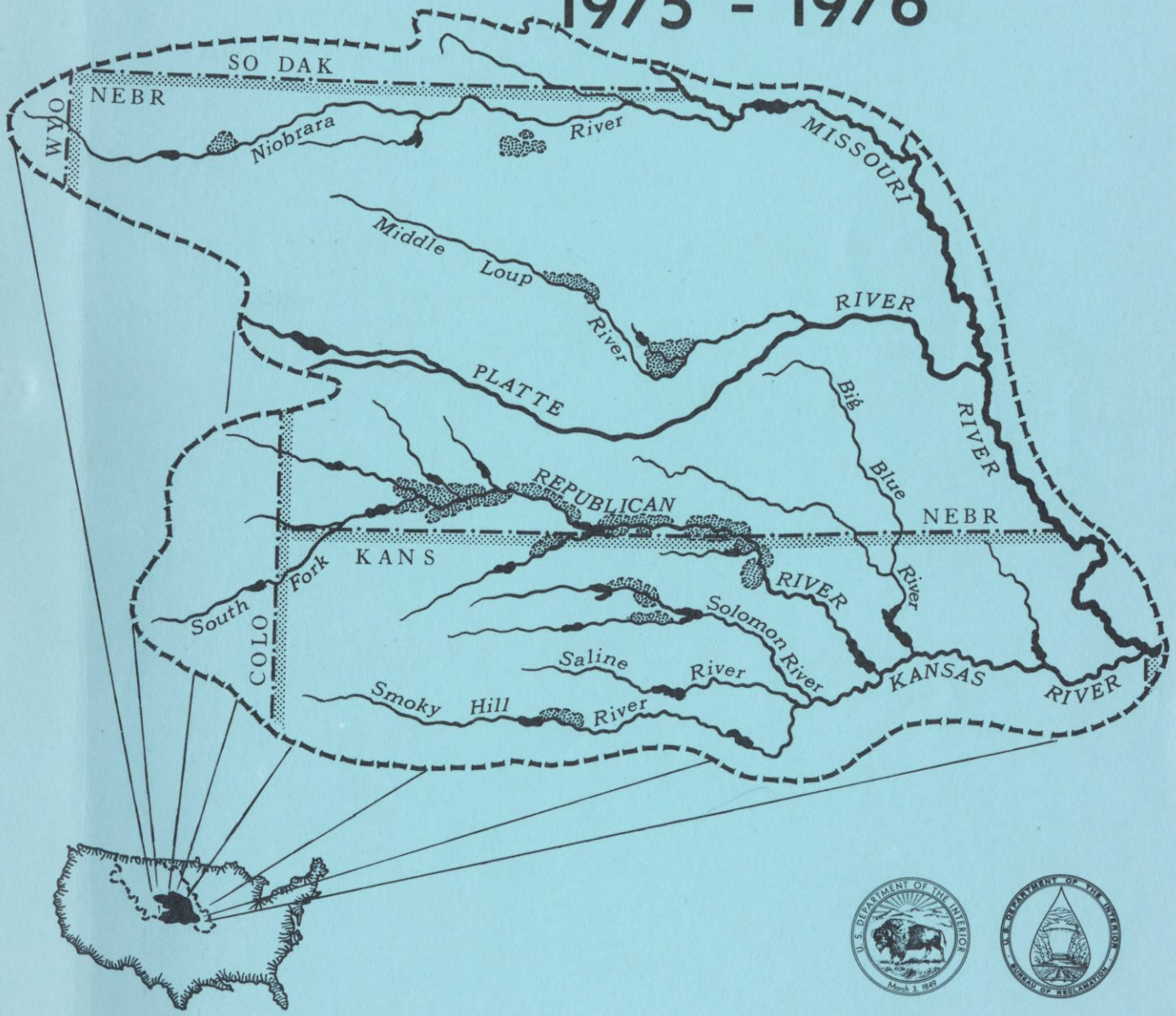
ANNUAL OPERATING PLAN

NIOBRARA, LOWER PLATTE, AND KANSAS RIVER BASINS 1975 - 1976



DEPARTMENT OF THE INTERIOR
Thomas S. Kleppe, Secretary

Bureau of Reclamation

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Department of the Interior

Bureau of Reclamation

Lower Missouri Region · Denver, Colorado

ANNUAL OPERATING PLAN

NIOBRARA, LOWER PLATTE, AND KANSAS RIVER BASINS

1975 OPERATIONS
1976 OUTLOOK

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SYNOPSIS

GENERAL

This is the twenty-third consecutive year that an Annual Operating Plan has been prepared for the federally owned reservoirs serving an irrigation function in the Niobrara, Lower Platte, and Kansas River Basins. There are 15 dams and reservoirs in Colorado, Nebraska and Kansas. These reservoirs with 10 diversion dams, 10 pumping plants, and 22 canal systems serve approximately 268,600 acres of project lands in Nebraska and Kansas. A map in the back of this report shows the location of these features. The reservoirs in the Niobrara and Lower Platte River Basins are operated by either irrigation or reclamation districts, and the reservoirs in the Kansas River Basin are operated by either the Bureau of Reclamation or the Corps of Engineers. The diversion dams, pumping plants, and canal systems are operated by either irrigation of reclamation districts.

In addition to irrigation, these features serve flood control, municipal and industrial water, recreation, and fish and wildlife purposes.

The "Headlines 75" following this Synopsis is indicative of the awareness of local people of natural resource development and conservation in the Niobrara, Lower Platte, and Kansas River Basins.

1975 SUMMARY

Climatic Conditions. The total precipitation during 1975 ranged from 65 to 128 percent of normal over the operating area. The temperatures during the irrigation season were generally normal.

Storage Reservoirs.

A. Conservation Operations - The 1975 inflows were within the range of forecasted dry, normal or wet years for all reservoirs with the exception of Lovewell, which was slightly above the wet-year forecast, and Box Butte and Merritt which were slightly below the dry-year forecast. The active conservation storage was evacuated from Box Butte and Sherman Reservoirs in 1975. The carryover storage in Box Butte and Norton Reservoirs and the available inflows and streamflows below these dams were inadequate to fully supply the irrigation requirements of the project lands served by the reservoirs.

B. Flood Control Operations - Harlan County and Waconda Lakes, Lovewell, Kirwin, Webster, and Cedar Bluff Reservoirs prevented an estimated $2,779,000 flood damages on the lower Republican and Kansas Rivers. The following table gives an individual breakdown by reservoir:

Lake or Reservoir	Calendar Year 1975 Storage Used for Flood Control (Acre-Feet)	Calendar Year 1975 Damage Prevented ($1,000)	Accumulated Actual Benefits from 1950 Through 1975 ($1,000)
Harlan County	---	200	13,226
Lovewell	7,860	98	2,532
Kirwin	26,830	618	2,290
Webster	31,000	885	2,832
Waconda	44,000	967	5,660
Cedar Bluff	2,900	11	8,942
Total		2,779	

The accumulated flood control benefits for the years 1951 through 1975 by the facilities covered in this report total $42,643,000. (See Table 5.)

Water Service. There were 567,109 acre-feet of water diverted to irrigate 245,813 acres of project lands in 13 irrigation districts. The project water supply was inadequate for 16,230 acres of lands irrigated in the Mirage Flats and Almena Irrigation Districts. Arrangements were made in these two districts with owners of private irrigation wells for a supplemental water supply to district lands. The project water supplies for the other units mentioned in this report were adequate in 1975.

The water requirements of three municipalities, two industrial companies, and a Federal fish hatchery were furnished from storage releases or natural flows.

Under a long-term contract, 32,045 acre-feet were diverted to irrigate 13,694 acres of non-project lands in the Middle Loup Public Power and Irrigation District.

Irrigation Production. The crop yields from project lands in 1975 were higher on the average than in 1974. Corn, the principal crop, rose from 107 bushel per acre average to 111 bushel per acre. In 1975, the unit prices for all commodities were much lower than those in 1974. The 1975 gross crop value of $65,660,125 was 85% of the 1974 gross crop value, and the gross average decreased from $324.58 per acre in 1974 to $267.12 per acre in 1975.

Fish and Wildlife and Recreation Benefits. The operations in 1975 were favorable for the recreation and fish and wildlife uses.

The Youth Conservation Corps camps at McCook, Nebraska, and Hays, Kansas, performed work on recreation and wildlife facilities which enhanced the visitations at Enders, Swanson, Hugh Butler, Norton, Cedar Bluff, Webster and Kirwin Public Use Areas.

1976 OUTLOOK

The irrigation and reclamation districts estimate that 245,700 acres of project land will be irrigated in 1976. The operation studies indicate that if 1976

is a dry year, the project water supplies will be inadequate for the irrigation of 79,600 acres in Mirage Flats, H & RW, Frenchman Valley, Almena, and Farwell Irrigation Districts. Farwell and Mirage Flats also show a shortage under normal-year conditions. As in past years, the Mirage Flats and Almena Irrigation Districts plan to use water from private irrigation wells to supplement the project water supply. Other districts are encouraging their irrigators to drill wells for supplemental water supplies.

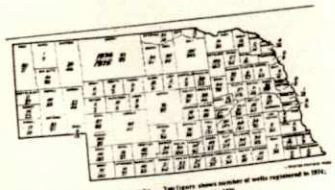
The industrial, municipal, and fish hatchery water supply requirements will be met in full.

During 1976, under all inflow forecast conditions, storage water will be in excess of project needs in Bonny Reservoir and Waconda Lake and will be available for sale to private irrigators or for other non-project uses. Under normal forecast conditions, excess storage will also be available for sale from Harry Strunk, Hugh Butler, Swanson, and Harlan County Lakes during July only.

With dry-year forecasted inflows, the conservation pools of Merritt, Sherman, Bonny and Lovewell Reservoirs and Harry Strunk and Waconda Lakes will fill during 1976. Most probable forecasted inflows would also fill Swanson, Hugh Butler and Harlan County Lakes.

Even with low pool levels in the reservoirs and inadequate water supplies for irrigation of some project lands, the recommendations of various State agencies will be considered. As in the past, irrigation and reclamation districts will advise State agencies regarding aquatic weed control and canal operations. The Bureau of Reclamation will continue to operate the reservoirs and other facilities under its jurisdiction in the best interests of all project functions and for the greatest public benefit whenever possible.

HEADLINES 75



Irrigation well registration in Nebraska ... Top figure shows number of wells registered in 1974, bottom figure those registered in 1975.

Rush to Pump Irrigation Reached Floodtide in 1975

By Don Ringler

McCOOK, NEBRASKA DAILY, FRIDAY, MAY 30, 1975

Flow Meters Will Be Put on Wells

Water Allocations Likely in SW Nebraska

Pumps Cloud Future Of Enders Irrigation

To Save Water: Impound

Moisture Boost for Crops

Enders Area Soaked by Showers

Oberlin's 2.06 Inches Tops Moisture Totals

FOR LAST YEAR

Harvest 57 Tons Of Fish In G. E. Reservoir

Omaha World-Herald, Tuesday, February 11, 1975

State Is Challenged To Fund Water Plans

Lawrence Not Relaxing: However

Irrigation Prospects Appear Good

E-25-75

TOTAL $2,501,729

Construction Contracts For Rural Water District No. 3 Are Approved

McCOOK, NEBRASKA DAILY, FRIDAY, JUNE 20, 1975

Creeks Swollen, Crops Down After Torrential Rainstorm

Real Heavy Rain

Seppe Creek Overflows

High Water Warning

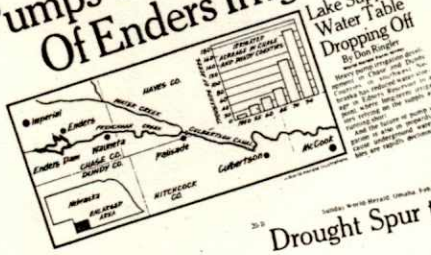
Cloud Funnels Form In Turbulent Skies

Sunday World-Herald
OMAHA, NEB., MAY 18, SECTION B — 32 PAGES

Pumps Cloud Future Of Enders Irrigation

Lake Supply, Water Table Dropping Off

By Don Ringler



VOL. LXXIV, NO. 143, BELOIT, KANSAS, TUESDAY, APRIL 8, 1975

$3.5 Million Piped Into Loral Rural Water Dist.

Omaha World-Herald, Wednesday, Feb. 5, 1975

Pump Irrigators Looking For Self-Governing Plan

Sunday World-Herald, Omaha, Feb. 9, 1975

Drought Spur to Irrigation

Rain-making study underway

Raindrops Keep Falling...

June Moisture Close To Modern-Day Record

Bostwick Irrigation district key ingredient in Courtland economy

Water Near Adequate For Area Irrigators

Level Runs Low in High Plains

Kansans sue rainmaker

McCOOK, NEBRASKA DAILY, MONDAY, APRIL 21, 1975

Ideas Shared with Irrigators

Water Solution Could Be Costly

By DICK BELLAMY

CULBERTSON — Shortage of water and what to do about it was the main theme of the annual meeting of the Hitchcock Irrigation District Thursday night in the VFW Hall in Culbertson.

-Y CALL

FICIAL COUNTY AND CITY NEWSPAPER

40 PERCENT COMPLETE

E-11-75

Report Progress On Water District Two

CHAPTER I - INTRODUCTION

PURPOSE OF THIS REPORT

In addition to describing the operational responsibilities of the Bureau of Reclamation, Corps of Engineers, and irrigation or reclamation districts in the three basins, this Annual Operating Plan advises water users, cooperating agencies, and other interested groups or persons of the actual operations during 1975 and serves as guidelines for the 1976 operations.

OPERATIONAL RESPONSIBILITIES

The Bureau of Reclamation is responsible for irrigation operations at all Federal reservoirs in the Kansas River Projects area. At those reservoirs which were constructed by the Bureau of Reclamation, the Bureau is also responsible for the operation and maintenance, safety of the structure, and reservoir operations not specifically associated with regulation of the flood control storage. In addition to irrigation, these reservoirs provide benefits for functions such as recreation, fish and wildlife, municipal and industrial, etc.

The Corps of Engineers is responsible for regulation of the flood control storage at all Federal reservoirs in the Kansas River Basin, and for conservation functions other than irrigation at the dams where it is the construction agency.

By contractual arrangements with the Bureau of Reclamation, 12 irrigation or reclamation districts are responsible for the operation of irrigation facilities constructed or rehabilitated by the Bureau of Reclamation in the Niobrara, Lower Platte, and Kansas River Basins with the exception of the reservoirs in the Kansas River Basin.

The States of Nebraska, Colorado, and Kansas are responsible for administration and enforcement of the laws of their respective States pertaining to the water rights and priorities of all parties concerned with the use of water.

The Republican River Compact was authorized on August 4, 1942, by Public Law No. 696, which was enacted by the 77th Congress. The Compact was ratified by the States of Colorado, Kansas, and Nebraska. This Annual Operating Plan is in accordance with the objectives of the Compact, which are: "...to provide for the most efficient use of the waters of the Republican River Basin for multiple purposes; to provide for an equitable division of such waters; to remove all causes, present and future, which might lead to controversies; to promote interstate comity; to recognize that the most efficient utilization of the waters within the Basin is for beneficial consumptive use, and to promote joint action by the States and the United States in the efficient use of water and the control of destructive floods."

TABLES AND EXHIBITS

Principal records for the facilities reported herein are attached as tables and exhibits.

WATER SUPPLY

For forecasting purposes, values of annual inflows that will be statistically equalled or exceeded 10, 50 and 90 percent of the time were selected from the probability curve to be "reasonable maximum" (wet year), "most probable" (normal year), and "reasonable minimum" (dry year) inflow conditions, respectively.

RESERVOIR OPERATIONS

All operations are scheduled for optimum benefits to project functions. At the end of the irrigation season and at the end of each month during the non-irrigation period, the carryover storage in each reservoir and the reasonable minimum inflow are evaluated to determine if water in excess of that required to fill the conservation pool may be anticipated. If excess inflow is apparent, controlled releases will be made to accomplish maximum downstream benefits.

MAJOR FEATURES

The Mirage Flats Project was constructed under the Water Conservation and Utilization Act and includes an irrigation storage reservoir, diversion dam, and canal system. The other features in the scope of this report are a part of the Pick-Sloan Missouri Basin Program and include multipurpose reservoirs, diversion dams, pump stations, and canal systems. Fifteen storage facilities are now in operation as follows:

Constructed by the Bureau of Reclamation:

(a) Operated by Irrigation or reclamation districts--Box Butte and Merritt Dams in the Niobrara River Basin and Sherman Dam in the Lower Platte River Basin.

(b) Operated by the Bureau of Reclamation--Bonny, Trenton, Enders, Red Willow, Medicine Creek, Norton, Lovewell, Kirwin, Webster, Glen Elder, and Cedar Bluff Dams in the Kansas River Basin.

Constructed and operated by the Corps of Engineers:

(a) Harlan County Dam in the Kansas River Basin.

IRRIGATION DISTRICTS

Thirteen irrigation districts in the Niobrara, Lower Platte, and Kansas River Basins have contracted with the Bureau of Reclamation for water supply and irrigation facilities. Sargent and Farwell Irrigation Districts have contracted their operation and maintenance to the Loup Basin Reclamation District.

The normal irrigation season for Mirage Flats Irrigation District is April through September. The contracted irrigation season for Frenchman Valley, H & RW, Frenchman-Cambridge, and Cedar Bluff Irrigation Districts is from May 1 to October 15, and for all other districts, May 1 to September 30th.

MUNICIPAL AND INDUSTRIAL WATER

Three municipalities and two oil companies have executed water service contracts for full or supplemental water supplies.

FISH HATCHERY

A United States Fish and Wildlife Service warm-water fish hatchery is in operation below Cedar Bluff Reservoir.

ENVIRONMENTAL CONSIDERATIONS

A "Statement of Operational Objectives" for Harlan County Reservoir sets forth the general operational objectives and the specific reservoir uses considered desirable, such as that fish and wildlife interests will be best served by high pool levels with minimum fluctuations and regulation of outflow in excess of minimum requirements insofar as feasible. The statement recognizes that to assure realization of the greatest public benefits, operation plans should be sufficiently comprehensive to permit the maximum integration of the secondary uses consistent with the primary purposes of flood control and irrigation.

Insofar as practicable, the above-mentioned objectives are also considered in the operation of all reservoirs in the Kansas River Basin, Merritt and Box Butte Reservoirs in the Niobrara River Basin, and Sherman Reservoir in the Lower Platte River Basin. The regulated outflow will also be of advantage to farmers, ranchers, industries, cities, and other interests below all reservoirs.

CHAPTER II - NIOBRARA AND LOWER PLATTE RIVER BASINS

MIRAGE FLATS PROJECT IN NEBRASKA

GENERAL

Niobrara River flows and Box Butte Reservoir storage provide a water supply which is normally insufficient to achieve maximum yields from the 11,662-acre Mirage Flats Irrigation District. The project water supply will yield an average diversion of one and a half acre-feet per acre which is about one-half acre-foot per acre short of the long-term average for a full water supply. Several of the landowners in the district have drilled irrigation wells as a source of a supplemental supply. The farmers that own wells share the well water with their neighbors but the wells are too few in number to fully supplement the project water supply.

During the 1975 irrigation season, personnel from the Kansas River Projects Office aided irrigation district personnel in conducting a study to determine both losses and waste from the irrigation system. Four recorders were operated on wasteways and flow measurements were taken throughout the summer. Results were as follows:

Lateral Wasteway	Discharge (Acre-Feet) July	August	September	Total
Fairfield	29.6	27.4	0.0	57.0
Mirage Flats	108.0	72.0	8.0	188.0
Sturgeon	16.7	21.3	2.9	40.9
Peters	31.6	33.0	0.0	64.6

The Mirage Flats Irrigation District cooperates with the Nebraska Game and Parks Commission by operating the Box Butte Dam outlet works gates and the Dunlap Diversion Dam gates in a manner that avoids large sudden changes in the flows of the Niobrara River.

1975 SUMMARY

The Niobrara River flows and the carryover storage in Box Butte Reservoir were insufficient for a full water supply for the Mirage Flats Irrigation District lands and the active storage was evacuated by August 24th. This is the sixth consecutive year that all of the available active storage was used. The total precipitation in the Mirage Flats area was 12.43 inches, which is 81 percent of normal.

There were 10,950 acres irrigated, which is 94 percent of the acres with service available. The farm deliveries from the project water supply were 0.73 acre-foot per acre. An additional 0.5 acre-foot per acre of water was

provided by privately owned irrigation wells. The gross crop value was $2,609,130, which is 93 percent of the 1974 value.

1976 OUTLOOK

The water level in the reservoir on January 1, 1976, was over two feet lower than it was on that day one year previously. The Mirage Flats Irrigation District will announce to their water users in the spring the amount of water that will be available from Box Butte storage. The project water supply is expected to be inadequate in 1976 as it has been in past years. The district plans, however, for the irrigators to continue the use of water from privately owned irrigation wells as a supplemental supply. There are 11,000 acres expected to be irrigated in 1976.

AINSWORTH UNIT, SANDHILLS DIVISION IN NEBRASKA

GENERAL

The water supply for 33,960 acres with service available in the Ainsworth Irrigation District is provided by Merritt Reservoir storage and Snake River flows. To avoid ice damage to the soil cement on the upstream face of Merritt Dam during the winter months, releases from Merritt Reservoir are regulated to maintain a water level about 5 feet below the top of the conservation capacity. When the reservoir surface clears of ice each spring, the conservation capacity is slowly filled. This operation greatly enhances the spring spawning of fish.

The Ainsworth Irrigation District cooperates with the Nebraska Game and Parks Commission by avoiding sudden large changes in reservoir releases. Small releases of 15 cubic feet per second, although not required, are made into the Snake River below Merritt Dam for fish, wildlife and recreation purposes.

1975 SUMMARY

The total precipitation of 11.31 inches for the year in the Merritt Dam vicinity was 65 percent of normal. The water supply was more than adequate to meet the irrigation requirements of 84,439 acre-feet to serve 33,694 acres of land irrigated in 1975. The gross crop value was $10,277,182, which is over 350,000 dollars greater than the previous year.

1976 OUTLOOK

Releases from Merritt Reservoir will be regulated to slowly fill the conservation capacity by mid-May. The water supply is expected to be adequate for the irrigation of an estimated 33,700 acres.

SARGENT UNIT, MIDDLE LOUP DIVISION IN NEBRASKA

GENERAL

The Sargent Irrigation District has contracted with the Loup Basin Reclamation District for the operation and maintenance of the Milburn Diversion Dam and Sargent Canal system serving 13,650 acres in this unit. The water supply is diverted from the Middle Loup River into the Sargent Canal under an appropriated natural flow right from the State of Nebraska. These diversions may exceed the natural flow appropriation of 198 cubic feet per second by an exchange of storage from Sherman Reservoir, provided that water is available after all senior appropriations are satisfied and the excess is not greater than the storage releases from Sherman Reservoir.

1975 SUMMARY

The annual precipitation over the Sargent Unit was about 70 percent of normal. The diversions into Sargent Canal of 28,034 acre-feet were slightly below normal year forecasts. The diversions exceeded the appropriated right for 32 days during 1975. There were 13,042 acres irrigated with a gross crop value of $3,842,744, which is about $600,000 less than in 1974.

1976 OUTLOOK

The Loup Basin Reclamation District estimates that 13,000 acres in the Sargent Unit will be irrigated in 1976. The water supply is expected to be adequate.

FARWELL UNIT, MIDDLE LOUP DIVISION IN NEBRASKA

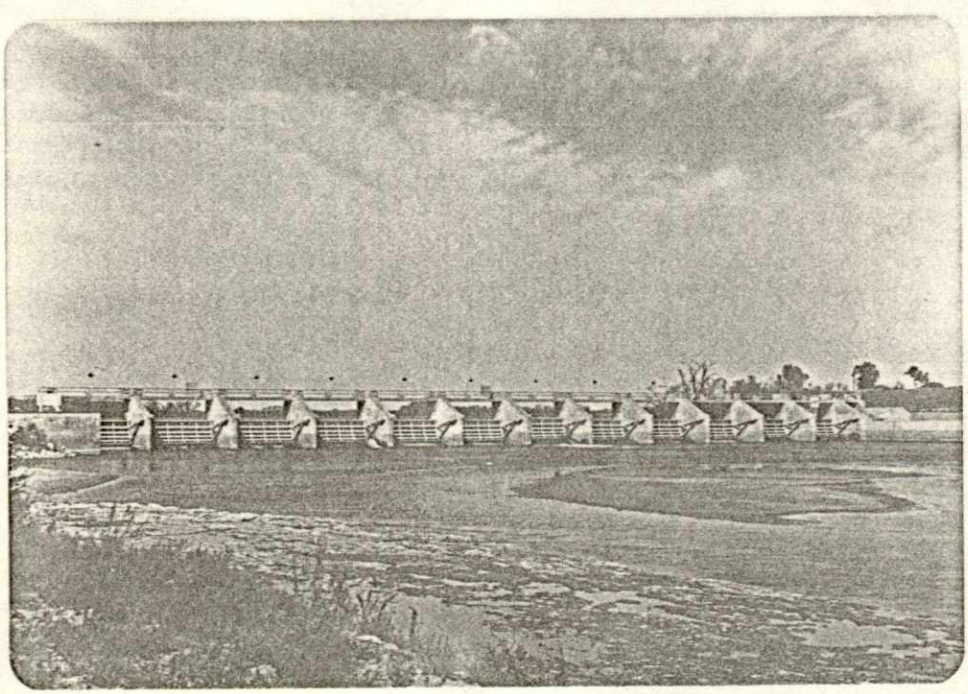
GENERAL

The Loup Basin Reclamation District operates and maintains the Arcadia Diversion Dam, Sherman Feeder Canal, Sherman Dam and Reservoir, and the Farwell Canal system serving 48,250 acres of Farwell Irrigation District land. Diversions are also made through the Arcadia Diversion Dam to 13,500 acres of non-project lands in the Middle Loup Public Power and Irrigation District under appropriated natural-flow water rights.

During the winter months, the pool level of Sherman Reservoir is normally regulated to 5 feet below the top of the conservation capacity to avoid ice damage to the upstream face of Sherman Dam. This low pool level also minimizes seepage from the reservoir into the ground water table. Each spring, diversions into Sherman Feeder Canal from the Middle Loup River are regulated to fill the conservation capacity of Sherman Reservoir by mid-June. The gradual rising water surface in the spring is ideal for fish spawning.

Whenever the flows in the Middle Loup River at Arcadia, Nebraska, exceed 6,000 cubic feet per second, and safe capacity flows are diverted into Sherman Feeder Canal to Sherman Reservoir, flood control benefits can be accrued by such operations.

Special studies are being made on the Farwell Canal system operation to evaluate the efficiency. This water stage recorder was installed on an operational wasteway near Dannebrog, Nebraska.



During the peak irrigation periods in the mid-summer months, all of the flows in the Middle Loup River are diverted at Arcadia Diversion Dam. In 1975 more than 160 thousand acre-feet were delivered to Middle Loup Public Power and Irrigation District canals and Sherman Reservoir.

1975 SUMMARY

The diversions from the Middle Loup River at Arcadia Diversion Dam were 32,045 acre-feet to Middle Loup Public Power and Irrigation District and 128,840 acre-feet into Sherman Feeder Canal.

Sherman Feeder Canal diversions into Sherman Reservoir were started on April 29, and the conservation capacity was filled on June 8, 1975. The precipitation at Sherman Dam was 15.01 inches, which is 72 percent of normal. Releases into the Farwell Canals totaled 108,733 acre-feet. Due to dry weather conditions causing low flows in the Middle Loup River and large irrigation demands, all active storage in Sherman Reservoir was evacuated by August 2nd. The Loup Basin Reclamation District reports that 43,702 acres of Farwell Irrigation District lands were irrigated in 1975. The gross crop value of $10,488,828 was approximately 2,300,000 less than in 1974.

The Irrigation Management Services program was continued during 1975. A total of 53 farms, covering 6,053 acres were served by the program.

1976 OUTLOOK

Diversions from the Middle Loup River into Sherman Feeder Canal for the normal spring filling of the conservation capacity of Sherman Reservoir are expected to start in April.

Under most probable inflow conditions, a small shortage is expected for the 44,000 acres that are planned to be irrigated in 1976. This shortage is attributable to high system losses and the distribution of approximately 90% of the total season irrigation requirement during the months of July and August.

ARMEL UNIT, UPPER REPUBLICAN DIVISION IN COLORADO

GENERAL

Bonny Reservoir storage is transferred to Swanson Lake as required where releases into the Republican River are regulated to meet the industrial needs of the Amoco Production Company and Ladd Petroleum Corporation for their water flood operations in the Sleepy Hollow Oil Field, south of Bartley, Nebraska.

Bonny Reservoir inflows from the South Fork of the Republican River and Landsman Creek are released into Hale Ditch, as requested by the State Engineer of Colorado. Bonny storage water is available to Hale Ditch and other natural flow appropriators under temporary contracts. Much of the 700 acres served by Hale Ditch is now owned and operated by the Colorado Department of Natural Resources, Division of Wildlife, for wildlife purposes.

The normal operation pattern of Bonny Reservoir, with a slowly rising or stable pool, enhances fish spawning in the spring and affords excellent hunting conditions each fall.

1975 SUMMARY

The precipitation was 123 percent of normal while the inflow to Bonny Reservoir was equal to the most probable year forecast. The water supply was adequate to furnish 278 acre-feet to Amoco Production Company and 41 acre-feet to Ladd Petroleum Corporation.

There were 244 acre-feet of storage water delivered to the State of Colorado Department of Natural Resources under temporary contract sales for industrial or irrigation purposes during 1975. As directed by the Colorado Water Commissioner, 2,097 acre-feet of reservoir inflows from the South Fork of the Republican River and Landsman Creek were passed through Bonny Reservoir into Hale Ditch.

1976 OUTLOOK

Amoco Production Company and Ladd Petroleum Corporation will have an adequate water supply in 1976. Bonny storage will also be available for sale to Hale Ditch and other private irrigators under temporary contracts.

The prospects are excellent for hunting, fishing, and recreation uses.

FRENCHMAN UNIT, FRENCHMAN-CAMBRIDGE DIVISION IN NEBRASKA

GENERAL

The transportation of water from Enders Reservoir through 52 miles of Frenchman Creek channel to the Culbertson Diversion Dam created an erosion problem that made it necessary to initiate a control and stabilization program in 1964, which is expected to continue until 1978. The program has restored private access, protected private and public improvements, stabilized various reaches of channel banks, and reduced sediment from the flow in the Culbertson Canal and the stream at the Culbertson Diversion Dam.

The Culbertson Canal and the Culbertson Extension Canal systems serve 9,600 acres in the Frenchman Valley Irrigation District and 11,500 acres in the H & RW Irrigation District. The water supply for these lands is furnished by flows from Frenchman Creek and Stinking Water Creek and off-season storage in Enders Reservoir.

The normal operation of Enders Reservoir, with the gradual rise in water surface during the spring months, provides desirable fish spawning conditions. Large irrigation releases substantially lower the pool level by late summer, thereby limiting the fishing and recreational usage.

1975 SUMMARY

The annual precipitation at Enders Dam was 98 percent of normal, while the annual inflow into Enders Reservoir was between the normal and dry-year forecasts. The 1975 inflow of about 38,300 acre-feet is significantly below the average pre-construction historical runoff at Enders damsite (60,700 acre-feet, 1929-1947). This is the eighth consecutive year with below-normal inflows. The conservation pool was not filled during 1975. A total of 3,243 acre-feet was conserved by pumpback of seepage into the reservoir between the 1974 and 1975 irrigation seasons. Irrigation releases were stopped the 28th of August with 1,800 acre-feet of active storage remaining.

The farm delivery averaged about 14.6 inches per acre for the two districts. A few farmers were able to supplement their project water supply from private irrigation wells. The Frenchman Valley Irrigation District reports that 9,060 acres received water in 1975, and H & RW reports 11,124 acres, which are 94 and 97 percent, respectively, of the lands with service available. The gross crop values for Frenchman Valley Irrigation District was $2,414,596, and for H & RW, $2,723,421, which are a 21- and 32-percent decrease, respectively, from the previous year.

1976 OUTLOOK

The fall and early winter inflows into Enders Reservoir were about midway between normal and dry-year forecasts. If dry-year conditions prevail, the project water supply is expected to be inadequate to irrigate 9,000 acres in

Frenchman Valley Irrigation District and 11,000 acres in H & RW Irrigation District. As much as 3,400 acre-feet are expected to be conserved by pumping seepage into the Enders Reservoir.

The control and stabilization program of the Frenchman River channel will be continued in 1976.

MEEKER-DRIFTWOOD, RED WILLOW, AND CAMBRIDGE UNITS, FRENCHMAN-CAMBRIDGE DIVISION IN NEBRASKA

GENERAL

The normal operation of Trenton Dam and Swanson Lake, Red Willow Dam and Hugh Butler Lake, and Medicine Creek Dam and Harry Strunk Lake during the spring months, with a slowly rising or stable pool level, enhances optimum spawning of northern and walleye pike. These lakes provide excellent opportunities for fishing, water sports, and recreation. The seepage below Red Willow and Medicine Creek Dams provides excellent fishing.

