US Army Corps of Engineers ®
Northwestern Division

Missouri River Basin
Water Management Division

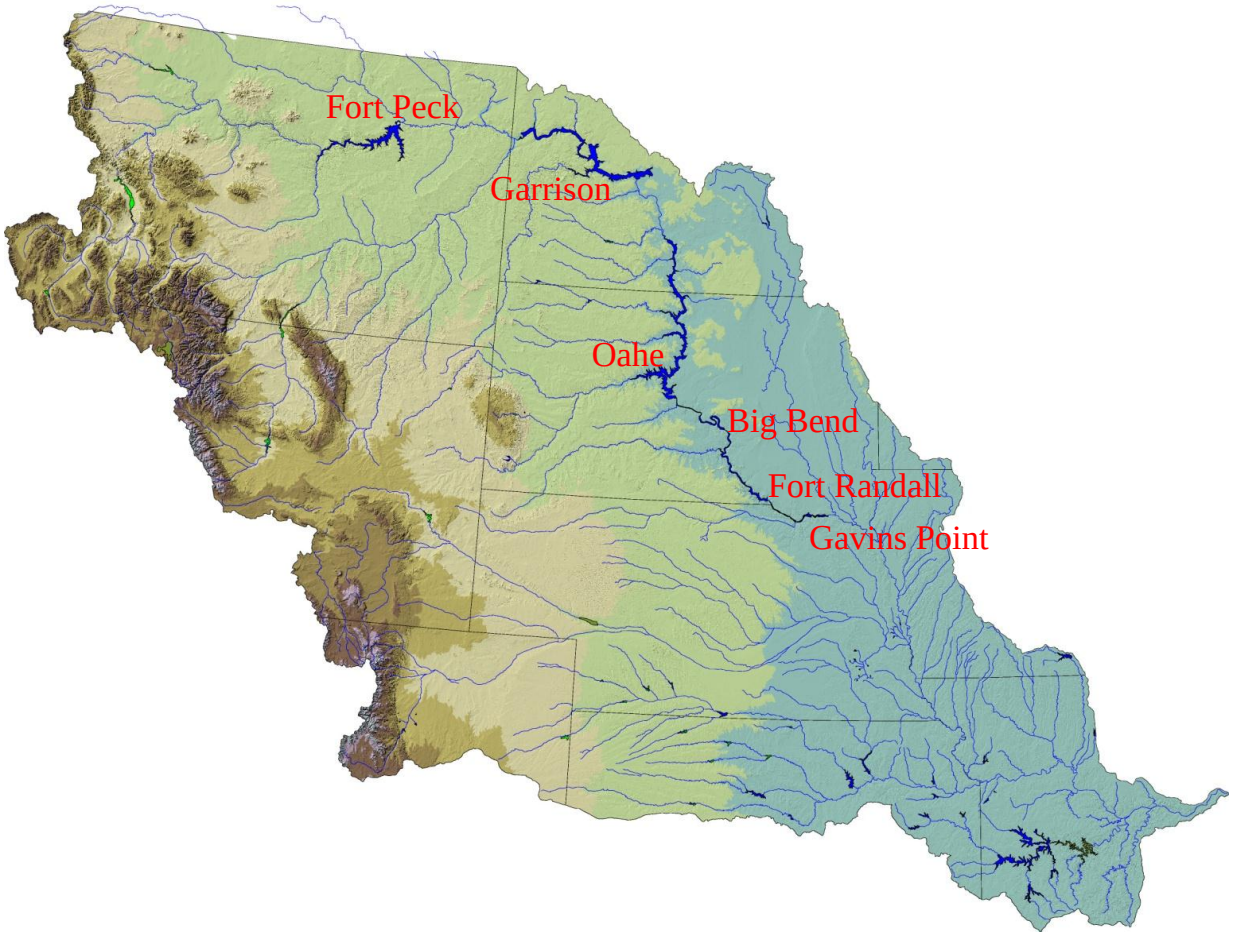
Final

AOP

2015-2016

Missouri River Mainstem System

2015-2016 Annual Operating Plan



Annual Operating Plan Process
63 Years Serving the Missouri River Basin

December 2015

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, NORTHWESTERN DIVISION
PO BOX 2870
PORTLAND OR 97208-2870

REPLY TO
ATTENTION OF

December 2015

Division Commander

Dear Stakeholders and Concerned Citizens,

This Annual Operating Plan (AOP) presents the Corps of Engineers' regulation of the Missouri River Mainstem Reservoir System through December 2016. The information in this AOP is based upon water management guidelines designed to meet the reservoir regulation objectives of the 2006 Missouri River Master Water Control Manual (Master Manual). Management of the reservoir system 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.

The AOP presents plans for the regulation of the reservoir system under widely varying water supply conditions. The AOP is not intended to be a forecast for the coming year; rather the guidelines included in the Master Manual are applied to computer simulations of the reservoir system regulation assuming five statistically derived inflow scenarios based on an analysis of water supply records from 1898 to 2011. This approach provides a good range of water management simulation for dry, average, and wet conditions. The AOP provides a framework for the development of detailed monthly, weekly, and daily regulation schedules for the mainstem reservoir system's six individual dams during the upcoming year to serve its Congressionally-authorized project purposes.

A draft of this AOP was made available to the public in September 2015. Five public meetings were held across the basin in late October. As part of continued communication, monthly conference calls will be conducted by the Corps beginning in January 2016 with Federal, state, county and local officials, Tribes, emergency management officials, independent experts and the press to discuss conditions on the ground and current Corps' reservoir release plans and forecasts.

Runoff into the Missouri River basin was near average in 2015. Releases made for navigation flow support and normal winter releases will be sufficient to evacuate water stored in the annual flood storage zone and prepare the reservoir system for the 2016 runoff season. We realize that the benefits provided by the reservoir system are vitally important to the Nation and the people that live and work in the Basin. We believe that the continued implementation of the Master Manual, and more specifically this AOP, will result in an appropriate balance of benefits provided to all of the people who rely on the reservoir system. Thank you for your interest in the regulation of the mainstem reservoir system.

Sincerely,

Scott A. Spellmon
Brigadier General, US Army
Division Commander

MISSOURI RIVER MAINSTEM RESERVOIR SYSTEM

Annual Operating Plan
2015 - 2016

TABLES

PLATES

ABBREVIATIONS

AOP	-	annual operating plan
ACHP	-	Advisory Council on Historic Preservation
AF	-	acre-feet
B	-	Billion
BiOp	-	Biological Opinion
BOR	-	Bureau of Reclamation
cfs	-	cubic feet per second
Corps	-	Corps of Engineers
CY	-	calendar year (January 1 to December 31)
elev	-	elevation
ESA	-	Endangered Species Act
ft	-	feet
FTT	-	Flow-to-Target
FY	-	fiscal year (October 1 to September 30)
GWh	-	gigawatt hour
ISAP	-	Independent Science Advisory Panel
KAF	-	1,000 acre-feet
kcfs	-	1,000 cubic feet per second
kW	-	kilowatt
kWh	-	kilowatt hour
MAF	-	million acre-feet
MRNRC	-	Missouri River Natural Resources Committee
MRBWMD	-	Missouri River Basin Water Management Division
msl	-	mean sea level
MW	-	megawatt
MWh	-	megawatt hour
NEPA	-	National Environmental Policy Act
plover	-	piping plover
PA	-	Programmatic Agreement
P-S MBP	-	Pick-Sloan Missouri Basin Program
RCC	-	Reservoir Control Center
RM	-	river mile
RPA	-	Reasonable and Prudent Alternative
SHPO	-	State Historic Preservation Officers
SR	-	Steady Release
System	-	Missouri River Mainstem System
tern	-	interior least tern
T&E	-	Threatened and Endangered
THPO	-	Tribal Historic Preservation Officers
USFWS	-	United States Fish and Wildlife Service
WY	-	water year
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
2015 – 2016

I. FOREWORD

This Annual Operating Plan (AOP) presents pertinent information and plans for regulating the Missouri River Mainstem Reservoir System (System) through December 2016 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 projects during the coming year to serve the Congressionally authorized project purposes; to fulfill the Corps' responsibilities to Native American Tribes; and to comply with environmental laws, including the Endangered Species Act (ESA). Regulation of the System is directed by the Missouri River Basin Water Management Division (MRBWMD), Northwestern Division, U. S. Army Corps of Engineers (Corps) located in Omaha, Nebraska. A map of the Missouri River basin is shown on ***Plate 1*** and the summary of engineering data for the six individual mainstem projects and System is shown on ***Plate 2***.

It is important to note that the AOP is not intended to be a forecast for the coming year; rather it examines a range of potential runoff scenarios which span 80 percent of the historic record. There is still a 10 percent chance that runoff will be higher than shown in the AOP and a 10 percent chance that it will be lower. The studies included in the AOP provide an array of reservoir levels and releases that may be expected under the various runoff scenarios. Actual real-time regulation of the System is accomplished using the best information and tools available and is adjusted to respond to changing conditions on the ground. As the runoff season unfolds, there is a possibility that real-time regulation plans will indicate runoff volumes, reservoir levels and releases outside those anticipated in this report. Should that occur, the Corps will appreciably increase its communication and outreach efforts to convey that information to stakeholders throughout the basin so that other Federal, state and local agencies, Tribes, communities, and local residents can take appropriate actions.

This plan may require adjustments such as when substantial departures from expected runoff occur; to meet emergencies including short-term intrasystem adjustments to protect human health and safety, to maintain minimum river or reservoir levels to keep intakes operational during periods of extended drought, and to prevent loss of historic and cultural properties; or to meet the provisions of applicable laws, including the ESA. These adjustments would be made to the extent possible after evaluating impacts to all System uses, would generally be short-term in nature, and would continue only until the issue is resolved.

This document provides the plan for future regulation of the System. Other documents that may be of interest include the "System Description and Regulation" report dated November 2007 or the "Summary of Actual 2014 Regulation," dated July 2015. Both reports are currently available at the "Reports and Publications" link on our website at: **www.nwd-mr.usace.army.mil/rcc**, or you may contact the Missouri River Basin Water Management Division at 1616 Capitol Avenue, Suite 365, Omaha, Nebraska 68102-4909, phone (402) 996-3841 for copies. The "Summary of Actual 2015 Regulation" will be available at the same site in late spring or early summer of 2016.

II. BACKGROUND AND AOP PROCESS

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 meetings are conducted to take public input on the draft AOP, which typically is published in mid-September 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.

Under the terms of Stipulation 18 of the March 2004 "Programmatic Agreement for the Operation and Management of the Missouri River Main Stem System for Compliance with the National Historic Preservation Act, as amended" (PA) the Corps has agreed to consult/meet with the affected Tribes and Tribal Historic Preservation Officers (THPOs), State Historic Preservation Officers (SHPOs), the Advisory Council on Historic Preservation (ACHP) and other parties on the draft AOP. The purpose of this consultation/meeting is to determine whether operational changes are likely to cause changes to the nature, location or severity of adverse effects to historic properties or to the types of historic properties affected and whether amendments to the Corps Cultural Resources Management Plans and Five-Year Plan are warranted in order to better address such effects to historic properties. During 2006 the Corps worked with the affected Tribes to establish processes for consultation on AOPs under 36 CFR Part 800, the PA, and Executive Order 13175. The process consists of a series of informational meetings with the Tribes and/or government-to-government consultation with Tribes, as requested. A letter dated August 28, 2015 was sent to the

Tribes offering consultation on the 2015-2016 AOP. Meeting times and locations of the five fall public meetings were also provided. Separate meetings will be scheduled for all Tribes requesting government-to-government consultation. All tribes, whether signatory to the PA or not, may request government-to-government consultation on this and all future AOPs. In addition, the Tribes have reserved water rights to the Missouri River and its major tributaries. In no way does this AOP attempt to define, regulate or quantify water rights or any other rights that the Tribes are entitled to by law or treaty.

The 2015 spring public meetings were held at the following locations and dates: April 7 at Pierre, South Dakota and Bismarck, North Dakota; April 8 at Fort Peck, Montana; and April 9 at Smithville, Missouri and Council Bluffs, Iowa. The attendees were given an update regarding the outlook for 2015 runoff and projected System regulation for the remainder of 2015. Five fall public meetings on the draft 2015-2016 AOP were held at the following locations: October 27 in Smithville, Missouri; October 28 in Pierre, South Dakota, and Bismarck, North Dakota; and October 29 in Fort Peck, Montana, and Council Bluffs, Iowa. In the spring of 2016, 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 final 2015-2016 AOP.

III. MAINSTEM MASTER MANUAL AND ESA CONSULTATIONS

The System is comprised of six dam and reservoir projects authorized by the Rivers and Harbors Act of 1935 and the Flood Control Act of 1944. Section 9 of the 1944 Flood Control Act authorized the System to be operated for the purposes of flood control, navigation, irrigation, hydropower, water supply, water quality control, recreation and fish and wildlife. In addition, operation of the System must also comply with other applicable Federal statutory and regulatory requirements, including the ESA. The System is regulated using guidelines published in the Master Manual. The Master Manual presents the water control plan and operational objectives for the integrated regulation of the System. Annual water management plans (Annual Operating Plans) are prepared each year, based on the water control criteria contained in the Master Manual, in order to describe potential reservoir regulation of the System for the current operating year under a variety of runoff conditions.

First published in 1960 and subsequently revised during the 1970s, the Master Manual was revised in March 2004 to include more stringent drought conservation measures. A 2000 Biological Opinion issued by the U. S. Fish and Wildlife Service (USFWS), while the Corps was revising the Master Manual, concluded that the operation and regulation of the System would jeopardize the continued existence of three endangered or threatened species: the pallid sturgeon, the interior least tern and the piping plover. In 2003 the USFWS amended the BiOp (2003 Amended BiOp) and provided a Reasonable and Prudent Alternative (RPA) to avoid jeopardy to the

endangered pallid sturgeon that included a provision for the Corps to develop a plan to implement a bimodal spring pulse from Gavins Point Dam. Working with the USFWS, Tribes, states and basin stakeholders, the Corps developed technical criteria for the bimodal spring pulse releases. In March 2006 the Master Manual was revised to include technical criteria for a spring pulse. Neither the 2004 Master Manual, nor the 2006 revisions to the Master Manual, changed the volume of storage in the System reserved for flood risk reduction or the basic principles of how that storage is regulated. The Corps does not store water in the reservoirs specifically for the endangered species and the Master Manual storage allocations were not altered to facilitate the spring pulses. In years when water is released for endangered species reservoir storage levels are not adjusted.

Current regulation of the System in accordance with the Master Manual to serve authorized project purposes is dependent on successful implementation of the 2003 Amended BiOp. The Missouri River Recovery Program (MRRP), together with the MRBWMD, works to ensure implementation of the following BiOp elements: habitat construction including emergent sandbar habitat and shallow water habitat, flow modifications, propagation/hatchery support, research, monitoring and evaluation, and adaptive management. Simply put, the Corps must comply with environmental laws including the ESA, and the MRRP is the vehicle used to accomplish this. This AOP identifies flow modifications at Garrison, Fort Randall and Gavins Point for the benefit of the endangered interior least tern (tern) and the threatened piping plover (plover) while maintaining flood control and navigation as primary authorized purposes.

On November 30, 2011 the Missouri River Recovery Program Independent Science Advisory Panel (ISAP) released its Final Report on Spring Pulses and Adaptive Management. This report, commissioned by the Missouri River Recovery Implementation Committee (MRRIC), evaluated the Gavins Point spring pulses that have been implemented to date in regards to the biological outcomes the USFWS sought in the 2003 Amended BiOp. The ISAP concluded that spring pulses as currently implemented are not accomplishing their intended outcomes and provided recommendations towards achieving a new management paradigm for the Missouri River.

Since the release of that report, the Corps and USFWS, in coordination with MRRIC, have been aggressively pursuing completing the recommendations laid out by the ISAP. At the center of this effort is the development of a Missouri River Recovery Management Plan/EIS that will establish an overarching adaptive management process for implementation of Corps actions required to avoid jeopardizing all of the listed species in the Missouri River basin. Since the Corps is consulting with the USFWS as this plan is being developed about what management actions are required, the agencies believe it is prudent to forego a spring pulse during the 2016 Missouri River operating

season and that this suspension is not likely to have an adverse effect on the listed species.

Additional information on other efforts undertaken through the MRRP to meet the requirements of the 2003 Amended BiOp can be found in the Annual Report on the Biological Opinion which can be found on the "MRRP Documents" page of the Recovery Program website at: www.moriverrecovery.org. The ISAP report is also available at this website.

IV. ON-GOING COORDINATION, STUDIES AND REPORTS

As committed to following the 2011 Flood, the Corps communicated more broadly and frequently in 2015 by holding monthly conference calls from January to May with Federal, state, county and local officials, Tribes, emergency management officials, independent experts and the media to discuss conditions on the ground and the current release plans and forecasts. One additional conference call was held in late June in response to weather events. Recordings of the conference calls were made available to the public. Outreach calls will be re-initiated in January 2016 or as needed if basin and/or weather conditions change dramatically.

The Corps continues to update a number of technical reports used in the regulation of the reservoir system. The "Determination and Analysis of Upper Basic and Lower Basic Forecasts" report has been completed and is posted on the Corps' website. The "Hydrologic Statistics on Inflows" report has also been completed. Additional reports include long-term runoff forecasting, which includes an analysis of the relationship of hydrologic factors as they relate to plains snowmelt, and an analysis of releases needed to support navigation.

The Corps continues to collaborate with other Federal, state and local agencies and our field offices to improve runoff forecasts, particularly as it relates to plains snowpack. This will require a collaborative effort to improve both data collection (i.e. plains snowpack water equivalent, soil moisture and frost depth) and hydrologic modeling. In 2013 a proposal for the Missouri River basin plains snow and basin condition network was prepared by subject matter experts from various Federal and State agencies. This proposal outlined timelines, costs, and agency responsibilities. The 2014 Water Resources and Reform Development Act (WRRDA 2014, Section 4003a) included authorization, but not funding, for the establishment of the basin monitoring network. Implementation guidance was provided in October 2015, which stated that activities under Section 4003(a) may not be undertaken until funds are specifically appropriated for such purpose. The Government Accountability Office (GAO) submitted a report to Congress in June 2015 stating that the progress has been limited, primarily due to lack of funding.

The Water Management office continues to participate in a variety of regional and national climate change teams. The National Oceanic and Atmospheric Administration (NOAA) also collaborated with the Corps and other agencies on a two-part study. The first part was a climate attribution effort focusing on the 2011 event. The second part of the study was an assessment of the skill and reliability of predictions of seasonal climate and the ability to predict rapid transitions of cycles from wet to dry and dry to wet. Both reports are available at http://www.drought.gov/drought/regional-programs/mrb/reports-assessments-and-outlooks. At the request of the Corps, NOAA is now working on a third part to the study which will include a summary and discussion of the physical process of land surface and runoff sensitivity to meteorological forcing occurring in the upper Missouri River basin. The report will explain the changes occurring in the nature of annual runoff, and statistics of flooding events in particular, since about 1970.

V. FUTURE RUNOFF: SEPTEMBER 2015 - DECEMBER 2016

Runoff into the six System reservoirs is typically low and relatively stable during the August through February period. The August 1 calendar year runoff forecast is used as input to the basic reservoir regulation simulation (Basic) in the AOP studies for the period August 2015 through February 2016. The August 1 runoff forecast for 2015 was 25.0 million acre-feet (MAF). Two other runoff scenarios based on the August 1 runoff forecast were developed for the same period. These are the Upper Basic (wetter than forecast) and Lower Basic (drier than forecast) simulations. The Upper and Lower Basic simulations are based on a percentage of the Basic runoff. These percentages were revised last year based on an analysis of historic water supply. The adjusted Upper and Lower Basic values for each month and reach are shown as percentages in ***Tables I*** and ***II***. The percentages shown are used for the August through February period in the AOP simulations. These percentages are also used in the regularly updated monthly reservoir simulations. The report detailing the computation of these new runoff factors was posted to the Corps' website in January 2015.

TABLE I
UPPER BASIC RUNOFF PERCENTAGES

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Fort Peck	120	120	135	145	135	145	145	130	120	120	120	120
Garrison	120	120	135	145	135	145	145	130	120	120	120	120
Oahe	140	140	150	155	155	145	140	135	135	135	135	135
Fort Randall	140	140	150	155	155	145	140	135	135	135	135	135
Gavins Point	140	140	150	155	155	145	140	135	135	135	135	135
Sioux City	140	140	150	155	155	145	140	135	135	135	135	135

TABLE II
LOWER BASIC RUNOFF PERCENTAGES

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Fort Peck	80	75	65	65	70	65	65	70	75	80	80	80
Garrison	80	75	65	65	70	65	65	70	75	80	80	80
Oahe	75	75	55	50	50	50	55	65	75	75	75	75
Fort Randall	75	75	55	50	50	50	55	65	75	75	75	75
Gavins Point	75	75	55	50	50	50	55	65	75	75	75	75
Sioux City	75	75	55	50	50	50	55	65	75	75	75	75

Simulations for the March 1, 2016 to February 28, 2017 time period use five statistically derived runoff scenarios based on an analysis of historic water supply. The report detailing the development of these runoff scenarios, "Runoff Volumes for Annual Operating Plan Studies", was updated in August 2013 to include five additional years of runoff data that now extends from 1898 to 2011. In addition to the five runoff scenarios, the updated analysis added two runoff scenarios, one each at the upper and lower end, to span 96 percent of the historic record. Using statistically derived runoff scenarios for the AOP provides a good range of simulation for dry, average, and wet conditions, and eliminates the need to forecast future precipitation months in advance. As noted in the second NOAA study (see Chapter IV), for the lead times (one to six months) and times of year of interest (January-February-March and April-May-June) in the Missouri River basin, there is no useful skill and reliability of precipitation forecasts. Real-time regulation of the System is based on all available and relevant hydrometerological information including, but not limited to, observed runoff volumes, National Weather Service short- and long-range outlooks, plains and mountain snow water equivalent data, observed base flows, and soil moisture and frost depths.

The five statistically derived runoffs used in the AOP are identified as the Upper Decile, Upper Quartile, Median, Lower Quartile and Lower Decile runoff conditions. Upper Decile runoff (34.5 MAF) has a 1 in 10 chance of being exceeded, Upper Quartile runoff (30.6 MAF) has a 1 in 4 chance of being exceeded, and Median runoff (24.6 MAF) has a 1 in 2 chance of being exceeded. Lower Quartile runoff (19.3 MAF) has a 1 in 4 chance of the occurrence of less runoff, and Lower Decile runoff (16.1 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 two additional runoff volumes included in the updated "Runoff Volumes for Annual Operating Plan Studies" report are the 2 percent and 98 percent exceedance levels. Annual runoff at the 2 percent exceedance (40.1 MAF) has a 1 in 50 chance of being exceeded; the 98 percent exceedance (11.4 MAF) has a 1 in 50 chance of the occurrence of less runoff. Although these runoff volumes were not included as

scenarios in this year's AOP, additional monthly studies could be performed based on these runoff volumes, or any prior year's runoff volume and distribution, as the 2016 runoff season unfolds should the runoff forecast exceed the Upper Decile runoff scenario or be lower than the Lower Decile runoff.

The Upper Decile and Upper Quartile simulations extend from the end of the Upper Basic simulation through February 2017. 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 Lower Basic simulation through February 2017.

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 III,*** where water supply conditions are quantified for the period August 2015 through February 2017. The natural water supply for calendar year (CY) 2014 totaled 35.3 MAF.

TABLE III
NATURAL AND NET RUNOFF AT SIOUX CITY
(Volumes in 1,000 Acre-Feet)

	Natural 1/	Post-1949 Depletions	Net 2/
August 2015 through February 2016 (Basic Runoff Scenario)			
Basic	6,600	700	7,300
Upper Basic	8,400	700	9,100
Lower Basic	5,000	500	5,500
Runoff Year March 2016 through February 2017 (Statistical Analysis of Past Records)			
Upper Decile	34,500	-2,900	31,600
Upper Quartile	30,600	-2,800	27,800
Median	24,600	-3,000	21,600
Lower Quartile	19,300	-2,900	16,400
Lower Decile	16,100	-2,600	13,500

1/ The word "Natural" is used to designate runoff 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 runoff after deduction of the post-1949 irrigation, upstream storage, and other use effects.

VI. ANNUAL OPERATING PLAN FOR 2015-2016

A. General. The anticipated regulation described in this AOP is designed to meet the regulation objectives presented in the current Master Manual. While some aspects of System and individual project regulation are clearly defined by technical criteria in the Master Manual, for example navigation service level and season length, others such as minimum releases for irrigation and water supply in the reaches between the reservoirs are based on regulation experience and may be adjusted as needed to respond to changing conditions. Consideration has been given to all of the authorized project purposes, to historic and cultural resources and to the needs of threatened and endangered (T&E) species. The "System Description and Regulation" report provides a concise summary of the primary aspects of System regulation and should be referred to for further information. For ease of use, a summary of the frequently used technical criteria included in the Master Manual is presented on ***Plate 3.***

The plan relies on a wealth of regulation experience. Reservoir regulation experience available for preparation of the 2015-2016 AOP includes 13 years of regulation at Fort Peck (1940) as the sole Mainstem project, plus 62 years of System experience as Fort Randall (1953), Garrison (1955), Gavins Point (1955), Oahe (1962), and Big Bend (1964) were brought progressively into System regulation. This regulation experience includes lessons learned during two major droughts of six and eight years (1987-1992 and 2000–2007) that have occurred since the System filled in 1967. It also includes the high runoff period 1993–1999 during which five of the seven years experienced runoff greater than Upper Quartile including the previous record runoff of 49.0 MAF in 1997, and the record runoff of 61.0 MAF in 2011. In addition to the long period of actual System reservoir regulation experience, many background regulation studies for the completed System are available for reference.

B. 2015-2016 AOP Simulations. Reservoir simulations for the Upper Basic, Basic, and Lower Basic runoff scenarios, which span the period of August 2015 through February 2016, are shown in the final section of this AOP as studies 1 through 3. AOP simulations for the five statistically derived runoff scenarios, which span the period of March 2016 through February 2017, are shown in the final section of this AOP as studies 4 through 8. As previously stated, the simulations use five statistically derived runoff scenarios and reflect 80 percent of the historic annual runoff volumes (between Upper Decile and Lower Decile). The simulations provide information for planning purposes on a range of future reservoir levels and release rates, and are not meant to represent a particular forecast. The simulations shown use a monthly time-step, and thus do not provide the level of detail necessary to address specific flood control regulations. Detailed routing of specific flood flows is accomplished using daily and hourly time-step models which incorporate real-time information including observed precipitation, and these situations are handled individually during real-time regulation.

The AOP studies, in summary, provide the following: the full flood control capacity of the reservoir system will be available at the start of the runoff season; use of the Exclusive Flood Control Zone is not anticipated under any of the five runoff scenarios covered in the AOP; full service flow support under all runoff scenarios to start the navigation season; full service flow support for Median and above runoff scenarios after the July 1 System storage check and reduced flow support for Lower Quartile and Lower Decile runoff; a full length navigation season for all runoff scenarios; normal winter releases for Median runoff, minimum winter releases for Lower Quartile and Lower Decile runoff, and above normal winter releases for Upper Decile and Upper Quartile runoff; a steady release-flow to target regulation during the tern and plover nesting season for Median and below runoff and nearly steady releases for Upper Decile and Upper Quartile runoff with flood water evacuation; emphasis on Garrison for a steady to rising reservoir level during the forage fish spawn; and reservoir releases and pool levels sufficient to keep all intakes operational under all runoff scenarios. Water conservation measures may be implemented if runoff conditions indicate that it would be appropriate including cycling releases from Gavins Point during the early part of the nesting season, only supporting flow targets in reaches being used by commercial navigation, and utilization of the Kansas River projects authorized for Missouri River navigation flow support. Additional details about the studies are provided in the following paragraphs. Results of the simulations are shown in ***Plate 4*** and ***Plate 5*** for the System storage and the Fort Peck, Garrison and Oahe pool elevations.

Under all runoff scenarios modeled for the AOP, the full flood control capacity of the System is available at the start of the 2016 runoff season. Although the March 1 and May 1 System storage is above the Gavins Point spring pulse precludes of 40.0 MAF, as discussed in Chapter III, spring pulses will not be conducted in 2016. The Corps will continue to work closely with the USFWS to ensure the AOP will meet the intent of the 2003 Amended BiOp and comply with the ESA.

The March 15 and July 1 System storage checks were used to determine the level of flow support for navigation and other downstream purposes as well as the navigation season length in 2016. Full service navigation flows or more are provided for Median and above runoff throughout the navigation season. Service levels for Lower Quartile and Lower Decile start the season at full service, and drop slightly based on the July 1 System storage check (see ***Plate 3***). Application of the July 1 System storage check indicated that a full length navigation season would be provided for all five runoff conditions, with the upper two runoff scenarios including a 10-day extension to the navigation season. Upper Quartile and Upper Decile simulations reach the desired 56.1 MAF System storage level on March 1, 2017. Storage is below the base of the Annual Flood Control and Multiple Use Zone for Median and lower runoff conditions.

For modeling purposes in this AOP, the Steady Release – Flow-to-Target (SR-FTT) regulation scenario for Gavins Point is shown during the 2016 tern and plover nesting season for Median and lower runoff conditions. For these simulations, the monthly average May release used in the simulations was determined by using the long-term average May release (see ***Plate 3***), based on the service level, for the first third of the month, followed by the July table values for the remainder of the month to reflect a steady release regulation at the start of the nesting season. The modeled June release was set equal to the long-term average release for July (see ***Plate 3***) based on the service level for the first half of the navigation season. The long-term average releases (see ***Plate 3***) were used for July and August to indicate flowing to target. The Upper Decile and Upper Quartile runoff simulations follow the Master Manual, with much above normal runoff requiring release increases mid-year to evacuate flood water from the reservoirs. Although these modeled Gavins Point releases represent our best estimate of required releases during 2016, actual releases will be based on hydrologic conditions and the availability of habitat at that time. To the extent reasonably possible, measures to minimize incidental take of the protected species will be utilized. These may include not meeting flow targets in reaches without commercial navigation and utilizing the Kansas River tributary reservoirs for navigation flow support when appropriate. It may also be necessary to cycle releases for flood control regulation during the T&E species' nesting season or for water conservation if drought conditions develop.

The long-term average Gavins Point releases to meet target flows were used in the AOP studies for navigation support during the spring and fall months with the exception of Upper Decile and Upper Quartile. Under these runoff scenarios, releases were based on flood water evacuation. Based on the September 1 storage checks and flood evacuation criteria, modeled Gavins Point winter releases range from 17,000 cfs to 20,000 cfs during the 2015-2016 winter season and range from 12,500 cfs to 20,000 cfs during the 2016-2017 winter season depending on the runoff scenario. Gavins Point releases will be increased to meet downstream water supply requirements in critical reaches, to the extent reasonably possible, if downstream incremental runoff is low.

The Gavins Point releases shown in this and previous AOPs are estimates based on historic averages and experience. Adjustments are made as necessary in real-time based on hydrologic conditions.

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. As part of the overall plan to rotate emphasis among the upper three reservoirs during low runoff years, Garrison is scheduled to be favored during the 2016 forage fish spawn while also attempting to maintain rising water levels at Fort Peck and Oahe. The Median, Upper Quartile, and Upper Decile simulations show that it is possible to provide steady-to-rising pool levels in each of the three large upper

reservoirs during the spring forage fish spawn period. Insufficient runoff is available in the Lower Quartile and Lower Decile simulations to keep all three reservoirs rising during the spawn period and releases are adjusted to maintain steady-to-rising pool levels at Garrison. The Oahe reservoir level declines in April and May in the Lower Quartile and Lower Decile runoff simulations. In the Lower Quartile and Lower Decile simulations, the Fort Peck pool level declines in April but rises in May.

Intrasystem releases are also adjusted so that the upper three reservoirs are shown in a balanced condition each year on March 1, the approximate start of the runoff season. This balancing is computed based on the percent of storage in the respective Carryover Multiple Use Zones.

Actual System regulation from January 1 through July 31, 2015 and the simulated regulating plans for each project through CY 2016 using the five runoff scenarios described on Page 4 are presented on ***Plate 6*** through ***Plate 11***, inclusive. Big Bend regulation is omitted 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 12 illustrates Fort Peck, Garrison, Oahe, and Gavins Point actual releases (Regulated Flow) as well as the Missouri River flows that would have resulted if the reservoirs were not in place (Unregulated Flow) during the period January 2014 through July 2015. ***Plate 13*** presents past and simulated gross average monthly power generation and gross peaking capability for the System.

C. <u>Regulation Plan for the Balance of the 2015 Navigation Season and Fall of 2015.</u> The regulation of the System for the period of August through November 2015 is presented in the following paragraphs.

<u>Fort Peck</u>. Releases averaged about 8,000 cfs through mid-September and then were lowered to 4,500 cfs as irrigation ceased. Releases were held near that level through the end of November. The Fort Peck pool slowly declined through mid-September before leveling off during October and November. The reservoir ended November at 2234.5 feet msl or 1.7 feet below the August 1 elevation of 2236.2 feet msl.

<u>Garrison</u>. The threatened least terns and endangered piping plovers were fledged by September 3 on the reach downstream of Garrison and hydropower peaking restrictions were discontinued at that time. Releases were maintained at 20,000 cfs through early September, before slowly decreasing to 13,000 cfs and then held steady through the end of November. The Garrison pool steadily dropped throughout the fall and ended the month of November at 1840.7 feet msl or 3.6 feet below the August 1 elevation of 1844.3 feet msl.

Oahe. The reservoir started the month of August at elevation 1613.3 feet msl. Releases averaged 24,100 cfs in August and 23,800 cfs in September in support of navigation and to evacuate the annual flood control pool. Releases were reduced to 17,200 cfs in October and 16,900 cfs in November, respectively to accommodate the fall drawdown of the Fort Randall pool and to continue evacuation of stored water. At the end of November, the Oahe pool was at elevation 1609.4 feet msl or 3.9 feet below the August 1 elevation.

Big Bend. Releases generally parallel those from Oahe. The Big Bend pool generally fluctuates between 1420.0 feet msl and 1421.0 feet msl for weekly cycling during high power load periods.

Fort Randall. Releases averaged 25,500 cfs in August, 27,000 in September, and 27,500 cfs in October to back up the releases from Gavins Point. The fall pool drawdown of Fort Randall was started after Labor Day in early September and was completed near the end of November. Releases were reduced after the navigation season ended to the level required to back up Gavins Point winter releases.

Gavins Point. Releases were scheduled to support downstream full service flows in reaches with scheduled commercial navigation throughout the 2015 navigation season. A full length navigation season was provided in accordance with the technical criteria for the July 1 System storage check presented in the Master Manual. The closing dates for the commercial navigation season ranged from November 22 at Sioux City, Iowa to December 1 at the mouth near St. Louis, Missouri. Releases were reduced by approximately 3,000 cfs per day beginning on November 21, working toward the target winter release. The Gavins Point pool level was raised 1.5 feet to elevation 1207.5 feet msl in the fall. The pool level will remain near that elevation during the winter months.

D. Regulation Plan for Winter 2015-2016. The regulation of the System presented in the following paragraphs is based on the previously discussed AOP simulations. Actual real-time regulation of the System is adjusted to respond to changing conditions on the ground. The latest long-term reservoir regulation forecasts, which are updated monthly, can be found on the Corps' website. The September 1 System storage check is used to determine the winter release rate from Gavins Point. A winter release of 12,000 cfs is scheduled if System storage is less than 55.0 MAF on September 1; 17,000 cfs is scheduled when System storage is above 58.0 MAF; and the release is prorated for System storages between 55.0 and 58.0 MAF. A modification to the winter release rate from Gavins Point dam may occur when the evacuation of System flood control storage cannot be accomplished by providing a full-service navigation season with a 10-day extension of the navigation season. With an excess annual water supply, the winter season Gavins Point release may be scheduled at a rate of up to 25,000 cfs to continue to evacuate the remaining excess water in System flood control storage. Based on the

studies included in this AOP, the scheduled winter System release for 2015-2016 will be at least 17,000 cfs. Under the Basic and Upper Basic forecast releases are set at 18,000 cfs and 20,000 cfs respectively. It is anticipated that this year's winter release will be adequate to complete evacuation of stored flood waters and serve all downstream water intakes. Water supply is discussed in more detail in Chapter VII, Section B.

Fort Peck. Releases are expected to average 6,500 cfs in December and 7,000 cfs in January and February to serve winter power loads and to help balance System storage. The Fort Peck pool level is expected to decline about 0.4 feet during December before starting to increase in January and February to near elevation 2234.0 feet msl by March 1. At the beginning of March, the Fort Peck pool will be at the base of its Annual Flood Control and Multiple Use Zone.

Garrison. Releases are scheduled to be 16,000 cfs in December increasing to 20,500 cfs for January and February to serve winter power loads and to draw down the lake to the base of the annual flood control pool. Releases will be held steady or lowered, most likely in December, to prevent ice-induced flooding at the time of freeze-in and then gradually increased as river conditions permit. These temporary reductions in the releases may be scheduled to prevent exceedance of a 13-foot stage at the Missouri River at Bismarck streamgaging station. The Bismarck flood stage is 14.5 feet. Water Management staff will coordinate closely with other Federal, state and local agencies during periods of freeze-in and ice-out to reduce flood risk and ensure communities and local residents are aware of the rapidly changing conditions and are prepared to take appropriate actions. The Garrison pool level will decline 3.8 feet from elevation 1841.3 feet msl at the end of November to near elevation 1837.5 feet msl by March 1, at the base of its Annual Flood Control and Multiple Use Zone.

Oahe. Releases for the winter season will provide backup for the Fort Randall and Gavins Point releases as well as refill 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 between 18,600 cfs and 21,500 cfs. Daily and hourly releases will vary widely to best meet power loads. Peak hourly and minimum 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 conditions develop downstream of Oahe Dam. This potential reduction is coordinated with the Western Area Power Administration (Western). The Oahe pool level is expected to slowly decline from 1608.2 feet msl at the end of November to 1607.3 feet msl at the end of January before rising to 1607.5 feet msl by the beginning of March, the base of its Annual Flood Control and Multiple Use Zone.

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

Fort Randall. Releases will average about 16,500 cfs during the winter season to support Gavins Point winter releases. The Fort Randall pool level is expected to rise from its fall drawdown elevation of near 1337.5 feet msl at the end of November or early December 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 lower than normal, the Fort Randall pool level will be raised to near 1353.0 feet msl by March 1. It is likely that a pool level as high as 1355.0 feet msl could be reached by the end of March if spring runoff has commenced. The Fort Randall pool level above the White River delta near Chamberlain, South Dakota will 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. Gavins Point winter 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.

System storage for all runoff conditions will be at the base of the Annual Flood Control and Multiple Use Zone of 56.1 MAF by the beginning of next year's runoff season, approximately March 1, 2016.

E. Regulation During the 2016 Navigation Season. All five runoff scenarios modeled for this year's AOP follow the technical criteria presented in the current Master Manual for downstream flow support. Beginning in mid-March, Gavins Point releases will be gradually increased to provide navigation flow support at the mouth of the Missouri near St. Louis, Missouri by April 1, 2016, 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 during the 2016 navigation season there is no commercial navigation scheduled to use the upper reaches of the navigation channel, we will consider not providing navigation flow support in those reaches to conserve water in the System, reduce flood risk, and/or minimize incidental take of the protected species during the nesting season.

Navigation flow support for the 2016 season will be determined by actual System storage on March 15 and July 1. Runoff scenarios modeled indicate full service flow support at the start of the 2016 navigation season for all runoff conditions. Following the July 1 System storage check, full service would be provided for Median and above runoff scenarios. The service level would be 1,300 cfs below full service for Lower Quartile runoff and 2,400 cfs below full service for Lower Decile runoff. The normal 8-month navigation season is provided for Median runoff scenarios and below as shown in ***Table IV***. A 10-day extension to the navigation season is provided for the upper two runoff scenarios.

TABLE IV
NAVIGATION SERVICE SUPPORT
FOR THE 2016 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	57.4	64.0	0	+19,000	0*
U.Q.	30.6	57.1	63.1	0	+12,000	0*
Med.	24.6	56.9	60.6	0	0	0
L.Q.	19.3	54.6	55.6	0	-1,300	0
L.D.	16.1	54.6	54.4	0	-2,400	0

*Includes 10-day extension for Upper Quartile and Upper Decile.

As previously stated, the modeled regulation for the 2016 nesting season below Gavins Point is SR-FTT. When the SR-FTT release scenario is used, the initial steady release, which has ranged from 24,000 cfs to 30,000 cfs over the last few years, will be based on hydrologic conditions and the availability of habitat at that time. Model runs included in this AOP have a Gavins Point release which is higher during the last 20 days of May to keep birds from nesting at low elevations. Gavins Point releases will be adjusted to meet downstream targets as tributary flows recede, but ideally the initial steady release will be sufficient to meet downstream targets until the majority of the birds have nested. The purpose of this regulation is to continue to meet the project purposes while minimizing the loss of nesting T&E species. A Gavins Point peaking cycle of two days down and one day up may be used for flood control regulation or to conserve water in the upper three reservoirs, if required. Gavins Point releases for the Upper Decile and Upper Quartile runoff simulations are much above normal to evacuate flood water from the reservoirs. Releases from 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 season in late August. In addition to the intra-day pattern, Fort Randall releases may also be cycled with two days of lower releases and one day of higher releases during the early part of the nesting season to maintain release flexibility in that reach while minimizing the potential for take. If higher daily releases are required later in the nesting season, the daily peaking pattern may be adjusted, reduced or eliminated resulting in a steady release to avoid increased stages at downstream nesting sites.

Gavins Point releases may be quite variable during the 2016 navigation season but are expected to range from 26,000 to 51,000 cfs under the five modeled runoff scenarios. Release reductions necessary to minimize downstream flooding are not reflected in the monthly averages shown in the simulations but will be implemented as conditions

warrant. Reductions in System releases to integrate the use of downstream Missouri River flow support from the designated Kansas River projects (Milford, Tuttle Creek and Perry) authorized to provide Missouri River navigation flow support have not been modeled since they are based on downstream hydrologic conditions. However, this storage will be utilized to the extent possible as a water conservation measure, or to minimize incidental take of protected species during the nesting season if conditions indicate it is prudent to do so. Simulated storages and releases for the System and individual reservoirs within the System are shown on ***Plate 6*** through ***Plate 11.*** As experienced in 2011, runoff above or below simulated levels can occur and result in releases beyond those modeled for the AOP. As previously stated, should that occur, the Corps will increase its efforts to convey that information throughout the basin so that state, Tribal, and local agencies, communities, and local residents can take appropriate action.

F. Regulation Activities for T&E Species and Fish Propagation Enhancement. 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 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 during the spring fish spawn period for the upper three reservoirs. As part of the overall plan to rotate emphasis among the upper three reservoirs during low runoff years, Garrison is scheduled to be favored during the 2016 forage fish spawn if runoff is below the Median runoff scenario. The studies show that inflows are sufficient to maintain a steady-to-rising pool at Garrison from April through June for the Lower Quartile and Lower Decile runoff scenarios. This will be accomplished by setting releases at Fort Peck and Garrison at a level that would attempt to maintain a rising Garrison pool, but no less than the minimum required for downstream water supply requirements, including irrigation. These adjustments may be restricted when the terns and plovers begin nesting in May. Fort Peck pool levels decline in April for both lower runoff scenarios. Oahe pool levels decline over the April to June period for both lower runoff scenarios. If drought conditions develop, emphasis during the fish spawn will be rotated among the upper three reservoirs and may also be adjusted to be opportunistic in regard to runoff potential. The upper three reservoirs will be managed to benefit forage fish to the extent reasonably possible, while continuing to serve the other Congressionally authorized project purposes.

Fort Peck. The repetitive daily pattern of releases from Fort Peck has not been implemented since the 2004 tern and plover nesting season. This adaptive management decision was made based on data collected during previous nesting seasons. In recent years, birds in this reach have nested on available high elevation habitat, and thus were not expected to be impacted by the potential range of releases from Fort Peck during the summer. Releases during the 2016 nesting season will not be restricted by the repetitive daily pattern unless habitat conditions or nesting patterns warrant a change.

If high tributary flows enter the Missouri River below the project during the nesting season, hourly releases will generally 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. In rare instances releases below 3,000 cfs may be scheduled for flood damage reduction. April releases are expected to be adequate for trout spawning below the project.

Maintaining a rising Fort Peck pool level will be dependent upon the daily inflow pattern to the reservoir. The reservoir rises in April and May for Median and above runoff scenarios, but declines in April under both lower runoff scenarios.

Garrison. As in previous years, releases from Garrison will follow a repetitive daily pattern during the T&E nesting season to limit peak stages below the project for nesting birds. Releases are scheduled to be 1,000 cfs lower in July and early August than the June releases to enhance conditions for the fledging of chicks. High elevation nesting habitat is expected to continue to be abundant below Garrison Dam during the 2016 nesting season.

During 2016, coldwater habitat in Garrison should be adequate for all runoff scenarios. Coldwater habitat will continue to be monitored during the year and adjustments will be considered if conditions warrant.

A steady-to-rising pool at Garrison during the fish spawn in April and May will be dependent upon the daily inflow pattern to the reservoir. The reservoir rises in April and May for all runoff scenarios.

Oahe. Releases in the spring and summer will back up those from Gavins Point. The pool level should be steady to rising in the spring during the fish spawn for Median and above runoff scenarios. Under the Lower Quartile and Lower Decile runoff scenarios, the Oahe pool would decline in April and May, dropping 2.3 feet and 3.1 feet, respectively.

Fort Randall. To the extent reasonably possible, Fort Randall will be regulated to provide for a pool elevation near 1355.0 feet msl during the fish spawn period, provided water can be supplied from other reservoirs for downstream uses. The pool will not be drawn down below elevation 1337.5 feet msl in the fall to ensure adequate supply for water intakes. As a measure to minimize take while maintaining the flexibility to increase releases during the nesting season, hourly releases from Fort Randall will follow a repetitive daily pattern to limit peak stages below the project for nesting birds. Daily average flows may be increased every third day to preserve the capability of increasing releases later in the summer with little or no incidental take if drier downstream conditions occur. If higher daily releases are required later in the nesting

season, the daily peaking pattern may be adjusted, reduced or eliminated resulting in a steady release to avoid increased stages at downstream nesting sites. Periods of zero release will be minimized to the extent reasonably possible during the nesting season given daily average releases, real-time hydrologic conditions, and System generating constraints as defined in coordination with Western.

Gavins Point. As detailed in Section III of this report, the Corps does not plan to implement the bimodal spring pulse from Gavins Point for the benefit of the endangered pallid sturgeon any runoff scenarios in 2016.

While less habitat is available than the previous few years, it is anticipated an abundant amount of sufficient habitat to provide for successful nesting will be available at elevations above the planned release rates for all runoff conditions. This expectation is based on experience from the previous record runoff in 1997 and from the high elevation habitat resulting from the record releases in 2011. Flows from Gavins Point Dam may follow the flow-to-target (FTT) release scenario or the SR-FTT scenario. The FTT scenario limits releases from Gavins Point to those needed to meet downstream targets. The actual release scenario will be evaluated when birds begin nesting in early May. If monitoring determines that nests are likely to be initiated at a lower elevation which would be inundated later in the summer, a SR-FTT release scenario may be implemented. A full description of these release scenarios can be found in the Master Manual. Actual releases will be based on hydrologic conditions and the availability of habitat at that time.

All reasonable measures to minimize the loss of nesting T&E bird species will be used. While not anticipated because of the quantity of high elevation habitat available, these measures include, but are not limited to, a relatively high initial steady release during the peak of nest initiation, the use of the three Kansas River basin reservoirs for Missouri River navigation flow support, moving nests to higher ground, and monitoring nest fledge dates to determine if delaying an increase a few days might allow threatened chicks to fledge. The location of navigation tows and river conditions at intakes would also be monitored to determine if an increase could be temporarily delayed without impact. Cycling releases every third day may be used to conserve water early in the nesting season if extremely dry conditions develop. In addition, cycling may be used during downstream flood control regulation.

The Gavins Point pool will be regulated near 1206.0 feet msl in the spring and early summer, with minor day-to-day variations due to incremental inflows between Fort Randall and Gavins Point resulting from rainfall runoff. Several factors can limit the ability to protect nests from inundation in the upper end of the Gavins Point pool. First, because there are greater numbers of T&E bird species nesting below Gavins Point, regulation to minimize incidental take usually involves restricting Gavins Point releases, which means that the Gavins Point pool can fluctuate significantly due to

increased runoff from rainfall events. Second, rainfall runoff between Fort Randall and Gavins Point can result in relatively rapid pool rises because the Gavins Point project has a smaller storage capacity than the other System reservoirs. And third, the regulation of Gavins Point for downstream flood control may necessitate immediate release reductions to reduce downstream damage. 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. However, because of the quantity of habitat expected we do not anticipate a large number of nests being inundated. The pool will be increased to elevation 1207.5 feet msl late in August or early September when it is determined that there are no terns or plovers nesting along the reservoir.

G. Regulation Activities for Historic and Cultural Properties. As acknowledged in the 2004 Programmatic Agreement (PA) for the Operation and Management of the Missouri River Main Stem System, wave action and fluctuation in the level of the reservoirs results in erosion along the banks of the reservoirs. The Corps will work with the Tribes utilizing 36 CFR Part 800 and the PA to address the exposure of historic and cultural sites. The objective of a programmatic agreement is to deal "…with the potential adverse effects of complex projects or multiple undertakings…" The PA objective was to collaboratively develop a preservation program that would avoid, minimize and/or mitigate adverse effects along the System reservoirs. All tribes, whether signatory to the PA or not, may request government-to-government consultation on the regulation of the System and the resulting effect on historic and cultural properties and other resources.

Pool levels at the upper three reservoirs will likely be near normal in 2016 but will vary depending on runoff conditions. Continuing exposure of cultural sites along the shoreline is still possible. Actions to avoid, minimize or mitigate adverse impacts and expected results of the actions are covered under Chapter VII of this AOP. ***Plate 16*** shows the locations of the Tribal Reservations.

Fort Peck. Depending on runoff in the Missouri River basin, System regulation during 2016 could result in a Fort Peck pool elevation variation from a high of 2243 feet msl to a low of 2220 feet msl. This is based on the Upper and Lower Decile runoff scenarios (see ***Plate 8*** and the studies included at the end of this report). Based on a review of existing information, approximately 13 known sites could be affected during this period.

Garrison. Based on the Upper and Lower Decile runoff scenarios (see ***Plate 9*** and the studies included at the end of this report), Garrison pool elevations could range between 1847 and 1826 feet msl during 2016. Based on a review of existing information, approximately 52 known sites could be affected during this period.

Oahe. At the Oahe reservoir, the System regulation under the Upper and Lower Decile runoff scenarios could result in pool elevations ranging from 1616 to 1592 feet msl (see ***Plate 10*** and the studies included at the end of this report). Based on a review of existing information, approximately 202 known sites could be affected during this period.

Big Bend. System regulation will be adjusted to maintain the Big Bend pool level in the normal 1420 to 1421 feet msl range during 2016. Short-term increases above 1421 due to local rainfall may also occur. Based on a review of existing information, no known sites will be affected during this period.

Fort Randall. As part of the normal System regulation, the Fort Randall pool elevations will vary between 1350 and 1355 feet msl during the spring and summer of 2016 (see ***Plate 11*** and the studies included at the end of this report). Short-term increases above 1355 feet msl due to local rainfall may occur. The annual fall drawdown of the reservoir to elevation 1337.5 feet msl will begin prior to the close of the navigation season and will be accomplished by early December. The reservoir will then be refilled during the winter to elevation 1350 feet msl. Based on a review of existing information, approximately 23 known sites could be affected during this period.

Gavins Point. System regulation will be adjusted to maintain the Gavins Point pool level in the normal 1206 to 1207.5 feet msl range during 2016. Short-term increases above 1207.5 feet msl may occur due to local rainfall. Based on a review of existing information, one known site could be affected during this period.

VII. SUMMARY OF RESULTS EXPECTED IN 2016

With regulation of the System in accordance with the 2015-2016 AOP outlined in the preceding pages, the following results can be expected. ***Table V*** summarizes the critical decision points throughout the year for all runoff conditions.

