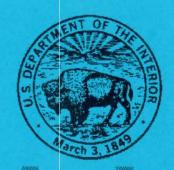
# Annual Operating Plans



North Platte

River Area

Water Years 1994 - 1995



U.S. DEPT. OF THE INTERIOR BUREAU OF RECLAMATION GREAT PLAINS REGION

PREFACE	•		1
HIGHLIGHTS OF 1994 OPERATIONS			1
DESCRIPTION OF THE NORTH PLATTE RIVER SYSTEM	•		3
SYSTEM PLANNING AND CONTROL		•	4
WATER YEAR 1994 OPERATIONS			6 7 8 10 11
Guernsey Reservoir			12 14 15
ANNUAL OPERATING PLAN FOR WATER YEAR			16
MOST PROBABLE CONDITION - WATER YEAR 1995  Seminoe Reservoir		•	16 17 17
REASONABLE MINIMUM INFLOW CONDITION - WATER YEAR 1995 Seminoe Reservoir			19 20 20 21 21
REASONABLE MAXIMUM INFLOW CONDITION - WATER YEAR 1998 Seminoe Reservoir		•	
GHODDAKI	•	•	20

#### TABLES

Tables	
1	Flood damage prevented in 1994
2	1994 Actual system operations
3A	1995 Operating Plan under most probable water supply condition
3B	1995 Operating Plan under reasonable minimum water supply condition
3C	1995 Operating Plan under reasonable maximum water supply condition
4	Summary of North Platte storage ownership for water year 1994
5	Reservoir Data
6	Powerplant Data
7	Maintenance schedule for water year 1995
8	North Platte River Basin Precipitation by Watershed

#### EXHIBITS

### Exhibits

1	North Platte River Total End of September Storage
2	1994 Seminoe Reservoir Inflow
2	1995 Annual Operating Plans, Seminoe Reservoir Inflow
3	1994 Pathfinder Reservoir Inflow
3	1995 Annual Operating Plans, Pathfinder Reservoir Inflow
4	1994 Glendo Reservoir Inflow
4	1995 Annual Operating Plans, Glendo Reservoir Inflow
5	1994 Seminoe Reservoir Storage
5	1995 Annual Operating Plans, Seminoe Reservoir Storage
6	1994 Pathfinder Reservoir Storage
6	1995 Annual Operating Plans, Pathfinder Reservoir Storage
7	1994 Alcova Reservoir Storage
7	1995 Annual Operating Plans, Alcova Reservoir Storage
8	1994 Glendo Reservoir Storage
8	1995 Annual Operating Plans, Glendo Reservoir Storage
9	1994 Guernsey Reservoir Storage
9	1995 Annual Operating Plans, Guernsey Reservoir Storage
10	Pathfinder Watershed Runoff
11	North Platte River Basin Man

#### PREFACE

This report concerns the operation of all Bureau of Reclamation (Reclamation) facilities in the North Platte River Drainage Basin above and including Guernsey Dam as well as the four Inland Lakes near Scottsbluff, Nebraska. This area of the North Platte River Drainage Basin is simply referred to in this report as the Basin. This report is to be published in combination with other river Basin reports from the Western Division of the Pick-Sloan Missouri Basin Program in the Great Plains Region. The reader is referred to the combined report for detailed information on power generation throughout the Western Division.

All references to average in this document will refer to the average of the historical record for the years 1964-1993 unless noted otherwise. In each coming year this period will be advanced by 1 year to maintain a running 30-year average.

#### HIGHLIGHTS OF 1994 OPERATIONS

Water Year 1994 was a dry year for inflows, but the water supply was greatly enhanced by carry-over storage left in the North Platte Reservoirs at the end of Water Year 1993. Exhibit 1 shows that the total system storage at the end of each of the past six water years has been below normal. Total system storage at the end of September 1994 was 59 percent of average and only 31 percent of capacity. Total inflow was significantly below average for the entire Basin with the Seminoe Reservoir inflow at 64 percent of average, gains to the Kortes to Pathfinder reach at 79 percent of average, and gains to the Alcova to Glendo reach at 57 percent of average. In the Glendo to Guernsey reach of the river, there were positive net gains early in the water year; however, large net losses in the reach in the summer resulted in a net loss in the reach for the water year. This was only the second time since the construction of Glendo Reservoir that there was a net loss in the reach for the water year.

Total accumulated precipitation for the 1994 Water Year was below average for all four watersheds within the Basin (Seminoe, Pathfinder, Glendo, and Guernsey). Precipitation was above average in all four watersheds for October and November of 1993. Winter precipitation was variable but generally near average. However, precipitation was well below average for all watersheds in March, May, and June; some weather stations in the Basin measured record or near record lows for these months.

Snowpack water content on May 1, 1994, was below average for all watersheds in the Basin. The Seminoe watershed was at 81 percent of average, Pathfinder measured 76 percent of average, and Glendo was only 69 percent of average. Warm dry weather in the spring caused the peak snowmelt runoff to occur about a month earlier than

average. Gains to Glendo Reservoir peaked in April with gains 112 percent of average; however, in May the little remaining snow melted, and gains dropped to 20 percent of average. Inflow to Seminoe peaked in May with inflows 84 percent of average, and the June snowmelt runoff which usually produces the peak Seminoe inflows for the year produced inflows which were only 30 percent of average.

The very warm and dry conditions in the spring and summer resulted in increased irrigation demands for storage water. The reduced gains to the North Platte River in the Glendo and Guernsey watersheds necessitated moving water from the upper reservoirs downstream earlier and in larger quantities than usual to meet irrigation demands. Not enough water could be discharged through Fremont Canyon Powerplant to meet all the downstream irrigation demands, so a bypass of water was initiated at Pathfinder Dam. The bypass continued from July 5 to September 7, 1994.

A bypass was also required at the Alcova Powerplant in May. The exterior of the Alcova Powerplant was painted, and part of the painting operations required that the plant be de-energized for several days as a safety precaution. The bypass of Alcova Powerplant lasted from May 3 to May 6, 1994.

North Platte Guernsey storage ownership was filled on March 5, 1994. The Inland Lakes storage right filled on April 20, 1994. At the beginning of the water year the Glendo ownership account contained 166,968 acre-feet of water. The Glendo storage ownership was filled on March 21, 1994. After deliveries and evaporation 153,384 acre-feet of water remained in the Glendo accounts on September 30, to be carried over into water year 1995. The North Platte Pathfinder storage ownership filled on May 16, 1994. The Kendrick Project storage water ownership account contained 481,817 acre-feet of water on October 1, 1993. This amount is 719,861 acre-feet less than the maximum allowable amount. The Kendrick Project came into priority in 1994 and accrued 49,564 acre-feet of water. The ownership balance for the Kendrick Project at the end of the water year was 419,992 acre-feet, which is the lowest end of September balance since 1967.

During the May 1994 through September 1994 period, Kendrick Project water users received 78,515 acre-feet of water. North Platte Project water users received 695,927 acre-feet of water from storage, 336,221 acre-feet of natural flow and 15,760 acre-feet of excess water, for a total delivery of 1,047,908 acre-feet. The Glendo Unit water users received 19,302 acre-feet of water from storage.

Reclamation continued to cooperate with the Wyoming Department of Game and Fish (WGF) and the Wyoming Flycasters Club (Flycasters) in an experimental fish hatching attempt in a hatching box at Gray Reef Dam. The hatching experiment is part of a cooperative

agreement between Reclamation and WGF. In the agreement Reclamation is also participating in an eight year fish tagging effort which is underway by WGF. The fish tagging effort involves inserting a coded wire strip into the head of all fish stocked into the river system over the eight year program. The tags will allow fishery biologists to track fish movement, numbers, age, and monitor stocked versus wild trout populations. Equipment was installed to monitor water temperature at the gaging stations at Sinclair, below Kortes Dam and below Gray Reef Dam to provide WGF with daily maximum, minimum, and mean water temperature data for use in the river fishery study. Instrumentation was purchased for these same sites which will monitor the turbidity of the water as well as other parameters. Although a test installation was made, technical problems precluded the collection of data. It is anticipated that installations will be made and water quality data will be collected in water year 1995. By participating in the fish tagging program, assisting in the fish egg hatching experiment, and assembling and sharing river flow data, Reclamation is an active partner in the improvement and management of the fishery on the North Platte River in Wyoming.

Reclamation and the Wyoming State Engineer's Office completed improvements to the North Platte River measurement gages near Orin, Wyoming, below Whalen Diversion Dam and near the Wyoming-Nebraska state line during this water year. Tilt meters were installed on the radial gates at Gray Reef dam to remotely monitor the position of the gates and transmit that information to the Hydromet data collection system in Billings, Montana, where it is be available to other agencies. The instrumentation of the gates was done as part of an effort to calibrate the gates and improve flow measurement at that site. These improvements at the sites of the measurement gages and calibration of the Gray Reef radial gates were made under the 1989 Cooperative Agreement No. 9-FG-60-01280. Streamgages on the North Platte River near Sinclair, Wyoming, the Medicine Bow River, and on the Sweetwater River were rehabilitated in previous years.

Power generated at the Reclamation facilities in the Basin for the water year was 739.3 GWH (93 percent of the 1961-1990 average).

#### DESCRIPTION OF THE NORTH PLATTE RIVER SYSTEM

The System of dams, reservoirs, and powerplants on the North Platte River (referred to as the "System" in this text) is monitored and in most cases operated and managed from the Wyoming Area Office in Mills, Wyoming. The operation and management of the System is aided by the use of a Programmable Master Supervisory Control, computerized accounting process, extensive Hydromet stations, control crest measurement weirs at gaging stations, SNOTEL stations, and a snowmelt runoff forecasting procedure which is used by the Water Management Branch. The System consists of a number of

individual water resource projects that were planned and constructed by Reclamation. The individual projects and features are operated as an integrated system to achieve efficiency and to produce increased multipurpose benefits. The drainage basin which affects the System covers an area from northern Colorado to southeastern Wyoming, encompassing 16,224 square miles. Storage reservoirs affected by the System include four off stream reservoirs known as the Inland Lakes in western Nebraska as shown in exhibit 11.

Approximately 70 to 80 percent of the annual North Platte River streamflow above Seminoe Dam occurs from snowmelt runoff during the April-July period. Primary water demand is irrigation, and the period of delivery of irrigation water normally extends from May through September. The System furnishes irrigation water to over 440,000 acres of land in Wyoming and Nebraska.

The System includes the Kendrick Project in Wyoming; the North Platte Project in Wyoming and Nebraska; and the Kortes and Glendo Units of the Pick-Sloan Missouri Basin Program in Wyoming and Nebraska. Major rivers which affect the water supply in the System are the North Platte River in Colorado and Wyoming, and the Medicine Bow, and Sweetwater Rivers in Wyoming.

The System has seven main stem reservoirs six of which have powerplants with a generating capacity totaling 234.2 megawatts (MW). The Department of Energy, by Executive order dated October 1, 1977, assumed the responsibility of marketing power from Federal resources and operation and maintenance of Federal transmission facilities.

Western Area Power Administration (WAPA) of the Department of Energy, headquartered in Golden, Colorado, now operates and maintains the nearly 3,500 miles of interconnected electrical transmission lines within the System. The power generating facilities are also interconnected with other federal, public, and private power facilities. Bulk power from Reclamation Powerplants is marketed by WAPA.

#### SYSTEM PLANNING AND CONTROL

The North Platte River storage, power generation, and water delivery facilities are operated for irrigation, hydroelectric power production, municipal and industrial water supply, providing instream flows in the section of the river below Kortes Dam known as the Miracle Mile and also below Gray Reef Dam, flood control, recreation, fish and wildlife preservation, and other purposes. Each project of the System must be operated under the purposes for which it was authorized and constructed. The objective of an integrated system is to obtain optimum benefits from the individual projects.

The System's integrated operation is planned and coordinated by Reclamation's Water Management Branch of the Wyoming Area Office in Mills, Wyoming. This office collects and analyzes information daily and makes the decisions necessary for successful operation of the System. The continuous water management function involves coordination between Reclamation, the Department of Energy, and many other local, state, and federal agencies. When water levels rise into the exclusive flood control pool at Glendo Reservoir, the flood control operation of Glendo Dam is directed by the U.S. Army Corps of Engineers, Omaha District, Omaha, Nebraska.

Experience has proven that proper utilization of the available water resource in a system such as this can be achieved only through careful budgeting of the anticipated water supply. The technical end product of this budgeting process is an Annual Operating Plan (AOP).

The System is operated on a water year basis (October 1 through September 30). Early in the water year an AOP is prepared, reviewed, and presented to the public. AOPs are prepared for reasonable maximum and reasonable minimum conditions of water supply and requirements as well as for the most probable runoff conditions. The System is operated to optimize the most probable water supply and still allow changes in operation should either reasonable maximum or reasonable minimum water supply conditions occur. This flexibility is the basis of the plan. Reclamation makes use of computer programs to revise and adjust the operating plan each month to reflect changing conditions. A computerized process of forecasting the anticipated water supply also aids the revision process during late winter and early spring.

#### WATER YEAR 1994 OPERATIONS

#### Seminoe Reservoir

Seminoe Dam and Reservoir, on the North Platte River, is the main storage facility for the Kendrick Project. Construction of the dam was completed in 1939, providing a storage capacity of 1,017,273 acre-feet. The powerplant contains three electrical generating units with a total installed capacity of 51 MW at a full release capability of about 4,000 c.f.s. The spillway consists of a concrete-lined tunnel through the right abutment controlled by three fixed-wheel gates with a release capability of close to 48,000 c.f.s. Two 60 inch jet flow valves provide a low level river outlet flow capacity of 3,450 c.f.s.

Seminoe Reservoir storage on September 30, 1993, totaled 608,884 acre-feet, which started Water Year 1994 with the reservoir storage at 87 percent of average. Release of water continued during the winter to generate power while maintaining the minimum required fishery flow of 500 c.f.s. in the Miracle Mile reach of the North Platte River. Releases averaged approximately 520 c.f.s. for October and November, 810 c.f.s. for December, and 830 c.f.s. for January through March. October through January inflow to Seminoe was 118 percent of average. Reservoir storage at the end of January was 574,138 acre-feet.

October through January precipitation on the Seminoe watershed was recorded at 132 percent of average. Precipitation each month was above average except for December which was 60 percent of average. Snow-water content within the Seminoe watershed was 90 percent of average at the end of January.

February precipitation in the Seminoe watershed was 139 percent of average, however, inflow was below average at 81 percent. Snow-water accumulation within the Seminoe watershed was 95 percent of average at the end of February.

March precipitation was only 69 percent of average in the Seminoe watershed while the March inflow improved to 130 percent of average. April 1 snow-water content was only 89 percent of the average at 18.7 inches.

The watershed above Seminoe measured 121 percent of average April precipitation. April inflow to Seminoe dropped to 89 percent of average. Seminoe Reservoir was at its highest end of April content since 1987. The May 1 snow water content was 81 percent of average at 17.1 inches. Water in storage for use by the Kendrick Project was the lowest end of April content since 1970. Turbine releases averaged 997 c.f.s. for the month of April.

Precipitation within the Seminoe watershed measured only 27 percent of average in May. May inflows were only 84 percent of average. Turbine releases averaged 1,474 c.f.s. for the month of May.

June precipitation above Seminoe continued to be low at only 56 percent of average, and the Seminoe inflow likewise remained low at 30 percent of average. The daily inflow for June averaged about 1,577 c.f.s. Turbine releases were increased for June and averaged 2,198 c.f.s. for the month.

July turbine releases averaged 2,239 c.f.s. Total April-July inflow volume from the Seminoe watershed was 415,915 acre-feet, which was 53 percent of average. Precipitation in July remained low with only 37 percent of average.

Turbine releases during August averaged 2,201 c.f.s. Precipitation increased in August to 94 percent of average. The August inflows remained low at 37 percent of average.

Precipitation was low in September at 54 percent of average, inflow remained low at 24 percent of average, and average turbine releases were decreased to approximately 1,111 c.f.s.

Gross generation for the water year at the Seminoe Powerplant totaled 138,000,000 kilo-watt hours (KWH); this was 97 percent of the 1961-1990 average.

The end of water year Seminoe Reservoir storage of 346,790 acrefeet was only 49 percent of average and 34 percent of capacity. Except for 1992, this was the lowest end of September Seminoe storage since 1966.

#### Kortes Reservoir

Completed in 1951, Kortes Dam, Reservoir, and Powerplant of the Kortes Unit (A Pick-Sloan Missouri Basin Project) are located about 2 miles below Seminoe Dam. This 4,700 acre-foot Reservoir serves as the forebay for Kortes Powerplant which has three electrical generating units with a total installed capacity of 36 MW and a release capability of 2,910 c.f.s.

The spillway on the right abutment consists of an uncontrolled crest with a concrete-lined tunnel and has a capacity of 50,000 c.f.s.

Gross generation for the water year totaled 147,800,000 KWH, which is 94 percent of the 1961-1990 average.

#### Pathfinder Reservoir

Pathfinder Dam and Reservoir, a major storage facility of the North Platte Project, has a total capacity of 1,016,507 acre-feet. Construction of the dam was completed in 1909. Operationally, this structure is a bottleneck in the System with its restricted release capability of less than 6,000 c.f.s. The two jet flow gates at the dam are capable of releasing 2,800 c.f.s., and depending on the elevation of the reservoir, as much as 2,900 c.f.s. can be released through the Fremont Canyon Power conduit and discharged from the Fremont Canyon turbines at the powerplant 3 miles downstream. The uncontrolled spillway is a flat-crested weir of natural rock over the left abutment of the dam. It has an estimated capacity of 65,000 c.f.s., at water surface elevation 5858.10 feet or 8 feet above the spillway crest. Fremont Canyon Powerplant, located in the canyon below Pathfinder Dam, has been reconditioned to a capacity of 66.8 MW under full reservoir operating head.

Upon entering water year 1994, storage in Pathfinder Reservoir was 305,549 acre-feet, which was 68 percent of average.