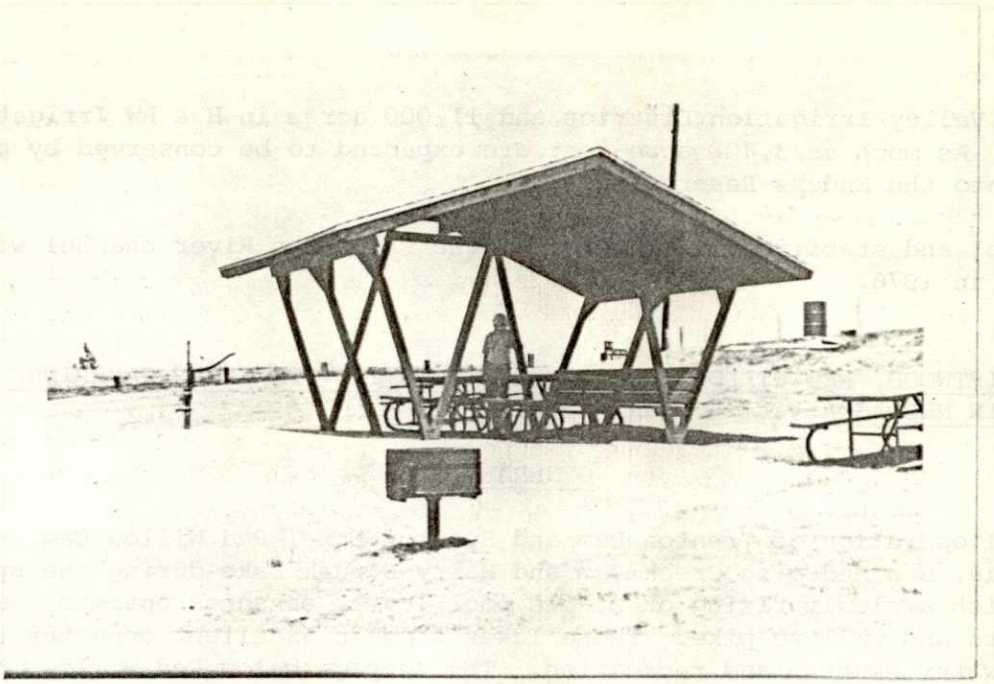
Service is provided for Frenchman-Cambridge Irrigation District by Meeker-Driftwood Canal to 16,476 acres; Red Willow Canal to 4,932 acres; Bartley Canal to 6,539 acres; and Cambridge Canal to 17,053 acres. The water supply for these lands is provided by storage in Swanson, Hugh Butler, and Harry Strunk Lakes, and flows of the Republican River and Red Willow and Medicine Creeks.

1975 SUMMARY

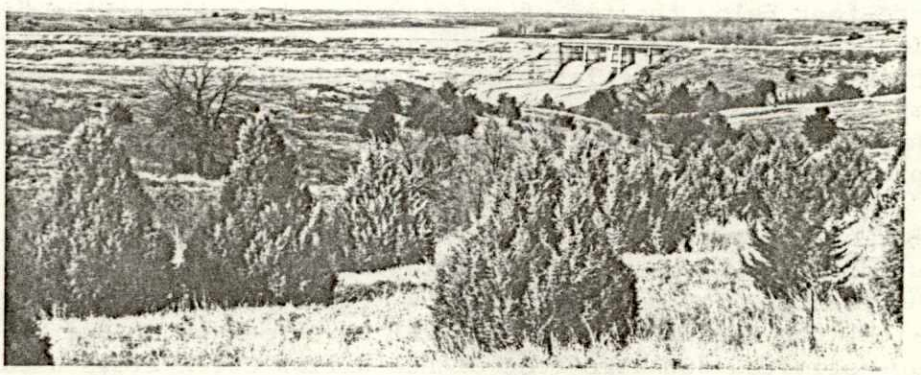
The precipitation at Trenton Dam was 103 percent of normal and the outflow to Swanson Lake was between the dry and normal-year forecasts. The content was 1,800 acre-feet below the top of conservation capacity at the beginning of the irrigation season in 1975. This storage and the 1975 inflows furnished full water supplies to project lands served by the Meeker-Driftwood and Bartley Canal systems. The Frenchman-Cambridge Irrigation District diverted 41,634 acre-feet into Meeker-Driftwood Canal to irrigate 16,156 acres, and 11,551 acre-feet into Bartley Canal for 6,289 acres.

The precipitation at Red Willow Dam was 98 percent of normal while the inflow into Hugh Butler Lake was above the normal-year forecasts. The water supply was more than adequate for Red Willow Canal diversions. The district diverted 10,011 acre-feet for the irrigation of 4,782 acres served by Red Willow Canal. There were an estimated 600 acre-feet of Red Willow Creek flows used downstream from Red Willow Dam for irrigation of non-project lands under senior water rights.

During late August, in order to conserve water in Swanson Lake, part of the demand for the Bartley Canal was satisfied by utilizing storage water from Hugh Butler Lake.



The Youth Conservation Corps constructed this shelter in 1975 near the south boat ramp of Hugh Butler Lake. This program has enhanced the visitation to the area lakes by the construction of these and other facilities.



View of the downstream face of Medicine Creek Dam. Note the trees and grass over the general area. It takes as long as twenty years from the time of construction for grasses and trees to cover the scars of construction. The dam was placed in operation in 1949.

The annual precipitation was 123 percent of normal at Medicine Creek Dam while the inflow was between the normal- and dry-year forecasts. The water supply was adequate for the diversion of 33,205 acre-feet for 16,633 acres served by the Cambridge Canal.

The 1975 gross crop value from the lands served by Meeker-Driftwood, Bartley, Red Willow, and Cambridge Canals was $12,712,180, as compared to $17,012,178 in 1974.

There were 56 acre-feet of storage water from Hugh Butler Lake sold under temporary contracts to private irrigators in Red Willow valley. Also, 270 acre-feet of storage water from Harry Strunk Lake were sold to private irrigators in Medicine Creek valley.

1976 OUTLOOK

The carryover storage and 1976 flows are forecasted to furnish an adequate water supply to irrigate 43,900 acres in the Frenchman-Cambridge Irrigation District. It is estimated that 16,200 acres will be served from the Meeker-Driftwood Canal, 16,600 acres from the Cambridge Canal, 4,800 acres from Red Willow Canal, and 6,300 acres from Bartley Canal.

ALMENA UNIT, KANASKA DIVISION IN KANSAS

GENERAL

There are 5,350 acres with service available in the Almena Irrigation District. The project water supply is provided by Prairie Dog Creek flows and Norton Reservoir storage.

The water service contract for the City of Norton, Kansas, provides for a maximum annual use of 1,600 acre-feet from Norton Reservoir.

1975 SUMMARY

The annual precipitation at Norton Dam was 128 percent of normal. The total 1975 inflow was slightly above the normal-year forecast.

Of the 1.64 acre-feet per acre of farm delivery to 5,280 acres of Almena Irrigation District land, 0.80 acre-feet per acre was available from project water supply and the balance from private irrigation wells.

Heavy rains during June 1975 above Norton Reservoir resulted in an inflow more than double the normal June inflow. The reservoir elevation rose nearly 12 feet during the month. Until this time, no active storage was available for irrigation releases.

For the fifth consecutive year, the district used water from privately owned irrigation wells to supplement the project water supply.

There were 9,018 acre-feet released from Norton Reservoir, of which the Almena Irrigation District diverted 6,697 acre-feet from Prairie Dog Creek. The water users pumped 4,440 acre-feet from irrigation wells as a supplemental supply to project lands. This well water combined with available project water provided a full irrigation supply. The average crop yields were the highest of the 13 districts discussed in this report and the highest ever for the District. The 5,280 acres that were irrigated in 1975 produced a gross crop value of $1,837,493 ($348.01 per acre). This is 88% of the crop value for 1974.

The City of Norton used 883 acre-feet to municipal water during 1975.

1976 OUTLOOK

The Almena Irrigation District expects to deliver water to 5,300 acres if an adequate water supply is available. If 1976 is a dry year without significant run-off producing storms above Norton Reservoir, a requirement shortage of approximately 11,000 acre-feet may be experienced. If normal inflow into the reservoir and normal rainfall over the irrigated area occur in 1976, a full water supply can be furnished the irrigation district lands from Norton storage and Prairie Dog Creek flows.

The City of Norton requirements are expected to be met in full in 1976.

FRANKLIN, SUPERIOR-COURTLAND, AND COURTLAND UNITS, BOSTWICK DIVISION IN NEBRASKA AND KANSAS

GENERAL

Harlan County Lake storage and Republican River Basin flows provide a project water supply for 22,787 acres in the Bostwick Irrigation District in Nebraska, and 12,771 acres in the Kansas-Bostwick Irrigation District above Lovewell Reservoir and, together with White Rock Creek flows and Lovewell Reservoir Storage, furnish a water supply for 27,329 acres below Lovewell Reservoir in the Kansas-Bostwick Irrigation District.

The lands in the Franklin and Superior-Courtland Units are in the Bostwick Irrigation District in Nebraska. The lands in the Courtland Unit are in the Kansas-Bostwick Irrigation District.

As recommended by the Kansas State Board of Health, the Nebraska State Department of Health, and the U. S. Public Health Service, it is desirable, for the sanitary quality of the stream, to maintain daily flows of 40 cubic feet per second in the Republican River below Superior, Nebraska, from

June through September. During normal years when the Superior Canal and Courtland Canal (in Nebraska) are in operation, the return flows of seepage and surface irrigation runoff plus the natural flow pickup in the Republican River below the Superior-Courtland Diversion Dam will meet this recommended flow. If it is possible through normal reservoir operations to comply with the above recommendations, the Bureau, as it has done in the past, will do so; however, during dry years when the forecasted reasonable minimum inflows will not fill Harlan County Lake before the start of the next irrigation season, the available flows in the Republican River below Harlan County Dam plus a minimum release of 10 cubic feet per second from Harlan County Lake are diverted into the Courtland Canal to be stored in Lovewell Reservoir. When this condition exists, the flow in the Republican River below Superior, Nebraska, will be less than the 40 cubic feet per second that was recommended.

At the request of the Kansas-Forestry, Fish and Game Commission, the Kansas-Bostwick Irrigation District and the Bureau of Reclamation maintain, when it is possible, a flow of 20 cubic feet per second into Lovewell Reservoir when the Courtland Canal is in operation and the conservation pool is below capacity. This recommended inflow provides excellent fishing aroung the canal inlet to the reservoir. The seepage below Lovewell Dam into White Rock Creek maintains a small live stream throughout the year.

1975 SUMMARY - BOSTWICK DIVISION
HARLAN COUNTY OPERATIONS

The precipitation at Harlan County Dam was 123 percent of normal, while the annual inflow was between the dry- and normal-year forecasts. The conservation capacity of Harlan County Lake was full at the beginning of the 1975 irrigation season. The 32,987 irrigated acres in the Bostwick Division in Nebraska and Kansas above Lovewell Dam were furnished a full water supply. Also 43,740 acre-feet were delivered to Lovewell Reservoir through Courtland Canal.

During the irrigation season, the mean daily flows in the Republican River below Superior, Nebraska, were greater than the 40 cubic feet per second recommended by various State and Federal health agencies.

1975 SUMMARY - BOSTWICK DIVISION - NEBRASKA

The Bostwick Irrigation District in Nebraska diverted 52,810 acre-feet for the irrigation of 20,797 acres. The gross crop value was $5,524,766, which is about $964,000 less than in 1974.

1975 SUMMARY - BOSTWICK DIVISION- KANSAS

The Kansas-Bostwick Irrigation District diverted a total of 79,574 acre-feet to serve 12,190 acres above Lovewell Dam and 19,587 acres below

Lovewell. The gross crop value was $8,273,460, which is $1,000,000 less than in the previous year.

1976 OUTLOOK - BOSTWICK DIVISION

The Bostwick Irrigation District in Nebraska and the Kansas-Bostwick Irrigation District expect to deliver water to 21,000 and 32,000 acres, respectively. The storage in Harlan County Lake and Lovewell Reservoir and the flows of the Republican River and White Rock Creek are forecasted to furnish an adequate water supply for the Bostwick lands.

CHAPTER IV - SMOKY HILL RIVER BASIN

KIRWIN UNIT, SOLOMON DIVISION IN KANSAS

GENERAL

The water supply for the 11,435 acres of land in the Kirwin Irrigation District is furnished by storage from Kirwin Reservoir and inflows from the North Fork of the Solomon River.

The operation of Kirwin Dam and Reservoir affords many opportunities for recreation, fishing, hunting, water sports, spawning of fish, and for preservation of waterfowl species.

1975 SUMMARY

The precipitation was 116 percent of normal. The inflow was between the normal- and wet-year forecasts. The water supply was adequate to fully meet the irrigation requirements.

The Kirwin Irrigation District diverted 21,399 acre-feet for irrigation of 9,410 acres. The gross crop value from these acres was $2,365,720, which is about $216,000 less than in 1974.

1976 OUTLOOK

The Kirwin Irrigation District estimates that 9,400 acres will be irrigated in 1976. The carryover storage in Kirwin Reservoir and the forecasted inflows from the North Fork of the Solomon River are expected to be adequate to irrigate these lands.

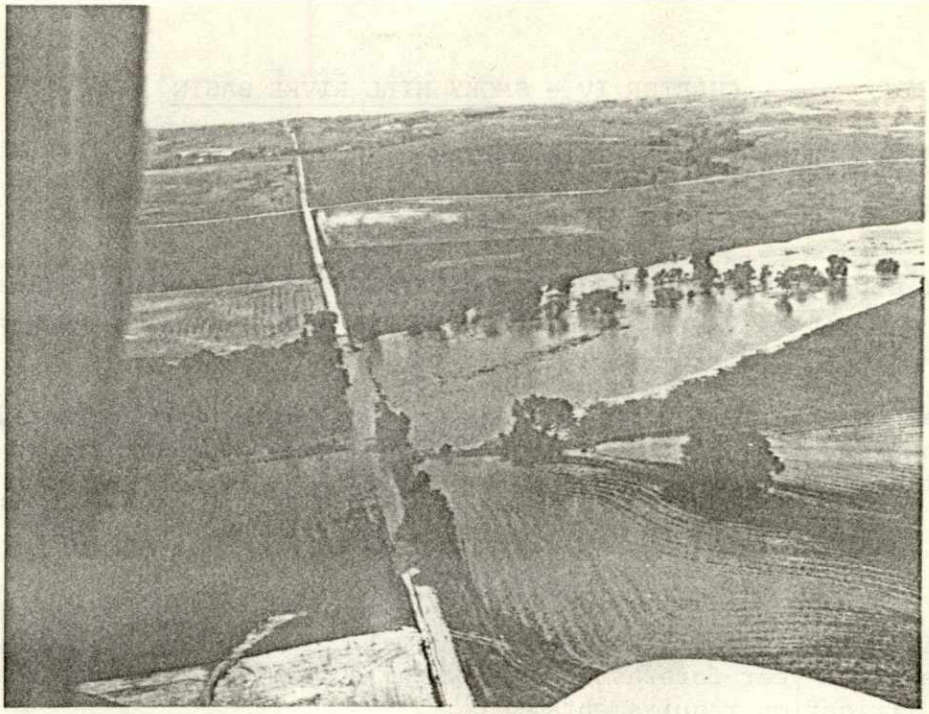
A pilot Irrigation Management Services program is expected to begin on the Kirwin and Webster Irrigation Districts during the 1976 irrigation season. This program will cover approximately 2,500 acres within the two districts.

WEBSTER UNIT, SOLOMON DIVISION IN KANSAS

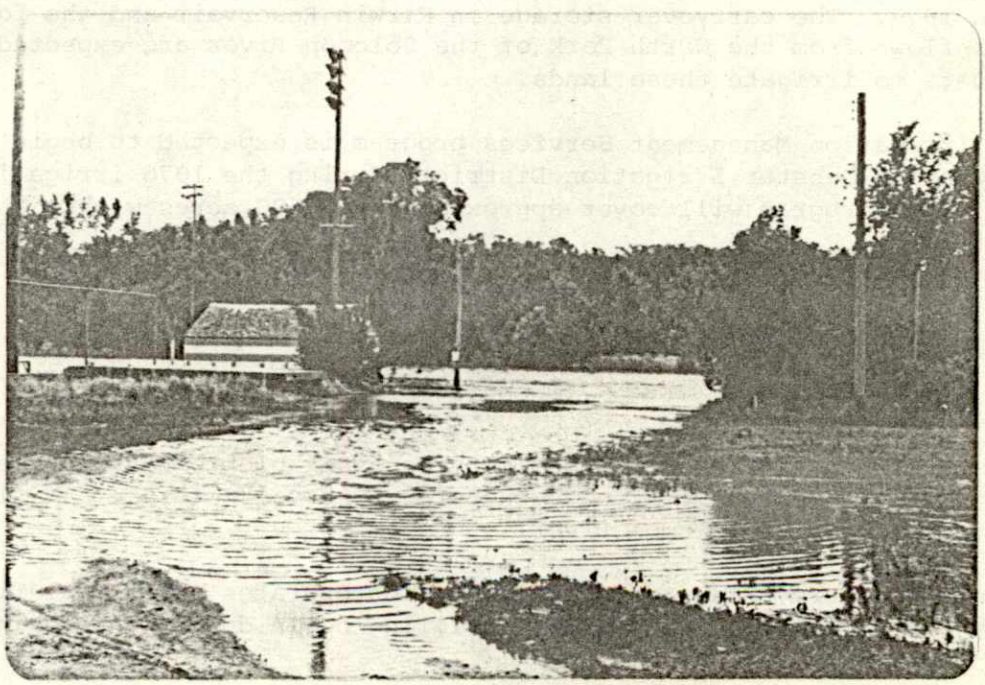
GENERAL

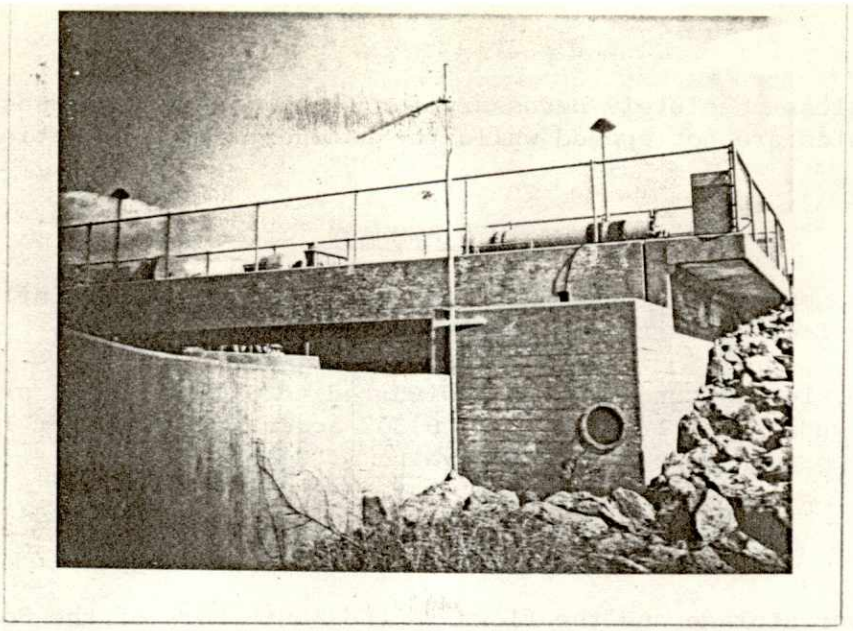
The Webster Irrigation District has service available to 8,500 acres. The project water supply is provided by Webster Reservoir storage and flows of the South Fork of the Solomon River.

The Kansas Forestry, Fish and Game Commission operates a seasonal fish hatchery at the Webster Dam spillway stilling basin during the spring

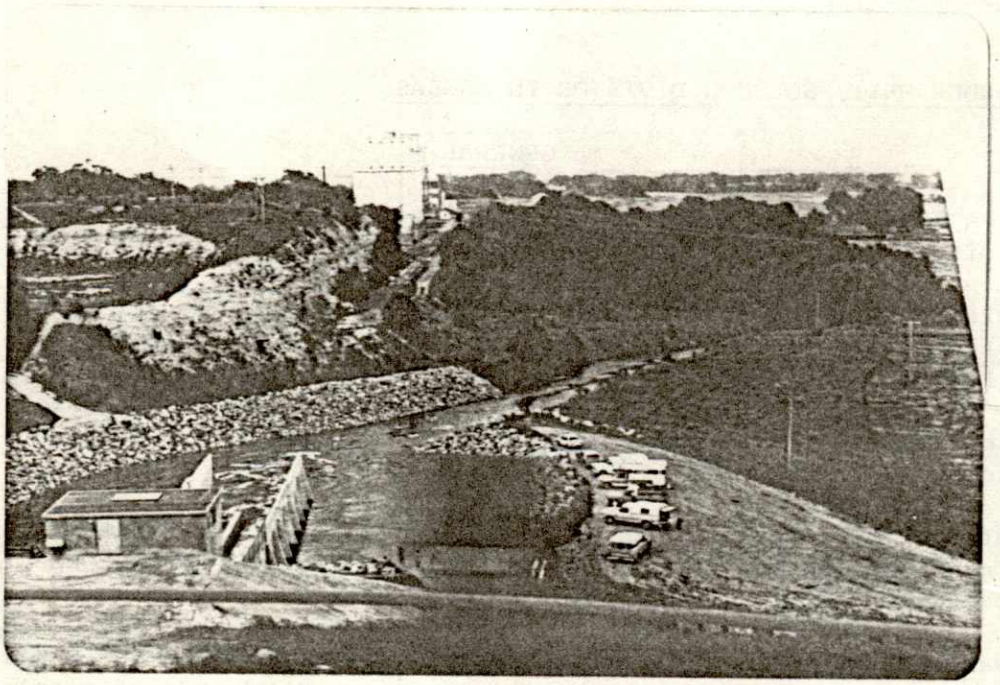


June floods on central Kansas streams greatly increased the storage in Norton, Kirwin, Webster, Glen Elder, Lovewell and Cedar Bluff Reservoirs. The above view illustrates the magnitude of the floods with over-bank flows in Bow Creek above Kirwin Reservoir on June 20, 1975. The view below shows the north fork of the Solomon River at Lenora, Kansas, on June 19, 1975.





An FM repeater two-way radio system was completed in 1975 providing communications between the Kansas River Projects Office and the twelve dams included in this report.



Releases near bank full capacity were made from Waconda Lake during late June 1975. These releases were made to test the operation of the Glen Elder Dam outlet works at flows above 3,000 cubic feet per second.

months. Unless absolutely necessary for flood control releases, the spillway gates are not opened while the hatchery is in operation.

1975 SUMMARY

In 1975, the precipitation at Webster Dam was normal. The inflow of 52,530 acre-feet was between normal- and wet-year forecasts.

During 1975, 14,960 acre-feet were diverted to Osborne Canal providing a full water supply for irrigation of 6,362 acres. The Webster Irrigation District reports a gross 1975 crop value of $1,690,797.

1976 OUTLOOK

The carryover storage and the flows in the South Fork of the Solomon River are expected to be adequate to irrigate 6,350 acres in the Webster Irrigation District in 1976.

A pilot Irrigation Management Services program is expected to begin on the Kirwin and Webster Irrigation Districts during the 1976 irrigation season. This program will cover approximately 2,500 acres within the two districts.

GLEN ELDER UNIT, SOLOMON DIVISION IN KANSAS

GENERAL

Releases from Waconda Lake will be regulated as required for the City of Beloit, Kansas, and water right administration.

The water service contract with Beloit provides for a normal annual use of up to 2,000 acre-feet of Waconda Lake storage as measured at the Glen Elder Dam river outlet works. In any water year that the City's water supply is insufficient and there is surplus water in Waconda Lake, such additional water may be delivered to the City at a rate of $15.00 per acre-foot.

The water service contract with the Mitchell County Rural Water District No. 2 provides for use of storage water as available from Waconda Lake, not to exceed 1,009 acre-feet per calendar year.

The available facilities along the shores of Waconda Lake and the large water surface area afford apportunities to many thousands of people for picnics, sightseeing, recreation, water sports, hunting, and fishing.

When compatible with flood control operations, the operating criteria

for Waconda Lake provide for a stable or rising pool level during the fish spawning period each spring.

1975 SUMMARY

The precipitation at Glen Elder Dam was 96 percent of normal and the inflow slightly above that expected in normal-year forecasts.

A total of 107 acre-feet was released for use by the City of Beloit, Kansas.

Modification of the outlet works at Glen Elder Dam was completed during 1975. This modification will enable releases to the WCH&T Rural Water District No. 2, Mitchell County, Kansas.

At the request of the State of Kansas, releases from Waconda Lake were increased from 150 to 250 cfs for a three-day period beginning April 15th. This increase was made to enhance upstream movement of fish below Glen Elder Dam.

1976 OUTLOOK

The municipal requirements of Beloit will be met in full with releases as required from Waconda Lake. It is expected that the Water Commissioner of the State of Kansas will request that inflows be passed through the lake for water right administration.

To facilitate the investigation of the condition of the soil cement on the upstream face of Glen Elder Dam, releases will be regulated beginning early July to lower the water level to 1453.0 by mid-August. This is 2.6 feet below the top of the conservation pool. This operation of lowering the pool elevation was not a requirement at the time Exhibit 14 was plotted. Therefore, Exhibit 14 represents normal operation without any additional drawdown.

Releases (up to 1,009 acre-feet per year) to the WCH&T Rural Water District No. 2 are expected to begin during early 1976.

CEDAR BLUFF UNIT, SMOKY HILL DIVISION IN KANSAS

GENERAL

Cedar Bluff Reservoir storage and Smoky Hill River flows provide a full water supply for the 6,800 acres in the Cedar Bluff Irrigation District, and up to 4,000 acre-feet for the Cedar Bluff National Fish Hatchery. Cedar Bluff storage also furnishes a maximum of 2,000 acre-feet per annum if required for the City of Russell, Kansas.

The return flows from the Cedar Bluff National Fish Hatchery and seepage from Cedar Bluff Reservoir maintain fisheries and enhance fishing in the Smoky Hill River below Cedar Bluff Dam.

1975 SUMMARY

The precipitation was 88 percent of normal. The inflow was just below the normal-year forecast. The water supplies for the Cedar Bluff Irrigation District and the Cedar Bluff National Fish Hatchery were furnished in full. No releases were required for the City of Russell.

The Cedar Bluff Irrigation District diverted 14,997 acre-feet to irrigate 6,755 acres of project lands. The gross crop value of $1,515,177 was a decrease of nearly $263,000 from the previous year.

The Cedar Bluff National Fish Hatchery diverted 1,721 acre-feet. Of this, 868 acre-feet were passed through the hatchery facilities and returned to the Smoky Hill River below Cedar Bluff Dam.

1976 OUTLOOK

The carryover storage in Cedar Bluff Reservoir and the inflows from the Smoky Hill River are expected to fully meet the requirements of the Cedar Bluff National Fish Hatchery, the City of Russell, and the irrigation of 6,750 acres of project lands.

TABLES

AND

EXHIBITS

TABLE 1

RESERVOIR DATA - NIOBRARA, LOWER PLATTE AND KANSAS RIVER BASINS

RESERVOIR		CAPACITY ALLOCATIONS 1/			
			LIVE CONSERVATION		FLOOD
		DEAD	Inactive	Active	CONTROL
Box Butte	- Elevation Ft.	3969.0	3976.5	4007.0	---
	Total Acre-feet	640	2,275	31,060	---
	Net Acre-feet	640	1,635	28,785	---
Merritt	- Elevation Ft.	2875.0	2896.0	2946.0	---
	Total Acre-feet	1,614	6,800	74,486	---
	Net Acre-feet	1,614	5,186	67,686	---
Sherman	- Elevation Ft.	2118.5	2129.0	2162.3	---
	Total Acre-feet	3,839	10,496	69,076	---
	Net Acre-feet	3,839	6,657	58,580	---
Bonny	- Elevation Ft.	3635.5	3638.0	3672.0	3710.0
	Total Acre-feet	1,418	2,134	41,340	170,160
	Net Acre-feet	1,418	716	39,206	128,820
Swanson Lake	- Elevation Ft.	2710.0	2720.0	2752.0	2773.0
	Total Acre-feet	4,101	15,510	120,160	253,950
	Net Acre-feet	4,101	11,409	104,650	133,790
Enders	- Elevation Ft.	3080.0	3082.4	3112.3	3127.0
	Total Acre-feet	8,467	9,968	44,480	74,520
	Net Acre-feet	8,467	1,501	34,512	30,040
Hugh Butler Lake	- Elevation Ft.	2552.0	2558.0	2581.8	2604.9
	Total Acre-feet	6,313	10,450	37,776	86,630
	Net Acre-feet	6,313	4,137	27,326	48,854
Harry Strunk Lake	- Elevation Ft.	2335.0	2343.0	2366.1	2386.2
	Total Acre-feet	4,911	9,548	37,141	89,313
	Net Acre-feet	4,911	4,637	27,593	52,172
Norton	- Elevation Ft.	2275.0	2280.4	2304.3	2331.4
	Total Acre-feet	2,718	5,284	35,935	134,740
	Net Acre-feet	2,718	2,566	30,651	98,805
Harlan County Lake	- Elevation Ft.	1885.0	1927.0	1946.0	1973.5
	Total Acre-feet	0	126,727	319,787	828,776
	Net Acre-feet	0	126,727	193,060	508,989
Lovewell	- Elevation Ft.	1562.0	1571.7	1582.6	1595.3
	Total Acre-feet	5,054	16,760	41,690	92,150
	Net Acre-feet	5,054	11,706	24,930	50,460
Kirwin	- Elevation Ft.	1693.0	1697.0	1729.25	1757.3
	Total Acre-feet	6,385	9,785	99,435	314,550
	Net Acre-feet	6,385	3,400	89,650	215,115
Webster	- Elevation Ft.	1855.5	1860.0	1892.45	1923.7
	Total Acre-feet	2,184	5,300	77,370	260,740
	Net Acre-feet	2,184	3,116	72,070	183,370
Waconda Lake	- Elevation Ft.	1407.8	1428.0	1455.6	1488.3
	Total Acre-feet	1,236	36,671	241,460	963,775
	Net Acre-feet	1,236	35,435	204,789	722,315
Cedar Bluff	- Elevation Ft.	2090.0	2107.8	2144.0	2166.0
	Total Acre-feet	8,261	35,320	185,090	376,950
	Net Acre-feet	8,261	27,059	149,770	191,860
Total Storage (A.F.)		57,141	303,028	1,456,286	3,646,254
Total Net Acre-feet		57,141	245,887	1,153,258	2,364,590

1/ Includes space for sediment storage.

TABLE 2
SUMMARY OF 1975 OPERATIONS

MIRAGE FLATS PROJECT

BOX BUTTE RESERVOIR

MONTH	Inflow (AF)	Outflow (AF)	Evap. (AF)	Precip. (Inches)	End Of Month Content (AF)	MIRAGE FLATS CANAL Diversions To Canal (AF)	MIRAGE FLATS CANAL Delivered To Farms (AF)
Jan.	1,459	46	61	0.10	8,806	0	0
Feb.	1,934	42	73	0.24	10,625	0	0
Mar.	2,609	49	147	1.10	13,038	0	0
Apr.	2,999	60	323	1.59	15,654	0	0
May	1,527	61	405	2.52	16,715	0	0
June	535	60	509	2.47	16,681	0	0
July	0	8,637	576	2.35	7,468	7,633	3,621
Aug.	838	7,222	212	1.09	872	7,071	4,323
Sep.	1,438	192	94	0.34	2,024	151	90
Oct.	931	43	79	0.28	2,833	0	0
Nov.	1,577	42	97	0.18	4,271	0	0
Dec.	1,881	43	57	0.17	6,052	0	0
TOTAL	17,728	16,497	2,633	12.43	---	14,855	8,034

NOTE.--Mirage Flats Canal:
Acres irrigated 1975 -- 10,950

SANDHILLS DIVISION
AINSWORTH UNIT

MERRITT RESERVOIR

MONTH	Inflow (AF)	Outflow (AF)	Evap. (AF)	Precip. (Inches)	End Of Month Content (AF)	AINSWORTH CANAL Diversions To Canal (AF)	AINSWORTH CANAL Delivered To Farms (AF)
Jan.	12,537	12,311	226	0.32	61,166	0	0
Feb.	12,236	11,697	283	0.14	61,422	0	0
Mar.	14,472	10,959	403	1.00	64,532	0	0
Apr.	18,118	7,340	824	1.03	74,486	0	0
May	15,062	13,914	1,148	1.32	74,486	3,819	480
June	13,867	11,937	1,341	3.08	75,075	3,967	1,067
July	14,045	34,939	1,623	1.61	52,558	33,926	27,254
Aug.	15,622	34,846	949	1.32	32,385	33,967	27,906
Sep.	15,275	9,500	533	0.32	37,327	8,710	4,983
Oct.	15,742	1,073	559	0.37	51,437	50	70
Nov.	13,554	4,183	397	0.53	60,411	0	0
Dec.	13,387	12,079	297	0.27	61,422	0	0
TOTAL	173,917	165,078	8,583	11.31	---	84,439	61,760

NOTE.--Ainsworth Canal:
Acres irrigated 1975 -- 33,694

MIDDLE LOUP DIVISION

MONTH	SARGENT UNIT SARGENT CANAL Diversions To Canal (AF)	SARGENT UNIT SARGENT CANAL Delivered To Farms (AF)	MIDDLE LOUP UNIT 1/ MIDDLE LOUP PUBLIC POWER CANALS Diversions To Canals (AF)	Diversion To Sherman Feeder Canal (AF)	FARWELL UNIT SHERMAN RESERVOIR Inflow (AF)	Outflow (AF)	Evap. (AF)	Precip. (Inches)	End Of Month Content (AF)	FARWELL CANALS Release To Canals (AF)	FARWELL CANALS Delivered To Farms (AF)
Jan.	0	0	0	0	0	1,390	88	0.00	53,941	0	0
Feb.	0	0	0	0	0	1,579	121	0.34	52,241	0	0
Mar.	0	0	0	0	0	473	237	0.45	51,531	0	0
Apr.	0	0	0	440	1,531	1,679	563	2.13	50,820	0	0
May	676	11	2,259	26,860	23,758	5,232	1,416	0.69	67,930	3,184	14
June	2,364	99	3,333	19,680	19,541	17,059	1,624	6.63	68,788	14,971	149
July	10,612	7,126	10,435	16,180	19,048	44,372	1,505	2.79	41,959	42,633	23,431
Aug.	11,954	9,218	12,426	12,750	13,390	44,265	914	0.37	10,170	42,881	26,823
Sep.	2,428	1,518	3,592	27,280	25,848	5,892	437	0.28	29,689	5,064	2,843
Oct.	0	0	0	25,650	24,232	1,384	296	0.06	52,241	0	0
Nov.	0	0	0	0	0	1,073	348	1.11	50,820	0	0
Dec.	0	0	0	0	0	1,516	113	0.16	49,191	0	0
TOTAL	28,034	17,972	32,045	128,840	127,348	125,914	7,662	15.01	---	108,733	53,260

1/ Non-Project.