Table V
Summary of 2015-2016 AOP Studies

Decision Points	2016 Runoff Condition				
	Upper Decile	**Upper Quartile**	**Median**	**Lower Quartile**	**Lower Decile**
March 1 System Storage March 23-31 GP Release	56.1 MAF 26.7 kcfs	56.1 MAF 26.7 kcfs	56.1 MAF 26.7 kcfs	54.1 MAF 29.8 kcfs	54.1 MAF 29.8 kcfs
March 15 System Storage Spring Service Level	57.4 MAF Full service	57.1 MAF Full service	56.9 MAF Full service	54.6 MAF Full service	54.6 MAF Full service
May 1 System Storage May Early/Late May Avg GP Release	60.1 MAF Not applicable 36.0 kcfs	59.4 MAF 28.0/31.6 kcfs 29.9 kcfs	57.6 MAF 28.0/31.6 kcfs 29.9 kcfs	54.3 MAF 31.3/34.3 kcfs 32.8 kcfs	54.0 MAF 31.3/34.3 kcfs 32.8 kcfs
Fish Spawn Rise (Apr-Jun) FTPK Pool Elev Change GARR Pool Elev Change OAHE Pool Elev Change	 +6.9 feet +7.0 feet +5.2 feet	 +6.2 feet +6.5 feet +5.0 feet	 +4.6 feet +4.8 feet +2.2 feet	 +2.8 feet +3.8 feet -2.9 feet	 +0.6 feet +2.7 feet -3.9 feet
July 1 System Storage Sum-Fall Service Level (kcfs) Nav Season Length	64.0 MAF Full Service 10 Day extension	63.1 MAF Full Service 10 Day extension	60.6 MAF Full Service 0 Days shortening	55.6 MAF 1.3 kcfs blw Full Service 0 Days shortening	54.4 MAF 2.4 kcfs blw Full Service 0 Days shortening
September 1 System Storage Winter 2016-17 GP Release	62.0 MAF 20.0 kcfs	61.4 MAF 20.0 kcfs	59.1 MAF 17.0 kcfs	53.1 MAF 12.5 kcfs	51.1 MAF 12.5 kcfs
February 28 System Storage End-Year Pool Balance Percent Pool	56.1 MAF Balanced 100%	56.1 MAF Balanced 100%	55.4 MAF Balanced 98%	48.9 MAF Balanced 80%	46.7 MAF Balanced 74%

A. Flood Control. Flood control is the only authorized project purpose that requires the availability of empty storage space rather than impounded water. Actual flood events, especially those that are a result of rainfall runoff, are difficult to predict with much advance notice; therefore, detailed routing of specific major flood flows is accomplished when floods occur. There is a recurring pattern of high-risk flood periods during each year: a season when snowmelt, ice jams, and protracted heavy rains will almost surely occur with or without generating consequent floods; and a season when these situations are less likely and the flood threat is correspondingly low. The high-risk flood season begins about March 1 and extends through the summer. As a consequence, regulation of the System throughout the fall and winter months is predicated on the achievement of a March 1 System storage level at or below the base of the Annual Flood Control and Multiple Use Zone. All runoff scenarios studied for this AOP will begin the March 1, 2016 runoff season with System storage at or below the desired 56.1 MAF base of the Annual Flood Control and Multiple Use Zone. Therefore, the entire System flood control storage of 16.3 MAF, (11.6 MAF in the Annual Flood Control and Multiple Use Zone and 4.7 MAF in Exclusive Flood Control Zone) will be available to store surplus runoff. Under the Lower Basic runoff scenario, an additional 2.0 MAF of the Carryover Multiple Purpose Zone will be available to store surplus runoff.

To the extent practical, the System is regulated to prevent damaging flows in the river reaches between and below the Mainstem dams. In 2016, the full capacity of the System will be available to capture a significant volume of runoff originating from the upper basin and meter it out over an extended period of time at a rate that does not contribute to flooding in the river reaches between and below the reservoirs. Additionally, the reservoir system will have the capacity to reduce releases and hold back water during periods of high runoff below the System to reduce peak stages and discharges on the lower river. The ability to significantly reduce peak stages on the lower river diminishes at locations further downstream due to the large uncontrolled drainage area and travel time from the dam.

The base of the Exclusive Flood Control Zone defines the maximum level of storage that will be accumulated for purposes other than flood control. When the Exclusive Flood Control Zone at a particular reservoir is encroached upon, the control of subsequent flood inflows becomes the dominant factor. During such periods, releases may substantially exceed the powerplant release capacity with the evacuation rate of any project dependent upon existing flood conditions, the potential for further inflows, and conditions of other reservoirs in the System. Maximum release rates at such times are based upon the Master Manual flood control criteria, the flood control status of the System, and the critical need to preserve the integrity of the dams. Detailed information regarding the adjustments of releases for flood control evacuation and downstream flood control constraints can be found in Chapter 7 of the Master Manual.

Due to release limitations imposed by the formation of downstream ice cover, a major portion of the required flood control space must be evacuated prior to the winter season. Higher releases may be made on occasions when the downstream channel conditions permit. If plains and/or mountain snowpack accumulations are much above normal during the winter of 2015-2016, and studies indicate that available storage in the Carryover Multiple Use Zone as well as the Annual Flood Control and Multiple Use Zone will be fully utilized, releases may be adjusted to the extent reasonably possible to evacuate water from the reservoir system early in the runoff season. High releases during the late winter and early spring periods may exacerbate localized flooding if coincident with plains snowmelt or spring rains, and may also contribute to significant ice jam flooding. Therefore, if higher than normal releases are indicated, local conditions will need to be closely monitored. In addition, all 2016 runoff that is stored in the flood control zones will be evacuated prior to the start of the 2017 runoff season.

B. <u>Water Supply and Water Quality Control</u>. Water supply problems at intakes located in the river reaches both between and below the Mainstem dams and in the reservoirs are related primarily to intake elevations or river access rather than inadequate water supply. In emergency situations, short-term adjustments to protect human health and safety would be considered to keep intakes operational.

Low reservoir levels during the 2000-2007 drought contributed to both intake access and water quality problems for intakes on Garrison and Oahe reservoirs, including several Tribal intakes. A return to more normal reservoir elevations has eliminated concern over many of these intakes. If the drought conditions return, reservoir pool levels and releases may decline renewing the potential for intake access and water quality problems at both river and reservoir intakes. Under the Lower Decile runoff scenario, minimum reservoir levels in 2016 would be at least 22 feet higher than the record lows set in the 2000-2007 drought. Although not below the critical shut-down elevations for any intake, a return to lower reservoir levels would require extra monitoring to ensure the continued operation of the intakes.

Winter releases are determined based on the September 1 System storage check. The winter season extends from December through February and flows are provided during this time to support the Congressionally authorized project purposes of hydropower production and downstream water supply and water quality. Per the Master Manual, if September 1 System storage is 55.0 MAF or less, the winter release from Gavins Point will be 12,000 cfs. Planned winter release rates of 12,000 cfs may be less than required for downstream water supply intakes without sufficient incremental tributary flows below the System. Should that occur, releases may need to be set higher to ensure that downstream water supply intakes are operable. In 2012-2013, winter releases were set at 14,000 cfs rather than 12,000 cfs due to channel degradation and low incremental tributary flows below the System. Improved tributary flows in future

winters would facilitate releases reaching the target level of 12,000 cfs. While the Master Manual indicates that the water control plan's purpose is to meet water supply requirements in river reaches downstream of the reservoirs to the extent reasonably possible, the Corps believes the minimum winter release of 12,000 cfs presented in the Master Manual represents a reasonable long-term goal for water intake operability and for owners to strive for as they make improvements to their facilities. A letter was sent to intake owners in the spring of 2013 informing them of the Master Manual criteria and encouraging them to take necessary action to ensure their intakes are able to operate at reduced release rates. Coordination with intake owners will continue prior to and during the low release periods. In addition, it may be necessary at times to temporarily increase Gavins Point releases to provide adequate downstream flows during periods when excessive river ice formation is forecast or if ice jams or blockages form which temporarily restrict flow. Based on past experiences, these events are expected to occur infrequently and be of short duration.

Based on the studies included in this AOP, the scheduled winter System release for 2015-2016 will be at least 17,000 cfs. Under the Basic and Upper Basic forecast releases are set at 18,000 cfs and 20,000 cfs respectively in order to evacuate excess water. As shown in ***Table V***, 2016-2017 winter releases of 20,000 cfs would be made for the Upper Decile and Upper Quartile runoff scenarios, 17,000 cfs for Median, and 12,500 cfs under Lower Quartile and Lower Decile runoff scenarios. The additional 500 cfs on Lower Quartile and Lower Decile reflects how the Corps, when conditions warrant, temporarily increases Gavins Point releases during extreme cold periods to inhibit the formation of ice jams in the lower river reach.

During non-navigation open water periods in the spring and fall the Master Manual includes System releases as low as 9,000 cfs as a water conservation measure provided that enough downstream tributary flow exists to allow for continued operation of downstream water intakes. If a non-navigation year would occur in the future, summer releases (May through August) could average around 18,000 cfs from the System. However, it should be noted that System releases will be set at levels that meet the operational requirements of water intakes to the extent reasonably possible. Problems have occurred at several downstream intakes in the past, however in all cases the problems have been associated with access to the river or reservoir rather than insufficient water supply. In addition, the low summer release rate would likely result in higher water temperatures in the river, which could impact a powerplant's ability to meet their thermal discharge permits. Again, it should be noted that System releases will be set at levels that allow the downstream powerplant to meet their thermal discharge permit requirements to the extent reasonably possible. This may mean that actual System releases in the hottest part of the summer period may be set well above the 18,000 cfs level. The Corps continues to encourage intake operators between and below the mainstem dams to make necessary modifications to their intakes to allow efficient operation over the widest possible range of hydrologic conditions. While the

current level of System storage should allow adequate access for all intakes during the coming year, intake operators that have experienced difficulty with access during the past drought years should continue to make adjustments to improve access and flexibility when drought returns to the basin.

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 Lower Quartile or Lower Decile runoff conditions return. Below Fort Peck, localized dredging may once again be required in the vicinity of irrigation intakes in order to maintain access to the water if releases are low next summer. Intake access problems are the responsibility of the intake owner and the Corps will not guarantee access, only that the supply of water in the Missouri River is adequate to meet this project purpose. Fort Peck releases may be adjusted during the irrigation season to provide more consistent flows at downstream locations as tributary flows vary. Tributary irrigation water usage is fully accounted for in the estimates of water supply.

D. Navigation. The anticipated service level and season length for all runoff conditions simulated are shown in ***Table V***. Service to navigation in 2016 from the beginning of the navigation season through the July 1 storage check will be at full service for all runoff scenarios. After the July 1 storage check, Median and higher runoff scenarios indicate at least full service to navigation. The July 1 storage check indicates 1,300 cfs below full service for the Lower Quartile runoff scenario and 2,400 cfs below full service for the Lower Decile runoff scenario. In addition, the Upper Decile and Upper Quartile runoff scenarios indicate a 10-day extension to the navigation season based on the July 1 storage check. Median and below runoff indicates a full length navigation season. Although the AOP simulations provide a comparison of typical flow support under varying runoff conditions, the actual rate of flow support for the 2016 navigation season will be based on actual System storage on March 15 and July 1, 2016.

E. Power. ***Table VI*** and ***Table VII*** indicate the estimated monthly System load requirements and hydropower supply of the Eastern Division, Pick-Sloan Missouri Basin Program (P-S MBP), from August 2015 through December 2016. 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. Under the Median runoff scenario, annual generation in 2016 is estimated to be 9.6 million MWh, 102 percent of the 1967-2014 average.

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

2015	Estimated Committed Sales*	Expected C of E Capability U.B.	Basic	L.B.	Expected Bureau Capability** U.B.	Basic	L.B.	Expected Total System Capability U.B.	Basic	L.B.
Aug	2200	2373	2370	2360	200	198	196	2573	2568	2556
Sep	2013	2367	2358	2346	200	197	194	2567	2555	2540
Oct	1879	2338	2335	2321	199	197	194	2537	2532	2515
Nov	1987	2300	2298	2282	198	197	193	2498	2495	2475
Dec	2115	2291	2297	2278	195	195	192	2486	2492	2470
2016										
Jan	2129	2312	2315	2295	192	192	191	2504	2507	2486
Feb	2115	2320	2320	2297	189	190	190	2509	2510	2487

		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	2049	2342	2336	2329	2300	2299	189	189	190	190	190	2531	2525	2519	2490	2489
Apr	1918	2362	2353	2333	2291	2286	184	184	189	190	190	2546	2537	2522	2481	2476
May	1879	2385	2370	2337	2286	2280	185	185	193	193	193	2570	2555	2530	2479	2473
Jun	2079	2400	2394	2371	2298	2285	199	199	199	196	196	2599	2593	2570	2494	2481
Jul	1407	2391	2386	2366	2287	2267	201	201	201	196	196	2592	2587	2567	2483	2463
Aug	2201	2377	2373	2354	2267	2245	200	199	200	195	195	2577	2572	2554	2462	2440
Sep	2016	2368	2365	2337	2259	2230	201	200	201	196	196	2569	2565	2538	2455	2426
Oct	1880	2334	2335	2317	2233	2209	200	199	201	197	198	2534	2534	2518	2430	2407
Nov	1988	2294	2297	2282	2196	2172	199	198	200	196	197	2493	2495	2482	2392	2369
Dec	2115	2251	2253	2246	2162	2135	196	195	197	194	194	2447	2448	2443	2356	2329

* Estimated sales, including system reserves. Power in addition to hydro production needed for these load requirements will 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 VII
ENERGY GENERATION AND SALES
(Million kWh at plant)

2015	Estimated Committed Sales*	Expected C of E Generation U.B.	Basic	L.B.	Expected Bureau Generation ** U.B.	Basic	L.B.	Expected Total System Generation U.B.	Basic	L.B.
Aug	858	804	825	846	75	63	53	879	888	899
Sep	738	906	822	839	75	57	45	980	879	885
Oct	736	854	711	744	75	55	45	929	766	789
Nov	805	848	621	627	72	53	42	920	674	669
Dec	913	819	603	583	74	55	43	893	657	626
2016										
Jan	927	764	688	661	75	58	44	839	746	705
Feb	897	700	623	602	68	53	40	768	676	642

		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	813	647	657	615	660	663	73	73	57	43	41	720	730	672	703	704
Apr	768	756	690	740	814	805	110	110	60	38	39	866	799	799	852	844
May	718	1063	913	903	960	960	118	118	92	45	45	1181	1031	995	1005	1005
Jun	779	1245	1107	938	987	987	114	114	105	46	48	1359	1221	1042	1034	1035
Jul	868	1453	1312	1012	1031	1001	118	105	79	50	55	1570	1417	1092	1081	1056
Aug	859	1454	1315	1050	1029	999	97	97	70	53	56	1551	1412	1120	1082	1055
Sep	740	1348	1201	918	847	870	86	85	68	50	53	1434	1287	986	897	923
Oct	737	1241	1079	761	814	716	81	80	67	53	53	1322	1159	828	866	768
Nov	806	1217	1063	673	645	607	78	77	74	52	53	1295	1140	747	697	660
Dec	912	836	804	656	549	542	80	79	76	59	54	916	882	732	608	597
CY TOT		12724	11605	9576	9600	9413	1097	1079	859	573	581	13821	12684	10435	10173	9995

* 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.

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. Recreation access is expected to be near normal levels in 2016. If Lower Quartile or Lower Decile runoff were to occur in 2016, boat ramps that were lowered and low water ramps that were constructed during the two recent drought periods will provide adequate reservoir access. Special regulation adjustments incorporating specific objectives for these purposes will be made to the extent reasonably possible. Overall conditions 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.

The effects of the simulated System regulation during 2016 on fish and wildlife are included in Chapter VI, Section F, entitled, "Regulation Activities for T&E Species and Fish Propagation Enhancement."

G. Historic and Cultural Properties. As mentioned in Chapter VI of this AOP, the regulation of the System during 2015 and 2016 will expose cultural sites due to erosion from the normal fluctuation of pool elevations. The Corps will work with the Tribes utilizing 36 CFR Part 800 and the PA to address the exposure of these sites. The objective of a programmatic agreement is to deal "…with the potential adverse effects of complex projects or multiple undertakings…" The PA objective was to collaboratively develop a preservation program that would avoid, minimize and/or mitigate the adverse affects of the System operation. All tribes, whether signatory to the PA or not, may request government-to-government consultation on the regulation of the System and the resulting effect on historic and cultural properties and other resources.

The planned preservation program for this AOP is outlined by multiple stipulations in the PA. One of the stipulations, or program components, is the Five-Year Plan. This plan outlines how the Corps will accomplish its responsibilities under the PA and the National Historic Preservation Act. The "Cultural Resource Program Final Five Year Plan, dated February 2012" (see http://www.nwo.usace.army.mil/Missions/CivilWorks/CulturalResources.aspx) is currently being implemented. The plan includes inventory, testing and evaluation, mitigation and other specific activities that will allow the Corps to avoid, minimize and/or mitigate the adverse effects to cultural sites on Corps lands within the System. Many of the actions listed in the plan are within the elevation ranges that will occur with the implementation of the Master Manual criteria in 2015 and 2016. Two critical components of the Five-Year Plan that are applicable to this AOP are monitoring and mitigation, which will be briefly discussed in the following paragraphs.

First, a collaboratively developed plan, entitled "Final Cultural Resource Monitoring Plan, dated June 2014" (see http://www.nwo.usace.army.mil/Missions/CivilWorks/CulturalResources.aspx) is in place. This monitoring plan outlines the sites that require monitoring and specifies a frequency for monitoring. The Corps is strategically monitoring sites, including those sites within the potential operating pool elevations, to document the effects of the implementation of the 2015-2016 AOP. Specific sites are identified in the draft Monitoring and Enforcement Plan for the monitoring team, comprised of Corps rangers and Tribal monitors, to visit and document impacts. This focused monitoring is resulting in more accurate data on the current impacts to sites along the river plus it is assisting with the identification of sites for mitigation. The most recent training for the monitoring teams was held in July 2014.

Second, mitigation or protection of sites that are being adversely impacted continues. During the reporting period for the 2013 Annual Report by the Corps on the implementation of the Programmatic Agreement, 17 sites were either completed, started, or in the design phase. The annual report is available at http://www.nwo.usace.army.mil/Missions/CivilWorks/CulturalResources.aspx. In addition the Corps completed a contract to develop an erosion model that will compare modeling data against actual erosion data, collected by the monitoring team, to assist in the prioritization of sites for protection. Work on the erosion model was completed in June 2011.

Results expected from the proposed monitoring and mitigation actions include more accurate horizontal and vertical data on existing cultural sites, detailed impact data, proactive protection and preservation of sites. The effects of the simulated System regulation during 2015-2016 on cultural sites are included in the Chapter VI, section G., entitled, "Regulation Activities for Historic and Cultural Properties."

H. System Storage. If the August 1, 2015 Basic runoff forecast verifies, System storage will decline to 56.3 MAF by the end of 2015. This would be 22.4 MAF higher than the record low System storage of 33.9 MAF set on February 9, 2007 and 0.1 MAF less than the 2014 end-of-year storage of 56.4 MAF. This end-of-year storage is 3.6 MAF more than the 1967-2014 average. The lowest storage during the 1988-1992 drought was 40.8 MAF in January 1991, and the record low storage was set during the 2000-2007 drought at 33.9 MAF in February 2007. The end-of-year System storages have ranged from a maximum of 60.9 MAF in 1975, to the 2006 minimum of 34.4 MAF. Forecasted System storage on December 31, 2016 is presented in ***Table VIII*** for the runoff scenarios simulated.

TABLE VIII
ANTICIPATED DECEMBER 31, 2016 SYSTEM STORAGE

Water Supply Condition	Total (12/31/16)	Carryover Storage Remaining 1/	Unfilled Carryover Storage 2/	Total Change CY 2016
	(Volumes in 1,000 Acre-Feet)			
Upper Decile	56,300	38,500	0	200
Upper Quartile	56,500	38,500	0	400
Median	55,600	38,000	500	-700
Lower Quartile	48,900	31,300	7,200	-5,800
Lower Decile	46,800	29,200	9,300	-7,800

1/ Net usable storage above 17.6 MAF System minimum pool level established for power, recreation, irrigation diversions, and other purposes.

2/ System base of Annual Flood Control and Multiple Use Zone containing 56.1 MAF.

I. Summary of Water Use by Functions. Anticipated water use in CY 2015, under the regulation plan with the Basic forecast of water supply is shown in ***Table IX***. Under the reservoir regulation simulations in this AOP, estimated water use in CY 2016 also is shown in ***Table IX.*** Actual water use data for CY 2014 are included for information and comparison.

TABLE IX
MISSOURI RIVER MAINSTEM SYSTEM
WATER USE FOR CALENDAR YEARS 2014, 2015, AND 2016 ABOVE SIOUX CITY, IOWA
in Million Acre-Feet (MAF)

		CY 2014 Actual	CY 2015 Basic Simulation	Simulations for Calendar Year 2016 Upper Decile	Upper Quartile	Median	Lower Quartile	Lower Decile
Upstream Depletions	(1)							
Irrigation, Tributary Reservoir Evaporation & Other Uses		2.6	2.8					
Tributary Reservoir Storage Change		0.2	-0.3					
Total Upstream Depletions		2.8	2.5	2.9	2.8	2.9	2.9	2.6
System Reservoir Evaporation	(2)	3.1	2.6	1.3	1.2	1.8	2.0	2.0
Sioux City Flows								
Navigation Season								
Unregulated Flood Inflows Between Gavins Point & Sioux City	(3)	0.4	0.0					
Navigation Service Requirement	(4)	15.5	15.3	16.6	16.3	16.0	16.0	15.3
Supplementary Releases								
T&E Species	(5)	0.5	0.6	0.3	0.3	0.3	0.3	0.3
Flood Evacuation	(6)	2.5	0.0	8.2	4.9	0.0	0.0	0.0
Non-navigation Season								
Flows		4.0	4.1	4.5	4.3	4.3	3.9	3.7
Flood Evacuation Releases	(7)	0.2	0.0	0.5	0.4	0.0	0.0	0.0
System Storage Change		6.3	-0.1	0.2	0.4	-0.7	-5.8	-7.8
Total		35.3	25.0	34.5	30.6	24.6	19.3	16.1
Project Releases								
Fort Peck		5.0	5.0	8.1	7.4	6.0	6.0	6.0
Garrison		16.4	14.6	20.9	18.9	15.5	15.2	16.6
Oahe		18.4	15.6	23.7	21.0	17.2	18.1	17.9
Big Bend		17.1	15.0	23.7	21.0	17.1	17.9	17.8
Fort Randall		18.9	16.3	25.0	22.1	17.8	18.2	17.9
Gavins Point		20.0	17.8	27.2	24.0	19.2	19.4	19.0

(1) Tributary uses above the 1949 level of development including agricultural depletions and tributary storage effects.
(2) Net evaporation is shown for 2016.
(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) Estimated requirement for downstream water supply and water quality is approximately 6.0 MAF.
(5) Increased releases required for threatened and endangered species regulation.
(6) 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.
(7) Releases for flood control storage evacuation in excess of a 17,000 cfs Gavins Point release.

VIII. TENTATIVE PROJECTION OF REGULATION THROUGH FEBRUARY 2022

The 5-year extensions to the AOP (March 2017 to February 2022) 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. Three runoff conditions are modeled in the extension studies: Median, Lower Quartile, and Lower Decile.

The full 16.3 MAF of flood control capacity or more would be available at the start of each runoff season. The navigation service level and season length criteria described in ***Plate 3*** were applied to the extensions. The March 15 and July 1 System storage checks shown in ***Plate 3*** were used to determine the flow support for navigation and other downstream uses and the navigation season length. A steady release – flow-to-target (SR-FTT) regulation with cycling in May was modeled during the T&E bird species' nesting season. The Gavins Point releases to meet navigation target flows, as shown in ***Plate 3*** and as computed by the March 15 and July 1 System storage checks, were used prior to and following the nesting season. The September 1 System storage check was used to determine the winter System release. Navigation service support and season length, March 1 reservoir unbalancing, end of year System storage, and the winter release rate for the extensions are shown on ***Table X***. The March and May spring pulses are currently on hold pending their review as discussed in Chapter III and were not included in the extension studies. The criteria considered as each year of the extensions was modeled are listed, along with the results, in ***Tables XI through XIII*** for the Median, Lower Quartile, and Lower Decile extension studies, respectively.

A. Median Runoff. Studies 9 through 13 present the results of simulating Median runoff (24.6 MAF) from March 2017 through February 2022. The March 1, 2017 System storage would be 55.4 MAF and would decrease to 53.4 MAF by March 1, 2022, 2.7 MAF below the desired March 1 storage of 56.1 MAF, the base of the annual flood control and multiple use pool. The navigation service level would be full service for the study period of 2017 to 2021. There would be full navigation seasons for the study period of 2017 through 2021. Winter releases would range from 17,000 cfs in the winter of 2017-2018 to 14,500 cfs in winter 2021-2022. For the entire study period, the carryover multiple use storage in Fort Peck, Garrison, and Oahe was balanced on March 1 each year.

TABLE X
NAVIGATION SERVICE SUPPORT, SPRING PULSES, UNBALANCING
AOP EXTENSION STUDIES

	2017	2018	2019	2020	2021
MEDIAN					
Annual Runoff Volume (MAF)	24.6	24.6	24.6	24.6	24.6
Spring Pulse					
March (kcfs)	N/A	N/A	N/A	N/A	N/A
May (kcfs)	N/A	N/A	N/A	N/A	N/A
Flow Level Below Full Service					
Spring (kcfs)	Full	Full	Full	Full	Full
Summer/Fall (kcfs)	Full	Full	Full	Full	Full
Season Length	8 months	8 months	8 months	8 months	8 months
Reservoir Unbalancing (ft)					
Fort Peck	0	0	0	0	0
Garrison	0	0	0	0	0
Oahe	0	0	0	0	0
Dec 31 Storage (MAF)	55.1	54.5	54.0	53.6	53.3
Winter Release (kcfs)	17.0	16.8	15.8	15.2	14.5
Special Information					
LOWER QUARTILE					
Annual Runoff Volume (MAF)	19.9	20.2	21.8	22.8	24.4
Spring Pulse					
March (kcfs)	N/A	N/A	N/A	N/A	N/A
May (kcfs)	N/A	N/A	N/A	N/A	N/A
Flow Level Below Full Service					
Spring (kcfs)	Full-5.3	Full-6.0	Full-6.0	Full-6.0	Full-6.0
Summer/Fall (kcfs)	Full-4.9	Full-6.0	Full-6.0	Full-6.0	Full-4.7
Season Length	8 mnths	8 mnths-11days	8 mnths-14days	8 mnths-9days	8 mnths
Reservoir Unbalancing (ft)					
Fort Peck	0	0	0	0	0
Garrison	0	0	0	0	0
Oahe	0	0	0	0	0
Dec 31 Storage (MAF)	46.4	45.3	45.4	46.3	47.9
Winter Release (kcfs)	12.5	12.5	12.5	12.5	12.5
LOWER DECILE					
Annual Runoff Volume (MAF)	17.1	17.5	18.5	19.3	19.5
Spring Pulse					
March (kcfs)	N/A	N/A	N/A	N/A	N/A
May (kcfs)	N/A	N/A	N/A	N/A	N/A
Flow Level Below Full Service					
Spring (kcfs)	Full-6.0	Full-6.0	Full-6.0	Full-6.0	Full-6.0
Summer/Fall (kcfs)	Full-6.0	Full-6.0	Full-6.0	Full-6.0	Full-6.0
Season Length	8 mnths-19days	8 mnths-30days	8 mnths-30days	8 mnths-30 days	8 mnths-36days
Reservoir Unbalancing (ft)					
Fort Peck	0	0	0	0	0
Garrison	0	0	0	0	0
Oahe	0	0	0	0	0
Dec 31 Storage (MAF)	42.9	40.1	38.1	36.8	36.1
Winter Release (kcfs)	12.5	12.5	12.5	12.5	12.5

* Limited by Downstream Flood-Control Limits.

N/A – The March and May Spring Pulses are currently on hold. See Chapter III for more information.

Table XI

Median Extension Studies - Criteria Considered in the Modeling Process

Study Number			9	10	11	12	13
	Units	Criteria	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022
March 1 Storage	MAF	40	55.4	54.9	54.3	53.9	53.6
- March Spring Pulse?	N/A		N/A	N/A	N/A	N/A	N/A
March 15 Storage	MAF	31/49/54.5	56.2	55.7	55.2	54.8	54.5
- Service Level	N/A or kcfs	No Sea/Min/Full Thresholds	Full	Full	Full	Full	Full
- 3rd Period March GP Q	kcfs		26.7	26.7	26.7	26.7	26.7
- April Gavins Point Q	kcfs		26.7	26.7	26.7	26.7	26.7
May 1 Storage	MAF	40	57.1	56.6	56.1	55.7	55.4
- May Spring Pulse?	N/A		N/A	N/A	N/A	N/A	N/A
- Pulse Magnitude*	kcfs		N/A	N/A	N/A	N/A	N/A
- Gavins Point Cycling Qs	kcfs		28.0/31.6	28.0/31.6	28.0/31.6	28.0/31.6	28.0/31.6
- May Gavins Point Q	kcfs		29.9	29.9	29.9	29.9	29.9
- June Gavins Point Q	kcfs		31.6	31.6	31.6	31.6	31.6
July 1 Storage	MAF	50.5/57	60.1	59.5	59.0	58.5	58.2
- Service Level	N/A	Min/Full Thresholds	Full	Full	Full	Full	Full
- July Gavins Point Q	kcfs		31.6	31.6	31.6	31.6	31.6
- Aug Gavins Point Q	kcfs		33.2	33.2	33.2	33.2	33.2
- Sept Gavins Point Q	kcfs		32.6	32.6	32.6	32.6	32.6
July 1 Storage	MAF	36.5/41&46.8/51.5	60.1	59.5	59.0	58.5	58.2
- Season Length Shortening	days	61/31&31/0 Thresholds	0	0	0	0	0
- Oct Gavins Point Q	kcfs		32.0	32.0	32.0	32.0	32.0
- Nov Gavins Point Q	kcfs		27.7	27.7	27.7	27.7	27.7
September 1 Storage	MAF	55/58	58.5	57.9	57.3	56.9	56.5
- Winter Gavins Point Q	kcfs	12/17 Thresholds	17.0	16.8	15.8	15.2	14.5
End-of-Year Reservoir Storage (12/31)	MAF		55.1	54.5	54.0	53.6	53.3
- Percent Full	N/A		98%	97%	96%	96%	95%
Balance/Unbalance	N/A	Bal <2227/1827/1600 ft msl	Balanced	Balanced	Balanced	Balanced	Balanced
Fort Peck Rise 3/31-5/31	N/A		Yes	Yes	Yes	Yes	Yes
Garrison Rise 3/31-5/31	N/A		Yes	Yes	Yes	Yes	Yes
Oahe Rise 3/31-5/31	N/A		Yes	Yes	Yes	Yes	Yes
Favored Reservoir - Fish Spawn	N/A		FP/OA	GA	FP/OA	GA	FP/OA
* Pulse magnitudes are the calculated magnitude per technical criteria and simulated magnitude due to the downstream flow limits							
N/A - The March and May Spring Pulses are currently on hold. See Chapter III for more information.							

Table XII							
Lower Quartile Extension Studies - Criteria Considered in the Modeling Process							
Study Number			**14**	**15**	**16**	**17**	**18**
	Units	*Criteria*	**2017-2018**	**2018-2019**	**2019-2020**	**2020-2021**	**2021-2022**
March 1 Storage	*MAF*	*40*	48.9	46.5	45.4	45.6	46.5
- March Spring Pulse?	*N/A*		N/A	N/A	N/A	N/A	N/A
March 15 Storage	*MAF*	*31/49/54.5*	49.6	47.3	46.2	46.5	47.5
- Service Level	*N/A or kcfs*	*No Sea/Min/Full Thresholds*	Full - 5.3	Min Service	Min Service	Min Service	Min Service
- 3rd Period March GP Q	*kcfs*		24.5	23.8	23.8	23.8	23.8
- April Gavins Point Q	*kcfs*		24.5	23.8	23.8	23.8	23.8
May 1 Storage	*MAF*	*40*	50.0	47.8	47.0	47.4	48.7
- May Spring Pulse?	*N/A*		N/A	N/A	N/A	N/A	N/A
*- Pulse Magnitude**	*kcfs*		N/A	N/A	N/A	N/A	N/A
- Gavins Point Cycling Qs	*kcfs*		26.0/29.0	25.3/28.3	25.3/28.3	25.3/28.3	25.3/28.3
- May Gavins Point Q	*kcfs*		27.4	26.8	26.8	26.8	26.8
- June Gavins Point Q	*kcfs*		29.0	28.3	28.3	28.3	28.3
July 1 Storage	*MAF*	*50.5/57*	51.7	49.7	49.3	50.1	51.9
- Service Level	*N/A*	*Min/Full Thresholds*	Full - 4.9	Min Service	Min Service	Min Service	Full - 4.7
- July Gavins Point Q	*kcfs*		29.4	28.3	28.3	28.3	29.6
- Aug Gavins Point Q	*kcfs*		29.1	28.0	28.0	28.0	29.3
- Sept Gavins Point Q	*kcfs*		28.6	27.5	27.5	27.5	28.8
July 1 Storage	*MAF*	*36.5/41&46.8/51.5*	51.7	49.7	49.3	50.1	51.9
- Season Length Shortening	*days*	*61/31&31/0 Thresholds*	0	11	14	9	0
- Oct Gavins Point Q	*kcfs*		28.2	27.1	27.1	27.1	28.4
- Nov Gavins Point Q	*kcfs*		23.4	16.1	14.5	17.2	20.2
September 1 Storage	*MAF*	*55/58*	49.7	47.8	47.7	48.6	50.4
- Winter Gavins Point Q	*kcfs*	*12/17 Thresholds*	12.5	12.5	12.5	12.5	12.5
End-of-Year Reservoir Storage (12/31)	*MAF*		46.4	45.3	45.4	46.3	47.9
- Percent Full	*N/A*		83%	81%	81%	83%	85%
Balance/Unbalance	*N/A*	*Bal <2227/1827/1600 ft msl*	Balance	Balance	Balance	Balance	Balance
Fort Peck Rise 3/31-5/31	*N/A*		Yes	Yes	Yes	Yes	Yes
Garrison Rise 3/31-5/31	*N/A*		Yes	Yes	Yes	Yes	Yes
Oahe Rise 3/31-5/31	*N/A*		Yes	Yes	Yes	Yes	Yes
Favored Reservoir - Fish Spawn	*N/A*		FP/OA	GA	FP/OA	GA	FP/OA
** Pulse magnitudes are the calculated magnitude per technical criteria and simulated magnitude due to the downstream flow limits*							
N/A - The March and May Spring Pulses are currently on hold. See Chapter III for more information.							

Table XIII							
Lower Decile Extension Studies - Criteria Considered in the Modeling Process							
Study Number			**19**	**20**	**21**	**22**	**23**
	Units	**Criteria**	**2017-2018**	**2018-2019**	**2019-2020**	**2020-2021**	**2021-2022**
March 1 Storage	*MAF*	*40*	46.7	43.0	40.1	38.3	37.0
- March Spring Pulse?	*N/A*		N/A	N/A	N/A	N/A	N/A
March 15 Storage	*MAF*	*31/49/54.5*	47.4	43.6	40.9	39.0	37.8
- Service Level	*N/A or kcfs*	*No Sea/Min/Full Thresholds*	Min Service	Min Service	Min Service	Min Service	Min Service
- 3rd Period March GP Q	*kcfs*		23.8	23.8	23.8	23.8	23.8
- April Gavins Point Q	*kcfs*		23.8	23.8	23.8	23.8	23.8
May 1 Storage	*MAF*	*40*	47.6	43.9	41.3	39.6	38.4
- May Spring Pulse?	*N/A*		N/A	N/A	N/A	N/A	N/A
- Pulse Magnitude	*kcfs*		N/A	N/A	N/A	N/A	N/A
- Gavins Point Cycling Qs	*kcfs*		25.3/28.3	25.3/28.3	25.3/28.3	25.3/28.3	25.3/28.3
- May Gavins Point Q	*kcfs*		26.8	26.8	26.8	26.8	26.8
- June Gavins Point Q	*kcfs*		28.3	28.3	28.3	28.3	28.3
July 1 Storage	*MAF*	*50.5/57*	48.5	45.0	42.7	41.3	40.1
- Service Level	*N/A*	*Min/Full Thresholds*	Min Service	Min Service	Min Service	Min Service	Min Service
- July Gavins Point Q	*kcfs*		28.3	28.3	28.3	28.3	28.3
- Aug Gavins Point Q	*kcfs*		28.0	28.0	28.0	28.0	28.0
- Sept Gavins Point Q	*kcfs*		27.5	27.5	27.5	27.5	27.5
July 1 Storage	*MAF*	*36.5/41&46.8/51.5*	48.5	45.0	42.7	41.3	40.1
- Season Length Shortening	*days*	*61/31&31/0 Thresholds*	19	30	30	30	36
- Oct Gavins Point Q	*kcfs*		27.1	23.9	23.9	23.9	20.4
- Nov Gavins Point Q	*kcfs*		11.8	9.0	9.0	9.0	9.0
September 1 Storage	*MAF*	*55/58*	45.6	42.2	40.0	38.6	37.5
- Winter Gavins Point Q	*kcfs*	*12/17 Thresholds*	12.5	12.5	12.5	12.5	12.5
End-of-Year Reservoir Storage (12/31)	*MAF*		42.9	40.1	38.1	36.8	36.1
- Percent Full	*N/A*		76%	71%	68%	66%	64%
Balance/Unbalance	*N/A*	*Bal <2227/1827/1600 ft msl*	Balance	Balance	Balance	Balance	Balance
Fort Peck Rise 3/31-5/31	*N/A*		Yes	Yes	Yes	Yes	Yes
Garrison Rise 3/31-5/31	*N/A*		No	Yes	Yes	Yes	Yes
Oahe Rise 3/31-5/31	*N/A*		No	No	Yes	Yes	Yes
Favored Reservoir - Fish Spawn	*N/A*		FP/OA	GA	FP/OA	GA	FP/OA
** Pulse magnitudes are the calculated magnitude per technical criteria and simulated magnitude due to the downstream flow limits*							
N/A - The March and May Spring Pulses are currently on hold. See Chapter III for more information.							

B. Lower Quartile Runoff. Studies 14 through 18 show the results of Lower Quartile runoff extensions. System storage on March 1, 2017 would be 48.9 MAF and decrease to 48.2 MAF by March 1, 2022. Navigation service levels would range between 4,700 cfs below full service to minimum service for the simulation period 2017 to 2021. The navigation season is shortened 0 days in 2017, 11 days in 2018, 14 days in 2019, 9 days in 2020, and 0 days in 2021. A 12,500-cfs average winter release is shown for the entire study period. Under Lower Quartile runoff, the carryover multiple use storage in the upper three reservoirs would be balanced each March 1.

C. Lower Decile Runoff. Studies 19 through 23 show the results of Lower Decile runoff extensions. System storage would be 46.7 MAF on March 1, 2017 and gradually decrease to 36.3 MAF on March 1, 2022. Navigation service levels would be at minimum navigation service levels throughout the season for all extension years. The navigation season would be shortened 19 days in 2017, 30 days in 2018 through 2020, and 36 days in 2012. The intrasystem storage is balanced each March 1 for the entire study period.

Plate 14 presents System storage, Gavins Point releases, and System peaking capability for Median, Lower Quartile, and Lower Decile runoff for the period 2017 through February 2022. Peak power, or peaking capability, is the amount of power available when all powerplants are operating at maximum.

Plate 15 presents reservoir pool elevations for Fort Peck, Garrison, Oahe, and Fort Randall for Median, Lower Quartile, and Lower Decile runoff for the period 2017 through February 2022.

This page intentionally left blank.

USACE Mainstem Project
USACE Tributary Project
USBR SECTION 7 PROJECT
☆ **State Capitol**
-------- District Boundary

Missouri River Basin

U.S. ARMY ENGINEERS, NORTHWESTERN DIVISION
CORPS OF ENGINEERS, OMAHA, NEBRASKA
AUGUST 2011

PLATE 1. Missouri River Basin Map.

Summary of Engineering Data -- Missouri River Mainstem System

Item No.	Subject	Fort Peck Dam - Fort Peck Lake	Garrison Dam - Lake Sakakawea	Oahe Dam - Lake Oahe
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 245,000 acres	1854 msl 383,000 acres	1620 msl 386,000 acres
27	Max. normal op. pool elev. & area	2246 msl 240,000 acres	1850 msl 365,000 acres	1617 msl 362,000 acres
28	Base flood control elev & area	2234 msl 211,000 acres	1837.5 msl 308,000 acres	1607.5 msl 311,000 acres
29	Min. operating pool elev. & area	2160 msl 89,000 acres	1775 msl 125,000 acres	1540 msl 115,000 acres
	Storage allocation & capacity			
30	Exclusive flood control	2250-2246 971,000 a.f.	1854-1850 1,495,000 a.f.	1620-1617 1,107,000 a.f.
31	Flood control & multiple use	2246-2234 2,704,000 a.f.	1850-1837.5 4,211,000 a.f.	1617-1607.5 3,208,000 a.f.
32	Carryover multiple use	2234-2160 10,700,000 a.f.	1837.5-1775 12,951,000 a.f.	1607.5-1540 13,353,000 a.f.
33	Permanent	2160-2030 4,088,000 a.f.	1775-1673 4,794,000 a.f.	1540-1415 5,315,000 a.f.
34	Gross	2250-2030 18,463,000 a.f.	1854-1673 23,451,000 a.f.	1620-1415 22,983,000 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	17,200 a.f./year 1073 yrs.	21,600 a.f./year 1,086 yrs.	14,800 a.f./year 1553 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	1669-1677 15,000- 60,000 cfs	1422-1427 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 - 121,600, 2 - 109,250	112,290
52	Plant capacity in kW	185,250	583,300	786,030
53	Dependable capacity in kW (9)	181,000	388,000	534,000
54	Avg. annual energy, million kWh (12)	1,040	2,258	2,629
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	(8) Length from upstream face of outlet or to spiral case.
Rolled earth, shale, chalk fill	Rolled earth fill & chalk berms	Rolled earth & chalk fill		16	
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) 1967-2014 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 29,000 acres	1,206,000 acres	26	(14) Based on Study 8-83-1985
1422 msl 60,000 acres	1365 msl 94,000 acres	1208 msl 25,000 acres	1,146,000 acres	27	
1420 msl 57,000 acres	1350 msl 76,000 acres	1204.5 msl 21,000 acres	984,000 acres	28	
1415 msl 51,000 acres	1320 msl 36,000 acres	1204.5 msl 21,000 acres	437,000 acres	29	
1423-1422 61,000 a.f.	1375-1365 986,000 a.f.	1210-1208 54,000 a.f.	4,674,000 a.f.	30	
1422-1420 118,000 a.f.	1365-1350 1,306,000 a.f.	1208-1204.5 79,000 a.f.	11,626,000 a.f.	31	
	1350-1320 1,532,000 a.f.		38,536,000 a.f.	32	
1420-1345 1,631,000 a.f.	1320-1240 1,469,000 a.f.	1204.5-1160 295,000 a.f.	17,592,000 a.f.	33	
1423-1345 1,810,000 a.f.	1375-1240 5,293,000 a.f.	1210-1160 428,000 a.f.	72,428,000 a.f.	34	
November 1963	January 1953	August 1955		35	
25 March 1964	24 November 1953	22 December 1955		36	
5,300 a.f./year 430 yrs.	15,800 a.f./year 334 yrs.	2,700 a.f./year 159 yrs.	77,400	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			43	
1351-1355(10) 25,000-100,000 cfs	32,000 cfs - 128,000 cfs 1228-1237 10,000-60,000 cfs	1153-1161 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	2,501,200 kw	52	
497,000	293,000	74,000	1,967,000 kw	53	Corps of Engineers, U.S. Army
982	1,727	724	9,360 million kWh	54	Compiled by
October 1964 - July 1966	March 1954 - January 1956	September 1956 - January 1957	July 1943 - July 1966	55	Northwestern Division
				56	Missouri River Region
$107,498,000	$199,066,000	$49,617,000	$1,166,404,000		April 2015

Plate 3
Summary of Master Manual Technical Criteria

NAVIGATION TARGET FLOWS

Location	Minimum Service (kcfs)	Full Service (kcfs)
Sioux City	25	31
Omaha	25	31
Nebraska City	31	37
Kansas City	35	41

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)

RELATION OF SYSTEM STORAGE TO NAVIGATION SEASON LENGTH

Date	System Storage (MAF)	Final Day of Navigation Support at Mouth of the Missouri River
July 1	51.5 or more	November 30 (8-month season)
July 1	46.8 through 41.0	October 31 (7-month season)
July 1	36.5 or less	September 30 (6-month season)

RELATION OF SYSTEM WINTER RELEASE TO SYSTEM STORAGE

September 1 System Storage (MAF)	Average Winter Release for Gavins Point
58.0 or more	17,000 cfs
55.0 or less	12,000 cfs

GAVINS POINT RELEASES NEEDED TO MEET TARGET FLOWS

1950 to 1996 Data (kcfs)

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

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 57.0 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.

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

Plate 3 (cont'd)
Summary of Master Manual Technical Criteria

TECHNICAL CRITERIA FOR SPRING PULSES FROM GAVINS POINT DAM

Criteria Applicable to Both the March and May Spring Pulses

Flood Control Constraints	No change from current levels

Criteria Applicable to the March Spring Pulse

Drought Preclude	40.0 MAF or below measured on March 1.
Drought Proration of Pulse Magnitude*	None, 5 kcfs added to navigation releases, but no greater than 35 kcfs.
Initiation of Pulse	Extend the stepped System release increases that precede the beginning of the navigation season.
Rate of Rise before Peak	Approximately 5 kcfs for 1 day.
Duration of Peak	Two days.
Rate of Fall after Peak	Drop over 5 days to navigation target release.

Criteria Applicable to Time Period Between the Bimodal Pulses

Release	Existing Master Manual Criteria

Criteria Applicable to the May Spring Pulse

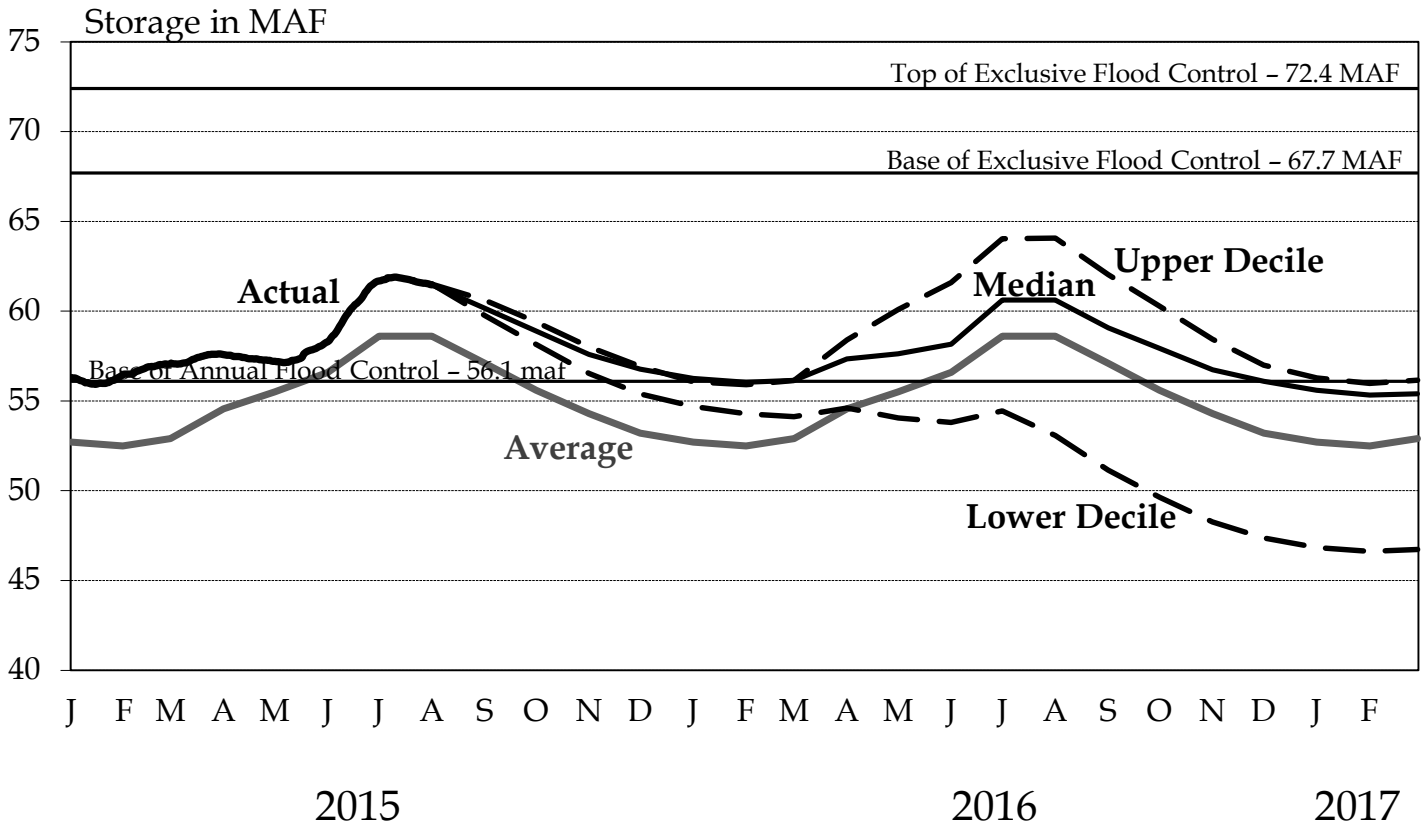
Drought Preclude	40.0 MAF or below measured on May 1.
Proration of Pulse Magnitude Based On System Storage*	Prorated from 16 kcfs based on a May 1 System Storage check; 100% at 54.5 MAF; straight line interpolation to 75% at 40.0 MAF.
Proration of Pulse Magnitude Based On Projected Runoff*	After the proration of the spring pulse magnitude for System Storage, the resultant magnitude would be further adjusted either up or down based on the May CY runoff forecast; 100% for Median; straight-line interpolation to 125% at Upper Quartile runoff; 125% for runoff above Upper Quartile; straight-line interpolation to 75% at Lower Quartile runoff; 75% for runoff below Lower Quartile.
Initiation of Pulse	Between May 1 to May 19, depending on Missouri River water temperature immediately below Gavins Point Dam. If possible, pulse will be initiated after the second daily occurrence of a 16 degree Celsius water temperature; however, the decision will be informed by the potential for 'take' of Threatened and Endangered bird species.
Rate of Rise before Peak	Approximately 6 kcfs per day.
Duration of Peak	Two days.
Rate of Fall after Peak	Approximately 30% drop over 2 days followed by a proportional reduction in releases back to the existing Master Manual criteria over an 8-day period.

Spring Pulse Downstream Flow Limits

Omaha	41,000 cfs
Nebraska City	47,000 cfs
Kansas City	71,000 cfs

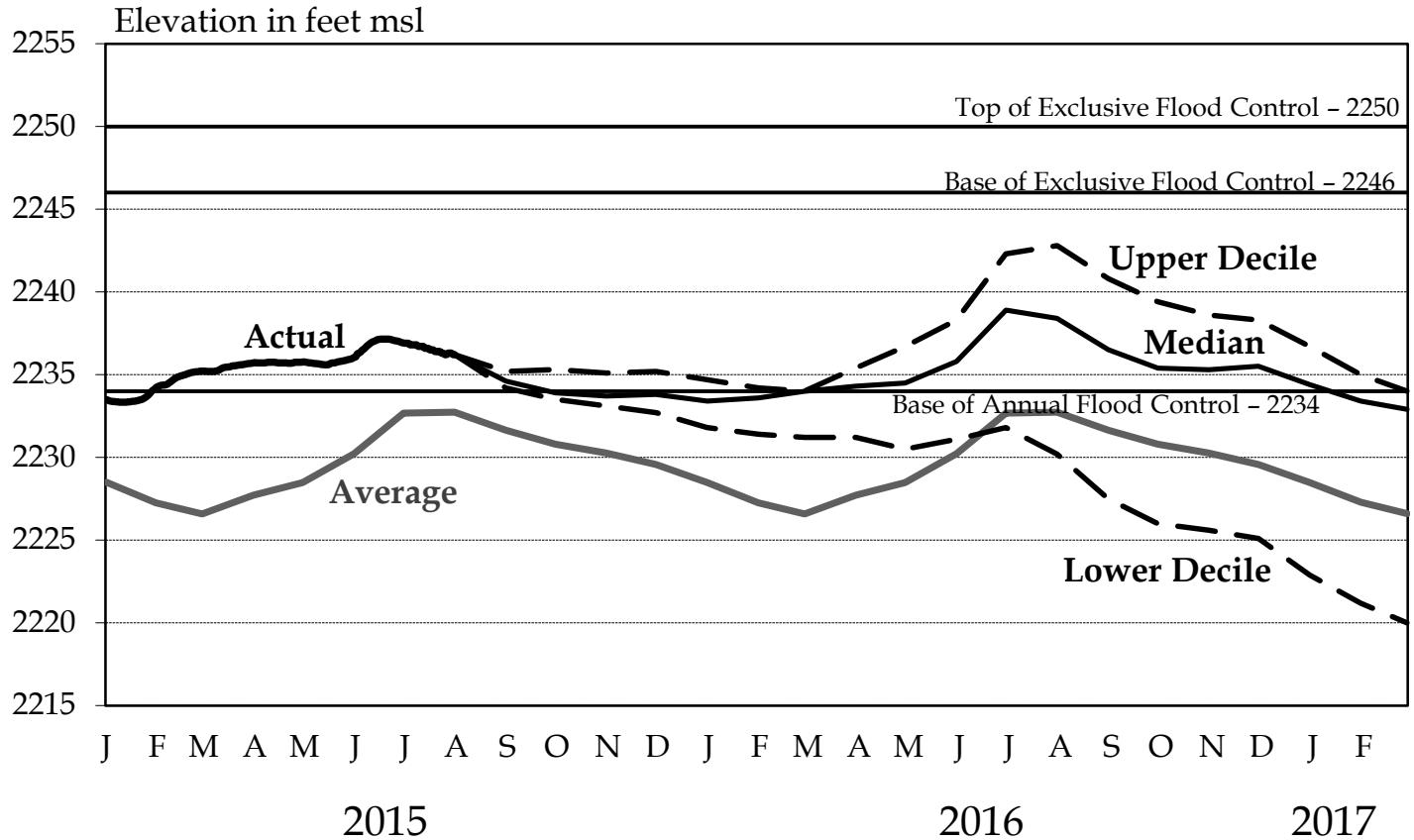
* Spring pulse magnitudes will be determined by taking the difference between pre-pulse Gavins Point releases and the peak pulse Missouri River flows measured just downstream of the mouth of the James River.