Very little release of water was made from Pathfinder Reservoir during the first half of October to allow the drawdown of Alcova Reservoir to its winter operating level. Starting in November, transfer of water to Glendo Reservoir for power generation at Fremont Canyon and Alcova Powerplants and maintenance of river flows below Gray Reef Dam averaged approximately 500 c.f.s. through March.

February 1 snow-water accumulation for the Sweetwater watershed was 51 percent of average. Precipitation within the watershed was 106 percent of average during the October-January period, with the January precipitation at 78 percent of average.

Precipitation in the Sweetwater watershed during February was 103 percent of average. River gains, which had been well above average for the October through January period (142 percent), rose even more to 197 percent of average for February. March 1 snow-water content was 72 percent of average.

March precipitation dropped to 48 percent of average. River gains below Kortes were 123 percent of average for March. There were no bypass releases for the month of March and turbine releases averaged 499 c.f.s. April 1 snow-water content for the Sweetwater watershed was 90 percent of average.

April precipitation fell below average at 78 percent of average for the Sweetwater watershed and river gains below Kortes decreased to 86 percent of average for April. The snow-water content on May 1 was 76 percent of average. May precipitation was extremely low at 13 percent of average. The Lander, Wyoming, weather station recorded the lowest May precipitation of 93 years of record and the Pathfinder, South Pass, and Muddy Gap, Wyoming, weather stations recorded the 3rd lowest May precipitation in 30 years. River gains below Kortes, including the Sweetwater River inflows, fell further below normal to 62 percent of average.

June precipitation was also very poor improving only to 33 percent of average. Kortes to Pathfinder river gains continued to be very poor at 26 percent of average. The gain of 8,000 acre-feet for the month was the 2nd lowest in 30 years with only 1988 being lower. June water releases through the Fremont Canyon Powerplant turbines averaged 2,726 c.f.s. with no bypass release of water for the month.

Precipitation in the Sweetwater watershed again remained extremely poor at 45 percent of average for the month of July. River gains between Kortes and Pathfinder improved to 76 percent of average for July. Fremont Canyon Powerplant turbine releases for July were increased to 2,818 c.f.s. A release of water was started through the jet flow gates at Pathfinder Dam on July 5th. This release bypassed the Fremont Canyon Powerplant and was necessary in order to move enough water downstream to meet irrigation demands in the lower system. The bypass flow averaged 920 c.f.s for July 5 through July 31.

Kortes to Pathfinder river gains increased for the month of August to 112 percent of average. Precipitation was 91 percent of average for August in the watershed. August releases from Pathfinder Reservoir averaged 2,784 c.f.s. through the Fremont Canyon Powerplant turbines and 1,059 c.f.s. through the jet flow gates at Pathfinder Dam.

September precipitation was 71 percent of average. Kortes to Pathfinder river gains were 110 percent of average for September. September turbine releases ranged from about 2,800 c.f.s. at the beginning of the month to about 200 c.f.s at the end of the month for an average of 1,399 c.f.s. The bypass release from the jet flow valves at Pathfinder Dam was continued through September 6th at an average rate of 601 c.f.s. and was then shut off for the year.

The maximum Pathfinder Reservoir content for the water year was reached on May 11, 1994, at 470,730 acre-feet.

The water year ended with 221,189 acre-feet of water in storage in Pathfinder Reservoir, which is 48 percent of average. This end of September storage is 84,360 acre-feet lower than the previous year and except for 1992 was the lowest end of year storage since 1969.

Generation for the year by the Fremont Canyon Powerplant totaled 233,000,000 KWH, which was 97 percent of the 1961-1990 average.

#### Alcova and Gray Reef Reservoirs

Alcova Dam and Reservoir are part of the Kendrick Project. The Dam serves as a diversion dam for the Casper Canal and the reservoir as a forebay for the Alcova Powerplant. The dam, located about 10 miles downstream of Pathfinder Dam, was completed in 1938. Reservoir storage capacity is about 184,405 acre-feet at elevation 5500 feet, of which only the top 30,600 acre-feet is active capacity available for irrigation of the Kendrick Project. powerplant consists of two electrical generating units with a total installed capacity of 36 MW at a full release capability of about 4,100 c.f.s. The spillway is a concrete lined open channel in the left abutment of the dam controlled by three 25 by 40 foot gates with a capacity of 55,000 c.f.s. at a reservoir level of 5500 feet. The Reservoir is operated within a 2 foot range during summer and winter but at levels 10 feet apart. A higher operating level is maintained during the summer months to provide adequate head on the Casper Canal and accommodate recreation use, while the lower winter operating level reduces the potential for ice damage to the canal gate and boat docks.

The annual drawdown of Alcova Reservoir began October 1, 1993. The reservoir water surface elevation was lowered below 5489.00 feet on October 20, bringing it within the winter operating range of 5488  $\pm$  1 foot, where it remained until April 1, 1994, when the refill of Alcova Reservoir was initiated.

The water surface elevation was raised above 5497 feet on April 21, and the Reservoir was maintained within 1 foot of elevation 5498 throughout the summer.

Kendrick Project irrigation deliveries from Alcova Reservoir to the Casper Canal, were 118 percent of average during the May-September period. The Kendrick Project ownership account contained 481,817 acre-feet on October 1, 1993. The Kendrick storage right came into priority on May 16, 1994, when the ownership began accruing water reaching the greatest amount for the water year on June 7 at 490,165. This was 711,513 acre-feet below maximum allowable ownership storage. After irrigation deliveries and evaporation, the Kendrick Project ownership contained 419,992 acre-feet of water at the end of the water year, and was 781,686 acre-feet less than the maximum allowable ownership storage. This was the lowest end of the water year balance the Kendrick Project ownership account has contained since the end of water year 1967.

Alcova Powerplant generated 125,800,000 KWH of energy during water year 1994, which was 97 percent of the 1961-1990 average annual generation.

Gray Reef Dam and Reservoir are part of the Glendo Unit, Oregon Trail Division, Pick-Sloan Missouri Basin Program. The dam is a three-zoned rock and earthfill structure located about 2.5 miles below Alcova Dam and was completed in 1961. The Reservoir has an active capacity of 1,744 acre-feet. Gray Reef Dam was constructed to provide a small reservoir to re-regulate releases from Alcova Dam. Re-regulation is required to provide flows acceptable to irrigation, municipal, industrial, and fish and wildlife interests along the 147 miles of river between Alcova and Glendo Dams.

The Gray Reef release was maintained near 500 c.f.s. from October 1, 1993, through May 8, 1994. Releases for the remainder of the water year were adjusted to meet irrigation demands below Guernsey Reservoir. The largest release for the water year of 3,793 c.f.s. occurred on August 24. After September 19, the Gray Reef releases were again maintained near 500 c.f.s.

#### Glendo Reservoir

Glendo Dam and Reservoir is the only storage facility for the Glendo Unit. The Reservoir has a storage capacity of 789,400 acre-feet, including 271,900 acre-feet allocated to flood control. Glendo Powerplant consists of 2 electrical generating units, with a total installed capacity of 38 MW at the full release capability of 3,400 c.f.s. The river outlet capacity is 6,600 c.f.s. when the powerplant is operating. If the powerplant is not operating, 13,000 c.f.s. can be released through the river outlet. The uncontrolled spillway, located on the right abutment, has a crest elevation of 4653.00 feet and discharge capacity of about 10,000 c.f.s. at approximately 4669.0 feet.

There is an outlet works at the Dam which consists of a 30 inch pipe through the right abutment of the Dam near the spillway. A butterfly valve controls the release of water. The outlet was constructed to provide year round flow below Glendo Dam for fishery purposes. A release of 25 c.f.s. was maintained from the outlet throughout the water year.

Reservoir storage of 121,163 acre-feet on September 30, 1993, began the 1994 water year with Glendo storage about 38,900 acre-feet above average. Precipitation in the Glendo watershed was above normal for the winter months at 126 percent of average. Winter (October-January) gains to the river between Alcova Dam and Glendo Reservoir were 125 percent of average. Glendo Reservoir contained 297,033 acre-feet of water at the end of January, which was 87 percent of average. Snowpack water content in this part of the Basin was 140 percent of average on February 1.

February precipitation was slightly above average, but precipitation decreased considerably in March to 32 percent of average. The Douglas, Wyoming, weather station recorded the 2nd

lowest March precipitation in 30 years. Inflow for the month was 122 percent of average. The snowpack water content was 100 percent of average on April 1. Water releases from Glendo Reservoir were initiated on April 25, in order to transfer water to Guernsey Reservoir for later release to the Inland Lakes. Snow water content had dropped to only 69 percent of average on May 1.

May brought a decrease to only 25 percent of normal precipitation, and inflow amounted to only 20 percent of average. On June 1 snow measurement sites in the area were generally without any measurable snow, and snowmelt runoff was essentially completed.

Very little rain fell in June, which was evident in the near record low accumulations at the Douglas and Casper, Wyoming, weather stations. Precipitation for the month was only 16 percent of average. Rather than a gain to the river, there was a net loss of 8,000 acre-feet of water during June which was the greatest loss recorded for June since Glendo Dam was built.

The Reservoir reached a maximum storage for the year of 422,269 acre-feet (elevation 4626.54 feet) on April 30.

Precipitation was above normal for July at 139 percent and dropped to 94 percent of average in August and further to 65 percent of average in September. The Alcova to Glendo river gains were actually net losses for July and August and returned to near average for September.

At the end of the water year, Glendo Reservoir contained 99,600 acre-feet of water (water surface elevation 4580.20 feet) which was 118 percent of average.

A total of 891,509 acre-feet of water was released through Glendo Powerplant resulting in gross generation of 75,900,000 KWH for the year. This was 10,300,000 KWH below the 1961-1990 average. A total of 184,294 acre-feet of water bypassed the Glendo turbines during the year. Of this amount, approximately 18,100 acre-feet of water was released through the Glendo Dam low flow outlet at the rate of 25 c.f.s., the remainder was seepage or irrigation release.

#### Guernsey Reservoir

The Reservoir, located about 25 miles below Glendo Dam, again stores and re-regulates the flow of the river prior to delivery of storage water to project lands of the North Platte Project and Glendo Unit. Guernsey Powerplant, located on the right abutment of the dam, has two 3.2 MW electrical generating units with a combined release capability of about 1,340 c.f.s. The windings of both units have been replaced resulting in the rating of 3.2 MW per unit. The North spillway gate, with a capacity of 50,000 c.f.s. at a reservoir level of 4420 feet, is utilized for irrigation releases

to supplement the maximum powerplant releases. The original capacity of the Reservoir was 73,800 acre-feet, but this has been greatly reduced by deposition of silt. Utilizing data from the 1980 Sedimentation Survey of Guernsey Reservoir, the March 1982 capacity tables show about 45,600 acre-feet of available storage.

Guernsey Reservoir contained 4,398 acre-feet of water on October 1, 1994. The Reservoir was being dewatered to allow repair on the North spillway gate and to provide water for transfer to the Inland Lakes in Nebraska. This was accomplished on October 4 and water releases were stopped on that date. Storage of water totaled 4,510 acre-feet at the end of the month.

October through January gains to the river between Glendo and Guernsey Dams were below average at 86 percent. Winter precipitation in the Guernsey watershed was above average overall with less than normal moisture only in December. River gains between Glendo and Guernsey Dams were average in February, while the precipitation fell .13 inches short of the 0.40 inch average for the month.

A net gain of 1,900 acre-feet of water entered the river between Glendo and Guernsey Dams during March, which is well above the average of 700 acre-feet. Precipitation decreased substantially in March with only 0.06 inches reported, which is only 8 percent of average. The Glendo, Wyoming, weather station recorded the 2nd lowest March precipitation in 30 years and the Guernsey, Wyoming, weather station recorded the lowest March precipitation of record in 49 years.

Guernsey Reservoir releases were started on April 24 to transfer water to the Inland Lakes. Gains to the river between Glendo and Guernsey in April were 600 acre-feet which is only 15 percent of average. Precipitation for the month was 0.99 inches for the watershed, which is 57 percent of average.

The Glendo to Guernsey river gains were only 15 percent of average again in May as they were in April. Precipitation for May was 66 percent of average.

Transfer of water to the Inland Lakes was completed on May 8, but Guernsey releases were continued to deliver irrigation water.

The lack of precipitation continued in June with only 41 percent of average for the month. There were no net gains to the river between Glendo and Guernsey for the month. Water releases were increased as necessary throughout June as the irrigation demands increased.

The annual "silt run" from the Reservoir was initiated on July 9 and continued for 14 days. Reservoir storage was reduced to initiate the "silt run" and was maintained at a low level

throughout the period. The minimum Reservoir content of 655 acrefeet occurred on July 16. Following the "silt run," the Reservoir was refilled to 33,813 acre-feet on July 29.

Although it is not unusual to experience losses instead of gains between Glendo and Guernsey Dams, the August losses of 9,000 acrefeet were the greatest ever experienced during any August since the construction of Glendo Dam. Precipitation returned to normal for the Guernsey watershed with 1.09 inches, which is 105 percent of average for the month.

The Glendo to Guernsey river gain did not recover in September but continued to show a net loss for the month. This was only the second year since Glendo Dam was built that there has been no net gain to the river for the entire period of June through September. In 1988 a similar phenomena occurred. September was a dry month as evidenced in the monthly precipitation for the Guernsey watershed of only 11 percent of average for September.

Guernsey Reservoir contained 3,048 acre-feet at the end of the irrigation season, September 30.

Gross generation for the water year totaled 18,800,000 KWH, which is 79 percent of the 1961-1990 average.

#### 1994 Ownerships

At the end of water year 1994, the North Platte Project ownership (includes North Platte Pathfinder and North Platte Guernsey), contained 275,544 acre-feet of water, which is 65 percent of average; the Kendrick ownership contained 419,992 acre-feet of water, which is 48 percent of average; and the Glendo ownership contained 153,522 acre-feet of water, which is 109 percent of average.

Net evaporation charged to the Glendo Ownership Account during water year 1994 was 4,501 acre-feet, which left a balance of 15,589 acre-feet remaining of the 20,090 acre-feet evaporation account in 1994. The power pool contained 63,148 acre-feet and there was 74,647 acre-feet of water available for irrigation at the end of the year.

The total amount of water reported as stored for the North Platte Project at the end of water year 1994 does not include water remaining in the four Inland Lakes in Nebraska. It should be noted 25,939 acre-feet of water remained in the lakes, which is available for use in 1995, in addition to the 853,870 acre-feet of water in the mainstem reservoirs.

#### Flood Benefits

The Corps of Engineers, Omaha District, estimates that in Water Year 1994 flood damages of \$1,915,800 were prevented in Wyoming and Nebraska because of the existence of dams in the System. Glendo Dam was the only North Platte River dam to which flood benefits were assigned for the year (Table 1). Since construction, the System has prevented flood damages totaling \$58,195,500.

#### ANNUAL OPERATING PLAN FOR WATER YEAR 1995

Three operation studies were developed for the System to establish an AOP for water year 1995. Each of the studies conformed to the established operating criteria but used different inflow conditions and different demand conditions.

The three inflow conditions were determined from a statistical analysis of historic inflows and were labeled reasonable minimum, reasonable maximum, and most probable. Reservoir inflow during water year 1995 has a one-in-ten chance of being less than the reasonable minimum. Statistically, inflows in 1995 will have an eight-in-ten chance of falling between the two extremes. The most probable inflow is based on long-term averages and approximates a 50 percent chance of occurrence. The three studies for water year 1995 are summarized numerically in tables 3A, 3B, and 3C and graphically in exhibits 2 through 9.

The AOP, as developed and reflected in the three studies, provides the flexibility to adjust operations as conditions change during the water year. Forecasts of the April-July reservoir inflow will be made at the beginning of each month for February through May. Projected operating schedules will be adjusted, as required, throughout the water year as changes occur in the forecasted inflows, irrigation demands, maintenance schedules, and power loads.

The carryover storage in mainstem reservoirs (including Kortes and Gray Reef) on the North Platte River in Wyoming, totaled 853,870 acre-feet at the beginning of the water year. This amount was 59 percent of average.

#### MOST PROBABLE CONDITION - WATER YEAR 1995

#### Seminoe Reservoir

October through March -- Seminoe Reservoir storage of 346,790 acrefeet, at the beginning of the water year, was 49 percent of the 30-year average. Planned turbine releases from Seminoe Reservoir of 500 c.f.s. in October through March will lower reservoir storage to about 335,600 acre-feet by March 31. These releases are projected based on a statistically estimated Seminoe inflow for the October through March period of 173,500 acre-feet. A release of at least 500 c.f.s. is required to maintain the minimum flow in the Miracle Mile reach of the river.

April through September -- Turbine releases are expected to average approximately 900 c.f.s. in April; 1,700 c.f.s. in May; 2,500 c.f.s June through August; and 1,700 c.f.s in September. The total release from the Reservoir during the April to September period

will be scheduled to provide storage space for the April-July inflow and meet downstream requirements and System power demands. With most probable inflow, storage will reach a maximum of 690,000 acre-feet by the end of June. Projected carryover storage of about 420,000 acre-feet at the end of the water year would be 60 percent of average.

#### Pathfinder Reservoir

October through March -- At the beginning of the water year, Pathfinder Reservoir storage was 221,189 acre-feet or 48 percent of the 1964-1993 average. Fremont Canyon Powerplant releases will be reduced during October to lower Alcova Reservoir water surface level to 5483.0  $\pm$  1.0 foot, which is five feet below the range of the normal winter operation. The extra five feet of drawdown is to allow for the extension of boat ramps at Alcova Reservoir. work on the boat ramps is complete, the releases from Fremont Canyon Powerplant will be increased in November to raise the level of Alcova Reservoir to 5488.0 ± 1.0 foot, the normal winter operating level. After the Alcova winter operating level is reached, releases from Pathfinder Reservoir will be adjusted to meet Gray Reef Reservoir releases and maintain the Alcova Reservoir content between 153,800 and 158,300 acre-feet. Pathfinder Reservoir storage is projected to be about 245,900 acre-feet by the end of January and 256,000 acre-feet at the end of March.