NOTE.--Sargent Canal:
Acres irrigated 1975 -- 13,042

Middle Loup P. P. Canals:
Acres irrigated 1975 -- 13,694

Farwell Canals:
Acres irrigated 1975 -- 43,702

UPPER REPUBLICAN DIVISION
ARMEL UNIT

BONNY RESERVOIR

MONTH	Inflow (AF)	Outflow (AF)	Evap. (AF)	Precip. (Inches)	End Of Month Content (AF)	Outflow To Hale Ditch (AF)	Industrial Uses (AF)
Jan.	1,800	310	0	0.34	39,530	0	26
Feb.	1,510	310	0	0.13	40,730	0	24
Mar.	1,324	344	60	0.56	41,650	0	29
Apr.	1,970	1,808	592	1.47	41,220	374	29
May	4,570	954	1,006	6.46	43,830	382	25
June	6,380	4,600	1,030	4.55	44,580	272	27
July	1,970	4,424	1,376	2.92	40,750	493	27
Aug.	530	694	1,196	1.40	39,390	318	23
Sep.	140	628	782	0.53	38,120	258	26
Oct.	890	346	894	0.06	37,770	0	30
Nov.	1,460	350	140	1.80	38,740	0	26
Dec.	1,872	372	0	0.16	40,240	0	27
TOTAL	24,416	15,140	7,076	20.08	---	2,097 2/	313

2/ Includes 244 A.F. under temporary contracts.

TABLE 2
SUMMARY OF 1975 OPERATIONS

FRENCHMAN-CAMBRIDGE DIVISION
FRENCHMAN UNIT

	ENDERS RESERVOIR					CULBERTSON CANAL	CULBERTSON EXT. CANAL	
MONTH	Inflow (AF)	Outflow (AF)	Evap. (AF)	Precip. (Inches)	End Of Month Content (AF)	Diversions To Canal 1/ (AF)	Diversions To Canal (AF)	Delivered To Farms (AF)
Jan.	3,190	20	0	0.08	27,570	0	0	0
Feb.	2,756	56	0	0.48	30,270	0	0	0
Mar.	2,260	60	0	0.76	32,470	0	0	0
Apr.	2,810	60	480	2.05	34,740	3,567	0	0
May	3,200	62	708	4.25	37,170	658	3,000	78
June	3,620	116	784	4.82	39,890	448	3,824	300
July	4,540	18,834	986	2.85	24,610	6,941	9,585	6,189
Aug.	2,860	14,846	574	0.44	12,050	7,843	8,614	5,558
Sep.	3,290	0	330	0.81	15,010	0	0	0
Oct.	3,160	0	340	0.09	17,830	0	0	0
Nov.	3,090	0	60	1.50	20,860	0	0	0
Dec.	3,560	0	0	0.18	24,420	0	0	0
TOTAL	38,336	34,054	4,262	18.31	---	19,457	25,023	12,125

1/ A.F. delivery to farms unavailable due to lack of measuring devices.

NOTE.--Culbertson Canal: Acres irrigated 1975 -- 9,060

Culbertson Extension Canal: Acres irrigated 1975 -- 11,124

FRENCHMAN-CAMBRIDGE DIVISION (Continued)
MEEKER-DRIFTWOOD UNIT

	SWANSON LAKE					MEEKER-DRIFTWOOD		BARTLEY CANAL	
MONTH	Inflow (AF)	Outflow (AF)	Evap. (AF)	Precip. (Inches)	End Of Month Content (AF)	Diversions To Canal (AF)	Delivered To Farms (AF)	Diversions To Canal (AF)	Delivered To Farms (AF)
Jan.	5,280	60	0	0.12	74,210	0	0	0	0
Feb.	6,636	56	0	0.55	80,970	0	0	0	0
Mar.	7,400	62	28	0.60	88,100	0	0	0	0
Apr.	9,580	60	1,360	1.81	96,260	0	0	0	0
May	8,350	2,260	2,030	3.85	100,320	1,534	8	910	28
June	22,189	1,783	2,396	6.84	118,330	1,765	0	486	0
July	4,520	27,842	3,098	1.32	91,910	18,645	14,715	5,261	4,308
Aug.	480	20,980	3,380	0.62	68,030	16,174	12,441	3,890	3,016
Sep.	114	3,922	1,732	1.15	62,490	3,516	2,308	1,004	844
Oct.	184	62	1,452	0.06	61,160	0	0	0	0
Nov.	1,130	60	240	2.84	61,990	0	0	0	0
Dec.	5,382	62	0	0.13	67,310	0	0	0	0
TOTAL	71,245	57,209	15,716	19.89	---	41,634	29,482	11,551	8,196

NOTE.--Meeker-Driftwood Canal: Acres irrigated 1975 -- 16,156

Bartley Canal: Acres irrigated 1975 -- 6,289

FRENCHMAN-CAMBRIDGE DIVISION (Continued)
RED WILLOW UNIT

	HUGH BUTLER LAKE					RED WILLOW CANAL	
MONTH	Inflow (AF)	Outflow (AF)	Evap. (AF)	Precip. (Inches)	End Of Month Content (AF)	Diversions To Canal (AF)	Delivered To Farms (AF)
Jan.	1,520	310	0	0.23	30,970	0	0
Feb.	1,436	306	0	0.65	32,100	0	0
Mar.	2,020	380	0	0.68	33,740	0	0
Apr.	2,480	320	570	1.94	35,330	0	0
May	1,910	1,022	838	1.88	35,380	537	28
June	5,220	1,308	842	6.95	38,450	692	16
July	1,680	6,372	1,148	1.52	32,610	4,903	3,843
Aug.	2,200	4,928	922	1.34	28,960	2,973	2,233
Sep.	1,100	1,916	544	0.85	27,600	906	601
Oct.	1,270	320	500	0.04	28,050	0	0
Nov.	1,490	312	88	3.19	29,140	0	0
Dec.	1,950	310	0	0.05	30,780	0	0
TOTAL	24,276	17,804 2/	5,452	19.32	---	10,011	6,721

2/ Includes 56 A.F. under temporary contracts.

NOTE.--Red Willow Canal: Acres irrigated 1975 -- 4,782

FRENCHMAN-CAMBRIDGE DIVISION (Continued)
CAMBRIDGE UNIT

	HARRY STRUNK LAKE					CAMBRIDGE CANAL	
MONTH	Inflow (AF)	Outflow (AF)	Evap. (AF)	Precip. (Inches)	End Of Month Content (AF)	Diversions To Canal (AF)	Delivered To Farms (AF)
Jan.	3,150	60	0	0.10	26,290	0	0
Feb.	2,686	56	0	0.63	28,920	0	0
Mar.	3,612	62	0	1.21	32,470	0	0
Apr.	3,920	60	550	1.16	35,780	0	0
May	2,870	640	940	1.23	37,070	346	0
June	12,400	8,686	964	9.83	39,820	2,781	0
July	3,760	14,476	1,104	3.97	28,000	15,810	12,698
Aug.	2,970	10,330	750	1.80	19,890	12,361	9,768
Sep.	2,040	1,526	454	0.99	19,950	1,907	1,119
Oct.	2,490	124	466	0.09	21,850	0	0
Nov.	2,940	120	100	2.44	24,570	0	0
Dec.	3,364	124	0	0.09	27,810	0	0
TOTAL	46,202	36,264 3/	5,328	23.54	---	33,205	23,585

3/ Includes 269.5 A.F. under temporary contracts.

NOTE.--Cambridge Canal: Acres irrigated 1975 -- 16,633

TABLE 2
SUMMARY OF 1975 OPERATIONS

KANASKA DIVISION
ALMENA UNIT

	NORTON RESERVOIR						ALMENA CANAL	
MONTH	Inflow (AF)	Outflow (AF)	Evap. (AF)	Precip. (Inches)	End Of Month Content (AF)	Release To City Of Norton (AF)	Diversions To Canal (AF)	Delivered To Farms (AF)
Jan.	172	62	0	0.06	3,860	49	0	0
Feb.	190	70	0	0.58	3,980	68	0	0
Mar.	342	92	0	0.83	4,230	47	0	0
Apr.	480	120	180	1.93	4,410	52	0	0
May	512	160	272	3.21	4,490	97	73	0
June	10,180	182	388	7.41	14,100	68	440	0
July	226	5,258	688	2.44	8,380	163	4,162	2,854
Aug.	5,140	2,648	582	4.66	10,290	114	2,018	1,368
Sep.	140	140	380	1.43	9,910	85	4	0
Oct.	98	122	366	0.20	9,520	54	0	0
Nov.	290	116	84	3.31	9,610	49	0	0
Dec.	232	62	0	0.05	9,780	37	0	0
TOTAL	18,002	9,032	2,940	26.11	---	883	6,697	4,222

NOTE.--Almena Canal:
Acres irrigated 1975 -- 5,280

BOSTWICK DIVISION
FRANKLIN UNIT

	HARLAN COUNTY LAKE					FRANKLIN CANAL		NAPONEE CANAL	
MONTH	Inflow (AF)	Outflow (AF)	Evap. (AF)	Precip. (Inches)	End Of Month Content (AF)	Release To Canal (AF)	Delivered To Farms (AF)	Release To Canal (AF)	Delivered To Farms (AF)
Jan.	9,300	620	0	0.04	247,130	0	0	0	0
Feb.	9,640	560	0	0.74	256,210	0	0	0	0
Mar.	15,760	620	0	0.70	271,350	0	0	0	0
Apr.	16,230	600	3,500	2.36	283,480	0	0	0	0
May	15,840	1,990	6,360	5.64	290,970	0	0	0	0
June	72,200	10,738	6,312	4.72	346,120	2,918	8	8	0
July	21,270	69,840	9,000	3.82	288,550	13,461	6,926	1,911	1,326
Aug.	22,120	44,376	6,514	3.83	259,780	12,211	5,814	1,468	916
Sep.	2,600	6,196	4,664	0.89	251,520	1,023	210	0	0
Oct.	4,460	620	4,530	0.10	250,830	0	0	0	0
Nov.	6,880	600	780	2.73	256,330	0	0	0	0
Dec.	9,750	620	0	0.09	265,460	0	0	0	0
TOTAL	206,050	137,380	41,660	25.66	---	29,613	12,958	3,387	2,242

NOTE.--Franklin Canal:
Acres irrigated 1975 -- 10,249

Naponee Canal:
Acres irrigated 1975 -- 1,405

BOSTWICK DIVISION (Continued)
SUPERIOR-COURTLAND UNIT

	FRANKLIN PUMP CANAL		SUPERIOR CANAL		COURTLAND CANAL - ABOVE LOVEWELL				
						NEBRASKA USE		KANSAS USE	
MONTH	Diversions To Canal (AF)	Delivered To Farms (AF)	Diversions To Canal (AF)	Delivered To Farms (AF)	Total Diversion (AF)	Total (AF)	Delivered To Farms (AF)	Diversions To Canal (AF)	Delivered To Farms (AF)
Jan.	0	0	0	0	0	0	0	0	0
Feb.	0	0	0	0	0	0	0	0	0
Mar.	0	0	0	0	0	0	0	0	0
Apr.	0	0	0	0	900	0	0	0	0
May	0	0	1,334	0	4,905	7	6	248	33
June	0	0	57	0	3,542	0	0	708	0
July	2,043	882	7,811	4,858	36,293	1,226	1,096	16,493	10,557
Aug.	1,406	764	4,983	2,643	28,017	526	438	9,791	6,278
Sep.	0	0	392	77	7,442	25	16	679	252
Oct.	0	0	0	0	0	0	0	0	0
Nov.	0	0	0	0	0	0	0	0	0
Dec.	0	0	0	0	0	0	0	0	0
TOTAL	3,449	1,646	14,577	7,578	81,099	1,784	1,556	27,919	17,120

NOTE.--Franklin Pump Canal:
Acres irrigated 1975 -- 2,041
Superior Canal:
Acres irrigated 1975 -- 5,340

NOTE.--Courtland Canal--Nebraska Use:
Acres irrigated 1975 -- 1,762
Courtland Canal--Kansas Use:
Acres irrigated 1975 -- 12,190

BOSTWICK DIVISION (Continued)
COURTLAND UNIT

	LOVEWELL RESERVOIR					COURTLAND (Below)	
MONTH	Inflow (AF)	Outflow (AF)	Evap. (AF)	Precip. (Inches)	End Of Month Content (AF)	Release To Canal (AF)	Delivered To Farms (AF)
Jan.	790	60	0	0.75	32,220	0	0
Feb.	1,476	56	0	1.29	33,640	0	0
Mar.	6,400	60	0	1.44	39,980	0	0
Apr.	2,424	190	824	2.64	41,390	134	0
May	3,801	2,054	1,387	3.25	41,750	1,978	14
June	21,274	10,526	1,288	6.29	51,210	2,227	0
July	20,580	33,728	1,882	0.84	36,180	28,948	20,860
Aug.	15,872	17,557	1,575	2.68	32,920	17,433	10,911
Sep.	5,551	905	976	0.99	36,590	885	214
Oct.	330	62	1,318	0.03	35,540	0	0
Nov.	850	60	260	3.00	36,070	0	0
Dec.	312	62	0	0.18	36,320	0	0
TOTAL	79,660	65,320	9,510	23.38	---	51,655	31,999

NOTE.--Courtland Canal below Lovewell:
Acres irrigated 1975 -- 19,587

TABLE 2
SUMMARY OF 1975 OPERATIONS

SOLOMON DIVISION
KIRWIN UNIT

	KIRWIN RESERVOIR					KIRWIN CANAL	
MONTH	Inflow (AF)	Outflow (AF)	Evap. (AF)	Precip. (Inches)	End Of Month Content (AF)	Release To Canal (AF)	Delivered To Farms (AF)
Jan.	950	0	250	0.06	31,210	0	0
Feb.	1,070	0	150	0.56	32,130	0	0
Mar.	1,750	0	300	0.95	33,580	0	0
Apr.	1,952	0	702	1.83	34,830	0	0
May	2,332	0	1,212	6.52	35,950	0	0
June	34,858	1,144	1,554	6.70	68,110	1,142	0
July	3,468	10,890	2,428	0.34	58,260	10,707	6,402
Aug.	7,220	9,318	1,942	3.87	54,220	9,072	5,940
Sep.	214	564	1,310	2.40	52,560	478	117
Oct.	24	0	1,294	0.05	51,250	0	0
Nov.	1,650	0	1,030	2.65	51,910	0	0
Dec.	1,740	0	770	0.00	52,880	0	0
TOTAL	57,228	21,916	12,942	25.93	---	21,399	12,459

NOTE.--Kirwin Canal:
Acres irrigated 1975 -- 9,410

SOLOMON DIVISION (Continued)
WEBSTER UNIT

	WEBSTER RESERVOIR					OSBORNE CANAL	
MONTH	Inflow (AF)	Outflow (AF)	Evap. (AF)	Precip. (Inches)	End Of Month Content (AF)	Diversions To Canal (AF)	Delivered To Farms (AF)
Jan.	400	0	210	0.16	16,040	0	0
Feb.	530	0	100	0.67	16,470	0	0
Mar.	1,050	0	200	1.08	17,320	0	0
Apr.	1,502	0	502	1.94	18,320	0	0
May	2,228	0	858	5.85	19,690	0	0
June	38,034	250	1,224	6.36	56,250	609	0
July	2,698	9,352	2,136	0.33	47,460	7,819	3,917
Aug.	3,200	7,866	1,694	3.19	41,100	6,204	3,958
Sep.	38	86	1,582	1.11	39,470	58	52
Oct.	20	0	1,260	0.02	38,230	0	0
Nov.	1,180	0	1,010	3.17	38,400	0	0
Dec.	1,650	0	760	0.00	39,290	0	0
TOTAL	52,530	17,554	11,536	23.88	---	14,690	7,927

NOTE.--Osborne Canal:
Acres irrigated 1975 -- 6,362

SOLOMON DIVISION (Continued)
GLEN ELDER UNIT

	WACONDA LAKE					OUTFLOW TO RIVER	
MONTH	Inflow (AF)	Outflow 1/ (AF)	Evap. (AF)	Precip. (Inches)	End Of Month Content (AF)	City of Beloit (AF)	Controlled Releases 2/ (AF)
Jan.	7,390	732	1,548	1.00	237,940	107	625
Feb.	6,676	3,486	800	1.15	240,330	0	3,486
Mar.	11,352	9,672	1,550	1.86	240,460	0	9,672
Apr.	13,982	9,924	3,688	3.13	240,830	0	9,924
May	14,246	4,426	5,920	3.71	244,730	0	4,426
June	80,318	29,768	6,530	5.45	288,750	0	29,768
July	6,918	50,266	8,712	0.87	236,690	0	50,266
Aug.	10,586	2,270	7,946	2.97	237,060	0	2,270
Sep.	3,048	1,152	4,906	1.59	234,050	0	1,152
Oct.	2,360	1,540	4,710	0.02	230,160	0	1,540
Nov.	8,000	590	3,770	2.46	233,800	0	590
Dec.	7,033	433	2,830	0.20	237,570	0	433
TOTAL	171,909	114,259	52,910	24.41	---	107	114,152

1/ No releases required for City of Beloit, Kansas.
2/ Flood control and water right administration.

SMOKY HILL DIVISION
ELLIS UNIT

	CEDAR BLUFF RESERVOIR					CEDAR BLUFF CANAL		Release To Fish Hatchery
MONTH	Inflow (AF)	Outflow 3/ (AF)	Evap. (AF)	Precip. (Inches)	End Of Month Content (AF)	Release To Canal (AF)	Delivered To Farms (AF)	(AF)
Jan.	318	138	550	0.07	108,960	0	0	65
Feb.	502	112	300	0.86	109,050	0	0	59
Mar.	800	110	600	0.67	109,140	0	0	64
Apr.	1,834	120	1,524	1.75	109,330	0	0	89
May	3,371	1,201	2,630	4.92	108,870	932	0	229
June	21,599	808	2,751	5.63	126,910	475	0	271
July	703	7,388	3,675	0.38	116,550	7,066	5,219	243
Aug.	6,050	5,192	3,468	1.98	113,940	4,937	3,483	227
Sep.	24	1,854	2,830	0.75	109,280	1,587	1,026	183
Oct.	0	130	2,300	0.00	106,850	0	0	124
Nov.	850	88	762	2.43	106,850	0	0	87
Dec.	1,439	89	1,300	0.00	106,900	0	0	80
TOTAL	37,490	17,230	22,690	19.44	---	14,997	9,728	1,721

3/ No releases required for City of Russell, Kansas.

NOTE.--Cedar Bluff Canal:
Acres irrigated 1975 -- 6,755

TABLE 3

ACRES IRRIGATED IN 1975 AND ESTIMATES FOR 1976

Irrigation District and Canal	Acres With Service Available	Acres Irrigated in 1975	Estimated Acres to be Irrigated in 1976
Mirage Flats Irrigation District			
Mirage Flats Canal	11,662	10,950	11,000
Ainsworth Irrigation District			
Ainsworth Canal	33,960	33,694	33,700
Sargent Irrigation District			
Sargent Canal	13,650	13,042	13,000
Farwell Irrigation District			
Farwell Canal	48,250	43,702	44,000
Frenchman Valley Irrigation District			
Culbertson Canal	9,600	9,060	8,500
H & RW Irrigation District			
Culbertson Extension Canal	11,500	11,124	10,800
Frenchman-Cambridge Irrigation District			
Meeker-Driftwood Canal	16,476	16,156	16,200
Bartley Canal	6,539	6,289	6,300
Red Willow Canal	4,932	4,782	4,800
Cambridge Canal	17,053	16,633	16,600
Total Frenchman-Cambridge Irr. Dist.	45,000	43,860	43,900
Almena Irrigation District			
Almena Canal	5,350	5,280	5,300
Bostwick Irrigation District in Nebraska			
Franklin Canal	11,116	10,249	10,400
Naponee	1,737	1,405	1,500
Franklin Pump Canal	2,091	2,041	2,100
Superior Canal	5,863	5,340	5,300
Courtland Canal (Nebr.)	1,980	1,762	1,700
Total Bostwick Irr. Dist. in Nebraska	22,787	20,797	21,000
Kansas-Bostwick Irrigation District			
Courtland Canal above Lovewell	12,771	12,190	9,800
Courtland Canal below Lovewell	27,329	19,587	22,200
Total Kansas-Bostwick Irr. Dist.	40,100	31,777	32,000
Kirwin Irrigation District			
Kirwin Canal	11,435	9,410	9,400
Webster Irrigation District			
Osborne Canal	8,500	6,362	6,350
Cedar Bluff Irrigation District			
Cedar Bluff Canal	6,800	6,755	6,750
Non-Project Uses			
Middle Loup P. P. Canals	13,500	13,694	13,700
Hale Ditch	700	700	700

BOX BUTTE RESERVOIR OPERATION ESTIMATES - 1976

MONTH	HISTORICAL INFLOW MEAN CFS	HISTORICAL INFLOW 1000 AF	NET EVAPORATION INCHES	NET EVAPORATION 1000 AF	RELEASE REQUIREMENT MEAN CFS	RELEASE REQUIREMENT 1000 AF	RESERVOIR SPILL 1000 AF	REQUIREMENT SHORTAGE 1000 AF	END OF MONTH ELEV FT	END OF MONTH CONT 1000 AF	RESERVOIR CHANGE 1000 AF
REASONABLE MINIMUM INFLOW CONDITIONS											
JAN	33.	2.0	1.09	.1	2.	.1	0.0	0.0	3987.1	7.9	1.8
FEB	38.	2.1	1.15	.1	2.	.1	0.0	0.0	3989.4	9.8	1.9
MAR	52.	3.2	2.07	.2	2.	.1	0.0	0.0	3992.6	12.7	2.9
APR	44.	2.6	3.76	.3	29.	1.7	0.0	0.0	3993.2	13.3	.6
MAY	23.	1.4	6.32	.5	55.	3.4	0.0	0.0	3990.6	10.8	-2.5
JUN	13.	.8	7.22	.5	57.	3.4	0.0	0.0	3986.8	7.7	-3.1
JUL	8.	.5	8.60	.4	166.	10.2	0.0	4.7	3976.5	2.3	-5.4
AUG	8.	.5	7.98	.2	166.	10.2	0.0	9.9	3976.5	2.3	0.0
SEP	8.	.5	5.81	.2	86.	5.1	0.0	4.8	3976.5	2.3	0.0
OCT	11.	.7	4.64	.1	2.	.1	0.0	0.0	3977.9	2.8	.5
NOV	25.	1.5	2.97	.1	2.	.1	0.0	0.0	3980.8	4.1	1.3
DEC	36.	2.2	1.39	.1	2.	.1	0.0	0.0	3984.3	6.1	2.0
TOTAL		18.0	53.00	2.8		34.6	0.0	19.4			-.0
MOST PROBABLE INFLOW CONDITIONS											
JAN	37.	2.3	.99	.1	2.	.1	0.0	0.0	3987.4	8.2	2.1
FEB	43.	2.4	1.04	.1	2.	.1	0.0	0.0	3990.1	10.4	2.2
MAR	55.	3.4	1.89	.1	2.	.1	0.0	0.0	3993.5	13.6	3.2
APR	49.	2.9	3.41	.3	20.	1.2	0.0	0.0	3994.9	15.0	1.4
MAY	24.	1.5	5.71	.5	18.	1.1	0.0	0.0	3994.8	14.9	-.1
JUN	24.	1.4	6.54	.6	42.	2.5	0.0	0.0	3993.1	13.2	-1.7
JUL	18.	1.1	7.80	.5	141.	8.7	0.0	0.0	3982.6	5.1	-8.1
AUG	16.	1.0	7.23	.3	143.	8.8	0.0	5.3	3976.5	2.3	-2.8
SEP	12.	.7	5.24	.1	40.	2.4	0.0	1.8	3976.5	2.3	0.0
OCT	16.	1.0	4.19	.1	2.	.1	0.0	0.0	3978.6	3.1	.8
NOV	32.	1.9	2.70	.1	2.	.1	0.0	0.0	3982.1	4.8	1.7
DEC	41.	2.5	1.26	.1	2.	.1	0.0	0.0	3985.9	7.1	2.3
TOTAL		22.1	48.00	2.9		25.3	0.0	7.1			1.0
REASONABLE MAXIMUM INFLOW CONDITIONS											
JAN	42.	2.6	.91	.1	2.	.1	0.0	0.0	3987.8	8.5	2.4
FEB	49.	2.7	.95	.1	2.	.1	0.0	0.0	3990.8	11.0	2.5
MAR	76.	4.7	1.72	.1	2.	.1	0.0	0.0	3995.3	15.5	4.5
APR	62.	3.7	3.12	.3	10.	.6	0.0	0.0	3997.8	18.3	2.8
MAY	39.	2.4	5.25	.5	13.	.8	0.0	0.0	3998.7	19.4	1.1
JUN	54.	3.2	6.00	.6	27.	1.6	0.0	0.0	3999.5	20.4	1.0
JUL	34.	2.1	7.14	.7	107.	6.6	0.0	0.0	3995.1	15.2	-5.2
AUG	26.	1.6	6.63	.5	106.	6.5	0.0	0.0	3989.4	9.8	-5.4
SEP	22.	1.3	4.82	.3	29.	1.7	0.0	0.0	3988.6	9.1	-.7
OCT	29.	1.8	3.85	.3	2.	.1	0.0	0.0	3990.2	10.5	1.4
NOV	42.	2.5	2.46	.2	2.	.1	0.0	0.0	3992.6	12.7	2.2
DEC	47.	2.9	1.15	.1	2.	.1	0.0	0.0	3995.3	15.4	2.7
TOTAL		31.5	44.00	3.8		18.4	0.0	0.0			9.3

MERRITT RESERVOIR OPERATION ESTIMATES - 1976

MONTH	HISTORICAL INFLOW MEAN CFS	HISTORICAL INFLOW 1000 AF	NET EVAPORATION INCHES	NET EVAPORATION 1000 AF	RELEASE REQUIREMENT MEAN CFS	RELEASE REQUIREMENT 1000 AF	RESERVOIR SPILL 1000 AF	REQUIREMENT SHORTAGE 1000 AF	END OF MONTH ELEV FT	END OF MONTH CONT 1000 AF	RESERVOIR CHANGE 1000 AF
REASONABLE MINIMUM INFLOW CONDITIONS											
JAN	236.	14.5	1.13	.2	16.	1.0	13.8	0.0	2941.0	60.9	-.5
FEB	254.	14.1	1.43	.3	18.	1.0	12.8	0.0	2941.0	60.9	0.0
MAR	270.	16.6	1.99	.5	16.	1.0	1.5	0.0	2946.0	74.5	13.6
APR	257.	15.3	3.31	.8	17.	1.0	13.5	0.0	2946.0	74.5	0.0
MAY	257.	15.8	4.79	1.2	104.	6.4	8.2	0.0	2946.0	74.5	0.0
JUN	235.	14.0	6.20	1.5	165.	9.8	2.7	0.0	2946.0	74.5	0.0
JUL	216.	13.3	8.03	1.6	712.	43.8	0.0	0.0	2932.5	42.4	-32.1
AUG	218.	13.4	7.33	.8	712.	43.8	0.0	0.0	2904.7	11.2	-31.2
SEP	224.	13.3	5.39	.3	141.	8.4	0.0	0.0	2911.3	15.8	4.6
OCT	241.	14.8	3.76	.3	16.	1.0	0.0	0.0	2924.2	29.3	13.5
NOV	245.	14.6	2.15	.3	17.	1.0	0.0	0.0	2932.6	42.6	13.3
DEC	246.	15.1	1.49	.3	16.	1.0	0.0	0.0	2939.1	56.4	13.8
TOTAL		174.8	47.00	8.1		119.2	52.5	0.0			-5.0
MOST PROBABLE INFLOW CONDITIONS											
JAN	263.	16.2	1.07	.2	16.	1.0	15.5	0.0	2941.0	60.9	-.5
FEB	274.	15.2	1.34	.3	18.	1.0	13.9	0.0	2941.0	60.9	0.0
MAR	283.	17.4	1.87	.4	16.	1.0	2.4	0.0	2946.0	74.5	13.6
APR	284.	16.9	3.10	.8	17.	1.0	15.1	0.0	2946.0	74.5	0.0
MAY	280.	17.2	4.48	1.1	81.	5.0	11.1	0.0	2946.0	74.5	0.0
JUN	260.	15.5	5.80	1.4	129.	7.7	6.4	0.0	2946.0	74.5	0.0
JUL	241.	14.8	7.50	1.7	527.	32.4	0.0	0.0	2938.6	55.2	-19.3
AUG	241.	14.8	6.85	1.1	527.	32.4	0.0	0.0	2929.1	36.5	-18.7
SEP	249.	14.8	5.04	.7	108.	6.4	0.0	0.0	2933.5	44.2	7.7
OCT	259.	15.9	3.52	.6	16.	1.0	0.0	0.0	2940.0	58.5	14.3
NOV	266.	15.8	2.02	.4	17.	1.0	12.0	0.0	2941.0	60.9	2.4
DEC	262.	16.1	1.41	.3	16.	1.0	14.8	0.0	2941.0	60.9	0.0
TOTAL		190.6	44.00	9.0		90.9	91.2	0.0			-.5
REASONABLE MAXIMUM INFLOW CONDITIONS											
JAN	281.	17.3	.94	.2	16.	1.0	16.6	0.0	2941.0	60.9	-.5
FEB	293.	16.3	1.19	.3	18.	1.0	15.0	0.0	2941.0	60.9	0.0
MAR	304.	18.7	1.65	.4	16.	1.0	3.7	0.0	2946.0	74.5	13.6
APR	316.	18.8	2.75	.7	17.	1.0	17.1	0.0	2946.0	74.5	0.0
MAY	299.	18.4	3.97	1.0	55.	3.4	14.0	0.0	2946.0	74.5	0.0
JUN	279.	16.6	5.15	1.2	84.	5.0	10.4	0.0	2946.0	74.5	0.0
JUL	265.	16.3	6.66	1.6	345.	21.2	0.0	0.0	2943.7	68.0	-6.5
AUG	257.	15.8	6.08	1.3	345.	21.2	0.0	0.0	2941.1	61.3	-6.7
SEP	266.	15.8	4.47	1.0	74.	4.4	0.0	0.0	2945.0	71.7	10.4
OCT	275.	16.9	3.12	.7	16.	1.0	26.0	0.0	2941.0	60.9	-10.8
NOV	279.	16.6	1.78	.4	17.	1.0	15.2	0.0	2941.0	60.9	0.0
DEC	285.	17.5	1.24	.3	16.	1.0	16.2	0.0	2941.0	60.9	0.0
TOTAL		205.0	39.00	9.1		62.2	134.2	0.0			-.5

SHERMAN RESERVOIR OPERATION ESTIMATES - 1976

MONTH	HISTORICAL INFLOW MEAN CFS	HISTORICAL INFLOW 1000 AF	NET EVAPORATION INCHES	NET EVAPORATION 1000 AF	RELEASE REQUIREMENT MEAN CFS	RELEASE REQUIREMENT 1000 AF	RESERVOIR SPILL 1000 AF	REQUIREMENT SHORTAGE 1000 AF	END OF MONTH ELEV FT	END OF MONTH CONT 1000 AF	RESERVOIR CHANGE 1000 AF
REASONABLE MINIMUM INFLOW CONDITIONS											
JAN	0.	0.0	.65	.1	28.	1.7	0.0	0.0	2153.8	47.4	-1.8
FEB	0.	0.0	.71	.1	31.	1.7	0.0	0.0	2153.0	45.6	-1.8
MAR	0.	0.0	1.59	.3	28.	1.7	0.0	0.0	2152.1	43.6	-2.0
APR	348.	20.7	3.85	.8	29.	1.7	0.0	0.0	2159.7	61.8	18.2
MAY	166.	10.2	3.74	.9	33.	2.0	0.0	0.0	2162.3	69.1	7.3
JUN	188.	11.2	4.67	1.1	170.	10.1	0.0	0.0	2162.3	69.1	0.0
JUL	179.	11.0	7.91	1.3	1168.	71.8	0.0	3.5	2129.0	10.5	-58.6
AUG	120.	7.4	7.12	.5	1140.	70.1	0.0	63.2	2129.0	10.5	0.0
SEP	424.	25.2	4.27	.4	171.	10.2	0.0	0.0	2141.8	25.1	14.6
OCT	532.	32.7	4.16	.7	23.	1.4	0.0	0.0	2157.3	55.7	30.6
NOV	0.	0.0	2.26	.5	29.	1.7	0.0	0.0	2156.4	53.5	-2.2
DEC	0.	0.0	.79	.2	28.	1.7	0.0	0.0	2155.6	51.6	-1.9
TOTAL		118.4	41.72	6.9		175.8	0.0	66.7			2.4
MOST PROBABLE INFLOW CONDITIONS											
JAN	0.	0.0	.43	.1	28.	1.7	0.0	0.0	2153.8	47.4	-1.8
FEB	0.	0.0	.60	.1	31.	1.7	0.0	0.0	2153.0	45.6	-1.8
MAR	0.	0.0	1.19	.2	28.	1.7	0.0	0.0	2152.1	43.7	-1.9
APR	262.	15.6	2.08	.4	29.	1.7	0.0	0.0	2157.9	57.2	13.5
MAY	234.	14.4	2.22	.5	33.	2.0	0.0	0.0	2162.3	69.1	11.9
JUN	139.	8.3	3.32	.8	126.	7.5	0.0	0.0	2162.3	69.1	0.0
JUL	296.	18.2	5.59	1.1	802.	49.3	0.0	0.0	2148.7	36.9	-32.2
AUG	207.	12.7	5.12	.6	781.	48.0	0.0	9.5	2129.0	10.5	-26.4
SEP	541.	32.2	3.23	.4	121.	7.2	0.0	0.0	2147.8	35.1	24.6
OCT	369.	22.7	3.81	.7	23.	1.4	0.0	0.0	2157.3	55.7	20.6
NOV	0.	0.0	1.76	.4	29.	1.7	0.0	0.0	2156.5	53.6	-2.1
DEC	0.	0.0	.58	.1	28.	1.7	0.0	0.0	2155.7	51.8	-1.8
TOTAL		124.1	29.93	5.4		125.6	0.0	9.5			2.6
REASONABLE MAXIMUM INFLOW CONDITIONS											
JAN	0.	0.0	.21	0.0	28.	1.7	0.0	0.0	2153.9	47.5	-1.7
FEB	0.	0.0	.32	.1	31.	1.7	0.0	0.0	2153.0	45.7	-1.8
MAR	0.	0.0	.42	.1	28.	1.7	0.0	0.0	2152.2	43.9	-1.8
APR	292.	17.4	.59	.1	29.	1.7	0.0	0.0	2158.8	59.5	15.6
MAY	190.	11.7	.39	.1	33.	2.0	0.0	0.0	2162.3	69.1	9.6
JUN	99.	5.9	.91	.2	96.	5.7	0.0	0.0	2162.3	69.1	0.0
JUL	384.	23.6	4.82	1.1	551.	33.9	0.0	0.0	2158.1	57.7	-11.4
AUG	268.	16.5	4.02	.8	532.	32.7	0.0	0.0	2150.7	40.7	-17.0
SEP	350.	20.8	2.14	.4	91.	5.4	0.0	0.0	2157.3	55.7	15.0
OCT	0.	0.0	3.37	.7	23.	1.4	0.0	0.0	2156.5	53.6	-2.1
NOV	0.	0.0	.40	.1	29.	1.7	0.0	0.0	2155.7	51.8	-1.8
DEC	0.	0.0	.24	0.0	28.	1.7	0.0	0.0	2155.0	50.1	-1.7
TOTAL		95.9	17.83	3.7		91.3	0.0	0.0			.9