System Storage
2015-2016 AOP



Average 1967-2014

Fort Peck
2015-2016 AOP

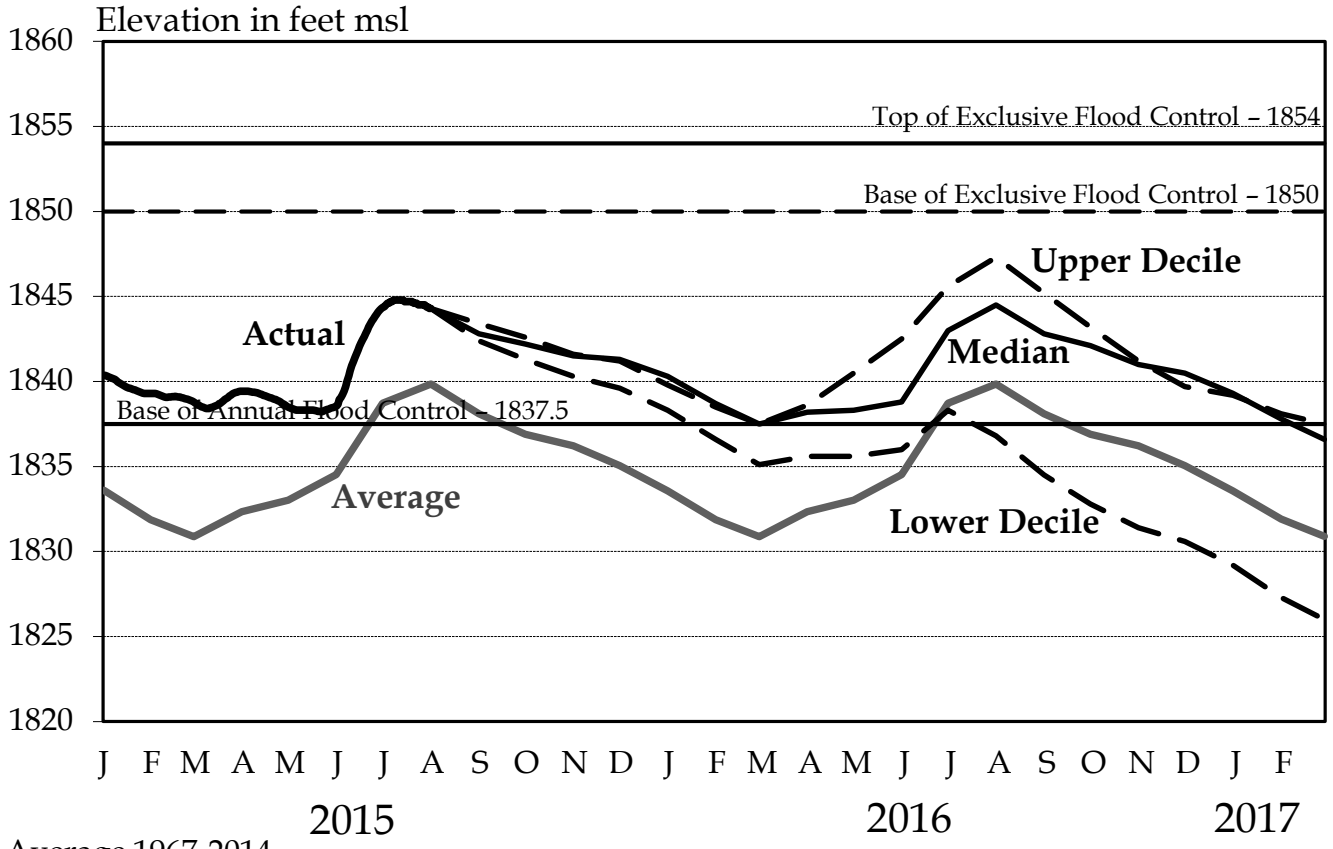


Average 1967-2014

Plate 4

Garrison

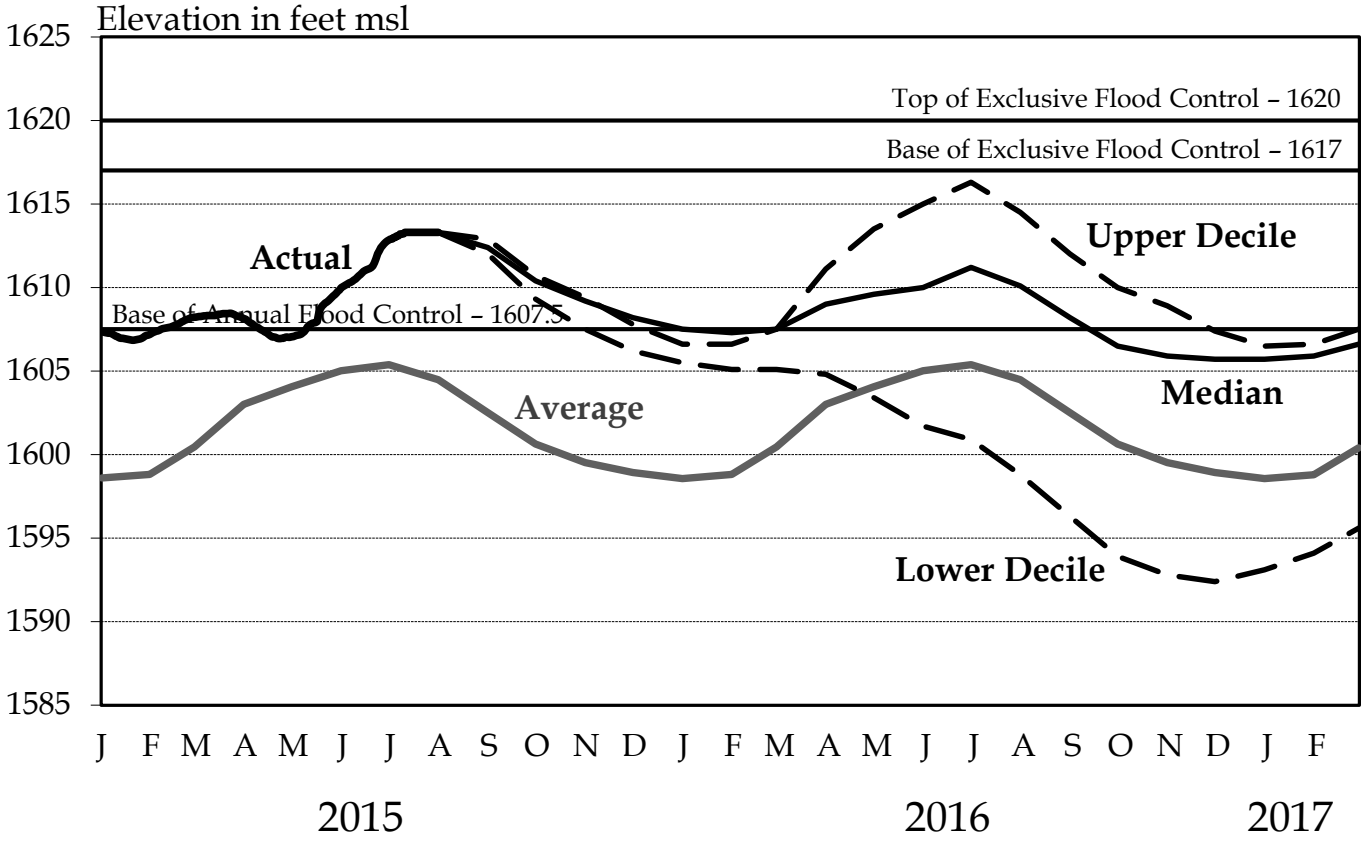
2015-2016 AOP



Average 1967-2014

Oahe

2015-2016 AOP



Average 1967-2014

Plate 5

System Storage

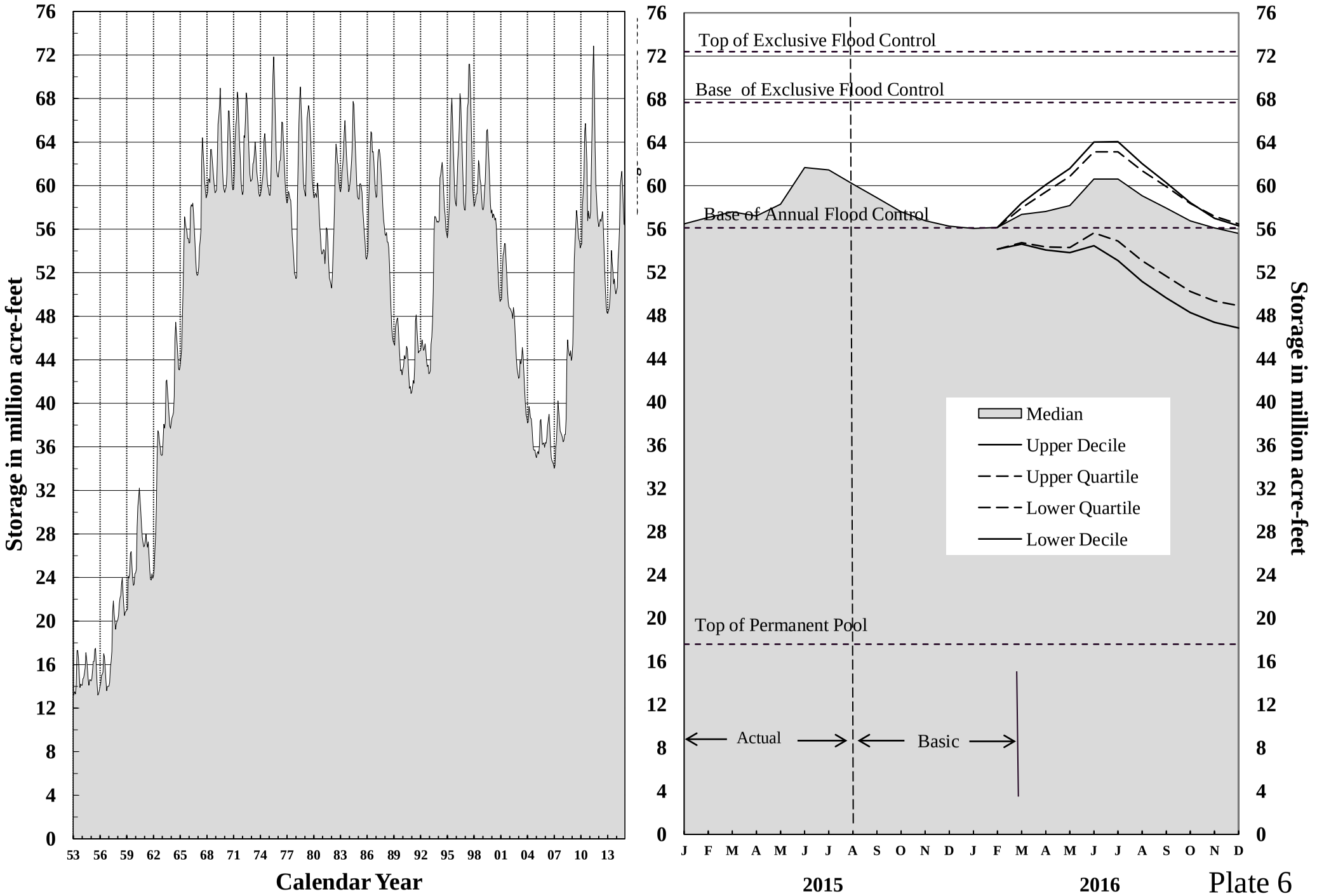


Plate 6

Gavins Point Releases

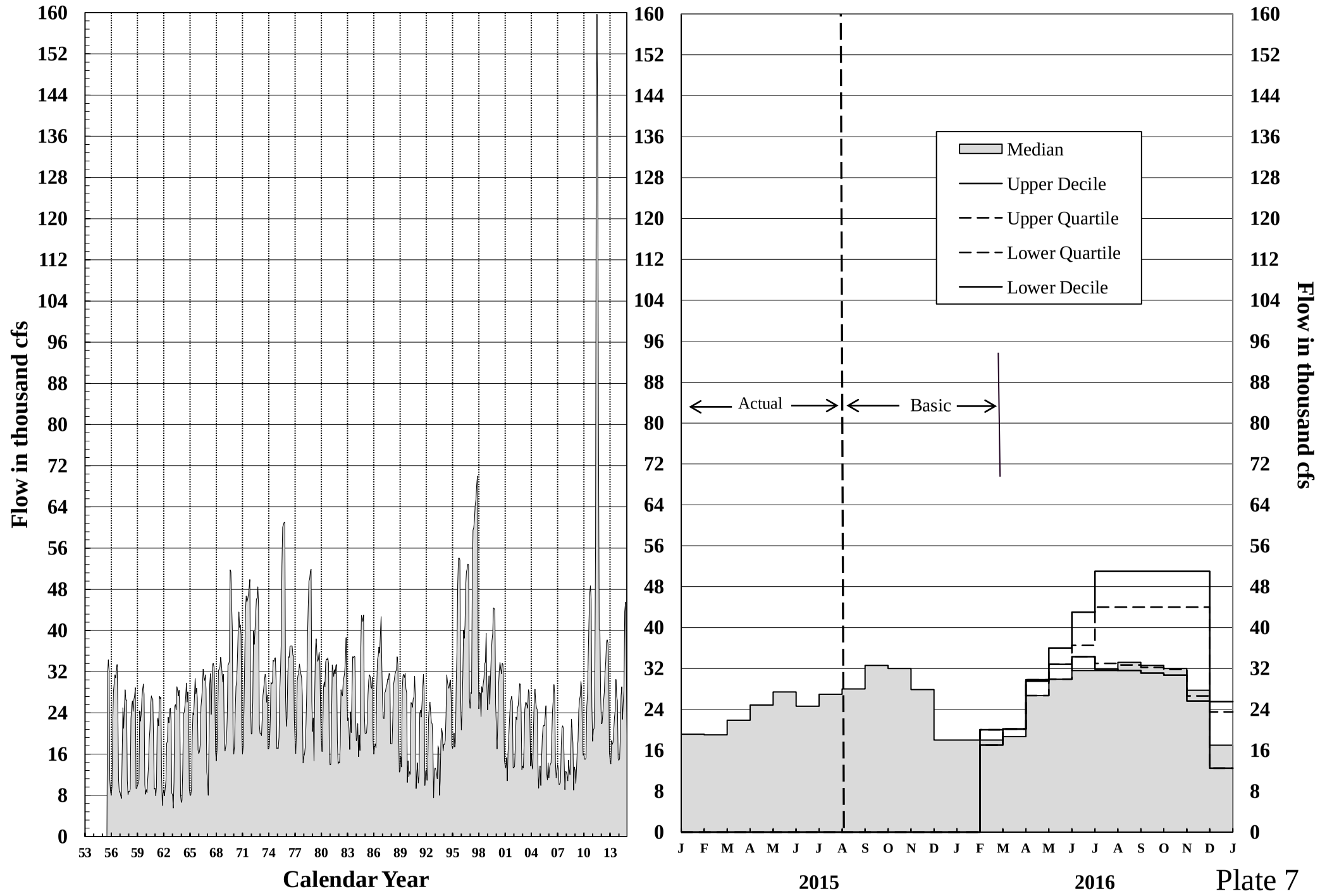
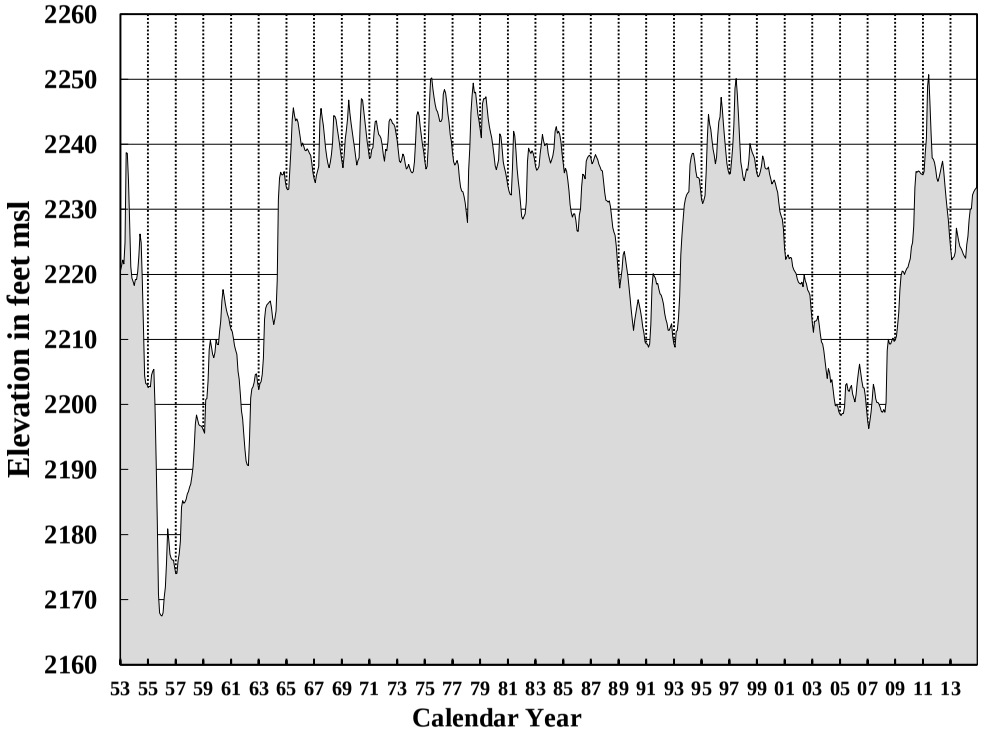
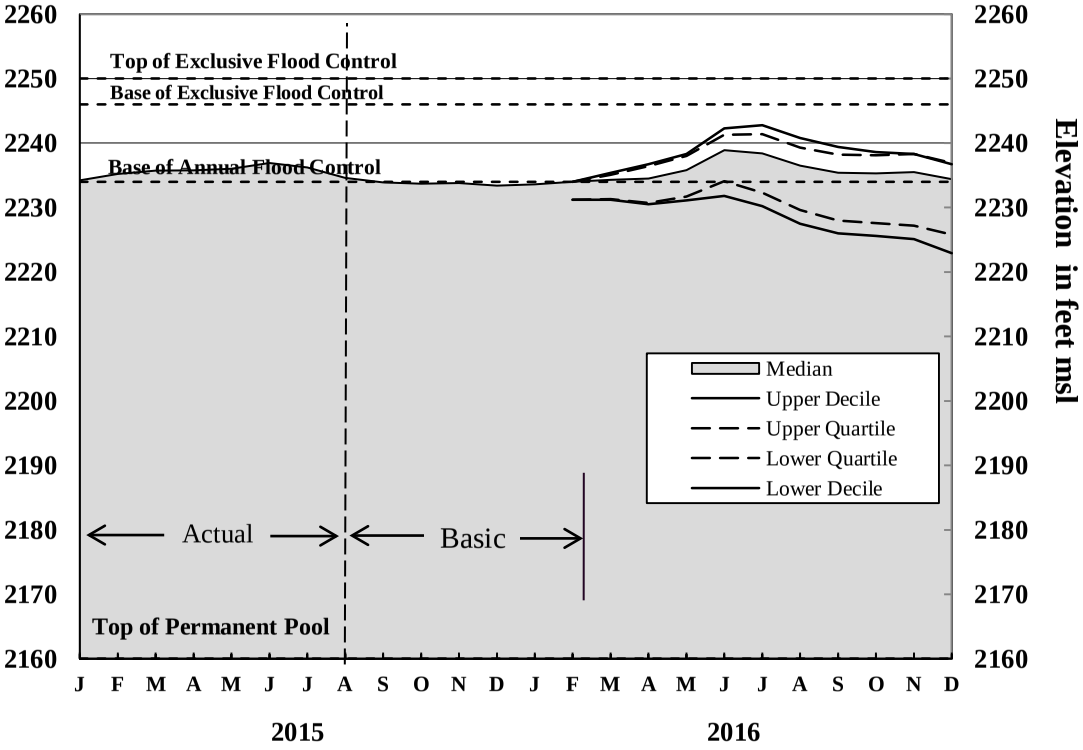
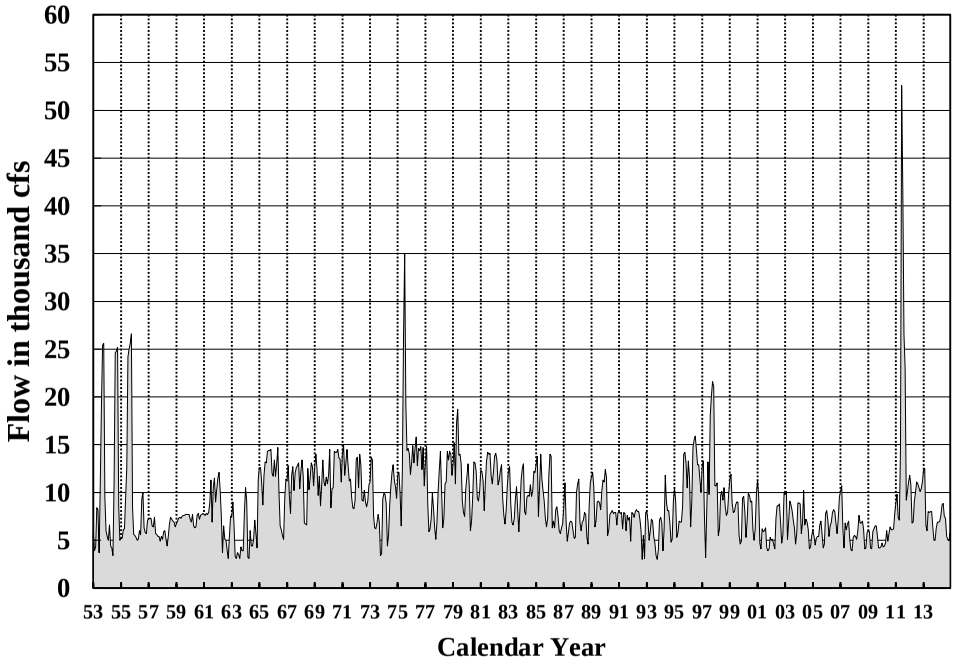


Plate 7

Fort Peck
Elevations and Releases







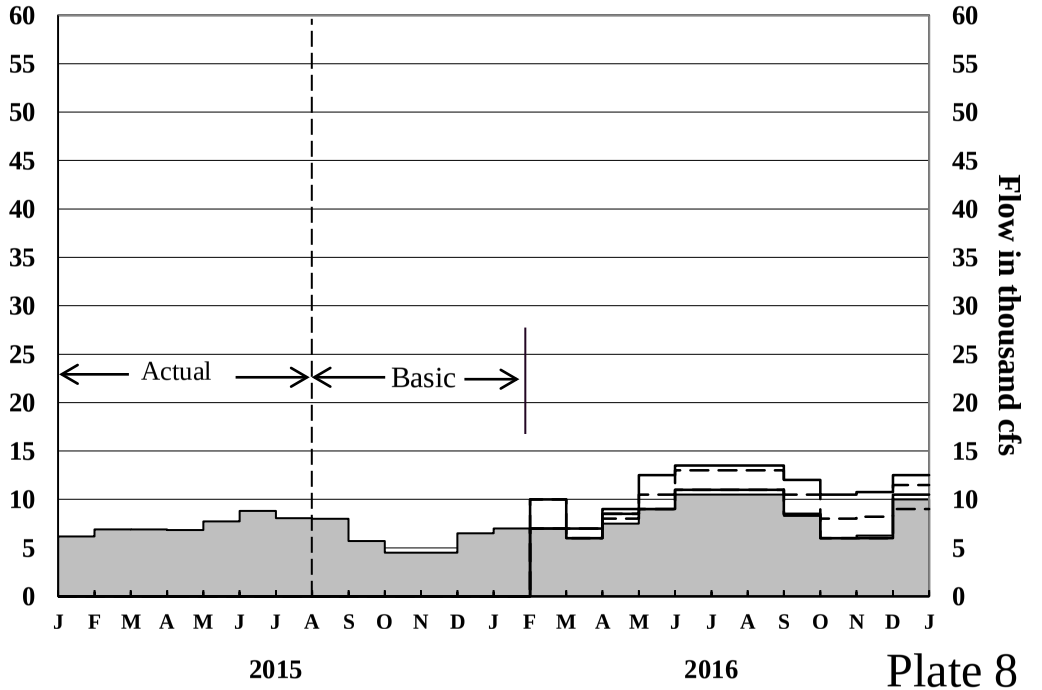
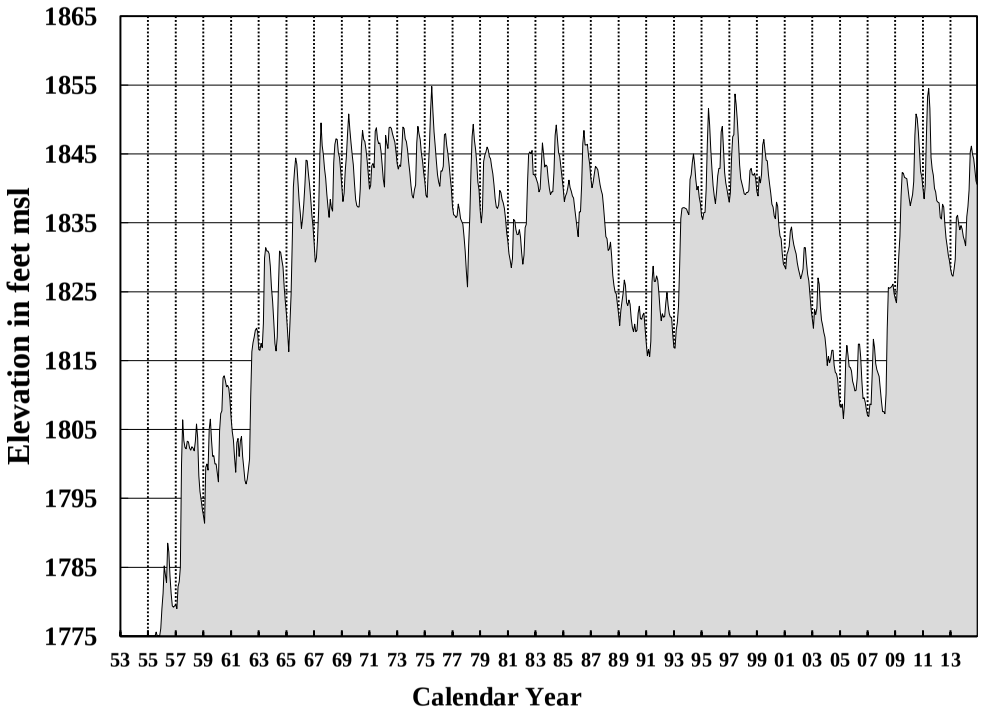
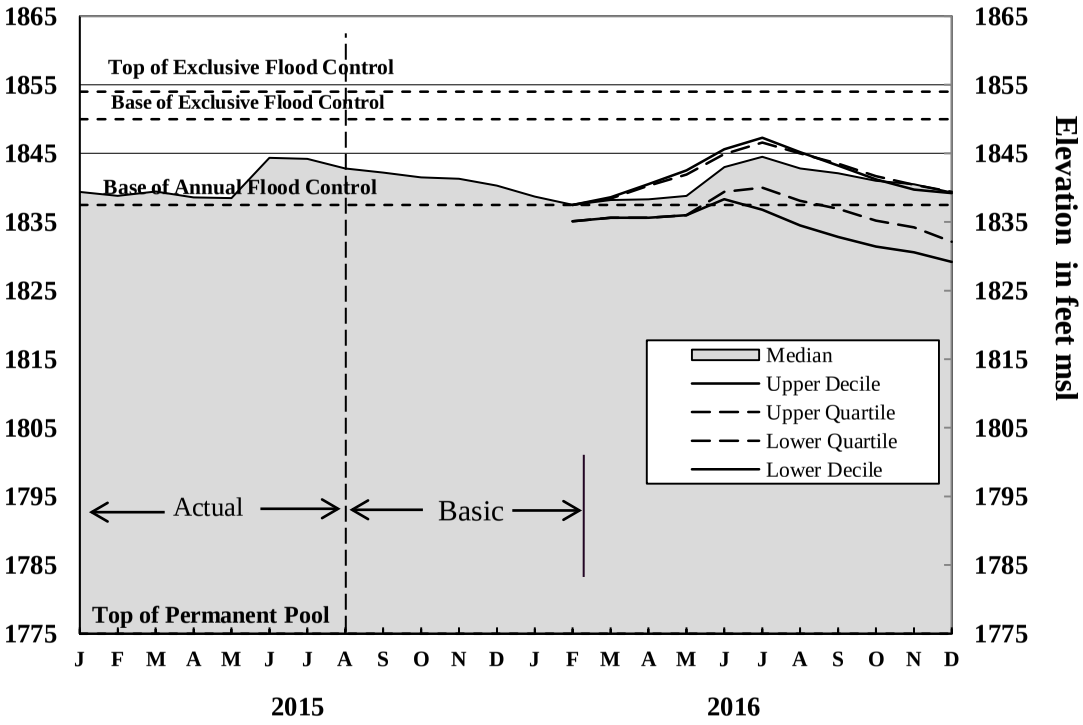


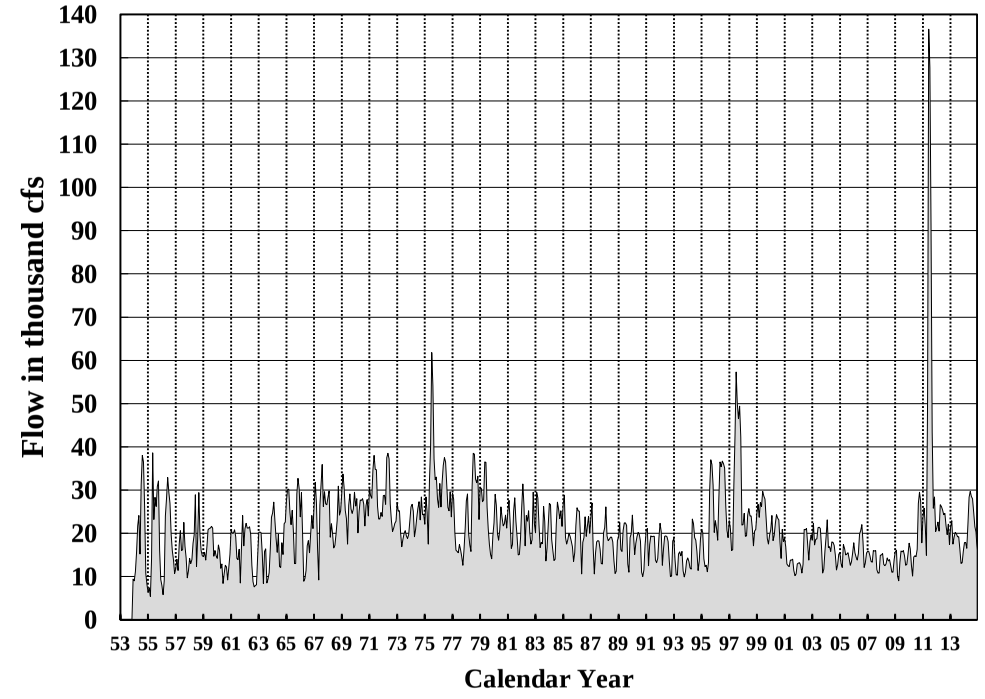
Plate 8

Garrison

Elevations and Releases







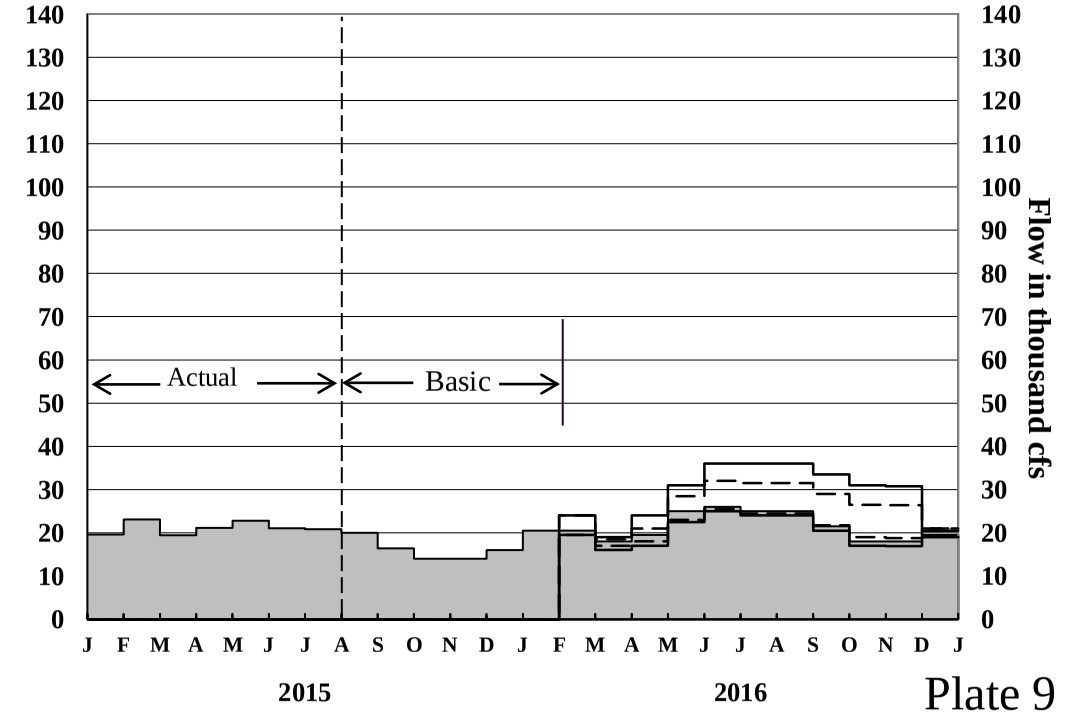
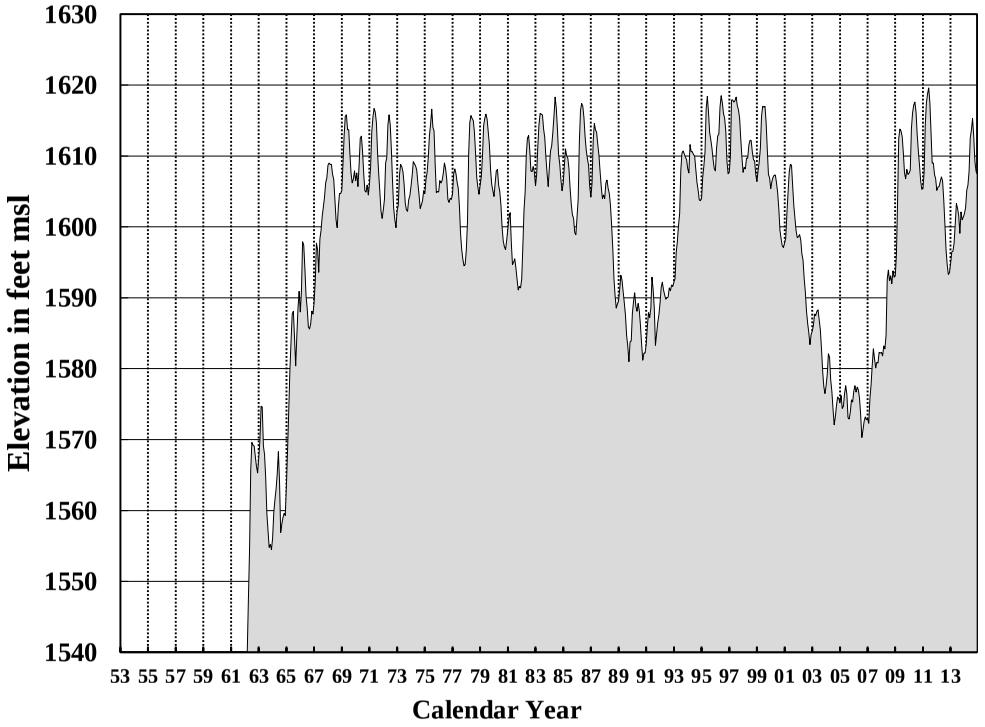
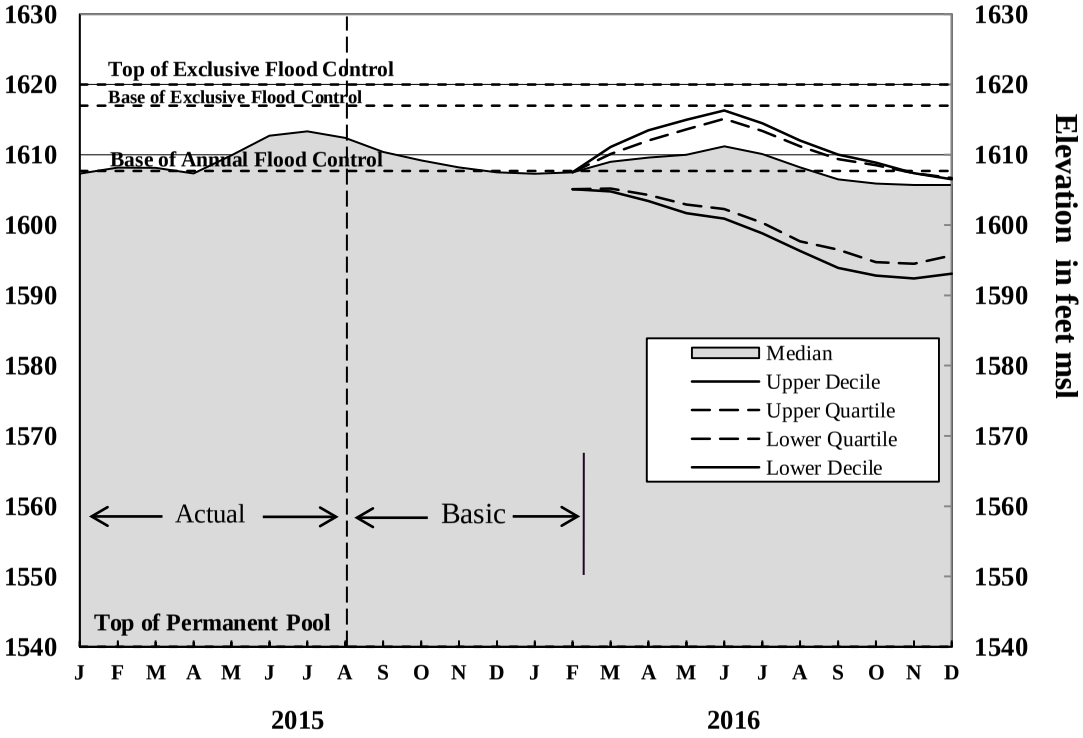


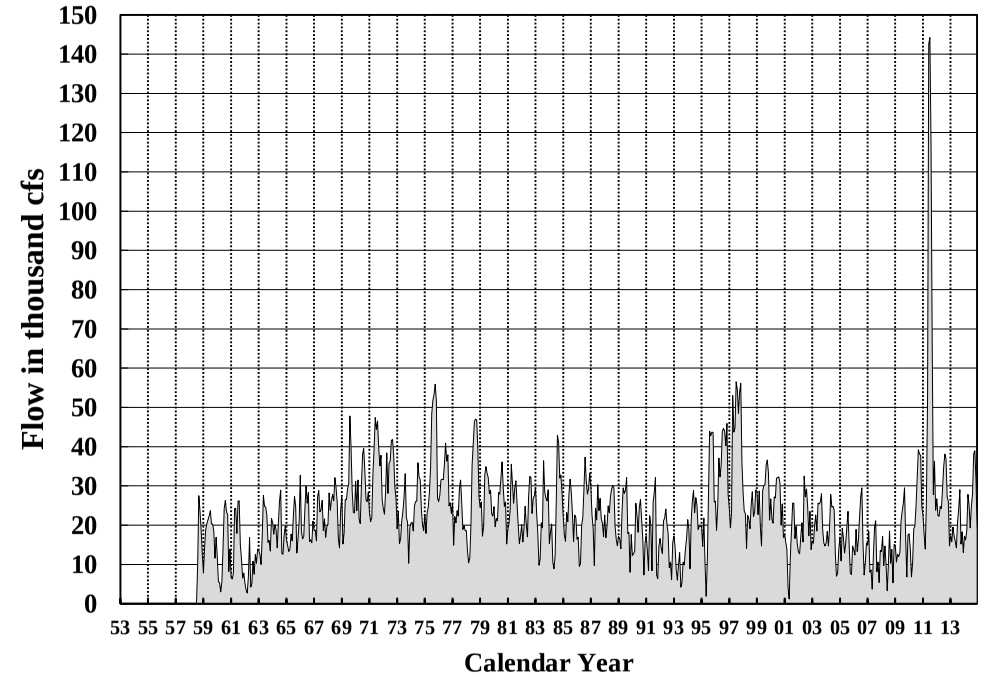
Plate 9

Oahe

Elevations and Releases







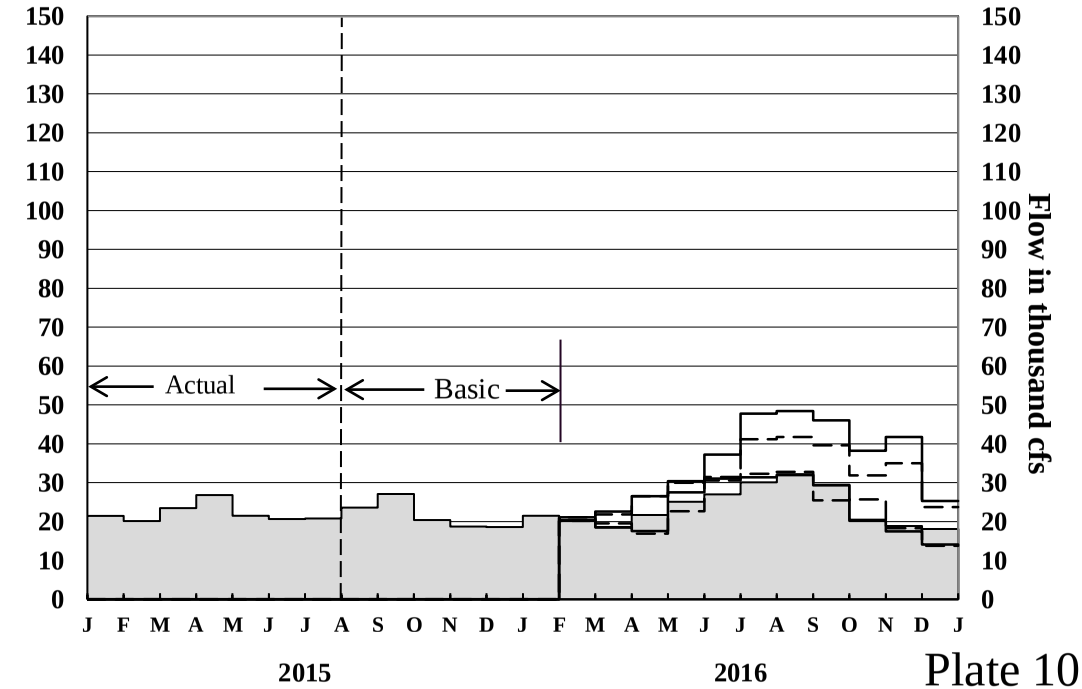
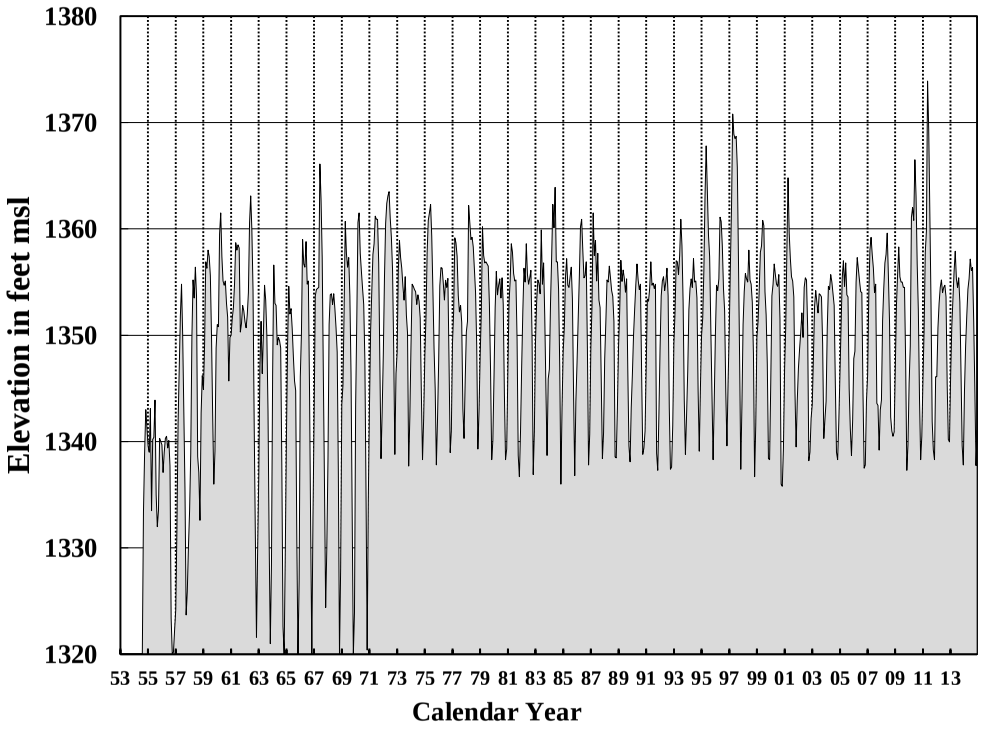
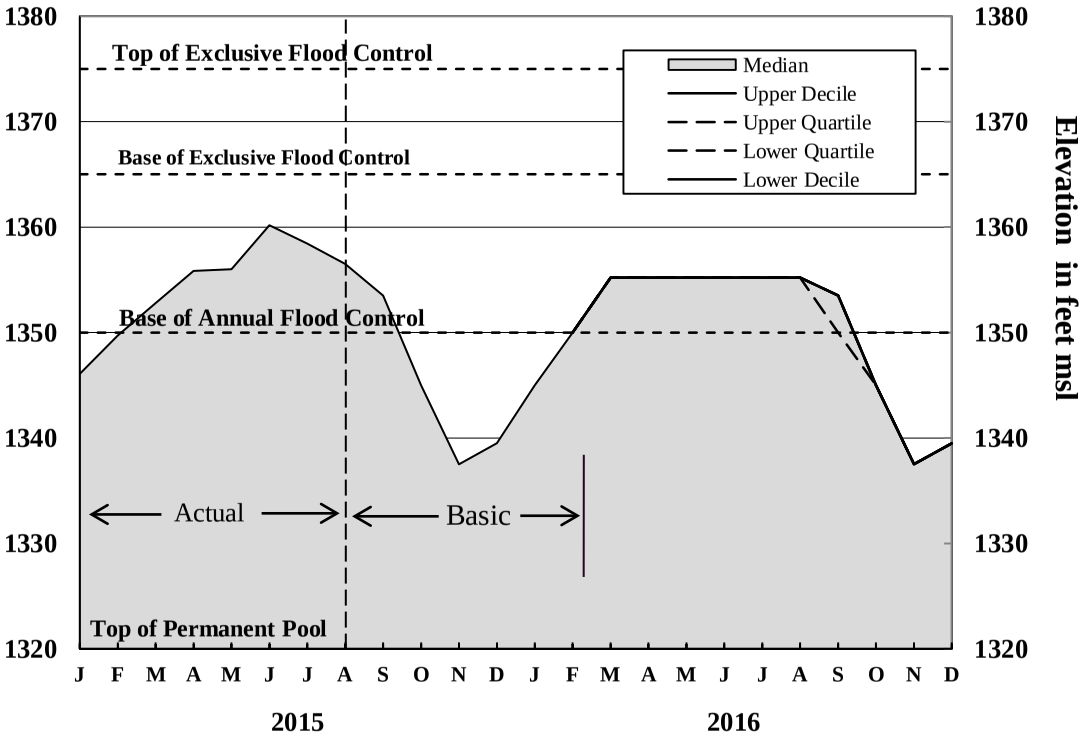
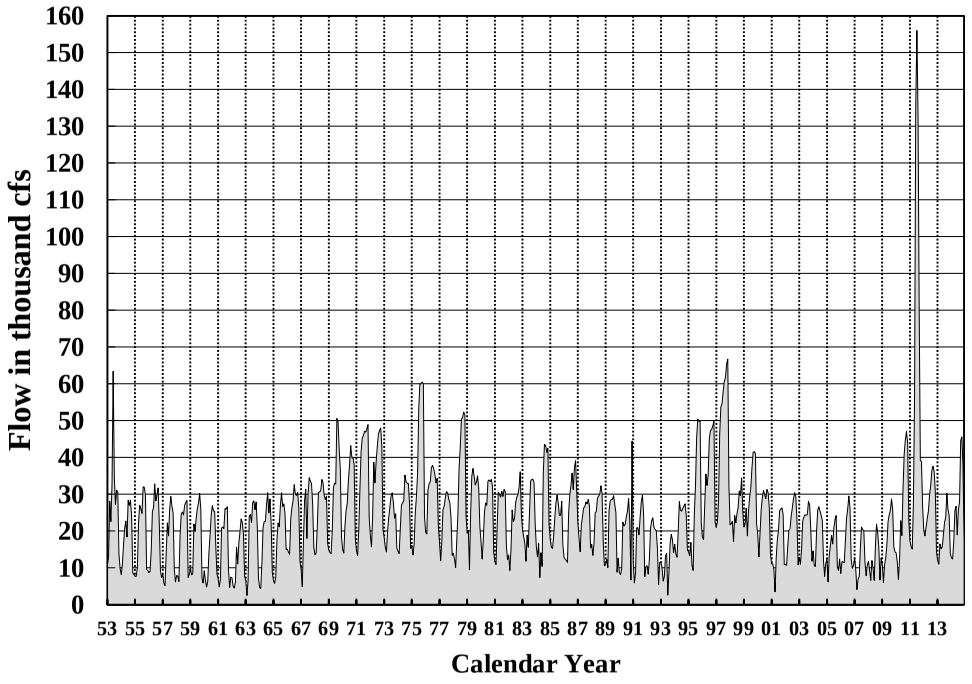