April through September -- Pathfinder Reservoir storage will reach a maximum of about 296,600 acre-feet by the end of June and be drawn down to a storage content of about 266,800 acre-feet by the end of the water year. River gains between Kortes and Pathfinder Reservoirs, including the Sweetwater River, is estimated at about 87,400 acre-feet for the April-July period under most probable inflow conditions.

In April, Fremont Canyon Powerplant releases will be coordinated with Alcova releases to refill Alcova Reservoir to its normal summer operating level of  $5498 \pm 1$  foot.

During May through September, Fremont Canyon power releases will be scheduled to meet downstream irrigation deliveries and maintain a storage content of 177,070 to 181,940 acre-feet (5498 ± 1 foot) in Alcova Reservoir. During May and September, water releases will average approximately 1,900 c.f.s. In June, July, and August Fremont Canyon turbine releases are expected to average approximately 2,700 c.f.s.

#### Alcova Reservoir

October through March -- During October, Alcova Reservoir will be drawn down to elevation  $5483.0 \pm 1.0$  foot, which is five feet below the normal winter operating range. The extra five feet of drawdown is to allow for the extension of boat ramps at Alcova Reservoir.

In November the level of the reservoir will be raised to the normal winter operating level of  $5488.0 \pm 1.0$  foot and will be maintained there through March. From October through April, releases will be maintained at approximately 500 c.f.s. for production of power, maintenance of fishery flows, pollution abatement, and transfer of water to Glendo Reservoir in preparation for meeting downstream irrigation demands during the coming irrigation season.

April through September -- During April, the Reservoir will be refilled to water surface elevation 5,498 feet (179,400 acre-feet). This level will be maintained within ± 1 foot to provide the necessary water surface elevation to make irrigation deliveries to Casper Canal and for recreational purposes. About 74,000 acre-feet of water are scheduled to be delivered during the May-September period to meet Kendrick Project irrigation requirements. Releases from Alcova Reservoir will be re-regulated in Gray Reef Reservoir.

#### Gray Reef Reservoir

October through March -- the water releases from Gray Reef Dam will be maintained at approximately 500 c.f.s during this period. This will result in a winter river level similar to last year. These below average winter flows will provide more space in Glendo Reservoir which will be used to hold spring runoff which occurs below Pathfinder Dam. The 30-year average flow below Gray Reef ranges between 810 c.f.s and 1,100 c.f.s. for the months of October through March.

April through September -- Releases from Gray Reef Reservoir will average about 500 c.f.s. in the month of April. The May through September releases are expected to be approximately 1,600 c.f.s in May; 2,400 c.f.s in June through August; and 1,800 c.f.s. in September as project irrigation water is moved downstream.

#### Glendo and Guernsey Reservoirs

October through January -- Carryover storage of 99,600 acre-feet in Glendo Reservoir on September 30 was 118 percent of average. With restorage of North Platte Project water released from Alcova and with North Platte River gains below Alcova Dam estimated to be near normal, Glendo Reservoir storage will increase to about 251,700 acre-feet by the end of January.

A constant release of 25 c.f.s. is planned for the Glendo Dam Outlet works which will provide the necessary water to maintain a year round fishery in the North Platte River between Glendo Dam and Guernsey Reservoir. The water released will be restored in Guernsey Reservoir.

Guernsey Reservoir contained 3,048 acre-feet of water at the start of water year 1995. 10,000 acre-feet of water will be transferred to the Inland Lakes during October. Natural inflow, as well as the

low flow releases from Glendo Dam, will be stored during the winter which will increase storage to 15,000 acre-feet by January 31.

February through September -- Glendo Reservoir storage will increase to about 345,100 acre-feet by the end of March. During April and May releases from Glendo Reservoir will be scheduled to refill Guernsey Reservoir. Releases from Glendo Reservoir during the April through September period will be based upon meeting a full irrigation demand of 1,056,000 acre-feet for the North Platte Project and 28,000 acre-feet for the Glendo Unit. Maximum Glendo Reservoir storage for the water year will be 440,600 acre-feet at the end of June. At this level, it would take approximately 76,885 acre-feet of water to fill the Reservoir to the flood pool elevation of 4635.0 ft.

Guernsey Reservoir content will be maintained near 35,000 acre-feet during mid-May through June. Provision is made in the plan for a possible silt run in July, which will require close coordination of Glendo and Guernsey release schedules as Guernsey is drawn down to about 1,000 acre-feet in July and refilled to about 35,000 acre-feet in August. During September, releases will be scheduled to complete Glendo drawdown to about 65,000 acre-feet and to lower Guernsey Reservoir to approximately 15,000 acre-feet, anticipating moving 10,000 acre-feet to the Inland Lakes in October.

#### Most Probable Condition Ownerships

At the close of water year 1995 the North Platte Project storage ownership is expected to be near 476,400 acre-feet (113 percent of average); the Kendrick Project storage ownership is expected to be near 330,100 acre-feet (38 percent of average) which is 871,578 acre-feet from filling. No water will accrue to Kendrick Project storage in water year 1995 under most probable inflow conditions. Glendo storage ownership at the end of water year 1995 is expected to be near average with an end-of-season content of 141,000 acre-feet under most probable runoff conditions.

#### REASONABLE MINIMUM INFLOW CONDITION - WATER YEAR 1995

#### Seminoe Reservoir

October through March -- Water releases for this period under a reasonable minimum inflow condition would be 500 c.f.s. which is the minimum required flow in the Miracle Mile reach of the river. Under this condition inflows would be expected to be 160,500 acrefeet for the period, which is 13,000 acre-feet less than in the most probable condition. The March 31 reservoir content would be expected to be approximately 322,600 acre-feet under these conditions.

April through September -- Seminoe water releases will increase from approximately 500 c.f.s. in April to 2,320 c.f.s. in June in order to meet irrigation requirements and provide increased power production. The releases will be decreased in July, August, and September to average approximately 2,080 c.f.s., 1,970 c.f.s., and 1,370 c.f.s., respectively. Under these conditions the water year will end with a Seminoe Reservoir content of 100,000 acre-feet (14 percent of average). The maximum end of month content under these conditions will be approximately 398,000 acre-feet at the end of May.

#### Pathfinder Reservoir

October through March -- Water releases for this period under a reasonable minimum inflow condition would be the same as in the most probable condition. Under this condition, gains to the river between Kortes Dam and Pathfinder Reservoir, including the Sweetwater River, are expected to be 28,700 acre-feet for the period. Pathfinder Reservoir storage will reach about 262,900 acre-feet by the end of March. Fremont Canyon Powerplant releases for the period will be scheduled to maintain 156,000 acre-feet content in Alcova Reservoir.

April through September -- River gains between Kortes Dam and Pathfinder Reservoir, including the Sweetwater River, are estimated at about 38,600 acre-feet for the April-July period under reasonable minimum inflow conditions.

In April, releases will be coordinated with Alcova releases to refill Alcova Reservoir to its normal summer operating level of 5498 ft + 1 foot (179,400 acre-feet) by the end of April.

During April through September, Fremont Canyon power releases will be scheduled to meet Kendrick Project and downstream irrigation deliveries and maintain a storage content of 179,400 acre-feet in Alcova Reservoir. Summer releases will increase to approximately 3,870 c.f.s. of combined turbine and jetflow releases during June and end the year with approximately 1,280 c.f.s. during September. If reasonable minimum runoff develops, the reservoir content at the end of the water year will be about 67,700 acre-feet or 15 percent of average.

#### Alcova Reservoir

October through March -- Operation of Alcova Reservoir would be the same as under the most probable condition. Alcova Reservoir will remain at the normal winter operating level through March.

April through September -- During April, the Reservoir will be refilled to water surface elevation 5498 feet (179,400 acre-feet). This level will be maintained within  $\pm$  1 foot to provide the necessary head for making irrigation deliveries to Casper Canal and

for recreational purposes. About 84,000 acre-feet of water are scheduled to be delivered during the May-September period to meet Kendrick Project irrigation requirements.

#### Gray Reef Reservoir

October through March -- Operation of Gray Reef Reservoir would be the same as under the most probable condition.

April through September -- Releases from Gray Reef Reservoir will average approximately 500 c.f.s. in April, increasing to 630 c.f.s. in May. Releases from Gray Reef Dam during June, July, and August will average 3,520 c.f.s, 3,020 c.f.s, and 2,830 c.f.s, respectively. September releases will average 1,100 c.f.s. These predicted flows may be redistributed as the irrigators adjust their use of water from storage.

#### Glendo and Guernsey Reservoirs

October through January -- Guernsey Reservoir contained 3,048 acrefeet of water at the start of water year 1995. 10,000 acre-feet of water will be transferred to the Inland Lakes during October this year. Under the reasonable minimum inflow conditions the natural inflow will be stored during the winter, as well as the low flow release from Glendo Dam, which will increase the Guernsey Reservoir content to 9,800 acre-feet by January 31. Glendo Reservoir content will increase from the carryover storage of 99,600 acre-feet to a January 31 content of 246,700 acre-feet.

February through September -- Glendo Reservoir storage will increase to about 374,900 acre-feet by the end of June, which is the largest end of month content for the year. At this level, it would take approximately 142,600 acre-feet of water to fill the Reservoir to the flood pool elevation of 4635 ft. During April and May releases from Glendo Reservoir will be scheduled to refill Guernsey Reservoir.

The operation of Glendo and Guernsey Reservoirs will be based upon making full irrigation deliveries to the Glendo Unit and the North Platte Project. The total combined North Platte System reservoir storage would be approximately 519,300 acre-feet less by the end of the water year under reasonable minimum water supply conditions than under the most probable conditions.

Guernsey Reservoir content will be maintained near 35,000 acre-feet during May and June. Provision is made in the plan for a possible silt run in July, which will require close coordination of Glendo and Guernsey release schedules as Guernsey is drawn down to about 1,000 acre-feet in July and refilled in August. September, releases will be made to meet irrigation requirements leaving 64,900 acre-feet of water in Glendo Reservoir at years end.

Guernsey Reservoir content on September 30 will be 15,000 acre-feet under minimum conditions.

#### Reasonable Minimum Condition Ownerships

The North Platte Project storage ownership is expected to be less than 50 acre-feet at the close of the water year compared to 476,400 acre-feet with the most probable runoff conditions. The Kendrick Project storage ownership is expected to be near 300,300 acre-feet which is 34 percent of average and 901,400 acre-feet from filling. Glendo storage ownership is expected to be near 128,000 acre-feet (91 percent of average) at the close of water year 1995 under the reasonable minimum runoff conditions. No water accrues to the Kendrick ownership account under minimum conditions.

#### REASONABLE MAXIMUM INFLOW CONDITION - WATER YEAR 1995

#### Seminoe Reservoir

October through March -- Water releases for this period under a reasonable maximum inflow condition would increase from 500 c.f.s. in October through February to 1,600 c.f.s. in March as water is moved downstream to generate power and make room in Seminoe Reservoir for spring runoff. Although inflows to Seminoe Reservoir would be higher under these conditions actual changes in winter operations would be made gradually until it was evident that the inflow quantities being experienced were showing a trend towards the reasonable maximum inflows for the water year. October through March inflows under this condition will be 205,400 acre-feet, which is 31,900 acre-feet more than the most probable runoff condition. The reservoir content would decrease from 352,500 acre-feet in November to 300,000 acre-feet in March under these conditions.

April through September -- Seminoe Reservoir release for the month of April will be set at an average of 2,510 c.f.s. Releases will average approximately 2,600 c.f.s for May through July, decrease to about 2,250 c.f.s in August, and then decrease further to a release of about 500 c.f.s in September. Inflows for the April through July period will be 1,366,600 acre-feet, which is 586,500 acre-feet more than the most probable runoff condition. Seminoe Reservoir will reach its maximum end of month content for the year in July with approximately 1,014,000 acre-feet in storage. This plan of operation would result in an end of year carryover storage of 929,300 acre-feet, which would be 132 percent of average.

#### Pathfinder Reservoir

October through March -- Water releases for this period under a reasonable maximum inflow condition would be the same as in the most probable condition. Under this condition, gains between Kortes Dam and Pathfinder Reservoir would be expected to be 30,200

acre-feet for the period, which is 8,600 acre-feet more than in the most probable condition. Pathfinder Reservoir content increases through this period from 248,800 acre-feet at the end of November to 331,700 acre-feet at the end of March as releases from Seminoe Reservoir are increased to generate power during the winter.

April through September -- Pathfinder Reservoir would fill to its maximum end of month content for the year in August with 777,200 acre-feet in storage. In April, water releases from Fremont Canyon Powerplant will be increased from 500 c.f.s. to 900 c.f.s. as Alcova Reservoir is filled. The rate of release will be increased through the summer as needed to meet downstream irrigation demands. July releases will be about 2,740 c.f.s. and then decreased to approximately 2,140 c.f.s. in August and 640 c.f.s. in September. The Pathfinder Reservoir end of year storage content is projected to be about 768,200 acre-feet, which will be 166 percent of average.

#### Alcova Reservoir

October through March -- Operation of Alcova Reservoir would be the same as under the most probable condition.

April through September -- During April the Reservoir will be refilled to water surface elevation 5498 feet (179,400 acre-feet). This level will be maintained within  $\pm$  1 foot to provide the necessary head for making irrigation deliveries to Casper Canal and for recreational purposes. Water delivered through the Casper Canal to the Kendrick Project for irrigation is estimated to be 74,000 acre-feet for the irrigation season.

#### Gray Reef Reservoir

October through March -- Operation of Gray Reef Reservoir would be the same as under the most probable condition.

April through September -- Releases are expected to be increased from 500 c.f.s. in May to 2,420 c.f.s. in July. August and September releases are scheduled to be 1,840 c.f.s. and 500 c.f.s., respectively.

#### Glendo and Guernsey Reservoirs

October through March -- Guernsey Reservoir contained 3,048 acrefeet of water at the start of water year 1995. 10,000 acre-feet of water will be transferred to the Inland Lakes in October. Under the reasonable maximum inflow conditions, the natural inflow as well as the 25 c.f.s. river maintenance release from Glendo will be stored during the winter, which will increase the reservoir content to 18,800 acre-feet by March 31. Glendo Reservoir content is expected to increase from the starting content of 99,600 acre-feet to an end of March content of 330,700 acre-feet.

April through September -- Guernsey Reservoir content reaches a maximum end of month content of 38,600 acre-feet in June. Glendo Reservoir fills in June, reaching maximum storage of 517,485 acrefeet. Provision is made in the plan for a possible silt run in July, which will require close coordination of Glendo and Guernsey release schedules as Guernsey is drawn down to about 1,000 acrefeet in July and refilled in August. During September releases will be scheduled to lower Guernsey Reservoir to approximately 18,600 acre-feet anticipating moving 10,000 acre-feet to the Inland Lakes in October.

In the case of an extreme runoff event, the use of the flood pool would be dictated by the pattern and magnitude of flow conditions that develop below Guernsey Reservoir. However, the use of the Glendo flood pool is restricted to regulating unforecasted rainfall floods. The planned use of the flood pool for regulation of the anticipated snowmelt runoff is not permitted. The operating plan shown assumes no downstream flow restrictions and normal irrigation deliveries. Glendo storage is projected to decrease to about 380,000 acre-feet by the end of July and will be about 103,300 acre-feet by the end of September. This end of year Glendo storage would be 123 percent of average and the total System storage at the end of the water year of 1,998,800 acre-feet (excluding about 6,600 acre-feet of storage in Kortes and Gray Reef Reservoirs) would be 139 percent of average for the major reservoirs on the North Platte River.

#### Reasonable Maximum Condition Ownerships

All storage water ownerships in the North Platte River System except Kendrick will fill during the water year. About 147,600 acre-feet of water, which is excess to the North Platte System ownerships, will be released from the System if the reasonable maximum runoff develops in the pattern that was assumed. Irrigation deliveries of 945,000 acre-feet are projected for the North Platte River Project during April through September and irrigation deliveries of 28,000 acre-feet are projected for the Glendo Unit.

#### GLOSSARY

- Acre-Foot A measure of volume of water equal to an area of 1 acre covered with water 1 foot deep. (43,560 cubic feet)
- Basin The watershed from which overland runoff flows into the North Platte River. When used alone in this report it refers to the North Platte River Drainage Basin upstream of Guernsey Dam.
- Bypass That amount of water released from a reservoir other than through the powerplant for those reservoirs which have a powerplant connected to them.
- Cubic foot per second (c.f.s.) 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.
- Evaporation pool A volume of water set aside in the accounting process from which reservoir evaporation is subtracted as it occurs. (Used in Glendo storage accounting).
- Flood pool A physical space in the reservoir which is to be occupied only by water from flood events. In Glendo Reservoir, the volume between reservoir elevations 4635.0 feet and 4653.0 feet is reserved exclusively for flood control.
- Gains Water which enters a river in a defined reach from a source other than an upstream release. When flow released into a reach is greater than the riverflow exiting the lower end of the reach the net gain is negative (loss of water in the reach).
- Head The difference in elevation between the reservoir water surface and the power generating turbines at a powerplant which is connected to a reservoir.
- Hydromet Computer software designed for the acquisition, processing, storage and retrieval of hydrological and meteorological data which is gathered via satellite from remote sites.
- Inflow As used in this report is any water which enters a reservoir irrespective of whether it originated in the reach or was released from an upstream storage reservoir.
- Inland Lakes A series of four off-stream storage reservoirs on the Interstate Canal system in Nebraska which are used to store and re-release irrigation water. (Lake Alice, Lake Minatare, Little Lake Alice, and Lake Winters Creek)

Natural flow - Riverflow which has originated from a source other than reservoir storage.

Power pool - That space in a reservoir which must be full in order to efficiently generate electrical power through an associated turbine generator.

Precipitation - A deposit on the earth of hail, mist, rain, sleet, or snow.

Runoff - That part of precipitation on the Basin which appears as flow in the North Platte River.

Silt Run - The name given to the practice of flushing silt from Guernsey Reservoir into the North Platte River downstream where the silt laden water is diverted by irrigators. The silt tends to settle in the slower moving water of canals and laterals helping to seal the wetted perimeter and reduce seepage losses.

SNOTEL - Snowpack telemetry network. A network of Soil Conservation Service automated sites which continually monitor snowpack and weather conditions and transmit data to a data retrieval center in Portland, Oregon.

