2	5		
REG INFLOW	14426	326	193	425	1416	1617	1666	1722	1735	1662	818	327	153	175	769	767	654
RELEASE	14426	326	193	425	1416	1617	1666	1722	1722	1636	818	327	153	175	769	767	693
STOR CHANGE									13	26							-39
STORAGE	358	358	358	358	358	358	358	358	371	397	397	397	397	397	397	397	358
ELEV FTMSL	1206.0	1206.0	1206.0	1206.0	1206.0	1206.0	1206.0	1206.0	1206.5	1207.5	1207.5	1207.5	1207.5	1207.5	1207.5	1207.5	1206.0
DISCH KCFS	12.5	11.0	13.9	23.8	23.8	26.3	28.0	28.0	28.0	27.5	13.3	11.0	11.0	11.0	12.5	12.5	12.5
POWER																	
AVE POWER MW		38	49	82	82	90	95	95	96	95	47	39	39	39	44	44	44
PEAK POW MW		114	114	114	114	114	114	114	115	117	117	117	117	117	78	78	76
ENERGY GWH	603.7	13.8	8.2	17.6	58.7	66.8	68.6	70.9	71.3	68.7	35.1	14.1	6.6	7.5	33.1	33.0	29.6
--GAVINS POINT - SIOUX CITY--																	
NAT INFLOW	1135	145	68	87	113	219	158	95	70	44	31	16	7	9	16	-3	60
DEPLETION	251	6	3	4	21	35	30	37	34	22	10	6	3	3	12	13	13
REGULATED FLOW AT SIOUX CITY																	
KAF	15310	465	258	508	1508	1801	1794	1780	1758	1658	839	338	158	180	773	751	740
KCFS		15.6	18.6	28.5	25.3	29.3	30.2	28.9	28.6	27.9	13.6	11.4	11.4	11.4	12.6	12.2	13.3
--TOTAL--																	
NAT INFLOW	21499	1256	586	753	1942	2883	5469	2922	1066	936	938	424	198	226	615	465	819
DEPLETION	2803	65	30	39	216	632	1531	1044	192	-188	-57	-123	-57	-65	-180	-176	-100
CHAN STOR	-23	74	-7	-20	-22	-30	-28	0	14	29	60	3	-16	-42	-25	-16	3
EVAPORATION	1585							99	309	381	328	148	69	79	172		
STORAGE	34063	34864	35154	35340	35536	35956	38072	38072	36893	36008	35896	35959	35971	35962	35786	35659	35841
SYSTEM POWER																	
AVE POWER MW		516	623	772	810	924	981	1060	987	690	501	455	475	546	715	664	688
PEAK POW MW		2002	2003	2005	2048	2051	2085	2080	2063	2026	2025	2026	2026	2027	2008	2018	2027
ENERGY GWH	6664.4	185.9	104.7	166.8	583.1	687.4	706.6	789.0	734.3	497.1	373.0	163.8	79.8	104.8	531.9	494.1	462.1
DAILY GWH		12.4	15.0	18.5	19.4	22.2	23.6	25.5	23.7	16.6	12.0	10.9	11.4	13.1	17.2	15.9	16.5
	INI-SUM	15MAR	22MAR	31MAR	30APR	31MAY	30JUN	31JUL	31AUG	30SEP	31OCT	15NOV	22NOV	30NOV	31DEC	31JAN	28FEB

STUDY NO 25

TIME OF STUDY 10:56:38

SHORTEN NAVIGATION SEASON 36-DAYS
VALUES IN 1000 AF EXCEPT AS INDICATED

	28FEB07 INI-SUM	15MAR	2007 22MAR	31MAR	30APR	31MAY	30JUN	31JUL	31AUG	30SEP	31OCT	15NOV	22NOV	2008 30NOV	31DEC	31JAN	29FEB
--FORT PECK--																	
NAT INFLOW	6613	267	124	160	579	1019	1603	698	289	278	357	185	86	98	325	233	312
DEPLETION	410	-16	-7	-10	35	315	544	203	-52	-141	-70	-32	-15	-17	-109	-123	-95
EVAPORATION	420							26	80	100	88	40	19	21	46		
MOD INFLOW	5783	283	132	170	544	704	1059	469	261	319	339	177	82	94	388	356	407
RELEASE	5278	134	62	80	417	492	536	523	492	357	271	131	62	127	523	553	518
STOR CHANGE	505	149	69	89	127	212	523	-53	-231	-38	68	45	20	-33	-135	-197	-111
STORAGE	8862	9011	9080	9169	9297	9509	10032	9979	9748	9710	9777	9823	9843	9810	9675	9478	9367
ELEV FTMSL	2199.1	2200.1	2200.6	2201.2	2202.0	2203.4	2206.7	2206.4	2204.9	2204.7	2205.1	2205.4	2205.5	2205.3	2204.5	2203.2	2202.5
DISCH KCFS	9.0	4.5	4.5	4.5	7.0	8.0	9.0	8.5	8.0	6.0	4.4	4.4	4.5	8.0	8.5	9.0	9.0
POWER																	
AVE POWER MW		53	53	53	83	95	108	103	96	72	53	53	54	96	102	107	107
PEAK POW MW		169	170	171	172	174	178	178	176	175	176	176	177	176	175	173	173
ENERGY GWH	763.3	19.0	8.9	11.5	59.5	70.6	77.7	76.5	71.7	51.9	39.5	19.2	9.1	18.5	75.8	79.8	74.3
--GARRISON--																	
NAT INFLOW	10134	478	223	287	768	1290	2718	1903	535	449	431	176	82	94	240	178	282
DEPLETION	982	-1	0	-1	3	206	731	549	76	-106	-10	-106	-49	-56	-107	-85	-62
CHAN STOR	0	50			-28	-11	-11	5	5	21	17		-1	-38	-5	-5	
EVAPORATION	499							30	96	120	104	47	22	25	54		
REG INFLOW	13931	663	286	368	1154	1565	2512	1852	860	813	625	366	171	214	811	811	862
RELEASE	13317	476	194	250	1012	1168	1279	1291	1261	952	795	385	208	286	1230	1322	1208
STOR CHANGE	614	187	92	118	142	397	1232	560	-401	-139	-170	-19	-37	-71	-419	-511	-346
STORAGE	10641	10828	10920	11037	11180	11576	12808	13369	12968	12830	12659	12640	12603	12532	12112	11601	11255
ELEV FTMSL	1808.7	1809.6	1810.0	1810.5	1811.2	1812.9	1818.1	1820.4	1818.8	1818.2	1817.5	1817.4	1817.3	1817.0	1815.2	1813.0	1811.5
DISCH KCFS	21.0	16.0	14.0	14.0	17.0	19.0	21.5	21.0	20.5	16.0	12.9	12.9	15.0	18.0	20.0	21.5	21.0
POWER																	
AVE POWER MW		164	144	145	176	198	230	231	226	175	141	141	163	195	215	227	219
PEAK POW MW		364	366	368	370	377	396	404	398	396	393	393	392	391	385	377	371
ENERGY GWH	1722.3	58.9	24.2	31.3	126.8	147.6	165.4	171.5	167.9	126.2	105.2	50.8	27.4	37.5	159.8	169.3	152.6
--OAHE--																	
NAT INFLOW	1794	190	89	114	283	161	714	127	30	80	11				-43	-7	45
DEPLETION	626	23	11	14	47	67	132	156	103	25	-9	2	1	1	12	17	26
CHAN STOR	0	26	10		-16	-10	-13	3	3	24	16		-11	-16	-11	-8	3
EVAPORATION	415							26	79	100	87	39	18	21	45		
REG INFLOW	14069	670	283	350	1232	1252	1848	1239	1111	931	744	344	178	248	1119	1290	1230
RELEASE	13439	409	248	350	1208	1435	1380	1681	1498	679	1130	290	146	165	1102	977	741
STOR CHANGE	630	261	35	0	24	-183	468	-442	-388	253	-385	55	32	83	16	313	488
STORAGE	11176	11437	11472	11472	11496	11312	11780	11338	10951	11203	10818	10873	10906	10989	11005	11318	11806
ELEV FTMSL	1577.4	1578.7	1578.8	1578.8	1579.0	1578.1	1580.3	1578.2	1576.3	1577.6	1575.6	1575.9	1576.1	1576.5	1576.6	1578.1	1580.4
DISCH KCFS	15.7	13.7	17.9	19.6	20.3	23.3	23.2	27.3	24.4	11.4	18.4	9.7	10.5	10.4	17.9	15.9	12.9
POWER																	
AVE POWER MW		151	197	216	223	256	255	300	265	124	199	105	114	113	194	173	142
PEAK POW MW		562	563	563	563	559	571	559	549	556	546	547	548	550	551	559	571
ENERGY GWH	1778.6	54.2	33.1	46.6	160.7	190.3	183.8	223.5	197.0	89.5	148.3	38.0	19.1	21.7	144.7	128.9	99.2
--BIG BEND--																	
EVAPORATION	129							8	24	31	27	12	6	7	14		
REG INFLOW	13310	409	248	350	1208	1435	1380	1673	1474	648	1102	277	140	159	1088	977	741
RELEASE	13310	409	248	350	1208	1435	1380	1673	1474	648	1102	277	140	159	1088	977	741
STORAGE	1681	1681	1681	1681	1681	1681	1681	1681	1681	1681	1681	1681	1681	1681	1681	1681	1681
ELEV FTMSL	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0
DISCH KCFS	15.7	13.7	17.9	19.6	20.3	23.3	23.2	27.2	24.0	10.9	17.9	9.3	10.1	10.0	17.7	15.9	12.9
POWER																	
AVE POWER MW		65	84	92	95	109	109	127	113	55	90	47	51	51	87	77	62
PEAK POW MW		517	510	509	509	509	509	509	518	538	538	538	538	538	538	538	529
ENERGY GWH	772.0	23.4	14.1	19.8	68.4	81.3	78.2	94.7	84.4	39.6	67.1	17.0	8.6	9.7	65.1	57.5	43.1
--FORT RANDALL--																	
NAT INFLOW	659	90	42	54	84	67	171	34	65	31	2				7	-7	20
DEPLETION	80	1	1	1	4	9	12	18	15	7	1	1	0	1	3	3	3
EVAPORATION	130							10	31	33	23	10	5	5	13		
REG INFLOW	13752	497	290	403	1288	1493	1539	1679	1493	631	1080	267	135	153	1079	967	758
RELEASE	13752	223	154	386	1288	1493	1539	1679	1667	1606	1183	267	135	153	713	695	569
STOR CHANGE	0	274	135	17				0	-174	-975	-103	0	0	0	366	272	189
STORAGE	3123	3397	3532	3549	3549	3549	3549	3549	3375	2400	2297	2296	2296	2296	2662	2934	3123
ELEV FTMSL	1350.0	1353.4	1355.0	1355.2	1355.2	1355.2	1355.2	1355.2	1353.1	1339.3	1337.5	1337.5	1337.5	1337.5	1343.5	1347.4	1350.0
DISCH KCFS	9.8	7.5	11.1	21.6	21.6	24.3	25.9	27.3	27.1	27.0	19.2	9.0	9.7	9.6	11.6	11.3	9.9
POWER																	
AVE POWER MW		62	94	182	183	205	218	230	226	211	141	66	71	70	87	89	80
PEAK POW MW		349	354	355	355	355	355	355	348	291	283	283	283	283	311	329	338
ENERGY GWH	1349.0	22.4	15.8	39.4	131.6	152.3	156.8	170.9	168.3	151.6	104.7	23.6	11.9	13.5	64.7	65.9	55.6
--GAVINS POINT--																	
NAT INFLOW	1342	98	46	59	133	148	154	87	86	62	112	51	24	27	75	73	108
DEPLETION	114	0	0	0	5	19	24	39	10	-5	2	5	2	3	10	1	
CHAN STOR	-1	4	-7	-20	0	-5	-3	-3	0	0	14	19	-1	0	-4	1	3
EVAPORATION	47							3	9	11	10	5	2	2	5		
REG INFLOW	14932	326	194	425	1416	1617	1666	1722	1735	1662	1297	327	153	175	769	767	680
RELEASE	14932	326	194	425	1416	1617	1666	1722	1722	1636	1297	327	153	175	769	767	719
STOR CHANGE									13	26							-39
STORAGE	358	358	358	358	358	358	358	358	371	397	397	397	397	397	397	397	358
ELEV FTMSL	1206.0	1206.0	1206.0	1206.0	1206.0	1206.0	1206.0	1206.0	1206.5	1207.5	1207.5	1207.5	1207.5	1207.5	1207.5	1207.5	1206.0
DISCH KCFS	12.5	11.0	13.9	23.8	23.8	26.3	28.0	28.0	28.0	27.5	21.1	11.0	11.0	11.0	12.5	12.5	12.5
POWER																	
AVE POWER MW		38	49	82	82	90	95	95	96	95	74	39	39	39	44	44	44
PEAK POW MW		114	114	114	114	114	114	114	115	117	117	117	117	117	78	78	76
ENERGY GWH	624.9	13.8	8.2	17.6	58.7	66.8	68.6	70.9	71.3	68.7	55.3	14.1	6.6	7.5	33.1	33.0	30.7
--GAVINS POINT - SIOUX CITY--																	
NAT INFLOW	1160	149	69	89	116	224	161	97	72	45	31	16	7	9	17	-3	61
DEPLETION	254	6	3	4	21	35	30	37	35	23	10	6	3	3	12	13	14
REGULATED FLOW AT SIOUX CITY																	
KAF	15838	469	260	510	1511	1806	1797	1782	1759	1658	1318	338	158	180	774	751	766
KCFS		15.7	18.7	28.6	25.4	29.4	30.2	29.0	28.6	27.9	21.4	11.4	11.4	11.4	12.6	12.2	13.3
--TOTAL--																	
NAT INFLOW	21702	1271	593	762	1963	2909	5521	2946	1077	945	944	427	199	228	621	467	828
DEPLETION	2466	13	6	8	115	651	1473	1002	187	-197	-76	-125	-58	-66	-179	-174	-114
CHAN STOR	-8	81	4	-20	-44	-27	-27	5	8	38	47	20	-13	-54	-20	-13	5
EVAPORATION	1640							102	320	395	340	153	71	82	178		
STORAGE	35841	36712	37043	37267	37560	37986	40209	40275	39094	38221	37630	37711	37726	37705	37533	37410	37591
SYSTEM POWER																	
AVE POWER MW		533	620	769	841	953	1015	1086	1022	733	699	452	493	564	730	718	654
PEAK POW MW		2076	2078	2080	2084	2087	2123	2119	2104	2073	2054	2055	2056	2057	2038	2054	2058
ENERGY GWH	7010.2	191.7	104.2	166.2	605.8	708.8	730.6	808.1	760.5	527.6	520.0	162.6	82.8	108.3	543.2	534.4	455.4
DAILY GWH		12.8	14.9	18.5	20.2	22.9	24.4	26.1	24.5	17.6	16.8	10.8	11.8	13.5	17.5	17.2	15.7
	INI-SUM	15MAR	22MAR	31MAR	30APR	31MAY	30JUN	31JUL	31AUG	30SEP	31OCT	15NOV	22NOV	30NOV	31DEC	31JAN	29FEB