Plate 10

Fort Randall
Elevations and Releases







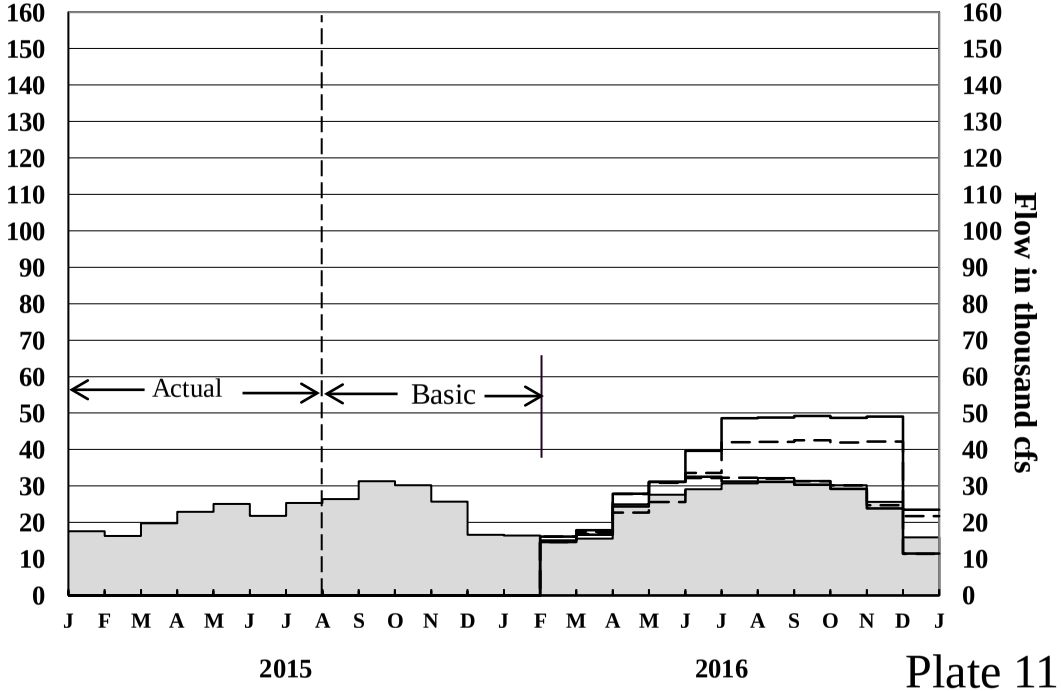
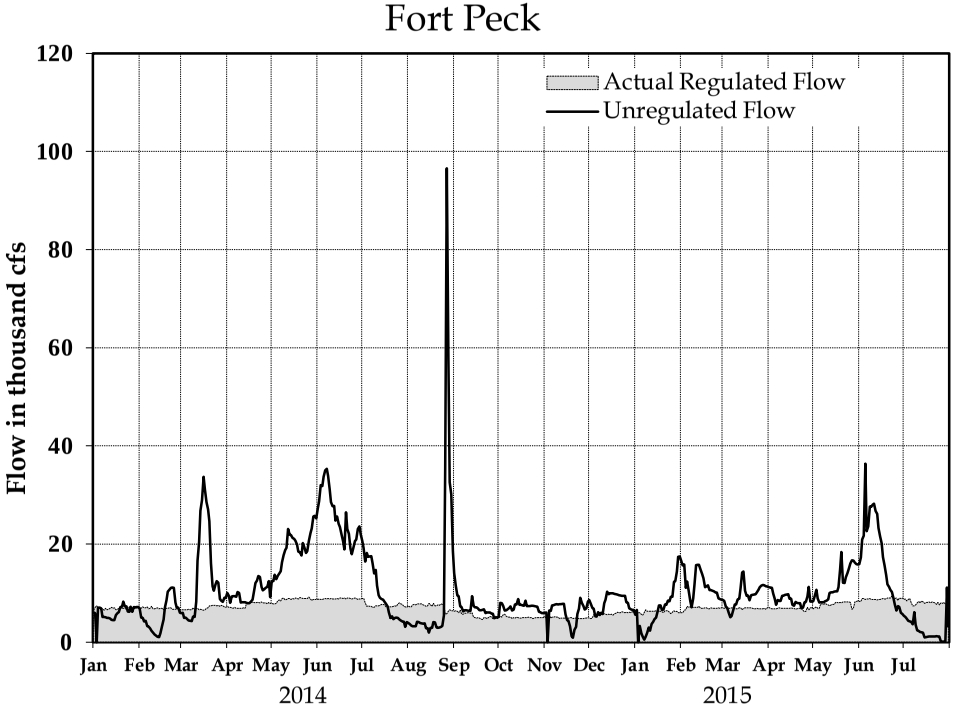
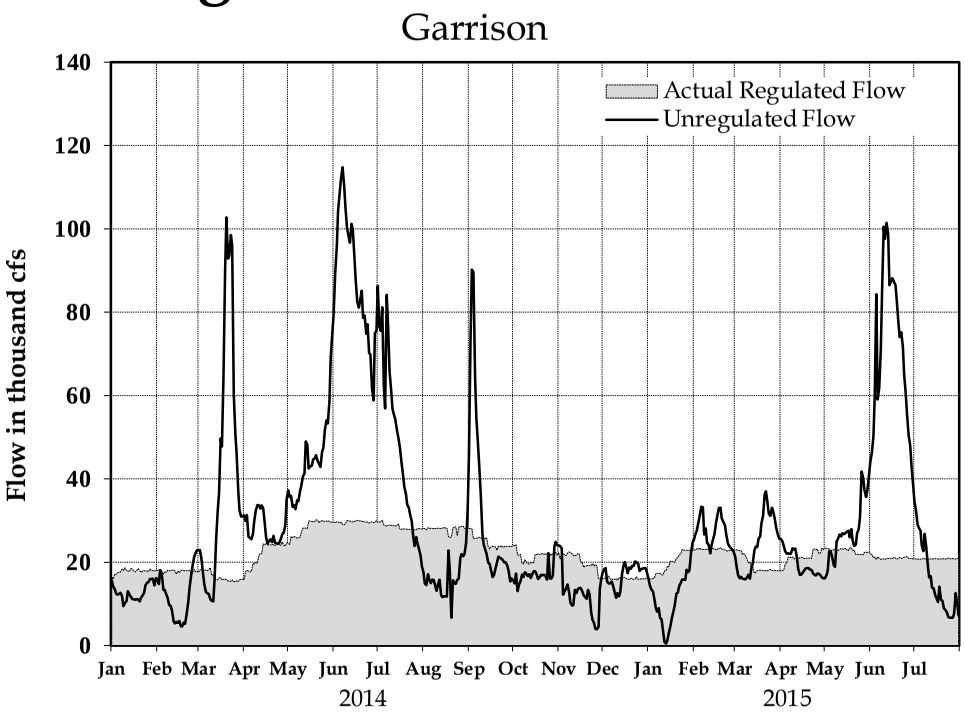
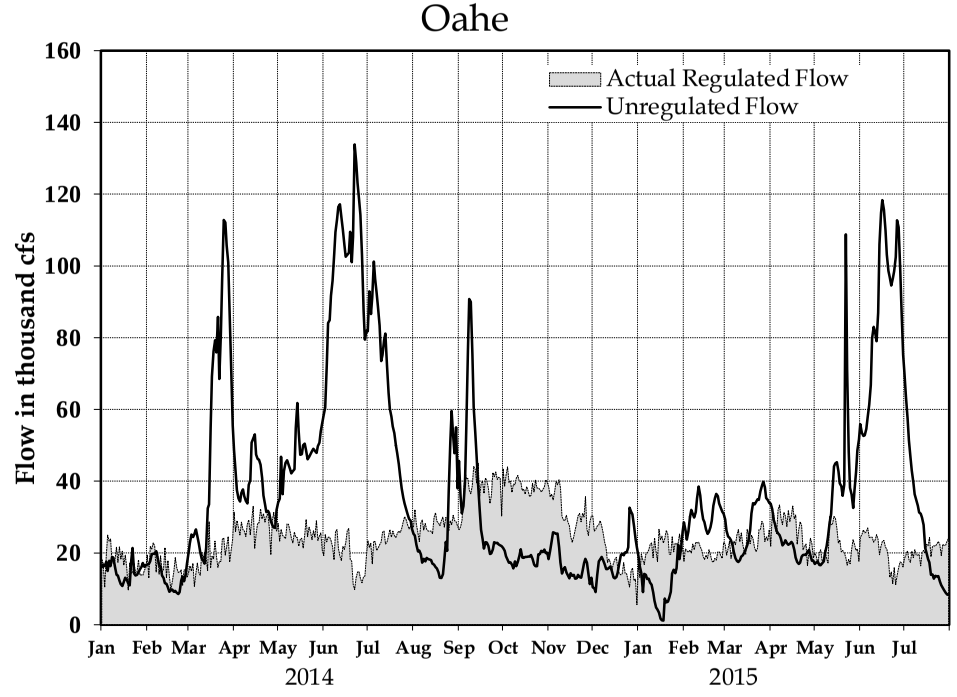


Plate 11

Reservoir Release and Unregulated Flow







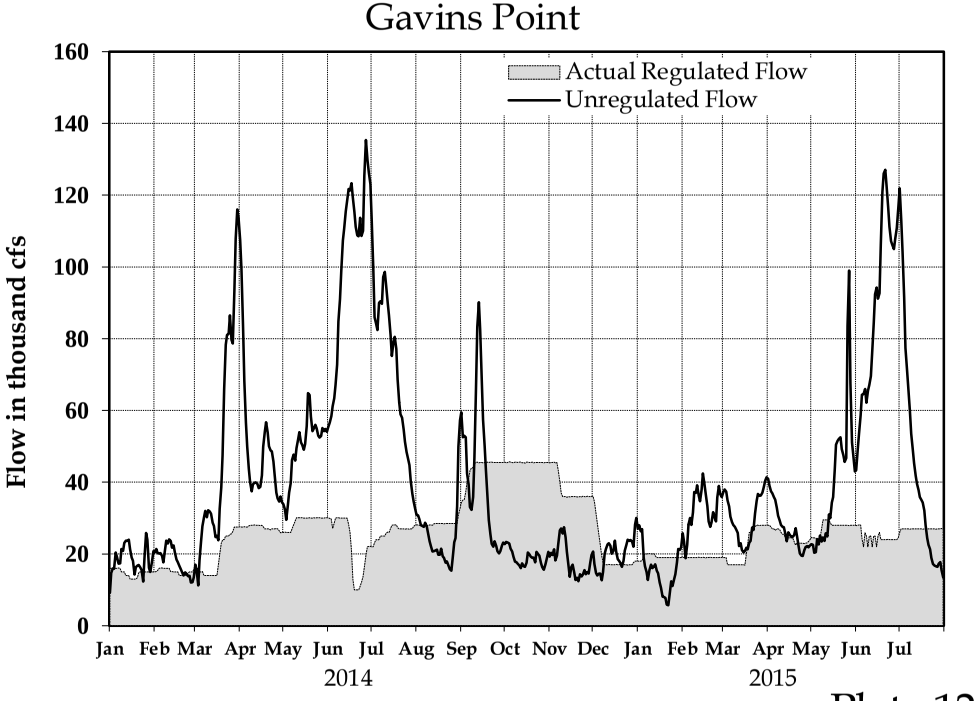


Plate 12

System Gross Capability and Average Monthly Generation

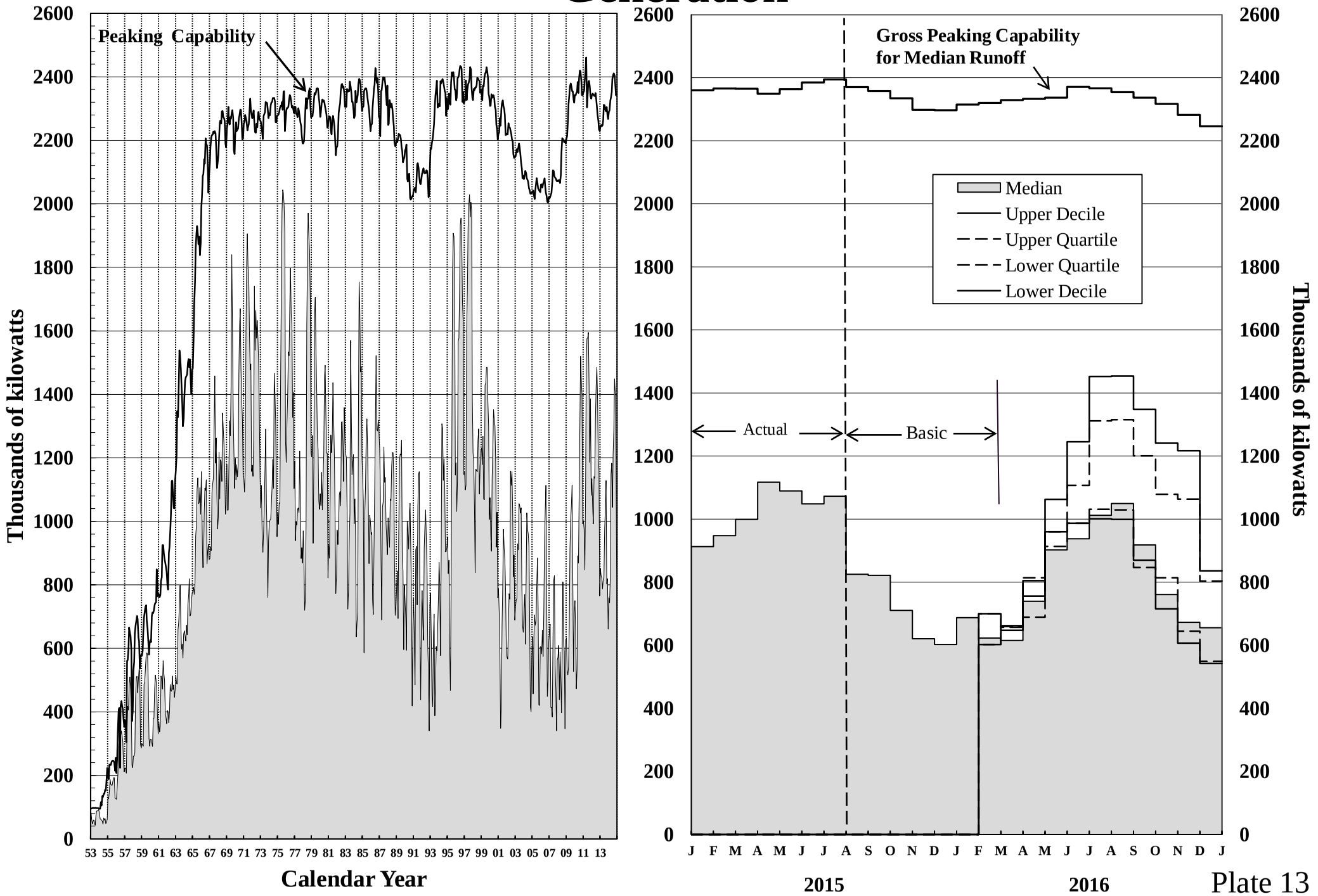


Plate 13

Tentative Five Year Extensions of 2015-2016 AOP

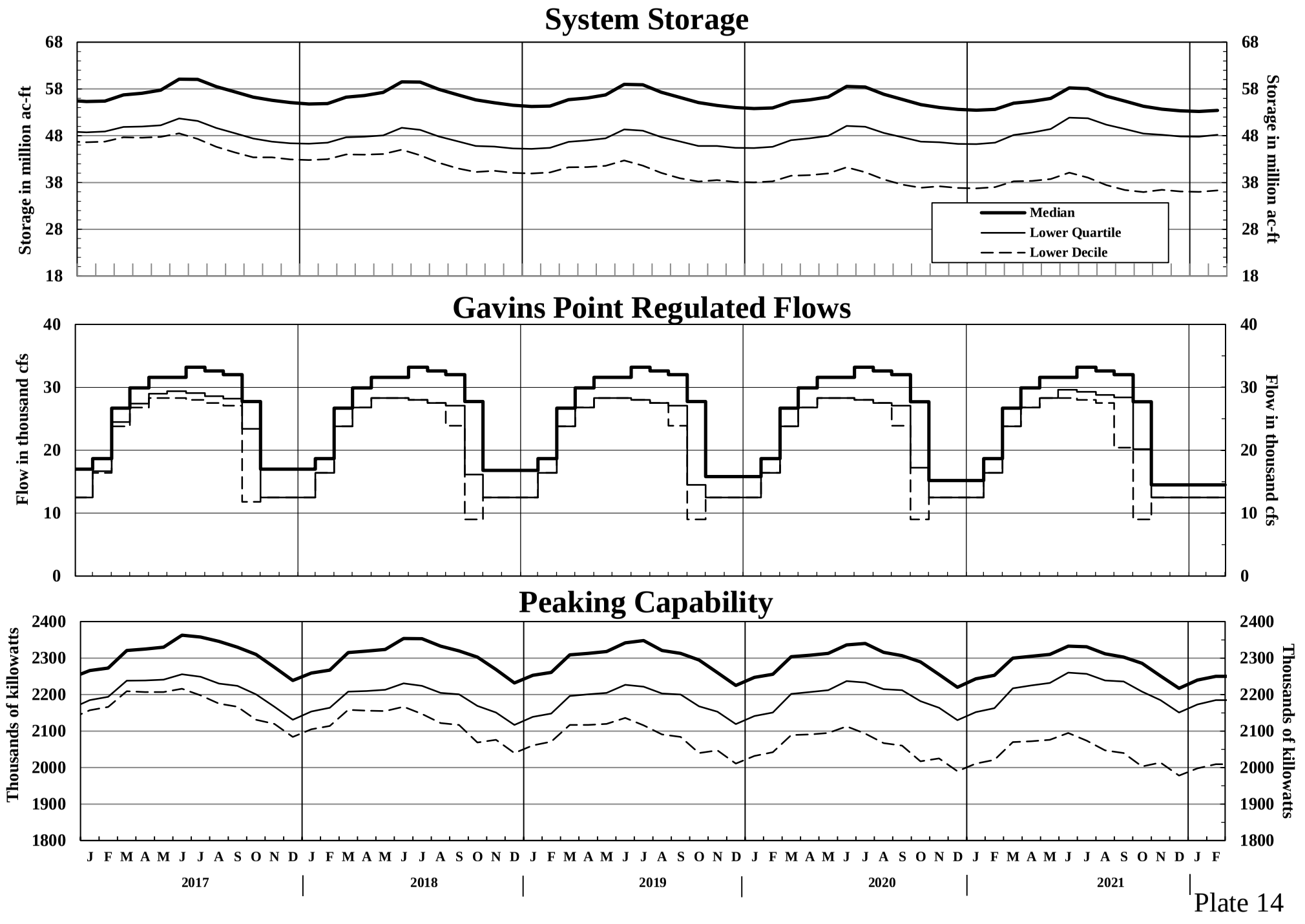


Plate 14

Tentative Five Year Extensions of 2015-2016 AOP

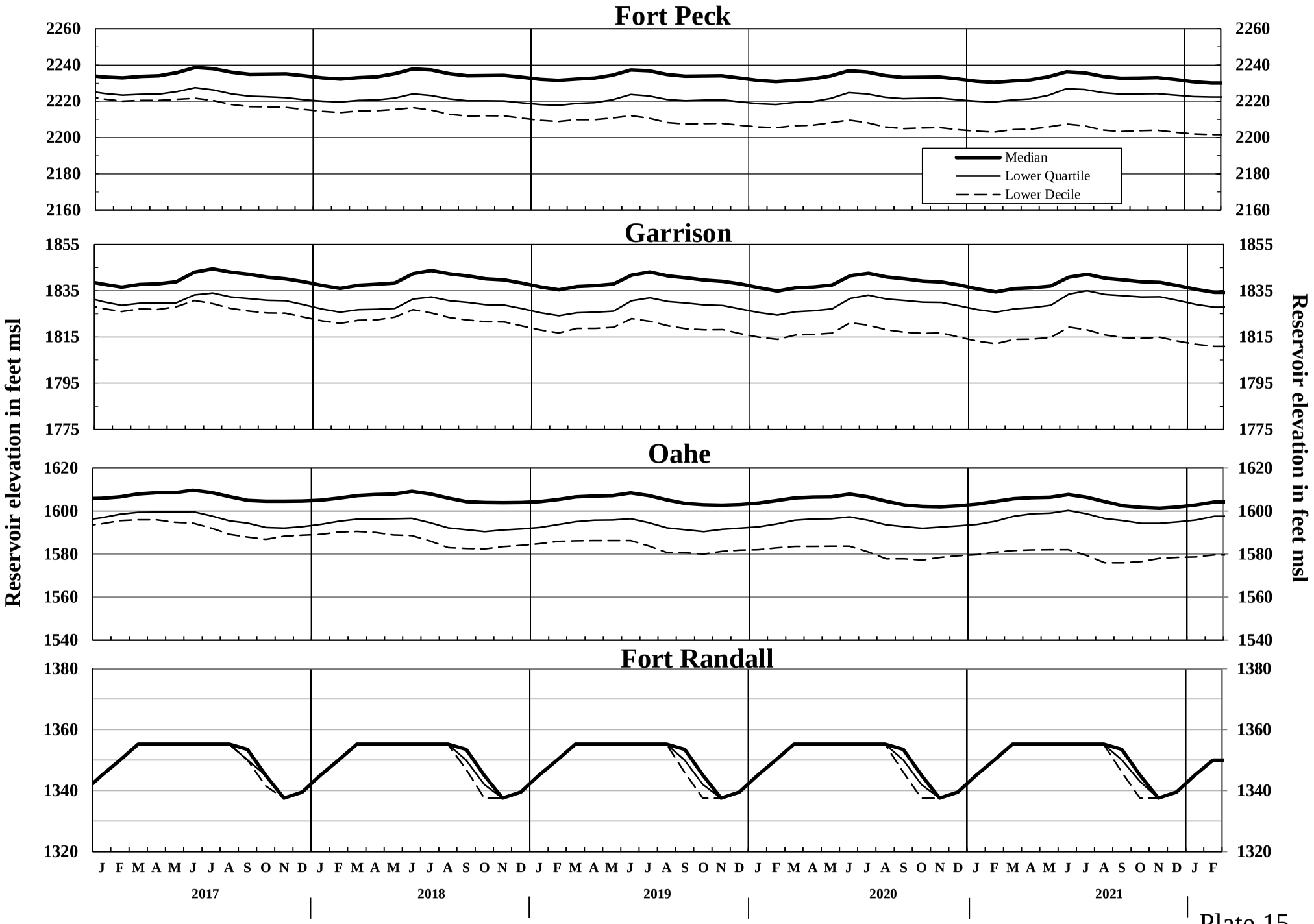


Plate 15

Tribal Lands of the Missouri River Basin

US Army Corps of Engineers ®

RESERVATIONS

1. Rocky Boy
2. Fort Belknap
3. Fort Peck
4. Fort Berthold
5. Turtle Mountain
6. Fort Totten
7. Red Lake
8. Nett Lake
9. White Earth
10. Leech Lake
11. Fond du Lac
12. Bad River
13. Lac Courte Oreilles
14. Lac du Flambeau
15. Crow
16. Northern Cheyenne
17. Standing Rock
18. Cheyenne River
19. Sisseton
20. Wind River
21. Pine RIdge
22. Rosebud
23. Lower Brule
24. Crow Creek
25. Yankton
26. Winnebago
27. Omaha
28. Potawatomi
29. Ute Mountain
30. Southern Ute
31. Flathead
32. Blackfeet
33. Santee
34. Flandreau
35. Iowa
36. Sac and Fox
37. Kickapoo

Missouri River Basin

Bureau of Indian Affairs - Tribal Lands

Department of Defense - Military installations and U.S. Army Corps of Engineers Lands and Reservoirs

Plate 16

TIME OF STUDY: 10:19:26 FULL SERV 1ST HALF/ FULL SERV 2ND HALF STUDY NO 1
VALUES IN 1000 AF EXCEPT AS INDICATED

	31JUL15	2015							2016
	INI-SUM	31AUG	30SEP	31OCT	15NOV	22NOV	30NOV	31DEC	31JAN	29FEB
--FORT PECK--										
NAT INFLOW	1963	260	230	270	140	65	75	250	312	361
DEPLETION	-583	33	-75	-56	-42	-20	-22	-131	-155	-115
EVAPORATION	423	87	108	94	43	20	23	49		
MOD INFLOW	2123	140	197	232	139	65	74	332	467	476
RELEASE	2607	492	338	277	134	62	71	400	430	403
STOR CHANGE	-484	-351	-141	-45	6	3	3	-68	37	73
STORAGE	15267.	14916	14775	14730	14736	14738	14741	14673	14710	14783
ELEV FTMSL	2236.2	2234.6	2233.9	2233.7	2233.7	2233.8	2233.8	2233.4	2233.6	2234.0
DISCH KCFS	8.100	8.0	5.7	4.5	4.5	4.5	4.5	6.5	7.0	7.0
POWER										
AVE POWER MW		110	77	61	61	61	61	89	95	95
PEAK POW MW		163	162	162	162	162	162	162	162	162
ENERGY GWH	430.4	81.5	55.8	45.7	22.1	10.3	11.8	65.9	70.9	66.4
--GARRISON--										
NAT INFLOW	2426	460	370	440	165	77	88	210	261	355
DEPLETION	-570	114	-147	-44	-130	-60	-69	-110	-74	-50
CHAN STOR	10	1	23	11				-19	-5	
EVAPORATION	502	103	129	112	50	23	27	58		
REG INFLOW	5111	735	748	660	378	176	202	643	761	808
RELEASE	7323	1230	976	861	417	194	222	984	1261	1179
STOR CHANGE	-2212	-494	-227	-200	-38	-18	-20	-341	-500	-372
STORAGE	19952.	19458	19230	19030	18991	18973	18953	18612	18112	17740
ELEV FTMSL	1844.3	1842.8	1842.2	1841.5	1841.4	1841.4	1841.3	1840.3	1838.7	1837.5
DISCH KCFS	20.800	20.0	16.4	14.0	14.0	14.0	14.0	16.0	20.5	20.5
POWER										
AVE POWER MW		256	209	178	178	178	178	202	258	255
PEAK POW MW		498	488	483	482	482	482	478	472	468
ENERGY GWH	1121.9	190.6	150.6	132.6	64.0	29.9	34.1	150.6	191.6	177.8
--OAHE--										
NAT INFLOW	552	150	120	75	35	16	19	30	12	95
DEPLETION	210	128	31	-12	1	0	1	13	19	29
CHAN STOR	0	3	14	9				-8	-18	
EVAPORATION	502	106	131	111	49	23	26	56		
REG INFLOW	7163	1149	948	846	401	187	214	937	1236	1245
RELEASE	9076	1454	1612	1256	577	305	231	1143	1323	1174
STOR CHANGE	-1913	-305	-665	-410	-176	-117	-17	-206	-88	71
STORAGE	20576.	20271	19606	19196	19020	18902	18886	18680	18592	18663
ELEV FTMSL	1613.3	1612.4	1610.4	1609.2	1608.6	1608.3	1608.2	1607.5	1607.3	1607.5
DISCH KCFS	20.800	23.6	27.1	20.4	19.4	22.0	14.6	18.6	21.5	20.4
POWER										
AVE POWER MW		314	356	267	253	285	189	241	278	263
PEAK POW MW		734	723	717	714	712	711	708	706	708
ENERGY GWH	1432.7	233.3	256.5	198.7	90.9	47.8	36.3	179.1	206.7	183.4
--BIG BEND--										
EVAPORATION	99	20	25	22	10	5	5	12		
REG INFLOW	8977	1434	1587	1234	567	300	226	1131	1323	1174
RELEASE	8968	1425	1587	1234	567	300	226	1131	1323	1174
STORAGE	1622.	1631	1631	1631	1631	1631	1631	1631	1631	1631
ELEV FTMSL	1419.8	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0
DISCH KCFS	19.600	23.2	26.7	20.1	19.1	21.6	14.2	18.4	21.5	20.4
POWER										
AVE POWER MW		107	126	98	96	108	72	93	106	98
PEAK POW MW		500	517	538	538	538	538	538	538	529
ENERGY GWH	525.9	79.7	91.0	73.3	34.5	18.2	13.8	68.8	78.5	68.1
--FORT RANDALL--										
NAT INFLOW	238	70	60	8	3	1	2	12	28	54
DEPLETION	34	15	7	1	1	0	1	3	3	3
EVAPORATION	109	26	32	24	9	4	4	9		
REG INFLOW	9063	1454	1608	1217	560	297	223	1131	1348	1225
RELEASE	9770	1623	1865	1856	873	408	249	1022	1007	866
STOR CHANGE	-706	-169	-257	-639	-313	-111	-26	108	341	359
STORAGE	3707.	3538	3281	2642	2329	2218	2192	2301	2642	3001
ELEV FTMSL	1358.4	1356.5	1353.5	1345.0	1340.0	1338.0	1337.5	1339.5	1345.0	1350.0
DISCH KCFS	25.300	26.4	31.3	30.2	29.3	29.4	15.7	16.6	16.4	15.1
POWER										
AVE POWER MW		227	263	242	222	215	115	122	125	120
PEAK POW MW		360	350	319	296	287	285	294	320	339
ENERGY GWH	943.0	168.7	189.6	179.8	79.8	36.1	22.0	90.9	92.6	83.5
--GAVINS POINT--										
NAT INFLOW	799	120	110	119	59	28	31	100	100	132
DEPLETION	28	10	-5	2	5	2	3	10	1	
CHAN STOR	19	-2	-9	2	2	0	25	-2	0	2
EVAPORATION	32	6	8	7	3	2	2	4		
REG INFLOW	10528	1725	1963	1968	925	432	302	1107	1107	1000
RELEASE	10537	1722	1940	1968	925	432	302	1107	1107	1035
STOR CHANGE	-9	3	23							-35
STORAGE	336.	339	362	362	362	362	362	362	362	327
ELEV FTMSL	1206.4	1206.5	1207.5	1207.5	1207.5	1207.5	1207.5	1207.5	1207.5	1206.0
DISCH KCFS	27.000	28.0	32.6	32.0	31.1	31.1	19.0	18.0	18.0	18.0
POWER										
AVE POWER MW		96	109	108	106	106	67	64	64	63
PEAK POW MW		115	117	117	117	117	117	117	117	114
ENERGY GWH	438.1	71.5	78.3	80.6	38.3	17.9	12.9	47.3	47.3	43.9
--GAVINS POINT - SIOUX CITY--										
NAT INFLOW	668	180	109	89	41	19	22	58	50	101
DEPLETION	132	38	25	12	7	3	3	14	15	15
REGULATED FLOW AT SIOUX CITY										
KAF	11073	1864	2024	2045	959	448	320	1151	1142	1121
KCFS		30.3	34.0	33.3	32.2	32.2	20.1	18.7	18.6	19.5
--TOTAL--										
NAT INFLOW	6646	1240	999	1001	443	207	236	660	763	1098
DEPLETION	-749	338	-164	-97	-158	-74	-84	-201	-191	-118
CHAN STOR	29	2	27	23	2	0	26	-30	-22	2
EVAPORATION	1667	348	433	371	165	76	87	188		
STORAGE	61460.	60152	58886	57591	57069	56825	56765	56258	56048	56145
SYSTEM POWER										
AVE POWER MW		1109	1142	955	916	954	682	810	924	895
PEAK POW MW		2370	2358	2335	2309	2298	2295	2297	2315	2320
ENERGY GWH	4891.9	825.2	821.9	710.7	329.6	160.3	130.9	602.6	687.6	623.1
DAILY GWH		26.6	27.4	22.9	22.0	22.9	16.4	19.4	22.2	21.5

INI-SUM 31AUG 30SEP 31OCT 15NOV 22NOV 30NOV 31DEC 31JAN 29FEB

	31JUL15	2015							2016	
	INI-SUM	31AUG	30SEP	31OCT	15NOV	22NOV	30NOV	31DEC	31JAN	29FEB
--FORT PECK--										
NAT INFLOW	2381	338	276	324	168	78	90	300	374	433
DEPLETION	-548	5	-103	-63	-21	-10	-11	-109	-136	-101
EVAPORATION	290	65	82	72	17	8	9	37		
MOD INFLOW	2639	268	297	315	171	80	91	372	510	534
RELEASE	3124	492	284	338	164	76	87	492	615	575
STOR CHANGE	-485	-224	13	-23	8	4	4	-120	-105	-41
STORAGE	15267.	15043	15056	15033	15041	15044	15048	14928	14823	14782
ELEV FTMSL	2236.2	2235.2	2235.3	2235.1	2235.2	2235.2	2235.2	2234.7	2234.2	2234.0
DISCH KCFS	8.100	8.0	4.8	5.5	5.5	5.5	5.5	8.0	10.0	10.0
POWER										
AVE POWER MW		110	65	75	75	75	75	109	136	136
PEAK POW MW		163	163	163	163	163	163	163	162	162
ENERGY GWH	516.3	81.6	47.2	56.1	27.1	12.7	14.5	81.4	101.3	94.6
--GARRISON--										
NAT INFLOW	2958	598	444	528	198	92	106	252	314	426
DEPLETION	-566	101	-132	-12	-128	-60	-68	-117	-89	-62
CHAN STOR	-19	1	31	-7				-24	-20	
EVAPORATION	343	78	98	84	20	9	11	43		
REG INFLOW	6285	912	794	787	469	219	250	793	998	1063
RELEASE	8500	1230	1052	1107	536	250	301	1230	1414	1381
STOR CHANGE	-2214	-318	-258	-320	-66	-31	-51	-436	-416	-317
STORAGE	19952.	19634	19376	19056	18990	18959	18908	18471	18055	17738
ELEV FTMSL	1844.3	1843.4	1842.6	1841.6	1841.4	1841.3	1841.2	1839.8	1838.5	1837.5
DISCH KCFS	20.800	20.0	17.7	18.0	18.0	18.0	19.0	20.0	23.0	24.0
POWER										
AVE POWER MW		257	226	229	228	228	240	253	288	298
PEAK POW MW		498	494	483	482	482	481	477	472	468
ENERGY GWH	1300.6	190.8	162.7	170.4	82.2	38.3	46.2	188.1	214.3	207.7
--OAHE--										
NAT INFLOW	752	203	162	101	48	22	25	41	17	133
DEPLETION	210	128	31	-12	1	0	1	13	19	29
CHAN STOR	-14	3	9	-1			-4	-4	-12	-4
EVAPORATION	345	80	99	84	20	9	10	42		
REG INFLOW	8683	1228	1092	1134	562	262	312	1212	1400	1481
RELEASE	10598	1372	1837	1537	734	377	533	1611	1383	1214
STOR CHANGE	-1915	-145	-745	-403	-172	-115	-221	-399	17	267
STORAGE	20576.	20431	19686	19283	19112	18997	18776	18377	18394	18661
ELEV FTMSL	1613.3	1612.9	1610.7	1609.4	1608.9	1608.5	1607.8	1606.6	1606.6	1607.5
DISCH KCFS	20.800	22.3	30.9	25.0	24.7	27.2	33.6	26.2	22.5	21.1
POWER										
AVE POWER MW		296	406	327	321	353	433	337	289	272
PEAK POW MW		736	725	718	715	713	710	703	703	708
ENERGY GWH	1669.2	220.6	292.5	243.0	115.6	59.2	83.2	250.9	215.0	189.2
--BIG BEND--										
EVAPORATION	67	15	19	17	4	2	2	9		
REG INFLOW	10531	1357	1818	1520	730	376	531	1602	1383	1214
RELEASE	10522	1348	1818	1520	730	376	531	1602	1383	1214
STORAGE	1622.	1631	1631	1631	1631	1631	1631	1631	1631	1631
ELEV FTMSL	1419.8	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0
DISCH KCFS	19.600	21.9	30.6	24.7	24.5	27.1	33.4	26.1	22.5	21.1
POWER										
AVE POWER MW		101	145	121	123	135	166	130	110	101
PEAK POW MW		500	517	538	538	538	538	538	538	529
ENERGY GWH	617.9	75.4	104.2	90.0	44.2	22.7	31.9	96.9	82.0	70.4
--FORT RANDALL--										
NAT INFLOW	326	95	81	11	4	2	2	16	39	76
DEPLETION	34	15	7	1	1	0	1	3	3	3
EVAPORATION	75	19	24	18	4	2	2	7		
REG INFLOW	10740	1409	1869	1512	730	375	530	1609	1419	1287
RELEASE	11445	1578	2126	2151	1043	487	556	1500	1078	928
STOR CHANGE	-706	-169	-257	-639	-313	-111	-26	109	341	359
STORAGE	3707.	3538	3281	2642	2329	2218	2192	2301	2642	3001
ELEV FTMSL	1358.4	1356.5	1353.5	1345.0	1340.0	1338.0	1337.5	1339.5	1345.0	1350.0
DISCH KCFS	25.300	25.7	35.7	35.0	35.0	35.0	35.0	24.4	17.5	16.1
POWER										
AVE POWER MW		221	299	279	264	256	253	178	133	128
PEAK POW MW		360	350	319	296	287	285	294	320	339
ENERGY GWH	1094.9	164.1	215.5	207.9	95.0	42.9	48.5	132.6	99.1	89.4
--GAVINS POINT--										
NAT INFLOW	1091	162	149	161	80	37	42	135	140	185
DEPLETION	28	10	-5	2	5	2	3	10	1	
CHAN STOR	17	-1	-19	1	0	0	0	20	13	3
EVAPORATION	22	5	6	5	1	1	1	3		
REG INFLOW	12503	1725	2254	2306	1116	521	595	1642	1230	1115
RELEASE	12512	1722	2231	2306	1116	521	595	1642	1230	1150
STOR CHANGE	-9	3	23							-35
STORAGE	336.	339	362	362	362	362	362	362	362	327
ELEV FTMSL	1206.4	1206.5	1207.5	1207.5	1207.5	1207.5	1207.5	1207.5	1207.5	1206.0
DISCH KCFS	27.000	28.0	37.5	37.5	37.5	37.5	37.5	26.7	20.0	20.0
POWER										
AVE POWER MW		96	116	117	117	117	117	94	71	70
PEAK POW MW		115	117	117	117	117	117	117	117	114
ENERGY GWH	496.8	71.5	83.5	86.9	42.0	19.6	22.4	69.6	52.5	48.7
--GAVINS POINT - SIOUX CITY--										
NAT INFLOW	908	243	147	120	55	25	29	78	70	141
DEPLETION	132	38	25	12	7	3	3	14	15	15
REGULATED FLOW AT SIOUX CITY										
KAF	13288	1927	2353	2414	1164	543	621	1706	1285	1276
KCFS		31.3	39.6	39.3	39.1	39.1	39.1	27.7	20.9	22.2
--TOTAL--										
NAT INFLOW	8416	1639	1259	1245	552	257	294	822	954	1394
DEPLETION	-710	297	-177	-72	-135	-63	-72	-186	-187	-116
CHAN STOR	-16	3	21	-7	0	0	-4	-8	-19	-1
EVAPORATION	1142	263	328	281	66	30	34	141		
STORAGE	61460.	60616	59392	58007	57464	57211	56917	56070	55908	56140
SYSTEM POWER										
AVE POWER MW		1081	1258	1148	1128	1164	1285	1101	1027	1006
PEAK POW MW		2373	2367	2338	2312	2300	2294	2291	2312	2320
ENERGY GWH	5695.6	804.0	905.5	854.3	406.1	195.5	246.7	819.4	764.1	700.0
DAILY GWH		25.9	30.2	27.6	27.1	27.9	30.8	26.4	24.6	24.1

	31JUl15	2015							2016
	INI-SUM	31AUG	30SEP	31OCT	15NOV	22NOV	30NOV	31DEC	31JAN	29FEB
--FORT PECK--										
NAT INFLOW	1516	182	173	216	112	52	60	200	250	271
DEPLETION	-502	20	-112	-98	-28	-13	-15	-79	-98	-79
EVAPORATION	525	108	134	117	53	25	28	60		
MOD INFLOW	1493	54	151	197	87	41	47	219	348	350
RELEASE	2559	492	290	277	134	62	71	400	430	403
STOR CHANGE	-1066	-438	-139	-80	-47	-22	-25	-181	-82	-53
STORAGE	15267.	14829	14690	14610	14564	14542	14517	14336	14254	14201
ELEV FTMSL	2236.2	2234.2	2233.5	2233.1	2232.9	2232.8	2232.7	2231.8	2231.4	2231.2
DISCH KCFS	8.100	8.0	4.9	4.5	4.5	4.5	4.5	6.5	7.0	7.0
POWER										
AVE POWER MW		109	66	61	61	61	61	88	95	95
PEAK POW MW		162	162	162	161	161	161	161	160	160
ENERGY GWH	421.0	81.4	47.8	45.6	22.1	10.3	11.8	65.6	70.5	65.9
--GARRISON--										
NAT INFLOW	1860	322	278	352	132	62	70	168	210	266
DEPLETION	-405	102	-144	-34	-110	-51	-58	-65	-29	-16
CHAN STOR	10	1	30	4				-20	-5	
EVAPORATION	624	130	161	139	62	29	33	71		
REG INFLOW	4210	583	581	528	313	146	167	542	664	685
RELEASE	7129	1230	932	861	417	194	222	953	1199	1122
STOR CHANGE	-2919	-647	-350	-333	-103	-48	-55	-411	-535	-437
STORAGE	19952.	19305	18955	18622	18518	18470	18415	18005	17470	17033
ELEV FTMSL	1844.3	1842.4	1841.3	1840.3	1840.0	1839.8	1839.6	1838.3	1836.6	1835.1
DISCH KCFS	20.800	20.0	15.7	14.0	14.0	14.0	14.0	15.5	19.5	19.5
POWER										
AVE POWER MW		256	199	177	177	177	177	195	242	240
PEAK POW MW		491	482	478	477	477	476	471	465	459
ENERGY GWH	1085.0	190.3	143.4	131.9	63.7	29.7	34.0	144.9	180.2	166.9
--OAHE--										
NAT INFLOW	400	98	90	56	27	12	14	23	9	71
DEPLETION	210	128	31	-12	1	0	1	13	19	29
CHAN STOR	4	3	16	6				-6	-16	
EVAPORATION	619	133	162	136	60	28	32	68		
REG INFLOW	6703	1070	845	799	382	178	204	889	1173	1164
RELEASE	9346	1534	1725	1370	599	316	231	1115	1294	1163
STOR CHANGE	-2643	-464	-880	-571	-217	-137	-27	-226	-121	1
STORAGE	20576.	20112	19232	18661	18444	18306	18280	18053	17932	17933
ELEV FTMSL	1613.3	1612.0	1609.3	1607.5	1606.8	1606.3	1606.2	1605.5	1605.1	1605.1
DISCH KCFS	20.800	25.0	29.0	22.3	20.1	22.7	14.5	18.1	21.0	20.2
POWER										
AVE POWER MW		330	380	289	260	292	187	232	269	258
PEAK POW MW		731	717	708	704	702	701	697	695	695
ENERGY GWH	1464.5	245.8	273.3	214.9	93.4	49.1	35.9	172.9	199.8	179.4
--BIG BEND--										
EVAPORATION	123	25	31	28	12	6	7	14		
REG INFLOW	9223	1509	1694	1342	586	310	224	1101	1294	1163
RELEASE	9214	1500	1694	1342	586	310	224	1101	1294	1163
STORAGE	1622.	1631	1631	1631	1631	1631	1631	1631	1631	1631
ELEV FTMSL	1419.8	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0
DISCH KCFS	19.600	24.4	28.5	21.8	19.7	22.3	14.1	17.9	21.0	20.2
POWER										
AVE POWER MW		113	135	107	99	112	71	90	103	97
PEAK POW MW		500	517	538	538	538	538	538	538	529
ENERGY GWH	539.9	83.9	97.1	79.6	35.6	18.8	13.7	67.0	76.8	67.5
--FORT RANDALL--										
NAT INFLOW	173	46	45	6	3	1	1	9	21	41
DEPLETION	34	15	7	1	1	0	1	3	3	3
EVAPORATION	136	33	40	31	12	5	5	12		
REG INFLOW	9218	1499	1692	1317	576	306	220	1095	1312	1201
RELEASE	9924	1668	1949	1956	889	417	246	986	971	842
STOR CHANGE	-706	-169	-257	-639	-313	-111	-26	109	341	359
STORAGE	3707.	3538	3281	2642	2329	2218	2192	2301	2642	3001
ELEV FTMSL	1358.4	1356.5	1353.5	1345.0	1340.0	1338.0	1337.5	1339.5	1345.0	1350.0
DISCH KCFS	25.300	27.1	32.8	31.8	29.9	30.0	15.5	16.0	15.8	14.6
POWER										
AVE POWER MW		233	275	254	226	220	113	118	120	117
PEAK POW MW		360	350	319	296	287	285	294	320	339
ENERGY GWH	958.6	173.3	197.9	189.3	81.2	36.9	21.8	87.7	89.3	81.2
--GAVINS POINT--										
NAT INFLOW	588	78	83	89	45	21	24	75	75	99
DEPLETION	28	10	-5	2	5	2	3	10	1	
CHAN STOR	19	-3	-11	2	4	0	27	-1	0	2
EVAPORATION	40	8	10	9	4	2	2	5		
REG INFLOW	10463	1725	2016	2035	928	433	292	1045	1045	943
RELEASE	10472	1722	1993	2035	928	433	292	1045	1045	978
STOR CHANGE	-9	3	23							-35
STORAGE	336.	339	362	362	362	362	362	362	362	327
ELEV FTMSL	1206.4	1206.5	1207.5	1207.5	1207.5	1207.5	1207.5	1207.5	1207.5	1206.0
DISCH KCFS	27.000	28.0	33.5	33.1	31.2	31.2	18.4	17.0	17.0	17.0
POWER										
AVE POWER MW		96	111	111	107	107	65	60	60	60
PEAK POW MW		115	117	117	117	117	117	117	117	114
ENERGY GWH	433.5	71.5	79.8	82.5	38.3	17.9	12.5	44.7	44.7	41.5
--GAVINS POINT - SIOUX CITY--										
NAT INFLOW	485	117	82	67	31	14	16	44	38	76
DEPLETION	132	38	25	12	7	3	3	14	15	15
REGULATED FLOW AT SIOUX CITY										
KAF	10825	1801	2050	2090	952	444	305	1075	1068	1039
KCFS		29.3	34.5	34.0	32.0	32.0	19.2	17.5	17.4	18.1
--TOTAL--										
NAT INFLOW	5022	843	751	786	348	162	186	519	603	824
DEPLETION	-503	313	-198	-129	-124	-58	-66	-104	-89	-48
CHAN STOR	34	0	36	12	4	0	28	-27	-21	2
EVAPORATION	2067	435	538	459	203	94	107	230		
STORAGE	61460.	59754	58151	56528	55848	55530	55398	54688	54291	54126
SYSTEM POWER										
AVE POWER MW		1137	1166	1000	929	968	675	783	889	865
PEAK POW MW		2360	2346	2321	2294	2282	2278	2278	2295	2297
ENERGY GWH	4902.6	846.3	839.3	743.9	334.4	162.7	129.6	582.8	661.3	602.3
DAILY GWH		27.3	28.0	24.0	22.3	23.2	16.2	18.8	21.3	20.8

	INI-SUM	31AUG	30SEP	31OCT	15NOV	22NOV	30NOV	31DEC	31JAN	29FEB

VALUES IN 1000 AF EXCEPT AS INDICATED

29FEB16		2016											2017			
	INI-SUM	15MAR	22MAR	31MAR	30APR	31MAY	30JUN	31JUL	31AUG	30SEP	31OCT	15NOV	22NOV	30NOV	31DEC	31JAN	28FEB
--FORT PECK--																	
NAT INFLOW	9450	341	159	205	825	1400	2355	1205	440	385	480	288	134	153	350	310	420
DEPLETION	632	-12	-5	-7	-1	291	631	255	2	-99	-63	-21	-10	-11	-106	-127	-85
EVAPORATION	327							22	70	87	75	18	8	9	38		
MOD INFLOW	8491	353	165	212	826	1109	1724	928	368	397	468	291	136	155	418	437	505
RELEASE	8487	208	97	125	536	769	803	830	830	713	646	312	146	182	769	799	722
STOR CHANGE	4	145	67	87	290	340	921	98	-462	-315	-177	-22	-10	-27	-351	-362	-217
STORAGE	14782.	14926	14994	15080	15371	15711	16632	16730	16268	15952	15775	15753	15743	15716	15365	15003	14786
ELEV FTMSL	2234.0	2234.6	2235.0	2235.4	2236.7	2238.3	2242.3	2242.8	2240.8	2239.4	2238.6	2238.5	2238.4	2238.3	2236.7	2235.0	2234.0
DISCH KCFS	10.000	7.0	7.0	7.0	9.0	12.5	13.5	13.5	13.5	12.0	10.5	10.5	10.5	11.5	12.5	13.0	13.0
POWER																	
AVE POWER MW		96	96	96	123	165	167	168	168	163	144	144	144	156	165	164	163
PEAK POW MW		163	163	163	164	165	168	169	167	166	166	165	165	165	164	163	162
ENERGY GWH	1336.8	34.4	16.1	20.7	88.8	122.6	120.0	125.3	124.8	117.3	107.3	51.8	24.2	30.0	122.6	121.6	109.2
--GARRISON--																	
NAT INFLOW	14000	530	247	318	1355	1840	3460	2715	835	570	645	248	116	132	260	315	415
DEPLETION	1094	11	5	7	-145	14	1054	727	105	-141	-28	-130	-60	-69	-115	-87	-54
CHAN STOR	-30	30			-20	-34	-10			15	14			-10	-10	-5	0
EVAPORATION	372							26	81	99	85	20	9	10	43		
REG INFLOW	20991	757	339	436	2016	2560	3200	2793	1479	1339	1248	670	313	363	1091	1196	1191
RELEASE	20989	565	264	339	1428	1906	2142	2214	2214	1996	1906	922	430	476	1261	1537	1388
STOR CHANGE	3	192	75	97	588	654	1057	579	-734	-657	-658	-253	-118	-113	-169	-341	-197
STORAGE	17738.	17929	18005	18102	18689	19344	20401	20980	20246	19589	18931	18679	18561	18448	18279	17938	17741
ELEV FTMSL	1837.5	1838.1	1838.3	1838.6	1840.5	1842.5	1845.6	1847.3	1845.2	1843.2	1841.2	1840.5	1840.1	1839.7	1839.2	1838.1	1837.5
DISCH KCFS	24.000	19.0	19.0	19.0	24.0	31.0	36.0	36.0	36.0	33.5	31.0	31.0	31.0	30.0	20.5	25.0	25.0
POWER																	
AVE POWER MW		237	237	237	301	392	452	459	458	426	392	391	390	376	258	312	310
PEAK POW MW		470	471	472	479	493	500	501	500	498	481	479	478	476	474	470	468
ENERGY GWH	3202.3	85.1	39.8	51.3	216.8	291.5	325.7	341.4	341.0	307.1	291.9	140.7	65.4	72.3	191.6	232.1	208.5
--OAHE--																	
NAT INFLOW	3900	569	265	341	510	390	710	310	125	185	145	118	55	63	15	10	90
DEPLETION	747	25	12	15	51	76	160	195	131	31	-13	1	0	1	13	19	30
CHAN STOR	-1	20			-19	-26	-18			9	10			4	38	-18	
EVAPORATION	368							26	80	98	83	20	9	10	42		
REG INFLOW	23773	1129	517	665	1868	2194	2674	2302	2127	2061	1991	1019	476	532	1258	1510	1448
RELEASE	23770	519	282	338	1046	1694	2211	2937	2977	2735	2349	1155	573	757	1554	1460	1184
STOR CHANGE	3	609	236	327	822	501	463	-635	-849	-674	-359	-136	-98	-225	-295	50	265
STORAGE	18661.	19270	19506	19833	20655	21156	21619	20984	20135	19461	19102	18966	18869	18644	18348	18399	18664
ELEV FTMSL	1607.5	1609.4	1610.1	1611.1	1613.5	1615.0	1616.3	1614.5	1612.0	1610.0	1608.9	1608.5	1608.1	1607.4	1606.5	1606.6	1607.5
DISCH KCFS	21.102	17.5	20.3	18.9	17.6	27.5	37.2	47.8	48.4	46.0	38.2	38.8	41.3	47.7	25.3	23.7	21.3
POWER																	
AVE POWER MW		227	265	249	233	367	497	635	635	600	496	501	532	608	325	305	275
PEAK POW MW		718	722	727	739	747	754	744	732	721	715	713	711	707	702	703	708
ENERGY GWH	3763.4	81.6	44.5	53.7	167.7	273.3	358.1	472.1	472.1	431.7	368.7	180.5	89.4	116.8	241.7	226.8	184.5
--BIG BEND--																	
EVAPORATION	72							5	15	19	17	4	2	2	9		
REG INFLOW	23698	519	282	338	1046	1694	2211	2933	2962	2716	2333	1151	572	755	1545	1460	1184
RELEASE	23698	519	282	338	1046	1694	2211	2933	2962	2716	2333	1151	572	755	1545	1460	1184
STORAGE	1631.	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631
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	21.102	17.5	20.3	18.9	17.6	27.5	37.2	47.7	48.2	45.6	37.9	38.7	41.2	47.6	25.1	23.7	21.3
POWER																	
AVE POWER MW		83	95	89	82	129	174	223	225	216	184	192	204	234	126	116	102
PEAK POW MW		517	509	509	509	509	509	509	509	517	538	538	538	538	538	538	529
ENERGY GWH	1368.2	29.8	16.0	19.1	59.3	95.9	125.2	165.9	167.5	155.4	137.2	69.0	34.2	45.0	93.5	86.5	68.6
--FORT RANDALL--																	
NAT INFLOW	1500	150	70	90	440	230	155	80	70	100	40				15		60
DEPLETION	80	1	1	1	4	9	12	18	15	7	1	1	0	1	3	3	3
EVAPORATION	80							6	19	24	18	4	2	2	7		
REG INFLOW	25040	668	351	427	1482	1915	2354	2989	2998	2786	2353	1146	570	752	1553	1457	1241
RELEASE	25040	388	207	427	1482	1915	2354	2989	2998	2930	2992	1459	681	778	1444	1116	882
STOR CHANGE	0	280	144	0	0		0	0	0	-144	-639	-313	-111	-26	109	341	359
STORAGE	3001.	3281	3425	3425	3425	3425	3425	3425	3425	3281	2642	2329	2218	2192	2301	2642	3001
ELEV FTMSL	1350.0	1353.5	1355.2	1355.2	1355.2	1355.2	1355.2	1355.2	1355.2	1353.5	1345.0	1340.0	1338.0	1337.5	1339.5	1345.0	1350.0
DISCH KCFS	16.130	13.0	14.9	23.9	24.9	31.1	39.6	48.6	48.8	49.2	48.7	49.1	49.0	49.0	23.5	18.1	15.9
POWER																	
AVE POWER MW		108	126	202	210	262	326	356	356	353	336	307	291	286	172	138	126
PEAK POW MW		350	356	356	356	356	356	356	356	350	319	296	287	284	294	320	339
ENERGY GWH	2248.2	38.8	21.1	43.7	151.4	194.9	234.8	264.8	264.8	254.2	250.1	110.7	48.9	54.8	127.7	102.5	84.9
--GAVINS POINT--																	
NAT INFLOW	2250	111	52	67	280	330	245	205	165	130	150	65	30	35	90	105	190
DEPLETION	114	0	0	0	5	19	24	39	10	-5	2	5	2	3	10	1	
CHAN STOR	-2	6	-4	-17	-2	-12	-16	-17	0	-1	1	-1	0	0	47	10	4
EVAPORATION	23							1	5	6	5	1	1	1	3		
REG INFLOW	27151	506	256	477	1755	2214	2559	3136	3148	3058	3136	1517	708	809	1568	1230	1076
RELEASE	27151	506	256	477	1755	2214	2559	3136	3136	3035	3136	1517	708	809	1568	1230	1111
STOR CHANGE									12	23							-35
STORAGE	327.	327	327	327	327	327	327	327	339	362	362	362	362	362	362	362	327
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	20.000	17.0	18.4	26.7	29.5	36.0	43.0	51.0	51.0	51.0	51.0	51.0	51.0	51.0	25.5	20.0	20.0
POWER																	
AVE POWER MW		59	64	91	100	114	113	112	113	115	115	115	115	115	79	70	69
PEAK POW MW		114	114	114	114	114	113	112	113	115	115	115	115	115	78	78	76
ENERGY GWH	865.1	21.2	10.7	19.7	71.8	84.8	81.6	83.1	83.7	82.5	85.8	41.5	19.4	22.1	58.6	52.0	46.6
--GAVINS POINT - SIOUX CITY--																	
NAT INFLOW	3400	189	88	113	470	890	550	290	225	165	85	50	23	27	60	35	140
DEPLETION	280	7	3	4	24	37	32	40	38	25	12	7	3	3	14	15	15
REGULATED FLOW AT SIOUX CITY																	
KAF	30271	687	340	586	2201	3067	3077	3386	3323	3175	3209	1561	728	832	1614	1250	1236
KCFS		23.1	24.5	32.8	37.0	49.9	51.7	55.1	54.0	53.4	52.2	52.5	52.5	52.5	26.2	20.3	22.3
--TOTAL--																	
NAT INFLOW	34500	1890	882	1133	3880	5080	7475	4805	1860	1535	1545	768	358	409	790	775	1315
DEPLETION	2947	33	15	20	-62	446	1913	1274	301	-182	-89	-137	-64	-73	-181	-176	-91
CHAN STOR	-30	56	-4	-17	-41	-72	-44	-17	0	23	25	-1	0	-6	78	-13	4
EVAPORATION	1243							86	269	332	283	66	30	35	141		
STORAGE	56140.	57365	57887	58398	60098	61594	64035	64077	62043	60276	58443	57720	57384	56993	56286	55974	56149
SYSTEM POWER																	
AVE POWER MW		808	882	964	1050	1429	1730	1952	1954	1872	1668	1651	1676	1776	1123	1104	1045
PEAK POW MW		2333	2336	2342	2362	2385	2400	2391	2377	2368	2334	2306	2294	2287	2251	2272	2282
ENERGY GWH	12783.9	291.0	148.2	208.2	755.9	1063.0	1245.3	1452.6	1454.0	1348.2	1241.0	594.3	281.6	341.0	835.7	821.5	702.4
DAILY GWH		19.4	21.2	23.1	25.2	34.3	41.5	46.9	46.9	44.9	40.0	39.6	40.2	42.6	27.0	26.5	25.1