System - As used in the report the System includes all storage, delivery, and power generating facilities on the mainstem of the North Platte River in Wyoming and also the four Nebraska reservoirs referred to as the Inland Lakes.

## APPENDIX A - TABLES

FLOOD DAMAGE PREVENTED BY DAMS
IN THE NORTH PLATTE RIVER SYSTEM 1/

<u>Dam</u>	Water year 1994	Prior to  1994	Accumulated <u>Total</u>
Seminoe	\$0	\$13,205,500	\$13,205,500
Pathfinder	\$0	\$5,328,100	\$5,328,100
Alcova	\$0	\$226,200	\$226,200
Glendo	\$1,915,800	\$37,080,900	\$38,996,700
Guernsey	0	\$439,000	\$439,000
Total	\$1,915,800	\$56,279,700	\$58,195,500

<sup>1/</sup>This data is received from the Army Corps of Engineer's Omaha District Office and is revised every October. The period of assessment is 1970 through 1994 except for Glendo Dam which is 1965 through 1994.

#### NORTH PLATTE RIVER OPERATING PLAN Year Beginning Oct 1993

#### HYDROLOGY OPERATIONS

Seminoe Reservoir Op					11110	ial Cont	000	.9 Kaf						
		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Tota
Total Inflow	kaf	38.9	32.2	33.4	29.4	21.9	67.3	97.1	202.4	93.8	22.6	14.8	5.3	659.
Total Inflow	cfs	633.	541.	543.	478.	394.	1094.	1632.	3292.	1576.	366.	241.	89.	
Turbine Release	kaf	30.9	31.2	49.9	51.0	46.1	51.1	59.3	90.6	130.8	137.7	135.3	66.1	880.0
Jetflow Release	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.
Spillway Release	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.
Total Release	kaf	30.9	31.2	49.9	51.0	46.1	51.1	59.3	90.6	130.8	137.7	135.3	66.1	880.
Total Release	cfs	503.	524.	811.	829.	830.	831.	997.	1473.	2198.	2240.	2200.	1111.	
Evaporation	kaf	2.9	1.0	0.5	1.3	0.4	2.2	4.3	6.5	7.7	6.3	4.9	3.2	41.
End-month content	kaf	614.0	614.0	597.0	574.1	549.5	563.5	597.0	702.3	657.6	536.2	410.8	346.8	
End-month elevation	ft	6332.9	6332.9	6331.7	6329.9	6328.0	6329.1	6331.7	6339.1	6336.1	6326.9	6315.4	6308.6	
Generation	gwh	4.3	4.5	7.9	8.0	7.4	7.9	9.6	15.0	21.6	22.0	20.4	9.4	138.
Kortes Reservoir Ope	ratio	ons			Init	ial Cont	ent 4	.7 Kaf						
		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Tota
Total Inflow	kaf	30.9	31.2	49.9	51.0	46.1	51.1	59.3	90.6	130.8	137.7	135.3	66.1	880.0
Turbine Release	kaf	30.9	31.1	49.9	51.1	46.1	51.1	59.2	90.8	130.6	137.6	135.3	66.1	879.
Spillway Release	kaf	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.
Total Release	kaf	30.9	31.3	49.9	51.1	46.1	51.1	59.2	90.8	130.6	137.6	135.3	66.1	880.
Total Release	cfs	503.	526.	811.	831.	830.	831.	995.	1477.	2195.	2238.	2200.	1111.	1001
Generation	gwh	5.4	5.1	8.4	8.8	8.1	8.6	10.2	15.3	21.7	22.7	22.3	11.2	147.
Pathfinder Reservoir	Oper	rations			Init	ial Cont	ent 305	.5 Kaf						
		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Tota
Constant Inflam	least.	4.5		3.0	2.8	3.3	6.5	13.9	20.3	5.9	1 5	1.5	1.1	68.
Sweetwater Inflow	kaf		4.0	3.0	4.2	4.0	5.6	4.0	20.3	2.1	1.5	9.1	4.5	45.
Kortes-Path Gain	kaf	-0.4 30.9	-2.6	49.9	51.1	46.1	51.1	59.2	90.8	130.6	137.6	135.3	66.1	880.
Inflow from Kortes Total Inflow	kaf	35.0	31.3 32.7	55.9	58.1	53.4	63.2	77.1	113.8	138.6	148.0	145.9	71.7	993.
Total Inflow	kaf	569.	550.	909.	945.	962.	1028.	1296.	1851.	2329.	2407.	2373.	1205.	773.
Total Initow	CIS	307.	550.	707.	743.	702.	1020.	1270.	1051.	2327.	2407.	2313.	1205.	
Turbine Release	kaf	9.8	30.5	29.9	32.0	27.6	30.7	54.1	113.2	162.2	173.4	162.2	84.5	910.
Jetflow Release	kaf	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	49.2	74.1	8.7	132.
Spillway Release	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.
Total Release	kaf	10.5	30.5	29.9	32.0	27.6	30.7	54.1	113.2	162.2	222.6	236.3	93.2	1042.
Total Release	cfs	171.	513.	486.	520.	497.	499.	909.	1841.	2726.	3620.	3843.	1566.	
Evaporation	kaf	1.6	0.6	0.4	0.9	0.3	1.9	2.8	7.1	6.4	6.0	4.2	2.7	34.
End-month content	kaf	328.4	330.0	355.6	380.8	406.3	436.9	457.1	450.6	420.6	340.0	245.4	221.2	
End-month elevation	ft	5803.7	5803.9	5806.7	5809.4	5811.9	5814.7	5816.5	5816.0	5813.2	5805.0	5793.1	5789.6	
Generation Fremont	gwh	3.4	9.2	8.1	8.5	7.2	7.7	14.5	30.0	42.1	42.3	40.0	20.0	233.
Alcova Reservoir Ope	eratio	ons			Init	ial Cont	tent 180	.8 Kaf						
		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Tota
Total Inflow	kaf	10.5	30.5	29.9	32.0	27.6	30.7	54.1	113.2	162.2	222.6	236.3	93.2	1042.
Total Inflow	cfs	171.	513.	486.	520.	497.	499.	909.	1841.	2726.	3620.	3843.	1566.	
Turbine Release	kaf	34.6	30.2	30.9	31.3	27.7	30.8	29.6	88.3	143.8	201.0	220.1	88.0	956.
Spillway Release	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.9	0.0	0.0	0.0	0.0	2.
Casper Canal Release		0.0	0.0	0.0	0.0	0.0	0.0	0.0	19.3	17.6	19.5	13.9	8.2	78.
Total Release	kaf	34.6	30.2	30.9	31.3	27.7	30.8	29.6	110.5	161.4	220.5	234.0	96.2	1037
Total Release	cfs	563.	508.	502.	509.	499.	501.	497.	1797.	2712.	3586.	3806.	1617.	
Evaporation	kaf	0.4	0.2	0.1	0.2	0.2	0.4	0.7	1.1	1.4	1.5	1.3	1.0	8
End-month content	kaf	156.3	156.4	155.3	155.8	155.5	155.1	178.9	180.5	179.9	180.5	181.5	177.5	
End-month elevation	ft		5488.1	5487.7		5487.8		5497.8	5498.4	5498.2	5498.4		5497.2	
Generation	gwh	4.8	4.1	4.0	4.0	3.4	3.8	4.0	12.0	19.5	26.2	28.2	11.8	125.

						Apr
34.6	30.2	30.9	31.3	27.7	30.8	29.6
563.	508.	502.	509.	499.	501.	497.
34.6	30.2	31.0	30.9	27.8	30.8	29.6

Jan

11.0

30.9

11 0

0.6

0.0

Jan

1.4

2.1

3.5

57.

0.0

0.3

0.0

0.3

6.

0.1

14.6

0.0

4404.0

297.0

4612.9

Total Inflow	cfs	563.	508.	502.	509.	499.	501.	497.
Total Release	kaf	34.6	30.2	31.0	30.9	27.8	30.8	29.6
Total Release	cfs	563.	508.	504.	502.	501.	501.	497.
Glendo Reservoir	Operation	ıs			Initi	al Conte	nt 121.	2 Kaf

Gray Reef Reservoir Operations

kaf

kaf

kaf

kaf

kaf

awh

kaf

kaf

kaf

cfs

kaf

kaf

kaf

kaf

cfs

kaf

kaf

ft

gwh

ft

Oct

20.1

34.6

E/ 7

0.9

0.0

Oct

2.1

2.2

4.3

70.

3.8

0.2

1.9

5.9

96.

0.1

4.5

0.1

4393.7

172.8

4595.2

Total Inflow

Alcova-Glendo Gain

Tatal Inflan

Evaporation

Generation

End-month content

End-month elevation

Glendo-Guerns Gain

Inflow from Glendo

Total Inflow

Total Inflow

Seepage

Turbine Release

Spillway Release

End-month content

End-month elevation

Total Release

Total Release

Evaporation

Generation

Guernsey Reservoir Operations

Infl from Gray Reef

Dec

14.7

31.0

/E 7

0.3

0.0

Dec

1.8

1.8

3.6

58.

0.0

0.3

0.0

0.3

5.

0.1

11.5

0.0

4401.6

257.8

4607.9

Nov

13.4

30.2

17 4

0.4

0.0

Nov

2.1

1.8

3.9

65.

0.0

0.1

0.0

0.1

2.

0.1

8.3

0.0

4398.6

214.2

4601.8

Feb

9.1

27.8

74 0

Initial Content

Mar

18.4

30.8

10 2

1.9

0.0

Mar

1.9

1.7

3.6

58.

0.0

0.6

0.0

0.6

10.

0.3

19.8

0.0

4407.4

376.9

4622.0

NORTH PLATTE RIVER OPERATING PLAN

Year Beginning Oct 1993

Apr

31.3

29.6

10 0

2.6

1.1

Apr

0.6

12.9

13.5

227.

6.0

0.0

5.1

11.1

186.

0.3

0.4

21.9

4408.6

422.3

4626.5

6.2 Kaf

1.1 Kaf

2415. May

May

91.2

90.8

1483.

1477.

13.7

90.8

4.2

354.3

17.0

May

1.9

168.3

170.2

2768.

54.0

101.6

155.6

2531.

0.9

35.6

3.8

4415.6

0.0

4619-6

401 -

Jun

143.8

2417.

143.7

Jun

-2.6

143.7

... .

4.3

314.8

15.5

Jun

-0.4

176.3

175.9

2956.

57.6

117.8

175.4

2948.

1.1

35.0

4415.3

0.0

4615.1

Jul

201.0

3269.

200.9

3267.

Jul

-22.5

200.9

470 /

3.5

196.6

18.5

Jul

-2.9

293.1

290.2

4720.

74.1

217.2

291.3

4738.

0.4

2.3

33.5

4414.6

0.0

4599.1

Table 2

Aug

220.1

3580.

220.0

3578.

Aug

-8.5

2.7

116.2

16.3

Aug

-9.0

289.2

280.2

4557.

83.6

197.7

281.3

4575.

0.9

31.5

4413.7

0.0

4584.1

220.0

Page 2 of 3

Total

959.2

958.6

Total

118.8

958.6

23.5

75.9

Total

-2.2

1075.5

1073.3

330.0

739.6

1071.6

2.0

4.9

18.8

4077 /

Sep

88.0

88.3

1479-

1484.

Sep

20.7

88.3

1.4

99.6

7.5

Sep

-2.9

124.2

121.3

2038.

50.9

0.0

98.3

149.2

2507.

0.5

3.1

4390.8

4580.2

Total Inflow	cfs	890.	733.	743.	681.	664.	800.	1024.	1700.	2371.	2901.	3440.	1832.	10/7.4
Turbine Release	kaf	0.0	0.0	0.0	0.0	0.0	0.0	11.1	166.8	155.3	218.3	231.2	121.0	903.7
Low Flow Release	kaf	2.2	1.8	1.8	2.1	1.9	1.7	1.8	1.5	1.5	1.5	1.5	1.5	20.8
Spillway Release	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Irrigation Release	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	19.5	73.3	56.5	1.7	151.0
Total Release	kaf	2.2	1.8	1.8	2.1	1.9	1.7	12.9	168.3	176.3	293.1	289.2	124.2	1075.5
Total Release	cfs	36.	30.	30.	34.	34.	28.	217.	2737.	2963.	4767.	4703.	2087.	

0.7

0.0

Feb

1.2

1.9

3.1

56.

0.0

0.5

0.0

0.5

9.

0.1

0.0

17.1

4405.7

331.3

4617.0

Initial Content

#### OWNERSHIP OPERATIONS

North Platte Pathfir	nder				Init	ial Owner	rship 5	72.1 Kaf						
	in the	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
Not Assessed	least.	42.5	20 E	70.7	7/ 1	29.1	75.8	177 0	70 7	0.0	0.7			//7 7
Net Accrual	kaf	2.9	28.5	39.7 1.2	34.1	1.3	2.9	133.8	78.7	0.8	0.7	0.0	0.0	463.7
Evaporation	kaf								9.6	12.8	12.1	7.9	4.1	61.8
Deliv fm Ownership End-month Ownership	kaf kaf	0.0 611.7	0.0 639.7	0.0 678.2	0.0 711.4	739.2	0.0 812.1	940.3	0.0	36.3 961.1	276.7 673.0	264.8 400.3	120.7 275.5	698.5
											100			
North Platte Guernse	- -				Init	ial Owner	rsnip	0.0 Kaf						
		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
Net Accrual	kaf	0.0	0.0	17.2	13.1	10.7	5.0	1.1	1.1	0.8	0.0	0.0	0.0	49.0
Evaporation/Seepage	kaf	0.0	0.0	0.1	0.1	0.1	0.6	0.6	1.1	1.0	0.0	0.0	0.0	3.6
Deliv fm Ownership	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	45.4	0.0	0.0	0.0	45.4
End-month Ownership	kaf	0.0	0.0	17.1	30.1	40.7	45.1	45.6	45.6	0.0	0.0	0.0	0.0	
Inland Lakes					Init	ial Owner	rship	0.0 Kaf						
		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
Net Accrual	kaf	17.7	15.6	0.0	0.0	0.0	0.0	13.4	0.0	0.0	0.0	0.0	0.0	46.7
Evaporation/Seepage	kaf	0.1	0.0	0.1	0.0	0.1	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.7
Trnsfr fm Ownership	kaf	1.5	0.0	0.0	0.0	0.0	0.0	29.6	14.9	0.0	0.0	0.0	0.0	46.0
End-month Ownership	kaf	16.1	31.7	31.6	31.6	31.5	31.3	14.9	0.0	0.0	0.0	0.0	0.0	
Kendrick					Init	ial Owner	rship 48	2.0 Kaf						
		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
Net Accrual	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	19.4	30.1	0.0	0.0	0.0	49.5
Evaporation	kaf	2.3	0.4	0.8	0.6	0.8	1.7	3.3	4.6	5.5	5.1	4.6	3.4	33.1
Deliv fm Ownership	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	19.3	17.6	19.5	13.9	8.1	78.4
End-month Ownership	kaf	479.7	479.3	478.5	477.9	477.1	475.4	472.1	467.6	474.6	450.0	431.5	420.0	
Glendo Unit					Init	ial Owner	rship 16	7.1 Kaf						
		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
Accrual	kaf	0.0	0.0	0.0	0.0	0.0	10.1	4.6	2.2	1.4	0.0	0.0	0.0	18.3
Evaporation	kaf	1.0	0.2	0.3	0.1	0.3	1.4	1.3	2.2	1.8	1.1	1.8	1.4	12.9
Deliv fm Ownership	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	8.0	9.3	0.9	19.0
End-month Ownership	kaf	166.1	165.9	165.6		165.2	173.9	177.2	177.2	176.0	166.9	155.8	153.5	17.0
Excess to Ownership					Init	ial Owner	rship	0.0 Kaf						
		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
Accrual	kaf	0.0	0.0	0.0	0.0	0.0	8.1	13.7	5.4	0.0	0.0	0.0	0.0	27.2
Evaporation/Seepage End-month total	kaf kaf	0.0	0.0	0.0	0.0	0.0	0.0 8.1	0.1	0.3 26.8	0.2	0.0	0.0	0.0	0.6
IRRIGATION DELIVERY	Ku i								20.0					
Kendrick (Casper Car	nal)	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
Requirement *	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15.0	17.0	18.0	17.0	7.0	74.0
Delivered	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	19.3	17.6	19.5	13.9	8.2	78.5
Guernsey Deliveries		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
North Platte Req *	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	110.0	125.0	305.0	295.0	175.0	1020.0
Glendo Reg *	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	6.0	8.0	12.0	28.0
Inland Lakes Req *	kaf	5.0	0.0	0.0	0.0	0.0	0.0	40.5	0.0	0.0	0.0	0.0	0.0	45.5
Total Requirement *	kaf	5.0	0.0	0.0	0.0	0.0	0.0	40.5	110.0	127.0	311.0	303.0	187.0	1083.5
Seepage	kaf	0.2	0.1	0.3	0.3	0.5	0.6	0.0	0.0	0.0	0.0	0.0	0.0	2.0
Actual Release	kaf	5.9	0.1	0.3	0.3	0.5	0.6	11.1	155.6	175.4	291.3	281.3	149.2	1071.6

\* Requirements are Bureau of Reclamation estimates of water use under most probable runoff conditions.