BONNY RESERVOIR OPERATION ESTIMATES - 1976

MONTH	HISTORICAL INFLOW MEAN CFS	HISTORICAL INFLOW 1000 AF	NET EVAPORATION INCHES	NET EVAPORATION 1000 AF	RELEASE REQUIREMENT HALE 1000 AF	RELEASE REQUIREMENT RIVER 1000 AF	RELEASE REQUIREMENT TOTAL MEAN CFS	RELEASE REQUIREMENT TOTAL 1000 AF	RES SPILL 1000 AF	REQUIREMENT SHORTAGE 1000 AF	END OF MONTH ELEV FT	END OF MONTH CONT 1000 AF	RESERVOIR CHANGE 1000 AF
REASONABLE MINIMUM INFLOW CONDITIONS													
JAN	23.	1.4	1.45	.2	0.0	.3	5.	.3	0.0	0.0	3671.9	41.1	.9
FEB	25.	1.4	1.55	.3	0.0	.3	5.	.3	.6	0.0	3672.0	41.3	.2
MAR	28.	1.7	2.45	.4	0.0	.3	5.	.3	1.0	0.0	3672.0	41.3	0.0
APR	27.	1.6	4.30	.7	.3	.3	10.	.6	.3	0.0	3672.0	41.3	0.0
MAY	55.	3.4	5.35	.9	.9	.3	20.	1.2	1.3	0.0	3672.0	41.3	0.0
JUN	45.	2.7	6.95	1.2	.9	.3	20.	1.2	.3	0.0	3672.0	41.3	0.0
JUL	26.	1.6	8.30	1.4	.9	.3	20.	1.2	0.0	0.0	3671.5	40.3	-1.0
AUG	23.	1.4	7.00	1.2	.8	.3	18.	1.1	0.0	0.0	3671.0	39.4	-.9
SEP	17.	1.0	5.20	.9	.6	.3	15.	.9	0.0	0.0	3670.6	38.6	-.8
OCT	18.	1.1	5.05	.8	.5	.3	13.	.8	0.0	0.0	3670.4	38.1	-.5
NOV	22.	1.3	3.05	.5	.3	.3	10.	.6	0.0	0.0	3670.5	38.3	.2
DEC	21.	1.3	1.85	.3	0.0	.3	5.	.3	0.0	0.0	3670.8	39.0	.7
TOTAL		19.9	52.50	8.8	5.2	3.6		8.8	3.5	0.0			-1.2
MOST PROBABLE INFLOW CONDITIONS													
JAN	28.	1.7	1.20	.2	0.0	.3	5.	.3	.1	0.0	3672.0	41.3	1.1
FEB	31.	1.7	1.40	.2	0.0	.3	5.	.3	1.2	0.0	3672.0	41.3	0.0
MAR	36.	2.2	1.85	.3	0.0	.3	5.	.3	1.6	0.0	3672.0	41.3	0.0
APR	34.	2.0	2.80	.5	.4	.3	12.	.7	.8	0.0	3672.0	41.3	0.0
MAY	67.	4.1	3.00	.5	.6	.3	15.	.9	2.7	0.0	3672.0	41.3	0.0
JUN	55.	3.3	4.60	.8	.6	.3	15.	.9	1.6	0.0	3672.0	41.3	0.0
JUL	33.	2.0	6.25	1.1	.4	.3	11.	.7	.2	0.0	3672.0	41.3	0.0
AUG	28.	1.7	6.10	1.0	.4	.3	11.	.7	0.0	0.0	3672.0	41.3	0.0
SEP	20.	1.2	4.30	.7	.6	.3	15.	.9	0.0	0.0	3671.8	40.9	-.4
OCT	21.	1.3	4.55	.8	.6	.3	15.	.9	0.0	0.0	3671.6	40.5	-.4
NOV	27.	1.6	2.80	.5	.2	.3	8.	.5	0.0	0.0	3671.9	41.1	.6
DEC	26.	1.6	1.55	.3	0.0	.3	5.	.3	.8	0.0	3672.0	41.3	.2
TOTAL		24.4	40.40	6.9	3.8	3.6		7.4	9.0	0.0			1.1
REASONABLE MAXIMUM INFLOW CONDITIONS													
JAN	52.	3.2	.90	.2	0.0	.3	5.	.3	1.6	0.0	3672.0	41.3	1.1
FEB	58.	3.2	1.25	.2	0.0	.3	5.	.3	2.7	0.0	3672.0	41.3	0.0
MAR	65.	4.0	1.35	.2	0.0	.3	5.	.3	3.5	0.0	3672.0	41.3	0.0
APR	62.	3.7	2.40	.4	.3	.3	10.	.6	2.7	0.0	3672.0	41.3	0.0
MAY	124.	7.6	2.05	.3	.5	.3	13.	.8	6.5	0.0	3672.0	41.3	0.0
JUN	104.	6.2	2.50	.4	.2	.3	8.	.5	5.3	0.0	3672.0	41.3	0.0
JUL	60.	3.7	5.05	.9	.2	.3	8.	.5	2.3	0.0	3672.0	41.3	0.0
AUG	50.	3.1	4.00	.7	.4	.3	11.	.7	1.7	0.0	3672.0	41.3	0.0
SEP	37.	2.2	3.20	.5	.4	.3	12.	.7	1.0	0.0	3672.0	41.3	0.0
OCT	41.	2.5	3.40	.6	.3	.3	10.	.6	1.3	0.0	3672.0	41.3	0.0
NOV	49.	2.9	2.60	.4	.3	.3	10.	.6	1.9	0.0	3672.0	41.3	0.0
DEC	49.	3.0	1.30	.2	0.0	.3	5.	.3	2.5	0.0	3672.0	41.3	0.0
TOTAL		45.3	30.00	5.0	2.6	3.6		6.2	33.0	0.0			1.1

SWANSON LAKE OPERATION ESTIMATES - 1976

MONTH	UNDEPLETED INFLOW 1000 AF	UPSTREAM DEPLETIONS 1000 AF	DEPLETED INFLOW MEAN CFS	DEPLETED INFLOW 1000 AF	NET EVAPORATION INCHES	NET EVAPORATION 1000 AF	RELEASE REQUIREMENT MEAN CFS	RELEASE REQUIREMENT 1000 AF	RES SPILL 1000 AF	REQ SHORT 1000 AF	END OF MONTH ELEV FT	END OF MONTH CONT 1000 AF	RES CHANGE 1000 AF
REASONABLE MINIMUM INFLOW CONDITIONS													
JAN	7.5	-1.1	104.	6.4	1.05	.3	2.	.1	0.0	0.0	2741.4	73.3	6.0
FEB	9.5	-.5	162.	9.0	1.20	.4	2.	.1	0.0	0.0	2743.5	81.8	8.5
MAR	11.1	-.4	174.	10.7	1.95	.7	2.	.1	0.0	0.0	2745.9	91.7	9.9
APR	8.5	-.7	131.	7.8	3.85	1.4	2.	.1	0.0	0.0	2747.3	98.0	6.3
MAY	7.7	-.9	111.	6.8	4.10	1.5	99.	6.1	0.0	0.0	2747.1	97.2	-.8
JUN	6.9	-1.2	96.	5.7	5.20	1.9	123.	7.3	0.0	0.0	2746.3	93.7	-3.5
JUL	2.4	-.5	31.	1.9	7.70	2.7	348.	21.4	0.0	0.0	2741.0	71.5	-22.2
AUG	1.9	-.4	24.	1.5	6.90	2.0	343.	21.1	0.0	0.0	2734.9	49.9	-21.6
SEP	.5	-.1	7.	.4	5.25	1.3	198.	11.8	0.0	0.0	2730.4	37.2	-12.7
OCT	2.6	-.3	37.	2.3	4.60	1.0	63.	3.9	0.0	0.0	2729.4	34.6	-2.6
NOV	5.7	-.7	84.	5.0	2.70	.6	2.	.1	0.0	0.0	2731.1	38.9	4.3
DEC	6.7	-1.0	93.	5.7	1.30	.3	2.	.1	0.0	0.0	2733.0	44.2	5.3
TOTAL	71.0	-7.8		63.2	45.80	14.1		72.2	0.0	0.0			-23.1
MOST PROBABLE INFLOW CONDITIONS													
JAN	9.6	-1.3	135.	8.3	.75	.2	2.	.1	0.0	0.0	2741.9	75.3	8.0
FEB	12.0	-.2	212.	11.8	1.00	.3	2.	.1	0.0	0.0	2744.7	86.7	11.4
MAR	14.3	-.3	228.	14.0	1.40	.5	2.	.1	0.0	0.0	2747.8	100.1	13.4
APR	12.0	-.5	193.	11.5	2.40	.9	2.	.1	0.0	0.0	2750.0	110.6	10.5
MAY	13.5	-.5	211.	13.0	2.10	.8	24.	1.5	1.1	0.0	2752.0	120.2	9.6
JUN	15.7	-.8	250.	14.9	3.70	1.5	27.	1.6	11.8	0.0	2752.0	120.2	0.0
JUL	5.7	-1.2	73.	4.5	6.10	2.4	265.	16.3	0.0	0.0	2749.0	106.0	-14.2
AUG	6.0	-1.1	80.	4.9	5.70	2.1	299.	18.4	0.0	0.0	2745.6	90.4	-15.6
SEP	5.0	-.3	79.	4.7	3.40	1.2	91.	5.4	0.0	0.0	2745.1	88.5	-1.9
OCT	4.6	-.4	68.	4.2	4.30	1.5	26.	1.6	0.0	0.0	2745.4	89.6	1.1
NOV	8.1	-1.1	118.	7.0	2.10	.8	2.	.1	0.0	0.0	2746.8	95.7	6.1
DEC	8.5	-.5	130.	8.0	1.10	.4	2.	.1	0.0	0.0	2748.4	103.2	7.5
TOTAL	115.0	-8.2		106.8	34.05	12.6		45.4	12.9	0.0			35.9
REASONABLE MAXIMUM INFLOW CONDITIONS													
JAN	11.8	-1.3	171.	10.5	.55	.2	2.	.1	0.0	0.0	2742.5	77.5	10.2
FEB	14.5	-.2	257.	14.3	.60	.2	2.	.1	0.0	0.0	2745.8	91.5	14.0
MAR	19.3	-.2	311.	19.1	.60	.2	2.	.1	0.0	0.0	2750.0	110.3	18.8
APR	16.3	-.4	267.	15.9	.60	.2	2.	.1	5.7	0.0	2752.0	120.2	9.9
MAY	23.1	-.3	371.	22.8	.80	.3	13.	.8	21.7	0.0	2752.0	120.2	0.0
JUN	27.4	-.4	454.	27.0	1.90	.8	17.	1.0	25.2	0.0	2752.0	120.2	0.0
JUL	29.3	-1.0	460.	28.3	4.00	1.7	145.	8.9	17.7	0.0	2752.0	120.2	0.0
AUG	18.3	-.8	285.	17.5	5.00	2.1	166.	10.2	5.2	0.0	2752.0	120.2	0.0
SEP	10.5	-.5	168.	10.0	2.40	1.0	30.	1.8	7.2	0.0	2752.0	120.2	0.0
OCT	8.7	-.6	132.	8.1	3.80	1.6	16.	1.0	5.5	0.0	2752.0	120.2	0.0
NOV	10.1	-.4	163.	9.7	1.60	.7	2.	.1	8.9	0.0	2752.0	120.2	0.0
DEC	10.7	-.2	171.	10.5	.65	.3	2.	.1	10.1	0.0	2752.0	120.2	0.0
TOTAL	200.0	-6.3		193.7	22.50	9.3		24.3	107.2	0.0			52.9

ENDERS RESERVOIR OPERATION ESTIMATES - 1976

MONTH	HISTORICAL INFLOW MEAN CFS	HISTORICAL INFLOW 1000 AF	NET EVAPORATION INCHES	NET EVAPORATION 1000 AF	RELEASE REQUIREMENT MEAN CFS	RELEASE REQUIREMENT 1000 AF	RESERVOIR SPILL 1000 AF	REQUIREMENT SHORTAGE 1000 AF	END OF MONTH ELEV FT	END OF MONTH CONT 1000 AF	RESERVOIR CHANGE 1000 AF
REASONABLE MINIMUM INFLOW CONDITIONS											
JAN	50.	3.1	1.05	.1	0.	0.0	0.0	0.0	3100.7	27.4	3.0
FEB	52.	2.9	1.20	.1	0.	0.0	0.0	0.0	3102.8	30.2	2.8
MAR	50.	3.1	1.95	.2	3.	.2	0.0	0.0	3104.8	32.9	2.7
APR	45.	2.7	4.10	.5	3.	.2	0.0	0.0	3106.2	34.9	2.0
MAY	49.	3.0	4.65	.6	52.	3.2	0.0	0.0	3105.7	34.1	-.8
JUN	54.	3.2	5.25	.6	61.	3.6	0.0	0.0	3105.0	33.1	-1.0
JUL	47.	2.9	8.60	.8	329.	20.2	0.0	0.0	3089.0	15.0	-18.1
AUG	44.	2.7	6.85	.4	309.	19.0	0.0	11.7	3082.4	10.0	-5.0
SEP	49.	2.9	5.50	.3	121.	7.2	0.0	4.6	3082.4	10.0	0.0
OCT	44.	2.7	4.60	.3	3.	.2	0.0	0.0	3085.6	12.2	2.2
NOV	49.	2.9	2.65	.2	0.	0.0	0.0	0.0	3088.9	14.9	2.7
DEC	49.	3.0	1.20	.1	0.	0.0	0.0	0.0	3092.1	17.8	2.9
TOTAL		35.1	47.60	4.2		53.8	0.0	16.3			-6.6
MOST PROBABLE INFLOW CONDITIONS											
JAN	60.	3.7	.75	.1	0.	0.0	0.0	0.0	3101.1	28.0	3.6
FEB	61.	3.4	.95	.1	0.	0.0	0.0	0.0	3103.7	31.3	3.3
MAR	62.	3.8	1.35	.2	3.	.2	0.0	0.0	3106.1	34.7	3.4
APR	55.	3.3	2.60	.3	3.	.2	0.0	0.0	3108.0	37.5	2.8
MAY	59.	3.6	3.00	.4	11.	.7	0.0	0.0	3109.6	40.0	2.5
JUN	66.	3.9	3.55	.5	15.	.9	0.0	0.0	3111.1	42.5	2.5
JUL	59.	3.6	5.90	.7	236.	14.5	0.0	0.0	3103.4	30.9	-11.6
AUG	54.	3.3	6.50	.6	247.	15.2	0.0	0.0	3092.7	18.4	-12.5
SEP	57.	3.4	3.45	.3	50.	3.0	0.0	0.0	3092.8	18.5	.1
OCT	55.	3.4	4.30	.4	0.	0.0	0.0	0.0	3095.7	21.5	3.0
NOV	59.	3.5	2.30	.2	0.	0.0	0.0	0.0	3098.6	24.8	3.3
DEC	59.	3.6	.90	.1	0.	0.0	0.0	0.0	3101.4	28.3	3.5
TOTAL		42.5	35.55	3.9		34.7	0.0	0.0			3.9
REASONABLE MAXIMUM INFLOW CONDITIONS											
JAN	72.	4.4	.55	.1	0.	0.0	0.0	0.0	3101.7	28.7	4.3
FEB	72.	4.0	.30	0.0	0.	0.0	0.0	0.0	3104.7	32.7	4.0
MAR	72.	4.4	.95	.1	3.	.2	0.0	0.0	3107.5	36.8	4.1
APR	66.	3.9	.80	.1	3.	.2	0.0	0.0	3109.8	40.4	3.6
MAY	68.	4.2	1.25	.2	3.	.2	0.0	0.0	3112.1	44.2	3.8
JUN	76.	4.5	2.40	.3	3.	.2	3.7	0.0	3112.3	44.5	.3
JUL	67.	4.1	4.35	.6	135.	8.3	0.0	0.0	3109.4	39.7	-4.8
AUG	62.	3.8	4.50	.6	148.	9.1	0.0	0.0	3105.5	33.8	-5.9
SEP	66.	3.9	2.30	.3	22.	1.3	0.0	0.0	3107.0	36.1	2.3
OCT	63.	3.9	3.35	.4	0.	0.0	0.0	0.0	3109.3	39.6	3.5
NOV	69.	4.1	1.90	.3	0.	0.0	0.0	0.0	3111.7	43.4	3.8
DEC	68.	4.2	.65	.1	0.	0.0	3.0	0.0	3112.3	44.5	1.1
TOTAL		49.4	23.30	3.1		19.5	6.7	0.0			20.1

HUGH BUTLER LAKE OPERATION ESTIMATES - 1976

MONTH	HISTORICAL INFLOW MEAN CFS	HISTORICAL INFLOW 1000 AF	NET EVAPORATION INCHES	NET EVAPORATION 1000 AF	RELEASE REQUIREMENT MEAN CFS	RELEASE REQUIREMENT 1000 AF	RESERVOIR SPILL 1000 AF	REQUIREMENT SHORTAGE 1000 AF	END OF MONTH ELEV FT	END OF MONTH CONT 1000 AF	RESERVOIR CHANGE 1000 AF
REASONABLE MINIMUM INFLOW CONDITIONS											
JAN	16.	1.0	.92	.1	5.	.3	0.0	0.0	2577.6	31.4	.6
FEB	20.	1.1	1.11	.1	5.	.3	0.0	0.0	2578.1	32.1	.7
MAR	24.	1.5	2.01	.2	5.	.3	0.0	0.0	2578.8	33.1	1.0
APR	22.	1.3	4.39	.5	5.	.3	0.0	0.0	2579.1	33.6	.5
MAY	26.	1.6	4.45	.6	29.	1.8	0.0	0.0	2578.6	32.8	-.8
JUN	39.	2.3	7.01	.9	30.	1.8	0.0	0.0	2578.3	32.4	-.4
JUL	23.	1.4	8.45	1.0	80.	4.9	0.0	0.0	2575.1	27.9	-4.5
AUG	15.	.9	6.73	.7	76.	4.7	0.0	0.0	2571.4	23.4	-4.5
SEP	17.	1.0	6.08	.6	39.	2.3	0.0	0.0	2569.7	21.5	-1.9
OCT	15.	.9	4.72	.4	15.	.9	0.0	0.0	2569.4	21.1	-.4
NOV	15.	.9	2.63	.2	5.	.3	0.0	0.0	2569.7	21.5	.4
DEC	16.	1.0	1.20	.1	5.	.3	0.0	0.0	2570.3	22.1	.6
TOTAL		14.9	49.70	5.4		18.2	0.0	0.0			-8.7
MOST PROBABLE INFLOW CONDITIONS											
JAN	21.	1.3	.70	.1	5.	.3	0.0	0.0	2577.9	31.7	.9
FEB	27.	1.5	.75	.1	5.	.3	0.0	0.0	2578.6	32.8	1.1
MAR	34.	2.1	1.35	.2	5.	.3	0.0	0.0	2579.7	34.4	1.6
APR	32.	1.9	2.70	.4	5.	.3	0.0	0.0	2580.4	35.6	1.2
MAY	37.	2.3	2.80	.4	16.	1.0	0.0	0.0	2581.0	36.5	.9
JUN	54.	3.2	2.99	.4	15.	.9	.6	0.0	2581.8	37.8	1.3
JUL	33.	2.0	6.09	.8	68.	4.2	0.0	0.0	2579.9	34.8	-3.0
AUG	21.	1.3	5.52	.7	73.	4.5	0.0	0.0	2577.3	30.9	-3.9
SEP	25.	1.5	3.81	.4	22.	1.3	0.0	0.0	2577.1	30.7	-.2
OCT	20.	1.2	3.88	.5	11.	.7	0.0	0.0	2577.1	30.7	0.0
NOV	22.	1.3	1.84	.2	5.	.3	0.0	0.0	2577.7	31.5	.8
DEC	21.	1.3	.87	.1	5.	.3	0.0	0.0	2578.3	32.4	.9
TOTAL		20.9	33.30	4.3		14.4	.6	0.0			1.6
REASONABLE MAXIMUM INFLOW CONDITIONS											
JAN	31.	1.9	.40	0.0	5.	.3	0.0	0.0	2578.3	32.4	1.6
FEB	38.	2.1	.47	.1	5.	.3	0.0	0.0	2579.5	34.1	1.7
MAR	47.	2.9	.85	.1	5.	.3	0.0	0.0	2581.1	36.6	2.5
APR	44.	2.6	1.52	.2	5.	.3	.9	0.0	2581.8	37.8	1.2
MAY	52.	3.2	1.78	.2	13.	.8	2.2	0.0	2581.8	37.8	0.0
JUN	74.	4.4	1.82	.2	12.	.7	3.5	0.0	2581.8	37.8	0.0
JUL	46.	2.8	3.42	.5	47.	2.9	0.0	0.0	2581.4	37.2	-.6
AUG	29.	1.8	4.12	.5	47.	2.9	0.0	0.0	2580.4	35.6	-1.6
SEP	34.	2.0	3.09	.4	17.	1.0	0.0	0.0	2580.8	36.2	.6
OCT	26.	1.6	3.21	.4	8.	.5	0.0	0.0	2581.3	36.9	.7
NOV	30.	1.8	1.15	.2	5.	.3	.4	0.0	2581.8	37.8	.9
DEC	29.	1.8	.77	.1	5.	.3	1.4	0.0	2581.8	37.8	0.0
TOTAL		28.9	22.60	2.9		10.6	8.4	0.0			7.0

HARRY STRUNK LAKE OPERATION ESTIMATES - 1976

MONTH	HISTORICAL INFLOW MEAN CFS	HISTORICAL INFLOW 1000 AF	NET EVAPORATION INCHES	NET EVAPORATION 1000 AF	RELEASE REQUIREMENT MEAN CFS	RELEASE REQUIREMENT 1000 AF	RESERVOIR SPILL 1000 AF	REQUIREMENT SHORTAGE 1000 AF	END OF MONTH ELEV FT	END OF MONTH CONT 1000 AF	RESERVOIR CHANGE 1000 AF
REASONABLE MINIMUM INFLOW CONDITIONS											
JAN	36.	2.2	.76	.1	3.	.2	0.0	0.0	2361.7	29.7	1.9
FEB	45.	2.5	.89	.1	4.	.2	0.0	0.0	2363.1	31.9	2.2
MAR	52.	3.2	1.87	.3	3.	.2	0.0	0.0	2364.7	34.6	2.7
APR	54.	3.2	4.23	.6	3.	.2	0.0	0.0	2366.0	37.0	2.4
MAY	63.	3.9	4.07	.6	59.	3.6	0.0	0.0	2365.9	36.7	-.3
JUN	106.	6.3	5.02	.8	64.	3.8	1.3	0.0	2366.1	37.1	.4
JUL	62.	3.8	8.41	1.1	228.	14.0	0.0	0.0	2359.1	25.8	-11.3
AUG	41.	2.5	7.42	.7	224.	13.8	0.0	0.0	2348.4	13.8	-12.0
SEP	37.	2.2	4.64	.3	106.	6.3	0.0	.1	2343.0	9.5	-4.3
OCT	36.	2.2	4.52	.3	21.	1.3	0.0	0.0	2343.8	10.1	.6
NOV	35.	2.1	2.57	.2	3.	.2	0.0	0.0	2346.0	11.8	1.7
DEC	34.	2.1	1.10	.1	3.	.2	0.0	0.0	2348.2	13.6	1.8
TOTAL		36.2	45.50	5.2		44.0	1.3	.1			-14.2
MOST PROBABLE INFLOW CONDITIONS											
JAN	52.	3.2	.50	.1	3.	.2	0.0	0.0	2362.3	30.7	2.9
FEB	65.	3.6	.75	.1	4.	.2	0.0	0.0	2364.3	34.0	3.3
MAR	75.	4.6	1.40	.2	3.	.2	1.1	0.0	2366.1	37.1	3.1
APR	77.	4.6	2.29	.4	3.	.2	4.0	0.0	2366.1	37.1	0.0
MAY	93.	5.7	2.41	.4	5.	.3	5.0	0.0	2366.1	37.1	0.0
JUN	151.	9.0	3.57	.6	8.	.5	7.9	0.0	2366.1	37.1	0.0
JUL	89.	5.5	5.95	.9	177.	10.9	0.0	0.0	2362.4	30.8	-6.3
AUG	57.	3.5	5.33	.6	202.	12.4	0.0	0.0	2355.6	21.3	-9.5
SEP	54.	3.2	3.51	.4	35.	2.1	0.0	0.0	2356.2	22.0	.7
OCT	50.	3.1	4.14	.4	5.	.3	0.0	0.0	2358.0	24.4	2.4
NOV	49.	2.9	2.00	.2	3.	.2	0.0	0.0	2359.8	26.9	2.5
DEC	49.	3.0	.81	.1	3.	.2	0.0	0.0	2361.6	29.6	2.7
TOTAL		51.9	32.66	4.4		27.7	18.0	0.0			1.8
REASONABLE MAXIMUM INFLOW CONDITIONS											
JAN	80.	4.9	.25	0.0	3.	.2	0.0	0.0	2363.5	32.5	4.7
FEB	101.	5.6	.40	.1	4.	.2	.7	0.0	2366.1	37.1	4.6
MAR	115.	7.1	.49	.1	3.	.2	6.8	0.0	2366.1	37.1	0.0
APR	121.	7.2	.65	.1	3.	.2	6.9	0.0	2366.1	37.1	0.0
MAY	141.	8.7	.42	.1	3.	.2	8.4	0.0	2366.1	37.1	0.0
JUN	235.	14.0	.98	.2	3.	.2	13.6	0.0	2366.1	37.1	0.0
JUL	138.	8.5	5.13	.8	88.	5.4	2.3	0.0	2366.1	37.1	0.0
AUG	89.	5.5	4.19	.6	106.	6.5	0.0	0.0	2365.2	35.5	-1.6
SEP	82.	4.9	2.33	.4	8.	.5	2.4	0.0	2366.1	37.1	1.6
OCT	78.	4.8	3.66	.6	3.	.2	4.0	0.0	2366.1	37.1	0.0
NOV	76.	4.5	.46	.1	3.	.2	4.2	0.0	2366.1	37.1	0.0
DEC	76.	4.7	.34	.1	3.	.2	4.4	0.0	2366.1	37.1	0.0
TOTAL		80.4	19.30	3.2		14.2	53.7	0.0			9.3

NORTON RESERVOIR OPERATION ESTIMATES - 1976

MONTH	HISTORICAL INFLOW MEAN CFS	HISTORICAL INFLOW 1000 AF	NET EVAPORATION INCHES	NET EVAPORATION 1000 AF	RELEASE REQUIREMENT MEAN CFS	RELEASE REQUIREMENT 1000 AF	RESERVOIR SPILL 1000 AF	REQUIREMENT SHORTAGE 1000 AF	END OF MONTH ELEV FT	END OF MONTH CONT 1000 AF	RESERVOIR CHANGE 1000 AF
REASONABLE MINIMUM INFLOW CONDITIONS											
JAN	2.	.1	.95	.1	2.	.1	0.0	0.0	2286.4	9.7	-.1
FEB	4.	.2	1.00	.1	2.	.1	0.0	0.0	2286.4	9.7	0.0
MAR	7.	.4	1.98	.1	2.	.1	0.0	0.0	2286.6	9.9	.2
APR	5.	.3	4.34	.3	2.	.1	0.0	0.0	2286.5	9.8	-.1
MAY	16.	1.0	4.10	.3	7.	.4	0.0	0.0	2286.9	10.1	.3
JUN	32.	1.9	7.86	.6	10.	.6	0.0	0.0	2287.6	10.8	.7
JUL	23.	1.4	8.77	.5	130.	8.0	0.0	0.0	2277.3	3.7	-7.1
AUG	11.	.7	7.38	.3	127.	7.8	0.0	7.3	2277.1	3.6	-.1
SEP	10.	.6	6.12	.2	54.	3.2	0.0	2.8	2277.1	3.6	0.0
OCT	7.	.4	4.66	.2	23.	1.4	0.0	1.2	2277.1	3.6	0.0
NOV	2.	.1	2.62	.1	2.	.1	0.0	.1	2277.1	3.6	0.0
DEC	2.	.1	1.22	0.0	2.	.1	0.0	0.0	2277.1	3.6	0.0
TOTAL		7.2	51.00	2.8		22.0	0.0	11.4			-6.2
MOST PROBABLE INFLOW CONDITIONS											
JAN	5.	.3	.80	.1	2.	.1	0.0	0.0	2286.6	9.9	.1
FEB	11.	.6	.85	.1	2.	.1	0.0	0.0	2287.1	10.3	.4
MAR	13.	.8	1.24	.1	2.	.1	0.0	0.0	2287.8	10.9	.6
APR	10.	.6	2.78	.2	2.	.1	0.0	0.0	2288.1	11.2	.3
MAY	37.	2.3	2.55	.2	2.	.1	0.0	0.0	2290.0	13.2	2.0
JUN	74.	4.4	3.85	.4	2.	.1	0.0	0.0	2293.3	17.1	3.9
JUL	55.	3.4	5.97	.6	75.	4.6	0.0	0.0	2291.9	15.3	-1.8
AUG	26.	1.6	5.89	.5	85.	5.2	0.0	0.0	2288.1	11.2	-4.1
SEP	24.	1.4	4.38	.4	20.	1.2	0.0	0.0	2287.9	11.0	-.2
OCT	16.	1.0	4.14	.3	7.	.4	0.0	0.0	2288.2	11.3	.3
NOV	5.	.3	2.12	.2	2.	.1	0.0	0.0	2288.2	11.3	0.0
DEC	5.	.3	1.03	.1	2.	.1	0.0	0.0	2288.3	11.4	.1
TOTAL		17.0	35.60	3.2		12.2	0.0	0.0			1.6
REASONABLE MAXIMUM INFLOW CONDITIONS											
JAN	11.	.7	.50	0.0	2.	.1	0.0	0.0	2287.2	10.4	.6
FEB	27.	1.5	.52	0.0	2.	.1	0.0	0.0	2288.7	11.8	1.4
MAR	33.	2.0	.54	0.0	2.	.1	0.0	0.0	2290.4	13.7	1.9
APR	27.	1.6	1.43	.1	2.	.1	0.0	0.0	2291.7	15.1	1.4
MAY	94.	5.8	1.16	.1	2.	.1	0.0	0.0	2295.9	20.7	5.6
JUN	185.	11.0	2.52	.4	2.	.1	0.0	0.0	2302.0	31.2	10.5
JUL	137.	8.4	4.42	.8	15.	.9	2.0	0.0	2304.3	35.9	4.7
AUG	63.	3.9	5.23	1.0	31.	1.9	1.0	0.0	2304.3	35.9	0.0
SEP	61.	3.6	3.07	.6	2.	.1	2.9	0.0	2304.3	35.9	0.0
OCT	41.	2.5	2.72	.5	2.	.1	1.9	0.0	2304.3	35.9	0.0
NOV	12.	.7	1.25	.2	2.	.1	.4	0.0	2304.3	35.9	0.0
DEC	11.	.7	.64	.1	2.	.1	.5	0.0	2304.3	35.9	0.0
TOTAL		42.4	24.00	3.8		3.8	8.7	0.0			26.1