VALUES IN 1000 AF EXCEPT AS INDICATED

29FEB16		2016									2017					
	INI-SUM	15MAR	22MAR	31MAR	30APR	31MAY	30JUN	31JUL	31AUG	30SEP	31OCT	15NOV	22NOV	30NOV	31DEC	31JAN	28FEB
--FORT PECK--																	
NAT INFLOW	8650	310	144	186	755	1285	2155	1105	405	350	440	263	123	140	320	285	385
DEPLETION	572	-12	-5	-7	-1	291	631	275	1	-116	-92	-30	-14	-16	-115	-134	-85
EVAPORATION	324							22	69	85	74	18	8	9	39		
MOD INFLOW	7754	321	150	193	756	994	1524	808	335	381	458	274	128	146	396	419	470
RELEASE	7758	208	97	125	476	646	774	799	799	624	492	238	111	140	707	799	722
STOR CHANGE	-4	113	53	68	280	348	750	9	-464	-244	-34	36	17	7	-311	-380	-252
STORAGE	14782.	14895	14948	15015	15295	15644	16394	16403	15939	15695	15661	15698	15714	15721	15411	15030	14778
ELEV FTMSL	2234.0	2234.5	2234.7	2235.1	2236.4	2238.0	2241.3	2241.4	2239.3	2238.2	2238.1	2238.2	2238.3	2238.3	2236.9	2235.1	2234.0
DISCH KCFS	10.000	7.0	7.0	7.0	8.0	10.5	13.0	13.0	13.0	10.5	8.0	8.0	8.0	8.8	11.5	13.0	13.0
POWER																	
AVE POWER MW		96	96	96	110	143	166	168	167	144	110	110	110	121	156	164	163
PEAK POW MW		163	163	163	164	165	168	168	166	165	165	165	165	165	164	163	162
ENERGY GWH	1239.3	34.4	16.1	20.7	78.9	106.6	119.7	124.6	124.1	103.7	82.1	39.7	18.6	23.3	115.7	121.7	109.2
--GARRISON--																	
NAT INFLOW	12750	482	225	289	1230	1675	3200	2475	760	520	555	215	100	115	235	295	380
DEPLETION	1052	11	5	7	-145	14	1029	752	86	-158	-39	-131	-61	-70	-115	-83	-50
CHAN STOR	-30	30			-10	-24	-24			24	24		0	-8	-26	-15	0
EVAPORATION	372							25	80	99	85	20	9	10	43		
REG INFLOW	19054	708	317	407	1841	2282	2920	2497	1393	1227	1025	564	263	306	988	1163	1152
RELEASE	19056	550	257	330	1250	1752	1904	1937	1937	1724	1629	788	368	413	1291	1537	1388
STOR CHANGE	-3	158	60	77	592	530	1016	560	-544	-496	-604	-224	-105	-107	-303	-375	-236
STORAGE	17738.	17896	17956	18032	18624	19154	20170	20730	20186	19690	19085	18861	18756	18650	18346	17972	17735
ELEV FTMSL	1837.5	1838.0	1838.2	1838.4	1840.3	1841.9	1844.9	1846.6	1845.0	1843.5	1841.7	1841.0	1840.7	1840.4	1839.4	1838.2	1837.5
DISCH KCFS	24.000	18.5	18.5	18.5	21.0	28.5	32.0	31.5	31.5	29.0	26.5	26.5	26.5	26.0	21.0	25.0	25.0
POWER																	
AVE POWER MW		230	231	231	264	360	407	406	406	371	337	335	335	328	264	312	310
PEAK POW MW		470	471	472	478	486	500	501	500	499	483	481	480	479	475	471	468
ENERGY GWH	2921.9	82.9	38.8	49.9	189.8	267.9	293.3	302.1	302.1	267.0	250.5	120.6	56.2	63.0	196.8	232.3	208.6
--OAHE--																	
NAT INFLOW	3200	457	213	274	430	310	640	250	95	150	120	95	44	51	-10		80
DEPLETION	747	25	12	15	51	76	160	195	131	31	-13	1	0	1	13	19	30
CHAN STOR	-2	22			-10	-28	-13	2		10	10			2	20	-16	
EVAPORATION	365							26	79	97	83	19	9	10	42		
REG INFLOW	21142	1004	458	589	1619	1958	2371	1968	1822	1756	1689	863	403	454	1246	1502	1438
RELEASE	21145	551	296	357	1005	1397	1873	2536	2571	2358	1964	954	480	650	1456	1479	1219
STOR CHANGE	-3	453	162	233	614	561	498	-568	-749	-603	-274	-91	-77	-195	-209	24	219
STORAGE	18661.	19114	19276	19509	20123	20684	21182	20614	19865	19262	18988	18897	18820	18624	18415	18439	18658
ELEV FTMSL	1607.5	1608.9	1609.4	1610.1	1612.0	1613.6	1615.1	1613.4	1611.2	1609.4	1608.5	1608.2	1608.0	1607.4	1606.7	1606.8	1607.5
DISCH KCFS	21.102	18.5	21.3	20.0	16.9	22.7	31.5	41.2	41.8	39.6	31.9	32.1	34.6	40.9	23.7	24.0	21.9
POWER																	
AVE POWER MW		240	278	261	222	301	420	548	550	516	414	415	446	526	305	309	283
PEAK POW MW		715	718	722	731	740	747	739	727	718	713	712	710	707	703	704	708
ENERGY GWH	3343.7	86.5	46.7	56.4	160.2	224.2	302.0	407.4	409.0	371.6	308.1	149.2	74.9	100.9	226.7	229.9	190.0
--BIG BEND--																	
EVAPORATION	72							5	15	19	17	4	2	2	9		
REG INFLOW	21073	551	296	357	1005	1397	1873	2531	2556	2340	1947	950	478	648	1447	1479	1219
RELEASE	21073	551	296	357	1005	1397	1873	2531	2556	2340	1947	950	478	648	1447	1479	1219
STORAGE	1631.	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631
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	21.102	18.5	21.3	20.0	16.9	22.7	31.5	41.2	41.6	39.3	31.7	31.9	34.4	40.8	23.5	24.0	21.9
POWER																	
AVE POWER MW		88	100	94	79	106	147	193	194	186	154	159	171	202	118	118	105
PEAK POW MW		517	509	509	509	509	509	509	509	517	538	538	538	538	538	538	529
ENERGY GWH	1218.3	31.6	16.8	20.2	56.9	79.1	106.1	143.2	144.7	134.0	114.9	57.2	28.7	38.8	87.7	87.6	70.7
--FORT RANDALL--																	
NAT INFLOW	1200	123	58	74	350	185	140	75	65	75	10	-3	-1	-1	5	-5	50
DEPLETION	80	1	1	1	4	9	12	18	15	7	1	1	0	1	3	3	3
EVAPORATION	80							6	19	24	18	4	2	2	7		
REG INFLOW	22114	673	353	430	1351	1573	2001	2582	2587	2384	1938	943	475	644	1444	1471	1266
RELEASE	22115	393	209	430	1351	1573	2001	2582	2587	2528	2577	1256	586	670	1335	1130	907
STOR CHANGE	0	280	144	0		0	0	0	0	-144	-639	-313	-111	-26	109	341	359
STORAGE	3001.	3281	3425	3425	3425	3425	3425	3425	3425	3281	2642	2329	2218	2192	2301	2642	3001
ELEV FTMSL	1350.0	1353.5	1355.2	1355.2	1355.2	1355.2	1355.2	1355.2	1355.2	1353.5	1345.0	1340.0	1338.0	1337.5	1339.5	1345.0	1350.0
DISCH KCFS	16.130	13.2	15.1	24.1	22.7	25.6	33.6	42.0	42.1	42.5	41.9	42.2	42.2	42.2	21.7	18.4	16.3
POWER																	
AVE POWER MW		109	127	203	192	216	283	336	337	336	319	297	284	280	159	139	130
PEAK POW MW		350	356	356	356	356	356	356	356	350	319	296	288	285	294	320	339
ENERGY GWH	2104.3	39.4	21.4	43.9	138.2	160.6	203.5	250.3	250.5	241.8	237.0	106.9	47.8	53.7	118.2	103.7	87.4
--GAVINS POINT--																	
NAT INFLOW	2000	106	50	64	240	290	210	180	145	115	135	60	28	32	85	95	165
DEPLETION	114	0	0	0	5	19	24	39	10	-5	2	5	2	3	10	1	
CHAN STOR	-2	6	-4	-17	3	-6	-15	-16	0	-1	1	-1	0	0	38	6	4
EVAPORATION	23							1	5	6	5	1	1	1	3		
REG INFLOW	23976	506	256	477	1589	1839	2172	2705	2717	2641	2705	1309	611	698	1445	1230	1076
RELEASE	23976	506	256	477	1589	1839	2172	2705	2705	2618	2705	1309	611	698	1445	1230	1111
STOR CHANGE									12	23							-35
STORAGE	327.	327	327	327	327	327	327	327	339	362	362	362	362	362	362	362	327
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	20.000	17.0	18.4	26.7	26.7	29.9	36.5	44.0	44.0	44.0	44.0	44.0	44.0	44.0	23.5	20.0	20.0
POWER																	
AVE POWER MW		59	64	91	91	101	114	113	114	115	116	116	116	116	78	70	69
PEAK POW MW		114	114	114	114	114	114	113	114	116	116	116	116	116	78	78	76
ENERGY GWH	853.1	21.2	10.7	19.7	65.6	74.9	82.3	84.1	84.8	82.9	86.3	41.8	19.5	22.3	58.4	52.0	46.6
--GAVINS POINT - SIOUX CITY--																	
NAT INFLOW	2800	165	77	99	390	730	435	240	180	135	70	43	20	23	50	30	115
DEPLETION	280	7	3	4	24	37	32	40	38	25	12	7	3	3	14	15	15
REGULATED FLOW AT SIOUX CITY																	
KAF	26496	663	329	571	1955	2532	2575	2905	2847	2728	2763	1345	628	717	1481	1245	1211
KCFS		22.3	23.7	32.0	32.8	41.2	43.3	47.3	46.3	45.8	44.9	45.2	45.2	45.2	24.1	20.2	21.8
--TOTAL--																	
NAT INFLOW	30600	1643	766	985	3395	4475	6780	4325	1650	1345	1330	673	314	359	685	700	1175
DEPLETION	2845	33	15	20	-62	446	1888	1319	281	-216	-129	-147	-69	-78	-190	-179	-87
CHAN STOR	-33	57	-4	-17	-17	-58	-53	-14	0	33	35	-1	0	-6	33	-25	4
EVAPORATION	1236							85	267	330	282	66	30	35	142		
STORAGE	56140.	57144	57563	57940	59425	60865	63129	63130	61385	59921	58369	57777	57502	57180	56466	56075	56130
SYSTEM POWER																	
AVE POWER MW		822	895	976	958	1228	1537	1763	1768	1668	1450	1432	1462	1573	1080	1112	1060
PEAK POW MW		2330	2331	2336	2353	2370	2394	2386	2373	2365	2335	2308	2297	2291	2253	2273	2282
ENERGY GWH	11680.6	296.0	150.4	210.9	689.5	913.4	1106.9	1311.8	1315.3	1201.1	1079.0	515.5	245.7	302.0	803.5	827.2	712.5
DAILY GWH		19.7	21.5	23.4	23.0	29.5	36.9	42.3	42.4	40.0	34.8	34.4	35.1	37.7	25.9	26.7	25.4
	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

29FEB16		2016									2017					
	INI-SUM	15MAR	22MAR	31MAR	30APR	31MAY	30JUN	31JUL	31AUG	30SEP	31OCT	15NOV	22NOV	30NOV	31DEC	31JAN	28FEB
--FORT PECK--																	
NAT INFLOW	7200	227	106	136	560	1145	1830	840	365	290	385	205	96	109	295	260	350
DEPLETION	649	13	6	8	78	320	526	281	36	-76	-59	-44	-20	-23	-133	-157	-106
EVAPORATION	459							28	88	110	96	43	20	23	50		
MOD INFLOW	6092	215	100	129	482	825	1304	531	241	256	348	205	96	109	378	417	456
RELEASE	6307	179	83	107	446	553	625	646	646	495	369	179	83	111	615	615	555
STOR CHANGE	-214	36	17	22	36	272	679	-115	-405	-239	-21	27	12	-2	-237	-198	-99
STORAGE	14783.	14820	14836	14858	14894	15166	15845	15730	15325	15086	15065	15092	15105	15103	14866	14668	14569
ELEV FTMSL	2234.0	2234.1	2234.2	2234.3	2234.5	2235.8	2238.9	2238.4	2236.5	2235.4	2235.3	2235.4	2235.5	2235.5	2234.4	2233.4	2232.9
DISCH KCFS	7.000	6.0	6.0	6.0	7.5	9.0	10.5	10.5	10.5	8.3	6.0	6.0	6.0	7.0	10.0	10.0	10.0
POWER																	
AVE POWER MW		82	82	82	102	123	143	144	143	114	82	82	82	96	136	136	136
PEAK POW MW		162	162	162	163	164	166	165	164	163	163	163	163	163	162	162	161
ENERGY GWH	1042.1	29.5	13.8	17.7	73.7	91.5	103.3	107.2	106.7	82.1	61.2	29.6	13.8	18.4	101.4	101.1	91.1
--GARRISON--																	
NAT INFLOW	10900	479	223	287	780	1300	3120	2100	580	480	445	180	84	96	180	255	310
DEPLETION	1133	15	7	9	28	143	810	695	130	-148	-44	-135	-63	-72	-115	-78	-48
CHAN STOR	-30	10			-15	-15	-15			21	23			-10	-29		0
EVAPORATION	533							33	104	129	111	50	23	26	57		
REG INFLOW	15511	653	300	386	1183	1696	2920	2018	992	1015	769	444	207	243	824	948	913
RELEASE	15772	536	250	321	1160	1537	1547	1537	1537	1278	1107	536	250	286	1199	1414	1277
STOR CHANGE	-261	118	50	64	23	158	1373	481	-545	-262	-338	-92	-43	-43	-375	-466	-364
STORAGE	17740.	17858	17908	17972	17995	18154	19527	20007	19462	19200	18862	18770	18727	18685	18309	17843	17479
ELEV FTMSL	1837.5	1837.9	1838.0	1838.2	1838.3	1838.8	1843.0	1844.5	1842.8	1842.1	1841.0	1840.7	1840.6	1840.5	1839.3	1837.8	1836.6
DISCH KCFS	20.500	18.0	18.0	18.0	19.5	25.0	26.0	25.0	25.0	21.5	18.0	18.0	18.0	18.0	19.5	23.0	23.0
POWER																	
AVE POWER MW		224	224	225	243	312	329	320	320	273	228	228	228	228	246	287	285
PEAK POW MW		470	470	471	471	473	498	499	498	486	481	480	479	479	475	469	465
ENERGY GWH	2404.5	80.7	37.7	48.5	175.2	231.9	236.6	237.9	237.8	196.7	169.9	82.0	38.2	43.7	182.9	213.6	191.3
--OAHE--																	
NAT INFLOW	2300	259	121	155	405	220	625	170	70	95	45	45	21	24	-15	-10	70
DEPLETION	746	25	12	15	51	76	160	195	131	31	-13	1	0	1	13	19	30
CHAN STOR	-10	10			-6	-21	-4	4		14	14				-6	-14	0
EVAPORATION	506							32	99	122	104	47	22	25	54		
REG INFLOW	16811	780	359	462	1508	1660	2008	1484	1377	1234	1074	533	249	284	1111	1371	1317
RELEASE	17081	466	306	360	1293	1543	1609	1849	1983	1754	1263	587	309	227	1113	1315	1103
STOR CHANGE	-270	314	53	101	216	117	399	-365	-606	-520	-189	-54	-61	57	-2	56	214
STORAGE	18663.	18977	19030	19131	19347	19464	19863	19497	18892	18372	18183	18128	18068	18125	18123	18179	18393
ELEV FTMSL	1607.5	1608.5	1608.7	1609.0	1609.6	1610.0	1611.2	1610.1	1608.2	1606.5	1605.9	1605.7	1605.5	1605.7	1605.7	1605.9	1606.6
DISCH KCFS	20.408	15.7	22.1	20.2	21.7	25.1	27.0	30.1	32.2	29.5	20.5	19.7	22.3	14.3	18.1	21.4	19.9
POWER																	
AVE POWER MW		203	287	263	283	328	354	394	418	379	264	253	285	183	232	274	255
PEAK POW MW		713	714	716	719	721	727	722	712	703	699	698	697	698	698	699	703
ENERGY GWH	2675.3	73.1	48.1	56.7	203.9	243.7	255.0	292.8	311.4	273.1	196.1	90.9	47.8	35.2	172.5	203.6	171.4
--BIG BEND--																	
EVAPORATION	105							6	20	25	22	10	5	5	12		
REG INFLOW	16976	466	306	360	1293	1543	1609	1843	1963	1729	1241	577	305	222	1101	1315	1103
RELEASE	16976	466	306	360	1293	1543	1609	1843	1963	1729	1241	577	305	222	1101	1315	1103
STORAGE	1631.	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631
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	20.408	15.7	22.1	20.2	21.7	25.1	27.0	30.0	31.9	29.1	20.2	19.4	21.9	14.0	17.9	21.4	19.9
POWER																	
AVE POWER MW		74	103	95	102	117	127	140	149	138	99	97	110	70	90	105	95
PEAK POW MW		517	509	509	509	509	509	509	509	517	538	538	538	538	538	538	529
ENERGY GWH	980.6	26.7	17.4	20.4	73.2	87.4	91.1	104.4	111.1	99.1	73.7	35.1	18.5	13.5	67.0	78.0	64.0
--FORT RANDALL--																	
NAT INFLOW	900	121	56	73	160	165	135	70	60	35		-5	-2	-3		-10	45
DEPLETION	80	1	1	1	4	9	12	18	15	7	1	1	0	1	3	3	3
EVAPORATION	116							8	25	31	24	9	4	4	9		
REG INFLOW	17680	586	362	432	1449	1699	1732	1887	1982	1725	1216	562	298	215	1089	1302	1145
RELEASE	17681	305	218	432	1449	1699	1732	1887	1982	1869	1855	875	409	241	980	961	786
STOR CHANGE	0	280	144				0	0	0	-144	-639	-313	-111	-26	108	341	359
STORAGE	3001.	3281	3425	3425	3425	3425	3425	3425	3425	3281	2642	2329	2218	2192	2300	2641	3000
ELEV FTMSL	1350.0	1353.5	1355.2	1355.2	1355.2	1355.2	1355.2	1355.2	1355.2	1353.5	1345.0	1340.0	1338.0	1337.5	1339.5	1345.0	1350.0
DISCH KCFS	15.054	10.3	15.7	24.2	24.3	27.6	29.1	30.7	32.2	31.4	30.2	29.4	29.5	15.2	15.9	15.6	14.2
POWER																	
AVE POWER MW		85	133	204	206	233	245	258	271	262	242	222	215	111	117	119	113
PEAK POW MW		350	356	356	356	356	356	356	356	350	319	296	287	285	294	320	339
ENERGY GWH	1746.2	30.6	22.3	44.2	148.1	173.3	176.5	192.1	201.7	188.9	179.7	79.9	36.2	21.3	87.2	88.4	75.9
--GAVINS POINT--																	
NAT INFLOW	1500	102	47	61	145	165	175	100	90	95	120	58	27	31	80	85	120
DEPLETION	114	0	0	0	5	19	24	39	10	-5	2	5	2	3	10	1	
CHAN STOR	1	9	-10	-16	0	-6	-3	-3	-3	2	2	1	0	26	-1	1	3
EVAPORATION	34							2	6	8	7	3	2	2	4		
REG INFLOW	19034	417	255	477	1588	1839	1880	1943	2053	1963	1968	925	432	294	1045	1045	909
RELEASE	19034	417	255	477	1588	1839	1880	1943	2041	1940	1968	925	432	294	1045	1045	944
STOR CHANGE									12	23							-35
STORAGE	327.	327	327	327	327	327	327	327	339	362	362	362	362	362	362	362	327
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	18.000	14.0	18.4	26.7	26.7	29.9	31.6	31.6	33.2	32.6	32.0	31.1	31.1	18.5	17.0	17.0	17.0
POWER																	
AVE POWER MW		49	64	91	91	101	105	105	109	109	108	106	106	65	60	60	60
PEAK POW MW		114	114	114	114	114	114	114	115	117	117	117	117	117	78	78	76
ENERGY GWH	779.7	17.6	10.7	19.7	65.6	74.9	75.3	77.8	80.9	78.3	80.6	38.3	17.9	12.5	44.7	44.7	40.1
--GAVINS POINT - SIOUX CITY--																	
NAT INFLOW	1800	162	76	97	280	345	190	165	130	110	60	30	14	16	25	25	75
DEPLETION	280	7	3	4	24	37	32	40	38	25	12	7	3	3	14	15	15
REGULATED FLOW AT SIOUX CITY																	
KAF	20554	571	328	570	1844	2147	2038	2068	2133	2025	2016	949	443	306	1056	1055	1004
KCFS		19.2	23.6	31.9	31.0	34.9	34.3	33.6	34.7	34.0	32.8	31.9	31.9	19.3	17.2	17.2	18.1
--TOTAL--																	
NAT INFLOW	24600	1350	630	810	2330	3340	6075	3445	1295	1105	1055	513	239	273	565	605	970
DEPLETION	3002	60	28	36	190	604	1564	1268	360	-166	-101	-165	-77	-88	-208	-197	-106
CHAN STOR	-39	29	-10	-16	-21	-42	-21	1	-3	37	39	1	0	17	-37	-14	3
EVAPORATION	1751							109	343	425	365	163	75	86	186		
STORAGE	56145.	56893	57157	57344	57619	58166	60617	60617	59073	57931	56745	56313	56111	56098	55591	55324	55399
SYSTEM POWER																	
AVE POWER MW		717	892	959	1027	1213	1303	1361	1411	1275	1023	988	1026	754	881	980	943
PEAK POW MW		2327	2326	2329	2333	2337	2371	2366	2354	2337	2317	2293	2282	2281	2246	2266	2273
ENERGY GWH	9628.5	258.2	149.9	207.2	739.7	902.7	937.8	1012.2	1049.6	918.3	761.1	355.8	172.4	144.7	655.7	729.4	633.8
DAILY GWH		17.2	21.4	23.0	24.7	29.1	31.3	32.7	33.9	30.6	24.6	23.7	24.6	18.1	21.2	23.5	22.6
	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

29FEB16		2016										2017				
	INI-SUM	15MAR	22MAR	31MAR	30APR	31MAY	30JUN	31JUL	31AUG	30SEP	31OCT	15NOV	22NOV	30NOV	31DEC	31JAN	28FEB
--FORT PECK--																	
NAT INFLOW	5950	201	94	120	460	945	1510	645	290	240	320	168	78	89	240	240	310
DEPLETION	552	11	5	6	74	184	367	312	54	-75	-80	-18	-8	-9	-99	-104	-68
EVAPORATION	526							33	103	126	109	49	23	26	56		
MOD INFLOW	4872	190	89	114	386	761	1143	300	133	189	291	136	63	73	283	344	378
RELEASE	6385	179	83	107	506	553	655	676	676	500	369	179	83	95	553	615	555
STOR CHANGE	-1514	12	5	7	-120	208	488	-377	-543	-312	-78	-43	-20	-23	-271	-271	-177
STORAGE	14201.	14213	14218	14225	14105	14313	14801	14425	13882	13570	13492	13449	13429	13406	13136	12865	12688
ELEV FTMSL	2231.2	2231.2	2231.2	2231.3	2230.7	2231.7	2234.1	2232.3	2229.6	2228.0	2227.6	2227.4	2227.3	2227.2	2225.8	2224.3	2223.4
DISCH KCFS	7.000	6.0	6.0	6.0	8.5	9.0	11.0	11.0	11.0	8.4	6.0	6.0	6.0	6.0	9.0	10.0	10.0
POWER																	
AVE POWER MW		81	81	81	115	122	147	147	146	113	80	80	80	80	120	132	131
PEAK POW MW		160	160	160	160	161	162	161	159	158	158	157	157	157	156	155	154
ENERGY GWH	1031.3	29.2	13.6	17.5	82.6	90.4	105.8	109.4	108.5	81.2	59.8	28.9	13.5	15.4	89.1	98.2	88.2
--GARRISON--																	
NAT INFLOW	9150	404	189	242	640	1150	2600	1700	475	395	395	160	75	85	150	210	280
DEPLETION	1101	22	10	13	49	138	693	620	122	-131	-17	-124	-58	-66	-89	-52	-31
CHAN STOR	-31	10			-25	-5	-20			26	24				-30	-10	0
EVAPORATION	621							39	122	151	129	58	27	30	65		
REG INFLOW	13783	570	261	336	1072	1560	2542	1717	907	901	676	404	189	216	697	867	866
RELEASE	15616	506	236	303	1071	1414	1517	1506	1506	1289	1168	565	264	286	1291	1414	1277
STOR CHANGE	-1833	65	25	33	1	146	1024	211	-599	-387	-493	-161	-75	-70	-594	-548	-411
STORAGE	17033.	17098	17123	17156	17157	17303	18327	18538	17938	17551	17059	16898	16823	16753	16159	15612	15201
ELEV FTMSL	1835.1	1835.4	1835.4	1835.6	1835.6	1836.0	1839.4	1840.0	1838.1	1836.9	1835.2	1834.7	1834.4	1834.2	1832.2	1830.2	1828.7
DISCH KCFS	19.500	17.0	17.0	17.0	18.0	23.0	25.5	24.5	24.5	21.7	19.0	19.0	19.0	18.0	21.0	23.0	23.0
POWER																	
AVE POWER MW		209	209	209	221	282	316	308	307	269	234	232	232	219	254	274	271
PEAK POW MW		460	461	461	461	463	475	477	470	466	460	458	457	456	448	441	436
ENERGY GWH	2315.8	75.1	35.1	45.1	159.2	209.9	227.7	228.9	228.1	193.5	174.1	83.6	38.9	42.1	188.7	203.8	182.1
--OAHE--																	
NAT INFLOW	1350	177	82	106	285	130	315	110	50	55	15	13	6	7	-35	-15	50
DEPLETION	747	25	12	15	51	76	160	195	131	31	-13	1	0	1	13	19	30
CHAN STOR	-14	10			-4	-21	-10	4		12	12			5	-14	-9	0
EVAPORATION	544							35	107	131	112	50	23	27	58		
REG INFLOW	15660	667	307	394	1301	1448	1662	1391	1318	1194	1096	527	246	270	1171	1371	1297
RELEASE	17549	520	373	448	1577	1846	1820	1986	2016	1515	1578	624	241	222	850	1058	874
STOR CHANGE	-1889	147	-66	-54	-276	-398	-158	-596	-698	-321	-482	-97	5	48	321	313	424
STORAGE	17933.	18080	18014	17960	17684	17286	17128	16533	15835	15514	15032	14934	14939	14987	15308	15621	16045
ELEV FTMSL	1605.1	1605.6	1605.4	1605.2	1604.3	1602.9	1602.3	1600.3	1597.7	1596.5	1594.7	1594.3	1594.3	1594.5	1595.7	1596.9	1598.5
DISCH KCFS	20.214	17.5	26.9	25.1	26.5	30.0	30.6	32.3	32.8	25.5	25.7	21.0	17.4	14.0	13.8	17.2	15.7
POWER																	
AVE POWER MW		224	342	320	337	378	383	402	403	310	310	252	209	168	167	209	193
PEAK POW MW		698	697	696	691	683	681	670	657	651	642	640	640	641	647	653	661
ENERGY GWH	2627.1	80.5	57.5	69.1	242.3	281.5	276.0	298.9	299.5	223.2	230.6	90.8	35.1	32.3	124.4	155.7	129.6
--BIG BEND--																	
EVAPORATION	131							8	25	31	28	12	6	7	14		
REG INFLOW	17418	520	373	448	1577	1846	1820	1979	1991	1483	1550	611	235	215	836	1058	874
RELEASE	17418	520	373	448	1577	1846	1820	1979	1991	1483	1550	611	235	215	836	1058	874
STORAGE	1631.	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631
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	20.214	17.5	26.9	25.1	26.5	30.0	30.6	32.2	32.4	24.9	25.2	20.6	16.9	13.6	13.6	17.2	15.7
POWER																	
AVE POWER MW		83	126	117	124	140	143	151	152	119	123	103	85	68	69	85	75
PEAK POW MW		517	509	509	509	509	509	509	509	529	538	538	538	538	538	538	529
ENERGY GWH	1004.9	29.8	21.1	25.4	89.3	104.5	103.0	112.0	112.8	85.9	91.8	37.0	14.3	13.1	51.1	62.9	50.7
--FORT RANDALL--																	
NAT INFLOW	450	77	36	46	80	65	110	35	25		-20	-8	-4	-4	-10	-20	40
DEPLETION	80	1	1	1	4	9	12	18	15	7	1	1	0	1	3	3	3
EVAPORATION	142							10	32	38	29	12	5	5	12		
REG INFLOW	17646	596	408	494	1653	1902	1918	1986	1970	1439	1500	591	226	206	811	1035	911
RELEASE	17646	316	264	494	1653	1902	1918	1986	1970	1863	1859	845	396	232	702	694	552
STOR CHANGE	0	280	144	0		0		0	0	-424	-359	-254	-170	-26	109	341	359
STORAGE	3001.	3281	3425	3425	3425	3425	3425	3425	3425	3001	2642	2388	2218	2192	2301	2642	3001
ELEV FTMSL	1350.0	1353.5	1355.2	1355.2	1355.2	1355.2	1355.2	1355.2	1355.2	1350.0	1345.0	1341.0	1338.0	1337.5	1339.5	1345.0	1350.0
DISCH KCFS	14.633	10.6	19.0	27.7	27.8	30.9	32.2	32.3	32.0	31.3	30.2	28.4	28.5	14.6	11.4	11.3	9.9
POWER																	
AVE POWER MW		88	160	233	234	260	271	272	269	258	239	216	210	107	84	86	79
PEAK POW MW		350	356	356	356	356	356	356	356	339	319	301	287	285	294	319	339
ENERGY GWH	1745.3	31.7	26.9	50.4	168.6	193.6	195.1	202.0	200.4	185.6	177.5	77.6	35.3	20.5	62.7	64.1	53.4
--GAVINS POINT--																	
NAT INFLOW	1300	92	43	55	125	140	150	85	70	80	105	50	23	27	75	75	105
DEPLETION	114	0	0	0	5	19	24	39	10	-5	2	5	2	3	10	1	
CHAN STOR	8	8	-16	-17	0	-6	-2	0	0	1	2	3	0	26	6	0	3
EVAPORATION	42							2	8	10	9	4	2	2	5		
REG INFLOW	18798	417	291	533	1773	2017	2041	2029	2023	1939	1955	890	415	279	769	769	659
RELEASE	18798	417	291	533	1773	2017	2041	2029	2011	1916	1955	890	415	279	769	769	694
STOR CHANGE									12	23							-35
STORAGE	327.	327	327	327	327	327	327	327	339	362	362	362	362	362	362	362	327
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	17.000	14.0	21.0	29.8	29.8	32.8	34.3	33.0	32.7	32.2	31.8	29.9	29.9	17.6	12.5	12.5	12.5
POWER																	
AVE POWER MW		49	72	100	100	107	111	108	108	108	108	103	103	62	44	44	44
PEAK POW MW		114	114	114	114	114	114	114	115	117	117	117	117	117	78	78	76
ENERGY GWH	763.6	17.6	12.1	21.7	72.3	79.8	79.6	80.2	80.0	77.7	80.3	37.2	17.4	11.9	33.0	33.0	29.6
--GAVINS POINT - SIOUX CITY--																	
NAT INFLOW	1100	121	56	73	145	185	115	100	80	65	35	23	11	12	10	20	50
DEPLETION	280	7	3	4	24	37	32	40	38	25	12	7	3	3	14	15	15
REGULATED FLOW AT SIOUX CITY																	
KAF	19618	530	344	601	1894	2165	2124	2089	2053	1956	1978	906	423	288	765	774	729
KCFS		17.8	24.8	33.7	31.8	35.2	35.7	34.0	33.4	32.9	32.2	30.4	30.4	18.1	12.4	12.6	13.1
--TOTAL--																	
NAT INFLOW	19300	1072	500	643	1735	2615	4800	2675	990	835	850	405	189	216	430	510	835
DEPLETION	2874	66	31	40	207	463	1288	1224	370	-148	-95	-128	-60	-68	-148	-118	-51
CHAN STOR	-37	28	-16	-17	-29	-32	-33	4	0	40	38	3	0	31	-38	-19	3
EVAPORATION	2006							127	396	488	416	185	85	97	210		
STORAGE	54126.	54630	54738	54724	54329	54285	55640	54878	53050	51629	50217	49662	49402	49332	48897	48732	48891
SYSTEM POWER																	
AVE POWER MW		733	991	1061	1131	1290	1371	1386	1383	1177	1094	986	919	705	738	830	794
PEAK POW MW		2300	2297	2296	2291	2286	2298	2287	2267	2259	2233	2211	2196	2194	2162	2185	2194
ENERGY GWH	9488.0	264.0	166.4	229.2	814.3	959.9	987.1	1031.4	1029.2	847.1	813.9	355.1	154.4	135.4	549.0	617.9	533.7
DAILY GWH		17.6	23.8	25.5	27.1	31.0	32.9	33.3	33.2	28.2	26.3	23.7	22.1	16.9	17.7	19.9	19.1
	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

29FEB16		2016										2017				
	INI-SUM	15MAR	22MAR	31MAR	30APR	31MAY	30JUN	31JUL	31AUG	30SEP	31OCT	15NOV	22NOV	30NOV	31DEC	31JAN	28FEB
--FORT PECK--																	
NAT INFLOW	5300	194	90	116	440	850	1180	595	260	230	310	145	68	77	220	230	295
DEPLETION	387	11	5	6	75	184	367	214	26	-108	-97	-27	-13	-14	-81	-95	-66
EVAPORATION	513							32	100	123	106	48	22	26	55		
MOD INFLOW	4400	183	85	110	365	666	813	349	134	215	301	124	58	66	246	325	361
RELEASE	6540	179	83	107	506	553	655	676	676	504	369	179	83	95	646	646	583
STOR CHANGE	-2140	4	2	3	-141	113	158	-328	-543	-289	-68	-55	-25	-29	-399	-321	-222
STORAGE	14201.	14206	14208	14210	14069	14182	14340	14013	13470	13181	13112	13058	13032	13003	12604	12283	12061
ELEV FTMSL	2231.2	2231.2	2231.2	2231.2	2230.5	2231.1	2231.8	2230.2	2227.5	2226.0	2225.6	2225.3	2225.2	2225.1	2222.9	2221.2	2220.0
DISCH KCFS	7.000	6.0	6.0	6.0	8.5	9.0	11.0	11.0	11.0	8.5	6.0	6.0	6.0	6.0	10.5	10.5	10.5
POWER																	
AVE POWER MW		81	81	81	115	121	146	146	145	113	80	80	80	80	137	135	134
PEAK POW MW		160	160	160	160	160	161	159	157	156	156	156	156	156	153	152	150
ENERGY GWH	1045.1	29.2	13.6	17.5	82.6	90.3	105.2	108.5	107.6	81.3	59.4	28.7	13.4	15.3	101.6	100.6	90.2
--GARRISON--																	
NAT INFLOW	7400	382	178	229	580	1100	2165	935	325	215	385	150	70	80	140	195	270
DEPLETION	1011	22	10	13	49	138	608	568	112	-127	-5	-118	-55	-63	-77	-41	-24
CHAN STOR	-35	10			-25	-5	-20			25	25				-46		
EVAPORATION	592							38	116	143	123	55	26	29	63		
REG INFLOW	12302	549	251	323	1012	1510	2192	1006	773	729	661	392	183	209	754	882	877
RELEASE	14893	476	222	286	1012	1383	1488	1476	1476	1221	1045	506	236	265	1168	1383	1250
STOR CHANGE	-2591	73	29	37	0	127	704	-470	-703	-492	-384	-114	-53	-56	-414	-502	-372
STORAGE	17033.	17106	17135	17172	17173	17299	18003	17533	16831	16338	15954	15840	15787	15731	15317	14815	14442
ELEV FTMSL	1835.1	1835.4	1835.5	1835.6	1835.6	1836.0	1838.3	1836.8	1834.5	1832.8	1831.4	1831.0	1830.8	1830.6	1829.2	1827.3	1826.0
DISCH KCFS	19.500	16.0	16.0	16.0	17.0	22.5	25.0	24.0	24.0	20.5	17.0	17.0	17.0	16.7	19.0	22.5	22.5
POWER																	
AVE POWER MW		196	197	197	209	276	309	298	294	249	204	203	203	199	225	263	260
PEAK POW MW		460	461	461	461	463	471	466	457	451	446	444	444	443	438	431	426
ENERGY GWH	2179.2	70.7	33.0	42.5	150.5	205.5	222.5	221.4	218.7	179.0	152.1	73.2	34.1	38.2	167.3	195.6	174.8
--OAHE--																	
NAT INFLOW	1150	169	79	102	200	110	305	105	40	45	5	8	4	4	-45	-20	40
DEPLETION	747	25	12	15	51	76	160	195	131	31	-13	1	0	1	13	19	30
CHAN STOR	-13	14	0	0	-4	-23	-11	4		16	16			1	-11	-16	
EVAPORATION	530							34	105	127	109	49	23	26	57		
REG INFLOW	14753	635	289	372	1156	1395	1622	1356	1280	1123	970	463	216	244	1043	1328	1260
RELEASE	17424	543	383	461	1576	1871	1850	1931	1969	1741	1242	537	287	214	867	1068	884
STOR CHANGE	-2671	91	-94	-89	-420	-476	-228	-576	-689	-618	-271	-74	-71	30	176	260	376
STORAGE	17933.	18025	17931	17842	17422	16946	16718	16142	15454	14836	14565	14491	14420	14450	14626	14886	15262
ELEV FTMSL	1605.1	1605.4	1605.1	1604.8	1603.4	1601.7	1600.9	1598.8	1596.3	1593.9	1592.8	1592.5	1592.2	1592.4	1593.1	1594.1	1595.6
DISCH KCFS	20.214	18.3	27.6	25.8	26.5	30.4	31.1	31.4	32.0	29.3	20.2	18.1	20.7	13.5	14.1	17.4	15.9
POWER																	
AVE POWER MW		233	351	328	335	381	387	388	390	352	241	215	246	161	168	208	192
PEAK POW MW		697	695	693	686	677	673	662	650	638	633	631	630	630	634	639	646
ENERGY GWH	2587.6	83.9	59.0	71.0	241.4	283.7	278.5	288.4	290.2	253.4	179.6	77.5	41.3	30.8	125.2	154.8	129.0
--BIG BEND--																	
EVAPORATION	131							8	25	31	28	12	6	7	14		
REG INFLOW	17293	543	383	461	1576	1871	1850	1923	1944	1709	1214	525	281	207	852	1068	884
RELEASE	17293	543	383	461	1576	1871	1850	1923	1944	1709	1214	525	281	207	852	1068	884
STORAGE	1631.	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631
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	20.214	18.3	27.6	25.8	26.5	30.4	31.1	31.3	31.6	28.7	19.7	17.6	20.2	13.1	13.9	17.4	15.9
POWER																	
AVE POWER MW		86	129	121	124	142	145	146	148	136	97	89	102	66	70	85	76
PEAK POW MW		517	509	509	509	509	509	509	509	517	538	538	538	538	538	538	529
ENERGY GWH	996.5	31.1	21.7	26.1	89.3	106.0	104.7	108.9	110.1	98.0	72.1	32.0	17.1	12.7	52.0	63.5	51.3
--FORT RANDALL--																	
NAT INFLOW	350	68	32	41	85	50	95	25	15	-5	-25	-10	-5	-5	-20	-25	35
DEPLETION	80	1	1	1	4	9	12	18	15	7	1	1	0	1	3	3	3
EVAPORATION	145							10	32	39	31	12	5	5	12		
REG INFLOW	17419	609	414	501	1657	1912	1933	1920	1912	1658	1158	502	271	197	818	1040	916
RELEASE	17419	329	270	501	1657	1912	1933	1920	1912	1802	1797	815	382	223	709	699	557
STOR CHANGE	0	280	144	0			0	0	0	-144	-639	-313	-111	-26	109	341	359
STORAGE	3001.	3281	3425	3425	3425	3425	3425	3425	3425	3281	2642	2329	2218	2192	2301	2642	3001
ELEV FTMSL	1350.0	1353.5	1355.2	1355.2	1355.2	1355.2	1355.2	1355.2	1355.2	1353.5	1345.0	1340.0	1338.0	1337.5	1339.5	1345.0	1350.0
DISCH KCFS	14.633	11.1	19.4	28.1	27.9	31.1	32.5	31.2	31.1	30.3	29.2	27.4	27.5	14.0	11.5	11.4	10.0
POWER																	
AVE POWER MW		92	164	236	235	262	273	263	262	253	234	207	202	103	85	87	80
PEAK POW MW		350	356	356	356	356	356	356	356	350	319	296	287	285	294	319	339
ENERGY GWH	1728.3	33.0	27.5	51.1	169.0	194.7	196.6	195.5	194.7	182.3	174.2	74.6	33.9	19.7	63.2	64.6	53.9
--GAVINS POINT--																	
NAT INFLOW	1200	80	37	48	120	130	135	80	60	75	100	48	22	25	70	70	100
DEPLETION	114	0	0	0	5	19	24	39	10	-5	2	5	2	3	10	1	
CHAN STOR	7	7	-16	-17	0	-6	-3	2	0	2	2	3	0	25	5	0	2
EVAPORATION	42							2	8	10	9	4	2	2	5		
REG INFLOW	18470	417	291	533	1773	2017	2041	1961	1955	1874	1888	857	400	268	769	769	659
RELEASE	18470	417	291	533	1773	2017	2041	1961	1943	1851	1888	857	400	268	769	769	694
STOR CHANGE									12	23							-35
STORAGE	327.	327	327	327	327	327	327	327	339	362	362	362	362	362	362	362	327
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	17.000	14.0	21.0	29.8	29.8	32.8	34.3	31.9	31.6	31.1	30.7	28.8	28.8	16.9	12.5	12.5	12.5
POWER																	
AVE POWER MW		49	72	100	100	107	111	105	105	105	105	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	754.3	17.6	12.1	21.7	72.3	79.8	79.6	78.3	78.2	75.9	78.4	36.3	16.9	11.5	33.0	33.0	29.6
--GAVINS POINT - SIOUX CITY--																	
NAT INFLOW	700	87	41	52	90	120	65	70	40	30	30	18	8	9	5	15	20
DEPLETION	280	7	3	4	24	37	32	40	38	25	12	7	3	3	14	15	15
REGULATED FLOW AT SIOUX CITY																	
KAF	18890	496	329	580	1839	2100	2074	1991	1945	1856	1906	868	405	274	760	769	699
KCFS		16.7	23.7	32.5	30.9	34.2	34.9	32.4	31.6	31.2	31.0	29.2	29.2	17.3	12.4	12.5	12.6
--TOTAL--																	
NAT INFLOW	16100	980	457	588	1515	2360	3945	1810	740	590	805	358	167	191	370	465	760
DEPLETION	2619	66	31	40	208	463	1203	1074	332	-177	-100	-132	-61	-70	-118	-98	-42
CHAN STOR	-41	31	-16	-17	-29	-34	-33	7	0	42	43	3	0	27	-52	-16	2
EVAPORATION	1952							125	385	474	405	180	83	95	205		
STORAGE	54126.	54575	54657	54607	54047	53810	54445	53071	51149	49629	48266	47710	47450	47369	46841	46619	46724
SYSTEM POWER																	
AVE POWER MW		738	994	1064	1118	1290	1371	1346	1343	1208	962	895	932	668	729	823	787
PEAK POW MW		2299	2296	2294	2286	2280	2285	2267	2245	2230	2209	2183	2172	2169	2135	2157	2166
ENERGY GWH	9291.0	265.6	167.0	229.9	805.0	959.9	987.1	1001.1	999.4	869.8	715.7	322.1	156.6	128.2	542.4	612.2	528.9
DAILY GWH		17.7	23.9	25.5	26.8	31.0	32.9	32.3	32.2	29.0	23.1	21.5	22.4	16.0	17.5	19.7	18.9

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

28FEB17		2017										2018				
	INI-SUM	15MAR	22MAR	31MAR	30APR	31MAY	30JUN	31JUL	31AUG	30SEP	31OCT	15NOV	22NOV	30NOV	31DEC	31JAN	28FEB
--FORT PECK--																	
NAT INFLOW	7200	227	106	136	560	1145	1830	840	365	290	385	205	96	109	295	260	350
DEPLETION	512	-30	-14	-18	44	275	556	276	34	-85	-104	-30	-14	-16	-129	-141	-93
EVAPORATION	457							28	88	109	95	43	20	23	50		
MOD INFLOW	6231	257	120	154	516	870	1274	536	243	266	394	192	90	102	374	401	443
RELEASE	6382	179	83	107	446	492	655	676	676	508	369	179	83	116	584	646	583
STOR CHANGE	-151	78	37	47	70	378	619	-141	-433	-243	25	13	6	-14	-210	-245	-140
STORAGE	14569.	14647	14684	14731	14801	15179	15798	15658	15224	14982	15006	15020	15026	15013	14803	14558	14418
ELEV FTMSL	2232.9	2233.3	2233.5	2233.7	2234.1	2235.8	2238.7	2238.0	2236.0	2234.9	2235.0	2235.1	2235.1	2235.1	2234.1	2232.9	2232.2
DISCH KCFS	10.000	6.0	6.0	6.0	7.5	8.0	11.0	11.0	11.0	8.5	6.0	6.0	6.0	7.3	9.5	10.5	10.5
POWER																	
AVE POWER MW		82	82	82	102	109	149	150	149	117	82	82	82	100	130	142	141
PEAK POW MW		162	162	162	162	164	166	165	164	163	163	163	163	163	162	161	161
ENERGY GWH	1050.3	29.4	13.7	17.7	73.6	81.4	107.6	111.6	111.1	84.2	61.1	29.6	13.8	19.2	96.4	105.3	94.8
--GARRISON--																	
NAT INFLOW	10900	479	223	287	780	1300	3120	2100	580	480	445	180	84	96	180	255	310
DEPLETION	1075	5	2	3	-8	87	875	720	121	-150	-48	-138	-64	-73	-119	-84	-55
CHAN STOR	-5	40			-15	-5	-30			24	25			-13	-22	-10	
EVAPORATION	532							33	104	129	111	50	23	26	57		
REG INFLOW	15670	692	304	391	1219	1700	2870	2024	1032	1033	775	446	208	246	805	975	948
RELEASE	15852	506	236	303	1131	1414	1547	1537	1537	1310	1168	565	264	295	1230	1476	1333
STOR CHANGE	-183	186	68	88	89	286	1323	486	-505	-277	-393	-119	-55	-49	-425	-501	-385
STORAGE	17479.	17665	17734	17821	17910	18196	19519	20005	19500	19223	18830	18711	18656	18606	18182	17681	17296
ELEV FTMSL	1836.6	1837.2	1837.5	1837.7	1838.0	1838.9	1843.0	1844.5	1843.0	1842.1	1840.9	1840.6	1840.4	1840.2	1838.9	1837.3	1836.0
DISCH KCFS	23.000	17.0	17.0	17.0	19.0	23.0	26.0	25.0	25.0	22.0	19.0	19.0	19.0	18.6	20.0	24.0	24.0
POWER																	
AVE POWER MW		211	211	212	237	287	329	320	320	280	241	240	240	235	251	299	296
PEAK POW MW		467	468	469	470	473	498	499	498	487	480	479	479	478	473	467	463
ENERGY GWH	2414.3	75.9	35.5	45.7	170.4	213.5	236.6	237.9	237.9	201.7	179.2	86.5	40.3	45.1	187.1	222.1	198.8
--OAHE--																	
NAT INFLOW	2300	259	121	155	405	220	625	170	70	95	45	45	21	24	-15	-10	70
DEPLETION	760	25	12	15	52	77	163	199	134	32	-13	1	0	0	14	19	30
CHAN STOR	-4	24			-8	-16	-12	4		12	12			2	-6	-16	
EVAPORATION	494							31	97	119	102	46	21	24	53		
REG INFLOW	16895	764	345	444	1476	1542	1997	1481	1376	1266	1137	564	263	296	1142	1430	1373
RELEASE	17083	468	306	360	1293	1543	1609	1849	1983	1754	1263	587	309	227	1113	1315	1103
STOR CHANGE	-188	295	39	83	183	-1	388	-369	-606	-488	-127	-23	-46	69	29	116	269
STORAGE	18393.	18688	18727	18810	18993	18992	19380	19012	18406	17918	17791	17768	17722	17791	17820	17935	18205
ELEV FTMSL	1606.6	1607.6	1607.7	1608.0	1608.5	1608.5	1609.7	1608.6	1606.7	1605.0	1604.6	1604.5	1604.4	1604.6	1604.7	1605.1	1606.0
DISCH KCFS	19.868	15.7	22.1	20.2	21.7	25.1	27.0	30.1	32.2	29.5	20.5	19.7	22.3	14.3	18.1	21.4	19.9
POWER																	
AVE POWER MW		203	285	261	282	325	352	391	415	376	262	251	283	182	230	272	254
PEAK POW MW		708	709	710	713	713	720	714	703	695	693	692	691	693	693	695	700
ENERGY GWH	2657.9	73.1	47.9	56.4	202.8	242.1	253.1	290.6	308.9	270.9	194.6	90.3	47.5	35.0	171.5	202.6	170.7
--BIG BEND--																	
EVAPORATION	105							6	20	25	22	10	5	5	12		
REG INFLOW	16978	468	306	360	1293	1543	1609	1843	1963	1729	1241	577	305	222	1101	1315	1103
RELEASE	16978	468	306	360	1293	1543	1609	1843	1963	1729	1241	577	305	222	1101	1315	1103
STORAGE	1631.	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631
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	19.868	15.7	22.1	20.2	21.7	25.1	27.0	30.0	31.9	29.1	20.2	19.4	21.9	14.0	17.9	21.4	19.9
POWER																	
AVE POWER MW		75	103	95	102	117	127	140	149	138	99	97	110	70	90	105	95
PEAK POW MW		517	509	509	509	509	509	509	509	517	538	538	538	538	538	538	529
ENERGY GWH	980.8	26.8	17.4	20.4	73.2	87.4	91.1	104.4	111.1	99.1	73.7	35.1	18.5	13.5	67.0	78.0	64.0
--FORT RANDALL--																	
NAT INFLOW	900	121	56	73	160	165	135	70	60	35		-5	-2	-3		-10	45
DEPLETION	80	1	1	1	4	9	12	18	15	7	1	1	0	1	3	3	3
EVAPORATION	116							8	25	31	24	9	4	4	9		
REG INFLOW	17682	588	362	432	1449	1699	1732	1887	1982	1725	1216	562	298	215	1089	1302	1145
RELEASE	17682	307	218	432	1449	1699	1732	1887	1982	1869	1855	875	409	241	980	961	786
STOR CHANGE	0	281	144	0			0	0	0	-144	-639	-313	-111	-26	108	341	359
STORAGE	3000.	3281	3425	3425	3425	3425	3425	3425	3425	3281	2642	2329	2218	2192	2300	2641	3000
ELEV FTMSL	1350.0	1353.5	1355.2	1355.2	1355.2	1355.2	1355.2	1355.2	1355.2	1353.5	1345.0	1340.0	1338.0	1337.5	1339.5	1345.0	1350.0
DISCH KCFS	14.160	10.3	15.7	24.2	24.3	27.6	29.1	30.7	32.2	31.4	30.2	29.4	29.5	15.2	15.9	15.6	14.2
POWER																	
AVE POWER MW		86	132	204	206	233	245	258	271	262	242	222	215	111	117	119	113
PEAK POW MW		350	356	356	356	356	356	356	356	350	319	296	287	285	294	320	339
ENERGY GWH	1746.4	30.8	22.3	44.2	148.1	173.3	176.5	192.1	201.7	188.9	179.7	79.9	36.2	21.3	87.2	88.4	75.9
--GAVINS POINT--																	
NAT INFLOW	1500	102	47	61	145	165	175	100	90	95	120	58	27	31	80	85	120
DEPLETION	114	0	0	0	5	19	24	39	10	-5	2	5	2	3	10	1	
CHAN STOR	-1	7	-10	-16	0	-6	-3	-3	-3	2	2	1	0	26	-1	1	3
EVAPORATION	34							2	6	8	7	3	2	2	4		
REG INFLOW	19034	417	255	477	1588	1839	1880	1943	2053	1963	1968	925	432	294	1045	1045	909
RELEASE	19034	417	255	477	1588	1839	1880	1943	2041	1940	1968	925	432	294	1045	1045	944
STOR CHANGE									12	23							-35
STORAGE	327.	327	327	327	327	327	327	327	339	362	362	362	362	362	362	362	327
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	17.000	14.0	18.4	26.7	26.7	29.9	31.6	31.6	33.2	32.6	32.0	31.1	31.1	18.5	17.0	17.0	17.0
POWER																	
AVE POWER MW		49	64	91	91	101	105	105	109	109	108	106	106	65	60	60	60
PEAK POW MW		114	114	114	114	114	114	114	115	117	117	117	117	117	78	78	76
ENERGY GWH	779.7	17.6	10.7	19.7	65.6	74.9	75.3	77.8	80.9	78.3	80.6	38.3	17.9	12.5	44.7	44.7	40.1
--GAVINS POINT - SIOUX CITY--																	
NAT INFLOW	1800	162	76	97	280	345	190	165	130	110	60	30	14	16	25	25	75
DEPLETION	283	7	3	4	24	37	32	40	39	26	12	7	3	3	14	15	16
REGULATED FLOW AT SIOUX CITY																	
KAF	20551	571	328	570	1844	2147	2038	2068	2132	2024	2016	949	443	306	1056	1055	1003
KCFS		19.2	23.6	31.9	31.0	34.9	34.3	33.6	34.7	34.0	32.8	31.9	31.9	19.3	17.2	17.2	18.1
--TOTAL--																	
NAT INFLOW	24600	1350	630	810	2330	3340	6075	3445	1295	1105	1055	513	239	273	565	605	970
DEPLETION	2824	9	4	6	121	504	1662	1292	353	-175	-150	-155	-72	-82	-207	-187	-99
CHAN STOR	-10	71	-10	-16	-23	-27	-44	1	-3	37	39	1	0	16	-29	-26	3
EVAPORATION	1737							109	340	422	362	161	75	85	184		
STORAGE	55399.	56240	56528	56746	57087	57750	60080	60058	58524	57396	56263	55821	55615	55595	55098	54809	54877
SYSTEM POWER																	
AVE POWER MW		705	877	945	1019	1173	1306	1364	1413	1282	1033	999	1037	764	879	996	959
PEAK POW MW		2319	2318	2321	2325	2330	2363	2358	2346	2330	2310	2285	2275	2274	2239	2259	2267
ENERGY GWH	9629.2	253.6	147.4	204.1	733.6	872.5	940.2	1014.5	1051.5	923.1	768.8	359.6	174.2	146.7	654.0	741.1	644.3
DAILY GWH		16.9	21.1	22.7	24.5	28.1	31.3	32.7	33.9	30.8	24.8	24.0	24.9	18.3	21.1	23.9	23.0