#### NORTH PLATTE RIVER OPERATING PLAN Year Beginning Oct 1994

#### HYDROLOGY OPERATIONS

Seminoe Reservoir Ope	erati	ons		Initial	Content	346.8	Kaf						
		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Total Inflow	kaf	28.9	27.3	23.1	19.9	21.7	52.6	117.1	241.9	322.4	98.7	37.1	22.2
Total Inflow	cfs	470.	459.	376.	324.	391.	855.	1968.	3934.	5418.	1605.	603.	373.
Turbine Release	kaf	30.9	29.8	30.8	30.8	27.8	30.8	54.9	105.8	149.6	156.3	156.4	98.7
Jetflow Release	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Spillway Release	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Release	kaf	30.9	29.8	30.8	30.8	27.8	30.8	54.9	105.8	149.6	156.3	156.4	98.7
Total Release	cfs	503.	501.	501.	501.	501.	501.	923.	1721.	2514.	2542.	2544.	1659.
Evaporation	kaf	2.4	1.3	0.7	0.7	0.7	1.4	3.0	3.4	6.9	8.1	6.1	3.8
End-month content	kaf	343.5	340.0	332.0	320.9	314.7	335.6#	395.0*	525.0*	690.0*	624.8*	500.0*	420.0
End-month elevation	ft	6308.2	6307.8	6306.9	6305.5	6304.8	6307.3	6313.8	6325.9	6338.3	6333.7	6323.8	6316.4
Kortes Reservoir Ope	ratio	ns		Initial	Content	4.7	Kaf						
		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Tatal Inflam	he f												
Total Inflow Total Inflow	kaf	30.9	29.8	30.8 501.	30.8 501.	27.8 501.	30.8	54.9	105.8	149.6	156.3	156.4	98.7
	cfs	503.					501.	923.	1721.	2514.	2542.	2544.	1659. 98.7
Turbine Release	kaf	30.8	29.8	30.8	30.8	27.8	30.8	54.9	105.8	149.6	156.3	156.4	
Spillway Release	kaf	0.0 30.8		0.0	30.8	0.0 27.8	30.8	0.0	0.0	0.0	0.0 156.3	0.0	0.0 98.7
Total Release Total Release	kaf	501.	29.8 501.	30.8 501.	501.	501.	501.	54.9 923.	1721.	149.6 2514.	2542.	2544.	1659.
			501.	501.	301.	501.	501.	723.	1/21.	2314.	2342.	2344.	1037.
Pathfinder Reservoir	Oper	ations		Initial	Content	221.2	Kaf						
		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Sweetwater Inflow	kaf	3.3	3.5	3.1	3.6	3.4	4.4	11.6	19.1	21.6	6.2	2.8	1.4
Kortes-Path Gain	kaf	0.4	-0.6	-1.7	-2.4	0.1	4.5	8.0	9.1	5.3	6.5	5.2	1.0
Inflow from Kortes	kaf	30.8	29.8	30.8	30.8	27.8	30.8	54.9	105.8	149.6	156.3	156.4	98.7
Total Inflow	kaf	34.5	32.7	32.2	32.0	31.3	39.7	74.5	134.0	176.5	169.0	164.4	101.1
Total Inflow	cfs	561.	550.	524.	520.	564.	646.	1252.	2179.	2966.	2749.	2674.	1699.
Turbine Release	kaf	0.0	40.7	30.9	30.9	28.0	31.1	54.2	116.7	163.3	169.1	169.1	112.9
Jetflow Release	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Spillway Release	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Release	kaf	0.0	40.7	30.9	30.9	28.0	31.1	54.2	116.7	163.3	169.1	169.1	112.9
Total Release	cfs	0.	684.	503.	503.	504.	506.	911.	1898.	2744.	2750.	2750.	1897.
Evaporation	kaf	1.9	1.1	0.6	0.6	0.6	1.2	2.4	3.1	4.7	5.2	4.6	3.4
End-month content End-month elevation	kaf	253.8 5794.3	244.7 5793.0	245.4 5793.1	245.9 5793.2	248.6 5793.6	256.0 5794.6	273.9 5797.0	288.1 5798.9	296.6 5799.9	291.3 5799.3	282.0 5798.1	266.8 5796.1
Alcova Reservoir Ope	WE				Content								
Reservoir ope													
		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Total Inflow	kaf	0.0	40.7	30.9	30.9	28.0	31.1	54.2	116.7	163.3	169.1	169.1	112.9
Total Inflow	cfs	0.	684.	503.	503.	504.	506.	911.	1898.	2744.	2750.	2750.	1897.
Turbine Release	kaf	31.6	29.8	30.7	30.7	27.8	30.7	29.9	100.7	144.9	149.5	150.7	104.8
Spillway Release	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Casper Canal Release		0.0	0.0	0.0	0.0	0.0	0.0	0.0	15.0	17.0	18.0	17.0	7.0
Total Release	kaf	31.6	29.8	30.7	30.7	27.8	30.7	29.9	115.7	161.9	167.5	167.7	111.8
Total Release	cfs	514.	501.	499.	499.	501.	499.	502.	1882.	2721.	2724.	2727.	1879.
Evaporation	kaf	0.6	0.3	0.2	0.2	0.2	0.4	0.8	1.0	1.4	1.6	1.4	1.1
End-month content	kaf	145.3*										179.4* 5498.0	
End-month elevation	ft	5483.1	5487.9										

NPRAOP V1.1E 08-Apr-1994 Run: 7-OCT-94 13:01:29
Based on OCTOBER 1994 MOS Probable Inflow Estimates

## NORTH PLATTE RIVER OPERATING PLAN Year Beginning Oct 1994

Gray Reef Reservoir	Opera	ations		Initial	Content	1.1	Kaf						
		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Total Inflow	kaf	31.6	29.8	30.7	30.7	27.8	30.7	29.9	100.7	144.9	149.5	150.7	104.8
Total Inflow	cfs	514.	501.	499.	499.	501.	499.	502.	1638.	2435.	2431.	2451.	1761.
Total Release	kaf	30.8	29.8	30.7	30.7	27.8	30.7	29.8	100.6	144.8	149.4	150.6	104.7
Total Release	cfs	501.	501.	499.	499.	501.	499.	501.	1636.	2433.	2430.	2449.	1760.
Glendo Reservoir Ope	ratio	ons		Initial	Content	99.6	Kaf						
		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Alcova-Glendo Gain	kaf	16.7	15.1	8.0	8.8	19.2	21.2	45.3	61.3	11.2	-1.1	-4.5	11.5
Infl from Gray Reef	kaf	30.8	29.8	30.7	30.7	27.8	30.7	29.8	100.6	144.8	149.4	150.6	104.7
Total Inflow	kaf	47.5	44.9	38.7	39.5	47.0	51.9	75.1	161.9	156.0	148.3	146.1	116.2
Total Inflow	cfs	773.	755.	629.	642.	846.	844.	1262.	2633.	2622.	2412.	2376.	1953.
Turbine Release	kaf	8.5	0.0	0.0	0.0	0.0	0.0	47.3	110.7	122.6	224.8	219.1	161.1
Low Flow Release	kaf	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Spillway Release	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Irrigation Release	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	82.7	82.8	0.0
Total Release	kaf	10.0	1.5	1.5	1.5	1.5	1.5	48.8	112.2	124.1	309.0	303.4	162.6
Total Release	cfs	163.	25.	24.	24.	27.	24.	820.	1825.	2086.	5025.	4934.	2733.
Evaporation	kaf	1.0	0.7	0.6	0.7	0.8	1.5	2.7	4.2	6.1	6.0	3.7	1.7
End-month content	kaf	135.5	178.0#	214.5	251.7	296.3	345.1	368.6#	414.6#	440.6#	274.1#	113.1#	65.1
End-month elevation	ft	4588.3	4596.1	4601.8	4607.1	4612.8	4618.5	4621.1	4625.8	4628.3	4610.1	4583.4	4570.6
Guernsey Reservoir O	perat	ions		Initial	Content	3.0 1	Kaf						
		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Glendo-Guerns Gain	kaf	3.8	2.1	1.7	1.5	0.7	0.2	2.4	8.5	4.1	3.3	0.7	5.1
Inflow from Glendo	kaf	10.0	1.5	1.5	1.5	1.5	1.5	48.8	112.2	124.1	309.0	303.4	162.6
Total Inflow	kaf	13.8	3.6	3.2	3.0	2.2	1.7	51.2	120.7	128.2	312.3	304.1	167.7
Total Inflow	cfs	224.	60.	52.	49.	40.	28.	860.	1963.	2154.	5079.	4946.	2818.
Turbine Release	kaf	9.7	0.0	0.0	0.0	0.0	0.0	43.1	53.3	50.9	52.6	52.6	52.3
Seepage	kaf	0.3	0.2	0.3	0.4	0.3	0.3	0.4	1.2	3.0	3.1	2.5	2.1
Spillway Release	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	55.5	73.1	255.3	247.9	132.6
Total Release	kaf	10.0	0.2	0.3	0.4	0.3	0.3	43.5	110.0	127.0	311.0	303.0	187.0
Total Release	cfs	163.	3.	5.	7.	5.	5.	731.	1789.	2134.	5058.	4928.	3143.
Evaporation	kaf	0.1	0.2	0.2	0.2	0.2	0.3	0.5	0.7	1.2	1.3	1.1	0.7
End-month content	kaf	6.7*	9.9	12.6	15.0	16.7#	17.8*	25.0*	35.0*	35.0*	35.0*	35.0*	15.0
		4396.8	4400.2	4402.5	4404.3	4405.5	4406.2	4410.4	4415.3	4415.3	4415.3	4415.3	4404.3

### **OWNERSHIP OPERATIONS**

	1				4375								
North Platte Pathfir	der			Initial	Ownershi	p 275.6	Kaf,	Accrued ti	his wate	r year:	0.0 K	af	
		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Net Accrual	kaf	30.6	29.0	23.7	20.2	24.2	59.7	132.9	224.1	206.5	0.0	0.0	0.0
Evaporation	kaf	2.0	1.2	0.8	0.9	1.0	1.8	3.8	5.8	11.4	13.8	10.6	6.0
Deliv fm Ownership	kaf	10.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	122.2	253.7	133.8
End-month Ownership	kaf	296.2	325.2	348.9	369.1	393.3	453.0	585.9	810.0	1016.5	880.5	616.2	476.4
North Platte Guernse	y			Initial	Ownershi	p 0.0	Kaf,	Accrued ti	his wate	r year:	0.0 K	af	
	•	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
						40.4							
Net Accrual	kaf	0.0	0.0	9.4	9.9	19.6	6.7		0.0	0.0	0.0	0.0	0.0
Evaporation/Seepage	kaf	0.0	0.0	0.3	0.4	0.3	0.5		0.5	0.6	0.6	0.0	0.0
Deliv fm Ownership	kaf	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	43.5	0.0	0.0
End-month Ownership	kaf	0.0	0.0	9.4	19.3	38.9	45.6	45.2	44.7	44.1	0.0	0.0	0.0
Inland Lakes				Initial	Ownershi	p 0.0	Kaf,	Accrued t	his wate	r year:	0.0 K	af	
		Oct	Nov	Dec	,Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Net Accrual	kaf	20.5	16.9	0.0	0.0	0.0	0.0	6.6	0.0	0.0	0.0	0.0	0.0
Evaporation/Seepage		0.0	0.3	0.1	0.1	0.1	0.2	The state of the s	0.0	0.0	0.0	0.0	0.0
Trnsfr fm Ownership	kaf kaf	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
End-month Ownership	kaf	20.5	37.4	37.3	37.2	37.1	36.9		0.0	0.0	0.0	0.0	0.0
Kendrick				Initial	Ownershi	p 420.0	Kaf,	Accrued t	his wate	r year:	0.0 K	af	
		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Net Accrual	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Evaporation	kaf	3.0	1.7	1.0	1.0	1.0	1.9	3.5	4.1	5.5	5.2	4.4	3.3
Deliv fm Ownership	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15.0	0.0	18.0	17.0	7.0
End-month Ownership	kaf	417.0	415.3	414.3	413.3	412.3	410.4	406.9	387.8	385.0	361.8	340.4	330.1
Glendo Unit				Initial	Ownershi	p 153.5	Kaf,	Accrued t	his wate	r year:	0.0 K	af .	
		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Accrual	kaf	0.0	0.0	0.0	0.0	0.0	14.2	14.2	0.0	0.0	0.0	0.0	0.0
Evaporation	kaf	1.1	0.6	0.4	0.4	0.4	0.7	1.4	1.8	2.4	2.3	1.9	1.5
Deliv fm Ownership	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.0	8.0	12.0
End-month Ownership	kaf	152.4	151.8	151.4	151.0	150.6	164.1	176.9	175.1	172.7	164.4	154.5	141.0
Excess to Ownership				Initial	Ownershi	ip 0.0	Kaf,	Accrued t	his wate	r year:	0.0 K	af	
		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Acenual	4-5	0.0	0.0	0.0	0.0	0.0	0.0	26.6	0.0	0.0	0.0	0.0	0.0
Accrual	kaf	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.4	0.3	0.0	0.0
Evaporation/Seepage	kaf	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	25.7	0.0	0.0
Release	kaf		0.0	0.0	0.0	0.0	0.0		26.4	26.0	0.0	0.0	0.0
End-month total	kaf	0.0	0.0	0.0	0.0	0.0	0.0	20.0	20.4	20.0	0.0	0.0	0.0

kaf

0.0

3.9

Oct

0.0

0.0

0.6

1.4

Oct

0.0

0.0

0.0

0.0

Oct

0.0

0.0

Oct

0.0

0.0

Oct

10.0

0.0

0.0

10.0

10.0

0.3

Release

Inflow

Release

Other

.....

Inflow

Release

Ownership

Requested

Delivered

Requested Delivered

Glendo Rea

Seepage

Kendrick (River)

Guernsey Deliveries

North Platte Req

Inland Lakes Req

Total Requirement

Actual Release

Evaporation

IRRIGATION DELIVERY

Kendrick (Casper Canal)

Ownership

Ownership

Pacificorp

Evaporation

NPRAOP V1.1E 08-Apr-1994 Run: 7-OCT-94 13:01:29

0.0

4.6

Dec

0.0

0.0

0.1

1.1

Dec

0.0

0.0

0.0

0.0

Dec

0.0

0.0

Dec

0.0

0.0

Dec

0.0

0.0

0.0

0.0

0.3

0.3

0.0

5.1

Jan

0.0

0.0

0.1

1.0

Jan

0.0

0.0

0.0

0.0

Jan

0.0

0.0

Jan

0.0

0.0

Jan

0.0

0.0

0.0

0.0

0.4

0.4

Initial Ownership

Initial Ownership

Jul

0.5

0.1

0.0

2.9

Jul

0.2

0.0

0.0

1.6

Jul

0.0

0.0

0.0

0.0

Jul

18.0

18.0

Jul

0.0

0.0

Jul

6.0

0.0

305.0

311.0

311.0

3.1

Table 3A

May

0.0

0.1

2.7

3.5

May

0.5

0.0

0.0

1.2

May

0.0

0.0

0.0

0.0

May

15.0

15.0

May

0.0

0.0

May

0.0

0.0

1.2

110.0

110.0

110.0

0.0

6.3

Apr

0.0

0.0

0.1

0.7

Apr

0.0

0.0

0.0

0.0

Apr

0.0

0.0

Apr

0.0

0.0

Apr

0.0

0.0

43.5

43.5

43.5

0.4

Jun

0.0

0.1

0.9

2.5

Jun

0.2

0.0

0.0

1.4

Jun

0.0

0.0

0.0

0.0

Jun

17.0

17.0

Jun

0.0

0.0

Jun

2.0

0.0

125.0

127.0

127.0

3.0

Aug

0.6

0.1

0.0

3.4

Aug

0.0

0.0

0.0

1.6

Aug

0.0

0.0

0.0

0.0

Aug

17.0

17.0

Aug

0.0

0.0

Aug

8.0

0.0

295.0

303.0

303.0

2.5

Page 4 of 4

Sep

0.3

0.0

0.0

3.7

Sep

0.1

0.0

0.0

1.7

Sep

0.0

0.0

0.0

0.0

Sep

7.0

7.0

Sep

0.0

0.0

Sep

175.0

187.0

187.0

2.1

12.0

0.0

ORTH	PLAT	TTE	RIVER	OPER/	TING	PLAN
	Year	Beg	inning	Oct	1994	

City of Cheyenne				Initial	Ownersh	ip 2.8	Kaf,	
		Oct	Nov	Dec	Jan	Feb	Mar	Apr
Inflow	kaf	1.1	0.3	0.4	0.5	0.6	0.5	0.2
Evaporation	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.1