DATE OF STUDY 11/15/04 2004-2005 AOP EXTENSIONS, LOWER QUARTILE RUNOFF SIMULATION 99001 9901 9901 PAGE 1

STUDY NO 26

TIME OF STUDY 10:56:38 SHORTEN NAVIGATION SEASON 31-DAYS

VALUES IN 1000 AF EXCEPT AS INDICATED

29FEB08	INI-SUM	15MAR	2008 22MAR	31MAR	30APR	31MAY	30JUN	31JUL	31AUG	30SEP	31OCT	15NOV	22NOV	2009 30NOV	31DEC	31JAN	28FEB
--FORT PECK--																	
NAT INFLOW	6720	271	126	163	588	1036	1629	709	294	282	363	188	88	100	330	237	317
DEPLETION	421	-16	-7	-10	35	316	548	210	-48	-142	-72	-34	-16	-18	-112	-126	-87
EVAPORATION	435							26	83	104	91	41	19	22	48		
MOD INFLOW	5864	287	134	172	553	720	1081	473	259	320	344	180	84	96	394	363	404
RELEASE	5327	134	62	80	357	492	536	523	492	363	305	148	71	127	553	584	500
STOR CHANGE	537	153	71	92	196	228	545	-50	-233	-43	39	33	13	-31	-159	-221	-96
STORAGE	9367	9520	9592	9683	9879	10107	10653	10603	10370	10327	10365	10398	10411	10380	10221	10000	9904
ELEV FTMSL	2202.5	2203.5	2203.9	2204.5	2205.7	2207.2	2210.5	2210.2	2208.8	2208.5	2208.8	2209.0	2209.1	2208.9	2207.9	2206.5	2205.9
DISCH KCFS	9.0	4.5	4.5	4.5	6.0	8.0	9.0	8.5	8.0	6.1	5.0	5.0	5.1	8.0	9.0	9.5	9.0
POWER																	
AVE POWER MW		54	54	54	72	97	110	105	98	75	61	61	63	98	110	115	109
PEAK POW MW		174	174	175	177	179	183	183	181	181	181	181	181	181	180	178	177
ENERGY GWH	785.0	19.3	9.0	11.7	52.0	72.0	79.3	78.0	73.1	53.9	45.3	21.9	10.6	18.8	81.7	85.7	73.0
--GARRISON--																	
NAT INFLOW	10262	484	226	290	777	1306	2752	1927	542	455	437	179	83	95	243	180	286
DEPLETION	999	0	0	0	4	206	741	565	81	-108	-16	-110	-51	-59	-110	-86	-57
CHAN STOR	0	50			-16	-22	-11	5	5	20	12	0	-2	-31	-11	-5	5
EVAPORATION	512							31	99	123	107	48	23	26	55		
REG INFLOW	14078	668	288	371	1114	1570	2536	1859	860	823	663	388	181	224	840	845	848
RELEASE	13422	446	194	250	1012	1168	1309	1322	1291	1022	760	368	174	301	1230	1353	1222
STOR CHANGE	656	222	94	121	102	402	1227	537	-432	-198	-97	20	7	-77	-389	-508	-374
STORAGE	11255	11477	11571	11692	11794	12196	13422	13959	13527	13329	13232	13252	13260	13182	12793	12285	11911
ELEV FTMSL	1811.5	1812.5	1812.9	1813.4	1813.9	1815.6	1820.6	1822.7	1821.0	1820.2	1819.8	1819.9	1819.9	1819.6	1818.0	1815.9	1814.4
DISCH KCFS	21.0	15.0	14.0	14.0	17.0	19.0	22.0	21.5	21.0	17.2	12.4	12.4	12.5	19.0	20.0	22.0	22.0
POWER																	
AVE POWER MW		157	147	148	180	202	239	240	235	191	137	137	139	210	219	238	234
PEAK POW MW		375	376	378	380	386	405	412	406	403	402	402	402	401	395	387	382
ENERGY GWH	1768.5	56.5	24.8	32.0	129.5	150.5	172.4	178.5	174.6	137.4	102.1	49.4	23.4	40.2	163.0	176.7	157.6
--OAHE--																	
NAT INFLOW	1860	197	92	118	294	167	740	131	31	83	12				-45	-7	46
DEPLETION	641	23	11	14	48	68	135	160	106	26	-9	2	1	1	12	17	27
CHAN STOR	-5	31	5		-15	-10	-15	3	3	20	25	0	-1	-34	-5	-10	0
EVAPORATION	437							27	84	105	91	41	19	22	48		
REG INFLOW	14199	651	281	354	1242	1257	1899	1268	1135	993	715	325	153	245	1120	1318	1241
RELEASE	13527	404	246	347	1202	1430	1371	1678	1494	971	994	284	146	165	1102	977	715
STOR CHANGE	672	247	35	8	40	-173	528	-410	-360	22	-279	41	7	80	18	342	526
STORAGE	11806	12053	12088	12096	12136	11963	12490	12081	11721	11744	11465	11506	11513	11594	11611	11953	12478
ELEV FTMSL	1580.4	1581.6	1581.7	1581.8	1582.0	1581.2	1583.6	1581.7	1580.0	1580.2	1578.8	1579.0	1579.0	1579.4	1579.5	1581.1	1583.5
DISCH KCFS	12.9	13.6	17.7	19.4	20.2	23.3	23.0	27.3	24.3	16.3	16.2	9.6	10.5	10.4	17.9	15.9	12.9
POWER																	
AVE POWER MW		152	198	217	226	260	259	306	270	181	179	106	116	115	198	177	145
PEAK POW MW		577	578	578	579	575	588	578	569	570	563	564	564	566	566	575	587
ENERGY GWH	1824.7	54.6	33.3	47.0	162.9	193.2	186.1	227.7	200.9	130.4	132.9	38.0	19.5	22.0	147.3	131.3	97.4
--BIG BEND--																	
EVAPORATION	129							8	24	31	27	12	6	7	14		
REG INFLOW	13398	404	246	347	1202	1430	1371	1670	1470	940	967	272	140	158	1088	977	715
RELEASE	13398	404	246	347	1202	1430	1371	1670	1470	940	967	272	140	158	1088	977	715
STORAGE	1681	1681	1681	1681	1681	1681	1681	1681	1681	1681	1681	1681	1681	1681	1681	1681	1681
ELEV FTMSL	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0
DISCH KCFS	12.9	13.6	17.7	19.4	20.2	23.3	23.0	27.2	23.9	15.8	15.7	9.1	10.1	10.0	17.7	15.9	12.9
POWER																	
AVE POWER MW		64	83	91	95	109	108	127	113	78	79	46	51	50	87	77	62
PEAK POW MW		517	510	509	509	509	509	509	518	538	538	538	538	538	538	538	529
ENERGY GWH	776.4	23.2	14.0	19.6	68.1	81.0	77.7	94.6	84.2	56.1	58.9	16.7	8.6	9.7	65.1	57.5	41.5
--FORT RANDALL--																	
NAT INFLOW	690	94	44	56	88	70	179	36	68	32	2				7	-7	21
DEPLETION	80	1	1	1	4	9	12	18	15	7	1	1	0	1	3	3	3
EVAPORATION	134							10	31	35	25	10	5	5	13		
REG INFLOW	13875	497	289	402	1286	1491	1538	1678	1492	930	943	262	135	152	1079	967	733
RELEASE	13875	223	154	385	1286	1491	1538	1678	1666	1605	1346	262	135	152	713	695	544
STOR CHANGE	0	274	135	17				0	-174	-675	-403	0	0	0	366	272	189
STORAGE	3123	3397	3532	3549	3549	3549	3549	3549	3375	2700	2297	2297	2297	2297	2663	2935	3124
ELEV FTMSL	1350.0	1353.4	1355.0	1355.2	1355.2	1355.2	1355.2	1355.2	1353.1	1344.1	1337.5	1337.5	1337.5	1337.5	1343.5	1347.4	1350.0
DISCH KCFS	9.9	7.5	11.1	21.6	21.6	24.3	25.9	27.3	27.1	27.0	21.9	8.8	9.7	9.6	11.6	11.3	9.8
POWER																	
AVE POWER MW		62	94	182	183	204	218	230	226	215	163	64	71	70	87	89	79
PEAK POW MW		349	354	355	355	355	355	355	348	313	283	283	283	283	311	329	338
ENERGY GWH	1365.1	22.4	15.7	39.3	131.4	152.1	156.7	170.8	168.2	154.7	121.5	23.1	11.9	13.5	64.7	65.9	53.1
--GAVINS POINT--																	
NAT INFLOW	1359	100	47	60	135	150	155	88	87	63	114	51	24	27	76	74	109
DEPLETION	114	0	0	0	5	19	24	39	10	-5	2	5	2	3	10	1	
CHAN STOR	-1	5	-7	-20	0	-5	-3	-3	0	0	9	24	-2	0	-4	1	3
EVAPORATION	47							3	9	11	10	5	2	2	5		
REG INFLOW	15072	328	194	425	1416	1617	1666	1722	1735	1662	1457	327	153	175	770	768	656
RELEASE	15072	328	194	425	1416	1617	1666	1722	1722	1636	1457	327	153	175	770	768	695
STOR CHANGE									13	26							-39
STORAGE	358	358	358	358	358	358	358	358	371	397	397	397	397	397	397	397	358
ELEV FTMSL	1206.0	1206.0	1206.0	1206.0	1206.0	1206.0	1206.0	1206.0	1206.5	1207.5	1207.5	1207.5	1207.5	1207.5	1207.5	1207.5	1206.0
DISCH KCFS	12.5	11.0	14.0	23.8	23.8	26.3	28.0	28.0	28.0	27.5	23.7	11.0	11.0	11.0	12.5	12.5	12.5
POWER																	
AVE POWER MW		39	49	82	82	90	95	95	96	95	83	39	39	39	45	44	44
PEAK POW MW		114	114	114	114	114	114	114	115	117	117	117	117	117	78	78	76
ENERGY GWH	630.8	13.9	8.2	17.6	58.7	66.8	68.6	70.9	71.3	68.7	62.0	14.1	6.6	7.5	33.1	33.0	29.7
--GAVINS POINT - SIOUX CITY--																	
NAT INFLOW	1211	155	72	93	121	234	168	101	75	47	33	17	8	9	17	-3	64
DEPLETION	255	6	3	4	21	35	30	38	35	23	10	6	3	3	12	13	14
REGULATED FLOW AT SIOUX CITY																	
KAF	16028	477	263	514	1516	1816	1804	1785	1762	1660	1480	339	158	181	775	752	745
KCFS		16.0	19.0	28.8	25.5	29.5	30.3	29.0	28.7	27.9	24.1	11.4	11.4	11.4	12.6	12.2	13.4
--TOTAL--																	
NAT INFLOW	22102	1301	607	780	2003	2963	5623	2992	1097	962	961	434	203	231	628	474	843
DEPLETION	2510	14	7	8	117	653	1490	1030	199	-199	-84	-131	-61	-70	-185	-178	-100
CHAN STOR	-5	85	-2	-20	-32	-37	-29	5	8	40	47	25	-4	-64	-20	-15	8
EVAPORATION	1693							105	330	409	351	157	74	84	183		
STORAGE	37591	38487	38822	39060	39398	39855	42154	42231	41046	40178	39438	39531	39559	39531	39367	39251	39457
SYSTEM POWER																	
AVE POWER MW		528	625	774	837	962	1029	1103	1038	835	703	453	480	582	746	740	673
PEAK POW MW		2107	2108	2110	2114	2118	2154	2151	2137	2122	2083	2085	2086	2086	2069	2085	2089
ENERGY GWH	7150.5	189.9	105.0	167.2	602.6	715.6	740.8	820.5	772.2	601.1	522.7	163.2	80.6	111.8	554.9	550.2	452.3
DAILY GWH		12.7	15.0	18.6	20.1	23.1	24.7	26.5	24.9	20.0	16.9	10.9	11.5	14.0	17.9	17.7	16.2
	INI-SUM	15MAR	22MAR	31MAR	30APR	31MAY	30JUN	31JUL	31AUG	30SEP	31OCT	15NOV	22NOV	30NOV	31DEC	31JAN	28FEB