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

28FEB18		2018											2019			
	INI-SUM	15MAR	22MAR	31MAR	30APR	31MAY	30JUN	31JUL	31AUG	30SEP	31OCT	15NOV	22NOV	30NOV	31DEC	31JAN	28FEB
--FORT PECK--																	
NAT INFLOW	7200	227	106	136	560	1145	1830	840	365	290	385	205	96	109	295	260	350
DEPLETION	530	-26	-12	-16	13	286	582	283	38	-87	-106	-31	-14	-16	-129	-142	-93
EVAPORATION	453							28	87	109	95	43	20	23	49		
MOD INFLOW	6217	254	118	152	547	859	1248	529	240	268	396	193	90	103	375	402	443
RELEASE	6372	179	83	107	446	492	655	676	676	508	369	179	83	106	584	646	583
STOR CHANGE	-156	75	35	45	101	367	593	-147	-437	-239	28	14	7	-4	-209	-244	-140
STORAGE	14418.	14493	14528	14573	14674	15041	15634	15487	15050	14811	14838	14853	14859	14856	14646	14402	14262
ELEV FTMSL	2232.2	2232.6	2232.8	2233.0	2233.5	2235.2	2237.9	2237.3	2235.2	2234.1	2234.2	2234.3	2234.3	2234.3	2233.3	2232.1	2231.5
DISCH KCFS	10.500	6.0	6.0	6.0	7.5	8.0	11.0	11.0	11.0	8.5	6.0	6.0	6.0	6.7	9.5	10.5	10.5
POWER																	
AVE POWER MW		81	82	82	102	109	149	150	149	117	82	82	82	91	129	141	141
PEAK POW MW		161	161	161	162	163	165	165	163	162	162	162	162	162	162	161	160
ENERGY GWH	1046.1	29.3	13.7	17.6	73.4	81.2	107.3	111.3	110.7	83.9	60.9	29.5	13.8	17.6	96.2	105.0	94.5
--GARRISON--																	
NAT INFLOW	10900	479	223	287	780	1300	3120	2100	580	480	445	180	84	96	180	255	310
DEPLETION	1113	3	1	2	-20	87	908	756	126	-153	-53	-141	-66	-75	-121	-85	-56
CHAN STOR	0	45			-15	-5	-30			24	25			-7	-28	-10	
EVAPORATION	527							32	103	128	110	49	23	26	56		
REG INFLOW	15632	700	305	393	1231	1700	2837	1988	1028	1037	781	450	210	245	802	976	949
RELEASE	15819	476	222	286	1101	1506	1547	1537	1537	1307	1168	565	264	263	1230	1476	1333
STOR CHANGE	-188	224	83	107	131	193	1290	451	-510	-270	-387	-115	-54	-19	-428	-500	-384
STORAGE	17296.	17520	17603	17710	17841	18034	19324	19775	19265	18995	18608	18493	18439	18420	17992	17492	17108
ELEV FTMSL	1836.0	1836.8	1837.0	1837.4	1837.8	1838.4	1842.4	1843.8	1842.3	1841.4	1840.2	1839.9	1839.7	1839.7	1838.3	1836.7	1835.4
DISCH KCFS	24.000	16.0	16.0	16.0	18.5	24.5	26.0	25.0	25.0	22.0	19.0	19.0	19.0	16.6	20.0	24.0	24.0
POWER																	
AVE POWER MW		198	198	199	230	305	328	319	319	279	240	240	239	209	251	297	295
PEAK POW MW		465	466	468	469	472	493	499	489	482	478	477	476	476	471	465	460
ENERGY GWH	2401.8	71.2	33.3	42.9	165.7	226.7	235.9	237.1	237.0	200.6	178.8	86.3	40.2	40.2	186.4	221.3	198.1
--OAHE--																	
NAT INFLOW	2300	259	121	155	405	220	625	170	70	95	45	45	21	24	-15	-10	70
DEPLETION	777	26	12	15	52	79	166	204	137	33	-13	1	0	0	14	20	31
CHAN STOR	0	32	0	0	-10	-24	-6	4		12	12			10	-14	-16	
EVAPORATION	489							31	96	117	101	45	21	24	53		
REG INFLOW	16854	742	331	426	1444	1624	2000	1476	1375	1264	1138	564	263	273	1134	1429	1372
RELEASE	17047	468	306	360	1293	1543	1609	1849	1983	1754	1263	587	309	227	1100	1302	1092
STOR CHANGE	-193	273	25	65	151	81	391	-373	-608	-490	-125	-23	-46	46	34	127	280
STORAGE	18205.	18478	18503	18568	18719	18800	19191	18818	18210	17720	17595	17572	17526	17572	17606	17733	18012
ELEV FTMSL	1606.0	1606.9	1607.0	1607.2	1607.7	1607.9	1609.2	1608.0	1606.0	1604.4	1604.0	1603.9	1603.7	1603.9	1604.0	1604.4	1605.4
DISCH KCFS	19.868	15.7	22.1	20.2	21.7	25.1	27.0	30.1	32.2	29.5	20.5	19.7	22.3	14.3	17.9	21.2	19.7
POWER																	
AVE POWER MW		202	284	260	280	324	350	389	414	375	261	250	282	182	227	269	251
PEAK POW MW		705	705	706	709	710	717	710	700	691	689	689	688	689	689	692	697
ENERGY GWH	2642.8	72.9	47.7	56.2	201.9	241.2	252.3	289.7	307.8	269.9	193.9	90.0	47.3	34.9	168.8	199.9	168.4
--BIG BEND--																	
EVAPORATION	105							6	20	25	22	10	5	5	12		
REG INFLOW	16942	468	306	360	1293	1543	1609	1843	1963	1729	1241	577	305	222	1089	1302	1092
RELEASE	16942	468	306	360	1293	1543	1609	1843	1963	1729	1241	577	305	222	1089	1302	1092
STORAGE	1631.	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631
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	19.868	15.7	22.1	20.2	21.7	25.1	27.0	30.0	31.9	29.1	20.2	19.4	21.9	14.0	17.7	21.2	19.7
POWER																	
AVE POWER MW		75	103	95	102	117	127	140	149	138	99	97	110	70	89	104	94
PEAK POW MW		517	509	509	509	509	509	509	509	517	538	538	538	538	538	538	529
ENERGY GWH	978.6	26.8	17.4	20.4	73.2	87.4	91.1	104.4	111.1	99.1	73.7	35.1	18.5	13.5	66.3	77.3	63.4
--FORT RANDALL--																	
NAT INFLOW	900	121	56	73	160	165	135	70	60	35		-5	-2	-3		-10	45
DEPLETION	80	1	1	1	4	9	12	18	15	7	1	1	0	1	3	3	3
EVAPORATION	116							8	25	31	24	9	4	4	9		
REG INFLOW	17646	588	362	432	1449	1699	1732	1887	1982	1725	1216	562	298	215	1076	1289	1134
RELEASE	17646	307	218	432	1449	1699	1732	1887	1982	1869	1855	875	409	241	968	948	775
STOR CHANGE	0	281	144	0			0	0	0	-144	-639	-313	-111	-26	108	341	359
STORAGE	3000.	3281	3425	3425	3425	3425	3425	3425	3425	3281	2642	2329	2218	2192	2300	2641	3000
ELEV FTMSL	1350.0	1353.5	1355.2	1355.2	1355.2	1355.2	1355.2	1355.2	1355.2	1353.5	1345.0	1340.0	1338.0	1337.5	1339.5	1345.0	1350.0
DISCH KCFS	14.160	10.3	15.7	24.2	24.3	27.6	29.1	30.7	32.2	31.4	30.2	29.4	29.5	15.2	15.7	15.4	14.0
POWER																	
AVE POWER MW		86	132	204	206	233	245	258	271	262	242	222	215	111	116	117	111
PEAK POW MW		350	356	356	356	356	356	356	356	350	319	296	287	285	294	320	339
ENERGY GWH	1743.1	30.8	22.3	44.2	148.1	173.3	176.5	192.1	201.7	188.9	179.7	79.9	36.2	21.3	86.1	87.3	74.8
--GAVINS POINT--																	
NAT INFLOW	1500	102	47	61	145	165	175	100	90	95	120	58	27	31	80	85	120
DEPLETION	114	0	0	0	5	19	24	39	10	-5	2	5	2	3	10	1	
CHAN STOR	-1	7	-10	-16	0	-6	-3	-3	-3	2	2	1	0	26	-1	1	3
EVAPORATION	34							2	6	8	7	3	2	2	4		
REG INFLOW	18998	417	255	477	1588	1839	1880	1943	2053	1963	1968	925	432	294	1033	1033	898
RELEASE	18998	417	255	477	1588	1839	1880	1943	2041	1940	1968	925	432	294	1033	1033	933
STOR CHANGE									12	23							-35
STORAGE	327.	327	327	327	327	327	327	327	339	362	362	362	362	362	362	362	327
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	17.000	14.0	18.4	26.7	26.7	29.9	31.6	31.6	33.2	32.6	32.0	31.1	31.1	18.5	16.8	16.8	16.8
POWER																	
AVE POWER MW		49	64	91	91	101	105	105	109	109	108	106	106	65	59	59	59
PEAK POW MW		114	114	114	114	114	114	114	115	117	117	117	117	117	78	78	76
ENERGY GWH	778.2	17.6	10.7	19.7	65.6	74.9	75.3	77.8	80.9	78.3	80.6	38.3	17.9	12.5	44.2	44.2	39.6
--GAVINS POINT - SIOUX CITY--																	
NAT INFLOW	1800	162	76	97	280	345	190	165	130	110	60	30	14	16	25	25	75
DEPLETION	286	7	3	4	24	37	32	41	39	26	12	7	3	4	15	15	16
REGULATED FLOW AT SIOUX CITY																	
KAF	20512	571	328	570	1844	2147	2038	2067	2132	2024	2016	948	443	306	1043	1043	992
KCFS		19.2	23.6	31.9	31.0	34.9	34.3	33.6	34.7	34.0	32.8	31.9	31.9	19.3	17.0	17.0	17.9
--TOTAL--																	
NAT INFLOW	24600	1350	630	810	2330	3340	6075	3445	1295	1105	1055	513	239	273	565	605	970
DEPLETION	2900	11	5	6	78	517	1724	1341	365	-179	-157	-158	-74	-84	-208	-188	-99
CHAN STOR	-1	85	-10	-16	-25	-35	-38	1	-3	38	39	1	0	30	-43	-26	3
EVAPORATION	1723							108	337	418	359	160	74	84	183		
STORAGE	54877.	55730	56017	56234	56617	57258	59532	59463	57920	56800	55676	55239	55036	55033	54537	54262	54341
SYSTEM POWER																	
AVE POWER MW		691	863	931	1011	1189	1304	1361	1410	1279	1032	997	1035	729	871	988	951
PEAK POW MW		2313	2312	2315	2319	2324	2354	2353	2333	2320	2303	2279	2269	2267	2232	2253	2261
ENERGY GWH	9590.6	248.7	145.0	201.0	727.9	884.7	938.5	1012.4	1049.2	920.8	767.6	359.1	173.9	140.0	648.0	735.0	638.8
DAILY GWH		16.6	20.7	22.3	24.3	28.5	31.3	32.7	33.8	30.7	24.8	23.9	24.8	17.5	20.9	23.7	22.8

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

28FEB19		2019										2020				
	INI-SUM	15MAR	22MAR	31MAR	30APR	31MAY	30JUN	31JUL	31AUG	30SEP	31OCT	15NOV	22NOV	30NOV	31DEC	31JAN	29FEB
--FORT PECK--																	
NAT INFLOW	7200	227	106	136	560	1145	1830	840	365	290	385	205	96	109	295	260	350
DEPLETION	539	-26	-12	-15	13	286	586	291	43	-86	-106	-31	-14	-16	-129	-141	-104
EVAPORATION	452							28	87	108	94	43	20	23	49		
MOD INFLOW	6209	253	118	152	547	859	1244	521	235	268	397	193	90	103	375	401	454
RELEASE	6328	179	83	107	417	523	625	646	646	483	369	179	83	95	646	646	604
STOR CHANGE	-119	75	35	45	130	336	619	-124	-411	-215	28	14	7	8	-271	-245	-150
STORAGE	14262.	14337	14372	14416	14547	14883	15502	15378	14967	14753	14780	14795	14801	14809	14538	14294	14144
ELEV FTMSL	2231.5	2231.8	2232.0	2232.2	2232.8	2234.4	2237.3	2236.8	2234.8	2233.8	2234.0	2234.0	2234.1	2234.1	2232.8	2231.6	2230.9
DISCH KCFS	10.500	6.0	6.0	6.0	7.0	8.5	10.5	10.5	10.5	8.1	6.0	6.0	6.0	6.0	10.5	10.5	10.5
POWER																	
AVE POWER MW		81	81	81	95	116	143	143	143	111	82	82	82	82	142	141	140
PEAK POW MW		161	161	161	161	163	165	164	163	162	162	162	162	162	161	160	160
ENERGY GWH	1037.9	29.3	13.7	17.6	68.4	86.1	102.8	106.6	106.1	79.7	60.9	29.5	13.8	15.7	105.3	104.8	97.7
--GARRISON--																	
NAT INFLOW	10900	479	223	287	780	1300	3120	2100	580	480	445	180	84	96	180	255	310
DEPLETION	1129	3	1	2	-20	88	919	773	132	-156	-57	-145	-67	-77	-121	-85	-61
CHAN STOR	0	45			-10	-15	-20			23	21				-44		
EVAPORATION	522							32	102	126	109	49	23	26	56		
REG INFLOW	15577	700	305	393	1207	1720	2806	1940	992	1016	783	454	212	242	847	986	975
RELEASE	15721	476	222	286	1071	1506	1547	1537	1537	1277	1107	536	250	282	1230	1476	1381
STOR CHANGE	-144	224	83	107	135	213	1259	403	-545	-261	-324	-81	-38	-40	-383	-490	-406
STORAGE	17108.	17332	17415	17523	17658	17871	19130	19533	18988	18727	18403	18321	18283	18243	17860	17370	16965
ELEV FTMSL	1835.4	1836.1	1836.4	1836.8	1837.2	1837.9	1841.8	1843.1	1841.4	1840.6	1839.6	1839.3	1839.2	1839.1	1837.9	1836.3	1834.9
DISCH KCFS	24.000	16.0	16.0	16.0	18.0	24.5	26.0	25.0	25.0	21.5	18.0	18.0	18.0	17.8	20.0	24.0	24.0
POWER																	
AVE POWER MW		197	198	198	223	304	327	318	317	271	227	226	226	224	250	297	294
PEAK POW MW		463	464	465	467	470	485	498	482	479	476	475	474	474	470	464	459
ENERGY GWH	2379.1	70.9	33.2	42.8	160.6	225.9	235.2	236.3	236.0	195.4	169.2	81.5	38.0	42.9	185.9	220.7	204.6
--OAHE--																	
NAT INFLOW	2300	259	121	155	405	220	625	170	70	95	45	45	21	24	-15	-10	70
DEPLETION	789	26	12	15	53	80	169	208	141	33	-14	1	0	0	14	20	31
CHAN STOR	0	32	0	0	-8	-26	-6	4		14	14			1	-9	-17	
EVAPORATION	482							31	95	116	100	45	21	24	52		
REG INFLOW	16750	742	331	426	1415	1621	1997	1472	1372	1238	1080	535	250	283	1140	1429	1420
RELEASE	16898	469	306	360	1293	1543	1609	1849	1983	1754	1263	587	309	227	1037	1241	1068
STOR CHANGE	-149	273	25	65	122	78	388	-377	-611	-516	-183	-52	-59	56	103	188	351
STORAGE	18012.	18286	18310	18375	18498	18575	18963	18587	17976	17459	17277	17225	17166	17222	17324	17512	17864
ELEV FTMSL	1605.4	1606.3	1606.3	1606.6	1607.0	1607.2	1608.4	1607.2	1605.2	1603.5	1602.9	1602.7	1602.5	1602.7	1603.0	1603.7	1604.9
DISCH KCFS	19.668	15.7	22.1	20.2	21.7	25.1	27.0	30.1	32.2	29.5	20.5	19.7	22.3	14.3	16.9	20.2	18.6
POWER																	
AVE POWER MW		202	283	259	279	323	349	388	412	373	259	248	280	180	213	255	236
PEAK POW MW		701	702	703	705	706	713	706	696	687	683	682	681	682	684	688	694
ENERGY GWH	2608.9	72.7	47.5	56.0	201.2	240.2	251.4	288.6	306.5	268.7	192.8	89.4	47.0	34.6	158.2	189.7	164.2
--BIG BEND--																	
EVAPORATION	105							6	20	25	22	10	5	5	12		
REG INFLOW	16793	469	306	360	1293	1543	1609	1843	1963	1729	1241	577	305	222	1025	1241	1068
RELEASE	16793	469	306	360	1293	1543	1609	1843	1963	1729	1241	577	305	222	1025	1241	1068
STORAGE	1631.	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631
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	19.668	15.7	22.1	20.2	21.7	25.1	27.0	30.0	31.9	29.1	20.2	19.4	21.9	14.0	16.7	20.2	18.6
POWER																	
AVE POWER MW		75	103	95	102	117	127	140	149	138	99	97	110	70	84	99	89
PEAK POW MW		517	509	509	509	509	509	509	509	517	538	538	538	538	538	538	529
ENERGY GWH	969.9	26.9	17.3	20.4	73.2	87.4	91.1	104.4	111.1	99.1	73.7	35.1	18.5	13.5	62.5	73.7	62.0
--FORT RANDALL--																	
NAT INFLOW	900	121	56	73	160	165	135	70	60	35		-5	-2	-3		-10	45
DEPLETION	80	1	1	1	4	9	12	18	15	7	1	1	0	1	3	3	3
EVAPORATION	116							8	25	31	24	9	4	4	9		
REG INFLOW	17498	588	362	432	1449	1699	1732	1887	1982	1725	1216	562	298	215	1013	1228	1110
RELEASE	17498	307	218	432	1449	1699	1732	1887	1982	1869	1855	875	409	241	904	887	751
STOR CHANGE	0	281	144					0	0	-144	-639	-313	-111	-26	108	341	359
STORAGE	3000.	3281	3425	3425	3425	3425	3425	3425	3425	3281	2642	2329	2218	2192	2300	2641	3000
ELEV FTMSL	1350.0	1353.5	1355.2	1355.2	1355.2	1355.2	1355.2	1355.2	1355.2	1353.5	1345.0	1340.0	1338.0	1337.5	1339.5	1345.0	1350.0
DISCH KCFS	13.960	10.3	15.7	24.2	24.3	27.6	29.1	30.7	32.2	31.4	30.2	29.4	29.5	15.2	14.7	14.4	13.1
POWER																	
AVE POWER MW		86	132	204	206	233	245	258	271	262	242	222	215	111	108	110	104
PEAK POW MW		350	356	356	356	356	356	356	356	350	319	296	287	285	294	320	339
ENERGY GWH	1729.7	30.8	22.3	44.2	148.1	173.3	176.5	192.1	201.7	188.9	179.7	79.9	36.2	21.3	80.5	81.7	72.5
--GAVINS POINT--																	
NAT INFLOW	1500	102	47	61	145	165	175	100	90	95	120	58	27	31	80	85	120
DEPLETION	114	0	0	0	5	19	24	39	10	-5	2	5	2	3	10	1	
CHAN STOR	0	7	-10	-16	0	-6	-3	-3	-3	2	2	1	0	26	1	1	3
EVAPORATION	34							2	6	8	7	3	2	2	4		
REG INFLOW	18851	417	255	477	1588	1839	1880	1943	2053	1963	1968	925	432	294	971	972	874
RELEASE	18851	417	255	477	1588	1839	1880	1943	2041	1940	1968	925	432	294	971	972	909
STOR CHANGE									12	23							-35
STORAGE	327.	327	327	327	327	327	327	327	339	362	362	362	362	362	362	362	327
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	16.800	14.0	18.4	26.7	26.7	29.9	31.6	31.6	33.2	32.6	32.0	31.1	31.1	18.5	15.8	15.8	15.8
POWER																	
AVE POWER MW		49	64	91	91	101	105	105	109	109	108	106	106	65	56	56	56
PEAK POW MW		114	114	114	114	114	114	114	115	117	117	117	117	117	78	78	76
ENERGY GWH	772.0	17.6	10.7	19.7	65.6	74.9	75.3	77.8	80.9	78.3	80.6	38.3	17.9	12.5	41.6	41.6	38.7
--GAVINS POINT - SIOUX CITY--																	
NAT INFLOW	1800	162	76	97	280	345	190	165	130	110	60	30	14	16	25	25	75
DEPLETION	291	8	4	5	25	37	33	41	40	26	12	7	3	4	15	16	16
REGULATED FLOW AT SIOUX CITY																	
KAF	20360	571	327	570	1843	2147	2037	2067	2131	2024	2016	948	443	306	981	981	968
KCFS		19.2	23.6	31.9	31.0	34.9	34.2	33.6	34.7	34.0	32.8	31.9	31.9	19.3	16.0	15.9	16.8
--TOTAL--																	
NAT INFLOW	24600	1350	630	810	2330	3340	6075	3445	1295	1105	1055	513	239	273	565	605	970
DEPLETION	2942	12	5	7	80	519	1743	1370	381	-181	-162	-162	-75	-86	-208	-186	-115
CHAN STOR	1	84	-10	-16	-18	-47	-29	1	-3	39	37	1	0	28	-53	-16	3
EVAPORATION	1710							107	334	415	357	159	74	84	181		
STORAGE	54341.	55194	55480	55697	56086	56713	58979	58881	57326	56213	55095	54663	54461	54459	54016	53811	53930
SYSTEM POWER																	
AVE POWER MW		689	861	929	996	1193	1295	1352	1401	1264	1017	983	1020	732	852	957	919
PEAK POW MW		2307	2306	2309	2313	2318	2342	2348	2321	2313	2295	2271	2260	2259	2225	2247	2256
ENERGY GWH	9497.5	248.2	144.7	200.7	717.1	887.8	932.3	1005.8	1042.4	910.2	756.9	353.7	171.3	140.6	634.0	712.2	639.7
DAILY GWH		16.5	20.7	22.3	23.9	28.6	31.1	32.4	33.6	30.3	24.4	23.6	24.5	17.6	20.5	23.0	22.1

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

29FEB20		2020										2021				
	INI-SUM	15MAR	22MAR	31MAR	30APR	31MAY	30JUN	31JUL	31AUG	30SEP	31OCT	15NOV	22NOV	30NOV	31DEC	31JAN	28FEB
--FORT PECK--																	
NAT INFLOW	7200	227	106	136	560	1145	1830	840	365	290	385	205	96	109	295	260	350
DEPLETION	555	-25	-12	-15	13	287	590	298	46	-87	-109	-32	-15	-17	-131	-143	-94
EVAPORATION	448							28	86	107	94	42	20	23	49		
MOD INFLOW	6197	253	118	152	547	858	1240	514	233	270	400	194	91	104	377	403	444
RELEASE	6286	179	83	107	417	523	625	646	646	493	369	179	83	95	615	646	583
STOR CHANGE	-90	74	35	44	130	335	615	-131	-413	-223	32	16	7	8	-238	-243	-139
STORAGE	14144.	14218	14252	14297	14427	14763	15378	15246	14833	14610	14642	14658	14665	14673	14435	14193	14054
ELEV FTMSL	2230.9	2231.2	2231.4	2231.6	2232.3	2233.9	2236.8	2236.1	2234.2	2233.1	2233.3	2233.4	2233.4	2233.4	2232.3	2231.1	2230.4
DISCH KCFS	10.500	6.0	6.0	6.0	7.0	8.5	10.5	10.5	10.5	8.3	6.0	6.0	6.0	6.0	10.0	10.5	10.5
POWER																	
AVE POWER MW		81	81	81	95	116	142	143	142	113	82	82	82	82	135	141	140
PEAK POW MW		160	160	160	161	162	164	164	162	162	162	162	162	162	161	160	160
ENERGY GWH	1029.9	29.2	13.6	17.6	68.3	85.9	102.5	106.4	105.9	81.2	60.8	29.4	13.7	15.7	100.8	104.6	94.2
--GARRISON--																	
NAT INFLOW	10900	479	223	287	780	1300	3120	2100	580	480	445	180	84	96	180	255	310
DEPLETION	1148	3	2	2	-19	89	930	790	137	-159	-62	-149	-69	-79	-124	-87	-57
CHAN STOR	0	45			-10	-15	-20			22	22				-39	-5	
EVAPORATION	519							32	101	125	108	49	23	26	55		
REG INFLOW	15520	699	305	392	1206	1719	2795	1924	988	1028	790	458	214	245	824	983	950
RELEASE	15627	476	222	286	1071	1476	1547	1537	1537	1279	1107	536	243	273	1230	1476	1333
STOR CHANGE	-108	223	83	107	134	243	1248	386	-550	-251	-317	-77	-29	-28	-406	-493	-383
STORAGE	16965.	17188	17271	17378	17512	17755	19003	19390	18840	18589	18273	18195	18167	18138	17733	17239	16857
ELEV FTMSL	1834.9	1835.7	1835.9	1836.3	1836.7	1837.5	1841.5	1842.6	1841.0	1840.2	1839.2	1838.9	1838.9	1838.8	1837.5	1835.8	1834.5
DISCH KCFS	24.000	16.0	16.0	16.0	18.0	24.0	26.0	25.0	25.0	21.5	18.0	18.0	17.5	17.2	20.0	24.0	24.0
POWER																	
AVE POWER MW		196	197	197	222	297	326	317	316	272	227	226	219	216	249	296	293
PEAK POW MW		461	462	464	465	468	483	494	480	478	474	473	473	473	468	462	457
ENERGY GWH	2359.7	70.7	33.1	42.7	160.2	220.8	234.6	235.8	235.4	195.5	168.7	81.3	36.9	41.4	185.5	220.1	197.0
--OAHE--																	
NAT INFLOW	2300	259	121	155	405	220	625	170	70	95	45	45	21	24	-15	-10	70
DEPLETION	802	26	12	16	53	81	172	212	144	34	-14	1	0	0	14	20	31
CHAN STOR	0	33	0	0	-8	-24	-8	4		14	15		2	1	-12	-17	
EVAPORATION	478							30	94	115	99	45	21	24	52		
REG INFLOW	16648	742	331	425	1415	1591	1992	1469	1370	1239	1081	536	245	274	1137	1429	1372
RELEASE	16759	470	306	360	1293	1543	1609	1849	1983	1754	1263	587	309	225	999	1204	1003
STOR CHANGE	-111	271	25	65	122	48	383	-380	-613	-515	-182	-51	-64	49	138	225	368
STORAGE	17864.	18135	18159	18224	18347	18394	18777	18397	17784	17269	17088	17036	16972	17021	17159	17384	17753
ELEV FTMSL	1604.9	1605.8	1605.8	1606.1	1606.5	1606.6	1607.9	1606.6	1604.6	1602.8	1602.2	1602.0	1601.8	1602.0	1602.5	1603.2	1604.5
DISCH KCFS	18.572	15.8	22.0	20.2	21.7	25.1	27.0	30.1	32.2	29.5	20.5	19.7	22.3	14.2	16.3	19.6	18.1
POWER																	
AVE POWER MW		202	282	259	279	322	348	387	411	372	258	248	279	178	204	247	229
PEAK POW MW		699	699	700	702	703	710	703	692	683	680	679	678	679	681	685	692
ENERGY GWH	2579.4	72.8	47.4	55.9	200.6	239.5	250.6	287.7	305.5	267.7	192.1	89.1	46.9	34.2	152.0	183.6	153.9
--BIG BEND--																	
EVAPORATION	105							6	20	25	22	10	5	5	12		
REG INFLOW	16654	470	306	360	1293	1543	1609	1843	1963	1729	1241	577	305	220	988	1204	1003
RELEASE	16654	470	306	360	1293	1543	1609	1843	1963	1729	1241	577	305	220	988	1204	1003
STORAGE	1631.	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631
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	18.572	15.8	22.0	20.2	21.7	25.1	27.0	30.0	31.9	29.1	20.2	19.4	21.9	13.9	16.1	19.6	18.1
POWER																	
AVE POWER MW		75	103	95	102	117	127	140	149	138	99	97	110	70	81	96	87
PEAK POW MW		517	509	509	509	509	509	509	509	517	538	538	538	538	538	538	529
ENERGY GWH	961.6	27.0	17.3	20.4	73.2	87.4	91.1	104.4	111.1	99.1	73.7	35.1	18.5	13.4	60.2	71.5	58.2
--FORT RANDALL--																	
NAT INFLOW	900	121	56	73	160	165	135	70	60	35		-5	-2	-3		-10	45
DEPLETION	80	1	1	1	4	9	12	18	15	7	1	1	0	1	3	3	3
EVAPORATION	116							8	25	31	24	9	4	4	9		
REG INFLOW	17358	590	362	432	1449	1699	1732	1887	1982	1725	1216	562	298	213	975	1191	1045
RELEASE	17358	309	218	432	1449	1699	1732	1887	1982	1869	1855	875	409	239	867	850	686
STOR CHANGE	0	281	144					0	0	-144	-639	-313	-111	-26	109	341	359
STORAGE	3000.	3281	3425	3425	3425	3425	3425	3425	3425	3281	2642	2329	2218	2192	2301	2642	3001
ELEV FTMSL	1350.0	1353.5	1355.2	1355.2	1355.2	1355.2	1355.2	1355.2	1355.2	1353.5	1345.0	1340.0	1338.0	1337.5	1339.5	1345.0	1350.0
DISCH KCFS	13.061	10.4	15.7	24.2	24.3	27.6	29.1	30.7	32.2	31.4	30.2	29.4	29.5	15.1	14.1	13.8	12.4
POWER																	
AVE POWER MW		86	132	204	206	233	245	258	271	262	242	222	215	110	104	105	99
PEAK POW MW		350	356	356	356	356	356	356	356	350	319	296	287	285	294	320	339
ENERGY GWH	1716.8	31.0	22.2	44.2	148.1	173.3	176.5	192.1	201.7	188.9	179.7	79.9	36.2	21.1	77.2	78.3	66.3
--GAVINS POINT--																	
NAT INFLOW	1500	102	47	61	145	165	175	100	90	95	120	58	27	31	80	85	120
DEPLETION	114	0	0	0	5	19	24	39	10	-5	2	5	2	3	10	1	
CHAN STOR	0	5	-10	-16	0	-6	-3	-3	-3	2	2	1	0	27	2	0	3
EVAPORATION	34							2	6	8	7	3	2	2	4		
REG INFLOW	18711	417	255	477	1588	1839	1880	1943	2053	1963	1968	925	432	292	935	935	809
RELEASE	18711	417	255	477	1588	1839	1880	1943	2041	1940	1968	925	432	292	935	935	844
STOR CHANGE									12	23							-35
STORAGE	327.	327	327	327	327	327	327	327	339	362	362	362	362	362	362	362	327
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	15.800	14.0	18.4	26.7	26.7	29.9	31.6	31.6	33.2	32.6	32.0	31.1	31.1	18.4	15.2	15.2	15.2
POWER																	
AVE POWER MW		49	64	91	91	101	105	105	109	109	108	106	106	65	54	54	53
PEAK POW MW		114	114	114	114	114	114	114	115	117	117	117	117	117	78	78	76
ENERGY GWH	766.1	17.6	10.7	19.7	65.6	74.9	75.3	77.8	80.9	78.3	80.6	38.3	17.9	12.5	40.1	40.1	35.9
--GAVINS POINT - SIOUX CITY--																	
NAT INFLOW	1800	162	76	97	280	345	190	165	130	110	60	30	14	16	25	25	75
DEPLETION	293	8	4	5	25	37	33	41	40	27	13	7	3	4	15	16	16
REGULATED FLOW AT SIOUX CITY																	
KAF	20218	571	327	570	1843	2147	2037	2067	2131	2023	2015	948	443	304	945	944	903
KCFS		19.2	23.6	31.9	31.0	34.9	34.2	33.6	34.7	34.0	32.8	31.9	31.9	19.2	15.4	15.3	16.3
--TOTAL--																	
NAT INFLOW	24600	1350	630	810	2330	3340	6075	3445	1295	1105	1055	513	239	273	565	605	970
DEPLETION	2992	13	6	8	81	522	1761	1398	392	-183	-169	-167	-78	-89	-213	-190	-101
CHAN STOR	1	83	-10	-16	-18	-45	-31	1	-3	38	39	1	2	29	-50	-21	3
EVAPORATION	1700							106	332	412	354	158	73	83	180		
STORAGE	53930.	54780	55066	55282	55669	56295	58541	58416	56852	55743	54637	54211	54014	54018	53621	53451	53622
SYSTEM POWER																	
AVE POWER MW		690	860	928	994	1185	1293	1350	1399	1265	1016	981	1012	721	828	938	901
PEAK POW MW		2302	2301	2304	2308	2313	2336	2340	2316	2307	2290	2265	2255	2253	2220	2243	2253
ENERGY GWH	9413.6	248.3	144.4	200.3	716.0	881.8	930.8	1004.1	1040.5	910.8	755.6	353.1	170.0	138.3	615.7	698.2	605.6
DAILY GWH		16.6	20.6	22.3	23.9	28.4	31.0	32.4	33.6	30.4	24.4	23.5	24.3	17.3	19.9	22.5	21.6

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

TIME OF STUDY: 10:19:26 STUDY NO 13

VALUES IN 1000 AF EXCEPT AS INDICATED

28FEB21		2021										2022				
	INI-SUM	15MAR	22MAR	31MAR	30APR	31MAY	30JUN	31JUL	31AUG	30SEP	31OCT	15NOV	22NOV	30NOV	31DEC	31JAN	28FEB
--FORT PECK--																	
NAT INFLOW	7200	227	106	136	560	1145	1830	840	365	290	385	205	96	109	295	260	350
DEPLETION	563	-26	-12	-16	12	288	594	305	50	-88	-111	-32	-15	-17	-132	-143	-94
EVAPORATION	446							27	86	107	93	42	20	22	49		
MOD INFLOW	6191	254	118	152	548	857	1236	508	229	271	403	195	91	104	378	403	444
RELEASE	6251	179	83	107	417	523	625	646	646	488	369	179	83	95	584	646	583
STOR CHANGE	-60	75	35	45	131	334	611	-138	-417	-217	34	16	8	9	-206	-243	-139
STORAGE	14054.	14129	14164	14209	14340	14675	15286	15148	14731	14514	14548	14565	14572	14581	14375	14133	13993
ELEV FTMSL	2230.4	2230.8	2231.0	2231.2	2231.8	2233.5	2236.3	2235.7	2233.7	2232.7	2232.8	2232.9	2233.0	2233.0	2232.0	2230.8	2230.1
DISCH KCFS	10.500	6.0	6.0	6.0	7.0	8.5	10.5	10.5	10.5	8.2	6.0	6.0	6.0	6.0	9.5	10.5	10.5
POWER																	
AVE POWER MW		81	81	81	95	115	142	143	142	112	82	82	82	82	129	141	140
PEAK POW MW		160	160	160	161	162	164	163	162	161	161	161	161	161	161	160	159
ENERGY GWH	1022.9	29.2	13.6	17.5	68.2	85.8	102.4	106.2	105.7	80.3	60.7	29.4	13.7	15.7	95.8	104.5	94.1
--GARRISON--																	
NAT INFLOW	10900	479	223	287	780	1300	3120	2100	580	480	445	180	84	96	180	255	310
DEPLETION	1161	3	2	2	-19	88	939	805	143	-162	-67	-152	-71	-81	-125	-87	-57
CHAN STOR	0	45			-10	-15	-20			22	22				-35	-10	
EVAPORATION	516							32	100	124	108	48	23	26	55		
REG INFLOW	15474	700	305	392	1206	1720	2786	1909	982	1028	795	462	216	247	799	978	950
RELEASE	15549	476	222	286	1101	1506	1547	1537	1537	1249	1045	506	236	262	1230	1476	1333
STOR CHANGE	-74	223	83	107	105	213	1239	372	-555	-221	-250	-44	-20	-15	-430	-498	-383
STORAGE	16857.	17080	17163	17270	17375	17588	18827	19198	18644	18423	18173	18129	18109	18094	17663	17165	16782
ELEV FTMSL	1834.5	1835.3	1835.6	1835.9	1836.3	1837.0	1840.9	1842.1	1840.4	1839.7	1838.9	1838.7	1838.7	1838.6	1837.2	1835.6	1834.3
DISCH KCFS	24.000	16.0	16.0	16.0	18.5	24.5	26.0	25.0	25.0	21.0	17.0	17.0	17.0	16.5	20.0	24.0	24.0
POWER																	
AVE POWER MW		196	197	197	228	302	325	316	316	264	214	213	213	207	249	295	293
PEAK POW MW		460	461	462	464	466	481	486	478	476	473	473	472	472	467	461	456
ENERGY GWH	2342.7	70.6	33.0	42.6	164.1	224.6	233.9	235.3	235.2	190.4	159.0	76.7	35.8	39.7	185.3	219.8	196.7
--OAHE--																	
NAT INFLOW	2300	259	121	155	405	220	625	170	70	95	45	45	21	24	-15	-10	70
DEPLETION	817	26	12	16	54	82	175	217	147	35	-15	1	0	0	14	21	32
CHAN STOR	0	33	0	0	-10	-24	-6	4		16	17			2	-15	-17	
EVAPORATION	476							30	93	114	98	44	21	23	51		
REG INFLOW	16556	742	331	425	1442	1620	1991	1464	1367	1211	1024	506	236	264	1135	1428	1371
RELEASE	16633	472	306	360	1293	1543	1609	1849	1983	1754	1263	587	309	225	955	1161	965
STOR CHANGE	-77	270	25	65	149	77	382	-385	-616	-543	-239	-81	-73	39	180	267	406
STORAGE	17753.	18023	18047	18112	18261	18339	18721	18335	17720	17177	16937	16856	16783	16822	17002	17269	17675
ELEV FTMSL	1604.5	1605.4	1605.5	1605.7	1606.2	1606.4	1607.7	1606.4	1604.4	1602.5	1601.7	1601.4	1601.1	1601.3	1601.9	1602.8	1604.2
DISCH KCFS	18.068	15.8	22.0	20.2	21.7	25.1	27.0	30.1	32.2	29.5	20.5	19.7	22.3	14.2	15.5	18.9	17.4
POWER																	
AVE POWER MW		202	281	258	278	322	348	386	410	371	258	247	278	178	195	237	220
PEAK POW MW		697	697	698	701	702	709	702	691	681	677	676	674	675	678	683	691
ENERGY GWH	2555.9	72.8	47.3	55.8	200.3	239.2	250.4	287.4	305.1	267.3	191.7	88.8	46.7	34.1	144.8	176.6	147.7
--BIG BEND--																	
EVAPORATION	105							6	20	25	22	10	5	5	12		
REG INFLOW	16528	472	306	360	1293	1543	1609	1843	1963	1729	1241	577	305	220	943	1161	965
RELEASE	16528	472	306	360	1293	1543	1609	1843	1963	1729	1241	577	305	220	943	1161	965
STORAGE	1631.	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631
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	18.068	15.8	22.0	20.2	21.7	25.1	27.0	30.0	31.9	29.1	20.2	19.4	21.9	13.9	15.3	18.9	17.4
POWER																	
AVE POWER MW		75	103	95	102	117	127	140	149	138	99	97	110	70	77	93	83
PEAK POW MW		517	509	509	509	509	509	509	509	517	538	538	538	538	538	538	529
ENERGY GWH	954.3	27.0	17.3	20.4	73.2	87.4	91.1	104.4	111.1	99.1	73.7	35.1	18.5	13.4	57.5	69.0	56.0
--FORT RANDALL--																	
NAT INFLOW	900	121	56	73	160	165	135	70	60	35		-5	-2	-3		-10	45
DEPLETION	80	1	1	1	4	9	12	18	15	7	1	1	0	1	3	3	3
EVAPORATION	116							8	25	31	24	9	4	4	9		
REG INFLOW	17233	591	362	432	1449	1699	1732	1887	1982	1725	1216	562	298	213	931	1148	1007
RELEASE	17233	311	218	432	1449	1699	1732	1887	1982	1869	1855	875	409	239	822	807	648
STOR CHANGE	0	280	144					0	0	-144	-639	-313	-111	-26	109	341	359
STORAGE	3001.	3281	3425	3425	3425	3425	3425	3425	3425	3281	2642	2329	2218	2192	2301	2642	3001
ELEV FTMSL	1350.0	1353.5	1355.2	1355.2	1355.2	1355.2	1355.2	1355.2	1355.2	1353.5	1345.0	1340.0	1338.0	1337.5	1339.5	1345.0	1350.0
DISCH KCFS	12.360	10.4	15.7	24.2	24.3	27.6	29.1	30.7	32.2	31.4	30.2	29.4	29.5	15.1	13.4	13.1	11.7
POWER																	
AVE POWER MW		87	132	204	206	233	245	258	271	262	242	222	215	110	98	100	93
PEAK POW MW		350	356	356	356	356	356	356	356	350	319	296	287	285	294	319	339
ENERGY GWH	1705.4	31.2	22.2	44.2	148.1	173.3	176.5	192.1	201.7	188.9	179.7	79.9	36.2	21.1	73.3	74.4	62.6
--GAVINS POINT--																	
NAT INFLOW	1500	102	47	61	145	165	175	100	90	95	120	58	27	31	80	85	120
DEPLETION	114	0	0	0	5	19	24	39	10	-5	2	5	2	3	10	1	
CHAN STOR	0	4	-10	-16	0	-6	-3	-3	-3	2	2	1	0	27	3	0	3
EVAPORATION	34							2	6	8	7	3	2	2	4		
REG INFLOW	18586	417	255	477	1588	1839	1880	1943	2053	1963	1968	925	432	292	892	892	770
RELEASE	18586	417	255	477	1588	1839	1880	1943	2041	1940	1968	925	432	292	892	892	805
STOR CHANGE									12	23							-35
STORAGE	327.	327	327	327	327	327	327	327	339	362	362	362	362	362	362	362	327
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	15.200	14.0	18.4	26.7	26.7	29.9	31.6	31.6	33.2	32.6	32.0	31.1	31.1	18.4	14.5	14.5	14.5
POWER																	
AVE POWER MW		49	64	91	91	101	105	105	109	109	108	106	106	65	51	51	51
PEAK POW MW		114	114	114	114	114	114	114	115	117	117	117	117	117	78	78	76
ENERGY GWH	760.8	17.6	10.7	19.7	65.6	74.9	75.3	77.8	80.9	78.3	80.6	38.3	17.9	12.5	38.3	38.3	34.3
--GAVINS POINT - SIOUX CITY--																	
NAT INFLOW	1800	162	76	97	280	345	190	165	130	110	60	30	14	16	25	25	75
DEPLETION	295	8	4	5	25	38	33	42	40	27	13	7	3	4	15	16	16
REGULATED FLOW AT SIOUX CITY																	
KAF	20091	571	327	570	1843	2146	2037	2066	2131	2023	2015	948	443	304	902	901	864
KCFS		19.2	23.6	31.9	31.0	34.9	34.2	33.6	34.7	34.0	32.8	31.9	31.9	19.2	14.7	14.6	15.6
--TOTAL--																	
NAT INFLOW	24600	1350	630	810	2330	3340	6075	3445	1295	1105	1055	513	239	273	565	605	970
DEPLETION	3030	12	6	7	81	524	1777	1426	405	-186	-177	-171	-80	-91	-215	-189	-100
CHAN STOR	1	82	-10	-16	-20	-45	-29	1	-3	41	41	1	0	29	-46	-26	3
EVAPORATION	1691							106	331	410	353	157	73	83	180		
STORAGE	53622.	54471	54757	54974	55359	55984	58216	58064	56489	55388	54293	53872	53675	53682	53334	53201	53410
SYSTEM POWER																	
AVE POWER MW		690	858	926	999	1190	1291	1348	1398	1256	1002	967	1004	711	800	917	880
PEAK POW MW		2299	2298	2300	2305	2310	2333	2331	2312	2303	2286	2261	2251	2249	2217	2240	2250
ENERGY GWH	9342.0	248.3	144.2	200.1	719.5	885.2	929.6	1003.2	1039.7	904.4	745.4	348.2	168.7	136.5	594.9	682.6	591.4
DAILY GWH		16.6	20.6	22.2	24.0	28.6	31.0	32.4	33.5	30.1	24.0	23.2	24.1	17.1	19.2	22.0	21.1
	INI-SUM	15MAR	22MAR	31MAR	30APR	31MAY	30JUN	31JUL	31AUG	30SEP	31OCT	15NOV	22NOV	30NOV	31DEC	31JAN	28FEB