0.0

4.2

Nov

0.0

0.0

0.2

1.2

Nov

0.0

0.0

0.0

0.0

Nov

0.0

0.0

Nov

0.0

0.0

Nov

0.0

0.0

0.0

0.0

0.2

0.2

	Designing			PLAN
rear	Beginning	UCT	1994	

0.0

5.7

Feb

0.0

0.0

0.1

0.9

Feb

0.0

0.0

0.0

0.0

Feb

0.0

0.0

Feb

0.0

0.0

Feb

0.0

0.0

0.0

0.0

0.3

0.3

2.0 Kaf.

0.0 Kaf,

0.0

6.2

Mar

0.0

0.0

0.1

0.8

Mar

0.0

0.0

0.0

0.0

Mar

0.0

0.0

Mar

0.0

0.0

Mar

0.0

0.0

0.0

0.0

0.3

0.3

### HYDROLOGY OPERATIONS

Seminoe Reservoir Ope	erati	ons		Initial	Content	346.8	Kaf						
		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Total Inflow	kaf	26.5	24.5	22.4	18.6	21.5	47.0	79.2	123.5	121.0	32.3	18.6	13.1
Total Inflow	cfs	431.	412.	364.	303.	387.	764.	1331.	2009.	2033.	525.	303.	220.
Turbine Release	kaf	30.9	29.8	30.8	30.8	27.8	30.8	29.8	89.2	138.3	128.1	121.1	81.8
Jetflow Release	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Spillway Release	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Release	kaf	30.9	29.8	30.8	30.8	27.8	30.8	29.8	89.2	138.3	128.1	121.1	81.8
Total Release	cfs	503.	501.	501.	501.	501.	501.	501.	1451.	2324.	2083.	1970.	1375.
Evaporation	kaf	2.4	1.3	0.7	0.7	0.7	1.4	2.8	3.0	4.8	4.7	3.1	1.6
End-month content	kaf	341.1	334.8	326.1	313.7	307.3	322.6	369.4#	398.0*	375.0*	275.0*	170.0*	100.0
End-month elevation	ft	6307.9	6307.2	6306.2	6304.7	6303.9	6305.8	6311.1	6314.2	6311.7	6299.7	6283.2	6267.5
Kortes Reservoir Ope	ratio	ns		Initial	Content	4.7	Kaf						
		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Total Inflow	kaf	30.9	29.8	30.8	30.8	27.8	30.8	29.8	89.2	138.3	128.1	121.1	81.8
Total Inflow	cfs	503.	501.	501.	501.	501.	501.	501.	1451.	2324.	2083.	1970.	1375.
Turbine Release	kaf	30.8	29.8	30.8	30.8	27.8	30.8	29.8	89.2	138.3	128.1	121.1	81.8
Spillway Release	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Release	kaf	30.8	29.8	30.8	30.8	27.8	30.8	29.8	89.2	138.3	128.1	121.1	81.8
Total Release	cfs	501.	501.	501.	501.	501.	501.	501.	1451.	2324.	2083.	1970.	1375.
Pathfinder Reservoir	0per	ations		Initial	Content	221.2	Kaf						
		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Sweetwater Inflow	kaf	2.5	2.7	3.2	3.7	3.8	4.2	8.7	5.7	4.1	1.7	1.2	0.9
Kortes-Path Gain	kaf	2.3	1.0	1.7	-0.1	-0.1	3.8	2.9	3.3	4.8	7.4	8.0	3.2
Inflow from Kortes	kaf	30.8	29.8	30.8	30.8	27.8	30.8	29.8	89.2	138.3	128.1	121.1	81.8
Total Inflow	kaf	35.6	33.5	35.7	34.4	31.5	38.8	41.4	98.2	147.2	137.2	130.3	85.9
Total Inflow	cfs	579.	563.	581.	559.	567.	631.	696.	1597.	2474.	2231.	2119.	1444.
Turbine Release	kaf	0.0	40.7	30.9	30.9	28.0	31.1	54.2	56.8	163.6	156.8	142.9	75.9
Jetflow Release	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	66.5	50.4	51.7	0.0
Spillway Release	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Release	kaf	0.0	40.7	30.9	30.9	28.0	31.1	54.2	56.8	230.1	207.2	194.6	75.9
Total Release	cfs	0.	684.	503.	503.	504.	506.	911.	924.	3867.	3370.	3165.	1276.
Evaporation	kaf	2.0	1.1	0.6	0.6	0.6	1.3	2.4	2.9	4.1	3.5	2.3	1.4
End-month content	kaf	254.8	246.5	250.7	253.6	256.5	262.9	247.7	286.2	199.2	125.7	59.1	67.7
End-month elevation	ft	5794.5	5793.3	5793.9	5794.3	5794.7	5795.6	5793.5	5798.6	5786.2	5772.7	5756.2	5758.7
Alcova Reservoir Ope	ratio	ons		Initial	Content	177.5	Kaf						
		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Total Inflam	ko4	0.0	40.7	30.9	30.9	28.0	31.1	54.2	56.8	230.1	207.2	194.6	75.9
Total Inflow	kaf			503.	503.	504.	506.	911.	924.	3867.	3370.	3165.	1276.
Total Inflow	cfs	0.	684.			27.8	30.7	29.9	38.8		185.6	174.2	65.8
Turbine Release	kaf	31.6	29.8	30.7	30.7					209.7			
Spillway Release	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Casper Canal Release		0.0	0.0	0.0	0.0	0.0	0.0	0.0	17.0	19.0	20.0	19.0	9.0
Total Release	kaf	31.6	29.8	30.7	30.7	27.8	30.7	29.9	55.8	228.7	205.6	193.2	74.8
Total Release	cfs	514.	501.	499.	499.	501.	499.	502.	907.	3843.	3344.	3142.	1257.
Evaporation	kaf	0.6	0.3	0.2	0.2	0.2	0.4	0.8	1.0	1.4	1.6	1.4	1.1
Fral manch sandant	Laf	1/5 74	155.9*	155 01	TEE OF		TEE OF	170 /+	170 /4	170 /+	170 /#	170 /4	179.4
End-month content End-month elevation	kaf ft	145.3*	5487.9		155.9* 5487.9		155.9* 5487.9			179.4* 5498.0		179.4* 5498.0	

Gray Reef Reservoir Operations

Guernsey Reservoir Operations

Glendo-Guerns Gain

Inflow from Glendo

Total Inflow

Total Inflow

Seepage

Turbine Release

Spillway Release

End-month content

End-month elevation

Total Release

Total Release

Evaporation

Jul

185 - 6

3018.

185.5

3017.

Jul

-10.3

185.5

175.2

2849.

221.4

1.5

0.0

86.0

308.9

5024.

5.5

Jul

-2.6

308.9

306.3

4981.

52.6

3.1

249.3

305.0

4960.

4415.3 4415.3 4415.3

1.3

35.0\*

235.9#

4604.9

Jun

209.7

3524.

209.6

3522.

Jun

-3.0

209.6

206.6

3472.

174.9

1.5

0.0

0.0

5.4

Jun

-2.2

176.4

174.2

2928.

50.9

3.0

119.1

173.0

2907.

1.2

35.0\*

374.9#

4621.8

176.4

2965.

May

38.8

631.

38.7

629.

May

12.2

38.7

50.9

828.

9.9

1.5

0.0

0.0

11.4

185.

3.7

349.9#

\*May

0.5

11.4

11.9

194.

0.0

1.2

0.0

1.2

20.

0.7

35.0\*

4619.1

Page 2 of 4

Sep

65.8

65.7

Sep

10.9

65.7

76.6

98.7

1.5

0.0

0.0

1.5

64.9#

Sep 2.6

100.2

102.8

1728.

52.3

67.7

122.1

2052.

0.7

15.0\*

2.1

100.2

1684.

1287.

1104.

1106.

Aug

174.2

2833.

174.1

2831.

Aug

-2.5

174.1

171.6

2791.

214.6

1.5

0.0

98.2

314.3

5112.

3.3

89.9#

Aug

-1.2

314.3

313.1

5092.

52.6

2.5

256.9

312.0

5074.

1.1

35.0\*

4577.7 4570.6

## NORTH PLATTE RIVER OPERATING PLAN Year Beginning Oct 1994

1.1 Kaf

3.0 Kaf

Mar

1.5

4.8

6.3

0.0

0.3

0.0

0.3

5.

0.3

18.0\*

102.

Apr

0.3

44.8

45.1

758.

37.2

0.4

0.0

37.6

632.

0.5

25.0\*

4406.3 4410.4 4415.3

Feb

1.5

1.5

3.0

54.

0.0

0.3

0.0

0.3

5.

0.2

12.3#

4402.3

Initial Content

Initial Content

Jan

1.5

1.5

3.0

49.

0.0

0.4

0.0

0.4

7.

0.2

9.8

4400.1

Dec

2.0

1.5

3.5

57.

0.0

0.3

0.0

0.3

5.

0.2

7.4

4397.6

		Oct	Nov	Dec	Jan	Feb	Mar	Apr
Total Inflow	kaf	31.6	29.8	30.7	30.7	27.8	30.7	29.9
Total Inflow	cfs		501.	499.	499.	501.	499.	502.
Total Release	kaf	30.8	29.8	30.7	30.7	27.8	30.7	29.8
Total Release	cfs	501.	501.	499.	499.	501.	499.	501.
Glendo Reservoir Ope	eratio	ons		Initial	Content	99.6	Kaf	
		Oct	Nov	Dec	Jan	Feb	Mar	Apr
							45.7	
Alcova-Glendo Gain	kaf	12.7	11.3	7.4	7.4	9.9		9.3
Infl from Gray Reef	kaf	30.8	29.8	30.7	30.7	27.8	30.7	29.8
Total Inflow	kaf	43.5	41.1		38.1	37.7		39.1
Total Inflow	cfs	707.	691.	620.	620.	679.	755.	657.
Turbine Release	kaf	3.7	0.0	0.0	0.0	0.0	3.3	43.3
Low Flow Release	kaf	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Spillway Release	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Irrigation Release	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Release	kaf	5.2	1.5	1.5	1.5	1.5	4.8	44.8
Total Release	cfs	85.	25.	24.	24.	27.	78.	753.
Evaporation	kaf	1.0	0.7	0.6	0.7	0.8	1.5	2.6
End-month content	kaf	136.3#	175.0	210.9	246.7	282.0	322.0	313.6#
End-month elevation	ft	4588.4	4595.6	4601.3	4606.4	4611.1	4615.9	4614.9

Oct

2.9

5.2

8.1

9.7

0.3

0.0

10.0

163.

0.1

1.0\*

4384.1 4393.5

132.

kaf

kaf

kaf

cfs

kaf

kaf

kaf

kaf

cfs

kaf

kaf

ft

Nov

2.1

1.5

3.6

60.

0.0

0.2

0.0

0.2

3.

0.0

4.4

OWNERSHIP OPERATIONS
----------------------

North Platte Pathfir	nder			Initial	Ownersh	ip 275.6	Kaf,	Accrued t	his water	year:	0.0 K	af	
		Oct	Nov	Dec		Feb							Con
					Jan		Mar	Apr	May	Jun	Jul	Aug	Sep
Net Accrual	kaf	29.3	27.1	26.5	21.3	24.2	53.1		127.2	0.0	0.0	0.0	0.0
Evaporation	kaf	2.0	1.1	0.8	0.9	1.0	1.9		5.3	9.0	9.3	4.9	1.0
Deliv fm Ownership	kaf	10.0	0.0	0.0	0.0	0.0	0.0		0.0	0.3	271.5	280.9	84.4
End-month Ownership	kaf	294.9	322.0	348.5	369.8	394.0	447.1	534.1	661.3	652.0	371.2	85.4	0.0
North Platte Guernse	y			Initial	Ownersh	ip 0.0	Kaf,	Accrued t	his water	year:	0.0 K	af	
	-	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Net Accrual	kaf	0.0	0.0	9.1	8.5	11.1	16.8		0.5	0.0	0.0	0.0	0.0
Evaporation/Seepage	kaf	0.0	0.0	0.3	0.4	0.3	0.4	0.4	1.6	0.6	0.0	0.0	0.0
Deliv fm Ownership	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	45.0	0.0	0.0	0.0
End-month Ownership	kaf	0.0	0.0	9.1	17.6	28.7	45.5	45.1	45.6	0.0	0.0	0.0	0.0
Inland Lakes				Initial	Ownersh	ip 0.0	Kaf,	Accrued t	his water	year:	0.0 K	af	
		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Net Accrual	kaf	15.6	13.1	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Evaporation/Seepage	kaf	0.0	0.3	0.1	0.1	0.1	0.2	The second secon	0.0	0.0	0.0	0.0	0.0
Trnsfr fm Ownership	kaf	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
End-month Ownership	kaf	15.6	28.7	28.6	28.5	28.4	28.2	0.0	0.0	0.0	0.0	0.0	0.0
Kendrick				Initial	Ownersh	ip 420.0	Kaf,	Accrued t	his water	year:	0.0 K	af	
		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Net Accrual	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Evaporation	kaf	3.0	1.6	1.0	1.0	1.0	2.0	17/17/17	4.1	5.2	5.2	4.4	3.7
Deliv fm Ownership	kaf	0.0	0.0	0.0	0.0	0.0	0.0		17.0	19.0	20.0	19.0	9.0
End-month Ownership	kaf	417.0	415.4	414.4	413.4	412.4	410.4		385.8	361.6	336.4	313.0	300.3
Glendo Unit				Initial	Ownersh	ip 153.5	Kaf,	Accrued t	his water	year:	0.0 K	af	
		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Accrual	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.6	0.0	0.0	0.0	0.0
Evaporation	kaf	1.2	0.6	0.4	0.4	0.4	0.7	1.2	1.5	2.1	2.1	1.9	1.6
Deliv fm Ownership	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	5.0	7.0	7.0
End-month Ownership	kaf	152.3	151.7	151.3	150.9	150.5	149.8	148.6	157.7	152.6	145.5	136.6	128.0
Excess to Ownership				Initial	Ownersh	ip 0.0	Kaf,	Accrued t	his water	year:	0.0 K	af	
		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
					0.0	0.0			0.0	0.0	0.0	0.0	0.0
Accrual	kaf	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Evaporation/Seepage	kaf	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0:0	0.0	0.0
Release	kaf	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
End-month total	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

NPRAOP V1.1F 27-Oct-1994 Run: 12-NOV-94 09:38:55
Based on OCTOBER 1994 MIN Probable Inflow Estimates

## NORTH PLATTE RIVER OPERATING PLAN Year Beginning Oct 1994

City of Cheyenne				initial	Ownership	2.8	kar,						
		0ct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Inflow	kaf	1.1	0.3	0.4	0.5	0.6	0.5	0.2	0.0	0.0	0.5	0.6	0.3
Evaporation	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1
Release	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7	0.9	0.0	0.0	0.0
Ownership	kaf	3.9	4.2	4.6	5.1	5.7	6.2	6.3	3.5	2.5	2.9	3.4	3.6
Pacificorp				Initial	Ownership	2.0	Kaf,						
		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Inflow	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.2	0.2	0.0	0.1
Evaporation	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Release	kaf	0.6	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Ownership	kaf	1.4	1.2	1.1	1.0	0.9	0.8	0.7	1.2	1.4	1.6	1.6	1.7
Other				Initial	Ownership	0.0	Kaf.						
		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Inflow	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Evaporation	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Release	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Ownership	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IRRIGATION DELIVER	<b>r</b>												
Kendrick (Casper Ca	anal)	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Requested	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17.0	19.0	20.0	19.0	9.0
Delivered	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17.0	19.0	20.0	19.0	9.0
Kendrick (River)		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	· Jun	Jul	Aug	Sep
Requested	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delivered	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Guernsey Deliveries	3	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
North Platte Req	kaf	10.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	170.0	300.0	305.0	115.1
Glendo Reg	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	5.0	7.0	7.0
Inland Lakes Req	kaf	0.0	0.0	0.0	0.0	0.0	0.0	37.6	0.0	0.0	0.0	0.0	0.0
C Da Sal	kaf	10.0	0.0	0.0	0.0	0.0	0.0	37.6	0.0	173.0	305.0	312.0	122.1
Total Requirement													
Total Requirement Seepage	kaf	0.3	0.2	0.3	0.4	0.3	0.3	0.4	1.2	3.0	3.1	2.5	2.1

## HYDROLOGY OPERATIONS

Seminoe Reservoir Ope	erati	ons		Initiat	content	346.8 k	ar						
		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Total Inflow	kaf	36.2	32.6	27.1	25.3	27.2	57.0	161.5	408.2	575.9	221.0	63.2	35.6
Total Inflow	cfs	589.	548.	441.	411.	490.	927.	2714.	6639.	9678.	3594.	1028.	598.
Turbine Release	kaf	30.9	29.8	30.8	30.8	27.8	98.2	149.1	160.2	155.0	160.1	138.2	29.8
Jetflow Release	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Spillway Release	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Release	kaf	30.9	29.8	30.8	30.8	27.8	98.2	149.1	160.2	155.0	160.1	138.2	29.8
Total Release	cfs	503.	501.	501.	501.	501.	1597.	2506.	2605.	2605.	2604.	2248.	501.
Evaporation	kaf	2.5	1.3	0.7	0.7	0.7	1.4	2.6	3.3	8.2	11.2	9.6	6.8
End-month content	kaf	350.7	352.5	348.5	342.8	342.1#	300.0*	310.0*	552.0*	963.8*	1014.0*	930.0*	929.3#
End-month elevation	ft	6309.0	6309.2	6308.8	6308.1	6308.0	6303.0	6304.2	6328.2	6354.3	6356.8	6352.6	6352.5
Kortes Reservoir Oper	ratio	ne		Initial	Content	4.7 K	af						
Kortes Reservoir oper		••		Iniciac	Content		.aı						
		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Total Inflow	kaf	30.9	29.8	30.8	30.8	27.8	98.2	149.1	160.2	155.0	160.1	138.2	29.8
Total Inflow	cfs	503.	501.	501.	501.	501.	1597.	2506.	2605.	2605.	2604.	2248.	501.
Turbine Release	kaf	30.8	29.8	30.8	30.8	27.8	98.2	149.1	160.2	155.0	160.1	138.2	29.8
Spillway Release	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Release	kaf	30.8	29.8	30.8	30.8	27.8	98.2	149.1	160.2	155.0	160.1	138.2	29.8
Total Release	cfs	501.	501.	501.	501.	501.	1597.	2506.	2605.	2605.	2604.	2248.	501.
Pathfinder Reservoir	0per	ations		Initial	Content	221.2	af						
		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Sweetwater Inflow	kaf	3.7	3.9	2.7	2.0	2.5	5.4	19.1	50.3	42.8	11.5	4.6	3.1
Kortes-Path Gain	kaf	3.3	-0.1	-0.4	0.6	1.7	4.9	8.4	18.7	4.3	6.9	6.5	4.2
Inflow from Kortes	kaf	30.8	29.8	30.8	30.8	27.8	98.2	149.1	160.2	155.0	160.1	138.2	29.8
Total Inflow	kaf	37.8	33.6	33.1	33.4	32.0	108.5	176.6	229.2	202.1	178.5	149.3	37.1
Total Inflow	cfs	615.	565.	538.	543.	576.	1765.	2968.	3728.	3396.	2903.	2428.	623.
Turbine Release	kaf	0.0	40.7	30.9	30.9	28.0	31.1	54.2	46.8	48.3	168.7	131.4	38.0
Jetflow Release	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Spillway Release	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Release	kaf	0.0	40.7	30.9	30.9	28.0	31.1	54.2	46.8	48.3	168.7	131.4	38.0
Total Release	cfs	0.	684.	503.	503.	504.	506.	911.	761.	812.	2744.	2137.	639.
Evaporation	kaf	2.0	1.1	0.6	0.6	0.6	1.4	3.3	5.2	9.8	11.9	10.6	8.1
End-month content	kaf	257.0	248.8	250.4	252.3	255.7	331.7	450.8	628.0	772.0	769.9	777.2	768.2
End-month elevation	ft	5794.8	5793.6	5793.8	5794.1	5794.6	5804.1	5816.0	5829.3	5837.9	5837.8	5838.2	5837.7
Alcova Reservoir Ope	ratio	ns		Initial	Content	177.5	Caf						
		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Total Inflow	kaf	0.0	40.7	30.9	30.9	28.0	31.1	54.2	46.8	48.3	168.7	131.4	38.0
Total Inflow	cfs	0.	684.	503.	503.	504.	506.	911.	761.	812.	2744.	2137.	639.
Turbine Release	kaf	31.6	29.8	30.7	30.7	27.8	30.7	29.9	30.8	29.9	149.1	113.0	29.9
Spillway Release	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Casper Canal Release	-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15.0	17.0	18.0	17.0	7.0
Total Release	kaf	31.6	29.8	30.7	30.7	27.8	30.7	29.9	45.8	46.9	167.1	130.0	36.9
Total Release	cfs	514.	501.	499.	499.	501.	499.	502.	745.	788.	2718.	2114.	620.
Evaporation	kaf	0.6	0.3	0.2	0.2	0.2	0.4	0.8	1.0	1.4	1.6	1.4	1.1
		145.3*											
End-month content	kaf												