STUDY NO 27

TIME OF STUDY 10:56:38

SHORTEN NAVIGATION SEASON 31-DAYS
VALUES IN 1000 AF EXCEPT AS INDICATED

	28FEB09 INI-SUM	15MAR	2009 22MAR	31MAR	30APR	31MAY	30JUN	31JUL	31AUG	30SEP	31OCT	15NOV	22NOV	2010 30NOV	31DEC	31JAN	28FEB
--FORT PECK--																	
NAT INFLOW	6751	272	127	163	591	1041	1636	712	295	284	365	188	88	100	332	238	318
DEPLETION	431	-16	-7	-10	35	317	552	217	-44	-142	-74	-35	-16	-19	-113	-127	-87
EVAPORATION	445							27	85	107	93	42	20	23	49		
MOD INFLOW	5875	288	135	173	556	724	1084	468	254	319	346	181	84	96	396	365	405
RELEASE	5337	134	62	80	357	492	536	523	492	378	317	158	74	127	553	553	500
STOR CHANGE	538	155	72	93	199	232	548	-55	-238	-59	28	22	10	-31	-157	-188	-95
STORAGE	9904	10059	10131	10224	10423	10655	11203	11148	10911	10852	10880	10903	10913	10883	10726	10537	10442
ELEV FTMSL	2205.9	2206.9	2207.3	2207.9	2209.1	2210.5	2213.8	2213.5	2212.1	2211.7	2211.9	2212.0	2212.1	2211.9	2211.0	2209.8	2209.2
DISCH KCFS	9.0	4.5	4.5	4.5	6.0	8.0	9.0	8.5	8.0	6.4	5.2	5.3	5.3	8.0	9.0	9.0	9.0
POWER																	
AVE POWER MW		55	55	55	73	98	112	106	100	79	64	66	66	99	111	111	110
PEAK POW MW		178	179	180	181	183	188	187	185	185	185	185	185	185	184	182	182
ENERGY GWH	799.4	19.6	9.2	11.9	52.9	73.2	80.6	79.2	74.3	56.9	47.8	23.9	11.1	19.1	83.0	82.5	74.2
--GARRISON--																	
NAT INFLOW	10290	485	226	291	779	1310	2760	1932	543	456	438	179	84	95	243	181	287
DEPLETION	1015	0	0	0	4	207	752	581	87	-111	-20	-114	-53	-61	-112	-87	-58
CHAN STOR	0	49			-16	-22	-11	5	5	17	13	-2		-28	-11		
EVAPORATION	525							32	101	126	110	50	23	26	57		
REG INFLOW	14087	669	289	372	1116	1573	2533	1847	852	836	678	400	187	228	841	821	845
RELEASE	13438	446	194	250	1012	1168	1339	1353	1322	952	747	364	170	286	1230	1383	1222
STOR CHANGE	650	223	95	122	104	405	1194	494	-470	-116	-69	36	17	-57	-389	-562	-377
STORAGE	11911	12134	12229	12351	12455	12860	14054	14548	14078	13962	13893	13929	13947	13889	13500	12938	12561
ELEV FTMSL	1814.4	1815.3	1815.7	1816.2	1816.6	1818.3	1823.1	1825.0	1823.2	1822.7	1822.4	1822.6	1822.6	1822.4	1820.9	1818.6	1817.1
DISCH KCFS	22.0	15.0	14.0	14.0	17.0	19.0	22.5	22.0	21.5	16.0	12.2	12.2	12.2	18.0	20.0	22.5	22.0
POWER																	
AVE POWER MW		160	150	151	183	206	249	249	244	181	137	138	138	203	223	248	239
PEAK POW MW		385	387	388	390	396	414	421	414	412	411	412	412	411	406	397	392
ENERGY GWH	1803.0	57.7	25.3	32.6	132.1	153.5	179.5	185.6	181.5	130.2	102.2	49.7	23.2	38.9	166.2	184.3	160.6
--OAHE--																	
NAT INFLOW	1877	199	93	119	297	168	747	132	31	84	12				-45	-7	47
DEPLETION	652	23	11	14	48	69	138	165	109	27	-10	1	0	1	12	17	27
CHAN STOR	0	35	5		-15	-10	-17	2	2	28	19	0	0	-29	-10	-13	2
EVAPORATION	459							29	88	110	96	43	20	23	50		
REG INFLOW	14204	657	281	355	1246	1257	1930	1294	1158	926	693	319	149	233	1113	1347	1244
RELEASE	13525	403	245	346	1201	1429	1368	1678	1494	971	994	290	146	165	1102	977	715
STOR CHANGE	678	254	36	9	45	-172	562	-384	-336	-45	-301	29	4	68	10	370	529
STORAGE	12478	12732	12768	12777	12822	12650	13212	12828	12492	12447	12147	12176	12179	12247	12258	12628	13157
ELEV FTMSL	1583.5	1584.6	1584.8	1584.8	1585.0	1584.3	1586.7	1585.0	1583.6	1583.4	1582.0	1582.1	1582.2	1582.5	1582.5	1584.2	1586.5
DISCH KCFS	12.9	13.6	17.7	19.4	20.2	23.2	23.0	27.3	24.3	16.3	16.2	9.8	10.5	10.4	17.9	15.9	12.9
POWER																	
AVE POWER MW		154	201	221	230	264	263	312	276	185	182	110	118	117	202	180	148
PEAK POW MW		593	594	594	595	591	604	595	588	587	579	580	580	582	582	591	603
ENERGY GWH	1859.3	55.5	33.8	47.7	165.7	196.7	189.2	232.2	205.1	133.0	135.5	39.5	19.8	22.5	150.0	133.7	99.2
--BIG BEND--																	
EVAPORATION	129							8	24	31	27	12	6	7	14		
REG INFLOW	13396	403	245	346	1201	1429	1368	1670	1470	940	967	278	140	158	1088	977	715
RELEASE	13396	403	245	346	1201	1429	1368	1670	1470	940	967	278	140	158	1088	977	715
STORAGE	1681	1681	1681	1681	1681	1681	1681	1681	1681	1681	1681	1681	1681	1681	1681	1681	1681
ELEV FTMSL	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0
DISCH KCFS	12.9	13.6	17.7	19.4	20.2	23.2	23.0	27.2	23.9	15.8	15.7	9.3	10.1	10.0	17.7	15.9	12.9
POWER																	
AVE POWER MW		64	83	91	94	109	108	127	113	78	79	47	51	50	87	77	62
PEAK POW MW		517	510	509	509	509	509	509	518	538	538	538	538	538	538	538	529
ENERGY GWH	776.3	23.1	13.9	19.6	68.0	80.9	77.5	94.6	84.2	56.1	58.9	17.0	8.6	9.7	65.1	57.5	41.5
--FORT RANDALL--																	
NAT INFLOW	696	95	44	57	89	71	181	36	68	32	2				7	-7	21
DEPLETION	80	1	1	1	4	9	12	18	15	7	1	1	0	1	3	3	3
EVAPORATION	134							10	31	35	25	10	5	5	13		
REG INFLOW	13879	497	289	402	1286	1491	1537	1678	1492	930	943	268	135	152	1079	967	733
RELEASE	13879	223	154	385	1286	1491	1537	1678	1666	1605	1346	268	135	152	713	695	544
STOR CHANGE	0	274	135	17			0	0	-174	-675	-403	0	0	0	366	272	189
STORAGE	3124	3397	3532	3549	3549	3549	3549	3549	3375	2700	2297	2296	2296	2296	2662	2934	3123
ELEV FTMSL	1350.0	1353.4	1355.0	1355.2	1355.2	1355.2	1355.2	1355.2	1353.1	1344.1	1337.5	1337.5	1337.5	1337.5	1343.5	1347.4	1350.0
DISCH KCFS	9.8	7.5	11.1	21.6	21.6	24.3	25.8	27.3	27.1	27.0	21.9	9.0	9.7	9.6	11.6	11.3	9.8
POWER																	
AVE POWER MW		62	94	182	183	204	218	230	226	215	163	66	71	70	87	89	79
PEAK POW MW		349	354	355	355	355	355	355	348	313	283	283	283	283	311	329	338
ENERGY GWH	1365.5	22.4	15.7	39.3	131.4	152.1	156.6	170.8	168.2	154.7	121.5	23.7	11.9	13.5	64.7	65.9	53.1
--GAVINS POINT--																	
NAT INFLOW	1362	100	47	60	135	150	156	88	87	63	114	51	24	27	76	75	110
DEPLETION	114	0	0	0	5	19	24	39	10	-5	2	5	2	3	10	1	
CHAN STOR	-1	4	-7	-20	0	-5	-3	-3	0	0	9	24	-1	0	-4	1	3
EVAPORATION	47							3	9	11	10	5	2	2	5		
REG INFLOW	15079	328	194	425	1416	1617	1666	1722	1735	1662	1457	333	153	175	770	769	657
RELEASE	15079	328	194	425	1416	1617	1666	1722	1722	1636	1457	333	153	175	770	769	696
STOR CHANGE									13	26							-39
STORAGE	358	358	358	358	358	358	358	358	371	397	397	397	397	397	397	397	358
ELEV FTMSL	1206.0	1206.0	1206.0	1206.0	1206.0	1206.0	1206.0	1206.0	1206.5	1207.5	1207.5	1207.5	1207.5	1207.5	1207.5	1207.5	1206.0
DISCH KCFS	12.5	11.0	14.0	23.8	23.8	26.3	28.0	28.0	28.0	27.5	23.7	11.2	11.0	11.0	12.5	12.5	12.5
POWER																	
AVE POWER MW		39	49	82	82	90	95	95	96	95	83	40	39	39	45	44	44
PEAK POW MW		114	114	114	114	114	114	114	115	117	117	117	117	117	78	78	76
ENERGY GWH	631.1	13.9	8.2	17.6	58.7	66.8	68.6	70.9	71.3	68.7	62.0	14.3	6.6	7.5	33.1	33.1	29.7
--GAVINS POINT - SIOUX CITY--																	
NAT INFLOW	1223	157	73	94	122	236	170	102	75	47	33	17	8	9	18	-3	65
DEPLETION	262	7	3	4	22	35	31	38	36	23	10	6	3	3	13	14	14
REGULATED FLOW AT SIOUX CITY																	
KAF	16040	478	264	515	1516	1818	1805	1786	1761	1660	1480	344	158	180	775	752	747
KCFS		16.1	19.0	28.9	25.5	29.6	30.3	29.0	28.6	27.9	24.1	11.6	11.4	11.4	12.6	12.2	13.5
--TOTAL--																	
NAT INFLOW	22199	1308	610	785	2013	2976	5650	3002	1099	966	964	435	203	232	631	477	848
DEPLETION	2554	15	7	9	118	656	1509	1058	213	-201	-91	-136	-63	-72	-187	-179	-101
CHAN STOR	0	89	-2	-20	-31	-37	-31	5	8	45	41	23	-1	-57	-24	-12	5
EVAPORATION	1739							108	338	420	361	162	76	86	188		
STORAGE	39457	40362	40700	40940	41288	41753	44058	44113	42908	42040	41295	41383	41414	41394	41224	41116	41323
SYSTEM POWER																	
AVE POWER MW		534	632	781	846	972	1044	1120	1054	833	710	467	484	579	755	749	682
PEAK POW MW		2137	2139	2141	2145	2149	2184	2181	2168	2152	2114	2116	2116	2117	2099	2116	2119
ENERGY GWH	7234.6	192.2	106.2	168.8	608.9	723.2	752.0	833.3	784.4	599.7	527.9	168.1	81.2	111.1	562.1	557.0	458.4
DAILY GWH		12.8	15.2	18.8	20.3	23.3	25.1	26.9	25.3	20.0	17.0	11.2	11.6	13.9	18.1	18.0	16.4