HARLAN COUNTY RESERVOIR OPERATION ESTIMATES - 1976

MONTH	UNDEPLETED INFLOW 1000 AF	UPSTREAM DEPLETIONS 1000 AF	DEPLETED INFLOW MEAN CFS	DEPLETED INFLOW 1000 AF	NET EVAPORATION INCHES	NET EVAPORATION 1000 AF	RELEASE REQUIREMENT MEAN CFS	RELEASE REQUIREMENT 1000 AF	RES SPILL 1000 AF	REQ SHORT 1000 AF	END OF MONTH ELEV FT	END OF MONTH CONT 1000 AF	RES CHANGE 1000 AF
REASONABLE MINIMUM INFLOW CONDITIONS													
JAN	19.2	-11.9	119.	7.3	.90	.9	10.	.6	0.0	0.0	1942.2	271.3	5.8
FEB	24.3	-14.4	178.	9.9	.78	.8	11.	.6	0.0	0.0	1942.9	279.8	8.5
MAR	32.1	-17.3	241.	14.8	1.74	1.8	10.	.6	0.0	0.0	1943.9	292.2	12.4
APR	28.0	-14.0	235.	14.0	4.70	5.0	10.	.6	0.0	0.0	1944.5	300.6	8.4
MAY	36.5	-14.8	353.	21.7	4.38	4.7	215.	13.2	0.0	0.0	1944.8	304.4	3.8
JUN	42.0	-16.4	430.	25.6	6.60	7.1	311.	18.5	0.0	0.0	1944.8	304.4	0.0
JUL	15.4	8.4	387.	23.8	9.71	10.2	670.	41.2	0.0	0.0	1942.7	276.8	-27.6
AUG	13.6	10.1	385.	23.7	8.41	8.3	751.	46.2	0.0	0.0	1940.1	246.0	-30.8
SEP	6.2	2.1	139.	8.3	5.56	5.0	397.	23.6	0.0	0.0	1938.3	225.7	-20.3
OCT	5.6	-5.6	0.	0.0	4.52	3.9	10.	.6	0.0	0.0	1937.8	221.2	-4.5
NOV	13.2	-8.9	72.	4.3	2.58	2.2	10.	.6	0.0	0.0	1938.0	222.7	1.5
DEC	16.9	-10.4	106.	6.5	1.12	1.0	10.	.6	0.0	0.0	1938.4	227.6	4.9
TOTAL	253.0	-93.1		159.9	51.00	50.9		146.9	0.0	0.0			-37.9
MOST PROBABLE INFLOW CONDITIONS													
JAN	22.4	-16.1	102.	6.3	.65	.7	10.	.6	0.0	0.0	1942.2	270.5	5.0
FEB	31.2	-19.3	214.	11.9	.61	.6	11.	.6	0.0	0.0	1943.0	281.2	10.7
MAR	38.0	-22.5	252.	15.5	1.13	1.2	10.	.6	0.0	0.0	1944.1	294.9	13.7
APR	38.8	-16.4	376.	22.4	1.31	1.4	10.	.6	0.0	0.0	1945.7	315.3	20.4
MAY	59.9	-21.0	633.	38.9	3.27	3.6	24.	1.5	29.3	0.0	1946.0	319.8	4.5
JUN	106.6	-15.9	1524.	90.7	5.46	6.1	27.	1.6	83.0	0.0	1946.0	319.8	0.0
JUL	42.1	-7.0	571.	35.1	7.70	8.6	446.	27.4	0.0	0.0	1945.9	318.9	-.9
AUG	26.6	-2.4	394.	24.2	6.01	6.6	468.	28.8	0.0	0.0	1945.1	307.7	-11.2
SEP	19.7	-9.7	168.	10.0	4.47	4.8	116.	6.9	0.0	0.0	1944.9	306.0	-1.7
OCT	16.4	-13.2	52.	3.2	3.43	3.7	10.	.6	0.0	0.0	1944.9	304.9	-1.1
NOV	20.8	-13.3	126.	7.5	1.55	1.7	10.	.6	0.0	0.0	1945.3	310.1	5.2
DEC	23.5	-14.2	151.	9.3	.71	.8	10.	.6	0.0	0.0	1945.9	318.0	7.9
TOTAL	446.0	-171.0		275.0	36.30	39.8		70.4	112.3	0.0			52.5
REASONABLE MAXIMUM INFLOW CONDITIONS													
JAN	28.1	-21.7	104.	6.4	0.00	0.0	10.	.6	0.0	0.0	1942.2	271.3	5.8
FEB	42.6	-25.2	313.	17.4	.28	.3	11.	.6	0.0	0.0	1943.5	287.8	16.5
MAR	57.1	-26.9	491.	30.2	.70	.8	10.	.6	0.0	0.0	1945.8	316.6	28.8
APR	55.8	-16.1	667.	39.7	.21	.2	10.	.6	35.7	0.0	1946.0	319.8	3.2
MAY	105.5	-11.7	1526.	93.8	1.78	2.0	13.	.8	91.0	0.0	1946.0	319.8	0.0
JUN	166.5	-14.3	2558.	152.2	1.58	1.8	13.	.8	149.6	0.0	1946.0	319.8	0.0
JUL	105.4	-26.0	1291.	79.4	6.53	7.3	104.	6.4	65.7	0.0	1946.0	319.8	0.0
AUG	63.8	-20.5	704.	43.3	3.43	3.8	104.	6.4	33.1	0.0	1946.0	319.8	0.0
SEP	75.0	-11.7	1064.	63.3	3.84	4.3	25.	1.5	57.5	0.0	1946.0	319.8	0.0
OCT	34.4	-8.9	415.	25.5	2.28	2.5	10.	.6	22.4	0.0	1946.0	319.8	0.0
NOV	31.4	-4.5	452.	26.9	1.03	1.1	10.	.6	25.2	0.0	1946.0	319.8	0.0
DEC	30.4	-.2	491.	30.2	.40	.4	10.	.6	29.2	0.0	1946.0	319.8	0.0
TOTAL	796.0	-187.7		608.3	22.06	24.5		20.1	509.4	0.0			54.3

LOVEWELL RESERVOIR OPERATION ESTIMATES - 1976

MONTH	WHITE ROCK CREEK INFLOW 1000 AF	COURTLAND CANAL INFLOW 1000 AF	TOTAL INFLOW MEAN CFS	TOTAL INFLOW 1000 AF	NET EVAPORATION INCHES	NET EVAPORATION 1000 AF	RELEASE REQUIREMENT MEAN CFS	RELEASE REQUIREMENT 1000 AF	RES SPILL 1000 AF	REQ SHORT 1000 AF	END OF MONTH ELEV FT	END OF MONTH CONT 1000 AF	RES CHANGE 1000 AF
REASONABLE MINIMUM INFLOW CONDITIONS													
JAN	.1	0.0	2.	.1	.77	.2	0.	0.0	0.0	0.0	1580.7	36.2	-.1
FEB	.2	0.0	4.	.2	.75	.2	0.	0.0	0.0	0.0	1580.7	36.2	0.0
MAR	.2	0.0	3.	.2	1.69	.4	0.	0.0	0.0	0.0	1580.6	36.0	-.2
APR	.2	0.0	3.	.2	3.79	.8	0.	0.0	0.0	0.0	1580.4	35.4	-.6
MAY	.6	6.2	111.	6.8	3.55	.8	94.	5.8	0.0	0.0	1580.4	35.6	.2
JUN	1.3	12.0	224.	13.3	5.84	1.4	97.	5.8	0.0	0.0	1582.6	41.7	6.1
JUL	.8	13.7	236.	14.5	7.75	1.9	278.	17.1	0.0	0.0	1581.0	37.2	-4.5
AUG	.5	13.7	231.	14.2	6.09	1.3	325.	20.0	0.0	0.0	1578.3	30.1	-7.1
SEP	.4	10.0	175.	10.4	5.15	1.0	145.	8.6	0.0	0.0	1578.6	30.9	.8
OCT	.3	0.0	5.	.3	3.45	.7	0.	0.0	0.0	0.0	1578.4	30.5	-.4
NOV	.1	0.0	2.	.1	2.37	.5	0.	0.0	0.0	0.0	1578.3	30.1	-.4
DEC	.1	0.0	2.	.1	.96	.2	0.	0.0	0.0	0.0	1578.2	30.0	-.1
TOTAL	4.8	55.6		60.4	42.16	9.4		57.3	0.0	0.0			-6.3
MOST PROBABLE INFLOW CONDITIONS													
JAN	.3	0.0	5.	.3	.50	.1	0.	0.0	0.0	0.0	1580.8	36.5	.2
FEB	.9	0.0	16.	.9	.40	.1	0.	0.0	0.0	0.0	1581.1	37.3	.8
MAR	1.0	0.0	16.	1.0	.92	.2	0.	0.0	0.0	0.0	1581.4	38.1	.8
APR	1.1	0.0	18.	1.1	1.97	.5	0.	0.0	0.0	0.0	1581.6	38.7	.6
MAY	3.0	1.2	68.	4.2	1.58	.4	33.	2.0	0.0	0.0	1582.2	40.5	1.8
JUN	5.9	1.2	119.	7.1	1.75	.4	34.	2.0	3.5	0.0	1582.6	41.7	1.2
JUL	3.9	9.0	210.	12.9	5.22	1.2	267.	16.4	0.0	0.0	1581.0	37.0	-4.7
AUG	2.2	7.6	159.	9.8	4.22	.9	272.	16.7	0.0	0.0	1577.9	29.2	-7.8
SEP	2.0	2.6	77.	4.6	3.36	.7	71.	4.2	0.0	0.0	1577.7	28.9	-.3
OCT	1.2	0.0	20.	1.2	2.09	.4	0.	0.0	0.0	0.0	1578.1	29.7	.8
NOV	.4	0.0	7.	.4	1.41	.3	0.	0.0	0.0	0.0	1578.1	29.8	.1
DEC	.3	0.0	5.	.3	.43	.1	0.	0.0	0.0	0.0	1578.2	30.0	.2
TOTAL	22.2	21.6		43.8	23.85	5.3		41.3	3.5	0.0			-6.3
REASONABLE MAXIMUM INFLOW CONDITIONS													
JAN	.8	0.0	13.	.8	.16	0.0	0.	0.0	0.0	0.0	1581.0	37.1	.8
FEB	2.5	0.0	45.	2.5	.26	.1	0.	0.0	0.0	0.0	1581.9	39.5	2.4
MAR	2.9	0.0	47.	2.9	.35	.1	0.	0.0	.6	0.0	1582.6	41.7	2.2
APR	3.1	0.0	52.	3.1	.44	.1	0.	0.0	3.0	0.0	1582.6	41.7	0.0
MAY	8.5	1.2	158.	9.7	.54	.1	15.	.9	8.7	0.0	1582.6	41.7	0.0
JUN	16.8	1.2	303.	18.0	-1.08	-.3	18.	1.1	17.2	0.0	1582.6	41.7	0.0
JUL	11.1	1.2	200.	12.3	4.30	1.1	130.	8.0	3.2	0.0	1582.6	41.7	0.0
AUG	6.1	1.2	119.	7.3	3.06	.8	130.	8.0	0.0	0.0	1582.1	40.2	-1.5
SEP	5.7	1.2	116.	6.9	1.78	.4	34.	2.0	3.0	0.0	1582.6	41.7	1.5
OCT	3.4	0.0	55.	3.4	1.49	.4	0.	0.0	3.0	0.0	1582.6	41.7	0.0
NOV	1.1	0.0	18.	1.1	1.00	.2	0.	0.0	.9	0.0	1582.6	41.7	0.0
DEC	.8	0.0	13.	.8	-.15	0.0	0.	0.0	.8	0.0	1582.6	41.7	0.0
TOTAL	62.8	6.0		68.8	12.15	3.0		20.0	40.4	0.0			5.4

KIRWIN RESERVOIR OPERATION ESTIMATES - 1976

MONTH	HISTORICAL INFLOW MEAN CFS	HISTORICAL INFLOW 1000 AF	NET EVAPORATION INCHES	NET EVAPORATION 1000 AF	RELEASE REQUIREMENT MEAN CFS	RELEASE REQUIREMENT 1000 AF	RESERVOIR SPILL 1000 AF	REQUIREMENT SHORTAGE 1000 AF	END OF MONTH ELEV FT	END OF MONTH CONT 1000 AF	RESERVOIR CHANGE 1000 AF
REASONABLE MINIMUM INFLOW CONDITIONS											
JAN	5.	.3	.91	.3	0.	0.0	0.0	0.0	1718.3	52.9	0.0
FEB	9.	.5	1.04	.3	0.	0.0	0.0	0.0	1718.4	53.1	.2
MAR	13.	.8	1.79	.5	0.	0.0	0.0	0.0	1718.5	53.4	.3
APR	17.	1.0	4.60	1.3	0.	0.0	0.0	0.0	1718.4	53.1	-.3
MAY	31.	1.9	4.77	1.4	41.	2.5	0.0	0.0	1717.8	51.1	-2.0
JUN	72.	4.3	6.32	1.8	44.	2.6	0.0	0.0	1717.8	51.0	-.1
JUL	46.	2.8	8.80	2.4	122.	7.5	0.0	0.0	1715.6	43.9	-7.1
AUG	33.	2.0	7.74	1.8	141.	8.7	0.0	0.0	1712.5	35.4	-8.5
SEP	22.	1.3	5.66	1.1	64.	3.8	0.0	0.0	1711.1	31.8	-3.6
OCT	13.	.8	4.61	.9	0.	0.0	0.0	0.0	1711.0	31.7	-.1
NOV	7.	.4	2.54	.5	0.	0.0	0.0	0.0	1711.0	31.6	-.1
DEC	5.	.3	1.22	.2	0.	0.0	0.0	0.0	1711.0	31.7	.1
TOTAL		16.4	50.00	12.5		25.1	0.0	0.0			-21.2
MOST PROBABLE INFLOW CONDITIONS											
JAN	10.	.6	.73	.2	0.	0.0	0.0	0.0	1718.4	53.3	.4
FEB	23.	1.3	.77	.2	0.	0.0	0.0	0.0	1718.8	54.4	1.1
MAR	29.	1.8	1.04	.3	0.	0.0	0.0	0.0	1719.2	55.9	1.5
APR	39.	2.3	1.89	.6	0.	0.0	0.0	0.0	1719.6	57.6	1.7
MAY	73.	4.5	3.60	1.1	13.	.8	0.0	0.0	1720.3	60.2	2.6
JUN	168.	10.0	4.65	1.5	13.	.8	0.0	0.0	1722.3	67.9	7.7
JUL	107.	6.6	6.33	2.1	111.	6.8	0.0	0.0	1721.7	65.6	-2.3
AUG	76.	4.7	5.56	1.8	111.	6.8	0.0	0.0	1720.7	61.7	-3.9
SEP	50.	3.0	4.25	1.4	29.	1.7	0.0	0.0	1720.7	61.6	-.1
OCT	33.	2.0	3.59	1.2	0.	0.0	0.0	0.0	1720.9	62.4	.8
NOV	15.	.9	1.85	.6	0.	0.0	0.0	0.0	1721.0	62.7	.3
DEC	11.	.7	.74	.2	0.	0.0	0.0	0.0	1721.1	63.2	.5
TOTAL		38.4	35.00	11.2		16.9	0.0	0.0			10.3
REASONABLE MAXIMUM INFLOW CONDITIONS											
JAN	24.	1.5	.45	.1	0.	0.0	0.0	0.0	1718.7	54.3	1.4
FEB	54.	3.0	.50	.2	0.	0.0	0.0	0.0	1719.5	57.1	2.8
MAR	65.	4.0	.56	.2	0.	0.0	0.0	0.0	1720.5	60.9	3.8
APR	87.	5.2	.53	.2	0.	0.0	0.0	0.0	1721.8	65.9	5.0
MAY	169.	10.4	1.68	.6	8.	.5	0.0	0.0	1724.0	75.2	9.3
JUN	383.	22.8	1.66	.6	10.	.6	0.0	0.0	1728.7	96.8	21.6
JUL	247.	15.2	5.47	2.3	68.	4.2	6.1	0.0	1729.2	99.4	2.6
AUG	174.	10.7	4.67	2.0	68.	4.2	4.5	0.0	1729.2	99.4	0.0
SEP	118.	7.0	2.75	1.2	17.	1.0	4.8	0.0	1729.2	99.4	0.0
OCT	73.	4.5	2.27	1.0	0.	0.0	3.5	0.0	1729.2	99.4	0.0
NOV	37.	2.2	1.02	.4	0.	0.0	1.8	0.0	1729.2	99.4	0.0
DEC	26.	1.6	.54	.2	0.	0.0	1.4	0.0	1729.2	99.4	0.0
TOTAL		88.1	22.10	9.0		10.5	22.1	0.0			46.5

WEBSTER RESERVOIR OPERATION ESTIMATES - 1976

MONTH	HISTORICAL INFLOW MEAN CFS	HISTORICAL INFLOW 1000 AF	NET EVAPORATION INCHES	NET EVAPORATION 1000 AF	RELEASE REQUIREMENT MEAN CFS	RELEASE REQUIREMENT 1000 AF	RESERVOIR SPILL 1000 AF	REQUIREMENT SHORTAGE 1000 AF	END OF MONTH ELEV FT	END OF MONTH CONT 1000 AF	RESERVOIR CHANGE 1000 AF
REASONABLE MINIMUM INFLOW CONDITIONS											
JAN	3.	.2	.96	.2	0.	0.0	0.0	0.0	1880.2	39.3	0.0
FEB	7.	.4	1.11	.2	0.	0.0	0.0	0.0	1880.3	39.5	.2
MAR	10.	.6	2.08	.4	0.	0.0	0.0	0.0	1880.3	39.7	.2
APR	12.	.7	4.92	1.0	0.	0.0	0.0	0.0	1880.2	39.4	-.3
MAY	24.	1.5	4.75	1.0	46.	2.8	0.0	0.0	1879.3	37.1	-2.3
JUN	47.	2.8	7.50	1.5	62.	3.7	0.0	0.0	1878.3	34.7	-2.4
JUL	36.	2.2	9.04	1.7	125.	7.7	0.0	0.0	1875.0	27.5	-7.2
AUG	20.	1.2	8.08	1.3	140.	8.6	0.0	0.0	1870.4	18.8	-8.7
SEP	15.	.9	6.70	.9	79.	4.7	0.0	0.0	1867.4	14.1	-4.7
OCT	11.	.7	4.71	.6	0.	0.0	0.0	0.0	1867.5	14.2	.1
NOV	5.	.3	2.45	.3	0.	0.0	0.0	0.0	1867.5	14.2	0.0
DEC	3.	.2	1.20	.1	0.	0.0	0.0	0.0	1867.6	14.3	.1
TOTAL		11.7	53.50	9.2		27.5	0.0	0.0			-25.0
MOST PROBABLE INFLOW CONDITIONS											
JAN	10.	.6	.67	.1	0.	0.0	0.0	0.0	1880.4	39.8	.5
FEB	22.	1.2	.81	.2	0.	0.0	0.0	0.0	1880.8	40.8	1.0
MAR	26.	1.6	1.48	.3	0.	0.0	0.0	0.0	1881.3	42.1	1.3
APR	32.	1.9	2.72	.6	0.	0.0	0.0	0.0	1881.8	43.4	1.3
MAY	65.	4.0	3.13	.7	13.	.8	0.0	0.0	1882.7	45.9	2.5
JUN	131.	7.8	4.40	1.0	15.	.9	0.0	0.0	1884.8	51.8	5.9
JUL	99.	6.1	7.02	1.7	112.	6.9	0.0	0.0	1883.9	49.3	-2.5
AUG	55.	3.4	5.72	1.3	112.	6.9	0.0	0.0	1882.2	44.5	-4.8
SEP	39.	2.3	4.69	1.0	34.	2.0	0.0	0.0	1881.9	43.8	-.7
OCT	29.	1.8	3.37	.8	0.	0.0	0.0	0.0	1882.3	44.8	1.0
NOV	13.	.8	1.61	.4	0.	0.0	0.0	0.0	1882.5	45.2	.4
DEC	10.	.6	.78	.2	0.	0.0	0.0	0.0	1882.6	45.6	.4
TOTAL		32.1	36.40	8.3		17.5	0.0	0.0			6.3
REASONABLE MAXIMUM INFLOW CONDITIONS											
JAN	29.	1.8	.53	.1	0.	0.0	0.0	0.0	1880.9	41.0	1.7
FEB	59.	3.3	.48	.1	0.	0.0	0.0	0.0	1882.1	44.2	3.2
MAR	72.	4.4	.70	.2	0.	0.0	0.0	0.0	1883.6	48.4	4.2
APR	92.	5.5	1.00	.2	0.	0.0	0.0	0.0	1885.4	53.7	5.3
MAY	181.	11.1	1.74	.5	0.	0.0	0.0	0.0	1888.8	64.3	10.6
JUN	366.	21.8	.72	.2	0.	0.0	8.5	0.0	1892.4	77.4	13.1
JUL	278.	17.1	5.63	1.8	57.	3.5	11.8	0.0	1892.4	77.4	0.0
AUG	155.	9.5	4.03	1.3	59.	3.6	4.6	0.0	1892.4	77.4	0.0
SEP	109.	6.5	3.75	1.2	3.	.2	5.1	0.0	1892.4	77.4	0.0
OCT	85.	5.2	2.83	.9	0.	0.0	4.3	0.0	1892.4	77.4	0.0
NOV	37.	2.2	.99	.3	0.	0.0	1.9	0.0	1892.4	77.4	0.0
DEC	29.	1.8	.60	.2	0.	0.0	1.6	0.0	1892.4	77.4	0.0
TOTAL		90.2	23.00	7.0		7.3	37.8	0.0			38.1

WACONDA LAKE OPERATION ESTIMATES - 1976

MONTH	UNDEPLETED INFLOW 1000 AF	UPSTREAM DEPLETIONS 1000 AF	DEPLETED INFLOW MEAN CFS	DEPLETED INFLOW 1000 AF	NET EVAPORATION INCHES	NET EVAPORATION 1000 AF	RELEASE REQUIREMENT MEAN CFS	RELEASE REQUIREMENT 1000 AF	RES SPILL 1000 AF	REQ SHORT 1000 AF	END OF MONTH ELEV FT	END OF MONTH CONT 1000 AF	RES CHANGE 1000 AF
					REASONABLE MINIMUM INFLOW CONDITIONS								
JAN	1.8	0.0	29.	1.8	.89	.9	3.	.2	0.0	0.0	1455.3	238.3	.7
FEB	3.2	-.5	49.	2.7	1.00	1.0	4.	.2	0.0	0.0	1455.5	239.8	1.5
MAR	4.4	-.9	57.	3.5	1.83	1.9	3.	.2	0.0	0.0	1455.6	241.2	1.4
APR	5.3	-1.1	71.	4.2	4.55	4.8	0.	0.0	0.0	0.0	1455.5	240.6	-.6
MAY	8.0	-1.9	99.	6.1	4.48	4.7	0.	0.0	.5	0.0	1455.6	241.5	.9
JUN	15.1	-4.6	176.	10.5	6.57	6.9	0.	0.0	3.6	0.0	1455.6	241.5	0.0
JUL	11.1	-2.3	143.	8.8	8.05	8.2	332.	20.4	0.0	0.0	1454.0	221.7	-19.8
AUG	6.0	-.3	93.	5.7	8.50	8.3	146.	9.0	0.0	0.0	1453.0	210.1	-11.6
SEP	4.5	.5	84.	5.0	6.19	5.9	0.	0.0	0.0	0.0	1452.9	209.2	-.9
OCT	2.0	-.8	20.	1.2	4.42	4.2	0.	0.0	0.0	0.0	1452.6	206.2	-3.0
NOV	1.9	-.3	27.	1.6	2.46	2.3	0.	0.0	0.0	0.0	1452.6	205.5	-.7
DEC	2.2	.1	37.	2.3	1.16	1.1	3.	.2	0.0	0.0	1452.7	206.5	1.0
TOTAL	65.5	-12.1		53.4	50.10	50.2		30.2	4.1	0.0			-31.1
					MOST PROBABLE INFLOW CONDITIONS								
JAN	4.4	-.7	60.	3.7	.53	.6	3.	.2	0.0	0.0	1455.5	240.5	2.9
FEB	6.3	-2.1	76.	4.2	.63	.7	4.	.2	2.3	0.0	1455.6	241.5	1.0
MAR	7.5	-2.9	75.	4.6	.84	.9	3.	.2	3.5	0.0	1455.6	241.5	0.0
APR	11.6	-3.6	134.	8.0	2.90	3.0	0.	0.0	5.0	0.0	1455.6	241.5	0.0
MAY	27.5	-7.7	322.	19.8	2.96	3.1	0.	0.0	16.7	0.0	1455.6	241.5	0.0
JUN	49.0	-16.8	541.	32.2	3.32	3.5	0.	0.0	28.7	0.0	1455.6	241.5	0.0
JUL	24.1	-10.3	224.	13.8	6.05	6.2	459.	28.2	0.0	0.0	1453.9	220.9	-20.6
AUG	13.0	-5.5	122.	7.5	4.46	4.3	228.	14.0	0.0	0.0	1453.0	210.1	-10.8
SEP	13.8	-3.6	171.	10.2	3.96	3.8	0.	0.0	0.0	0.0	1453.5	216.5	6.4
OCT	6.0	-3.1	47.	2.9	3.24	3.2	0.	0.0	0.0	0.0	1453.5	216.2	-.3
NOV	4.8	-1.3	59.	3.5	1.85	1.8	0.	0.0	0.0	0.0	1453.7	217.9	1.7
DEC	5.0	-.7	70.	4.3	.76	.7	3.	.2	0.0	0.0	1453.9	221.3	3.4
TOTAL	173.0	-58.3		114.7	31.50	31.8		43.0	56.2	0.0			-16.3
					REASONABLE MAXIMUM INFLOW CONDITIONS								
JAN	9.5	-2.8	109.	6.7	.36	.4	0.	0.0	2.4	0.0	1455.6	241.5	3.9
FEB	15.5	-5.9	173.	9.6	.21	.2	0.	0.0	9.4	0.0	1455.6	241.5	0.0
MAR	19.0	-7.9	181.	11.1	.34	.4	0.	0.0	10.7	0.0	1455.6	241.5	0.0
APR	36.4	-10.1	442.	26.3	1.39	1.5	0.	0.0	24.8	0.0	1455.6	241.5	0.0
MAY	56.6	-21.2	576.	35.4	.87	.9	0.	0.0	34.5	0.0	1455.6	241.5	0.0
JUN	165.9	-35.7	2188.	130.2	-.20	-.2	0.	0.0	130.4	0.0	1455.6	241.5	0.0
JUL	69.8	-13.4	917.	56.4	4.46	4.6	1161.	71.4	0.0	0.0	1454.0	221.9	-19.6
AUG	41.8	-9.8	520.	32.0	3.27	3.2	660.	40.6	0.0	0.0	1453.0	210.1	-11.8
SEP	53.5	-3.2	845.	50.3	2.29	2.3	0.	0.0	16.6	0.0	1455.6	241.5	31.4
OCT	28.5	-1.2	444.	27.3	2.41	2.5	0.	0.0	24.8	0.0	1455.6	241.5	0.0
NOV	14.9	-.3	245.	14.6	.92	1.0	0.	0.0	13.6	0.0	1455.6	241.5	0.0
DEC	9.6	.2	159.	9.8	.38	.4	0.	0.0	9.4	0.0	1455.6	241.5	0.0
TOTAL	521.0	-111.3		409.7	16.70	17.2		112.0	276.6	0.0			3.9

CEDAR BLUFF RESERVOIR OPERATION ESTIMATES - 1976

MONTH	HISTORICAL INFLOW MEAN CFS	HISTORICAL INFLOW 1000 AF	NET EVAPORATION INCHES	NET EVAPORATION 1000 AF	RELEASE REQUIREMENT MEAN CFS	RELEASE REQUIREMENT 1000 AF	RESERVOIR SPILL 1000 AF	REQUIREMENT SHORTAGE 1000 AF	END OF MONTH ELEV FT	END OF MONTH CONT 1000 AF	RESERVOIR CHANGE 1000 AF
REASONABLE MINIMUM INFLOW CONDITIONS											
JAN	3.	.2	1.23	.5	8.	.5	0.0	0.0	2130.1	106.1	-.8
FEB	5.	.3	1.39	.5	7.	.4	0.0	0.0	2130.0	105.5	-.6
MAR	8.	.5	2.48	.9	10.	.6	0.0	0.0	2129.8	104.5	-1.0
APR	15.	.9	5.30	2.0	7.	.4	0.0	0.0	2129.5	103.0	-1.5
MAY	34.	2.1	5.10	1.9	44.	2.7	0.0	0.0	2128.9	100.5	-2.5
JUN	79.	4.7	7.76	2.8	44.	2.6	0.0	0.0	2128.7	99.8	-.7
JUL	39.	2.4	9.16	3.2	111.	6.8	0.0	0.0	2126.9	92.2	-7.6
AUG	36.	2.2	8.88	2.9	111.	6.8	0.0	0.0	2125.0	84.7	-7.5
SEP	20.	1.2	6.41	2.0	61.	3.6	0.0	0.0	2123.8	80.3	-4.4
OCT	15.	.9	4.93	1.5	24.	1.5	0.0	0.0	2123.3	78.2	-2.1
NOV	5.	.3	2.90	.9	7.	.4	0.0	0.0	2123.0	77.2	-1.0
DEC	3.	.2	1.46	.4	7.	.4	0.0	0.0	2122.8	76.6	-.6
TOTAL		15.9	57.00	19.5		26.7	0.0	0.0			-30.3
MOST PROBABLE INFLOW CONDITIONS											
JAN	8.	.5	1.08	.4	8.	.5	0.0	0.0	2130.2	106.5	-.4
FEB	16.	.9	1.13	.4	7.	.4	0.0	0.0	2130.3	106.6	.1
MAR	21.	1.3	1.72	.7	10.	.6	0.0	0.0	2130.3	106.6	0.0
APR	37.	2.2	3.77	1.4	7.	.4	0.0	0.0	2130.3	107.0	.4
MAY	86.	5.3	3.22	1.2	21.	1.3	0.0	0.0	2131.0	109.8	2.8
JUN	200.	11.9	4.29	1.7	20.	1.2	0.0	0.0	2132.8	118.8	9.0
JUL	101.	6.2	7.39	3.0	93.	5.7	0.0	0.0	2132.3	116.3	-2.5
AUG	93.	5.7	6.04	2.4	106.	6.5	0.0	0.0	2131.7	113.1	-3.2
SEP	49.	2.9	4.48	1.8	34.	2.0	0.0	0.0	2131.5	112.2	-.9
OCT	37.	2.3	3.73	1.5	21.	1.3	0.0	0.0	2131.4	111.7	-.5
NOV	13.	.8	2.46	1.0	7.	.4	0.0	0.0	2131.2	111.1	-.6
DEC	10.	.6	1.20	.5	7.	.4	0.0	0.0	2131.2	110.8	-.3
TOTAL		40.6	40.51	16.0		20.7	0.0	0.0			3.9
REASONABLE MAXIMUM INFLOW CONDITIONS											
JAN	23.	1.4	.92	.3	8.	.5	0.0	0.0	2130.5	107.5	.6
FEB	45.	2.5	.87	.3	7.	.4	0.0	0.0	2130.9	109.3	1.8
MAR	60.	3.7	1.20	.5	10.	.6	0.0	0.0	2131.4	111.9	2.6
APR	104.	6.2	2.32	.9	7.	.4	0.0	0.0	2132.4	116.8	4.9
MAY	239.	14.7	2.02	.9	18.	1.1	0.0	0.0	2134.9	129.5	12.7
JUN	553.	32.9	1.25	.6	17.	1.0	0.0	0.0	2140.3	160.8	31.3
JUL	276.	17.0	5.22	2.8	62.	3.8	0.0	0.0	2141.9	171.2	10.4
AUG	257.	15.8	4.25	2.4	70.	4.3	0.0	0.0	2143.3	180.3	9.1
SEP	136.	8.1	3.86	2.2	24.	1.4	0.0	0.0	2144.0	184.8	4.5
OCT	106.	6.5	2.56	1.5	16.	1.0	3.7	0.0	2144.0	185.1	.3
NOV	37.	2.2	1.62	.9	7.	.4	.9	0.0	2144.0	185.1	0.0
DEC	24.	1.5	.92	.5	7.	.4	.6	0.0	2144.0	185.1	0.0
TOTAL		112.5	27.01	13.8		15.3	5.2	0.0			78.2

TABLE 5

FLOOD DAMAGES PREVENTED BY KANSAS RIVER PROJECTS RESERVOIRS

BONNY

Year	Damages Prevented	Cumulative Total
1951	$ 293,000	$ 293,000
1953	135,000	428,000
1957	1,050,000	1,478,000
1960	169,000	1,647,000
1965	273,000	1,920,000
1967	42,000	1,962,000
1969	200,000	2,162,000

SWANSON

Year	Damages Prevented	Cumulative Total
1957	$ 233,000	$ 233,000
1960	900,000	1,133,000
1962	126,000	1,259,000
1964	50,000	1,309,000
1965	477,000	1,786,000
1967	182,000	1,968,000
1969	1,000	1,969,000

ENDERS

Year	Damages Prevented	Cumulative Total
1951	$ 220,000	$ 220,000
1956	104,000	324,000
1960	412,000	736,000
1962	37,000	773,000
1965	137,000	910,000
1967	42,000	952,000
1969	1,000	953,000

HUGH BUTLER

Year	Damages Prevented	Cumulative Total
1962	$ 2,000	$ 2,000
1965	137,000	139,000
1967	42,000	181,000

HARRY STRUNK

Year	Damages Prevented	Cumulative Total
1951	$ 14,000	$ 14,000
1957	5,000	19,000
1960	198,000	217,000
1962	29,000	246,000
1967	129,000	375,000
1969	6,000	381,000

NORTON

Year	Damages Prevented	Cumulative Total
1966	$ 132,000	$ 132,000
1967	885,000	1,017,000
1972	498,000	1,515,000

HARLAN COUNTY

Year	Damages Prevented	Cumulative Total
1957	$1,045,000	$ 1,045,000
1960	4,853,000	5,898,000
1961	255,000	6,153,000
1962	45,000	6,198,000
1964	182,000	6,380,000
1965	60,000	6,440,000
1966	1,658,000	8,098,000
1967	3,539,000	11,637,000
1969	14,000	11,651,000
1971	64,000	11,715,000
1973	1,310,000	13,025,000
1974	1,000	13,026,000
1975	200,000	13,226,000

LOVEWELL

Year	Damages Prevented	Cumulative Total
1957	$ 349,000	$ 349,000
1960	178,000	527,000
1961	165,000	692,000
1962	5,000	697,000
1971	9,000	706,000
1973	1,728,000	2,434,000
1975	98,000	2,532,000

KIRWIN

Year	Damages Prevented	Cumulative Total
1957	$ 522,000	$ 522,000
1958	10,000	532,000
1960	499,000	1,031,000
1961	1,000	1,032,000
1962	1,000	1,033,000
1964	34,000	1,067,000
1965	325,000	1,392,000
1967	191,000	1,583,000
1968	44,000	1,627,000
1969	2,000	1,629,000
1971	3,000	1,632,000
1973	40,000	1,672,000
1975	618,000	2,290,000

WEBSTER

Year	Damages Prevented	Cumulative Total
1957	$ 326,000	$ 326,000
1958	114,000	440,000
1960	1,018,000	1,458,000
1961	1,000	1,459,000
1962	1,000	1,460,000
1964	17,000	1,477,000
1965	325,000	1,802,000
1967	85,000	1,887,000
1968	2,000	1,889,000
1969	1,000	1,890,000
1971	3,000	1,893,000
1973	54,000	1,947,000
1975	885,000	2,832,000

WACONDA

Year	Damages Prevented	Cumulative Total
1968	$ 280,000	$ 280,000
1969	606,000	886,000
1971	9,000	895,000
1973	3,797,000	4,692,000
1974	1,000	4,693,000
1975	967,000	5,660,000

CEDAR BLUFF

Year	Damages Prevented	Cumulative Total
1951	$ 597,000	$ 597,000
1955	357,000	954,000
1956	19,000	973,000
1957	4,812,000	5,785,000
1958	829,000	6,614,000
1960	1,573,000	8,187,000
1961	101,000	8,288,000
1962	1,000	8,289,000
1964	17,000	8,306,000
1965	38,000	8,344,000
1967	42,000	8,386,000
1969	1,000	8,387,000
1971	8,000	8,395,000
1973	536,000	8,931,000
1975	11,000	8,942,000

PROJECT TOTALS

Year	Damages Prevented	Cumulative Total
1951	$1,124,000	$ 1,124,000
1953	135,000	1,259,000
1955	357,000	1,616,000
1956	123,000	1,739,000
1957	8,342,000	10,081,000
1958	953,000	11,034,000
1960	9,800,000	20,834,000
1961	523,000	21,357,000
1962	247,000	21,604,000
1964	300,000	21,904,000
1965	1,772,000	23,676,000
1966	1,790,000	25,466,000
1967	5,179,000	30,645,000
1968	326,000	30,971,000
1969	832,000	31,803,000
1971	96,000	31,899,000
1972	498,000	32,397,000
1973	7,465,000	39,862,000
1974	2,000	39,864,000
1975	2,779,000	42,643,000

NOTE.--Construction cost of storage dams -- $208,954,130.