Oct

Nov

9.6

6.7\*

kaf

12.0

14.9

17.3#

End-month elevation ft 4396.8 4399.9 4402.0 4404.2 4405.9 4406.8 4410.4 4415.3 4417.0 4417.0 4406.7

18.8#

25.0\*

35.0\*

38.6#

38.6#

38.6#

18.6#

Gray Reef Reservoir Operations

End-month content

NPRAOP V1.1F 27-Oct-1994 Run: 10-NOV-94 10:30:04

Table 3C

Jul

Page 2 of 4

Sep

NORTH PLATTE RIVER OPERATING PLAN Year Beginning Oct 1994

1.1 Kaf

Apr

May

Feb

Initial Content

Jan

Dec

Total Inflow	kaf	31.6	29.8	30.7	30.7	27.8	30.7	29.9	30.8	29.9	149.1	113.0	29.9
Total Inflow	cfs	514.	501.	499.	499.	501.	499.	502.	501.	502.	2425.	1838.	502.
Total Release	kaf	30.8	29.8	30.7	30.7	27.8	30.7	29.8	30.7	29.8	149.0	112.9	29.8
Total Release	cfs	501.	501.	499.	499.	501.	499.	501.	499.	501.	2423.	1836.	501.
Glendo Reservoir Ope	eratio	ons		Initial	Content	99.6	Kaf						
		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Alcova-Glendo Gain	kaf	14.5	13.4	4.4	13.2	12.5	17.0	49.4	202.1	73.4	8.6	9.7	18.3
Infl from Gray Reef	kaf	30.8	29.8	30.7	30.7	27.8	30.7	29.8	30.7	29.8	149.0	112.9	29.8
Total Inflow	kaf	45.3	43.2	35.1	43.9	40.3	47.7	79.2	232.8	103.2	157.6	122.6	48.1
Total Inflow	cfs	737.	726.	571.	714.	726.	776.	1331.	3786.	1734.	2563.	1994.	808.
Turbine Release	kaf	8.9	0.0	0.0	0.0	0.0	0.0	41.6	80.4	88.0	234.1	221.4	151.0
Low Flow Release	kaf	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Spillway Release	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Irrigation Release	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	52.6	65.0	0.0
Total Release	kaf	10.4	1.5	1.5	1.5	1.5	1.5	43.1	81.9	89.5	288.2	287.9	152.5
Total Release	cfs	169.	25.	24.	24.	27.	24.	724.	1332.	1504.	4687.	4682.	2563.
Evaporation	kaf	1.0	0.7	0.6	0.7	0.8	1.5	2.7	4.6	7.2	7.1	4.7	2.4
End-month content	kaf	132.9	173.7#	206.6	248.2	286.1	330.7	364.0#	510.8	517.5	380.0*	210.0*	103.3
End-month elevation	ft	4587.7	4595.4	4600.7	4606.6	4611.6	4616.9	4620.6	4634.5	4635.0	4622.3	4601.2	4581.1
Guernsey Reservoir C	perat	ions		Initial	Content	3.0	Kaf						
		0ct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Glendo-Guerns Gain	kaf	3.4	1.8	1.4	2.0	1.4	0.6	7.1	28.8	27.3	9.1	1.2	5.2
Inflow from Glendo	kaf	10.4	1.5	1.5	1.5	1.5	1.5	43.1	81.9	89.5	288.2	287.9	152.5 157.7
Total Inflow	kaf	13.8	3.3	2.9	3.5 57.	2.9	2.1	50.2 844.	110.7	116.8	297.3 4835.	4702.	2650.
Total Inflow	cfs	224.	55.	47.	57.	52.	34.	044.	1000.	1903.	4037.	4/02.	2050.
Turbine Release	kaf	9.7	0.0	0.0	0.0	0.0	0.0	43.1	53.3	50.6	52.0	52.0	51.8
Seepage	kaf	0.3	0.2	0.3	0.4	0.3	0.3	0.4	1.2	3.0	3.1	2.5	2.1
Spillway Release	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	45.5	58.4	240.9	233.5	123.1
Total Release	kaf	10.0	0.2	0.3	0.4	0.3	0.3	43.5	100.0	112.0	296.0	288.0	177.0
Total Release	cfs	163.	3.	5.	7.	5.	5.	731.	1626.	1882.	4814.	4684.	2975.
Evaporation	kaf	0.1	0.2	0.2	0.2	0.2	0.3	0.5	0.7	1.2	1.3	1.1	0.7

## OWNERSHIP OPERATIONS

End-month total

kaf

0.0 0.0

0.0

0.0

0.0

North Platte Pathfir	ider			Initiat	Ownersn	ip 2/5.6	Kai,	Accrued t	nis wate	r year:	0.0 K	ат	
		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Net Accrual	kaf	41.2	35.2	28.6	27.0	30.4	65.3	184.7	338.5	0.0	0.0	0.0	0.0
Evaporation	kaf	2.0	1.2	0.8	0.9	1.0	2.0	4.3	7.6	14.8	13.4	11.3	8.2
Deliv fm Ownership	kaf	10.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	61.1	98.6
End-month Ownership	kaf	306.8	342.0	370.6	397.6	428.0	493.3	678.0	1016.5	1001.7	988.3	915.9	809.1
North Platte Guernse	y			Initial	0wnersh	ip 0.0	Kaf,	Accrued t	his wate	r year:	0.0 K	af	
		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Net Accrual	kaf	0.0	0.0	5.5	14.8	13.6	11.7	0.0	0.0	0.0	0.0	0.0	0.0
Evaporation/Seepage	kaf	0.0	0.0	0.3	0.4	0.3	0.5		0.5	0.6	0.6	0.5	0.0
Deliv fm Ownership	kaf	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	43.0	0.0
End-month Ownership	kaf	0.0	0.0	5.5	20.3	33.9	45.6		44.7	44.1	43.5	0.0	0.0
Inland Lakes				Initial	Ownersh	ip 0.0	Kaf,	Accrued t	his wate	r year:	0.0 K	af	
		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Net Accrual	kaf	17.9	14.9	0.0	0.0	0.0	0.0	11.2	0.0	0.0	0.0	0.0	0.0
Evaporation/Seepage	kaf	0.0	0.3	0.1	0.1	0.1	0.2		0.0	0.0	0.0	0.0	0.0
Trnsfr fm Ownership	kaf	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
End-month Ownership	kaf	17.9	32.8	32.7	32.6	32.5	32.3		0.0	0.0	0.0	0.0	0.0
Kendrick				Initial	Ownersh	ip 420.0	Kaf,	Accrued t	his wate	r year:	0.0 K	af	
		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Net Accrual	kaf	0.0	0.0	0.0	0.0	0.0	0.0		111.6	587.1	0.0	0.0	0.0
Evaporation	kaf	3.1	1.7	1.0	1.0	1.0	1.9		4.5	7.6	14.8	12.6	9.5
Deliv fm Ownership End-month Ownership	kaf kaf	0.0 416.9	0.0 415.2	0.0 414.2	0.0 413.2	0.0 412.2	410.3		0.0 518.3	1105.4	1090.6	17.0 1061.0	7.0 1044.5
Glendo Unit				Initial	Ownersh	ip 153.5	Kaf,	Accrued t	his wate	r year:	0.0 K	af	
		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Accrual	kaf	0.0	0.0	0.0	0.0	0.0	5.4		0.0	0.0	0.0	0.0	0.0
Evaporation	kaf	1.2	0.6	0.4	0.4	0.4	0.7		2.0	2.6	2.3	2.0	1.5
Deliv fm Ownership	kaf	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	8.0	12.0
End-month Ownership	kaf	152.3	151.7	151.3	150.9	150.5	155.2	176.8	174.8	172.2	169.9	159.9	146.4
Excess to Ownership				Initial	Ownersh	1p 0.0	Kaf,	Accrued t	this wate	er year:	0.0 K	af	
		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Accrual	kaf	0.0	0.0	0.0	0.0	0.0	0.0	22.1	130.9	0.0	0.0	0.0	0.0
Evaporation/Seepage		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	2.2	2.0	1.0	0.0
Release	kaf	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	56.9	90.7	0.0
	1 6	0 0	0.0	0 0	0 0	0.0	0.0	22 1	152 0	150 4	01 7	0.0	0.0

0.0

22.1 152.8

150.6

91.7 0.0

0.0

NPRAOP V1.1F 27-Oct-1994 Run: 10-NOV-94 10:30:04
Based on OCTOBER 1994 MAX Probable Inflow Estimates

## NORTH PLATTE RIVER OPERATING PLAN Year Beginning Oct 1994

City of Cheyenne				Initial	Ownership	2.8	Kaf,						
		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Inflow	kaf	1.1	0.3	0.4	0.5	0.6	0.5	0.2	0.0	0.0	0.5	0.6	0.3
Evaporation	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0
Release	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7	0.9	0.0	0.0	0.0
Ownership	kaf	3.9	4.2	4.6	5.1	5.7	6.2	6.3	3.5	2.5	2.9	3.4	3.7
Pacificorp				Initial	Ownership	2.0	Kaf,						
		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Inflow	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.2	0.2	0.0	0.1
Evaporation	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Release	kaf	0.6	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Ownership	kaf	1.4	1.2	1.1	1.0	0.9	0.8	0.7	1.2	1.4	1.6	1.6	1.7
Other				Initial	Ownership	0.0	Kaf,						
		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Inflow	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Evaporation	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Release	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Ownership	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IRRIGATION DELIVERY													
									•				
Kendrick (Casper Car	nal)	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Requested	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15.0	17.0	18.0	17.0	7.0
Delivered	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15.0	17.0	18.0	17.0	7.0
Kendrick (River)		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Requested	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delivered	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Guernsey Deliveries		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
North Platte Req	kaf	10.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	110.0	290.0	280.0	165.0
Glendo Req	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	6.0	8.0	12.0
Inland Lakes Req	kaf	0.0	0.0	0.0	0.0	0.0	0.0	43.5	0.0	0.0	0.0	0.0	0.0
Total Requirement	kaf	10.0	0.0	0.0	0.0	0.0	0.0	43.5	100.0	112.0	296.0	288.0	177.0
Seepage	kaf	0.3	0.2	0.3	0.4	0.3	0.3	0.4	1.2	3.0	3.1	2.5	2.1
Actual Release	kaf	10.0	0.2	0.3	0.4	0.3	0.3	43.5	100.0	112.0	296.0	288.0	177.0

TABLE 4 PAGE 1 OF 2

### SUMMARY OF NORTH PLATTE RIVER SYSTEM OWNERSHIPS FOR WATER YEAR 1994 (ACRE-FEET) MONTHS SEP OCT NOV DEC JAN FEB MAR APR MAY JUN JUL AUG SEP TOTAL PATHFINDER OWNERSHIP ACCRUAL 1 **EVAPORATION** DELIVERY<sup>2</sup> OWNERSHIP<sup>3</sup> 572124 KENDRICK OWNERSHIP ACCRUAL **EVAPORATION** DELIVERY2 OWNERSHIP 482018 GLENDO OWNERSHIP 2205<sup>4</sup> 1386<sup>4</sup> ACCRUAL **EVAPORATION** DELIVERY & LOSS2 OWNERSHIP 167082 PACIFIC POWER & LIGHT ACCRUAL DELIVERY<sup>2</sup> **EVAPORATION** INSTORAGE **GUERNSEY OWNERSHIP** 1085<sup>5</sup> 764<sup>5</sup> 1082<sup>5</sup> ACCRUAL **EVAPORATION** DELIVERY2 OWNERSHIP

### SUMMARY OF NORTH PLATTE STORAGE OWNERSHIP FOR WATER YEAR 1994 (ACRE-FEET)

MONTHS	SEP	ост	NOV	DEC	JÁN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	TOTAL
INLAND LAKES	S OWNERS	SHIP												
ACCRUAL		17655	15635	0	0	0	0	13377	0	0	0	0	0	46667 <sup>6</sup>
EVAPORATION OWNERSHIP <sup>3</sup>	0	49 16117	43 31709	96 31613	31 31582	57 31525	205 31320	244 14871	17 0	0	0	0	0	742
TRANSFER <sup>7</sup>		1489	0	0	0	0	0	29582	14854	0	0	0	0	45925
CITY OF CHE	YENNE													
ACCRUAL EVAPORATION		1122 27	3815 0	9	4	10 10	28 28	0 69	161 55	560 0	904 0	829 16	869 20	8311 238
DELIVERY OWNERSHIP	5090	0 6185	10000	0 10000	0 10000	10000	10000	640 9291	8703 694	943 311	3 1212	62 1963	0 2812	10351
EXCESS WATER	R													
ACCRUAL		0	0	0	0	0	8064	13705	5397	0	0	0	0	27166
EVAPORATION		0	0	0	0	0	15	56	306	182	0	0	0	559
OWNERSHIP RELEASED	0	0	0	0	0	0	8049	21698 0	26789 0	26607	0	0	0	26607

- 1/ Pacificorp contracted with Pathfinder Irrigation District for water via exchange through April 30, 1994. Pathfinder ownership filled on May 16 at 1,014,592 acre-feet expecting 1,915 acre-feet to be returned from Pacificorp to reach 1,016,507 acre-feet maximum ownership. Pacificorp returned the water at a rate of 26 acre-feet per day during May, June, July, and August until all exchange water was returned to Pathfinder ownership.
- 2/ Amounts shown as delivery are storage water only. Natural flow which was delivered is not shown in this table.
- In September of water year 1993, 14,721 acre-feet of Pathfinder ownership water was transferred to the Inland Lakes. In October of water year 1994, 4,160 acre-feet of Pathfinder ownership water was transferred to the Inland Lakes for a total of 18,881 acre-feet of Pathfinder ownership water in the Inland Lakes. After the Inland Lakes account filled, 18,881 acre-feet of Inland Lakes ownership was transferred to the Pathfinder ownership account on April 21, 1994. The 18,881 acre-feet is not reflected in Pathfinder ownership until April when the transfer occurred. In September of water year 1994, 11,265 acre-feet of Pathfinder ownership water was transferred to the Inland Lakes.
- 4/ In accordance with 1994 North Platte River Ownership and Natural Flow Accounting Procedures, Glendo ownership was allowed to refill water lost to evaporation from excess until the first delivery from storage was made on June 19, 1994.
- 5/ In accordance with 1994 North Platte River Ownership and Natural Flow Accounting Procedures, Guernsey ownership was allowed to refill water lost to evaporation from excess until the first delivery from storage was made on June 19, 1994.
- 6/ Total accrual exceeds 46,000 acre-feet by the amount of water which was taken from the excess to ownership account to replace water lost to evaporation.
- 7/ Transfer refers to Inland Lakes ownership water which was transferred from storage in Glendo or Guernsey. In October, 1,489 acre-feet were transferred to the Inland Lakes. In April, 10,701 acre-feet were transferred to the Inland Lakes and 18,881 acre-feet were transferred to the Pathfinder ownership account. In May, 14,854 acre-feet were transferred to the Inland Lakes.