INI-SUM 15MAR 22MAR 31MAR 30APR 31MAY 30JUN 31JUL 31AUG 30SEP 31OCT 15NOV 22NOV 30NOV 31DEC 31JAN 28FEB

DATE OF STUDY 11/15/04

TIME OF STUDY 10:56:38

2004-2005 AOP EXTENSIONS, LOWER QUARTILE RUNOFF SIMULATION 99001 9901 9901

STUDY NO 28

SHORTEN NAVIGATION SEASON 31-DAYS

VALUES IN 1000 AF EXCEPT AS INDICATED

	28FEB10 INI-SUM	15MAR	2010 22MAR	31MAR	30APR	31MAY	30JUN	31JUL	31AUG	30SEP	31OCT	15NOV	22NOV	2011 30NOV	31DEC	31JAN	28FEB
--FORT PECK--																	
NAT INFLOW	7022	283	132	170	615	1083	1702	741	307	295	379	196	91	104	345	248	331
DEPLETION	442	-16	-8	-10	35	318	557	224	-40	-142	-76	-36	-17	-19	-114	-127	-88
EVAPORATION	463							28	88	111	97	44	21	24	51		
MOD INFLOW	6117	300	140	180	580	765	1145	489	259	326	358	187	87	100	408	375	419
RELEASE	5398	134	62	80	357	492	565	553	492	356	299	145	70	127	553	584	528
STOR CHANGE	719	166	77	99	223	273	580	-65	-233	-30	59	42	17	-27	-145	-209	-109
STORAGE	10442	10608	10685	10785	11008	11281	11860	11796	11563	11533	11592	11634	11651	11624	11479	11270	11161
ELEV FTMSL	2209.2	2210.3	2210.7	2211.3	2212.6	2214.3	2217.6	2217.2	2215.9	2215.7	2216.1	2216.3	2216.4	2216.2	2215.4	2214.2	2213.6
DISCH KCFS	9.0	4.5	4.5	4.5	6.0	8.0	9.5	9.0	8.0	6.0	4.9	4.9	5.1	8.0	9.0	9.5	9.5
POWER																	
AVE POWER MW		56	56	56	75	100	120	115	102	76	62	62	64	102	114	120	119
PEAK POW MW		183	184	184	186	188	193	192	190	190	191	191	191	191	190	188	187
ENERGY GWH	824.3	20.0	9.4	12.1	53.8	74.5	86.6	85.4	75.6	54.6	45.9	22.3	10.8	19.5	84.7	89.0	80.0
--GARRISON--																	
NAT INFLOW	10598	500	233	300	803	1349	2842	1990	559	470	451	185	86	98	251	186	295
DEPLETION	1178	0	0	0	5	207	762	597	82	-130	1	-99	-46	-53	-75	-49	-24
CHAN STOR	-5	49			-16	-21	-16	5	10	21	12	0	-2	-31	-10	-5	
EVAPORATION	550							33	106	132	115	52	24	28	59		
REG INFLOW	14263	683	296	380	1139	1612	2629	1918	873	845	645	376	176	220	810	814	847
RELEASE	13384	446	194	250	1012	1138	1309	1322	1291	952	806	390	184	286	1230	1353	1222
STOR CHANGE	879	237	102	131	127	475	1320	596	-418	-108	-161	-14	-8	-66	-420	-539	-375
STORAGE	12561	12798	12899	13030	13157	13632	14952	15549	15130	15023	14862	14848	14840	14774	14354	13815	13440
ELEV FTMSL	1817.1	1818.1	1818.5	1819.0	1819.5	1821.4	1826.5	1828.7	1827.1	1826.7	1826.1	1826.1	1826.1	1825.8	1824.2	1822.1	1820.7
DISCH KCFS	22.0	15.0	14.0	14.0	17.0	18.5	22.0	21.5	21.0	16.0	13.1	13.1	13.2	18.0	20.0	22.0	22.0
POWER																	
AVE POWER MW		163	153	154	187	205	249	250	245	186	152	152	153	207	229	248	245
PEAK POW MW		395	397	399	401	408	426	434	428	427	425	425	424	424	418	410	405
ENERGY GWH	1838.7	58.8	25.8	33.2	134.8	152.6	179.5	185.8	181.9	133.7	113.1	54.6	25.7	39.8	170.0	184.5	164.6
--OAHE--																	
NAT INFLOW	2048	217	101	130	324	183	815	144	34	92	13				-49	-8	51
DEPLETION	666	24	11	14	49	70	142	169	112	27	-10	1	0	1	12	17	27
CHAN STOR	0	34	5		-14	-7	-17	2	2	24	14		-1	-23	-10	-10	0
EVAPORATION	482							30	93	116	100	45	21	24	53		
REG INFLOW	14285	674	290	366	1272	1243	1965	1269	1123	926	743	344	162	237	1106	1318	1246
RELEASE	13395	524	122	323	1192	1410	1342	1670	1484	965	991	283	145	164	1095	978	708
STOR CHANGE	889	150	168	43	80	-166	623	-400	-361	-39	-248	61	16	74	11	340	538
STORAGE	13157	13307	13474	13518	13598	13432	14054	13654	13293	13253	13006	13067	13083	13157	13168	13508	14046
ELEV FTMSL	1586.5	1587.1	1587.8	1588.0	1588.3	1587.6	1590.2	1588.6	1587.0	1586.9	1585.8	1586.1	1586.2	1586.5	1586.5	1588.0	1590.2
DISCH KCFS	12.9	17.6	8.8	18.1	20.0	22.9	22.6	27.2	24.1	16.2	16.1	9.5	10.5	10.3	17.8	15.9	12.7
POWER																	
AVE POWER MW		203	102	210	233	266	263	317	280	187	186	109	121	119	205	184	149
PEAK POW MW		606	610	611	613	609	622	614	606	605	599	601	601	603	603	611	622
ENERGY GWH	1879.9	73.2	17.1	45.3	167.6	197.8	189.4	235.9	208.0	135.0	138.1	39.4	20.3	22.9	152.7	137.0	100.3
--BIG BEND--																	
EVAPORATION	129							8	24	31	27	12	6	7	14		
REG INFLOW	13267	524	122	323	1192	1410	1342	1662	1460	934	964	270	140	157	1081	978	708
RELEASE	13267	524	122	323	1192	1410	1342	1662	1460	934	964	270	140	157	1081	978	708
STORAGE	1681	1681	1681	1681	1681	1681	1681	1681	1681	1681	1681	1681	1681	1681	1681	1681	1681
ELEV FTMSL	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0
DISCH KCFS	12.9	17.6	8.8	18.1	20.0	22.9	22.6	27.0	23.7	15.7	15.7	9.1	10.1	9.9	17.6	15.9	12.7
POWER																	
AVE POWER MW		83	41	85	94	107	106	127	112	77	79	46	51	50	87	77	61
PEAK POW MW		510	509	509	509	509	509	509	518	538	538	538	538	538	538	538	529
ENERGY GWH	768.6	29.7	6.9	18.3	67.5	79.8	76.0	94.1	83.6	55.8	58.8	16.6	8.5	9.6	64.6	57.6	41.1
--FORT RANDALL--																	
NAT INFLOW	779	106	49	64	100	79	203	41	76	36	2				8	-8	23
DEPLETION	80	1	1	1	4	9	12	18	15	7	1	1	0	1	3	3	3
EVAPORATION	134							10	31	35	25	10	5	5	13		
REG INFLOW	13832	629	171	385	1288	1480	1533	1675	1490	928	940	260	134	151	1073	967	728
RELEASE	13832	220	154	385	1288	1480	1533	1675	1664	1603	1343	260	134	151	707	695	539
STOR CHANGE	0	409	17					0	-174	-675	-403	0	0	0	366	272	189
STORAGE	3123	3532	3549	3549	3549	3549	3549	3549	3375	2700	2297	2296	2296	2296	2662	2934	3123
ELEV FTMSL	1350.0	1355.0	1355.2	1355.2	1355.2	1355.2	1355.2	1355.2	1353.1	1344.1	1337.5	1337.5	1337.5	1337.5	1343.5	1347.4	1350.0
DISCH KCFS	9.8	7.4	11.1	21.6	21.6	24.1	25.8	27.2	27.1	26.9	21.8	8.7	9.7	9.5	11.5	11.3	9.7
POWER																	
AVE POWER MW		62	94	182	183	203	217	229	226	215	163	64	71	70	86	89	78
PEAK POW MW		354	355	355	355	355	355	355	348	313	283	283	283	283	311	329	338
ENERGY GWH	1361.4	22.2	15.8	39.4	131.6	150.9	156.3	170.5	168.0	154.5	121.2	23.0	11.9	13.4	64.1	65.9	52.6
--GAVINS POINT--																	
NAT INFLOW	1401	103	48	62	139	155	160	91	89	65	117	53	25	28	78	77	113
DEPLETION	114	0	0	0	5	19	24	39	10	-5	2	5	2	3	10	1	
CHAN STOR	-1	5	-7	-20	0	-5	-3	-3	0	0	9	24	-2	0	-4	0	3
EVAPORATION	47							3	9	11	10	5	2	2	5		
REG INFLOW	15071.	328	195	427	1422	1611	1666	1722	1735	1662	1457	327	153	175	766	771	655
RELEASE	15071	328	195	427	1422	1611	1666	1722	1722	1636	1457	327	153	175	766	771	694
STOR CHANGE									13	26							-39
STORAGE	358	358	358	358	358	358	358	358	371	397	397	397	397	397	397	397	358
ELEV FTMSL	1206.0	1206.0	1206.0	1206.0	1206.0	1206.0	1206.0	1206.0	1206.5	1207.5	1207.5	1207.5	1207.5	1207.5	1207.5	1207.5	1206.0
DISCH KCFS	12.5	11.0	14.0	23.9	23.9	26.2	28.0	28.0	28.0	27.5	23.7	11.0	11.0	11.0	12.5	12.5	12.5
POWER																	
AVE POWER MW		39	49	82	82	89	95	95	96	95	83	39	39	39	44	45	44
PEAK POW MW		114	114	114	114	114	114	114	115	117	117	117	117	117	78	78	76
ENERGY GWH	630.7	13.9	8.2	17.7	59.0	66.6	68.6	70.9	71.3	68.7	62.0	14.1	6.6	7.5	32.9	33.2	29.6
--GAVINS POINT - SIOUX CITY--																	
NAT INFLOW	1356	174	81	104	135	262	188	113	84	52	37	19	9	10	20	-4	72
DEPLETION	263	7	3	4	22	35	31	38	36	24	10	6	3	3	13	14	14
REGULATED FLOW AT SIOUX CITY																	
KAF	16164	495	273	527	1535	1838	1823	1797	1770	1664	1484	340	159	182	773	753	752
KCFS		16.6	19.6	29.5	25.8	29.9	30.6	29.2	28.8	28.0	24.1	11.4	11.4	11.4	12.6	12.2	13.5
--TOTAL--																	
NAT INFLOW	23204	1383	645	829	2116	3111	5910	3120	1149	1010	999	452	211	241	653	491	885
DEPLETION	2743	15	7	9	120	658	1528	1085	215	-219	-72	-121	-56	-65	-151	-141	-68
CHAN STOR	-5	88	-2	-20	-31	-33	-36	5	13	45	35	25	-4	-54	-24	-15	3
EVAPORATION	1805							112	351	436	375	168	78	90	195		
STORAGE	41323	42284	42648	42921	43351	43933	46456	46587	45413	44587	43834	43924	43949	43929	43741	43606	43810
SYSTEM POWER																	
AVE POWER MW		605	495	768	853	971	1051	1133	1060	837	725	472	499	587	765	762	697
PEAK POW MW		2163	2169	2172	2178	2183	2219	2218	2206	2190	2153	2155	2155	2156	2138	2154	2156
ENERGY GWH	7303.6	217.9	83.2	166.0	614.3	722.3	756.4	842.6	788.4	602.3	539.0	170.0	83.8	112.7	569.2	567.1	468.3
DAILY GWH		14.5	11.9	18.4	20.5	23.3	25.2	27.2	25.4	20.1	17.4	11.3	12.0	14.1	18.4	18.3	16.7
	INI-SUM	15MAR	22MAR	31MAR	30APR	31MAY	30JUN	31JUL	31AUG	30SEP	31OCT	15NOV	22NOV	30NOV	31DEC	31JAN	28FEB