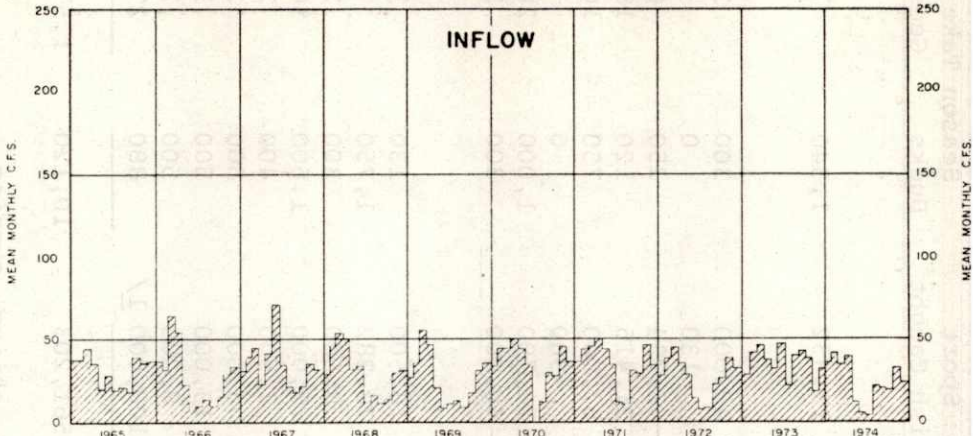
TABLE 6
OTHER USES AT FEDERALLY CONSTRUCTED STORAGE AND DIVERSION DAMS
NIOBRARA, LOWER PLATTE AND KANSAS RIVER BASINS
DURING 1975
Annual Totals

Features	Visitors	Cars in Area	Water Craft	Sport Fish Caught	Season Take Ducks	Season Take Geese
Colorado						
Bonny Reservoir	335,372	95,820	5,290	13,352	1,340	70
Kansas						
Norton Reservoir	127,913	36,547	3,302	40,000	300	30
Almena Diversion Dam	1,595	500	0	130	0	0
Lovewell Reservoir	184,110	48,450	4,750	2,734	250	65
Kirwin Reservoir	75,056	37,368	175	21,415	120	188
Webster Reservoir	140,371	37,938	375	57,000	750	100
Woodston Diversion Dam	2,010	670	0	900	0	0
Waconda Lake	307,334	83,065	5,446	174,790	1,000	200
Cedar Bluff Reservoir	200,200	57,200	6,477	40,000	300	30
Nebraska						
Box Butte Reservoir	51,218	15,304	4,822	16,500	130	12
Merritt Reservoir	54,846	18,902	4,375	78,382	1,750	0
Arcadia Diversion Dam	15,150	3,990	0	9,500	300	25
Sherman Reservoir	88,000	32,592	17,000	75,000	1,600	500
Swanson Lake	136,471	57,179	5,328	7,500	400	20
Enders Reservoir	25,837	6,130	1,066	3,000	500	25
Hugh Butler Lake	112,815	42,903	5,514	13,000	500	15
Harry Strunk Lake	56,161	13,874	1,711	8,000	500	20
Harlan County Reservoir	954,666	275,605	93,000	100,000 1/	380	275
TOTAL REPORTED	2,869,125	864,037	158,631	561,203	10,120	1,575

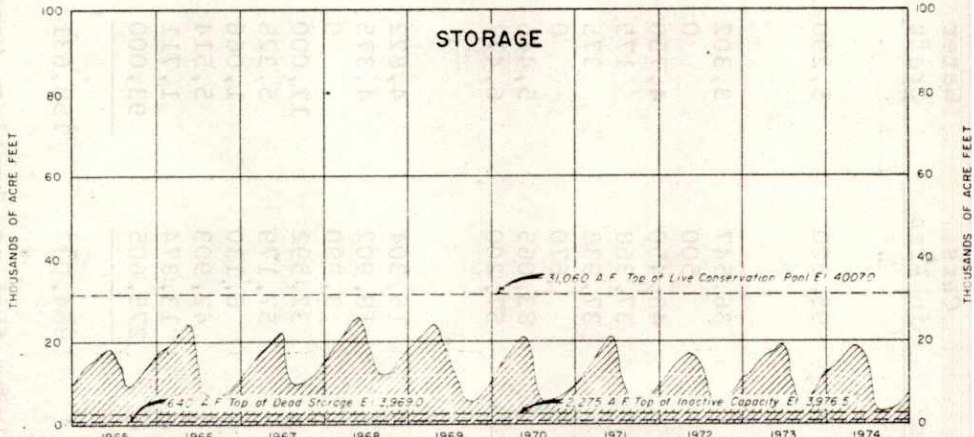
Visitors = Total visitor-days which includes fishing, hunting, boating, skiing, camping, picnicking and sightseeing.
Water Craft = Boating days which includes rentals, inboards, outboards, rowboats and sailboats.

1/ lbs. -- excluded from total.

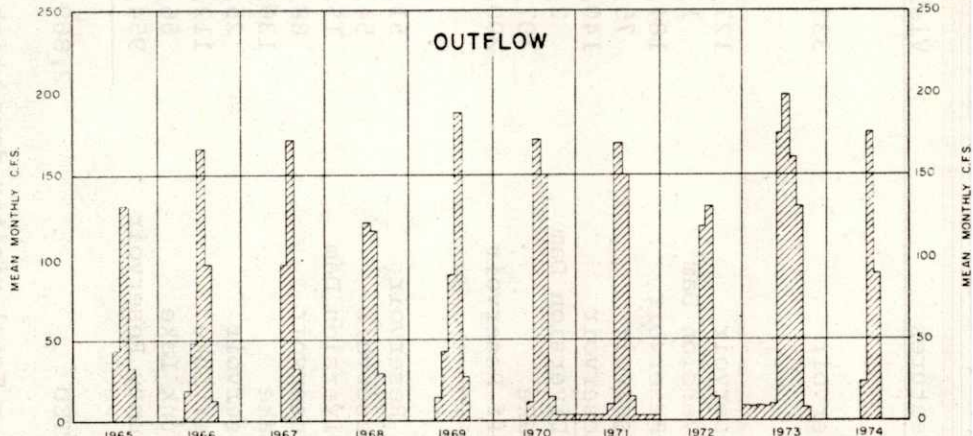
BOX BUTTE RESERVOIR
HISTORICAL OPERATION



	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974
MEAN ANNUAL C.F.S.			34	37	23	27	32	25	35	25
TOTAL ANNUAL A.F.			24,400	26,600	16,900	19,642	22,942	17,973	25,307	18,011



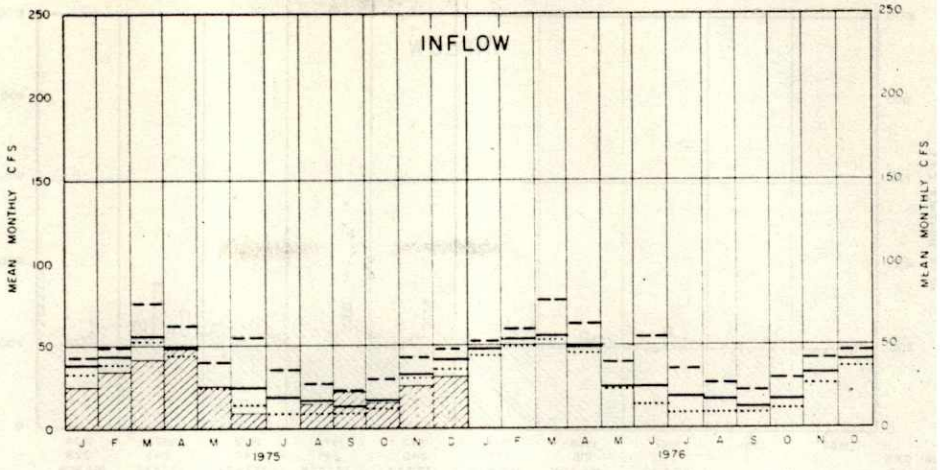
	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974
MAXIMUM A.F.			23,793	25,555	23,546	20,181	20,652	16,749	20,143	19,132
MINIMUM A.F.			7,560	10,455	2,950	1,105	868	2,211	1,368	1,918

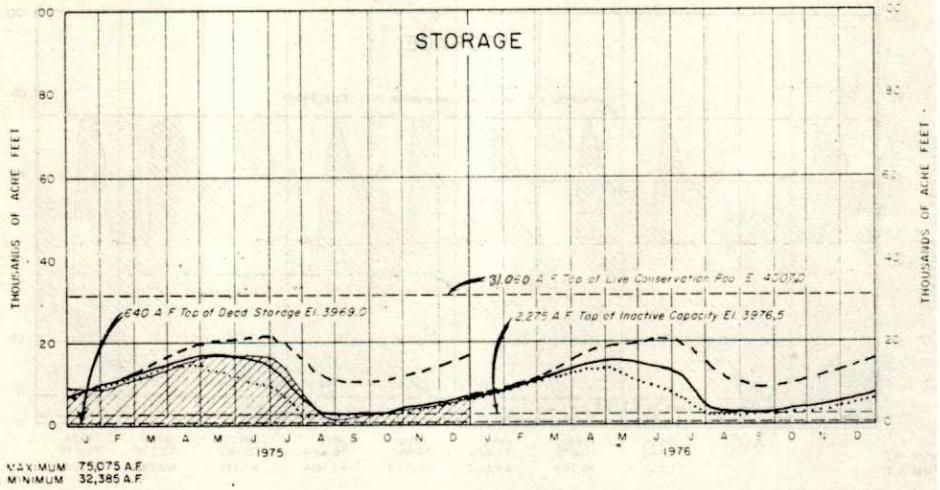


	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974
MEAN ANNUAL C.F.S.			26	23	31	27	30	23	27	24
TOTAL ANNUAL A.F.			18,700	16,900	22,100	19,388	22,018	16,711	19,851	17,291

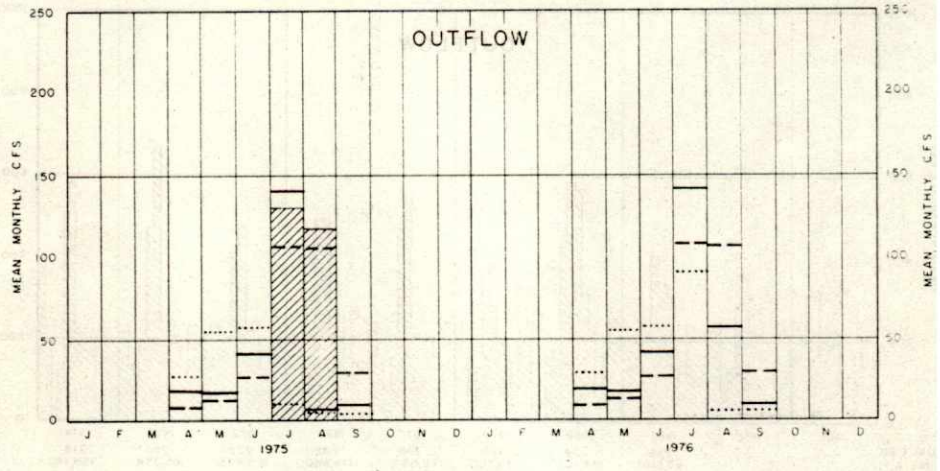
Exhibit I

BOX BUTTE RESERVOIR
OPERATING PLANS



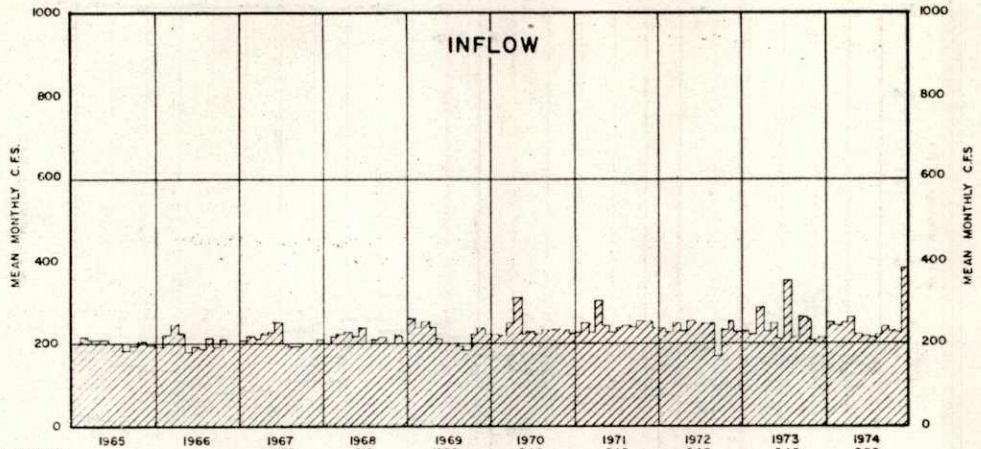


ANNUAL MAXIMUM 75,075 A.F.
ANNUAL MINIMUM 32,385 A.F.

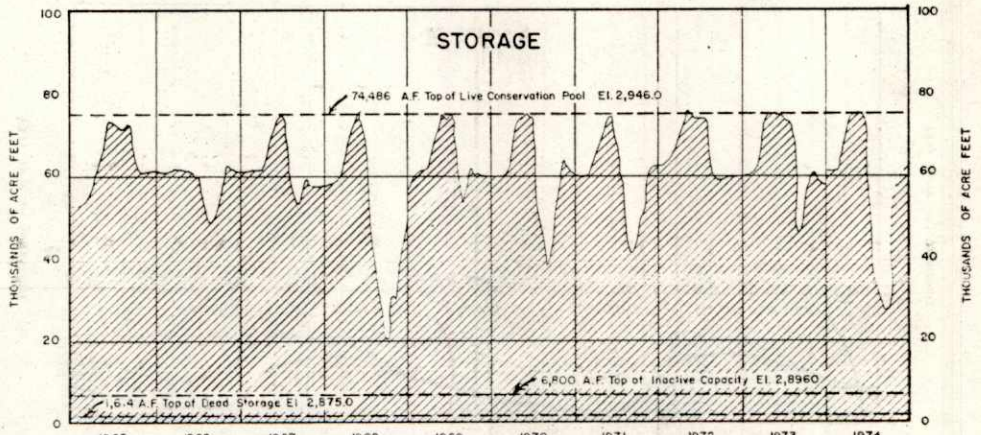


MOST PROBABLE
REASONABLE MAXIMUM
REASONABLE MINIMUM
ACTUAL

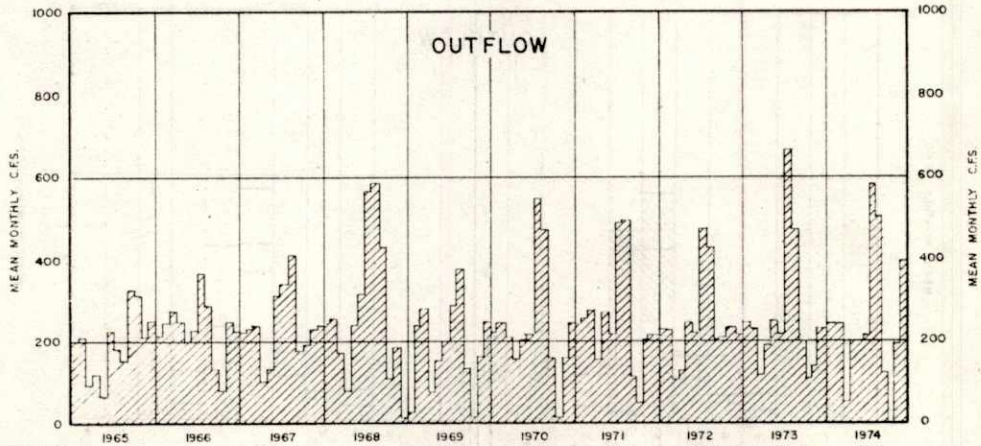
MERRITT RESERVOIR
HISTORICAL OPERATION



	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974
MEAN ANNUAL C.F.S.			222	215	228	240	245	240	245	229
TOTAL ANNUAL A.F.			160,500	156,300	165,400	173,547	177,429	173,877	177,432	165,909

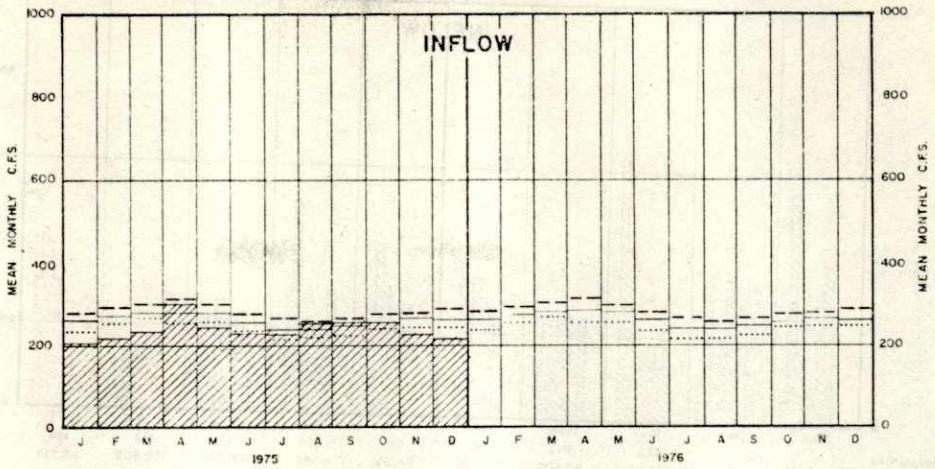


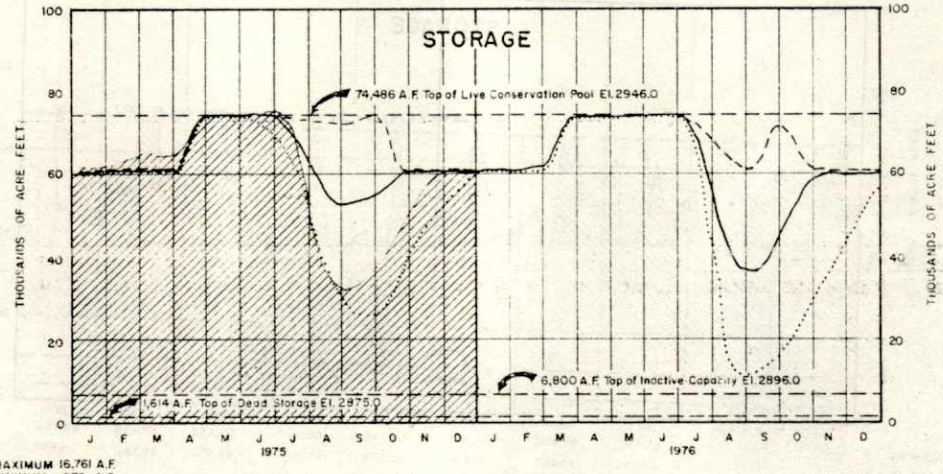
	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974
MAXIMUM A.F.			75,660	75,075	74,486	74,595	76,844	75,960	75,370	75,075
MINIMUM A.F.			51,221	19,763	48,867	38,323	41,104	58,176	40,749	31,104



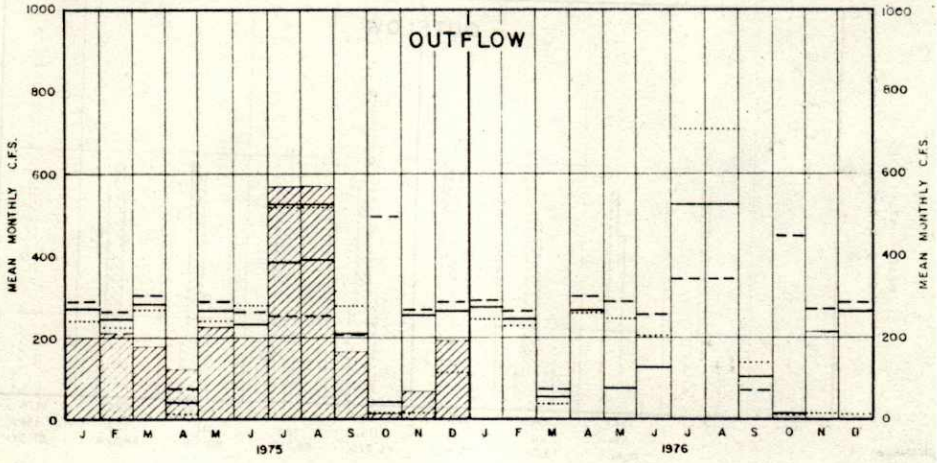
	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974
MEAN ANNUAL C.F.S.			235	254	192	238	242	228	256	218
TOTAL ANNUAL A.F.			169,800	184,100	139,300	172,067	174,960	165,425	185,054	158,135

MERRITT RESERVOIR
OPERATING PLANS



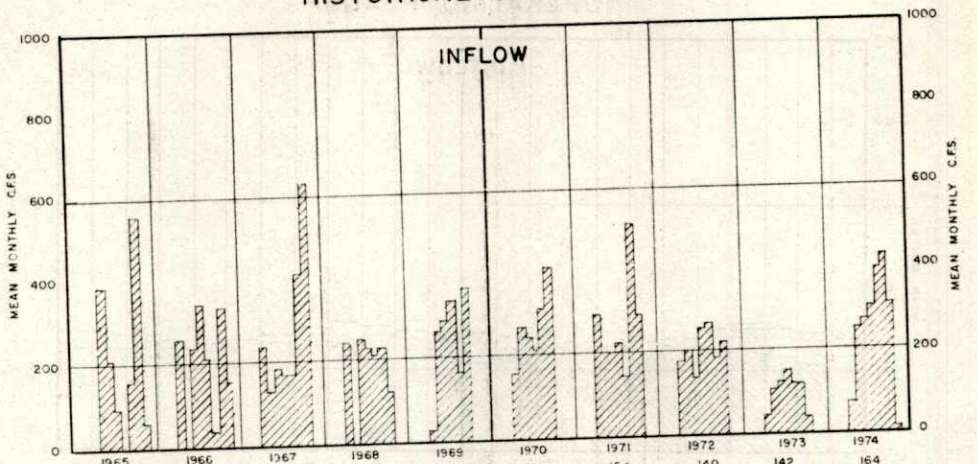


ANNUAL MAXIMUM 16,761 A.F.
ANNUAL MINIMUM 872 A.F.

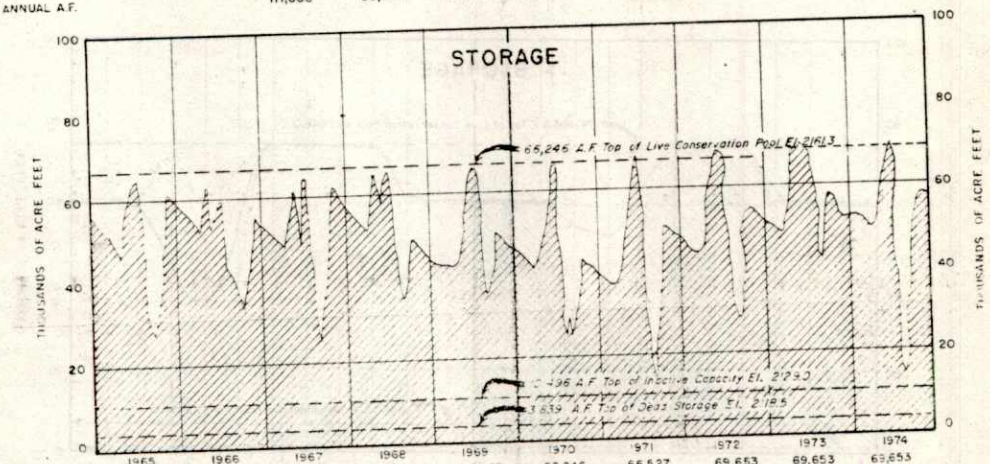


MOST PROBABLE
REASONABLE MAXIMUM
REASONABLE MINIMUM
ACTUAL

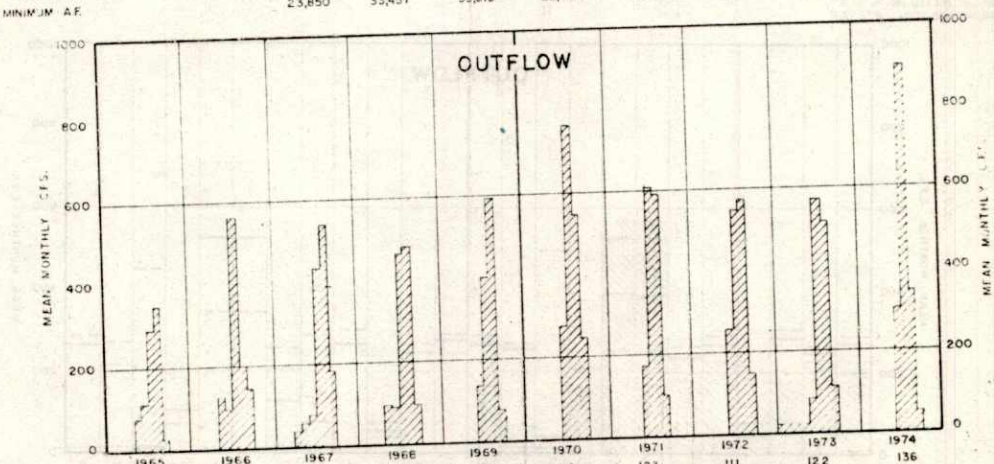
SHERMAN RESERVOIR
HISTORICAL OPERATION



	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974
MEAN ANNUAL C.F.S.			162	111	141	131	154	140	142	164
TOTAL ANNUAL A.F.			117,600	80,600	101,900	94,919	111,148	101,710	102,905	118,539



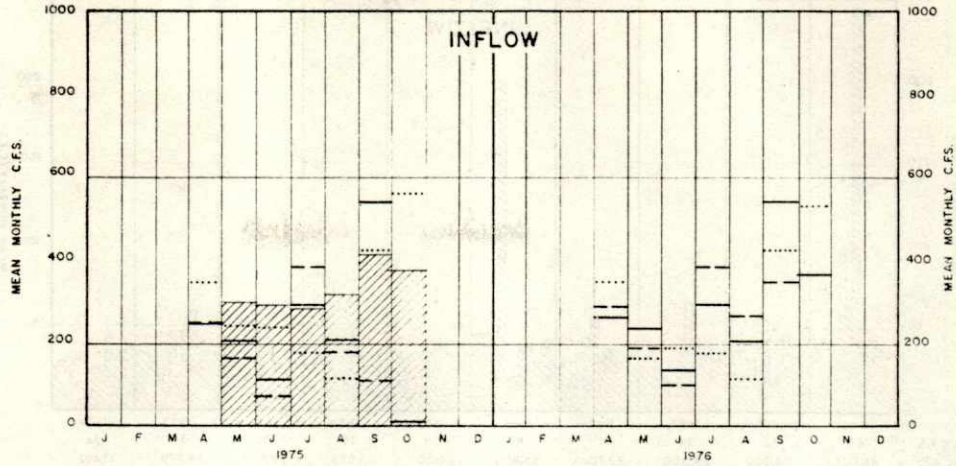
	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974
MAXIMUM A.F.			65,690	65,404	65,965	66,246	66,527	69,653	69,653	69,653
MINIMUM A.F.			23,850	33,457	33,815	22,869	10,007	26,820	36,592	8,690

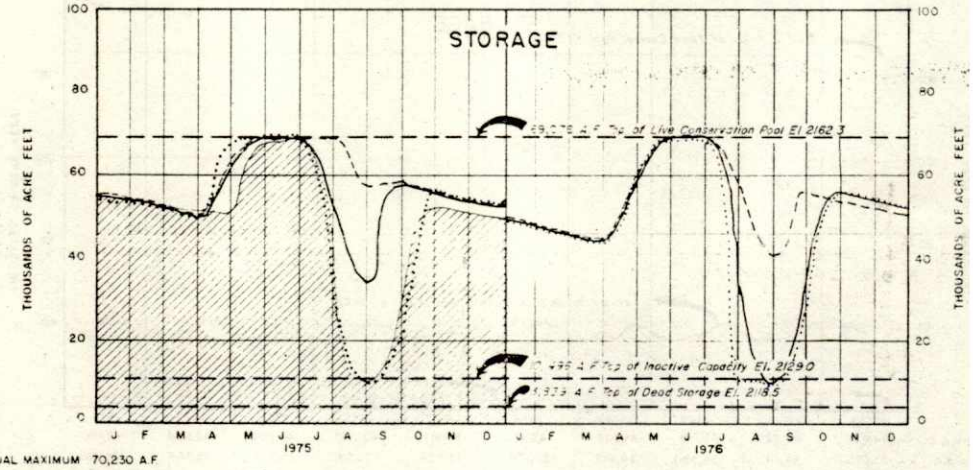


	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974
MEAN ANNUAL C.F.S.			109	101	101	119	123	111	122	136
TOTAL ANNUAL A.F.			78,600	73,200	73,300	86,020	88,718	80,316	88,328	96,371

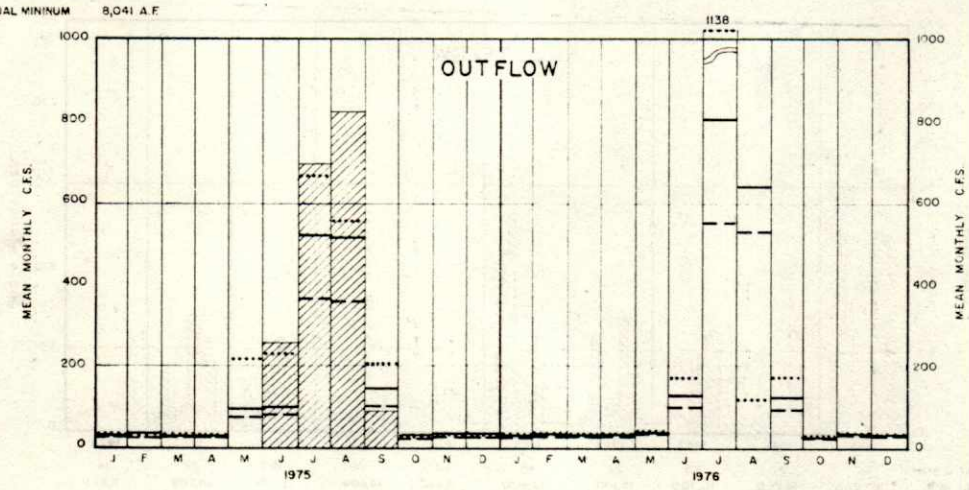
Exhibit 3

SHERMAN RESERVOIR
OPERATING PLANS



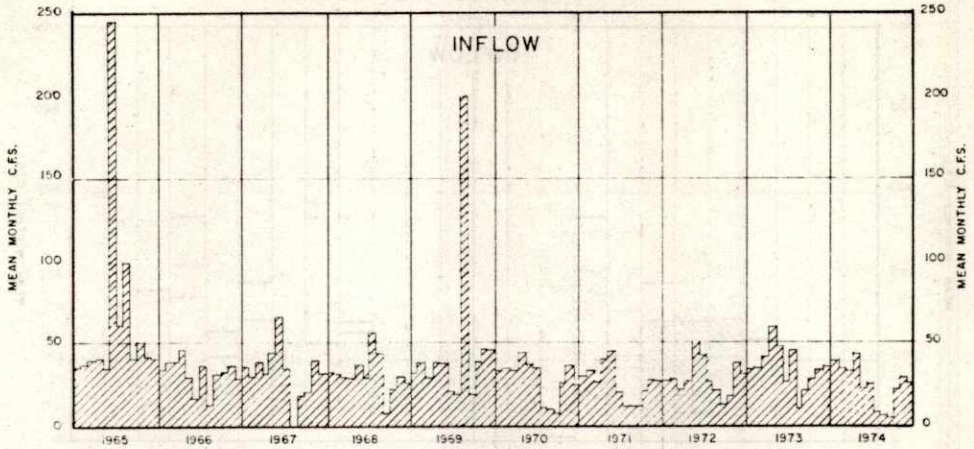


ANNUAL MAXIMUM 70,230 A.F.
ANNUAL MINIMUM 8,041 A.F.