## NORTH PLATTE RIVER

## RESERVOIR DATA

	Dead	Active	Total	Normal Minimum	(Data in Acre-Feet)
Reservoir	Storage <sup>1</sup>	Storage <sup>2</sup>	Storage	Storage	Limitation on normal minimum storage
Seminoe	556	1,016,717	1,017,273	31,670	Minimum elevation for power generation
Kortes	151	4,588	4,739	1,666	Minimum elevation for power generation
Pathfinder	7	1,016,500	1,016,507	31,405	Minimum elevation for power generation
Alcova	91	184,314	184,405	153,802	Minimum elevation for power generation
Gray Reef	56	1,744	1,800	56	Lowest outlet elevation
Glendo	11,033	506,452	$517,485^3$	63,148	Minimum elevation for power generation
Guernsey	0	45,612	45,612	0	Lowest outlet elevation
Total	11,894	2,775,927	2,787,821	281,747	

<sup>1/</sup>Storage capacity below elevation of lowest outlet 2/Total storage minus dead storage 3/An additional 271,917 acre-feet allocated to flood control

## NORTH PLATTE RIVER POWERPLANT DATA

794.2

93%

739.3

Powerplant	Number	Capacity each	Total installed	Normal operating	Output at rated	30 Year	Generation (GWH)		
	of Units	Unit (KW)	Capacity (KW)	Head (Ft)	Head (Ft³/s)	Average <sup>1</sup> (GWH)	Percent of average <sup>1</sup>	Water Year (1994)	
Seminoe	3	17,000	51,000	97-227	4,050	142.3	97%	138.0	
Kortes	3	12,000	36,000	192-204	2,910	156.8	94%	147.8	
Fremont Canyon	2	33,400	66,800	247-363	3,080	255.7	91%	233.0	
Alcova	2	18,000	36,000	153-165	4,100	129.3	97%	125.8	
Glendo	2	19,000	38,000	73-156	3,400	86.2	88%	75.9	
Guernsey	2	3,200	6,400	89-91	1,340	23.9	79%	18.8	

234,200

Total

1/1961-1990

14

## PROPOSED UNIT MAINTENANCE SCHEDULE NORTH PLATTE RIVER SYSTEM OCTOBER 1994 THROUGH SEPTEMBER 1995

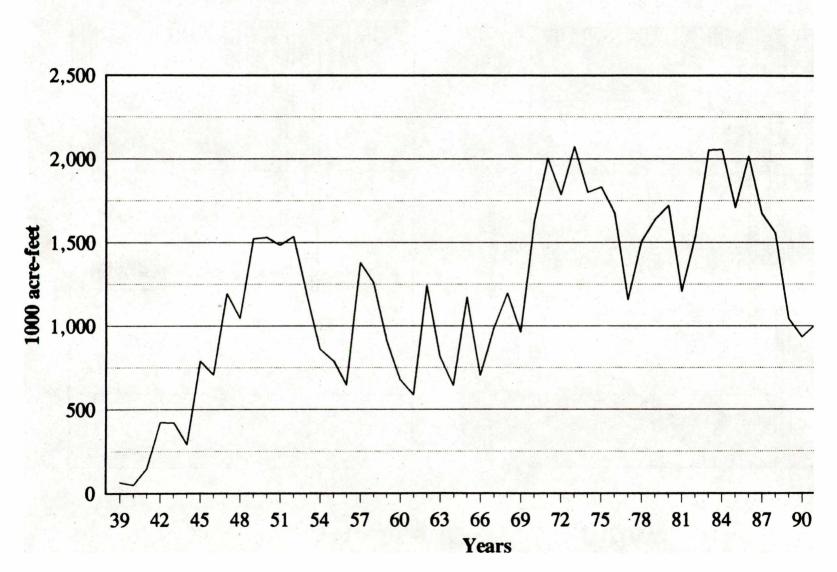
FACILITY AND UNIT NO.	SCHEDULED PERIOD	DESCRIPTION OF WORK
Kortes Unit #1	10-01-94 thru 11-16-94	Major inspection
Fremont Unit #1	10-03-94 thru 12-14-94	Minor inspection and other work as required
Guernsey Unit #1	10-17-94 thru 10-27-94	Replace unit power cables
Guernsey Unit #2	10-17-94 thru 10-27-94	Replace unit power cables
Guernsey Unit #1	10-24-94 thru 10-28-94	Stator inspection and hipot testing
Guernsey Unit #2	10-24-94 thru 10-28-94	Stator inspection and hipot testing
Glendo Unit #1	10-31-94 thru 12-15-94	Annual inspection and maintenance
Guernsey Unit #1	10-31-94 thru 12-15-94	Annual inspection and maintenance
Kortes Unit #3	11-21-94 thru 12-07-94	Minor inspection and points check
Kortes Unit #2	12-12-94 thru 12-28-94	Minor inspection and points check
Fremont Unit #2	12-19-94 thru 03-01-95	Minor inspection and other work as required
Seminoe Unit #3	01-02-95 thru 03-01-95	Major inspection
Glendo Unit #2	01-09-95 thru 02-16-95	Annual inspection and maintenance
Geurnsey Unit #2	01-09-95 thru 02-16-95	Annual inspection and maintenance
Alcova Unit #1	01-16-95 thru 03-01-95	Minor inspection and other work as required
Seminoe Unit #1	03-06-95 thru 03-22-95	Minor inspection and points check
Alcova Unit #2	03-06-95 thru 04-19-95	Minor inspection and other work as required
Seminoe Unit #2	03-27-95 thru 04-12-95	Minor inspection and points check

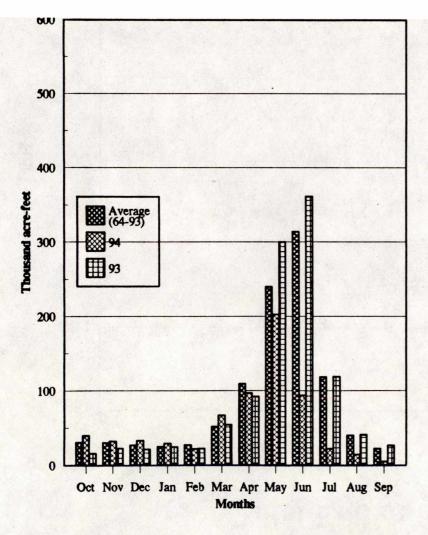
## NORTH PLATTE RIVER BASIN PRECIPITATION BY WATERSHED

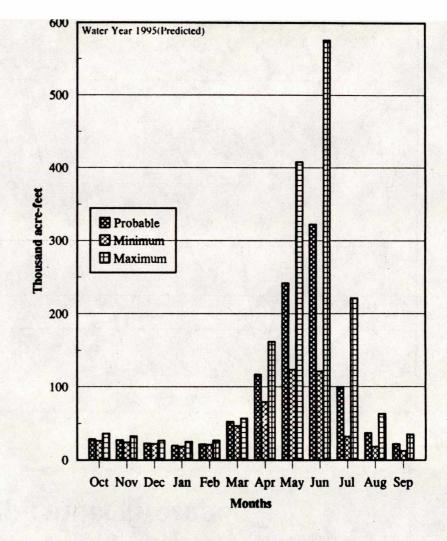
		INOE		'INDER RSHED	Charles Barrier Control of the Control	NDO RSHED	GUERNSEY WATERSHED		
	Precip	Percent	Precip	of .	Precip	of	Precip	of	
Month	Inches	Average	Inches	Average	Inches	Average	Inches	Average	
October	1.66	158	1.25	133	.90	111	1.79	213	
November	1.53	172	.95	116	1.06	166	1.10	193	
December	.47	60	.65	89	.56	117	.33	83	
January	.78	122	.52	78	.45	107	.42	127	
February	.92	139	.59	100	.51	106	.27	68	
March	.65	69	.48	48	.26	32	.06	8	
April	1.45	121	1.19	78	.96	63	.99	57	
May	.42	27	.27	13	.56	25	1.62	66	
June	.67	56	.42	33	.26	16	1.01	41	
July	.48	37	.44	45	1.70	139	1.58	93	
August	1.04	94	.61	91	.68	94	1.09	105	
September	58	54	67	<u>71</u>	58	65	13	_11	
Water Year	10.65	86	8.04	64	8.48	72	10.39	75	

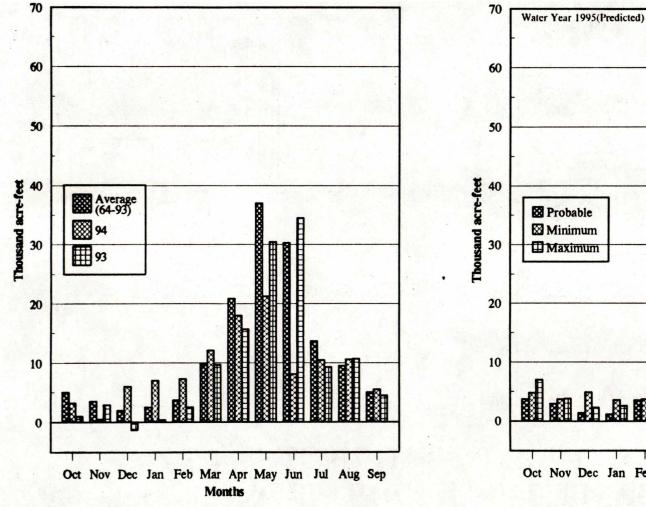
# APPENDIX B - EXHIBITS

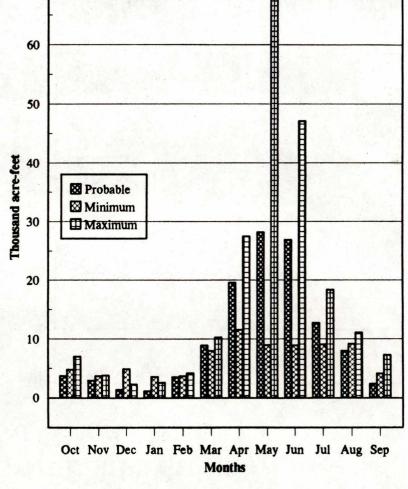
## North Platte River System Total End of September Storage

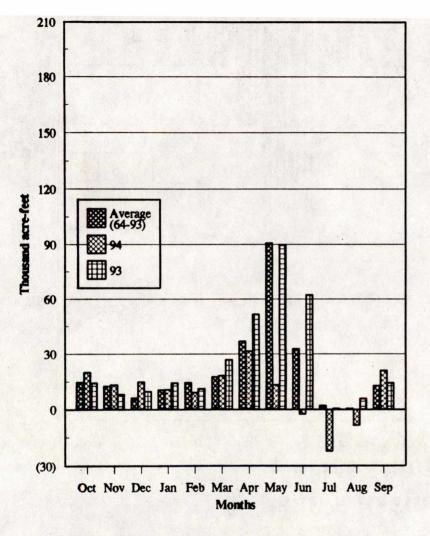


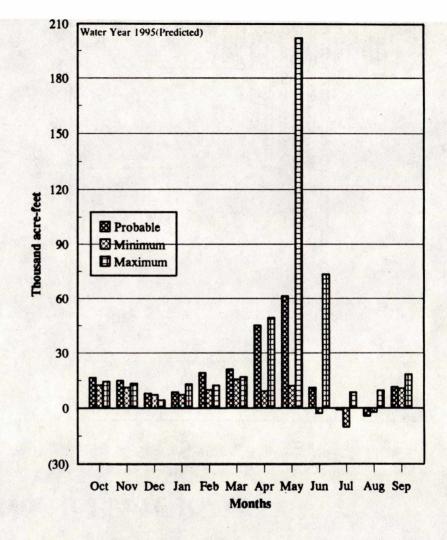


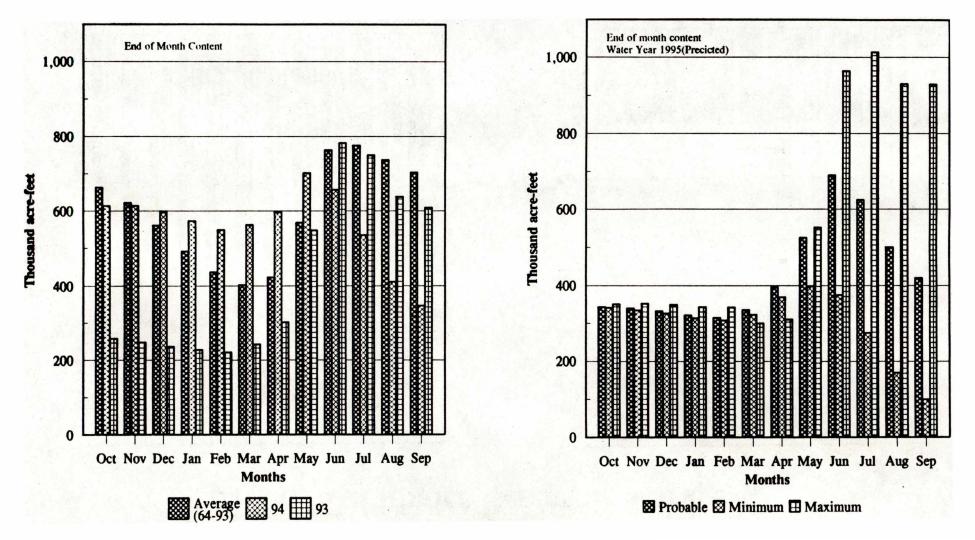


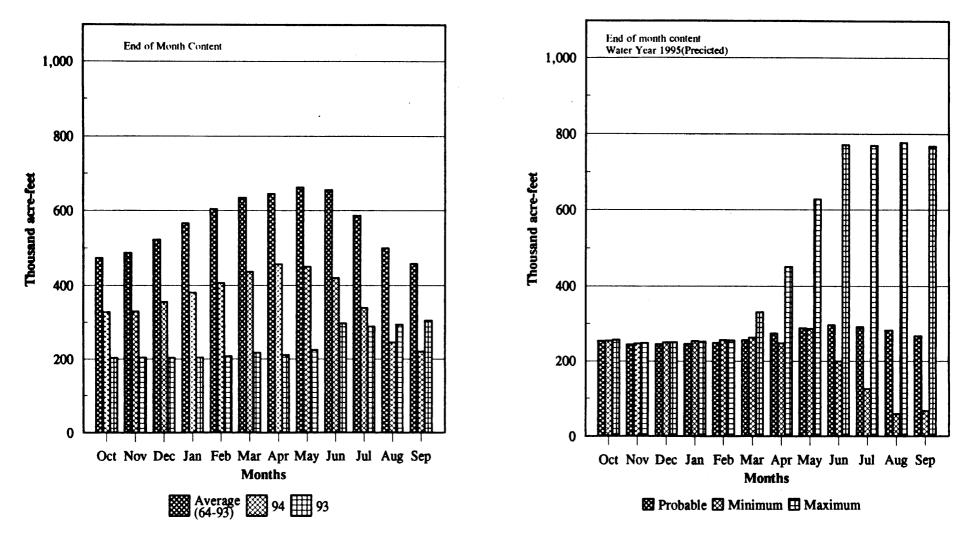


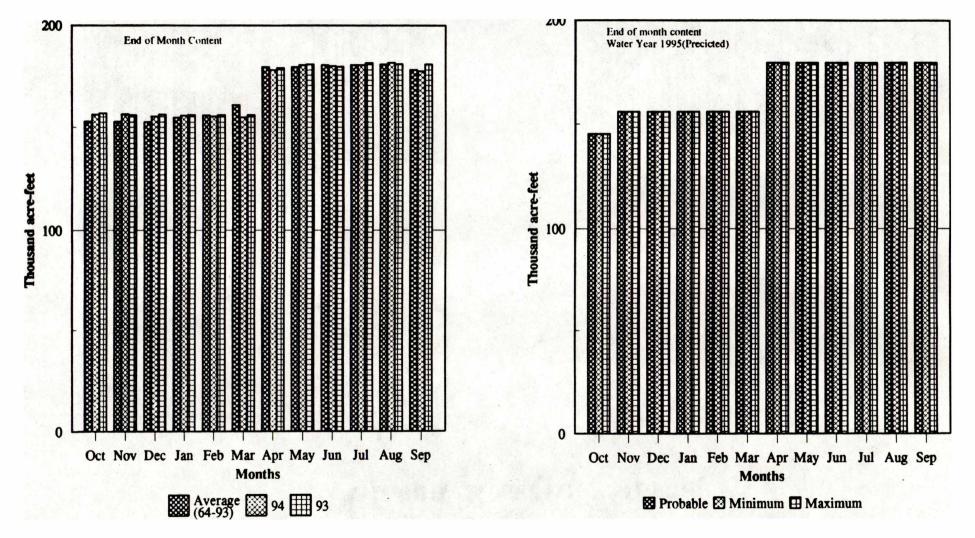


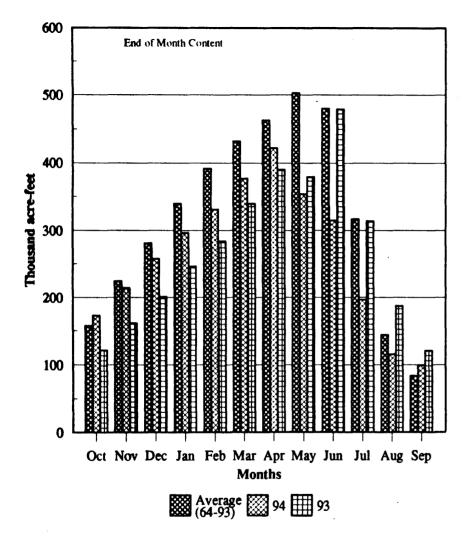


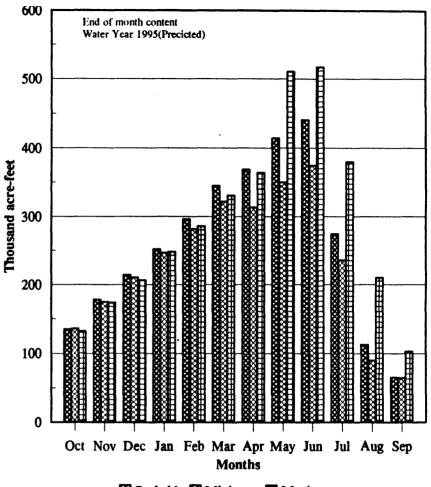








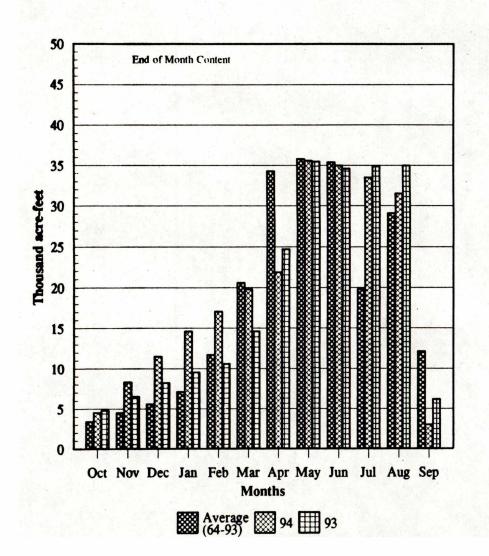


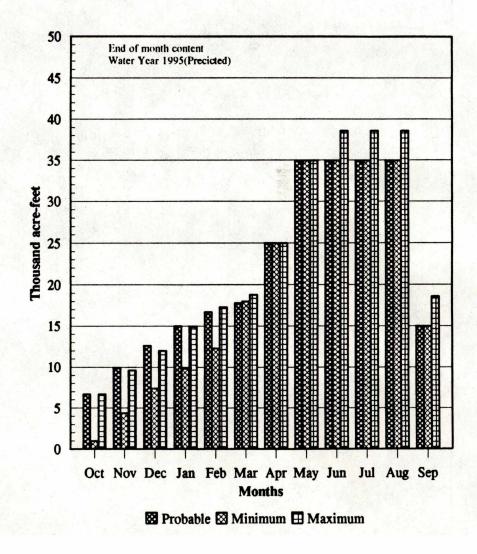


☑ Probable ☑ Minimum ☐ Maximum

**EXHIBIT 8** 

## **Guernsey Reservoir Storage**





## PATHFINDER WATERSHED RUNOFF