SHORTEN NAVIGATION SEASON 61-DAYS
VALUES IN 1000 AF EXCEPT AS INDICATED

28FEB06	INI-SUM	2006 15MAR	22MAR	31MAR	30APR	31MAY	30JUN	31JUL	31AUG	30SEP	31OCT	15NOV	22NOV	2007 30NOV	31DEC	31JAN	28FEB
--FORT PECK--																	
NAT INFLOW	5435	250	116	150	549	834	1061	468	270	258	341	169	79	90	289	218	293
DEPLETION	377	2	1	1	51	207	358	178	-28	-115	-59	-12	-6	-6	-65	-82	-49
EVAPORATION	354							22	68	85	74	34	16	18	39		
MOD INFLOW	4704	247	115	148	498	627	703	268	230	288	326	147	69	79	315	300	342
RELEASE	5204	149	69	89	387	492	536	523	492	342	270	131	69	79	523	553	500
STOR CHANGE	-500	99	46	59	111	135	167	-255	-262	-53	56	17	-1	-1	-207	-253	-158
STORAGE	7405	7503	7549	7608	7719	7854	8022	7767	7505	7452	7507	7524	7523	7523	7315	7062	6904
ELEV FTMSL	2188.7	2189.5	2189.8	2190.2	2191.1	2192.1	2193.3	2191.4	2189.5	2189.1	2189.5	2189.6	2189.6	2189.6	2188.0	2186.1	2184.8
DISCH KCFS	8.5	5.0	5.0	5.0	6.5	8.0	9.0	8.5	8.0	5.7	4.4	4.4	5.0	5.0	8.5	9.0	9.0
POWER																	
AVE POWER MW		55	55	55	71	88	100	94	88	62	48	48	55	55	92	96	95
PEAK POW MW		113	113	114	156	158	159	157	154	153	154	154	154	154	152	149	147
ENERGY GWH	685.8	19.7	9.2	11.9	51.4	65.6	72.0	70.1	65.1	45.0	35.7	17.3	9.2	10.5	68.3	71.3	63.7
--GARRISON--																	
NAT INFLOW	8026	297	138	178	770	993	2221	1404	397	305	429	177	83	94	119	176	245
DEPLETION	1260	32	15	19	60	132	727	568	89	-110	14	-83	-39	-44	-63	-40	-18
CHAN STOR	-6	41			-17	-17	-11	6	6	25	15		-7	0	-40	-6	
EVAPORATION	417							26	82	101	87	39	18	21	44		
REG INFLOW	11547	454	193	248	1079	1336	2018	1338	724	681	614	352	166	197	621	764	763
RELEASE	12156	417	180	232	893	1045	1131	1138	1107	944	842	408	190	270	1138	1168	1055
STOR CHANGE	-609	37	12	16	187	290	888	201	-383	-262	-228	-56	-25	-73	-516	-405	-292
STORAGE	8867	8905	8917	8933	9120	9410	10298	10499	10115	9853	9625	9569	9544	9472	8955	8551	8258
ELEV FTMSL	1799.9	1800.1	1800.2	1800.3	1801.3	1802.7	1807.1	1808.0	1806.2	1805.0	1803.8	1803.5	1803.4	1803.1	1800.4	1798.2	1796.6
DISCH KCFS	18.5	14.0	13.0	13.0	15.0	17.0	19.0	18.5	18.0	15.9	13.7	13.7	13.7	17.0	18.5	19.0	19.0
POWER																	
AVE POWER MW		133	124	124	143	164	187	186	181	157	135	134	134	165	177	178	175
PEAK POW MW		330	330	331	334	340	355	359	352	348	343	342	342	341	331	323	317
ENERGY GWH	1427.1	47.8	20.8	26.7	103.1	121.8	134.7	138.6	134.5	113.4	100.4	48.3	22.5	31.8	132.0	132.7	117.9
--OAHE--																	
NAT INFLOW	1184	223	104	134	206	113	242	92	24	72	6	-6	-3	-3	-54	-13	47
DEPLETION	613	23	11	14	47	66	129	151	100	25	-8	2	1	1	11	16	26
CHAN STOR	-3	26	6		-11	-11	-12	3	3	13	13	0		-20	-9	-3	
EVAPORATION	319							20	59	75	67	31	14	17	36		
REG INFLOW	12405	642	279	352	1040	1081	1232	1062	974	929	802	370	172	230	1027	1136	1076
RELEASE	13024	432	277	369	1250	1474	1418	1708	1351	611	673	318	148	169	1022	801	1002
STOR CHANGE	-619	210	3	-17	-210	-393	-186	-646	-377	317	129	51	25	60	5	335	74
STORAGE	9358	9568	9571	9554	9344	8950	8764	8118	7741	8059	8187	8239	8263	8324	8329	8664	8739
ELEV FTMSL	1567.9	1569.0	1569.1	1569.0	1567.8	1565.5	1564.4	1560.4	1558.0	1560.0	1560.9	1561.2	1561.3	1561.7	1561.8	1563.8	1564.3
DISCH KCFS	16.6	14.5	19.9	20.7	21.0	24.0	23.8	27.8	22.0	10.3	10.9	10.7	10.7	10.7	16.6	13.0	18.0
POWER																	
AVE POWER MW		150	206	214	216	243	239	273	211	99	107	105	105	105	163	129	180
PEAK POW MW		511	511	511	505	493	488	468	455	466	470	472	473	474	475	485	487
ENERGY GWH	1568.0	53.9	34.6	46.1	155.5	181.1	172.0	202.9	157.1	71.4	79.4	37.7	17.6	20.1	121.5	96.1	121.0
--BIG BEND--																	
EVAPORATION	129							8	24	31	27	12	6	7	14		
REG INFLOW	12895	432	277	369	1250	1474	1418	1700	1327	580	646	306	142	163	1008	801	1002
RELEASE	12895	432	277	369	1250	1474	1418	1700	1327	580	646	306	142	163	1008	801	1002
STORAGE	1681	1681	1681	1681	1681	1681	1681	1681	1681	1681	1681	1681	1681	1681	1681	1681	1681
ELEV FTMSL	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0
DISCH KCFS	16.6	14.5	19.9	20.7	21.0	24.0	23.8	27.6	21.6	9.8	10.5	10.3	10.2	10.3	16.4	13.0	18.0
POWER																	
AVE POWER MW		69	93	97	98	112	112	129	103	49	53	52	52	52	82	65	87
PEAK POW MW		518	510	509	509	509	509	509	525	538	538	538	538	538	538	538	529
ENERGY GWH	748.2	24.7	15.7	20.9	70.8	83.5	80.3	96.3	76.5	35.6	39.6	18.7	8.7	10.0	60.8	48.0	58.1
--FORT RANDALL--																	
NAT INFLOW	366	67	31	40	52	42	146	16	44	-12	-62	-3	-1	-2		-7	15
DEPLETION	80	1	1	1	4	9	12	18	15	7	1	1	0	1	3	3	3
EVAPORATION	127							10	30	31	22	10	5	5	13		
REG INFLOW	13049	497	307	408	1298	1507	1552	1688	1326	525	561	292	136	155	992	791	1014
RELEASE	13048	235	159	391	1298	1507	1552	1688	1675	1428	561	292	136	155	719	701	550
STOR CHANGE	1	262	148	17				0	-349	-903	0	0	0	0	273	90	464
STORAGE	3122	3384	3532	3549	3549	3549	3549	3549	3200	2296	2296	2296	2296	2296	2569	2659	3123
ELEV FTMSL	1350.0	1353.2	1355.0	1355.2	1355.2	1355.2	1355.2	1355.2	1351.0	1337.5	1337.5	1337.5	1337.5	1337.5	1342.1	1343.5	1350.0
DISCH KCFS	10.0	7.9	11.5	21.9	21.8	24.5	26.1	27.5	27.2	24.0	9.1	9.8	9.8	9.8	11.7	11.4	9.9
POWER																	
AVE POWER MW		65	97	185	184	207	220	231	225	184	67	72	71	71	87	87	79
PEAK POW MW		349	354	355	355	355	355	355	341	283	283	283	283	283	305	311	338
ENERGY GWH	1279.9	23.6	16.2	40.0	132.6	153.7	158.1	171.8	167.6	132.7	49.6	25.8	12.0	13.7	64.8	64.9	52.8
--GAVINS POINT--																	
NAT INFLOW	1229	89	42	53	123	134	141	78	78	56	107	46	21	25	69	67	100
DEPLETION	114	0	0	0	5	19	24	39	10	-5	2	5	2	3	10	1	
CHAN STOR	-1	4	-7	-20	0	-5	-3	-3	0	6	28	-1	0	0	-4	1	3
EVAPORATION	47							3	9	11	10	5	2	2	5		
REG INFLOW	14115	329	194	425	1416	1617	1666	1722	1735	1484	683	327	153	175	770	768	653
RELEASE	14115	329	194	425	1416	1617	1666	1722	1722	1458	683	327	153	175	770	768	692
STOR CHANGE									13	26							-39
STORAGE	358	358	358	358	358	358	358	358	371	397	397	397	397	397	397	397	358
ELEV FTMSL	1206.0	1206.0	1206.0	1206.0	1206.0	1206.0	1206.0	1206.0	1206.5	1207.5	1207.5	1207.5	1207.5	1207.5	1207.5	1207.5	1206.0
DISCH KCFS	12.5	11.0	14.0	23.8	23.8	26.3	28.0	28.0	28.0	24.5	11.1	11.0	11.0	11.0	12.5	12.5	12.5
POWER																	
AVE POWER MW		39	49	82	82	90	95	95	96	85	40	39	39	39	44	44	44
PEAK POW MW		114	114	114	114	114	114	114	115	117	117	117	117	117	78	78	76
ENERGY GWH	590.8	13.9	8.2	17.6	58.7	66.8	68.6	70.9	71.3	61.5	29.4	14.1	6.6	7.5	33.1	33.0	29.5
--GAVINS POINT - SIOUX CITY--																	
NAT INFLOW	664	44	21	26	93	173	128	57	26	18	17	12	5	6	12	-6	32
DEPLETION	251	6	3	4	21	35	30	37	34	22	10	6	3	3	12	13	13
REGULATED FLOW AT SIOUX CITY																	
KAF	14528	366	212	448	1488	1755	1764	1742	1714	1454	690	333	156	178	770	749	711
KCFS		12.3	15.2	25.1	25.0	28.5	29.6	28.3	27.9	24.4	11.2	11.2	11.2	11.2	12.5	12.2	12.8
--TOTAL--																	
NAT INFLOW	16904	969	452	581	1793	2289	3939	2115	839	697	838	395	184	211	435	435	732
DEPLETION	2695	64	30	39	188	468	1280	991	220	-176	-40	-82	-38	-43	-92	-89	-25
CHAN STOR	-15	70	-1	-20	-28	-34	-26	6	9	39	56	-1	-7	-20	-53	-8	3
EVAPORATION	1393							88	273	334	288	130	61	69	150		
STORAGE	30791	31400	31609	31683	31772	31804	32672	31972	30614	29738	29694	29706	29706	29693	29247	29015	29064
SYSTEM POWER																	
AVE POWER MW		510	623	756	795	904	953	1009	903	638	449	450	455	487	646	600	659
PEAK POW MW		1935	1934	1934	1973	1969	1981	1962	1942	1904	1906	1907	1907	1908	1878	1884	1894
ENERGY GWH	6299.9	183.6	104.7	163.3	572.1	672.5	685.8	750.6	672.0	459.5	334.1	162.0	76.5	93.5	480.5	446.1	443.0
DAILY GWH		12.2	15.0	18.1	19.1	21.7	22.9	24.2	21.7	15.3	10.8	10.8	10.9	11.7	15.5	14.4	15.8
	INI-SUM	15MAR	22MAR	31MAR	30APR	31MAY	30JUN	31JUL	31AUG	30SEP	31OCT	15NOV	22NOV	30NOV	31DEC	31JAN	28FEB

STUDY NO 30

TIME OF STUDY 10:57:00

NO NAVIGATION

VALUES IN 1000 AF EXCEPT AS INDICATED

	28FEB07 INI-SUM	2007 15MAR	22MAR	31MAR	30APR	31MAY	30JUN	31JUL	31AUG	30SEP	31OCT	15NOV	22NOV	2008 30NOV	31DEC	31JAN	29FEB
--FORT PECK--																	
NAT INFLOW	5615	258	120	155	567	862	1097	483	279	266	352	175	81	93	298	226	303
DEPLETION	582	1	0	1	82	349	580	178	-31	-122	-61	-33	-15	-17	-107	-124	-99
EVAPORATION	353							21	67	84	74	34	16	18	39		
MOD INFLOW	4680	257	120	154	485	513	517	284	243	304	339	173	81	92	366	350	402
RELEASE	3834	119	56	71	298	338	387	400	369	327	282	136	69	79	307	307	288
STOR CHANGE	846	138	64	83	187	175	130	-116	-126	-23	57	37	12	13	58	43	114
STORAGE	6904	7042	7107	7189	7377	7552	7682	7566	7440	7416	7473	7511	7522	7535	7594	7636	7751
ELEV FTMSL	2184.8	2185.9	2186.4	2187.1	2188.5	2189.8	2190.8	2189.9	2189.0	2188.8	2189.2	2189.5	2189.6	2189.7	2190.1	2190.4	2191.3
DISCH KCFS	9.0	4.0	4.0	4.0	5.0	5.5	6.5	6.5	6.0	5.5	4.6	4.6	5.0	5.0	5.0	5.0	5.0
POWER																	
AVE POWER MW		42	43	43	54	60	71	71	65	60	50	50	55	55	55	55	55
PEAK POW MW		148	149	150	152	154	156	154	153	153	153	154	154	154	155	155	156
ENERGY GWH	505.3	15.2	7.2	9.2	38.8	44.5	51.2	53.0	48.6	43.0	37.1	18.0	9.2	10.5	40.7	40.8	38.3
--GARRISON--																	
NAT INFLOW	8444	312	146	187	810	1045	2337	1477	418	320	451	187	87	99	125	185	258
DEPLETION	1027	24	11	15	28	211	732	522	82	-125	-3	-101	-47	-54	-112	-88	-68
CHAN STOR	46	59			-12	-6	-12		6	6	10		-5	0	0		
EVAPORATION	430							26	83	103	90	41	19	22	47		
REG INFLOW	10867	466	190	244	1068	1166	1980	1329	628	675	656	383	180	211	498	580	614
RELEASE	9827	417	167	214	774	830	863	892	892	708	704	341	159	222	861	922	863
STOR CHANGE	1041	49	23	30	294	336	1117	437	-264	-33	-48	42	21	-11	-363	-342	-249
STORAGE	8258	8307	8330	8360	8655	8991	10108	10545	10282	10249	10201	10243	10264	10253	9890	9548	9299
ELEV FTMSL	1796.6	1796.9	1797.0	1797.2	1798.8	1800.6	1806.2	1808.3	1807.0	1806.9	1806.6	1806.8	1806.9	1806.9	1805.1	1803.4	1802.2
DISCH KCFS	19.0	14.0	12.0	12.0	13.0	13.5	14.5	14.5	14.5	11.9	11.5	11.5	11.5	14.0	14.0	15.0	15.0
POWER																	
AVE POWER MW		129	111	111	121	128	142	146	147	120	115	115	115	141	140	147	146
PEAK POW MW		318	319	319	325	332	352	360	355	354	354	354	355	355	348	342	337
ENERGY GWH	1166.6	46.5	18.7	24.0	87.4	95.1	101.9	108.7	109.1	86.3	85.8	41.5	19.4	27.0	104.0	109.7	101.4
--OAHE--																	
NAT INFLOW	1263	238	111	143	220	120	259	99	25	77	6	-6	-3	-3	-58	-14	50
DEPLETION	626	23	11	14	47	67	132	156	103	25	-9	2	1	1	12	17	26
CHAN STOR	24	29	12		-6	-3	-6			15	2	0	0	-14	0	-6	
EVAPORATION	381							23	71	91	81	37	17	20	42		
REG INFLOW	10107	661	278	343	941	880	984	812	743	684	640	296	138	184	749	886	887
RELEASE	9020	428	215	116	484	744	810	1090	907	207	533	319	148	170	1023	802	1026
STOR CHANGE	1086	233	63	227	457	137	175	-278	-165	477	107	-23	-10	15	-274	84	-139
STORAGE	8739	8972	9035	9263	9720	9856	10031	9753	9589	10066	10173	10150	10140	10155	9881	9965	9825
ELEV FTMSL	1564.3	1565.6	1566.0	1567.3	1569.9	1570.6	1571.6	1570.1	1569.2	1571.8	1572.3	1572.2	1572.2	1572.2	1570.8	1571.2	1570.5
DISCH KCFS	18.0	14.4	15.5	6.5	8.1	12.1	13.6	17.7	14.8	3.5	8.7	10.7	10.7	10.7	16.6	13.0	17.8
POWER																	
AVE POWER MW		145	157	66	84	126	143	185	153	36	92	114	113	113	175	137	187
PEAK POW MW		494	496	503	516	520	525	517	512	526	529	528	528	528	520	523	519
ENERGY GWH	1140.0	52.1	26.4	14.3	60.6	94.0	102.8	137.9	114.1	26.3	68.3	40.9	19.0	21.7	130.1	101.8	129.9
--BIG BEND--																	
EVAPORATION	129							8	24	31	27	12	6	7	14		
REG INFLOW	8891	428	215	116	484	744	810	1082	883	176	506	307	143	163	1009	802	1026
RELEASE	8891	428	215	116	484	744	810	1082	883	176	506	307	143	163	1009	802	1026
STORAGE	1681	1681	1681	1681	1681	1681	1681	1681	1681	1681	1681	1681	1681	1681	1681	1681	1681
ELEV FTMSL	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0
DISCH KCFS	18.0	14.4	15.5	6.5	8.1	12.1	13.6	17.6	14.4	3.0	8.2	10.3	10.3	10.3	16.4	13.0	17.8
POWER																	
AVE POWER MW		68	73	30	38	57	64	82	68	15	42	52	52	52	82	65	86
PEAK POW MW		517	510	509	509	509	509	509	518	538	538	538	538	538	538	538	528
ENERGY GWH	518.2	24.5	12.2	6.6	27.4	42.1	45.9	61.3	50.5	10.8	31.1	18.8	8.7	10.0	60.8	48.1	59.5
--FORT RANDALL--																	
NAT INFLOW	404	74	35	44	58	47	161	18	48	-13	-69	-4	-2	-2		-8	16
DEPLETION	80	1	1	1	4	9	12	18	15	7	1	1	0	1	3	3	3
EVAPORATION	131							10	31	33	23	10	5	5	13		
REG INFLOW	9085	500	249	159	538	782	959	1072	885	122	413	292	136	155	993	791	1039
RELEASE	9081	232	108	142	538	782	959	1072	1059	1047	565	291	135	155	719	701	575
STOR CHANGE	4	268	141	17				0	-174	-925	-152	0	0	0	274	90	464
STORAGE	3123	3391	3532	3549	3549	3549	3549	3549	3375	2450	2298	2298	2299	2299	2573	2663	3127
ELEV FTMSL	1350.0	1353.3	1355.0	1355.2	1355.2	1355.2	1355.2	1355.2	1353.1	1340.2	1337.5	1337.5	1337.5	1337.5	1342.1	1343.5	1350.0
DISCH KCFS	9.9	7.8	7.8	8.0	9.0	12.7	16.1	17.4	17.2	17.6	9.2	9.8	9.8	9.8	11.7	11.4	10.0
POWER																	
AVE POWER MW		65	66	68	77	108	137	148	145	139	68	72	71	71	87	87	79
PEAK POW MW		349	354	355	355	355	355	355	348	295	283	284	284	284	305	311	338
ENERGY GWH	887.5	23.3	11.1	14.7	55.5	80.4	98.3	109.8	107.6	99.8	50.6	25.8	12.0	13.7	64.9	64.9	55.2
--GAVINS POINT--																	
NAT INFLOW	1242	90	42	54	124	136	143	79	79	57	108	47	22	25	69	67	101
DEPLETION	114	0	0	0	5	19	24	39	10	-5	2	5	2	3	10	1	
CHAN STOR	-1	4	0	0	-2	-7	-7	-3	0	-1	16	-1	0	0	-4	1	3
EVAPORATION	47							3	9	11	10	5	2	2	5		
REG INFLOW	10161	327	151	196	655	892	1071	1107	1120	1097	676	327	153	175	770	768	679
RELEASE	10161	327	151	196	655	892	1071	1107	1107	1071	676	327	153	175	770	768	718
STOR CHANGE									13	26							-39
STORAGE	358	358	358	358	358	358	358	358	371	397	397	397	397	397	397	397	358
ELEV FTMSL	1206.0	1206.0	1206.0	1206.0	1206.0	1206.0	1206.0	1206.0	1206.5	1207.5	1207.5	1207.5	1207.5	1207.5	1207.5	1207.5	1206.0
DISCH KCFS	12.5	11.0	10.8	11.0	11.0	14.5	18.0	18.0	18.0	18.0	11.0	11.0	11.0	11.0	12.5	12.5	12.5
POWER																	
AVE POWER MW		38	38	39	39	51	62	62	63	63	39	39	39	39	44	44	44
PEAK POW MW		114	114	114	114	114	114	114	115	117	117	117	117	117	78	78	76
ENERGY GWH	431.5	13.9	6.4	8.3	27.8	37.6	44.9	46.4	46.6	45.6	29.1	14.1	6.6	7.5	33.1	33.0	30.6
--GAVINS POINT - SIOUX CITY--																	
NAT INFLOW	730	48	23	29	102	191	141	63	29	20	18	13	6	7	13	-7	35
DEPLETION	254	6	3	4	21	35	30	37	35	23	10	6	3	3	12	13	14
REGULATED FLOW AT SIOUX CITY																	
KAF	10637	369	170	222	736	1048	1182	1133	1101	1068	684	334	156	178	771	748	739
KCFS		12.4	12.3	12.4	12.4	17.0	19.9	18.4	17.9	17.9	11.1	11.2	11.2	11.2	12.5	12.2	12.8
--TOTAL--																	
NAT INFLOW	17698	1020	476	612	1881	2401	4138	2219	878	727	866	411	192	219	447	449	763
DEPLETION	2683	55	26	33	187	690	1510	950	214	-197	-60	-121	-56	-64	-182	-178	-124
CHAN STOR	70	92	12	0	-19	-16	-24	-3	6	20	28	-1	-5	-14	-4	-5	3
EVAPORATION	1471							90	285	354	306	138	65	74	160		
STORAGE	29064	29752	30044	30401	31339	31987	33409	33453	32737	32259	32224	32281	32304	32321	32016	31890	32041
SYSTEM POWER																	
AVE POWER MW		487	488	357	413	529	618	695	641	433	406	442	445	471	583	535	596
PEAK POW MW		1942	1943	1950	1972	1984	2011	2009	2001	1983	1974	1975	1975	1975	1944	1947	1955
ENERGY GWH	4649.1	175.4	81.9	77.2	297.3	393.7	445.1	517.1	476.5	311.8	301.9	159.0	74.8	90.4	433.5	398.4	415.0
DAILY GWH		11.7	11.7	8.6	9.9	12.7	14.8	16.7	15.4	10.4	9.7	10.6	10.7	11.3	14.0	12.9	14.3