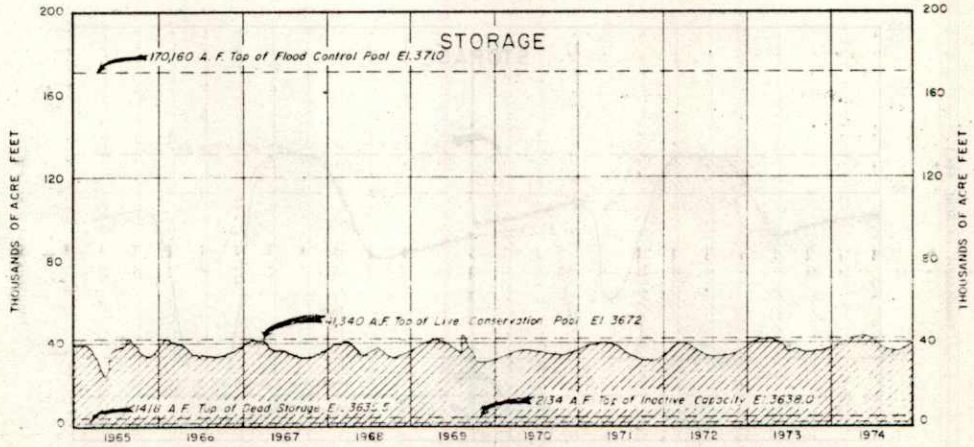


MOST PROBABLE
REASONABLE MAXIMUM
REASONABLE MINIMUM
ACTUAL

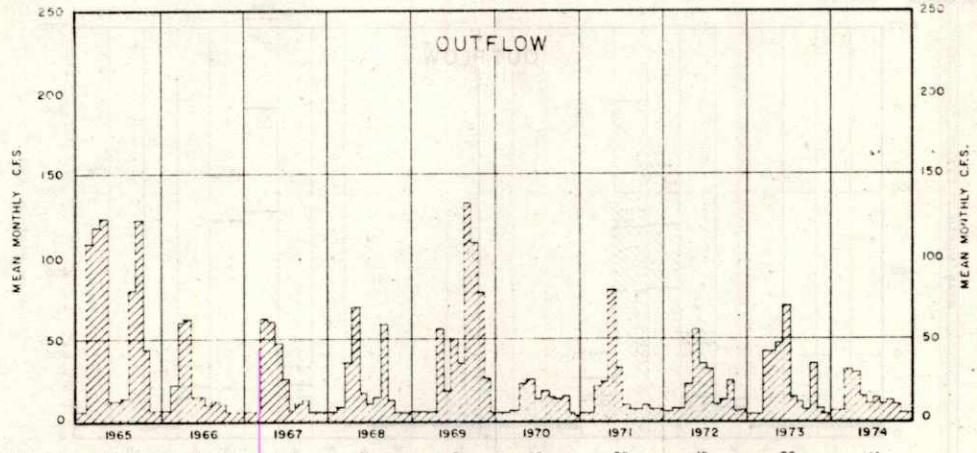
BONNY RESERVOIR
HISTORICAL OPERATION



	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974
MEAN ANNUAL C.F.S.	67	32	34	31	47	29	26	31	34	24
TOTAL ANNUAL A.F.	48,600	23,200	24,300	22,700	33,800	21,120	19,085	22,597	24,779	17,492

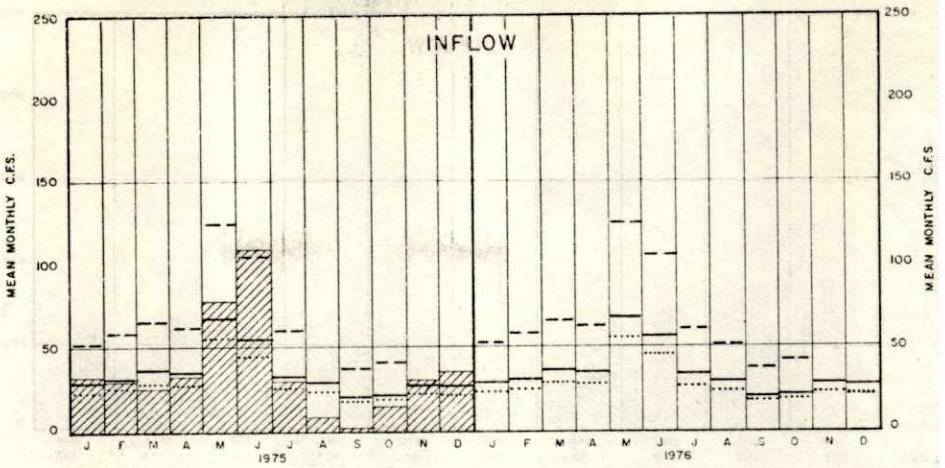


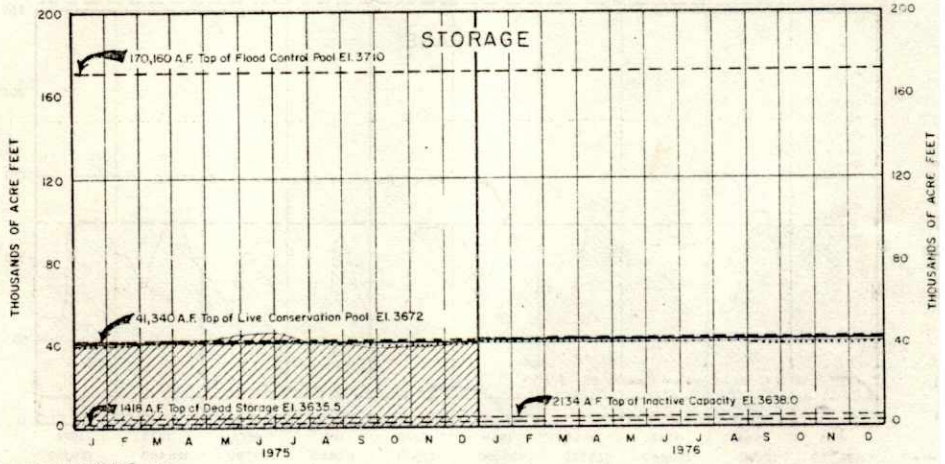
	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974
MAXIMUM A.F.	44,730	42,020	42,718	41,500	47,430	38,911	42,097	40,300	42,654	42,119
MINIMUM A.F.	23,665	34,140	34,390	34,817	30,176	31,934	33,059	35,501	35,464	35,392



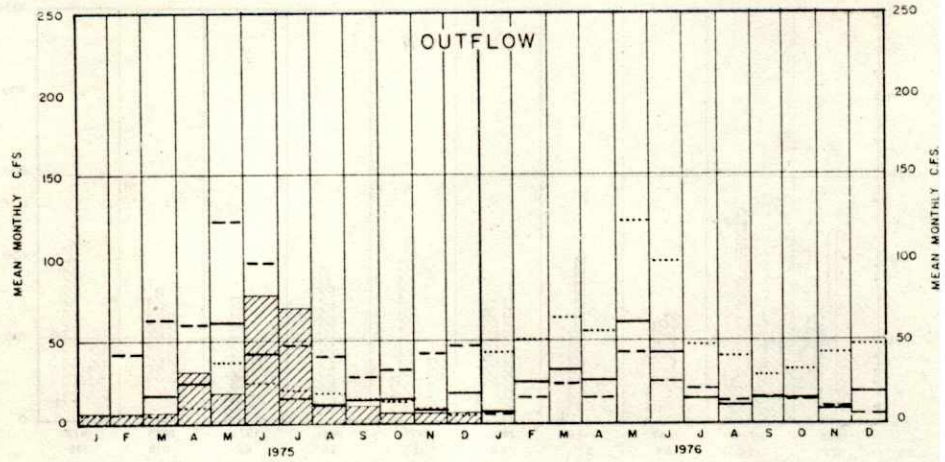
	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974
MEAN ANNUAL C.F.S.	56	20	23	21	45	10	20	19	26	14
TOTAL ANNUAL A.F.	40,800	14,700	16,300	15,100	32,800	7,490	14,694	13,776	18,708	9,883

BONNY RESERVOIR
OPERATING PLANS



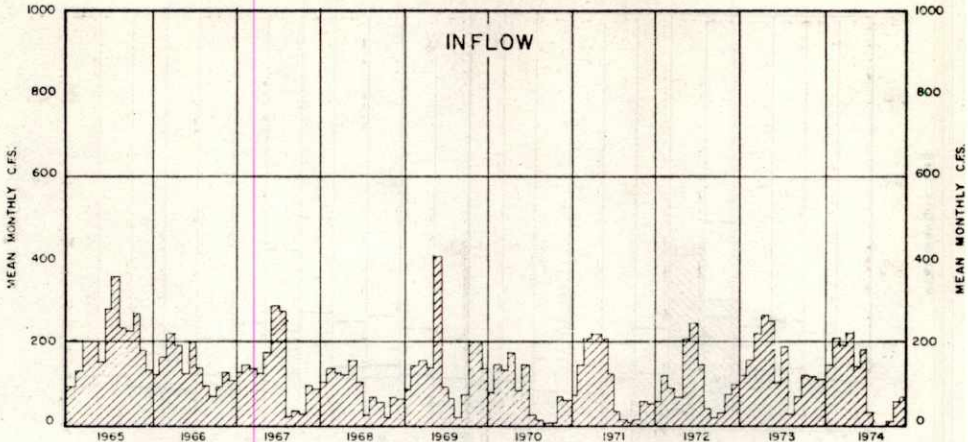


ANNUAL MAXIMUM 45,467 A.F.
ANNUAL MINIMUM 38,056 A.F.

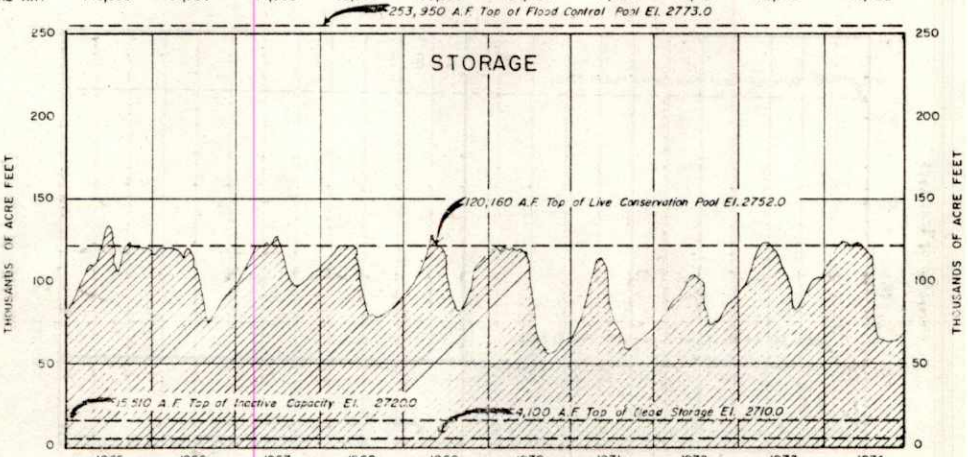


MOST PROBABLE
REASONABLE MAXIMUM
REASONABLE MINIMUM
ACTUAL

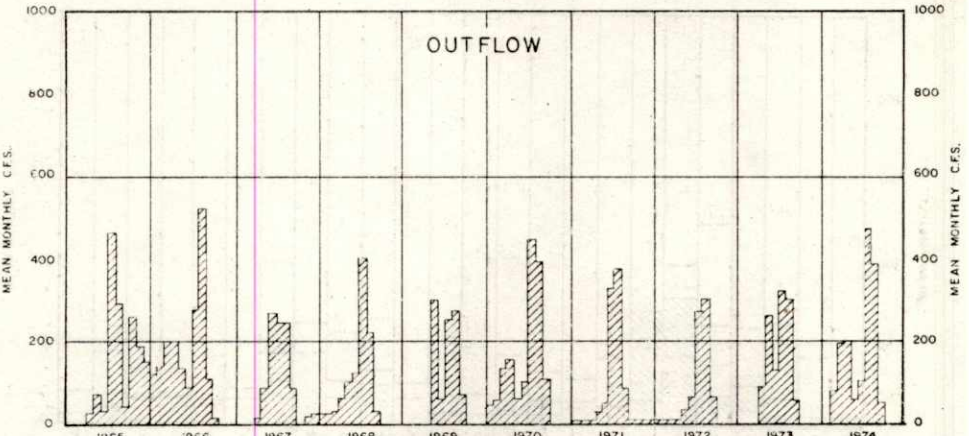
SWANSON LAKE
HISTORICAL OPERATION



	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974
MEAN ANNUAL C.F.S.	203	135	108	82	138	81	103	104	155	107
TOTAL ANNUAL A.F.	146,800	97,900	77,900	59,800	100,200	58,420	74,326	75,429	112,048	77,402

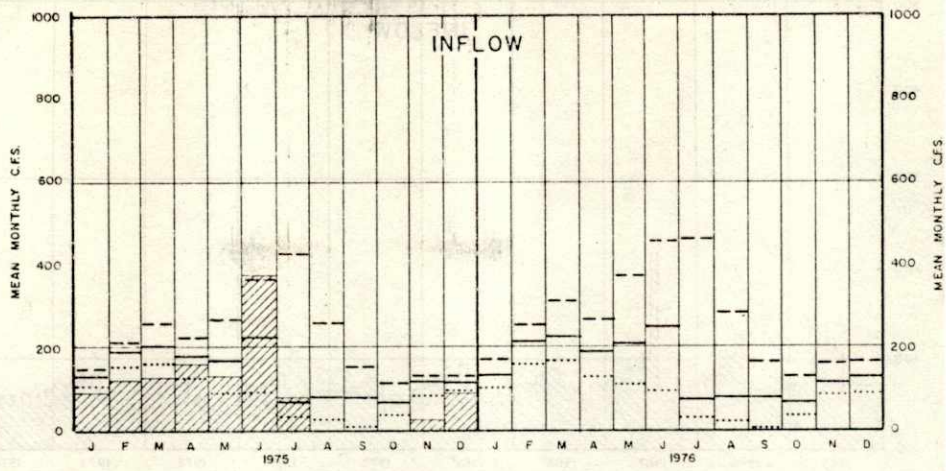


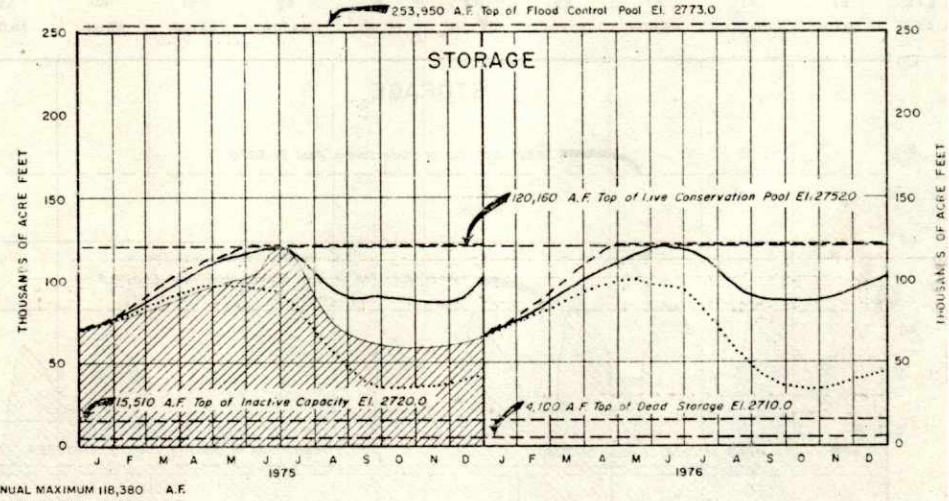
	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974
MAXIMUM A.F.	136,320	121,910	130,660	123,520	130,090	122,410	117,940	109,790	126,480	129,160
MINIMUM A.F.	79,480	76,200	92,120	77,330	83,410	57,370	60,420	69,370	68,830	61,850



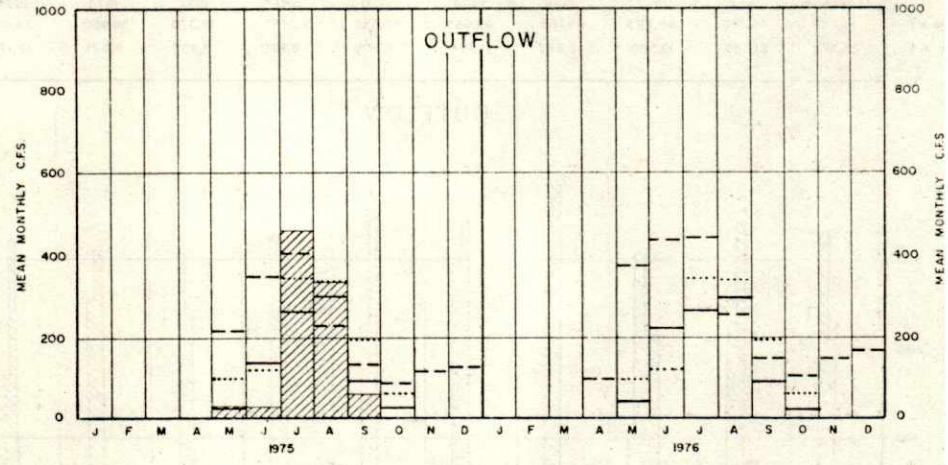
	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974
MEAN ANNUAL C.F.S.	122	154	84	87	83	123	75	62	108	135
TOTAL ANNUAL A.F.	88,400	111,200	61,000	63,300	60,000	88,953	54,499	45,259	78,263	97,556

SWANSON LAKE
OPERATING PLANS



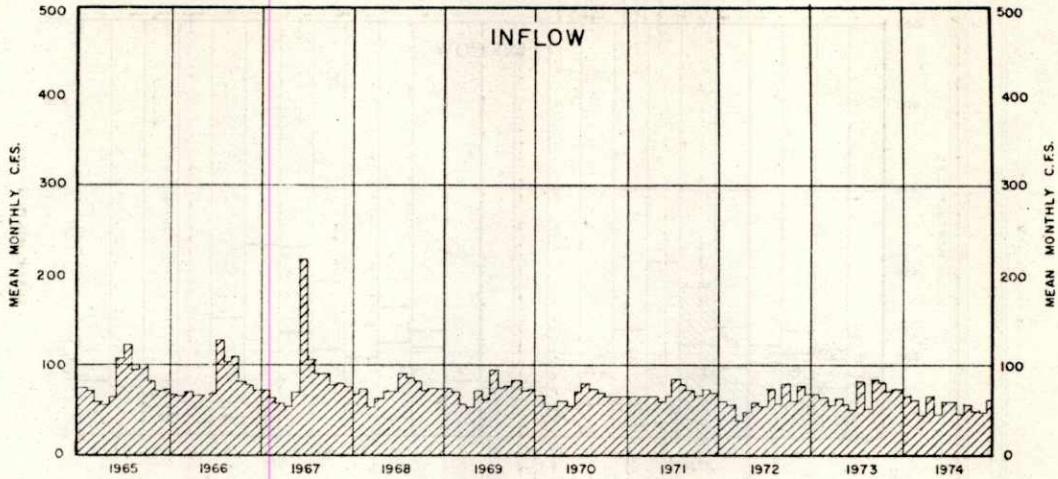


ANNUAL MAXIMUM 118,380 A.F.
ANNUAL MINIMUM 61,050 A.F.

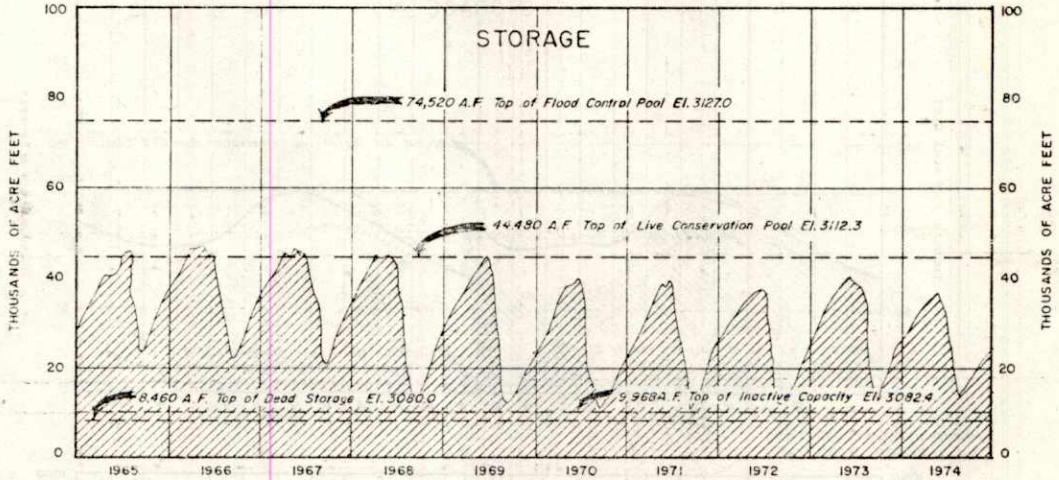


MOST PROBABLE
REASONABLE MAXIMUM
REASONABLE MINIMUM
ACTUAL

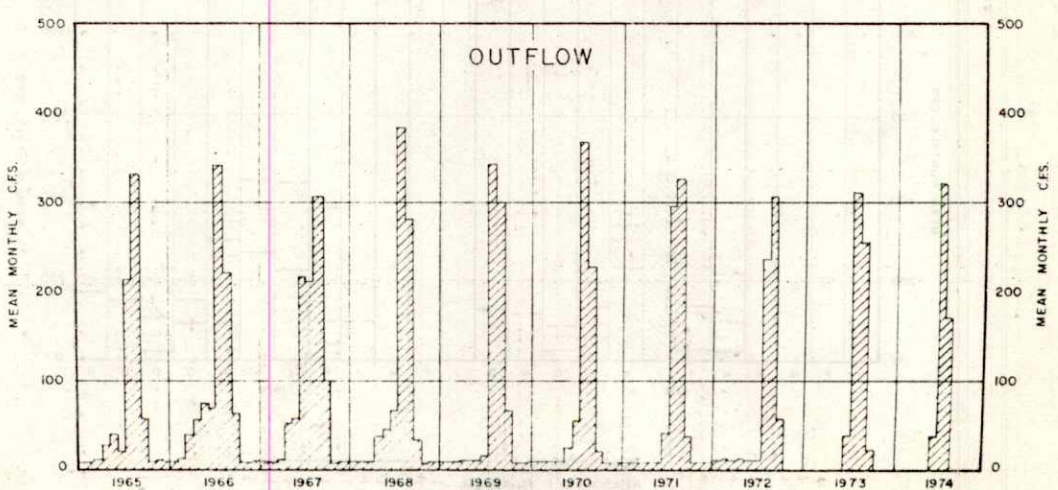
ENDERS RESERVOIR
HISTORICAL OPERATION



	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974
MEAN ANNUAL C.F.S.	82	81	87	69	68	70	69	61	60	53
TOTAL ANNUAL A.F.	59,200	58,700	63,000	50,400	49,100	50,520	49,776	44,018	43,141	38,040



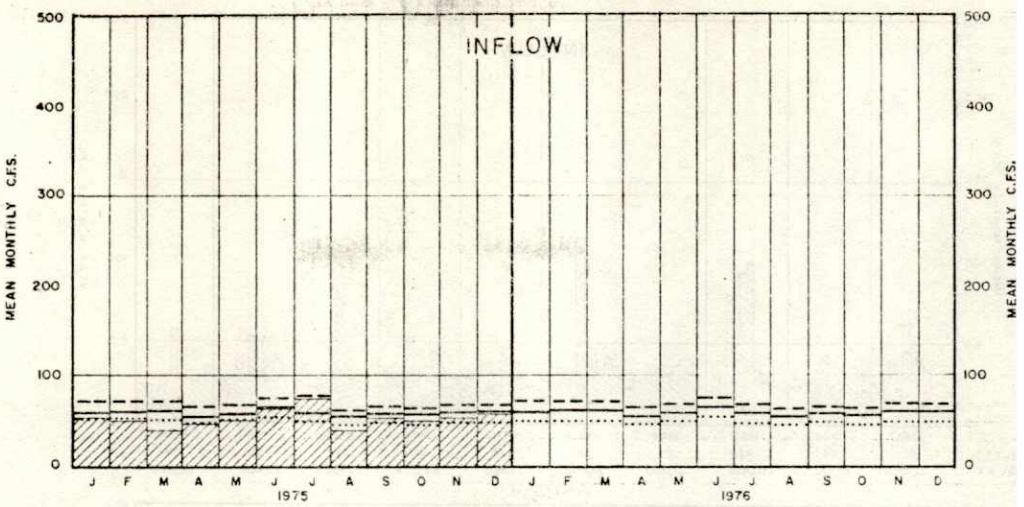
	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974
MAXIMUM A.F.	46,777	46,758	46,723	45,788	43,965	40,682	40,781	38,370	39,950	39,512
MINIMUM A.F.	23,382	21,588	19,580	12,887	11,397	9,869	8,920	9,895	9,071	12,172

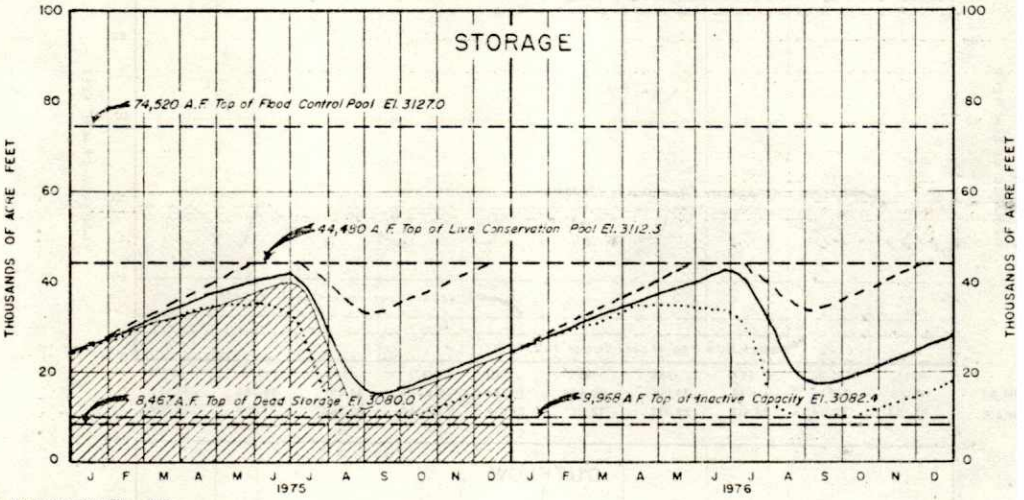


	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974
MEAN ANNUAL C.F.S.	63	76	81	75	68	62	63	54	54	46
TOTAL ANNUAL A.F.	45,700	55,200	58,900	54,300	48,000	44,910	45,730	38,990	39,374	33,214

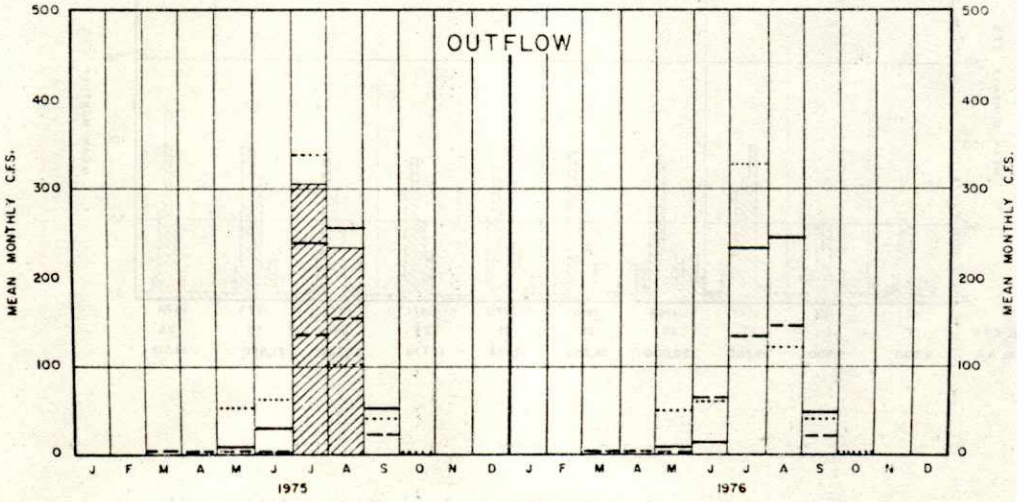
Exhibit 6

ENDERS RESERVOIR
OPERATING PLANS



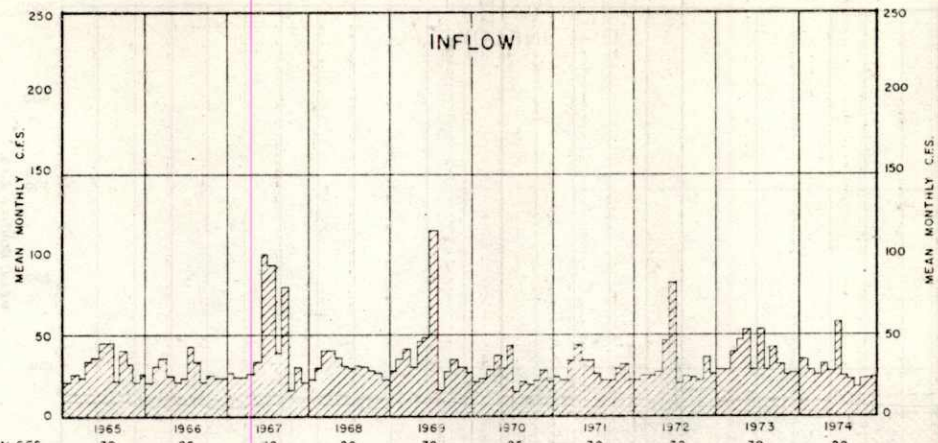


ANNUAL MAXIMUM 39,934 A.F.
ANNUAL MINIMUM 11,802 A.F.