TIME OF STUDY: 10:19:04 STUDY NO 14

VALUES IN 1000 AF EXCEPT AS INDICATED

28FEB17		2017										2018				
	INI-SUM	15MAR	22MAR	31MAR	30APR	31MAY	30JUN	31JUL	31AUG	30SEP	31OCT	15NOV	22NOV	30NOV	31DEC	31JAN	28FEB
--FORT PECK--																	
NAT INFLOW	6100	206	96	123	472	969	1548	661	297	246	329	172	80	91	246	246	318
DEPLETION	473	-10	-5	-6	-5	231	560	290	22	-100	-81	-17	-8	-9	-137	-149	-104
EVAPORATION	494							31	96	119	103	46	22	25	53		
MOD INFLOW	5133	215	100	129	477	738	988	340	179	227	307	142	66	76	330	395	422
RELEASE	5815	179	83	107	446	492	565	584	584	465	369	179	83	103	523	553	500
STOR CHANGE	-682	37	17	22	31	246	423	-244	-405	-237	-62	-36	-17	-27	-193	-158	-78
STORAGE	12688.	12724	12742	12764	12794	13040	13463	13219	12814	12577	12515	12479	12462	12434	12241	12083	12005
ELEV FTMSL	2223.4	2223.6	2223.7	2223.8	2223.9	2225.3	2227.5	2226.2	2224.1	2222.8	2222.4	2222.2	2222.1	2222.0	2220.9	2220.1	2219.6
DISCH KCFS	10.000	6.0	6.0	6.0	7.5	8.0	9.5	9.5	9.5	7.8	6.0	6.0	6.0	6.5	8.5	9.0	9.0
POWER																	
AVE POWER MW		79	79	79	99	106	126	127	126	103	79	79	79	85	111	117	117
PEAK POW MW		154	154	154	154	156	157	156	154	153	153	153	153	152	151	150	150
ENERGY GWH	925.7	28.5	13.3	17.1	71.2	78.7	90.9	94.1	93.6	74.0	58.6	28.3	13.2	16.3	82.5	86.9	78.3
--GARRISON--																	
NAT INFLOW	9365	414	193	248	655	1177	2661	1740	486	403	404	164	77	87	154	215	287
DEPLETION	1205	15	7	9	32	171	855	698	111	-156	-45	-134	-62	-71	-107	-72	-47
CHAN STOR	10	41			-15	-5	-15			17	18			-5	-20	-5	
EVAPORATION	582							36	112	140	122	55	26	29	63		
REG INFLOW	13404	618	269	346	1054	1493	2356	1590	847	901	715	421	197	228	701	835	834
RELEASE	14228	476	222	286	1041	1476	1369	1353	1353	1095	922	446	208	238	1168	1353	1222
STOR CHANGE	-824	142	47	60	13	17	987	238	-506	-194	-208	-25	-12	-10	-468	-517	-388
STORAGE	15201.	15343	15390	15450	15462	15479	16467	16704	16198	16004	15797	15772	15760	15749	15282	14764	14376
ELEV FTMSL	1828.7	1829.3	1829.4	1829.6	1829.7	1829.8	1833.2	1834.0	1832.3	1831.6	1830.9	1830.8	1830.7	1830.7	1829.0	1827.1	1825.7
DISCH KCFS	23.000	16.0	16.0	16.0	17.5	24.0	23.0	22.0	22.0	18.4	15.0	15.0	15.0	15.0	19.0	22.0	22.0
POWER																	
AVE POWER MW		189	189	189	207	283	274	266	266	221	180	179	179	179	225	257	254
PEAK POW MW		438	439	439	440	440	453	455	449	447	444	444	443	443	437	430	425
ENERGY GWH	2044.3	67.9	31.8	40.9	149.1	210.6	197.6	198.1	197.6	159.0	133.6	64.5	30.1	34.4	167.3	191.1	170.7
--OAHE--																	
NAT INFLOW	1445	189	88	113	305	139	337	118	54	58	15	14	6	7	-37	-16	54
DEPLETION	761	25	12	15	52	77	163	199	134	32	-13	1	0	1	14	19	30
CHAN STOR	4	31	0	0	-6	-28	4	4		16	15				-19	-14	
EVAPORATION	527							34	103	127	109	49	23	26	56		
REG INFLOW	14389	671	299	384	1288	1510	1547	1242	1169	1010	857	410	191	219	1042	1304	1246
RELEASE	15240	457	302	346	1251	1505	1490	1763	1792	1300	1358	516	191	190	853	1058	868
STOR CHANGE	-850	214	-3	38	37	5	57	-521	-622	-289	-501	-106	1	29	189	246	378
STORAGE	16045.	16258	16255	16293	16330	16335	16392	15870	15248	14959	14458	14352	14352	14382	14570	14816	15194
ELEV FTMSL	1598.5	1599.3	1599.3	1599.4	1599.5	1599.5	1599.7	1597.8	1595.5	1594.4	1592.4	1592.0	1592.0	1592.1	1592.8	1593.8	1595.3
DISCH KCFS	15.732	15.4	21.7	19.4	21.0	24.5	25.0	28.7	29.1	21.8	22.1	17.4	13.7	12.0	13.9	17.2	15.6
POWER																	
AVE POWER MW		190	268	240	260	302	309	352	354	263	264	206	163	142	165	206	188
PEAK POW MW		664	664	665	666	666	667	657	646	640	630	628	628	629	633	638	645
ENERGY GWH	2242.4	68.2	45.0	51.8	187.1	224.8	222.8	262.0	263.1	189.5	196.2	74.3	27.5	27.3	123.1	153.2	126.5
--BIG BEND--																	
EVAPORATION	131							8	25	31	28	12	6	7	14		
REG INFLOW	15108	457	302	346	1251	1505	1490	1756	1767	1268	1330	504	185	183	839	1058	868
RELEASE	15108	457	302	346	1251	1505	1490	1756	1767	1268	1330	504	185	183	839	1058	868
STORAGE	1631.	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631
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	15.732	15.4	21.7	19.4	21.0	24.5	25.0	28.6	28.7	21.3	21.6	16.9	13.3	11.5	13.6	17.2	15.6
POWER																	
AVE POWER MW		73	102	91	98	115	117	134	134	102	106	85	67	58	69	85	75
PEAK POW MW		517	509	509	509	509	509	509	509	529	538	538	538	538	538	538	529
ENERGY GWH	872.9	26.2	17.1	19.6	70.9	85.2	84.4	99.4	100.1	73.5	78.9	30.5	11.3	11.2	51.2	62.9	50.4
--FORT RANDALL--																	
NAT INFLOW	494	85	40	51	88	71	121	38	27		-22	-8	-4	-4	-11	-22	44
DEPLETION	80	1	1	1	4	9	12	18	15	7	1	1	0	1	3	3	3
EVAPORATION	142							10	32	38	29	12	5	5	12		
REG INFLOW	15381	540	341	397	1335	1567	1599	1766	1747	1223	1278	483	176	173	813	1033	909
RELEASE	15381	260	197	397	1335	1567	1599	1766	1747	1648	1637	737	346	199	704	692	550
STOR CHANGE	0	280	144		0	0		0	0	-424	-359	-254	-170	-26	109	341	359
STORAGE	3001.	3281	3425	3425	3425	3425	3425	3425	3425	3001	2642	2388	2218	2192	2301	2642	3001
ELEV FTMSL	1350.0	1353.5	1355.2	1355.2	1355.2	1355.2	1355.2	1355.2	1355.2	1350.0	1345.0	1341.0	1338.0	1337.5	1339.5	1345.0	1350.0
DISCH KCFS	9.934	8.8	14.2	22.2	22.4	25.5	26.9	28.7	28.4	27.7	26.6	24.8	24.9	12.6	11.5	11.3	9.9
POWER																	
AVE POWER MW		73	120	188	190	215	227	242	239	228	210	188	184	92	84	86	79
PEAK POW MW		350	356	356	356	356	356	356	356	339	319	301	287	285	294	319	339
ENERGY GWH	1522.1	26.2	20.1	40.6	136.6	160.0	163.2	180.0	178.1	164.5	156.6	67.8	30.8	17.6	62.8	63.9	53.2
--GAVINS POINT--																	
NAT INFLOW	1326	94	44	56	128	143	153	87	71	81	106	51	24	27	77	77	107
DEPLETION	114	0	0	0	5	19	24	39	10	-5	2	5	2	3	10	1	
CHAN STOR	-1	2	-10	-15	0	-6	-3	-4	1	1	2	3	0	23	2	0	3
EVAPORATION	42							2	8	10	9	4	2	2	5		
REG INFLOW	16550	357	230	438	1458	1685	1726	1808	1801	1725	1734	782	365	244	769	769	659
RELEASE	16550	357	230	438	1458	1685	1726	1808	1789	1702	1734	782	365	244	769	769	694
STOR CHANGE									12	23							-35
STORAGE	327.	327	327	327	327	327	327	327	339	362	362	362	362	362	362	362	327
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	12.500	12.0	16.6	24.5	24.5	27.4	29.0	29.4	29.1	28.6	28.2	26.3	26.3	15.4	12.5	12.5	12.5
POWER																	
AVE POWER MW		42	58	84	84	93	99	99	99	99	99	92	92	55	44	44	44
PEAK POW MW		114	114	114	114	114	114	114	115	117	117	117	117	117	78	78	76
ENERGY GWH	691.2	15.1	9.7	18.1	60.4	69.5	70.9	74.0	73.8	71.4	73.4	33.2	15.5	10.5	33.0	33.0	29.6
--GAVINS POINT - SIOUX CITY--																	
NAT INFLOW	1170	129	60	77	154	197	122	106	85	70	37	24	11	13	11	21	53
DEPLETION	283	7	3	4	24	37	32	40	39	26	12	7	3	3	14	15	16
REGULATED FLOW AT SIOUX CITY																	
KAF	17437	479	287	511	1588	1845	1816	1874	1835	1746	1759	800	373	254	766	775	731
KCFS		16.1	20.7	28.6	26.7	30.0	30.5	30.5	29.8	29.3	28.6	26.9	26.9	16.0	12.5	12.6	13.2
--TOTAL--																	
NAT INFLOW	19900	1117	521	670	1802	2696	4942	2750	1020	858	869	416	194	222	440	521	863
DEPLETION	2916	39	18	24	112	544	1646	1284	331	-196	-124	-137	-64	-73	-203	-183	-102
CHAN STOR	13	74	-10	-15	-22	-39	-14	1	1	35	36	3	0	18	-37	-19	3
EVAPORATION	1917							120	375	465	399	178	82	94	203		
STORAGE	48891.	49564	49770	49890	49970	50238	51704	51177	49656	48534	47404	46983	46785	46750	46387	46298	46534
SYSTEM POWER																	
AVE POWER MW		645	815	871	938	1114	1153	1220	1218	1017	937	830	764	611	699	795	757
PEAK POW MW		2238	2237	2238	2239	2241	2256	2249	2230	2224	2201	2180	2167	2165	2131	2154	2164
ENERGY GWH	8298.6	232.1	137.0	188.1	675.2	828.8	829.9	907.7	906.2	731.9	697.4	298.6	128.4	117.4	520.0	591.1	508.8
DAILY GWH		15.5	19.6	20.9	22.5	26.7	27.7	29.3	29.2	24.4	22.5	19.9	18.3	14.7	16.8	19.1	18.2

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

28FEB18		2018										2019				
	INI-SUM	15MAR	22MAR	31MAR	30APR	31MAY	30JUN	31JUL	31AUG	30SEP	31OCT	15NOV	22NOV	30NOV	31DEC	31JAN	28FEB
--FORT PECK--																	
NAT INFLOW	6174	209	97	125	477	981	1567	669	301	249	331	174	81	93	249	249	322
DEPLETION	495	-33	-15	-20	21	272	592	272	-1	-127	-112	-31	-14	-17	-104	-115	-73
EVAPORATION	484							30	93	116	101	46	21	24	53		
MOD INFLOW	5195	242	113	145	456	709	975	367	209	260	342	159	74	85	300	364	395
RELEASE	5520	164	76	98	417	523	536	553	553	434	338	164	83	95	492	523	472
STOR CHANGE	-326	78	36	47	39	186	439	-186	-344	-174	4	-4	-9	-10	-192	-159	-77
STORAGE	12005.	12083	12119	12166	12205	12392	12831	12645	12301	12127	12131	12126	12117	12107	11915	11757	11679
ELEV FTMSL	2219.6	2220.1	2220.3	2220.5	2220.7	2221.8	2224.1	2223.1	2221.3	2220.3	2220.3	2220.3	2220.3	2220.2	2219.1	2218.2	2217.8
DISCH KCFS	9.000	5.5	5.5	5.5	7.0	8.5	9.0	9.0	9.0	7.3	5.5	5.5	6.0	6.0	8.0	8.5	8.5
POWER																	
AVE POWER MW		71	71	72	91	111	118	118	118	95	72	72	78	78	104	109	109
PEAK POW MW		150	151	151	151	152	155	154	152	151	151	151	151	151	149	148	148
ENERGY GWH	869.1	25.7	12.0	15.5	65.6	82.4	85.0	88.1	87.6	68.3	53.2	25.8	13.1	15.0	77.0	81.5	73.4
--GARRISON--																	
NAT INFLOW	9470	418	195	251	662	1190	2691	1760	492	409	409	166	77	88	155	217	290
DEPLETION	1068	8	4	5	22	150	809	714	116	-159	-50	-143	-67	-76	-121	-85	-59
CHAN STOR	5	37			-16	-16	-5			17	18		-5		-21	-5	
EVAPORATION	570							35	110	138	119	54	25	29	61		
REG INFLOW	13357	610	268	344	1041	1547	2412	1564	819	882	696	419	197	231	686	819	821
RELEASE	13750	446	208	268	982	1445	1309	1291	1291	1084	953	461	208	238	1107	1291	1166
STOR CHANGE	-393	164	59	76	59	102	1103	273	-472	-202	-257	-43	-11	-7	-421	-472	-345
STORAGE	14376.	14540	14599	14676	14735	14837	15940	16213	15741	15539	15282	15239	15228	15221	14800	14329	13983
ELEV FTMSL	1825.7	1826.3	1826.5	1826.8	1827.0	1827.4	1831.4	1832.3	1830.7	1830.0	1829.0	1828.9	1828.8	1828.8	1827.3	1825.5	1824.2
DISCH KCFS	22.000	15.0	15.0	15.0	16.5	23.5	22.0	21.0	21.0	18.2	15.5	15.5	15.0	15.0	18.0	21.0	21.0
POWER																	
AVE POWER MW		174	174	174	192	273	259	251	251	216	183	183	177	177	211	243	240
PEAK POW MW		427	428	429	430	431	446	449	443	441	437	437	436	436	431	424	419
ENERGY GWH	1951.0	62.5	29.2	37.6	138.1	202.9	186.6	187.1	186.7	155.8	136.5	65.8	29.7	33.9	156.7	180.5	161.4
--OAHE--																	
NAT INFLOW	1494	196	91	117	315	144	349	122	55	61	17	14	7	7	-39	-17	55
DEPLETION	777	26	12	15	52	79	166	204	137	33	-13	1	0	0	14	20	31
CHAN STOR	5	32		0	-7	-31	7	4		13	13		2		-14	-14	
EVAPORATION	510							32	99	122	106	48	22	26	56		
REG INFLOW	13961	648	288	370	1238	1479	1499	1182	1111	1003	890	427	195	220	984	1240	1190
RELEASE	14366	452	295	330	1205	1463	1442	1692	1721	1233	1096	433	76	141	863	1059	865
STOR CHANGE	-405	196	-7	39	34	16	56	-510	-611	-230	-206	-6	119	79	121	181	326
STORAGE	15194.	15390	15383	15422	15456	15472	15528	15018	14407	14177	13971	13964	14083	14162	14283	14464	14789
ELEV FTMSL	1595.3	1596.0	1596.0	1596.2	1596.3	1596.4	1596.6	1594.6	1592.2	1591.3	1590.4	1590.4	1590.9	1591.2	1591.7	1592.4	1593.7
DISCH KCFS	15.624	15.2	21.2	18.5	20.2	23.8	24.2	27.5	28.0	20.7	17.8	14.6	5.5	8.9	14.0	17.2	15.6
POWER																	
AVE POWER MW		184	257	225	246	289	294	332	334	245	210	172	65	105	166	205	186
PEAK POW MW		648	648	649	650	650	651	641	629	625	621	621	623	625	627	631	637
ENERGY GWH	2084.0	66.3	43.2	48.5	177.0	214.8	211.9	247.1	248.3	176.7	156.4	61.8	10.8	20.2	123.8	152.2	125.1
--BIG BEND--																	
EVAPORATION	131							8	25	31	28	12	6	7	14		
REG INFLOW	14235	452	295	330	1205	1463	1442	1684	1696	1202	1068	421	70	134	849	1059	865
RELEASE	14235	452	295	330	1205	1463	1442	1684	1696	1202	1068	421	70	134	849	1059	865
STORAGE	1631.	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631
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	15.624	15.2	21.2	18.5	20.2	23.8	24.2	27.4	27.6	20.2	17.4	14.1	5.0	8.5	13.8	17.2	15.6
POWER																	
AVE POWER MW		72	99	87	95	111	113	128	129	97	87	71	26	43	70	85	75
PEAK POW MW		517	509	509	509	509	509	509	509	529	538	538	538	538	538	538	529
ENERGY GWH	822.9	25.9	16.7	18.7	68.2	82.9	81.7	95.4	96.1	69.7	64.4	25.7	4.3	8.2	51.8	62.9	50.2
--FORT RANDALL--																	
NAT INFLOW	517	89	42	53	92	75	126	40	29		-24	-9	-4	-5	-11	-23	46
DEPLETION	80	1	1	1	4	9	12	18	15	7	1	1	0	1	3	3	3
EVAPORATION	139							10	32	38	28	11	4	5	12		
REG INFLOW	14532	540	335	383	1293	1529	1556	1696	1679	1157	1015	400	62	124	823	1033	908
RELEASE	14532	259	191	383	1293	1529	1556	1696	1679	1581	1567	641	79	124	713	692	549
STOR CHANGE	0	280	144			0		0	0	-424	-552	-240	-17	0	109	341	359
STORAGE	3001.	3281	3425	3425	3425	3425	3425	3425	3425	3001	2449	2209	2192	2192	2301	2642	3001
ELEV FTMSL	1350.0	1353.5	1355.2	1355.2	1355.2	1355.2	1355.2	1355.2	1355.2	1350.0	1342.0	1337.8	1337.5	1337.5	1339.5	1345.0	1350.0
DISCH KCFS	9.898	8.7	13.8	21.4	21.7	24.9	26.2	27.6	27.3	26.6	25.5	21.5	5.7	7.8	11.6	11.3	9.9
POWER																	
AVE POWER MW		72	116	181	184	210	221	233	230	219	199	160	42	57	86	86	79
PEAK POW MW		350	356	356	356	356	356	356	356	339	305	286	285	285	294	319	339
ENERGY GWH	1438.6	26.1	19.6	39.2	132.3	156.2	158.9	173.0	171.3	158.0	148.1	57.5	7.0	11.0	63.7	63.9	53.1
--GAVINS POINT--																	
NAT INFLOW	1338	95	44	57	129	144	154	88	72	82	108	52	24	27	77	77	108
DEPLETION	114	0	0	0	5	19	24	39	10	-5	2	5	2	3	10	1	
CHAN STOR	-1	2	-10	-15	-1	-6	-2	-3	1	1	2	7	29	-4	-7	1	3
EVAPORATION	42							2	8	10	9	4	2	2	5		
REG INFLOW	15713	357	226	425	1416	1648	1684	1740	1734	1659	1666	690	128	143	769	769	659
RELEASE	15713	357	226	425	1416	1648	1684	1740	1722	1636	1666	690	128	143	769	769	694
STOR CHANGE									12	23							-35
STORAGE	327.	327	327	327	327	327	327	327	339	362	362	362	362	362	362	362	327
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	12.500	12.0	16.3	23.8	23.8	26.8	28.3	28.3	28.0	27.5	27.1	23.2	9.2	9.0	12.5	12.5	12.5
POWER																	
AVE POWER MW		42	57	82	82	91	96	96	96	96	95	82	33	32	44	44	44
PEAK POW MW		114	114	114	114	114	114	114	115	117	117	117	117	117	78	78	76
ENERGY GWH	657.4	15.1	9.5	17.6	58.7	68.0	69.3	71.6	71.3	68.8	70.6	29.4	5.5	6.2	33.1	33.0	29.6
--GAVINS POINT - SIOUX CITY--																	
NAT INFLOW	1207	133	62	80	159	203	126	110	88	71	39	25	11	13	11	22	55
DEPLETION	286	7	3	4	24	37	32	41	39	26	12	7	3	4	15	15	16
REGULATED FLOW AT SIOUX CITY																	
KAF	16634	482	285	500	1551	1814	1778	1809	1771	1681	1693	708	136	152	765	776	733
KCFS		16.2	20.5	28.0	26.1	29.5	29.9	29.4	28.8	28.3	27.5	23.8	9.8	9.6	12.4	12.6	13.2
--TOTAL--																	
NAT INFLOW	20200	1139	531	683	1834	2737	5013	2789	1037	872	880	421	196	225	442	525	876
DEPLETION	2820	9	4	6	128	566	1635	1288	316	-225	-160	-161	-75	-86	-183	-161	-82
CHAN STOR	8	70	-10	-15	-23	-53	-1	2	1	32	33	7	27	-4	-42	-19	3
EVAPORATION	1877							117	366	455	391	174	81	92	201		
STORAGE	46534.	47252	47484	47647	47779	48083	49682	49259	47844	46836	45825	45531	45613	45675	45292	45184	45411
SYSTEM POWER																	
AVE POWER MW		615	775	820	889	1085	1102	1159	1157	968	846	738	419	492	680	772	733
PEAK POW MW		2208	2207	2208	2210	2213	2231	2224	2205	2201	2169	2149	2150	2151	2117	2139	2148
ENERGY GWH	7823.0	221.6	130.2	177.1	639.9	807.1	793.4	862.3	861.1	697.2	629.2	265.8	70.5	94.5	506.1	574.1	492.7
DAILY GWH		14.8	18.6	19.7	21.3	26.0	26.4	27.8	27.8	23.2	20.3	17.7	10.1	11.8	16.3	18.5	17.6

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

28FEB19		2019										2020				
	INI-SUM	15MAR	22MAR	31MAR	30APR	31MAY	30JUN	31JUL	31AUG	30SEP	31OCT	15NOV	22NOV	30NOV	31DEC	31JAN	29FEB
--FORT PECK--																	
NAT INFLOW	6560	222	103	133	507	1042	1665	711	320	264	353	184	86	98	265	265	342
DEPLETION	541	-16	-8	-10	21	273	596	280	6	-126	-112	-31	-14	-17	-104	-114	-83
EVAPORATION	484							30	93	116	101	46	21	24	53		
MOD INFLOW	5535	238	111	143	486	769	1069	401	221	274	364	169	79	90	316	379	425
RELEASE	5471	149	69	89	417	492	536	553	553	414	307	149	69	79	523	553	518
STOR CHANGE	64	89	42	54	69	277	533	-152	-332	-140	56	20	9	11	-207	-174	-93
STORAGE	11679.	11769	11810	11864	11933	12211	12744	12592	12260	12120	12176	12197	12206	12217	12010	11836	11743
ELEV FTMSL	2217.8	2218.3	2218.6	2218.8	2219.2	2220.8	2223.7	2222.9	2221.0	2220.3	2220.6	2220.7	2220.7	2220.8	2219.7	2218.7	2218.2
DISCH KCFS	8.500	5.0	5.0	5.0	7.0	8.0	9.0	9.0	9.0	7.0	5.0	5.0	5.0	5.0	8.5	9.0	9.0
POWER																	
AVE POWER MW		64	65	65	90	104	118	118	118	90	65	65	65	65	110	116	116
PEAK POW MW		149	149	149	150	151	154	153	151	151	151	151	151	151	150	149	148
ENERGY GWH	860.0	23.2	10.8	14.0	65.1	77.2	84.8	88.0	87.5	65.1	48.4	23.5	11.0	12.5	82.0	86.4	80.6
--GARRISON--																	
NAT INFLOW	10016	442	206	265	701	1259	2846	1861	520	432	432	175	82	93	164	230	307
DEPLETION	1130	3	1	2	11	194	846	730	122	-162	-54	-146	-68	-78	-122	-85	-64
CHAN STOR	-5	37	0	0	-21	-10	-10			21	20		0	0	-36	-5	
EVAPORATION	569							35	110	137	119	53	25	28	61		
REG INFLOW	13783	625	274	353	1086	1546	2525	1650	842	892	695	416	194	222	711	863	889
RELEASE	13708	446	208	268	1012	1414	1309	1291	1291	1076	922	446	208	238	1138	1261	1179
STOR CHANGE	75	179	66	85	74	132	1216	358	-450	-184	-228	-30	-14	-16	-426	-397	-290
STORAGE	13983.	14162	14228	14313	14387	14520	15736	16094	15644	15460	15232	15202	15188	15172	14746	14349	14058
ELEV FTMSL	1824.2	1824.9	1825.1	1825.5	1825.7	1826.2	1830.7	1831.9	1830.3	1829.7	1828.9	1828.8	1828.7	1828.6	1827.1	1825.6	1824.5
DISCH KCFS	21.000	15.0	15.0	15.0	17.0	23.0	22.0	21.0	21.0	18.1	15.0	15.0	15.0	15.0	18.5	20.5	20.5
POWER																	
AVE POWER MW		172	172	173	196	265	258	251	250	214	177	177	177	177	216	237	235
PEAK POW MW		422	423	424	425	427	443	448	442	439	436	436	436	436	430	424	420
ENERGY GWH	1938.0	61.9	29.0	37.3	141.0	197.0	185.4	186.4	186.2	154.3	131.9	63.6	29.7	33.9	160.8	176.2	163.4
--OAHE--																	
NAT INFLOW	1767	231	108	139	373	170	412	144	65	72	21	17	8	9	-46	-20	65
DEPLETION	789	26	12	15	53	80	169	208	141	33	-14	1	0	0	14	20	31
CHAN STOR	3	27		0	-9	-27	4	4		14	14				-16	-9	
EVAPORATION	511							32	99	122	106	48	22	26	56		
REG INFLOW	14178	679	304	391	1323	1477	1557	1200	1117	1006	866	414	193	221	1005	1211	1213
RELEASE	14100	426	282	315	1176	1438	1402	1678	1710	1229	1096	315	97	140	862	1061	874
STOR CHANGE	78	254	22	77	147	39	154	-478	-594	-223	-230	100	96	81	143	150	340
STORAGE	14789.	15043	15065	15142	15289	15328	15482	15004	14410	14187	13957	14057	14154	14235	14378	14528	14867
ELEV FTMSL	1593.7	1594.7	1594.8	1595.1	1595.7	1595.8	1596.4	1594.6	1592.2	1591.3	1590.4	1590.8	1591.2	1591.5	1592.1	1592.7	1594.0
DISCH KCFS	15.569	14.3	20.3	17.6	19.8	23.4	23.6	27.3	27.8	20.7	17.8	10.6	7.0	8.8	14.0	17.3	15.2
POWER																	
AVE POWER MW		172	245	213	239	283	286	329	332	245	210	125	83	105	167	205	182
PEAK POW MW		642	642	644	647	647	650	641	630	625	621	623	624	626	629	632	639
ENERGY GWH	2043.4	62.0	41.1	45.9	171.9	210.4	205.6	244.9	246.7	176.1	156.4	44.9	13.9	20.1	123.9	152.8	126.6
--BIG BEND--																	
EVAPORATION	131							8	25	31	28	12	6	7	14		
REG INFLOW	13969	426	282	315	1176	1438	1402	1670	1685	1198	1068	302	91	133	848	1061	874
RELEASE	13969	426	282	315	1176	1438	1402	1670	1685	1198	1068	302	91	133	848	1061	874
STORAGE	1631.	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631
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	15.569	14.3	20.3	17.6	19.8	23.4	23.6	27.2	27.4	20.1	17.4	10.2	6.6	8.4	13.8	17.3	15.2
POWER																	
AVE POWER MW		68	95	82	92	109	110	127	128	97	87	51	33	43	70	85	73
PEAK POW MW		517	509	509	509	509	509	509	509	529	538	538	538	538	538	538	529
ENERGY GWH	807.5	24.4	16.0	17.8	66.6	81.4	79.4	94.6	95.4	69.5	64.4	18.5	5.6	8.2	51.8	63.1	50.7
--FORT RANDALL--																	
NAT INFLOW	645	111	52	66	115	93	158	50	36		-29	-11	-5	-6	-14	-29	57
DEPLETION	80	1	1	1	4	9	12	18	15	7	1	1	0	1	3	3	3
EVAPORATION	139							10	32	38	28	11	4	5	12		
REG INFLOW	14394	535	333	380	1287	1522	1548	1692	1675	1153	1010	279	82	122	819	1029	928
RELEASE	14394	255	189	380	1287	1522	1548	1692	1675	1577	1562	536	82	122	710	688	569
STOR CHANGE	0	280	144					0	0	-424	-552	-257	0	0	109	341	359
STORAGE	3001.	3281	3425	3425	3425	3425	3425	3425	3425	3001	2449	2192	2192	2192	2301	2642	3001
ELEV FTMSL	1350.0	1353.5	1355.2	1355.2	1355.2	1355.2	1355.2	1355.2	1355.2	1350.0	1342.0	1337.5	1337.5	1337.5	1339.5	1345.0	1350.0
DISCH KCFS	9.879	8.6	13.6	21.3	21.6	24.8	26.0	27.5	27.2	26.5	25.4	18.0	5.9	7.7	11.5	11.2	9.9
POWER																	
AVE POWER MW		71	115	180	183	209	220	232	230	219	198	134	43	56	85	85	79
PEAK POW MW		350	356	356	356	356	356	356	356	339	305	285	285	285	294	319	339
ENERGY GWH	1425.9	25.6	19.4	38.9	131.7	155.5	158.1	172.6	170.9	157.6	147.6	48.2	7.2	10.8	63.3	63.5	55.0
--GAVINS POINT--																	
NAT INFLOW	1403	99	46	60	135	151	162	92	76	86	113	54	25	29	81	81	113
DEPLETION	114	0	0	0	5	19	24	39	10	-5	2	5	2	3	10	1	
CHAN STOR	-1	3	-10	-15	-1	-6	-2	-3	1	1	2	14	23	-3	-7	1	2
EVAPORATION	42							2	8	10	9	4	2	2	5		
REG INFLOW	15640	357	226	425	1416	1648	1684	1740	1734	1659	1666	595	125	143	769	769	684
RELEASE	15640	357	226	425	1416	1648	1684	1740	1722	1636	1666	595	125	143	769	769	719
STOR CHANGE									12	23							-35
STORAGE	327.	327	327	327	327	327	327	327	339	362	362	362	362	362	362	362	327
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	12.500	12.0	16.3	23.8	23.8	26.8	28.3	28.3	28.0	27.5	27.1	20.0	9.0	9.0	12.5	12.5	12.5
POWER																	
AVE POWER MW		42	57	82	82	91	96	96	96	96	95	71	32	32	44	44	44
PEAK POW MW		114	114	114	114	114	114	114	115	117	117	117	117	117	78	78	76
ENERGY GWH	654.4	15.1	9.5	17.6	58.7	68.0	69.3	71.6	71.3	68.8	70.6	25.4	5.4	6.2	33.0	33.0	30.7
--GAVINS POINT - SIOUX CITY--																	
NAT INFLOW	1409	155	72	93	186	237	147	128	102	83	45	29	14	15	13	26	64
DEPLETION	291	8	4	5	25	37	33	41	40	26	12	7	3	4	15	16	16
REGULATED FLOW AT SIOUX CITY																	
KAF	16758	504	295	513	1577	1848	1798	1827	1784	1693	1699	617	135	154	767	779	767
KCFS		16.9	21.2	28.8	26.5	30.1	30.2	29.7	29.0	28.5	27.6	20.7	9.7	9.7	12.5	12.7	13.3
--TOTAL--																	
NAT INFLOW	21800	1260	588	756	2017	2952	5390	2986	1119	937	935	448	209	239	463	553	948
DEPLETION	2945	21	10	12	119	612	1680	1316	334	-227	-165	-164	-76	-87	-184	-159	-97
CHAN STOR	-5	67	-10	-15	-31	-43	-8	2	1	36	37	13	23	-4	-60	-14	2
EVAPORATION	1876							117	365	454	391	174	81	93	201		
STORAGE	45411.	46213	46487	46702	46993	47441	49345	49073	47709	46762	45808	45641	45733	45809	45428	45348	45628
SYSTEM POWER																	
AVE POWER MW		589	749	794	882	1061	1087	1153	1153	960	833	622	433	478	692	773	728
PEAK POW MW		2194	2194	2196	2201	2205	2227	2222	2203	2200	2168	2149	2151	2153	2119	2141	2151
ENERGY GWH	7729.2	212.1	125.8	171.6	635.1	789.5	782.7	858.2	858.0	691.4	619.4	224.1	72.8	91.7	514.9	575.0	507.0
DAILY GWH		14.1	18.0	19.1	21.2	25.5	26.1	27.7	27.7	23.0	20.0	14.9	10.4	11.5	16.6	18.5	17.5

TIME OF STUDY: 10:19:04 STUDY NO 17

VALUES IN 1000 AF EXCEPT AS INDICATED

29FEB20		2020									2021					
	INI-SUM	15MAR	22MAR	31MAR	30APR	31MAY	30JUN	31JUL	31AUG	30SEP	31OCT	15NOV	22NOV	30NOV	31DEC	31JAN	28FEB
--FORT PECK--																	
NAT INFLOW	6794	229	107	138	525	1079	1724	736	331	275	365	192	89	102	274	274	354
DEPLETION	553	-16	-8	-10	20	274	600	286	9	-127	-115	-33	-15	-17	-105	-116	-74
EVAPORATION	488							30	94	117	102	46	22	25	53		
MOD INFLOW	5753	246	115	147	505	805	1124	420	228	285	378	178	83	95	326	390	428
RELEASE	5496	149	69	89	417	492	536	553	553	427	338	164	76	87	492	553	500
STOR CHANGE	257	97	45	58	88	313	588	-133	-325	-142	40	14	7	8	-166	-163	-72
STORAGE	11743.	11840	11886	11944	12032	12345	12934	12801	12476	12333	12373	12387	12394	12402	12235	12072	12000
ELEV FTMSL	2218.2	2218.7	2219.0	2219.3	2219.8	2221.5	2224.7	2224.0	2222.2	2221.4	2221.7	2221.7	2221.8	2221.8	2220.9	2220.0	2219.6
DISCH KCFS	9.000	5.0	5.0	5.0	7.0	8.0	9.0	9.0	9.0	7.2	5.5	5.5	5.5	5.5	8.0	9.0	9.0
POWER																	
AVE POWER MW		65	65	65	91	104	118	119	118	94	72	72	72	72	104	117	116
PEAK POW MW		149	149	150	150	152	155	154	153	152	152	152	152	152	151	150	150
ENERGY GWH	867.9	23.2	10.9	14.0	65.2	77.4	85.1	88.4	87.9	67.6	53.5	25.9	12.1	13.8	77.6	86.9	78.3
--GARRISON--																	
NAT INFLOW	10343	457	213	274	723	1300	2939	1922	537	447	446	181	84	97	170	237	316
DEPLETION	1144	3	2	2	29	189	851	740	121	-171	-65	-149	-69	-79	-121	-83	-56
CHAN STOR	0	42	0	0	-21	-10	-10			19	17				-26	-10	
EVAPORATION	576							35	111	139	121	54	25	29	62		
REG INFLOW	14119	644	281	361	1090	1593	2613	1700	858	925	746	439	205	234	695	863	872
RELEASE	13807	446	208	268	952	1383	1339	1322	1322	1101	953	461	215	241	1138	1291	1166
STOR CHANGE	312	198	73	93	138	209	1274	378	-464	-176	-207	-22	-10	-7	-442	-428	-294
STORAGE	14058.	14256	14329	14422	14560	14769	16043	16422	15958	15782	15575	15553	15542	15535	15093	14665	14370
ELEV FTMSL	1824.5	1825.2	1825.5	1825.9	1826.4	1827.2	1831.7	1833.1	1831.4	1830.8	1830.1	1830.0	1830.0	1830.0	1828.4	1826.8	1825.7
DISCH KCFS	20.500	15.0	15.0	15.0	16.0	22.5	22.5	21.5	21.5	18.5	15.5	15.5	15.5	15.2	18.5	21.0	21.0
POWER																	
AVE POWER MW		172	173	173	185	260	265	258	258	221	185	184	184	180	218	245	242
PEAK POW MW		423	424	426	427	430	447	452	446	444	441	441	441	440	435	429	425
ENERGY GWH	1965.6	62.0	29.0	37.4	133.3	193.7	190.8	192.2	192.0	159.0	137.3	66.3	30.9	34.6	162.2	181.9	162.9
--OAHE--																	
NAT INFLOW	1949	255	119	153	412	188	455	159	72	79	22	18	8	10	-51	-22	72
DEPLETION	802	26	12	16	53	81	172	212	144	34	-14	1	0	0	14	20	31
CHAN STOR	-2	25		0	-4	-29		4		14	14			1	-15	-12	
EVAPORATION	519							33	100	124	108	48	23	26	57		
REG INFLOW	14434	700	315	405	1307	1461	1622	1241	1150	1035	895	430	201	226	1001	1238	1207
RELEASE	14113	408	274	304	1158	1421	1377	1669	1703	1227	1096	486	89	137	863	1063	838
STOR CHANGE	321	292	41	101	149	41	244	-428	-553	-192	-201	-56	112	89	138	175	370
STORAGE	14867.	15160	15200	15301	15450	15491	15735	15307	14754	14562	14361	14305	14417	14506	14644	14818	15188
ELEV FTMSL	1594.0	1595.2	1595.3	1595.7	1596.3	1596.4	1597.3	1595.7	1593.6	1592.8	1592.0	1591.8	1592.2	1592.6	1593.1	1593.8	1595.3
DISCH KCFS	15.187	13.7	19.8	17.0	19.5	23.1	23.1	27.1	27.7	20.6	17.8	16.3	6.4	8.6	14.0	17.3	15.1
POWER																	
AVE POWER MW		165	239	206	236	280	282	329	333	246	212	194	76	103	168	207	182
PEAK POW MW		644	645	647	650	650	655	647	636	633	629	627	630	631	634	638	645
ENERGY GWH	2056.4	59.5	40.1	44.5	169.9	208.7	202.9	245.1	247.4	177.3	157.8	69.8	12.8	19.8	124.7	154.0	122.2
--BIG BEND--																	
EVAPORATION	131							8	25	31	28	12	6	7	14		
REG INFLOW	13982	408	274	304	1158	1421	1377	1661	1678	1196	1068	474	83	131	848	1063	838
RELEASE	13982	408	274	304	1158	1421	1377	1661	1678	1196	1068	474	83	131	848	1063	838
STORAGE	1631.	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631
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	15.187	13.7	19.8	17.0	19.5	23.1	23.1	27.0	27.3	20.1	17.4	15.9	6.0	8.2	13.8	17.3	15.1
POWER																	
AVE POWER MW		65	92	80	91	108	108	126	128	96	87	80	30	42	70	85	72
PEAK POW MW		517	509	509	509	509	509	509	509	529	538	538	538	538	538	538	529
ENERGY GWH	808.8	23.4	15.5	17.2	65.6	80.5	78.0	94.1	95.0	69.4	64.4	28.9	5.1	8.0	51.8	63.2	48.6
--FORT RANDALL--																	
NAT INFLOW	731	126	59	75	130	106	179	57	41	-1	-33	-12	-6	-6	-16	-33	65
DEPLETION	80	1	1	1	4	9	12	18	15	7	1	1	0	1	3	3	3
EVAPORATION	139							10	32	38	28	11	5	5	12		
REG INFLOW	14494	532	332	379	1284	1518	1544	1690	1673	1150	1006	450	73	118	817	1027	900
RELEASE	14494	252	188	379	1284	1518	1544	1690	1673	1574	1558	681	99	119	708	686	541
STOR CHANGE	0	280	144			0		0	0	-424	-552	-231	-26	0	109	341	359
STORAGE	3001.	3281	3425	3425	3425	3425	3425	3425	3425	3001	2449	2218	2192	2192	2301	2642	3001
ELEV FTMSL	1350.0	1353.5	1355.2	1355.2	1355.2	1355.2	1355.2	1355.2	1355.2	1350.0	1342.0	1338.0	1337.5	1337.5	1339.5	1345.0	1350.0
DISCH KCFS	9.885	8.5	13.6	21.2	21.6	24.7	26.0	27.5	27.2	26.5	25.3	22.9	7.1	7.5	11.5	11.2	9.7
POWER																	
AVE POWER MW		70	115	179	182	208	219	232	229	218	198	170	53	55	85	85	78
PEAK POW MW		350	356	356	356	356	356	356	356	339	305	287	285	285	294	319	339
ENERGY GWH	1434.4	25.3	19.2	38.8	131.4	155.1	157.7	172.4	170.7	157.3	147.3	61.1	8.8	10.5	63.2	63.3	52.3
--GAVINS POINT--																	
NAT INFLOW	1440	102	47	61	138	155	166	94	78	89	117	56	26	30	83	83	116
DEPLETION	114	0	0	0	5	19	24	39	10	-5	2	5	2	3	10	1	
CHAN STOR	-1	3	-10	-15	-1	-6	-2	-3	1	1	2	5	29	-1	-7	1	3
EVAPORATION	42							2	8	10	9	4	2	2	5		
REG INFLOW	15777	357	226	425	1416	1648	1684	1740	1734	1659	1666	732	150	143	769	769	659
RELEASE	15777	357	226	425	1416	1648	1684	1740	1722	1636	1666	732	150	143	769	769	694
STOR CHANGE									12	23							-35
STORAGE	327.	327	327	327	327	327	327	327	339	362	362	362	362	362	362	362	327
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	12.500	12.0	16.3	23.8	23.8	26.8	28.3	28.3	28.0	27.5	27.1	24.6	10.8	9.0	12.5	12.5	12.5
POWER																	
AVE POWER MW		42	57	82	82	91	96	96	96	96	95	86	38	32	44	44	44
PEAK POW MW		114	114	114	114	114	114	114	115	117	117	117	117	117	78	78	76
ENERGY GWH	660.1	15.1	9.5	17.6	58.7	68.0	69.3	71.6	71.3	68.8	70.6	31.1	6.5	6.2	33.1	33.0	29.6
--GAVINS POINT - SIOUX CITY--																	
NAT INFLOW	1543	170	79	102	203	260	161	140	112	91	50	32	15	17	14	28	70
DEPLETION	293	8	4	5	25	37	33	41	40	27	13	7	3	4	15	16	16
REGULATED FLOW AT SIOUX CITY																	
KAF	17027	519	302	522	1594	1871	1812	1839	1794	1700	1703	756	161	156	768	781	748
KCFS		17.4	21.7	29.3	26.8	30.4	30.5	29.9	29.2	28.6	27.7	25.4	11.6	9.8	12.5	12.7	13.5
--TOTAL--																	
NAT INFLOW	22800	1339	624	803	2131	3088	5624	3108	1171	980	967	466	217	248	474	567	993
DEPLETION	2986	22	10	13	136	609	1692	1336	339	-235	-178	-168	-78	-89	-184	-159	-80
CHAN STOR	-3	70	-10	-15	-26	-45	-13	1	1	34	33	4	30	1	-49	-21	3
EVAPORATION	1895							118	369	459	395	176	82	93	203		
STORAGE	45628.	46495	46798	47051	47426	47988	50096	49912	48582	47671	46751	46456	46538	46627	46265	46190	46517
SYSTEM POWER																	
AVE POWER MW		580	740	785	867	1053	1089	1161	1162	971	848	786	454	484	689	783	735
PEAK POW MW		2198	2198	2202	2207	2212	2237	2233	2215	2212	2182	2162	2162	2164	2130	2152	2163
ENERGY GWH	7793.2	208.6	124.3	169.6	624.2	783.4	783.8	863.8	864.3	699.3	630.9	283.1	76.2	93.0	512.5	582.4	493.9
DAILY GWH		13.9	17.8	18.8	20.8	25.3	26.1	27.9	27.9	23.3	20.4	18.9	10.9	11.6	16.5	18.8	17.6
	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

28FEB21		2021										2022				
	INI-SUM	15MAR	22MAR	31MAR	30APR	31MAY	30JUN	31JUL	31AUG	30SEP	31OCT	15NOV	22NOV	30NOV	31DEC	31JAN	28FEB
--FORT PECK--																	
NAT INFLOW	7156	242	113	145	553	1137	1816	776	349	289	384	201	94	107	289	289	373
DEPLETION	564	-17	-8	-10	20	275	604	293	14	-128	-117	-33	-15	-18	-106	-116	-74
EVAPORATION	500							31	96	120	104	47	22	25	55		
MOD INFLOW	6092	258	121	155	533	862	1212	452	239	297	397	187	87	100	340	405	447
RELEASE	5608	164	76	98	417	492	536	553	553	447	369	179	83	95	492	553	500
STOR CHANGE	484	95	44	57	116	370	676	-101	-315	-150	28	8	4	4	-151	-148	-53
STORAGE	12000.	12095	12139	12196	12312	12682	13359	13258	12943	12793	12821	12829	12833	12837	12685	12537	12484
ELEV FTMSL	2219.6	2220.1	2220.4	2220.7	2221.3	2223.3	2226.9	2226.4	2224.7	2223.9	2224.1	2224.1	2224.2	2224.2	2223.4	2222.6	2222.3
DISCH KCFS	9.000	5.5	5.5	5.5	7.0	8.0	9.0	9.0	9.0	7.5	6.0	6.0	6.0	6.0	8.0	9.0	9.0
POWER																	
AVE POWER MW		71	72	72	91	105	119	120	119	99	79	79	79	79	105	118	118
PEAK POW MW		150	151	151	152	154	157	157	155	154	155	155	155	155	154	153	153
ENERGY GWH	893.7	25.7	12.0	15.5	65.7	77.9	85.8	89.1	88.8	71.5	59.0	28.6	13.3	15.2	78.4	87.9	79.2
--GARRISON--																	
NAT INFLOW	10840	479	223	287	758	1362	3080	2014	563	468	468	190	88	101	178	249	332
DEPLETION	1162	5	2	3	17	193	869	756	127	-174	-70	-152	-71	-81	-122	-84	-57
CHAN STOR	0	37			-16	-10	-10			15	15				-20	-10	
EVAPORATION	590							36	114	142	123	56	26	30	64		
REG INFLOW	14695	674	297	382	1142	1651	2736	1775	875	962	799	464	217	248	708	876	889
RELEASE	14108	461	215	277	1012	1353	1369	1353	1353	1113	953	461	208	238	1168	1353	1222
STOR CHANGE	587	212	82	105	130	298	1368	423	-477	-151	-154	3	8	10	-461	-477	-333
STORAGE	14370.	14582	14664	14770	14900	15198	16566	16988	16511	16360	16206	16209	16218	16227	15767	15290	14957
ELEV FTMSL	1825.7	1826.5	1826.8	1827.2	1827.7	1828.7	1833.6	1835.0	1833.4	1832.8	1832.3	1832.3	1832.4	1832.4	1830.8	1829.1	1827.9
DISCH KCFS	21.000	15.5	15.5	15.5	17.0	22.0	23.0	22.0	22.0	18.7	15.5	15.5	15.0	15.0	19.0	22.0	22.0
POWER																	
AVE POWER MW		179	180	180	198	257	274	267	267	226	187	187	181	181	227	260	258
PEAK POW MW		428	429	430	432	436	454	459	453	451	449	449	449	449	443	437	433
ENERGY GWH	2032.9	64.6	30.2	39.0	142.7	191.3	197.2	199.0	198.9	162.8	139.2	67.2	30.4	34.7	169.2	193.5	173.1
--OAHE--																	
NAT INFLOW	2260	296	138	177	477	218	527	184	84	92	25	21	10	11	-59	-25	84
DEPLETION	817	26	12	16	54	82	175	217	147	35	-15	1	0	0	14	21	32
CHAN STOR	-4	25			-7	-22	-4	4		15	14		2		-18	-14	
EVAPORATION	537							34	105	129	111	50	23	27	58		
REG INFLOW	15010	756	341	438	1428	1467	1716	1290	1185	1056	896	432	197	222	1019	1293	1274
RELEASE	14405	379	261	286	1125	1394	1335	1737	1773	1300	1240	565	113	154	858	1066	820
STOR CHANGE	605	377	80	152	303	73	381	-447	-588	-245	-344	-133	84	69	161	227	454
STORAGE	15188.	15565	15646	15798	16101	16174	16555	16108	15520	15275	14931	14798	14882	14951	15112	15339	15793
ELEV FTMSL	1595.3	1596.7	1597.0	1597.6	1598.7	1599.0	1600.3	1598.7	1596.5	1595.6	1594.3	1593.8	1594.1	1594.3	1595.0	1595.8	1597.6
DISCH KCFS	15.081	12.7	18.8	16.0	18.9	22.7	22.4	28.2	28.8	21.9	20.2	19.0	8.1	9.7	14.0	17.3	14.8
POWER																	
AVE POWER MW		155	229	196	232	279	278	348	352	265	243	228	98	117	168	210	180
PEAK POW MW		652	653	656	662	663	670	662	651	646	640	637	639	640	643	648	656
ENERGY GWH	2126.7	55.7	38.4	42.4	167.1	207.6	199.8	259.2	261.7	190.8	180.9	82.0	16.5	22.4	125.3	156.1	120.9
--BIG BEND--																	
EVAPORATION	131							8	25	31	28	12	6	7	14		
REG INFLOW	14274	379	261	286	1125	1394	1335	1729	1748	1269	1213	552	107	147	844	1066	820
RELEASE	14274	379	261	286	1125	1394	1335	1729	1748	1269	1213	552	107	147	844	1066	820
STORAGE	1631.	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631
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	15.081	12.7	18.8	16.0	18.9	22.7	22.4	28.1	28.4	21.3	19.7	18.6	7.7	9.3	13.7	17.3	14.8
POWER																	
AVE POWER MW		60	88	75	88	106	105	132	133	102	98	93	39	47	69	85	71
PEAK POW MW		517	509	509	509	509	509	509	509	529	538	538	538	538	538	538	529
ENERGY GWH	825.8	21.7	14.8	16.2	63.7	79.0	75.6	97.9	99.0	73.6	72.6	33.6	6.6	9.0	51.5	63.4	47.6
--FORT RANDALL--																	
NAT INFLOW	880	151	71	91	157	127	215	68	49		-39	-15	-7	-8	-20	-39	78
DEPLETION	80	1	1	1	4	9	12	18	15	7	1	1	0	1	3	3	3
EVAPORATION	140							10	32	38	28	11	5	5	12		
REG INFLOW	14933	529	330	376	1278	1512	1538	1769	1751	1224	1144	526	95	133	809	1024	895
RELEASE	14933	248	186	376	1278	1512	1538	1769	1751	1648	1634	737	177	159	700	683	536
STOR CHANGE	0	280	144	0				0	0	-424	-490	-211	-82	-26	109	341	359
STORAGE	3001.	3281	3425	3425	3425	3425	3425	3425	3425	3001	2511	2300	2218	2192	2301	2642	3001
ELEV FTMSL	1350.0	1353.5	1355.2	1355.2	1355.2	1355.2	1355.2	1355.2	1355.2	1350.0	1343.0	1339.5	1338.0	1337.5	1339.5	1345.0	1350.0
DISCH KCFS	9.734	8.3	13.4	21.1	21.5	24.6	25.9	28.8	28.5	27.7	26.6	24.8	12.8	10.0	11.4	11.1	9.6
POWER																	
AVE POWER MW		69	113	178	182	208	218	242	240	229	208	185	94	74	84	85	77
PEAK POW MW		350	356	356	356	356	356	356	356	339	310	294	287	285	294	319	339
ENERGY GWH	1477.4	25.0	19.1	38.5	130.8	154.5	157.1	180.3	178.5	164.6	155.0	66.7	15.9	14.1	62.5	63.1	51.8
--GAVINS POINT--																	
NAT INFLOW	1494	106	49	63	144	161	172	98	80	92	121	58	27	31	86	86	121
DEPLETION	114	0	0	0	5	19	24	39	10	-5	2	5	2	3	10	1	
CHAN STOR	-1	3	-10	-15	-1	-6	-2	-6	1	1	2	3	22	5	-2	1	3
EVAPORATION	42							2	8	10	9	4	2	2	5		
REG INFLOW	16270	357	226	425	1416	1648	1684	1820	1814	1737	1746	788	222	190	769	769	659
RELEASE	16270	357	226	425	1416	1648	1684	1820	1802	1714	1746	788	222	190	769	769	694
STOR CHANGE									12	23							-35
STORAGE	327.	327	327	327	327	327	327	327	339	362	362	362	362	362	362	362	327
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	12.500	12.0	16.3	23.8	23.8	26.8	28.3	29.6	29.3	28.8	28.4	26.5	16.0	12.0	12.5	12.5	12.5
POWER																	
AVE POWER MW		42	57	82	82	91	96	100	100	100	99	93	57	43	44	44	44
PEAK POW MW		114	114	114	114	114	114	114	115	117	117	117	117	117	78	78	76
ENERGY GWH	679.6	15.1	9.5	17.6	58.7	68.0	69.3	74.4	74.2	71.9	73.9	33.4	9.5	8.2	33.0	33.0	29.6
--GAVINS POINT - SIOUX CITY--																	
NAT INFLOW	1770	195	91	117	233	298	185	161	129	105	57	36	17	19	16	32	80
DEPLETION	295	8	4	5	25	38	33	42	40	27	13	7	3	4	15	16	16
REGULATED FLOW AT SIOUX CITY																	
KAF	17745	544	313	537	1624	1908	1836	1939	1891	1792	1790	817	236	206	770	785	758
KCFS		18.3	22.6	30.1	27.3	31.0	30.9	31.5	30.7	30.1	29.1	27.5	17.0	13.0	12.5	12.8	13.7
--TOTAL--																	
NAT INFLOW	24400	1467	684	880	2322	3303	5995	3301	1254	1046	1016	491	229	262	490	592	1068
DEPLETION	3032	23	11	14	125	616	1717	1365	353	-238	-186	-172	-80	-91	-186	-159	-80
CHAN STOR	-5	64	-10	-15	-23	-38	-17	-1	1	31	32	3	25	5	-41	-23	3
EVAPORATION	1941							121	379	470	404	180	84	95	207		
STORAGE	46517.	47481	47832	48146	48696	49437	51862	51737	50369	49422	48462	48129	48143	48200	47858	47801	48193
SYSTEM POWER																	
AVE POWER MW		577	738	783	873	1046	1090	1209	1211	1021	915	866	548	540	699	802	747
PEAK POW MW		2212	2212	2217	2225	2232	2260	2257	2239	2236	2208	2190	2185	2184	2151	2173	2185
ENERGY GWH	8036.0	207.7	124.0	169.2	628.7	778.3	784.9	899.9	901.0	735.1	680.6	311.6	92.1	103.7	520.0	596.9	502.3
DAILY GWH		13.8	17.7	18.8	21.0	25.1	26.2	29.0	29.1	24.5	22.0	20.8	13.2	13.0	16.8	19.3	17.9