INI-SUM 15MAR 22MAR 31MAR 30APR 31MAY 30JUN 31JUL 31AUG 30SEP 31OCT 15NOV 22NOV 30NOV 31DEC 31JAN 29FEB

SHORTEN NAVIGATION SEASON 61-DAYS
VALUES IN 1000 AF EXCEPT AS INDICATED

29FEB08	INI-SUM	2008 15MAR	22MAR	31MAR	30APR	31MAY	30JUN	31JUL	31AUG	30SEP	31OCT	15NOV	22NOV	2009 30NOV	31DEC	31JAN	28FEB
--FORT PECK--																	
NAT INFLOW	5748	264	123	158	580	882	1123	495	285	273	361	179	83	95	305	231	310
DEPLETION	419	-10	-5	-6	63	315	507	178	-34	-129	-63	-35	-16	-18	-110	-127	-92
EVAPORATION	373							23	71	89	78	36	17	19	41		
MOD INFLOW	4956	274	128	164	517	567	616	294	248	313	346	177	83	95	374	358	402
RELEASE	5068	119	56	71	298	400	536	523	523	363	268	127	83	127	523	553	500
STOR CHANGE	-112	155	72	93	219	167	80	-229	-275	-50	78	50	-1	-32	-148	-195	-98
STORAGE	7751	7906	7978	8071	8290	8457	8538	8309	8034	7984	8062	8113	8112	8080	7932	7736	7638
ELEV FTMSL	2191.3	2192.4	2193.0	2193.6	2195.2	2196.3	2196.9	2195.3	2193.4	2193.0	2193.6	2193.9	2193.9	2193.7	2192.6	2191.2	2190.5
DISCH KCFS	5.0	4.0	4.0	4.0	5.0	6.5	9.0	8.5	8.5	6.1	4.4	4.3	6.0	8.0	8.5	9.0	9.0
POWER																	
AVE POWER MW		44	45	45	57	74	103	97	96	68	49	48	68	90	95	99	99
PEAK POW MW		158	159	160	162	164	165	162	159	159	160	160	160	160	158	156	155
ENERGY GWH	688.4	16.0	7.5	9.7	40.7	55.1	74.1	72.0	71.1	49.1	36.4	17.3	11.3	17.2	70.5	73.9	66.3
--GARRISON--																	
NAT INFLOW	8762	324	151	194	840	1084	2425	1533	433	332	468	194	90	103	130	192	268
DEPLETION	984	-4	-2	-3	-6	211	736	538	88	-127	-8	-96	-45	-51	-107	-83	-57
CHAN STOR	-46	11			-11	-17	-28	6		27	19	1	-19	-22	-6	-6	
EVAPORATION	439							27	85	106	92	41	19	22	47		
REG INFLOW	12361	459	209	268	1132	1256	2196	1496	782	743	671	376	180	237	707	823	825
RELEASE	12482	417	167	214	893	1107	1190	1199	1168	849	877	431	208	254	1168	1230	1111
STOR CHANGE	-121	43	42	54	240	149	1006	297	-386	-106	-205	-55	-29	-17	-461	-407	-286
STORAGE	9299	9341	9383	9438	9677	9826	10832	11129	10743	10637	10432	10377	10348	10331	9870	9463	9177
ELEV FTMSL	1802.2	1802.4	1802.6	1802.9	1804.1	1804.8	1809.6	1810.9	1809.2	1808.7	1807.7	1807.5	1807.3	1807.3	1805.0	1803.0	1801.6
DISCH KCFS	15.0	14.0	12.0	12.0	15.0	18.0	20.0	19.5	19.0	14.3	14.3	14.5	15.0	16.0	19.0	20.0	20.0
POWER																	
AVE POWER MW		135	117	117	147	177	201	201	195	146	145	147	151	161	189	195	192
PEAK POW MW		338	339	340	344	347	365	369	363	361	358	357	356	356	348	340	335
ENERGY GWH	1506.8	48.8	19.6	25.2	105.5	131.5	144.4	149.2	145.2	105.0	107.8	52.8	25.4	30.9	140.7	145.3	129.4
--OAHE--																	
NAT INFLOW	1323	249	116	149	231	126	271	103	26	81	7	-7	-3	-3	-61	-15	52
DEPLETION	641	23	11	14	48	68	135	160	106	26	-9	2	1	1	12	17	27
CHAN STOR	-27	6	11		-17	-17	-11	3	3	28		-1	-3	-6	-17	-6	
EVAPORATION	346							21	65	81	73	33	16	18	39		
REG INFLOW	12790	648	283	350	1059	1148	1315	1123	1027	851	820	389	186	226	1039	1192	1136
RELEASE	12936	413	267	361	1238	1464	1388	1704	1518	443	678	319	148	169	1021	804	1000
STOR CHANGE	-145	235	16	-11	-179	-316	-73	-580	-492	407	142	70	38	57	18	388	136
STORAGE	9825	10060	10076	10065	9886	9570	9496	8916	8425	8832	8973	9043	9081	9138	9156	9544	9680
ELEV FTMSL	1570.5	1571.7	1571.8	1571.8	1570.8	1569.1	1568.7	1565.3	1562.4	1564.8	1565.7	1566.1	1566.3	1566.6	1566.7	1568.9	1569.7
DISCH KCFS	17.8	13.9	19.3	20.2	20.8	23.8	23.3	27.7	24.7	7.5	11.0	10.7	10.7	10.7	16.6	13.1	18.0
POWER																	
AVE POWER MW		146	203	212	218	247	240	281	245	75	111	109	108	109	169	134	186
PEAK POW MW		525	526	526	521	511	509	492	478	490	494	496	497	499	499	511	515
ENERGY GWH	1603.9	52.5	34.0	45.9	156.9	183.8	173.0	209.4	182.6	53.7	83.0	39.1	18.2	20.9	125.8	100.0	125.3
--BIG BEND--																	
EVAPORATION	129							8	24	31	27	12	6	7	14		
REG INFLOW	12807	413	267	361	1238	1464	1388	1696	1494	413	651	306	142	163	1007	804	1000
RELEASE	12807	413	267	361	1238	1464	1388	1696	1494	413	651	306	142	163	1007	804	1000
STORAGE	1681	1681	1681	1681	1681	1681	1681	1681	1681	1681	1681	1681	1681	1681	1682	1682	1682
ELEV FTMSL	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0
DISCH KCFS	17.8	13.9	19.3	20.2	20.8	23.8	23.3	27.6	24.3	6.9	10.6	10.3	10.2	10.2	16.4	13.1	18.0
POWER																	
AVE POWER MW		66	90	95	97	111	109	129	115	35	54	52	52	52	82	65	86
PEAK POW MW		518	510	509	509	509	509	509	518	538	538	538	538	538	538	538	529
ENERGY GWH	742.1	23.7	15.2	20.4	70.1	82.9	78.6	96.0	85.5	25.3	39.9	18.8	8.7	10.0	60.7	48.2	58.0
--FORT RANDALL--																	
NAT INFLOW	433	80	37	48	62	50	174	19	52	-15	-75	-4	-2	-2		-9	17
DEPLETION	80	1	1	1	4	9	12	18	15	7	1	1	0	1	3	3	3
EVAPORATION	128							10	31	32	22	10	5	5	13		
REG INFLOW	13021	492	304	408	1296	1505	1550	1687	1500	348	553	292	135	155	991	792	1014
RELEASE	13025	232	158	391	1296	1505	1550	1687	1674	1427	553	292	135	155	719	701	550
STOR CHANGE	-4	260	146	17	0			0	-174	-1079	0	0	0	0	272	91	464
STORAGE	3127	3386	3532	3549	3549	3549	3549	3549	3375	2296	2296	2296	2296	2296	2568	2659	3123
ELEV FTMSL	1350.0	1353.3	1355.0	1355.2	1355.2	1355.2	1355.2	1355.2	1353.1	1337.5	1337.5	1337.5	1337.5	1337.5	1342.1	1343.5	1350.0
DISCH KCFS	10.0	7.8	11.4	21.9	21.8	24.5	26.1	27.4	27.2	24.0	9.0	9.8	9.8	9.8	11.7	11.4	9.9
POWER																	
AVE POWER MW		65	96	185	184	206	219	231	227	186	66	72	71	71	87	87	79
PEAK POW MW		349	354	355	355	355	355	355	348	282	283	283	283	283	305	311	338
ENERGY GWH	1280.5	23.3	16.1	39.9	132.4	153.5	157.9	171.7	169.0	133.9	48.9	25.8	12.0	13.7	64.8	64.9	52.8
--GAVINS POINT--																	
NAT INFLOW	1246	91	42	54	125	136	143	79	79	57	108	47	22	25	70	68	101
DEPLETION	114	0	0	0	5	19	24	39	10	-5	2	5	2	3	10	1	
CHAN STOR	-1	4	-7	-20	0	-5	-3	-3	0	6	28	-2	0	0	-4	1	3
EVAPORATION	47							3	9	11	10	5	2	2	5		
REG INFLOW	14109	327	194	425	1416	1617	1666	1722	1735	1484	676	327	153	175	771	769	654
RELEASE	14109	327	194	425	1416	1617	1666	1722	1722	1458	676	327	153	175	771	769	693
STOR CHANGE									13	26							-39
STORAGE	358	358	358	358	358	358	358	358	371	397	397	397	397	397	397	397	358
ELEV FTMSL	1206.0	1206.0	1206.0	1206.0	1206.0	1206.0	1206.0	1206.0	1206.5	1207.5	1207.5	1207.5	1207.5	1207.5	1207.5	1207.5	1206.0
DISCH KCFS	12.5	11.0	14.0	23.8	23.8	26.3	28.0	28.0	28.0	24.5	11.0	11.0	11.0	11.0	12.5	12.5	12.5
POWER																	
AVE POWER MW		39	49	82	82	90	95	95	96	85	39	39	39	39	45	44	44
PEAK POW MW		114	114	114	114	114	114	114	115	117	117	117	117	117	78	78	76
ENERGY GWH	590.6	13.9	8.2	17.6	58.7	66.8	68.6	70.9	71.3	61.5	29.1	14.1	6.6	7.5	33.1	33.0	29.6
--GAVINS POINT - SIOUX CITY--																	
NAT INFLOW	785	52	24	31	110	205	151	68	31	21	20	14	6	7	14	-7	38
DEPLETION	255	6	3	4	21	35	30	38	35	23	10	6	3	3	12	13	14
REGULATED FLOW AT SIOUX CITY																	
KAF	14639	373	215	452	1505	1787	1787	1752	1718	1456	686	335	156	179	773	749	717
KCFS		12.5	15.5	25.3	25.3	29.1	30.0	28.5	27.9	24.5	11.2	11.3	11.3	11.3	12.6	12.2	12.9
--TOTAL--																	
NAT INFLOW	18297	1060	494	636	1948	2483	4287	2297	906	749	889	422	197	225	458	460	786
DEPLETION	2493	16	8	10	135	657	1444	971	220	-205	-67	-118	-55	-63	-180	-176	-105
CHAN STOR	-84	21	4	-20	-28	-39	-43	6	3	51	47	-2	-22	-28	-27	-11	3
EVAPORATION	1463							92	285	351	303	137	64	73	159		
STORAGE	32041	32733	33009	33162	33442	33442	34455	33943	32629	31828	31842	31907	31916	31924	31604	31481	31658
SYSTEM POWER																	
AVE POWER MW		495	599	735	784	905	968	1034	974	595	464	466	489	522	666	626	686
PEAK POW MW		2002	2003	2004	2005	2001	2017	2002	1981	1947	1950	1952	1952	1953	1926	1934	1948
ENERGY GWH	6412.3	178.1	100.6	158.7	564.4	673.7	696.7	769.3	724.7	428.5	345.1	167.9	82.2	100.2	495.6	465.4	461.2
DAILY GWH		11.9	14.4	17.6	18.8	21.7	23.2	24.8	23.4	14.3	11.1	11.2	11.7	12.5	16.0	15.0	16.5
	INI-SUM	15MAR	22MAR	31MAR	30APR	31MAY	30JUN	31JUL	31AUG	30SEP	31OCT	15NOV	22NOV	30NOV	31DEC	31JAN	28FEB

DATE OF STUDY 11/15/04

TIME OF STUDY 10:57:00

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STUDY NO 32

SHORTEN NAVIGATION SEASON 61-DAYS

VALUES IN 1000 AF EXCEPT AS INDICATED

	28FEB09 INI-SUM	15MAR	2009 22MAR	31MAR	30APR	31MAY	30JUN	31JUL	31AUG	30SEP	31OCT	15NOV	22NOV	2010 30NOV	31DEC	31JAN	28FEB
--FORT PECK--																	
NAT INFLOW	5919	272	127	163	598	909	1156	509	294	281	371	184	86	98	314	238	319
DEPLETION	432	-10	-5	-6	63	316	511	185	-29	-130	-65	-35	-16	-19	-110	-127	-92
EVAPORATION	372							23	71	89	78	35	17	19	41		
MOD INFLOW	5115	282	131	169	535	593	645	301	252	322	358	184	86	98	383	365	411
RELEASE	4997	119	56	71	298	461	536	523	492	356	270	130	69	127	523	523	444
STOR CHANGE	118	163	76	98	237	132	109	-222	-240	-34	88	53	16	-29	-139	-158	-33
STORAGE	7638	7801	7877	7974	8212	8344	8453	8232	7992	7958	8046	8099	8116	8086	7947	7789	7756
ELEV FTMSL	2190.5	2191.7	2192.2	2192.9	2194.6	2195.6	2196.3	2194.8	2193.1	2192.8	2193.4	2193.8	2193.9	2193.7	2192.7	2191.6	2191.3
DISCH KCFS	9.0	4.0	4.0	4.0	5.0	7.5	9.0	8.5	8.0	6.0	4.4	4.4	5.0	8.0	8.5	8.5	8.0
POWER																	
AVE POWER MW		44	44	45	56	85	102	96	90	67	49	49	56	90	95	94	88
PEAK POW MW		157	158	159	161	163	164	161	159	159	160	160	160	160	159	157	156
ENERGY GWH	677.9	15.9	7.5	9.7	40.5	63.2	73.7	71.7	66.8	48.1	36.6	17.7	9.5	17.2	70.6	70.0	59.2
--GARRISON--																	
NAT INFLOW	9185	340	158	204	881	1136	2542	1607	454	349	491	203	95	108	136	201	281
DEPLETION	1019	-1	0	-1	1	212	752	555	94	-130	-12	-100	-46	-53	-110	-84	-58
CHAN STOR	12	58			-11	-28	-17	6	6	22	18	0	-7	-34	-6		6
EVAPORATION	444							27	86	107	93	42	20	22	48		
REG INFLOW	12731	517	214	276	1166	1357	2309	1553	771	751	698	390	184	232	715	808	789
RELEASE	12618	417	167	214	893	1138	1220	1230	1199	952	716	381	178	286	1230	1261	1139
STOR CHANGE	113	101	48	62	273	219	1089	323	-428	-201	-18	9	6	-53	-514	-453	-350
STORAGE	9177	9278	9326	9387	9661	9880	10969	11292	10864	10663	10645	10655	10661	10607	10093	9640	9290
ELEV FTMSL	1801.6	1802.1	1802.3	1802.6	1804.0	1805.1	1810.2	1811.7	1809.7	1808.8	1808.7	1808.8	1808.8	1808.5	1806.1	1803.9	1802.1
DISCH KCFS	20.0	14.0	12.0	12.0	15.0	18.5	20.5	20.0	19.5	16.0	11.6	12.8	12.8	18.0	20.0	20.5	20.5
POWER																	
AVE POWER MW		135	116	117	146	182	206	207	201	164	119	131	131	183	201	202	198
PEAK POW MW		337	338	339	344	348	367	372	365	362	361	361	361	361	352	344	337
ENERGY GWH	1529.7	48.6	19.5	25.2	105.3	135.2	148.5	153.8	149.8	117.9	88.6	47.1	22.0	35.1	149.4	150.2	133.4
--OAHE--																	
NAT INFLOW	1408	265	123	159	245	134	288	110	28	86	7	-7	-3	-3	-64	-16	56
DEPLETION	653	23	11	14	48	69	138	165	109	27	-10	2	1	1	12	17	27
CHAN STOR	-2	34	11		-17	-20	-11	3	3	21	25	-7		-30	-12	-3	
EVAPORATION	350							22	65	83	74	33	16	18	39		
REG INFLOW	13021	692	290	359	1073	1183	1359	1156	1056	949	684	333	159	233	1103	1225	1168
RELEASE	12893	408	265	356	1232	1458	1370	1702	1513	445	684	319	148	169	1022	804	998
STOR CHANGE	128	283	26	3	-159	-275	-12	-546	-458	505	0	14	11	64	81	421	170
STORAGE	9680	9963	9989	9992	9833	9558	9546	9001	8543	9048	9047	9062	9072	9136	9217	9638	9808
ELEV FTMSL	1569.7	1571.2	1571.4	1571.4	1570.5	1569.0	1568.9	1565.8	1563.1	1566.1	1566.1	1566.2	1566.2	1566.6	1567.1	1569.4	1570.4
DISCH KCFS	18.0	13.7	19.1	19.9	20.7	23.7	23.0	27.7	24.6	7.5	11.1	10.7	10.7	10.7	16.6	13.1	18.0
POWER																	
AVE POWER MW		143	200	209	216	246	237	282	246	75	113	109	108	109	169	135	187
PEAK POW MW		523	523	524	519	511	511	495	481	496	496	497	497	499	501	514	518
ENERGY GWH	1600.9	51.6	33.6	45.1	155.8	182.8	170.9	209.7	182.8	54.2	84.2	39.2	18.2	20.9	126.1	100.2	125.5
--BIG BEND--																	
EVAPORATION	129							8	24	31	27	12	6	7	14		
REG INFLOW	12764	408	265	356	1232	1458	1370	1694	1489	414	657	306	142	163	1008	804	998
RELEASE	12764	408	265	356	1232	1458	1370	1694	1489	414	657	306	142	163	1008	804	998
STORAGE	1682	1682	1682	1682	1682	1682	1682	1681	1682	1682	1682	1682	1682	1682	1682	1682	1682
ELEV FTMSL	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0
DISCH KCFS	18.0	13.7	19.1	19.9	20.7	23.7	23.0	27.5	24.2	7.0	10.7	10.3	10.2	10.3	16.4	13.1	18.0
POWER																	
AVE POWER MW		65	89	93	97	111	108	129	115	35	54	52	52	52	82	65	86
PEAK POW MW		518	510	509	509	509	509	509	518	538	538	538	538	538	538	538	529
ENERGY GWH	739.7	23.4	15.0	20.1	69.8	82.6	77.6	95.9	85.2	25.4	40.2	18.8	8.7	10.0	60.8	48.2	57.9
--FORT RANDALL--																	
NAT INFLOW	476	88	41	53	68	55	191	21	57	-16	-82	-4	-2	-2		-10	19
DEPLETION	80	1	1	1	4	9	12	18	15	7	1	1	0	1	3	3	3
EVAPORATION	128							10	31	32	22	10	5	5	13		
REG INFLOW	13021	495	305	407	1296	1504	1549	1687	1500	349	552	291	135	155	992	791	1014
RELEASE	13021	232	158	390	1296	1504	1549	1687	1674	1427	552	291	135	155	719	701	550
STOR CHANGE	1	262	147	17		0		0	-174	-1078	0	0	0	0	273	90	464
STORAGE	3123	3385	3532	3549	3549	3549	3549	3549	3375	2297	2296	2296	2296	2296	2569	2659	3123
ELEV FTMSL	1350.0	1353.3	1355.0	1355.2	1355.2	1355.2	1355.2	1355.2	1353.1	1337.5	1337.5	1337.5	1337.5	1337.5	1342.1	1343.5	1350.0
DISCH KCFS	9.9	7.8	11.4	21.9	21.8	24.5	26.0	27.4	27.2	24.0	9.0	9.8	9.7	9.7	11.7	11.4	9.9
POWER																	
AVE POWER MW		65	96	184	184	206	219	231	227	186	66	72	71	71	87	87	79
PEAK POW MW		349	354	355	355	355	355	355	348	282	283	283	283	283	305	311	338
ENERGY GWH	1280.1	23.3	16.1	39.8	132.4	153.4	157.8	171.7	169.0	133.9	48.8	25.7	11.9	13.7	64.8	64.9	52.8
--GAVINS POINT--																	
NAT INFLOW	1252	91	42	55	125	137	144	79	79	57	109	47	22	25	70	68	102
DEPLETION	114	0	0	0	5	19	24	39	10	-5	2	5	2	3	10	1	
CHAN STOR	-1	4	-7	-20	0	-5	-3	-3	0	6	28	-2	0	0	-4	1	3
EVAPORATION	47							3	9	11	10	5	2	2	5		
REG INFLOW	14111	328	194	425	1416	1617	1666	1722	1735	1484	676	327	153	175	770	769	655
RELEASE	14111	328	194	425	1416	1617	1666	1722	1722	1458	676	327	153	175	770	769	694
STOR CHANGE									13	26							-39
STORAGE	358	358	358	358	358	358	358	358	371	397	397	397	397	397	397	397	358
ELEV FTMSL	1206.0	1206.0	1206.0	1206.0	1206.0	1206.0	1206.0	1206.0	1206.5	1207.5	1207.5	1207.5	1207.5	1207.5	1207.5	1207.5	1206.0
DISCH KCFS	12.5	11.0	14.0	23.8	23.8	26.3	28.0	28.0	28.0	24.5	11.0	11.0	11.0	11.0	12.5	12.5	12.5
POWER																	
AVE POWER MW		39	49	82	82	90	95	95	96	85	39	39	39	39	45	44	44
PEAK POW MW		114	114	114	114	114	114	114	115	117	117	117	117	117	78	78	76
ENERGY GWH	590.7	13.9	8.2	17.6	58.7	66.8	68.6	70.9	71.3	61.5	29.1	14.1	6.6	7.5	33.1	33.0	29.6
--GAVINS POINT - SIOUX CITY--																	
NAT INFLOW	862	57	27	34	121	225	166	74	34	23	22	15	7	8	16	-8	41
DEPLETION	262	7	3	4	22	35	31	38	36	23	10	6	3	3	13	14	14
REGULATED FLOW AT SIOUX CITY																	
KAF	14711	378	217	455	1515	1807	1801	1758	1720	1458	688	336	157	179	773	747	721
KCFS		12.7	15.7	25.5	25.5	29.4	30.3	28.6	28.0	24.5	11.2	11.3	11.3	11.3	12.6	12.1	13.0
--TOTAL--																	
NAT INFLOW	19102	1112	519	667	2038	2596	4487	2400	946	780	918	438	204	234	472	473	818
DEPLETION	2560	20	9	12	143	660	1468	1000	235	-208	-74	-121	-56	-65	-182	-176	-106
CHAN STOR	-2	95	4	-20	-28	-53	-31	6	9	39	70	-8	-7	-64	-21	-2	8
EVAPORATION	1470							92	286	352	304	138	64	74	160		
STORAGE	31658	32467	32763	32943	33295	33370	34557	34113	32826	32044	32114	32191	32223	32205	31905	31805	32017
SYSTEM POWER																	
AVE POWER MW		491	595	730	781	919	968	1040	974	613	440	452	458	544	678	627	682
PEAK POW MW		1998	1998	2000	2003	2000	2020	2007	1987	1954	1956	1957	1957	1958	1932	1941	1955
ENERGY GWH	6419.0	176.7	99.9	157.6	562.6	684.0	697.2	773.8	724.8	441.1	327.6	162.7	76.9	104.4	504.7	466.6	458.4
DAILY GWH		11.8	14.3	17.5	18.8	22.1	23.2	25.0	23.4	14.7	10.6	10.8	11.0	13.0	16.3	15.1	16.4
	INI-SUM	15MAR	22MAR	31MAR	30APR	31MAY	30JUN	31JUL	31AUG	30SEP	31OCT	15NOV	22NOV	30NOV	31DEC	31JAN	28FEB