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

28FEB17		2017										2018				
	INI-SUM	15MAR	22MAR	31MAR	30APR	31MAY	30JUN	31JUL	31AUG	30SEP	31OCT	15NOV	22NOV	30NOV	31DEC	31JAN	28FEB
--FORT PECK--																	
NAT INFLOW	5518	202	94	121	458	885	1228	619	271	240	323	151	70	81	229	239	307
DEPLETION	616	-9	-4	-5	46	303	584	277	26	-116	-103	-29	-13	-15	-116	-124	-86
EVAPORATION	470							29	91	113	98	44	21	24	51		
MOD INFLOW	4432	211	98	126	412	582	644	313	154	243	328	135	63	72	294	363	393
RELEASE	5519	164	76	98	417	461	536	553	553	435	338	164	76	103	492	553	500
STOR CHANGE	-1087	47	22	28	-5	121	108	-240	-399	-191	-10	-28	-13	-31	-198	-190	-107
STORAGE	12061.	12108	12130	12158	12154	12274	12383	12142	11743	11552	11542	11513	11500	11469	11271	11081	10974
ELEV FTMSL	2220.0	2220.2	2220.3	2220.5	2220.5	2221.1	2221.7	2220.4	2218.2	2217.1	2217.0	2216.9	2216.8	2216.6	2215.5	2214.4	2213.7
DISCH KCFS	10.500	5.5	5.5	5.5	7.0	7.5	9.0	9.0	9.0	7.3	5.5	5.5	5.5	6.5	8.0	9.0	9.0
POWER																	
AVE POWER MW		71	72	72	91	98	117	117	116	94	70	70	70	83	102	114	113
PEAK POW MW		151	151	151	151	151	152	151	148	147	147	147	147	147	145	144	143
ENERGY GWH	859.2	25.7	12.0	15.5	65.5	72.6	84.5	87.1	86.5	67.5	52.5	25.4	11.8	16.0	75.8	84.7	76.2
--GARRISON--																	
NAT INFLOW	7937	410	191	246	622	1180	2322	1003	349	230	413	161	75	86	150	209	290
DEPLETION	1218	20	9	12	41	129	834	689	121	-145	-27	-131	-61	-70	-99	-64	-41
CHAN STOR	16	52			-16	-5	-15			18	19			-10	-16	-11	
EVAPORATION	547							34	106	132	114	51	24	27	59		
REG INFLOW	11707	605	258	332	982	1507	2008	833	675	696	683	404	189	221	667	816	831
RELEASE	13021	417	194	250	1071	1168	1250	1230	1230	1025	892	431	194	222	1107	1230	1111
STOR CHANGE	-1314	189	64	82	-89	339	758	-397	-555	-330	-208	-27	-6	-1	-440	-414	-280
STORAGE	14442.	14631	14695	14777	14688	15026	15785	15388	14833	14504	14295	14269	14263	14262	13822	13408	13128
ELEV FTMSL	1826.0	1826.7	1826.9	1827.2	1826.9	1828.1	1830.8	1829.4	1827.4	1826.2	1825.4	1825.3	1825.3	1825.3	1823.6	1822.0	1820.9
DISCH KCFS	22.500	14.0	14.0	14.0	18.0	19.0	21.0	20.0	20.0	17.2	14.5	14.5	14.0	14.0	18.0	20.0	20.0
POWER																	
AVE POWER MW		162	163	163	209	221	248	237	234	200	168	167	161	161	206	226	224
PEAK POW MW		428	429	430	429	434	444	439	431	427	424	423	423	423	417	411	407
ENERGY GWH	1823.2	58.5	27.4	35.2	150.6	164.7	178.3	176.3	174.3	144.0	124.7	60.1	27.1	31.0	153.0	167.9	150.2
--OAHE--																	
NAT INFLOW	1213	179	83	107	211	116	322	111	42	47	5	8	4	4	-47	-21	42
DEPLETION	760	25	12	15	52	77	163	199	134	32	-13	1	0	0	14	19	30
CHAN STOR	11	38			-18	-4	-9	5		13	13		2		-19	-10	0
EVAPORATION	494							31	96	118	102	46	22	25	54		
REG INFLOW	12991	608	266	342	1212	1203	1400	1115	1042	935	821	393	179	201	972	1180	1123
RELEASE	14347	481	308	347	1209	1494	1481	1711	1744	1243	1075	194	95	141	867	1067	891
STOR CHANGE	-1355	127	-42	-5	3	-291	-81	-596	-702	-308	-254	199	84	60	105	113	232
STORAGE	15262.	15390	15348	15343	15346	15055	14974	14378	13676	13368	13114	13313	13396	13457	13562	13675	13907
ELEV FTMSL	1595.6	1596.0	1595.9	1595.9	1595.9	1594.8	1594.4	1592.1	1589.2	1587.9	1586.9	1587.7	1588.1	1588.3	1588.8	1589.2	1590.2
DISCH KCFS	15.912	16.2	22.2	19.4	20.3	24.3	24.9	27.8	28.4	20.9	17.5	6.5	6.8	8.9	14.1	17.4	16.0
POWER																	
AVE POWER MW		196	268	236	246	293	299	331	333	243	202	76	80	104	164	203	188
PEAK POW MW		648	648	648	648	642	641	629	615	608	603	607	609	610	613	615	620
ENERGY GWH	2056.8	70.6	45.1	50.9	177.2	218.1	215.2	246.6	247.7	174.9	150.4	27.3	13.4	19.9	122.3	150.7	126.4
--BIG BEND--																	
EVAPORATION	131							8	25	31	28	12	6	7	14		
REG INFLOW	14216	481	308	347	1209	1494	1481	1703	1719	1211	1047	182	89	134	853	1067	891
RELEASE	14216	481	308	347	1209	1494	1481	1703	1719	1211	1047	182	89	134	853	1067	891
STORAGE	1631.	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631
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	15.912	16.2	22.2	19.4	20.3	24.3	24.9	27.7	28.0	20.4	17.0	6.1	6.4	8.5	13.9	17.4	16.0
POWER																	
AVE POWER MW		77	104	91	95	114	116	130	131	98	85	31	33	43	70	85	77
PEAK POW MW		517	509	509	509	509	509	509	509	529	538	538	538	538	538	538	529
ENERGY GWH	821.2	27.6	17.4	19.7	68.5	84.6	83.9	96.4	97.4	70.3	63.3	11.2	5.5	8.2	52.1	63.5	51.7
--FORT RANDALL--																	
NAT INFLOW	380	74	34	44	92	54	103	27	16	-5	-27	-11	-5	-6	-22	-27	38
DEPLETION	80	1	1	1	4	9	12	18	15	7	1	1	0	1	3	3	3
EVAPORATION	139							10	32	38	28	10	4	5	12		
REG INFLOW	14375	553	341	390	1297	1539	1572	1702	1689	1162	991	159	79	123	816	1037	926
RELEASE	14375	273	197	390	1297	1539	1572	1702	1689	1586	1572	370	96	123	719	697	554
STOR CHANGE	0	280	144		0			0	0	-424	-581	-211	-17	0	97	340	372
STORAGE	3001.	3281	3425	3425	3425	3425	3425	3425	3425	3001	2420	2209	2192	2192	2289	2629	3001
ELEV FTMSL	1350.0	1353.5	1355.2	1355.2	1355.2	1355.2	1355.2	1355.2	1355.2	1350.0	1341.5	1337.8	1337.5	1337.5	1339.3	1344.8	1350.0
DISCH KCFS	10.024	9.2	14.2	21.9	21.8	25.0	26.4	27.7	27.5	26.7	25.6	12.4	6.9	7.8	11.7	11.3	10.0
POWER																	
AVE POWER MW		76	120	185	184	211	223	233	232	220	199	93	51	57	86	86	80
PEAK POW MW		350	356	356	356	356	356	356	356	339	303	286	285	285	293	319	339
ENERGY GWH	1425.0	27.4	20.2	39.9	132.7	157.2	160.4	173.6	172.3	158.4	148.2	33.4	8.5	10.9	64.1	64.2	53.5
--GAVINS POINT--																	
NAT INFLOW	1236	82	38	49	124	134	139	82	62	77	103	49	23	26	72	72	103
DEPLETION	114	0	0	0	5	19	24	39	10	-5	2	5	2	3	10	1	
CHAN STOR	-1	2	-10	-15	0	-6	-3	-2	0	2	2	24	10	-2	-7	1	3
EVAPORATION	42							2	8	10	9	4	2	2	5		
REG INFLOW	15454	357	226	425	1416	1648	1684	1740	1734	1659	1666	434	125	143	769	769	659
RELEASE	15454	357	226	425	1416	1648	1684	1740	1722	1636	1666	434	125	143	769	769	694
STOR CHANGE									12	23							-35
STORAGE	327.	327	327	327	327	327	327	327	339	362	362	362	362	362	362	362	327
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	12.500	12.0	16.3	23.8	23.8	26.8	28.3	28.3	28.0	27.5	27.1	14.6	9.0	9.0	12.5	12.5	12.5
POWER																	
AVE POWER MW		42	57	82	82	91	96	96	96	96	95	52	32	32	44	44	44
PEAK POW MW		114	114	114	114	114	114	114	115	117	117	117	117	117	78	78	76
ENERGY GWH	646.6	15.1	9.5	17.6	58.7	68.0	69.3	71.6	71.3	68.8	70.6	18.6	5.4	6.2	33.0	33.0	29.6
--GAVINS POINT - SIOUX CITY--																	
NAT INFLOW	816	102	47	61	105	140	76	82	46	35	35	21	10	11	6	17	23
DEPLETION	283	7	3	4	24	37	32	40	39	26	12	7	3	3	14	15	16
REGULATED FLOW AT SIOUX CITY																	
KAF	15987	451	270	482	1497	1751	1728	1782	1729	1645	1689	448	131	150	761	771	701
KCFS		15.2	19.5	27.0	25.2	28.5	29.0	29.0	28.1	27.7	27.5	15.1	9.5	9.5	12.4	12.5	12.6
--TOTAL--																	
NAT INFLOW	17100	1048	489	628	1612	2509	4190	1924	786	624	852	379	177	202	388	489	803
DEPLETION	3071	45	21	27	172	574	1649	1262	345	-201	-128	-147	-68	-78	-174	-150	-78
CHAN STOR	24	92	-10	-15	-33	-16	-27	2	0	32	34	24	13	-12	-43	-19	3
EVAPORATION	1823							115	357	442	378	169	78	90	194		
STORAGE	46724.	47368	47556	47661	47570	47739	48524	47292	45648	44418	43364	43296	43344	43372	42936	42785	42967
SYSTEM POWER																	
AVE POWER MW		624	783	828	907	1029	1099	1145	1142	950	820	489	427	480	672	758	726
PEAK POW MW		2209	2207	2208	2207	2207	2216	2198	2175	2167	2131	2119	2119	2120	2084	2105	2114
ENERGY GWH	7631.9	224.8	131.6	178.8	653.4	765.3	791.6	851.7	849.4	683.9	609.7	176.0	71.7	92.2	500.2	564.0	487.7
DAILY GWH		15.0	18.8	19.9	21.8	24.7	26.4	27.5	27.4	22.8	19.7	11.7	10.2	11.5	16.1	18.2	17.4

VALUES IN 1000 AF EXCEPT AS INDICATED

28FEB18		2018											2019			
	INI-SUM	15MAR	22MAR	31MAR	30APR	31MAY	30JUN	31JUL	31AUG	30SEP	31OCT	15NOV	22NOV	30NOV	31DEC	31JAN	28FEB
--FORT PECK--																	
NAT INFLOW	5601	205	95	123	465	898	1247	629	275	243	328	153	71	82	232	243	312
DEPLETION	518	-24	-11	-15	41	278	537	286	31	-114	-102	-36	-17	-19	-119	-126	-73
EVAPORATION	447							28	86	107	93	42	20	22	48		
MOD INFLOW	4636	229	107	137	424	620	710	315	158	250	337	146	68	78	303	369	385
RELEASE	5458	149	69	89	417	492	536	553	553	414	307	149	69	84	523	553	500
STOR CHANGE	-822	80	37	48	7	128	174	-238	-395	-164	29	-2	-1	-6	-220	-184	-115
STORAGE	10974.	11054	11091	11139	11147	11275	11449	11211	10816	10652	10681	10679	10677	10671	10451	10267	10152
ELEV FTMSL	2213.7	2214.2	2214.4	2214.7	2214.8	2215.5	2216.5	2215.1	2212.8	2211.8	2212.0	2212.0	2212.0	2211.9	2210.6	2209.5	2208.8
DISCH KCFS	9.000	5.0	5.0	5.0	7.0	8.0	9.0	9.0	9.0	7.0	5.0	5.0	5.0	5.3	8.5	9.0	9.0
POWER																	
AVE POWER MW		63	63	63	89	101	114	114	113	87	63	63	63	66	106	111	111
PEAK POW MW		144	144	144	145	145	147	145	142	141	141	141	141	141	140	139	138
ENERGY GWH	828.9	22.7	10.6	13.7	63.8	75.4	82.4	85.1	84.3	62.7	46.5	22.5	10.5	12.7	78.6	82.7	74.4
--GARRISON--																	
NAT INFLOW	8154	422	197	253	639	1212	2386	1030	358	236	424	166	77	88	154	215	298
DEPLETION	1155	12	6	7	34	205	825	681	108	-165	-50	-139	-65	-74	-109	-73	-49
CHAN STOR	0	43	0	0	-21	-11	-11			21	21		0	-3	-34	-5	
EVAPORATION	522							33	101	126	109	49	23	26	56		
REG INFLOW	11935	601	260	335	1000	1488	2086	870	702	711	694	404	188	217	696	836	847
RELEASE	12929	417	194	250	952	1168	1250	1230	1230	1011	861	417	194	219	1138	1261	1139
STOR CHANGE	-994	184	66	85	48	320	836	-360	-528	-300	-167	-13	-6	-2	-442	-424	-292
STORAGE	13128.	13312	13378	13463	13511	13831	14668	14308	13780	13480	13313	13300	13294	13292	12850	12426	12134
ELEV FTMSL	1820.9	1821.6	1821.9	1822.2	1822.4	1823.6	1826.8	1825.4	1823.4	1822.3	1821.6	1821.5	1821.5	1821.5	1819.7	1818.0	1816.8
DISCH KCFS	20.000	14.0	14.0	14.0	16.0	19.0	21.0	20.0	20.0	17.0	14.0	14.0	14.0	13.8	18.5	20.5	20.5
POWER																	
AVE POWER MW		157	157	158	180	215	241	231	228	192	158	157	157	155	206	225	223
PEAK POW MW		410	411	412	413	417	429	424	417	412	410	410	410	410	403	397	392
ENERGY GWH	1760.1	56.5	26.4	34.1	129.9	159.8	173.3	171.7	169.8	138.4	117.3	56.6	26.4	29.8	153.1	167.4	149.7
--OAHE--																	
NAT INFLOW	1239	182	85	109	215	118	329	113	44	49	5	8	4	4	-48	-22	43
DEPLETION	777	26	12	15	52	79	166	204	137	33	-13	1	0	0	14	20	31
CHAN STOR	-2	28			-9	-14	-10	5		15	15			1	-24	-10	
EVAPORATION	461							29	89	109	95	43	20	23	51		
REG INFLOW	12928	602	268	344	1106	1193	1403	1114	1048	933	799	381	178	201	1001	1209	1151
RELEASE	13952	477	306	345	1205	1491	1475	1709	1743	1021	863	232	124	139	866	1067	889
STOR CHANGE	-1024	124	-39	-1	-99	-298	-72	-594	-695	-88	-64	149	54	61	135	142	262
STORAGE	13907.	14031	13993	13992	13892	13594	13523	12929	12233	12145	12081	12230	12283	12345	12480	12621	12883
ELEV FTMSL	1590.2	1590.7	1590.5	1590.5	1590.1	1588.9	1588.6	1586.1	1583.0	1582.6	1582.4	1583.0	1583.3	1583.5	1584.1	1584.8	1585.9
DISCH KCFS	16.038	16.0	22.1	19.3	20.3	24.3	24.8	27.8	28.4	17.2	14.0	7.8	8.9	8.8	14.1	17.4	16.0
POWER																	
AVE POWER MW		189	259	227	238	283	288	320	321	193	158	88	101	99	160	197	183
PEAK POW MW		622	621	621	619	613	612	598	582	580	579	582	584	585	588	591	597
ENERGY GWH	1940.2	68.0	43.6	49.1	171.3	210.7	207.4	238.2	239.0	139.1	117.5	31.7	17.0	19.1	118.9	146.8	122.9
--BIG BEND--																	
EVAPORATION	131							8	25	31	28	12	6	7	14		
REG INFLOW	13821	477	306	345	1205	1491	1475	1701	1718	989	835	220	118	133	852	1067	889
RELEASE	13821	477	306	345	1205	1491	1475	1701	1718	989	835	220	118	133	852	1067	889
STORAGE	1631.	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631
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	16.038	16.0	22.1	19.3	20.3	24.3	24.8	27.7	27.9	16.6	13.6	7.4	8.5	8.4	13.9	17.4	16.0
POWER																	
AVE POWER MW		76	103	90	95	114	116	129	131	81	69	37	43	42	70	85	77
PEAK POW MW		517	509	509	509	509	509	509	509	538	538	538	538	538	538	538	529
ENERGY GWH	799.5	27.4	17.3	19.5	68.3	84.5	83.5	96.3	97.3	58.4	51.0	13.5	7.3	8.1	52.0	63.5	51.6
--FORT RANDALL--																	
NAT INFLOW	393	76	35	46	95	56	107	28	17	-6	-28	-11	-5	-6	-22	-28	39
DEPLETION	80	1	1	1	4	9	12	18	15	7	1	1	0	1	3	3	3
EVAPORATION	134							10	32	36	25	10	4	5	12		
REG INFLOW	13999	552	341	389	1296	1538	1570	1701	1689	940	780	199	108	121	815	1036	925
RELEASE	13999	272	197	389	1296	1538	1570	1701	1689	1585	1369	199	108	121	718	696	553
STOR CHANGE	0	280	144			0	0	0	0	-645	-588	0	0	0	97	340	372
STORAGE	3001.	3281	3425	3425	3425	3425	3425	3425	3425	2780	2192	2192	2192	2192	2289	2629	3001
ELEV FTMSL	1350.0	1353.5	1355.2	1355.2	1355.2	1355.2	1355.2	1355.2	1355.2	1347.0	1337.5	1337.5	1337.5	1337.5	1339.3	1344.8	1350.0
DISCH KCFS	9.970	9.1	14.2	21.8	21.8	25.0	26.4	27.7	27.5	26.6	22.3	6.7	7.8	7.6	11.7	11.3	10.0
POWER																	
AVE POWER MW		76	120	184	184	211	223	233	232	217	168	49	57	56	86	86	80
PEAK POW MW		350	356	356	356	356	356	356	356	328	284	285	285	285	293	319	339
ENERGY GWH	1384.2	27.3	20.1	39.9	132.7	157.1	160.2	173.5	172.3	156.3	125.3	17.6	9.6	10.7	64.0	64.1	53.4
--GAVINS POINT--																	
NAT INFLOW	1249	83	39	50	125	135	141	83	62	78	104	50	23	26	73	73	104
DEPLETION	114	0	0	0	5	19	24	39	10	-5	2	5	2	3	10	1	
CHAN STOR	-1	2	-10	-15	0	-6	-3	-2	0	2	8	29	-2	0	-7	1	3
EVAPORATION	42							2	8	10	9	4	2	2	5		
REG INFLOW	15091	357	226	425	1416	1648	1684	1740	1734	1659	1470	268	125	143	769	769	659
RELEASE	15091	357	226	425	1416	1648	1684	1740	1722	1636	1470	268	125	143	769	769	694
STOR CHANGE									12	23							-35
STORAGE	327.	327	327	327	327	327	327	327	339	362	362	362	362	362	362	362	327
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	12.500	12.0	16.3	23.8	23.8	26.8	28.3	28.3	28.0	27.5	23.9	9.0	9.0	9.0	12.5	12.5	12.5
POWER																	
AVE POWER MW		42	57	82	82	91	96	96	96	96	84	32	32	32	44	44	44
PEAK POW MW		114	114	114	114	114	114	114	115	117	117	117	117	117	78	78	76
ENERGY GWH	631.3	15.1	9.5	17.6	58.7	68.0	69.3	71.6	71.3	68.8	62.5	11.6	5.4	6.2	33.0	33.0	29.6
--GAVINS POINT - SIOUX CITY--																	
NAT INFLOW	864	107	50	64	111	148	80	86	49	38	37	22	10	11	6	19	25
DEPLETION	286	7	3	4	24	37	32	41	39	26	12	7	3	4	15	15	16
REGULATED FLOW AT SIOUX CITY																	
KAF	15669	457	273	485	1503	1759	1732	1785	1732	1648	1495	282	132	151	760	773	703
KCFS		15.4	19.7	27.2	25.3	28.6	29.1	29.0	28.2	27.7	24.3	9.5	9.5	9.5	12.4	12.6	12.7
--TOTAL--																	
NAT INFLOW	17500	1075	502	645	1650	2567	4290	1969	805	638	870	387	180	206	395	500	821
DEPLETION	2930	22	10	13	160	627	1596	1269	340	-218	-150	-161	-75	-86	-186	-160	-72
CHAN STOR	-4	73	-10	-15	-31	-31	-23	2	0	38	43	30	-2	-2	-66	-15	3
EVAPORATION	1736							110	340	420	359	161	75	86	186		
STORAGE	42967.	43637	43845	43977	43934	44084	45023	43831	42224	41050	40260	40393	40440	40493	40063	39936	40128
SYSTEM POWER																	
AVE POWER MW		603	760	805	868	1015	1078	1124	1121	866	699	426	453	451	672	749	717
PEAK POW MW		2158	2156	2157	2156	2155	2167	2147	2122	2117	2069	2073	2075	2076	2040	2061	2071
ENERGY GWH	7344.2	217.0	127.6	173.8	624.7	755.5	776.2	836.4	833.9	623.7	520.1	153.5	76.1	86.6	499.7	557.6	481.7
DAILY GWH		14.5	18.2	19.3	20.8	24.4	25.9	27.0	26.9	20.8	16.8	10.2	10.9	10.8	16.1	18.0	17.2
	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

28FEB19		2019									2020					
	INI-SUM	15MAR	22MAR	31MAR	30APR	31MAY	30JUN	31JUL	31AUG	30SEP	31OCT	15NOV	22NOV	30NOV	31DEC	31JAN	29FEB
--FORT PECK--																	
NAT INFLOW	5800	212	99	127	482	930	1291	651	285	251	339	159	74	85	241	252	323
DEPLETION	540	-18	-8	-11	32	275	554	293	36	-114	-104	-35	-16	-19	-120	-126	-79
EVAPORATION	426							26	82	102	89	40	19	21	46		
MOD INFLOW	4834	230	107	138	450	655	737	332	167	263	354	153	71	82	315	378	402
RELEASE	5376	149	69	89	446	492	536	553	553	410	307	149	69	79	461	523	489
STOR CHANGE	-542	81	38	49	4	163	201	-222	-386	-147	47	4	2	2	-147	-145	-87
STORAGE	10152.	10233	10271	10320	10323	10486	10688	10466	10079	9932	9979	9983	9985	9988	9841	9697	9610
ELEV FTMSL	2208.8	2209.3	2209.5	2209.8	2209.8	2210.8	2212.0	2210.7	2208.3	2207.4	2207.7	2207.7	2207.7	2207.8	2206.8	2205.9	2205.4
DISCH KCFS	9.000	5.0	5.0	5.0	7.5	8.0	9.0	9.0	9.0	6.9	5.0	5.0	5.0	5.0	7.5	8.5	8.5
POWER																	
AVE POWER MW		62	62	62	93	99	112	112	111	84	61	61	61	61	91	103	103
PEAK POW MW		138	139	139	139	140	141	140	137	136	136	137	137	137	136	134	134
ENERGY GWH	799.5	22.2	10.4	13.4	66.7	73.7	80.6	83.3	82.5	60.8	45.5	22.1	10.3	11.8	68.1	76.7	71.5
--GARRISON--																	
NAT INFLOW	8704	450	210	270	682	1294	2546	1100	382	253	453	177	82	94	165	229	318
DEPLETION	1081	9	4	5	23	199	831	697	114	-168	-64	-148	-69	-79	-122	-85	-66
CHAN STOR	5	43	0	0	-27	-5	-11			23	20		0	0	-27	-11	
EVAPORATION	501							31	97	120	104	47	22	25	54		
REG INFLOW	12504	633	275	354	1078	1582	2240	925	724	734	741	426	199	227	667	826	873
RELEASE	13161	387	180	232	1071	1476	1279	1230	1230	1014	861	417	194	222	1107	1168	1093
STOR CHANGE	-657	246	95	122	7	106	960	-305	-505	-281	-120	10	5	5	-439	-342	-220
STORAGE	12134.	12380	12475	12596	12604	12710	13670	13365	12860	12579	12459	12469	12473	12479	12039	11697	11477
ELEV FTMSL	1816.8	1817.8	1818.2	1818.7	1818.7	1819.2	1823.0	1821.8	1819.8	1818.6	1818.1	1818.2	1818.2	1818.2	1816.4	1814.9	1814.0
DISCH KCFS	20.500	13.0	13.0	13.0	18.0	24.0	21.5	20.0	20.0	17.0	14.0	14.0	14.0	14.0	18.0	19.0	19.0
POWER																	
AVE POWER MW		142	143	143	198	263	240	225	223	188	154	154	154	154	196	204	202
PEAK POW MW		396	397	399	399	401	415	411	403	399	397	397	397	398	391	385	382
ENERGY GWH	1748.3	51.1	24.0	30.9	142.4	195.7	172.5	167.4	165.6	135.4	114.5	55.3	25.8	29.5	145.6	151.8	140.8
--OAHE--																	
NAT INFLOW	1301	192	89	115	226	124	345	119	45	52	6	9	4	5	-51	-23	45
DEPLETION	789	26	12	15	53	80	169	208	141	33	-14	1	0	0	14	20	31
CHAN STOR	8	37	0	0	-25	-29	12	7		15	16				-20	-5	
EVAPORATION	445							28	86	106	92	42	20	23	49		
REG INFLOW	13236	590	258	332	1220	1490	1468	1120	1048	943	804	383	178	204	972	1120	1107
RELEASE	13914	469	302	340	1194	1482	1464	1705	1740	949	932	232	124	139	866	1067	908
STOR CHANGE	-678	121	-44	-8	26	8	4	-585	-692	-7	-127	150	54	64	106	53	199
STORAGE	12883.	13004	12960	12951	12977	12985	12989	12404	11712	11705	11577	11728	11782	11846	11952	12005	12205
ELEV FTMSL	1585.9	1586.4	1586.2	1586.2	1586.3	1586.3	1586.3	1583.8	1580.7	1580.6	1580.0	1580.7	1581.0	1581.3	1581.8	1582.0	1582.9
DISCH KCFS	16.002	15.8	21.8	19.0	20.1	24.1	24.6	27.7	28.3	16.0	15.2	7.8	8.9	8.8	14.1	17.4	15.8
POWER																	
AVE POWER MW		181	250	219	230	276	282	315	316	177	168	87	100	98	158	194	177
PEAK POW MW		600	599	599	600	600	600	586	570	570	567	570	572	573	576	577	582
ENERGY GWH	1903.6	65.2	42.0	47.2	165.8	205.6	203.0	234.4	235.2	127.7	125.2	31.3	16.8	18.9	117.3	144.5	123.5
--BIG BEND--																	
EVAPORATION	131							8	25	31	28	12	6	7	14		
REG INFLOW	13783	469	302	340	1194	1482	1464	1697	1715	918	904	220	118	133	852	1067	908
RELEASE	13783	469	302	340	1194	1482	1464	1697	1715	918	904	220	118	133	852	1067	908
STORAGE	1631.	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631
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	16.002	15.8	21.8	19.0	20.1	24.1	24.6	27.6	27.9	15.4	14.7	7.4	8.5	8.4	13.9	17.4	15.8
POWER																	
AVE POWER MW		75	102	89	94	113	115	129	131	76	74	38	43	42	70	85	76
PEAK POW MW		517	509	509	509	509	509	509	509	538	538	538	538	538	538	538	529
ENERGY GWH	797.7	26.9	17.1	19.3	67.6	83.9	82.9	96.1	97.1	54.4	55.2	13.5	7.3	8.2	52.0	63.5	52.7
--FORT RANDALL--																	
NAT INFLOW	424	82	38	49	103	61	115	30	18	-7	-30	-12	-6	-6	-24	-30	42
DEPLETION	80	1	1	1	4	9	12	18	15	7	1	1	0	1	3	3	3
EVAPORATION	133							10	32	36	25	10	4	5	12		
REG INFLOW	13994	550	340	389	1293	1534	1567	1699	1687	868	848	198	108	121	813	1034	947
RELEASE	13994	270	196	389	1293	1534	1567	1699	1687	1583	1367	198	108	121	716	694	575
STOR CHANGE	0	280	144			0		0	0	-715	-518	0	0	0	97	340	372
STORAGE	3001.	3281	3425	3425	3425	3425	3425	3425	3425	2710	2192	2192	2192	2192	2289	2629	3001
ELEV FTMSL	1350.0	1353.5	1355.2	1355.2	1355.2	1355.2	1355.2	1355.2	1355.2	1346.0	1337.5	1337.5	1337.5	1337.5	1339.3	1344.8	1350.0
DISCH KCFS	9.952	9.1	14.1	21.8	21.7	24.9	26.3	27.6	27.4	26.6	22.2	6.7	7.8	7.6	11.6	11.3	10.0
POWER																	
AVE POWER MW		75	119	184	184	211	222	233	231	216	167	49	57	56	86	86	80
PEAK POW MW		350	356	356	356	356	356	356	356	324	284	285	285	285	293	319	339
ENERGY GWH	1382.5	27.1	20.0	39.8	132.3	156.7	159.9	173.3	172.1	155.5	124.6	17.6	9.6	10.7	63.8	64.0	55.6
--GAVINS POINT--																	
NAT INFLOW	1279	85	40	51	128	139	144	85	64	80	106	50	23	27	75	75	107
DEPLETION	114	0	0	0	5	19	24	39	10	-5	2	5	2	3	10	1	
CHAN STOR	-1	2	-10	-15	0	-6	-3	-2	0	2	8	29	-2	0	-7	1	2
EVAPORATION	42							2	8	10	9	4	2	2	5		
REG INFLOW	15116	357	226	425	1416	1648	1684	1740	1734	1659	1470	268	125	143	769	769	684
RELEASE	15116	357	226	425	1416	1648	1684	1740	1722	1636	1470	268	125	143	769	769	719
STOR CHANGE									12	23							-35
STORAGE	327.	327	327	327	327	327	327	327	339	362	362	362	362	362	362	362	327
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	12.500	12.0	16.3	23.8	23.8	26.8	28.3	28.3	28.0	27.5	23.9	9.0	9.0	9.0	12.5	12.5	12.5
POWER																	
AVE POWER MW		42	57	82	82	91	96	96	96	96	84	32	32	32	44	44	44
PEAK POW MW		114	114	114	114	114	114	114	115	117	117	117	117	117	78	78	76
ENERGY GWH	632.4	15.1	9.5	17.6	58.7	68.0	69.3	71.6	71.3	68.8	62.5	11.6	5.4	6.2	33.0	33.0	30.7
--GAVINS POINT - SIOUX CITY--																	
NAT INFLOW	992	123	58	74	128	170	92	99	57	42	43	25	12	13	7	21	28
DEPLETION	291	8	4	5	25	37	33	41	40	26	12	7	3	4	15	16	16
REGULATED FLOW AT SIOUX CITY																	
KAF	15817	473	280	495	1519	1781	1743	1798	1739	1652	1501	286	133	152	761	774	731
KCFS		15.9	20.2	27.7	25.5	29.0	29.3	29.2	28.3	27.8	24.4	9.6	9.6	9.6	12.4	12.6	12.7
--TOTAL--																	
NAT INFLOW	18500	1144	534	686	1749	2718	4533	2084	851	671	917	407	190	217	413	524	863
DEPLETION	2895	25	12	15	142	619	1623	1296	356	-221	-167	-170	-79	-90	-200	-171	-95
CHAN STOR	12	82	-10	-15	-51	-41	-1	5	0	39	44	30	-2	0	-55	-15	2
EVAPORATION	1678							106	329	406	346	155	73	83	180		
STORAGE	40128.	40856	41088	41250	41287	41564	42730	41618	40046	38919	38200	38365	38426	38498	38115	38021	38250
SYSTEM POWER																	
AVE POWER MW		577	732	779	880	1053	1067	1110	1107	837	709	420	447	444	645	717	682
PEAK POW MW		2117	2115	2117	2117	2120	2136	2116	2091	2084	2040	2044	2046	2047	2011	2032	2042
ENERGY GWH	7263.9	207.6	122.9	168.2	633.6	783.7	768.2	826.2	823.8	602.5	527.4	151.3	75.1	85.2	479.9	533.6	474.7
DAILY GWH		13.8	17.6	18.7	21.1	25.3	25.6	26.7	26.6	20.1	17.0	10.1	10.7	10.6	15.5	17.2	16.4

VALUES IN 1000 AF EXCEPT AS INDICATED

28FEB20		2020										2021			
	INI-SUM	15MAR	22MAR	31MAR	30APR	31MAY	30JUN	31JUL	31AUG	30SEP	31OCT	15NOV	22NOV	30NOV	31DEC	31JAN	28FEB
--FORT PECK--																	
NAT INFLOW	5950	217	101	130	494	954	1325	668	292	258	348	163	76	87	247	258	331
DEPLETION	557	-16	-8	-10	32	276	558	300	40	-115	-106	-37	-17	-19	-121	-127	-73
EVAPORATION	415							26	80	99	86	39	18	21	45		
MOD INFLOW	4978	234	109	140	462	678	767	342	172	274	368	160	75	85	323	385	404
RELEASE	5334	149	69	89	417	461	536	553	553	415	307	149	69	79	492	523	472
STOR CHANGE	-356	85	40	51	45	217	231	-211	-381	-141	60	12	5	6	-169	-138	-68
STORAGE	9610.	9695	9734	9785	9831	10048	10279	10068	9687	9545	9606	9617	9622	9629	9460	9322	9254
ELEV FTMSL	2205.4	2205.9	2206.2	2206.5	2206.8	2208.1	2209.6	2208.3	2205.8	2204.9	2205.3	2205.4	2205.4	2205.5	2204.4	2203.5	2203.0
DISCH KCFS	8.500	5.0	5.0	5.0	7.0	7.5	9.0	9.0	9.0	7.0	5.0	5.0	5.0	5.0	8.0	8.5	8.5
POWER																	
AVE POWER MW		61	61	61	85	92	111	111	110	84	60	61	61	61	96	102	101
PEAK POW MW		134	135	135	135	137	139	137	134	133	134	134	134	134	133	132	131
ENERGY GWH	783.0	21.8	10.2	13.1	61.3	68.1	79.6	82.3	81.5	60.7	45.0	21.8	10.2	11.6	71.7	75.8	68.2
--GARRISON--																	
NAT INFLOW	9150	473	221	284	717	1360	2677	1156	402	266	476	186	87	99	173	241	334
DEPLETION	1143	3	2	2	29	205	846	719	125	-165	-69	-149	-70	-79	-119	-81	-56
CHAN STOR	0	38	0	0	-22	-5	-16			22	21		0	0	-32	-5	
EVAPORATION	491							31	95	118	102	46	22	25	53		
REG INFLOW	12851	657	288	371	1083	1611	2350	960	735	750	772	437	204	233	699	839	862
RELEASE	13281	417	194	250	1041	1476	1250	1230	1230	1014	861	417	194	230	1138	1230	1111
STOR CHANGE	-430	240	94	121	41	135	1101	-270	-494	-264	-89	21	10	3	-439	-391	-249
STORAGE	11477.	11717	11811	11932	11973	12108	13209	12939	12444	12181	12092	12112	12122	12125	11686	11295	11047
ELEV FTMSL	1814.0	1815.0	1815.4	1815.9	1816.1	1816.7	1821.2	1820.1	1818.1	1817.0	1816.6	1816.7	1816.7	1816.8	1814.9	1813.2	1812.1
DISCH KCFS	19.000	14.0	14.0	14.0	17.5	24.0	21.0	20.0	20.0	17.0	14.0	14.0	14.0	14.5	18.5	20.0	20.0
POWER																	
AVE POWER MW		150	150	151	189	258	231	222	220	186	152	152	152	157	199	212	210
PEAK POW MW		386	387	389	390	392	408	404	397	393	392	392	392	392	385	379	375
ENERGY GWH	1739.4	53.9	25.3	32.6	135.8	192.2	166.0	165.4	163.6	133.7	113.2	54.7	25.5	30.2	148.1	157.9	141.2
--OAHE--																	
NAT INFLOW	1350	199	93	119	235	129	358	123	47	52	6	9	4	5	-53	-23	47
DEPLETION	802	26	12	16	53	81	172	212	144	34	-14	1	0	0	14	20	31
CHAN STOR	-5	25			-18	-33	15	5		16	16			-3	-21	-8	0
EVAPORATION	425							27	82	101	88	40	19	22	47		
REG INFLOW	13399	615	275	354	1206	1491	1451	1119	1051	947	809	385	180	210	1002	1179	1127
RELEASE	13842	462	299	336	1186	1477	1455	1701	1738	947	931	232	124	139	867	1068	879
STOR CHANGE	-443	152	-24	17	20	14	-4	-582	-688	-1	-122	153	56	71	135	111	248
STORAGE	12205.	12357	12333	12350	12370	12384	12380	11798	11110	11109	10987	11141	11196	11268	11403	11514	11762
ELEV FTMSL	1582.9	1583.6	1583.5	1583.6	1583.6	1583.7	1583.7	1581.1	1577.8	1577.8	1577.2	1577.9	1578.2	1578.5	1579.2	1579.7	1580.9
DISCH KCFS	15.779	15.5	21.6	18.8	19.9	24.0	24.4	27.7	28.3	15.9	15.1	7.8	8.9	8.8	14.1	17.4	15.8
POWER																	
AVE POWER MW		176	243	213	225	271	276	309	310	174	165	85	98	96	155	192	176
PEAK POW MW		585	585	585	586	586	586	572	555	555	552	556	557	559	562	565	571
ENERGY GWH	1863.5	63.2	40.9	46.0	162.1	201.7	198.7	230.2	231.0	125.2	122.8	30.7	16.5	18.5	115.5	142.6	118.0
--BIG BEND--																	
EVAPORATION	131							8	25	31	28	12	6	7	14		
REG INFLOW	13711	462	299	336	1186	1477	1455	1693	1713	916	903	219	118	133	853	1068	879
RELEASE	13711	462	299	336	1186	1477	1455	1693	1713	916	903	219	118	133	853	1068	879
STORAGE	1631.	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631
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	15.779	15.5	21.6	18.8	19.9	24.0	24.4	27.5	27.9	15.4	14.7	7.4	8.5	8.4	13.9	17.4	15.8
POWER																	
AVE POWER MW		74	101	88	93	112	114	129	130	75	74	37	43	42	70	85	76
PEAK POW MW		517	509	509	509	509	509	509	509	538	538	538	538	538	538	538	529
ENERGY GWH	793.5	26.5	17.0	19.1	67.2	83.7	82.4	95.9	97.0	54.3	55.1	13.5	7.3	8.1	52.1	63.5	51.0
--FORT RANDALL--																	
NAT INFLOW	450	87	41	52	109	64	122	32	19	-6	-31	-13	-6	-7	-26	-32	45
DEPLETION	80	1	1	1	4	9	12	18	15	7	1	1	0	1	3	3	3
EVAPORATION	133							10	32	36	25	10	4	5	12		
REG INFLOW	13948	548	339	388	1291	1532	1565	1697	1686	867	846	197	107	120	812	1033	921
RELEASE	13948	268	195	388	1291	1532	1565	1697	1686	1582	1364	197	107	120	715	693	549
STOR CHANGE	0	280	144		0	0	0	0	0	-715	-518	0	0	0	97	340	372
STORAGE	3001.	3281	3425	3425	3425	3425	3425	3425	3425	2710	2192	2192	2192	2192	2289	2629	3001
ELEV FTMSL	1350.0	1353.5	1355.2	1355.2	1355.2	1355.2	1355.2	1355.2	1355.2	1346.0	1337.5	1337.5	1337.5	1337.5	1339.3	1344.8	1350.0
DISCH KCFS	9.990	9.0	14.1	21.7	21.7	24.9	26.3	27.6	27.4	26.6	22.2	6.6	7.7	7.6	11.6	11.3	9.9
POWER																	
AVE POWER MW		75	119	184	184	210	222	233	231	216	167	49	57	55	86	86	79
PEAK POW MW		350	356	356	356	356	356	356	356	324	284	285	285	285	293	319	339
ENERGY GWH	1378.1	26.9	20.0	39.7	132.1	156.5	159.7	173.1	172.0	155.4	124.4	17.5	9.5	10.6	63.7	63.9	53.1
--GAVINS POINT--																	
NAT INFLOW	1300	87	40	52	130	141	146	87	65	81	108	52	24	27	76	76	108
DEPLETION	114	0	0	0	5	19	24	39	10	-5	2	5	2	3	10	1	
CHAN STOR	-1	2	-10	-15	0	-6	-3	-2	0	2	8	29	-2	0	-8	1	3
EVAPORATION	42							2	8	10	9	4	2	2	5		
REG INFLOW	15091	357	226	425	1416	1648	1684	1740	1734	1659	1470	268	125	143	769	769	659
RELEASE	15091	357	226	425	1416	1648	1684	1740	1722	1636	1470	268	125	143	769	769	694
STOR CHANGE									12	23							-35
STORAGE	327.	327	327	327	327	327	327	327	339	362	362	362	362	362	362	362	327
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	12.500	12.0	16.3	23.8	23.8	26.8	28.3	28.3	28.0	27.5	23.9	9.0	9.0	9.0	12.5	12.5	12.5
POWER																	
AVE POWER MW		42	57	82	82	91	96	96	96	96	84	32	32	32	44	44	44
PEAK POW MW		114	114	114	114	114	114	114	115	117	117	117	117	117	78	78	76
ENERGY GWH	631.3	15.1	9.5	17.6	58.7	68.0	69.3	71.6	71.3	68.8	62.5	11.6	5.4	6.2	33.0	33.0	29.6
--GAVINS POINT - SIOUX CITY--																	
NAT INFLOW	1100	137	64	82	141	189	102	110	63	55	39	28	13	15	8	24	31
DEPLETION	293	8	4	5	25	37	33	41	40	27	13	7	3	4	15	16	16
REGULATED FLOW AT SIOUX CITY																	
KAF	15898	486	287	503	1532	1800	1753	1809	1745	1664	1496	288	134	154	762	777	709
KCFS		16.3	20.6	28.2	25.7	29.3	29.5	29.4	28.4	28.0	24.3	9.7	9.7	9.7	12.4	12.6	12.8
--TOTAL--																	
NAT INFLOW	19300	1200	560	720	1826	2837	4730	2176	888	706	946	424	198	226	425	544	896
DEPLETION	2989	22	10	13	148	627	1645	1329	374	-217	-173	-172	-80	-92	-198	-168	-79
CHAN STOR	-5	65	-10	-15	-39	-44	-4	3	0	39	45	30	-2	-2	-62	-13	3
EVAPORATION	1636							104	321	395	337	151	71	81	176		
STORAGE	38250.	39007	39261	39450	39556	39922	41250	40187	38636	37538	36869	37055	37126	37206	36830	36753	37021
SYSTEM POWER																	
AVE POWER MW		576	731	778	857	1035	1050	1100	1097	831	703	416	443	444	651	721	686
PEAK POW MW		2088	2086	2089	2091	2095	2113	2093	2067	2060	2017	2021	2023	2025	1990	2011	2021
ENERGY GWH	7188.8	207.4	122.8	168.1	617.3	770.3	755.7	818.4	816.4	598.1	523.0	149.7	74.3	85.3	484.2	536.6	461.0
DAILY GWH		13.8	17.5	18.7	20.6	24.8	25.2	26.4	26.3	19.9	16.9	10.0	10.6	10.7	15.6	17.3	16.5
	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

28FEB21		2021										2022				
	INI-SUM	15MAR	22MAR	31MAR	30APR	31MAY	30JUN	31JUL	31AUG	30SEP	31OCT	15NOV	22NOV	30NOV	31DEC	31JAN	28FEB
--FORT PECK--																	
NAT INFLOW	6000	219	102	131	498	962	1336	674	294	260	352	164	77	87	249	260	334
DEPLETION	565	-18	-8	-11	32	277	562	307	44	-116	-107	-37	-17	-20	-122	-127	-74
EVAPORATION	379							25	78	97	85	24	11	13	45		
MOD INFLOW	5056	237	111	142	466	685	774	342	172	279	374	177	82	94	326	387	408
RELEASE	5270	134	62	80	446	492	506	523	523	396	307	149	69	95	492	523	472
STOR CHANGE	-214	103	48	62	20	193	268	-181	-351	-118	66	28	13	-1	-165	-136	-64
STORAGE	9254.	9357	9405	9467	9487	9680	9948	9767	9416	9299	9365	9393	9406	9405	9239	9104	9040
ELEV FTMSL	2203.0	2203.7	2204.0	2204.4	2204.6	2205.8	2207.5	2206.4	2204.1	2203.3	2203.8	2203.9	2204.0	2204.0	2202.9	2202.0	2201.6
DISCH KCFS	8.500	4.5	4.5	4.5	7.5	8.0	8.5	8.5	8.5	6.7	5.0	5.0	5.0	6.0	8.0	8.5	8.5
POWER																	
AVE POWER MW		54	54	54	90	97	103	103	103	80	60	60	60	72	96	101	101
PEAK POW MW		132	132	133	133	134	136	135	132	132	132	132	132	132	131	130	130
ENERGY GWH	766.4	19.4	9.1	11.7	64.9	71.8	74.4	76.9	76.3	57.5	44.6	21.6	10.1	13.8	71.2	75.2	67.7
--GARRISON--																	
NAT INFLOW	9222	477	222	286	723	1371	2698	1165	405	268	480	187	87	100	174	243	336
DEPLETION	1170	6	3	3	45	221	857	735	131	-168	-73	-156	-73	-83	-127	-88	-63
CHAN STOR	0	44			-33	-5	-5			20	18		0	-11	-22	-5	
EVAPORATION	444							30	93	114	99	28	13	15	51		
REG INFLOW	12878	649	282	363	1091	1636	2341	923	704	738	780	464	216	252	720	848	871
RELEASE	13136	417	194	250	1071	1476	1250	1230	1230	1011	861	417	194	206	1107	1168	1055
STOR CHANGE	-258	232	88	113	20	161	1092	-307	-526	-273	-81	47	22	46	-387	-320	-184
STORAGE	11047.	11279	11367	11480	11500	11661	12753	12446	11920	11647	11565	11612	11634	11680	11293	10973	10789
ELEV FTMSL	1812.1	1813.1	1813.5	1814.0	1814.1	1814.8	1819.3	1818.1	1815.9	1814.7	1814.4	1814.6	1814.7	1814.9	1813.2	1811.8	1810.9
DISCH KCFS	20.000	14.0	14.0	14.0	18.0	24.0	21.0	20.0	20.0	17.0	14.0	14.0	14.0	13.0	18.0	19.0	19.0
POWER																	
AVE POWER MW		148	148	149	191	255	228	219	217	182	150	150	150	139	191	199	198
PEAK POW MW		379	380	382	382	385	402	397	389	385	383	384	385	385	379	374	371
ENERGY GWH	1697.8	53.1	24.9	32.2	137.7	189.6	163.8	163.2	161.2	131.3	111.4	53.9	25.2	26.8	142.3	148.4	132.9
--OAHE--																	
NAT INFLOW	1381	203	95	122	240	132	366	126	48	55	6	9	4	5	-54	-24	48
DEPLETION	818	26	12	16	54	82	175	217	147	35	-14	1	0	0	14	21	32
CHAN STOR	6	31			-20	-31	15	5		16	16			5	-26	-5	
EVAPORATION	387							26	80	98	86	25	12	13	47		
REG INFLOW	13319	625	277	356	1237	1495	1456	1117	1051	949	811	400	187	203	966	1118	1071
RELEASE	13585	459	298	334	1181	1474	1450	1700	1737	946	710	229	119	134	869	1069	877
STOR CHANGE	-266	165	-21	22	56	21	6	-582	-686	3	101	171	68	69	97	49	195
STORAGE	11762.	11927	11906	11928	11984	12005	12011	11429	10743	10746	10847	11018	11086	11155	11252	11301	11496
ELEV FTMSL	1580.9	1581.7	1581.6	1581.7	1581.9	1582.0	1582.0	1579.3	1576.0	1576.0	1576.5	1577.3	1577.7	1578.0	1578.5	1578.7	1579.6
DISCH KCFS	15.821	15.4	21.4	18.7	19.8	24.0	24.4	27.6	28.3	15.9	11.5	7.7	8.6	8.4	14.1	17.4	15.8
POWER																	
AVE POWER MW		172	239	209	222	268	272	306	307	172	125	84	94	92	155	191	174
PEAK POW MW		575	575	575	577	577	577	563	545	545	548	553	554	556	558	560	565
ENERGY GWH	1812.9	62.0	40.2	45.2	159.7	199.3	196.0	227.7	228.3	123.7	93.1	30.2	15.7	17.8	115.2	141.9	116.9
--BIG BEND--																	
EVAPORATION	122							8	25	31	28	8	4	4	14		
REG INFLOW	13463	459	298	334	1181	1474	1450	1692	1712	915	682	221	115	130	854	1069	877
RELEASE	13463	459	298	334	1181	1474	1450	1692	1712	915	682	221	115	130	854	1069	877
STORAGE	1631.	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631	1631
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	15.821	15.4	21.4	18.7	19.8	24.0	24.4	27.5	27.9	15.4	11.1	7.4	8.3	8.2	13.9	17.4	15.8
POWER																	
AVE POWER MW		73	100	88	93	112	114	129	130	75	56	38	42	41	70	85	76
PEAK POW MW		517	509	509	509	509	509	509	509	538	538	538	538	538	538	538	529
ENERGY GWH	778.6	26.3	16.9	18.9	66.9	83.5	82.1	95.8	97.0	54.2	41.8	13.6	7.1	8.0	52.2	63.6	50.9
--FORT RANDALL--																	
NAT INFLOW	465	90	42	54	113	66	126	33	20	-6	-32	-14	-6	-7	-27	-33	46
DEPLETION	80	1	1	1	4	9	12	18	15	7	1	1	0	1	3	3	3
EVAPORATION	126							10	32	36	25	6	3	3	12		
REG INFLOW	13721	548	339	387	1290	1531	1564	1697	1686	866	623	201	105	119	812	1033	920
RELEASE	13721	268	195	387	1290	1531	1564	1697	1686	1581	1142	201	106	119	715	693	548
STOR CHANGE	0	280	144		0	0		0	0	-715	-518	0	0	0	97	340	372
STORAGE	3001.	3281	3425	3425	3425	3425	3425	3425	3425	2710	2192	2192	2192	2192	2289	2629	3001
ELEV FTMSL	1350.0	1353.5	1355.2	1355.2	1355.2	1355.2	1355.2	1355.2	1355.2	1346.0	1337.5	1337.5	1337.5	1337.5	1339.3	1344.8	1350.0
DISCH KCFS	9.879	9.0	14.0	21.7	21.7	24.9	26.3	27.6	27.4	26.6	18.6	6.8	7.6	7.5	11.6	11.3	9.9
POWER																	
AVE POWER MW		75	119	184	183	210	222	233	231	216	140	50	56	55	86	86	79
PEAK POW MW		350	356	356	356	356	356	356	356	324	284	285	285	285	293	319	339
ENERGY GWH	1357.6	26.9	19.9	39.6	132.0	156.4	159.6	173.1	172.0	155.3	104.3	17.9	9.4	10.5	63.7	63.9	53.0
--GAVINS POINT--																	
NAT INFLOW	1309	87	41	52	131	142	147	87	65	82	109	53	25	28	76	76	109
DEPLETION	114	0	0	0	5	19	24	39	10	-5	2	5	2	3	10	1	
CHAN STOR	-1	2	-10	-15	0	-6	-3	-3	0	2	15	22	-2	0	-8	1	3
EVAPORATION	39							2	8	10	9	3	1	1	5		
REG INFLOW	14876	357	226	425	1416	1648	1684	1740	1734	1659	1254	268	125	143	769	769	659
RELEASE	14876	357	226	425	1416	1648	1684	1740	1722	1636	1254	268	125	143	769	769	694
STOR CHANGE									12	23							-35
STORAGE	327.	327	327	327	327	327	327	327	339	362	362	362	362	362	362	362	327
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	12.500	12.0	16.3	23.8	23.8	26.8	28.3	28.3	28.0	27.5	20.4	9.0	9.0	9.0	12.5	12.5	12.5
POWER																	
AVE POWER MW		42	57	82	82	91	96	96	96	96	72	32	32	32	44	44	44
PEAK POW MW		114	114	114	114	114	114	114	115	117	117	117	117	117	78	78	76
ENERGY GWH	622.4	15.1	9.5	17.6	58.7	68.0	69.3	71.6	71.3	68.8	53.5	11.6	5.4	6.2	33.0	33.0	29.6
--GAVINS POINT - SIOUX CITY--																	
NAT INFLOW	1123	140	65	84	144	193	104	112	64	49	48	28	13	15	8	24	32
DEPLETION	295	8	4	5	25	38	33	42	40	27	13	7	3	4	15	16	16
REGULATED FLOW AT SIOUX CITY																	
KAF	15704	489	288	504	1535	1803	1755	1810	1746	1658	1289	289	135	154	762	777	710
KCFS		16.4	20.7	28.3	25.8	29.3	29.5	29.4	28.4	27.9	21.0	9.7	9.7	9.7	12.4	12.6	12.8
--TOTAL--																	
NAT INFLOW	19500	1216	567	729	1849	2866	4777	2197	896	708	963	427	199	228	426	546	905
DEPLETION	3042	23	11	14	165	646	1663	1358	387	-220	-178	-180	-84	-96	-207	-174	-86
CHAN STOR	4	77	-10	-15	-53	-42	7	3	0	38	48	22	-2	-5	-56	-10	3
EVAPORATION	1496							102	315	387	331	94	44	50	173		
STORAGE	37021.	37802	38062	38258	38354	38729	40095	39025	37474	36394	35962	36208	36311	36425	36066	36000	36283
SYSTEM POWER																	
AVE POWER MW		564	717	765	861	1033	1035	1087	1083	820	603	413	433	432	642	707	671
PEAK POW MW		2068	2067	2070	2072	2076	2095	2074	2047	2040	2003	2009	2011	2014	1978	1998	2009
ENERGY GWH	7035.6	202.9	120.5	165.3	620.1	768.6	745.2	808.4	806.1	590.7	448.7	148.7	72.8	83.0	477.6	526.0	450.9
DAILY GWH		13.5	17.2	18.4	20.7	24.8	24.8	26.1	26.0	19.7	14.5	9.9	10.4	10.4	15.4	17.0	16.1
	INI-SUM	15MAR	22MAR	31MAR	30APR	31MAY	30JUN	31JUL	31AUG	30SEP	31OCT	15NOV	22NOV	30NOV	31DEC	31JAN	28FEB