SHORTEN NAVIGATION SEASON 61-DAYS
VALUES IN 1000 AF EXCEPT AS INDICATED

28FEB10	INI-SUM	2010 15MAR	22MAR	31MAR	30APR	31MAY	30JUN	31JUL	31AUG	30SEP	31OCT	15NOV	22NOV	30NOV	2011 31DEC	31JAN	28FEB
--FORT PECK--																	
NAT INFLOW	5961	274	128	164	602	915	1164	513	296	283	374	185	86	99	317	240	321
DEPLETION	443	-10	-5	-6	63	317	515	192	-25	-130	-67	-36	-17	-19	-111	-128	-92
EVAPORATION	351							23	72	90	79	23	11	12	42		
MOD INFLOW	5167	284	132	170	539	598	649	298	249	323	362	198	92	105	386	368	413
RELEASE	5031	119	56	71	298	461	536	523	492	357	250	125	69	127	523	553	472
STOR CHANGE	136	165	77	99	241	137	113	-225	-243	-34	113	73	23	-21	-136	-185	-59
STORAGE	7756	7921	7997	8096	8338	8474	8588	8363	8120	8086	8199	8272	8294	8273	8137	7951	7892
ELEV FTMSL	2191.3	2192.5	2193.1	2193.8	2195.5	2196.5	2197.2	2195.7	2194.0	2193.7	2194.5	2195.0	2195.2	2195.1	2194.1	2192.8	2192.3
DISCH KCFS	8.0	4.0	4.0	4.0	5.0	7.5	9.0	8.5	8.0	6.0	4.1	4.2	5.0	8.0	8.5	9.0	8.5
POWER																	
AVE POWER MW		44	45	45	57	85	103	97	90	67	46	48	57	91	96	101	94
PEAK POW MW		158	159	160	163	164	165	163	160	160	161	162	162	162	161	159	158
ENERGY GWH	687.5	16.0	7.5	9.7	40.8	63.6	74.2	72.2	67.2	48.6	34.1	17.2	9.5	17.4	71.3	74.8	63.4
--GARRISON--																	
NAT INFLOW	9293	344	160	206	891	1150	2572	1626	460	353	496	205	96	109	137	204	284
DEPLETION	1143	-1	-1	-1		212	762	596	99	-133	-17	-103	-48	-55	-81	-55	-31
CHAN STOR	-5	46			-11	-28	-17	6	6	22	22	-2	-9	-33	-6	-6	6
EVAPORATION	417							28	87	108	93	27	12	14	48		
REG INFLOW	12758	510	216	278	1177	1371	2329	1531	772	758	691	405	192	244	687	807	793
RELEASE	12588	387	167	214	893	1076	1250	1261	1230	952	734	351	164	286	1168	1291	1166
STOR CHANGE	170	123	50	64	285	295	1079	270	-458	-194	-43	54	28	-42	-481	-484	-374
STORAGE	9290	9414	9464	9528	9812	10107	11186	11456	10998	10803	10760	10814	10842	10800	10319	9834	9461
ELEV FTMSL	1802.1	1802.8	1803.0	1803.3	1804.8	1806.2	1811.2	1812.4	1810.3	1809.5	1809.3	1809.5	1809.6	1809.4	1807.2	1804.9	1803.0
DISCH KCFS	20.5	13.0	12.0	12.0	15.0	17.5	21.0	20.5	20.0	16.0	11.9	11.8	11.8	18.0	19.0	21.0	21.0
POWER																	
AVE POWER MW		126	117	117	147	173	213	213	207	165	123	121	121	184	192	208	205
PEAK POW MW		340	341	342	347	352	370	375	367	364	363	364	365	364	356	347	340
ENERGY GWH	1537.0	45.4	19.6	25.3	106.0	129.0	153.4	158.7	154.4	118.5	91.3	43.6	20.4	35.4	143.2	155.1	137.6
--OAHE--																	
NAT INFLOW	1429	269	125	161	249	136	293	112	29	87	7	-7	-3	-4	-65	-16	56
DEPLETION	666	24	11	14	49	70	142	169	112	27	-10	1	0	1	12	17	27
CHAN STOR	-2	42	6		-17	-14	-20	3	3	24	23	1		-36	-6	-11	
EVAPORATION	329							22	66	84	75	21	10	11	40		
REG INFLOW	13020	674	286	361	1076	1128	1381	1185	1084	952	700	322	150	234	1046	1247	1195
RELEASE	12859	406	263	354	1230	1457	1366	1702	1511	445	687	309	143	164	1022	804	997
STOR CHANGE	160	268	23	7	-154	-329	15	-517	-428	507	13	14	7	70	24	443	198
STORAGE	9808	10076	10099	10106	9952	9622	9637	9120	8692	9200	9213	9226	9233	9303	9327	9770	9968
ELEV FTMSL	1570.4	1571.8	1571.9	1572.0	1571.2	1569.3	1569.4	1566.5	1564.0	1567.0	1567.0	1567.1	1567.2	1567.6	1567.7	1570.2	1571.2
DISCH KCFS	18.0	13.6	19.0	19.8	20.7	23.7	23.0	27.7	24.6	7.5	11.2	10.4	10.3	10.3	16.6	13.1	17.9
POWER																	
AVE POWER MW		143	200	209	217	246	237	283	247	76	114	106	106	106	170	135	188
PEAK POW MW		526	527	527	522	513	513	498	486	501	501	501	502	504	504	517	523
ENERGY GWH	1604.1	51.5	33.5	45.1	156.2	183.3	170.9	210.5	183.6	54.6	85.0	38.2	17.8	20.3	126.7	100.7	126.0
--BIG BEND--																	
EVAPORATION	120							8	24	31	27	8	4	4	14		
REG INFLOW	12740	406	263	354	1230	1457	1366	1694	1487	414	659	301	140	160	1008	804	997
RELEASE	12740	406	263	354	1230	1457	1366	1694	1487	414	659	301	140	160	1008	804	997
STORAGE	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682
ELEV FTMSL	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0
DISCH KCFS	18.0	13.6	19.0	19.8	20.7	23.7	23.0	27.5	24.2	7.0	10.7	10.1	10.1	10.1	16.4	13.1	17.9
POWER																	
AVE POWER MW		65	89	93	97	111	107	129	114	35	54	51	51	51	82	65	86
PEAK POW MW		518	510	509	509	509	509	509	518	538	538	538	538	538	538	538	529
ENERGY GWH	738.2	23.2	14.9	20.1	69.7	82.5	77.4	95.9	85.1	25.4	40.4	18.4	8.6	9.8	60.8	48.2	57.9
--FORT RANDALL--																	
NAT INFLOW	489	90	42	54	70	56	195	21	59	-16	-84	-4	-2	-2		-10	20
DEPLETION	80	1	1	1	4	9	12	18	15	7	1	1	0	1	3	3	3
EVAPORATION	121							10	31	32	22	6	3	3	13		
REG INFLOW	13017	494	305	407	1296	1504	1549	1687	1500	349	552	289	134	154	992	791	1014
RELEASE	13017	232	158	390	1296	1504	1549	1687	1674	1427	552	290	134	154	719	701	550
STOR CHANGE	0	262	147	17	0			0	-174	-1078	0	0	0	0	273	90	464
STORAGE	3123	3385	3532	3549	3549	3549	3549	3549	3375	2297	2297	2296	2296	2296	2569	2659	3123
ELEV FTMSL	1350.0	1353.3	1355.0	1355.2	1355.2	1355.2	1355.2	1355.2	1353.1	1337.5	1337.5	1337.5	1337.5	1337.5	1342.1	1343.5	1350.0
DISCH KCFS	9.9	7.8	11.4	21.9	21.8	24.5	26.0	27.4	27.2	24.0	9.0	9.7	9.7	9.7	11.7	11.4	9.9
POWER																	
AVE POWER MW		65	96	184	184	206	219	231	227	186	66	71	71	71	87	87	79
PEAK POW MW		349	354	355	355	355	355	355	348	282	283	283	283	283	305	311	338
ENERGY GWH	1279.8	23.3	16.1	39.8	132.4	153.4	157.8	171.7	169.0	133.9	48.8	25.6	11.9	13.6	64.8	64.9	52.8
--GAVINS POINT--																	
NAT INFLOW	1252	91	42	55	125	137	144	79	79	57	109	47	22	25	70	68	102
DEPLETION	114	0	0	0	5	19	24	39	10	-5	2	5	2	3	10	1	
CHAN STOR	-1	4	-7	-20	0	-5	-3	-3	0	6	28	-1	0	0	-4	1	3
EVAPORATION	44							3	9	11	10	3	1	2	5		
REG INFLOW	14111	328	194	425	1416	1617	1666	1722	1735	1484	676	327	153	175	770	769	655
RELEASE	14111	328	194	425	1416	1617	1666	1722	1722	1458	676	327	153	175	770	769	694
STOR CHANGE									13	26							-39
STORAGE	358	358	358	358	358	358	358	358	371	397	397	397	397	397	397	397	358
ELEV FTMSL	1206.0	1206.0	1206.0	1206.0	1206.0	1206.0	1206.0	1206.0	1206.5	1207.5	1207.5	1207.5	1207.5	1207.5	1207.5	1207.5	1206.0
DISCH KCFS	12.5	11.0	14.0	23.8	23.8	26.3	28.0	28.0	28.0	24.5	11.0	11.0	11.0	11.0	12.5	12.5	12.5
POWER																	
AVE POWER MW		39	49	82	82	90	95	95	96	85	39	39	39	39	45	44	44
PEAK POW MW		114	114	114	114	114	114	114	115	117	117	117	117	117	78	78	76
ENERGY GWH	590.7	13.9	8.2	17.6	58.7	66.8	68.6	70.9	71.3	61.5	29.1	14.1	6.6	7.5	33.1	33.0	29.6
--GAVINS POINT - SIOUX CITY--																	
NAT INFLOW	879	58	27	35	123	230	169	76	35	24	22	15	7	8	16	-8	42
DEPLETION	263	7	3	4	22	35	31	38	36	24	10	6	3	3	13	14	14
REGULATED FLOW AT SIOUX CITY																	
KAF	14727	379	218	456	1517	1812	1804	1760	1721	1458	688	336	157	179	773	747	722
KCFS		12.7	15.7	25.5	25.5	29.5	30.3	28.6	28.0	24.5	11.2	11.3	11.3	11.3	12.6	12.1	13.0
--TOTAL--																	
NAT INFLOW	19303	1125	525	675	2060	2624	4537	2427	958	788	924	441	206	235	475	478	825
DEPLETION	2709	20	9	12	143	662	1486	1052	247	-210	-81	-126	-59	-67	-154	-148	-79
CHAN STOR	-19	92	-1	-20	-28	-47	-40	6	9	42	72	-2	-9	-69	-15	-17	8
EVAPORATION	1382							93	289	355	307	88	41	47	162		
STORAGE	32017	32835	33131	33318	33690	33792	34999	34528	33238	32464	32547	32687	32744	32751	32430	32293	32484
SYSTEM POWER																	
AVE POWER MW		481	595	730	783	912	975	1048	982	615	442	436	445	542	672	641	695
PEAK POW MW		2004	2005	2007	2010	2007	2027	2014	1995	1962	1964	1966	1967	1968	1941	1950	1964
ENERGY GWH	6437.2	173.3	100.0	157.7	563.8	678.7	702.3	780.0	730.6	442.5	328.7	157.1	74.7	104.0	499.9	476.7	467.3
DAILY GWH		11.6	14.3	17.5	18.8	21.9	23.4	25.2	23.6	14.7	10.6	10.5	10.7	13.0	16.1	15.4	16.7
	INI-SUM	15MAR	22MAR	31MAR	30APR	31MAY	30JUN	31JUL	31AUG	30SEP	31OCT	15NOV	22NOV	30NOV	31DEC	31JAN	28FEB