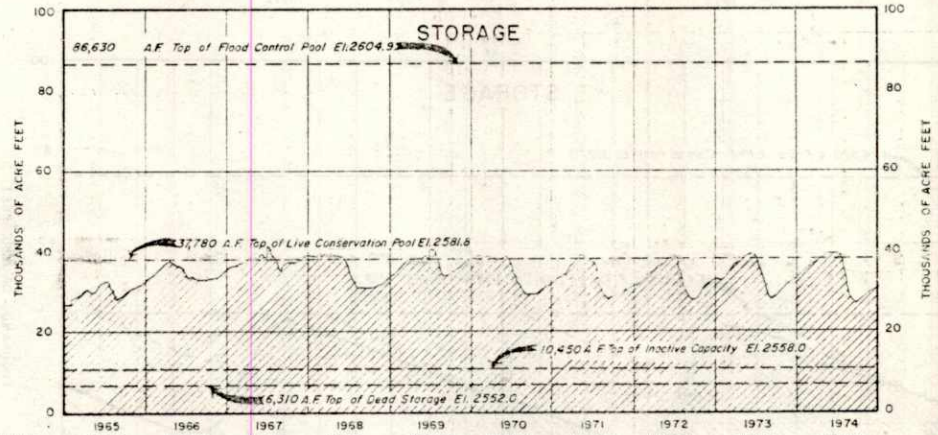


MOST PROBABLE
REASONABLE MAXIMUM
REASONABLE MINIMUM
ACTUAL

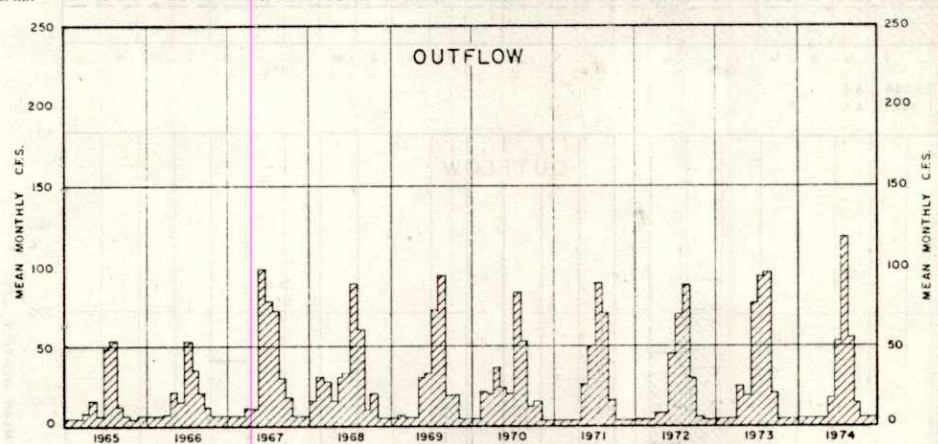
HUGH BUTLER LAKE
HISTORICAL OPERATION



	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974
MEAN ANNUAL C.F.S.	30	26	42	29	38	25	30	32	38	29
TOTAL ANNUAL A.F.	22,000	19,100	30,100	21,000	27,800	17,860	22004	23,185	27,802	20,820

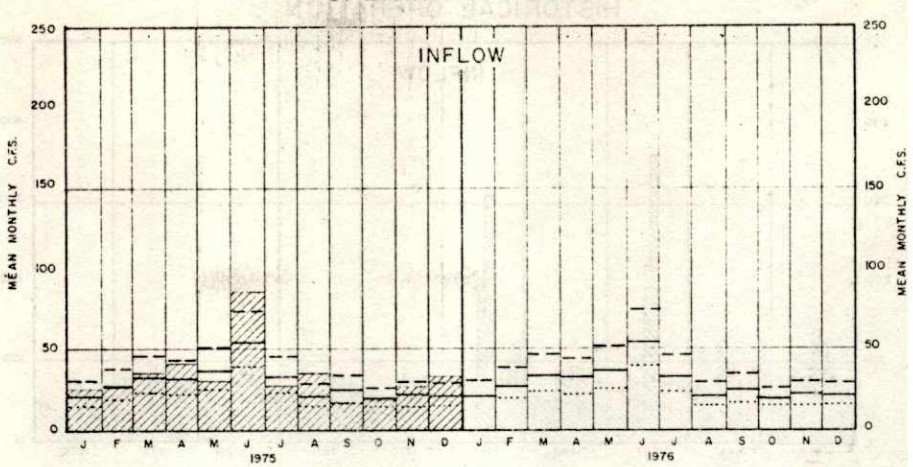


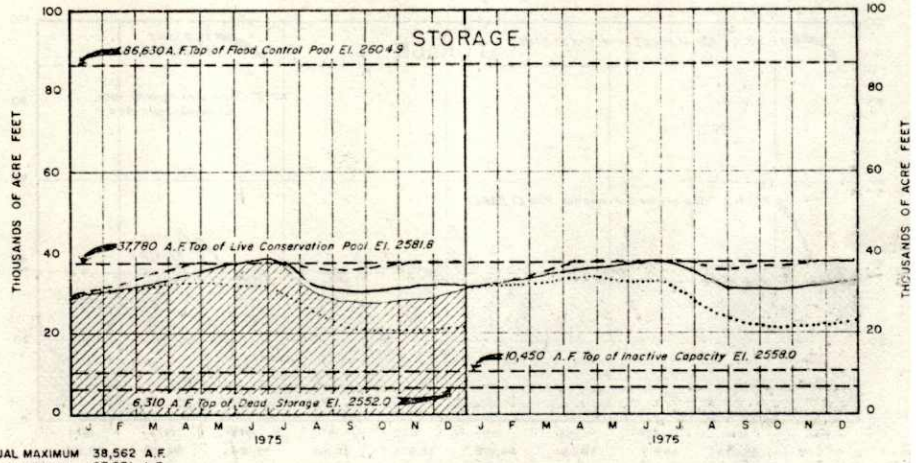
	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974
MAXIMUM A.F.	33,010	37,242	41,634	39,158	40,498	38,364	38,778	38,281	39,788	39,555
MINIMUM A.F.	25,762	32,214	34,417	29,692	32,111	28,814	27240	28,564	27,202	26,706



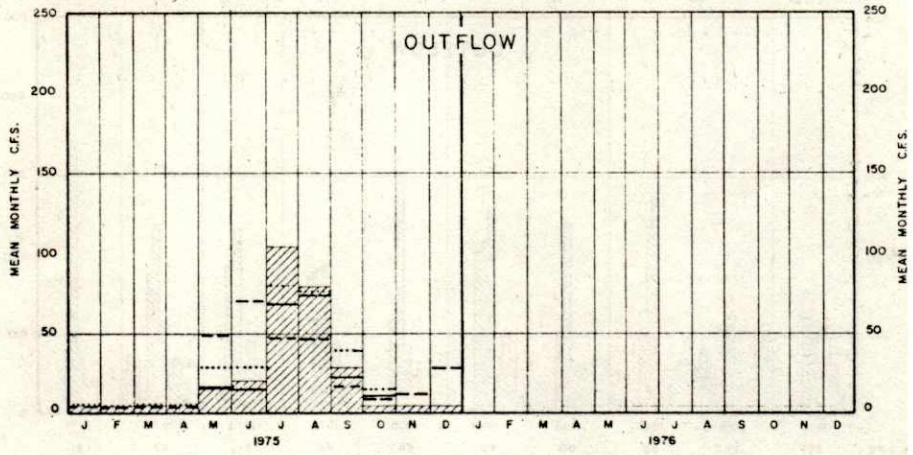
	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974
MEAN ANNUAL C.F.S.	13	14	27	28	25	25	24	24	30	26
TOTAL ANNUAL A.F.	9,500	9,900	19,200	20,000	18,200	18,194	17,378	17,387	21,950	18,512

HUGH BUTLER LAKE
OPERATING PLANS



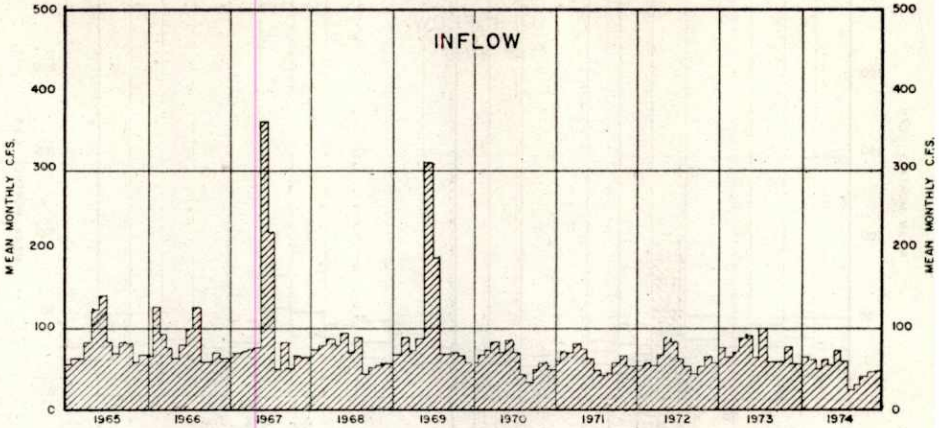


ANNUAL MAXIMUM 38,562 A.F.
ANNUAL MINIMUN 27,571 A.F.

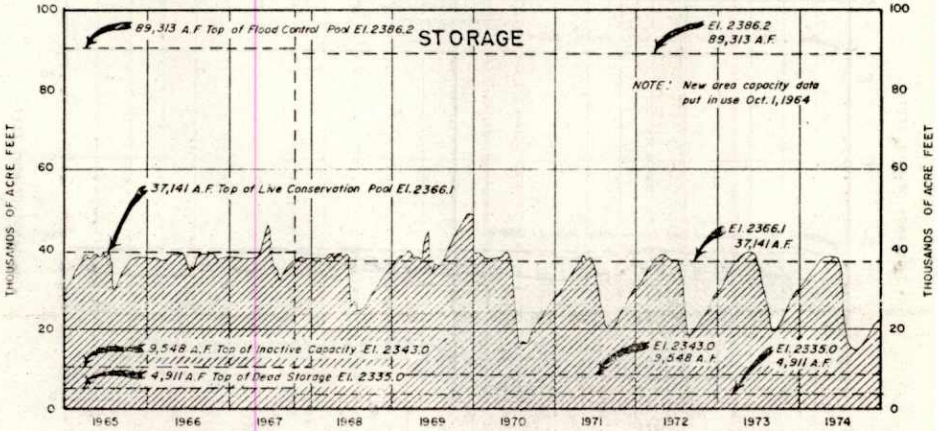


MOST PROBABLE
REASONABLE MAXIMUM
REASONABLE MINIMUM
ACTUAL

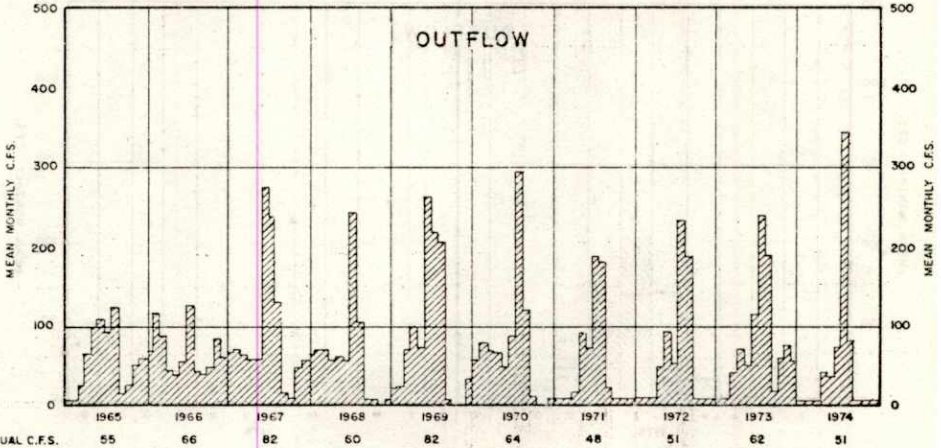
HARRY STRUNK LAKE
HISTORICAL OPERATION



	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974
MEAN ANNUAL C.F.S.	79	80	102	67	96	59	58	57	71	51
TOTAL ANNUAL A.F.	57,400	57,800	74,200	48,400	69,800	42,670	41,914	41,702	51,485	36,808



	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974
MAXIMUM A.F.	39,474	39,084	44,619	39,084	44,978	38,831	39,162	39,104	39,883	39,182
MINIMUM A.F.	28,476	31,915	31,217	23,267	25,528	15,311	18,456	17,666	16,312	14,255

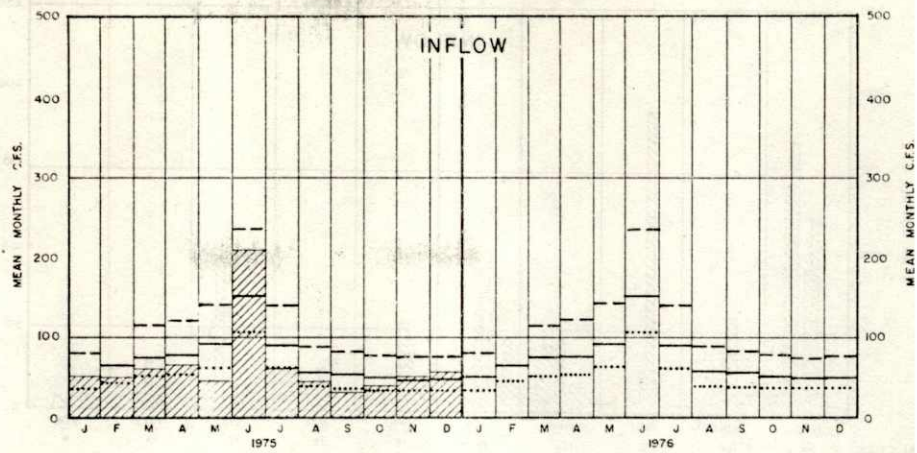


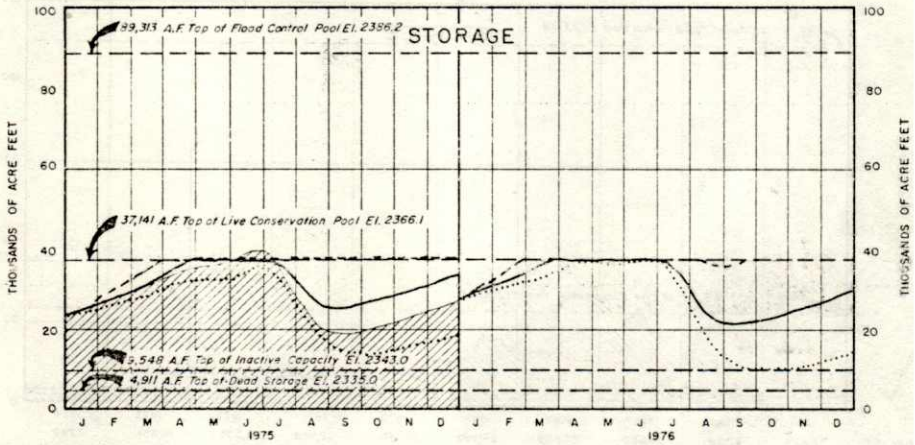
	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974
MEAN ANNUAL C.F.S.	55	66	82	60	82	64	48	51	62	51
TOTAL ANNUAL A.F.	40,000	47,700	59,200	43,500	59,200	46,277	34,463	37,006	44,903	36,843

Exhibit B

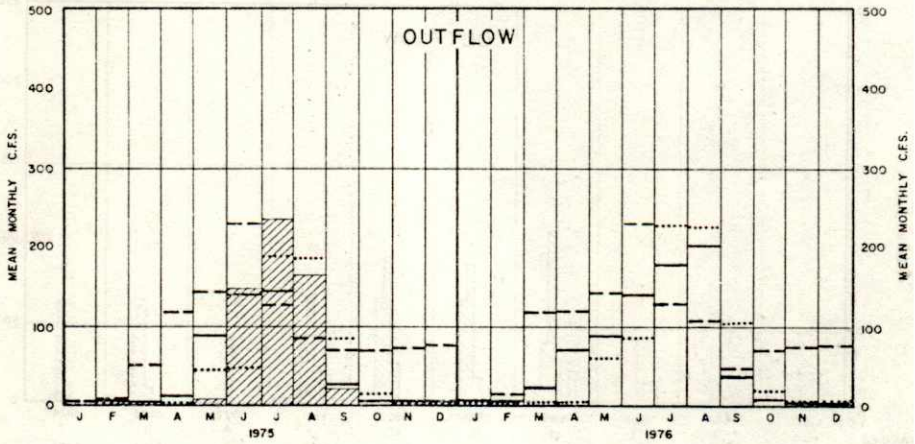
HARRY STRUNK LAKE

OPERATING PLANS



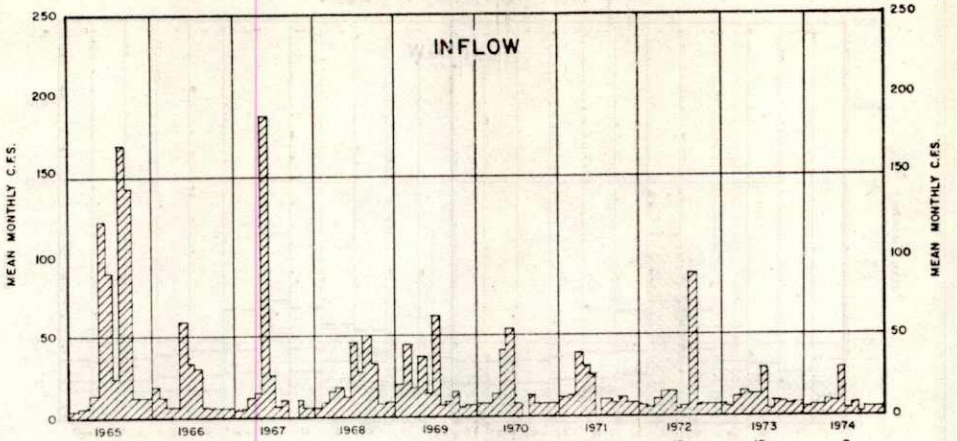


ANNUAL MAXIMUM 41,890 A.F.
ANNUAL MINIMUM 18,732 A.F.

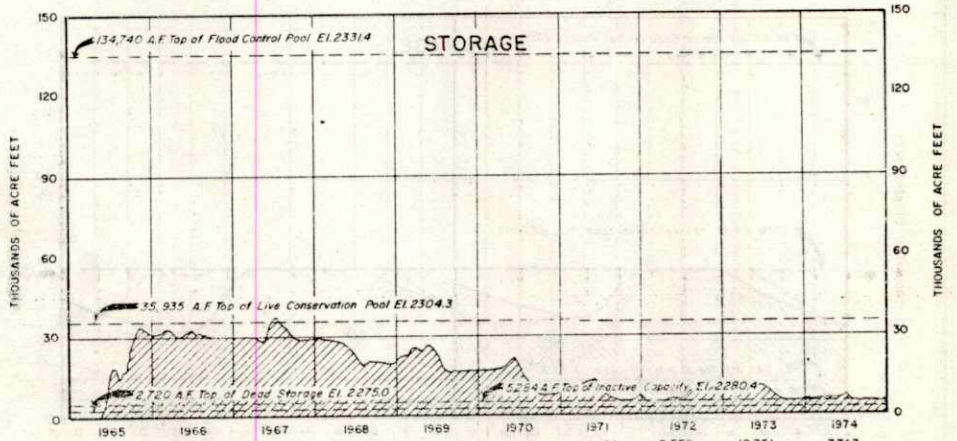


MOST PROBABLE
REASONABLE MAXIMUM
REASONABLE MINIMUM
ACTUAL

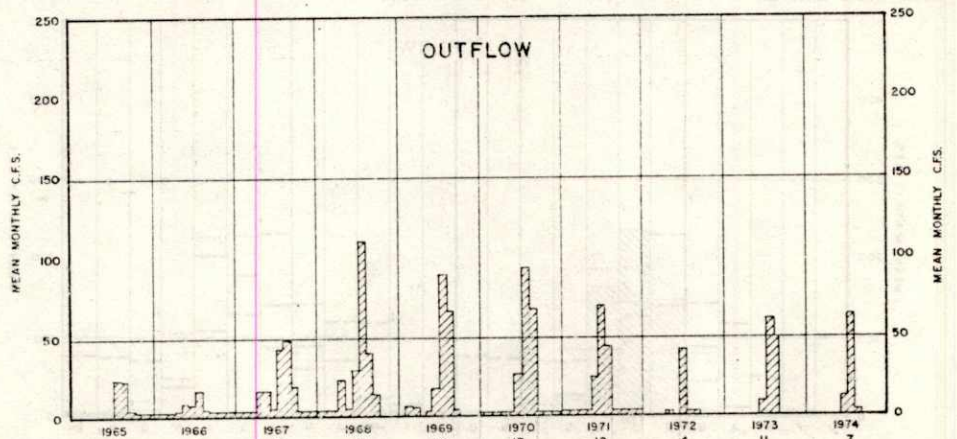
NORTON RESERVOIR
HISTORICAL OPERATION



	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974
MEAN ANNUAL C.F.S.	54	14	22	17	19	15	12	13	10	9
TOTAL ANNUAL A.F.	39,100	9,800	15,900	12,700	13,500	11,022	8,551	9,396	7,394	6,164



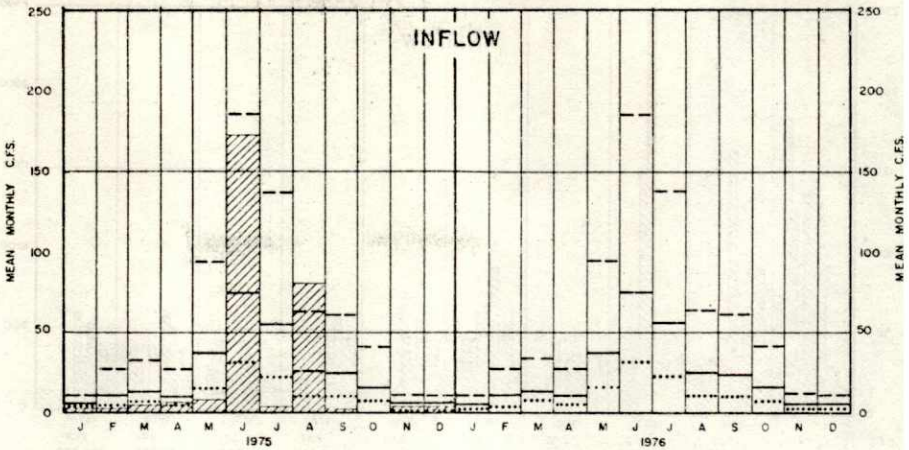
	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974
MAXIMUM A.F.	32,624	32,099	36,660	27,905	24,882	20,186	12,958	8,555	10,351	7,747
MINIMUM A.F.	64	28,453	26,418	17,091	15,542	7,864	3,995	3,547	3,839	3,448

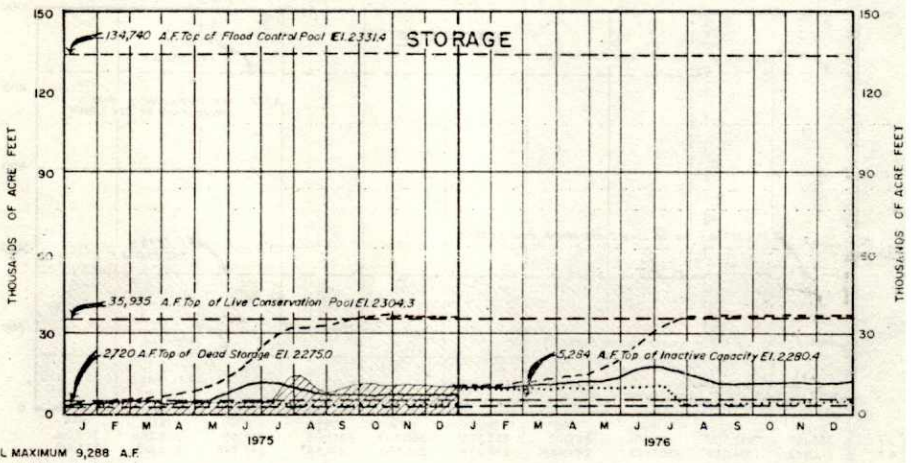


	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974
MEAN ANNUAL C.F.S.	0	4	13	18	16	17	12	4	11	7
TOTAL ANNUAL A.F.	0	2,600	9,400	13,100	11,800	11,974	9,006	3,035	7,828	5,172

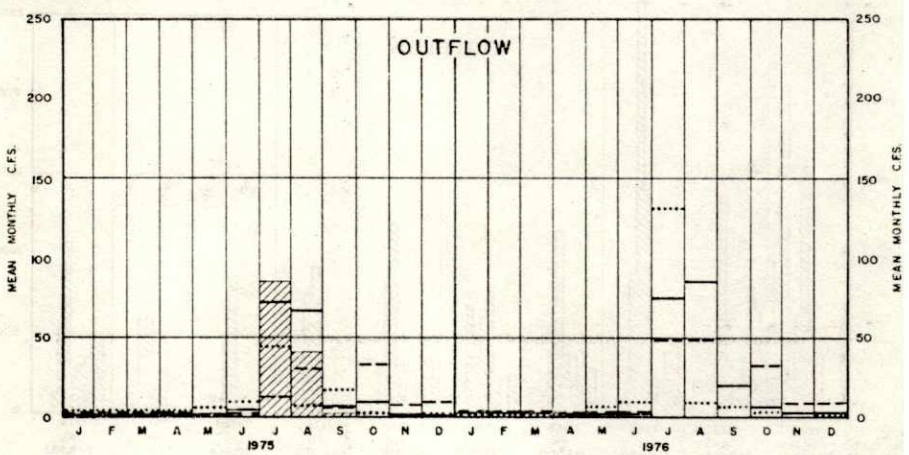
Exhibit 9

NORTON RESERVOIR
OPERATING PLANS



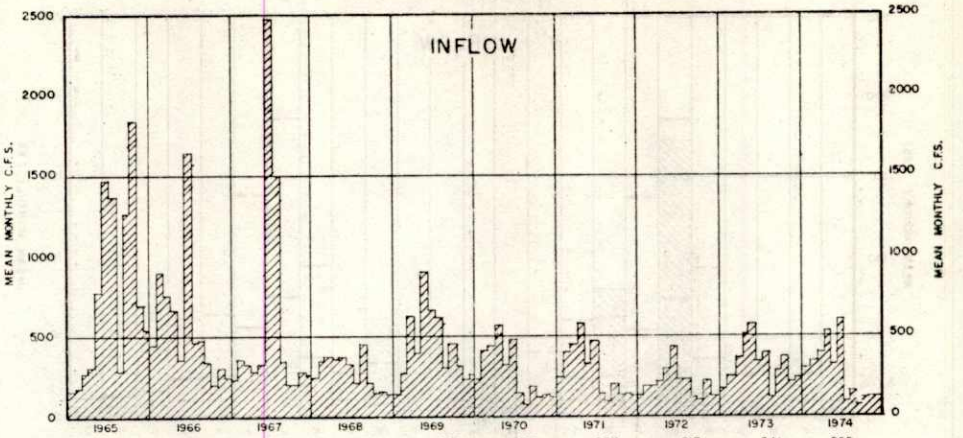


ANNUAL MAXIMUM 9,288 A.F.
ANNUAL MINIMUM 4,417 A.F.

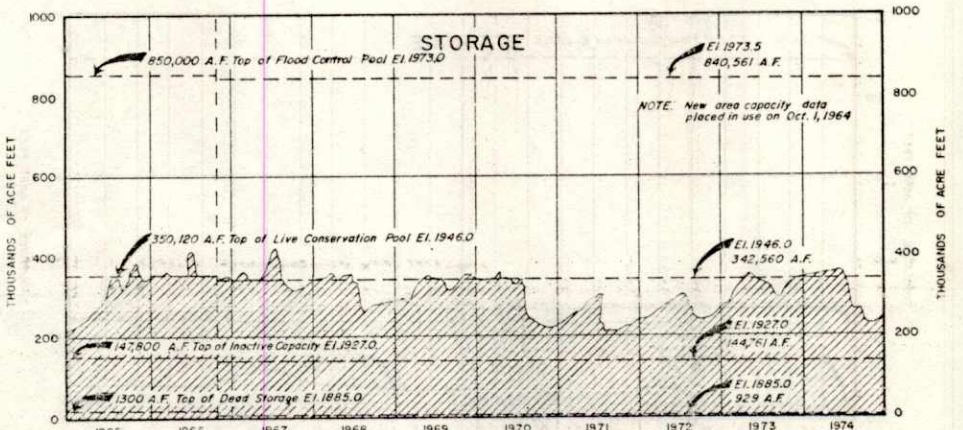


MOST PROBABLE
REASONABLE MAXIMUM
REASONABLE MINIMUM
ACTUAL

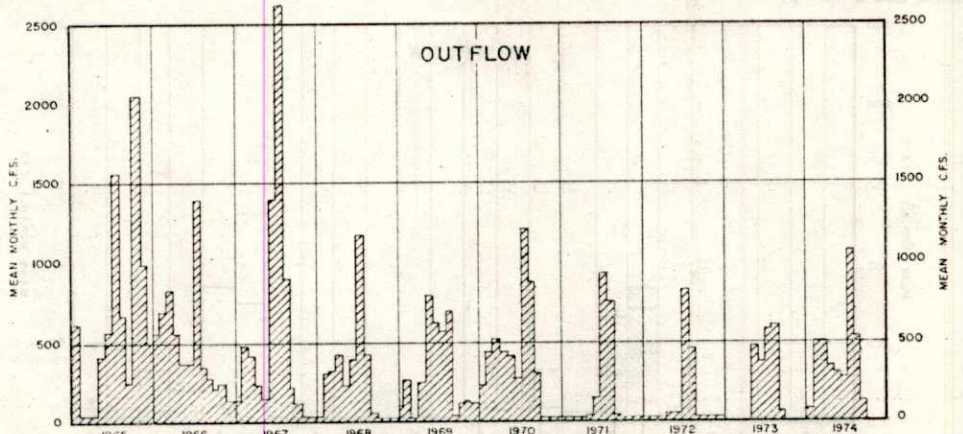
HARLAN COUNTY RESERVOIR
HISTORICAL OPERATION



	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974
MEAN ANNUAL C.F.S.	770	555	550	270	423	270	237	217	341	268
TOTAL ANNUAL A.F.	557,500	401,600	358,400	196,300	306,500	195,180	171,504	157,331	246,863	196,830



	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974
MAXIMUM A.F.	383,147	412,300	415,356	367,613	357,225	360,247	317,610	314,155	356,268	369,016
MINIMUM A.F.	212,972	332,520	307,823	264,468	283,944	210,380	214,447	243,445	270,180	223,019

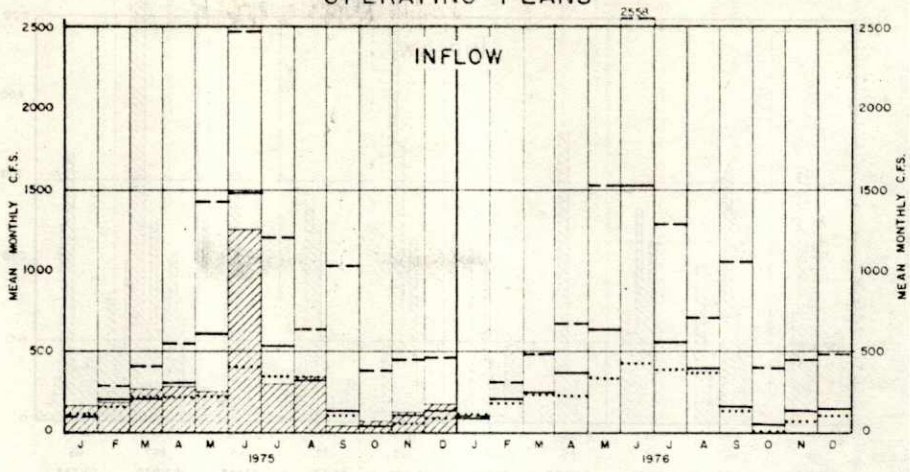


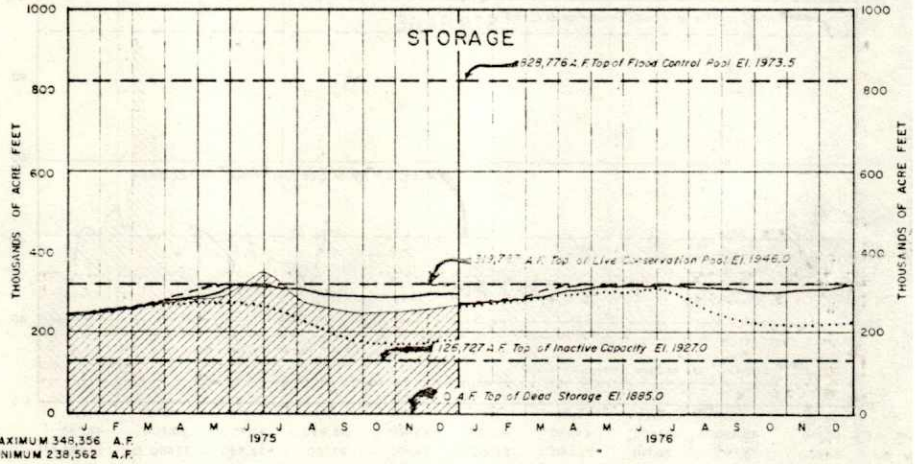
	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974
MEAN ANNUAL C.F.S.	545	483	511	276	311	366	170	125	188	316
TOTAL ANNUAL A.F.	394,600	350,000	369,900	199,000	225,200	225,316	122,920	90,744	135,941	228,983

Exhibit 10

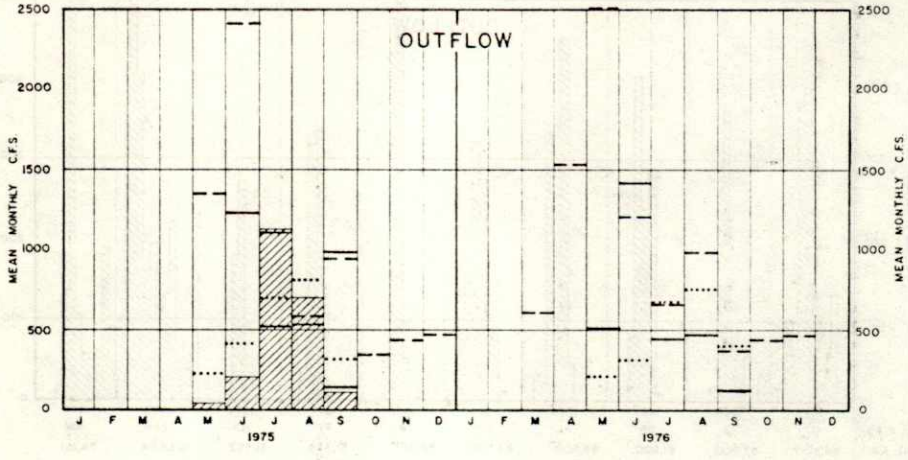
HARLAN COUNTY RESERVOIR

OPERATING PLANS



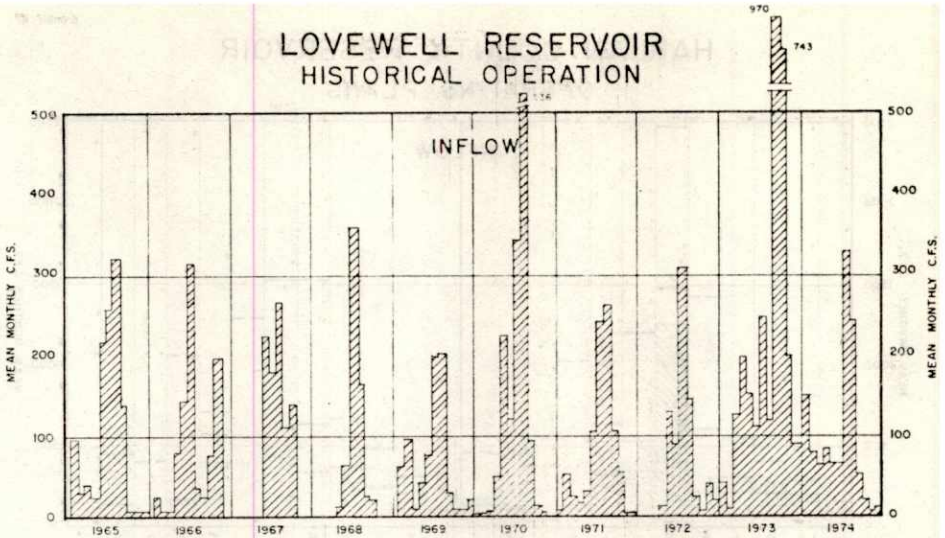


ANNUAL MAXIMUM 348,356 A.F.
ANNUAL MINIMUM 238,562 A.F.

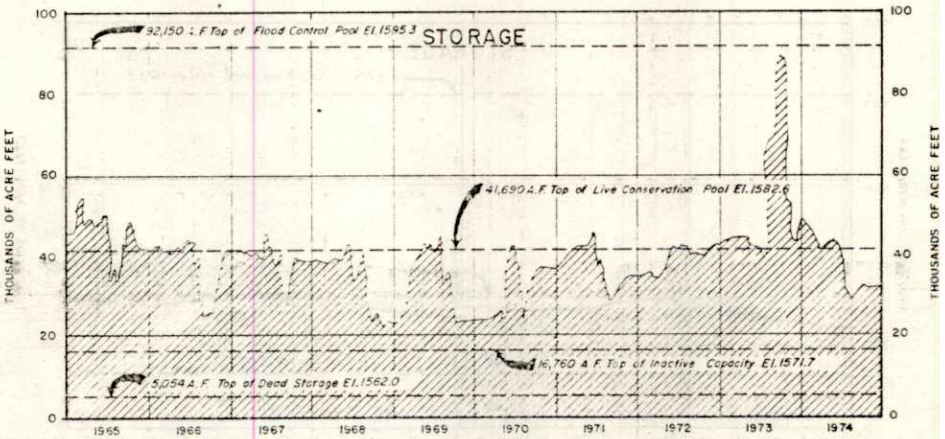


MOST PROBABLE
REASONABLE MAXIMUM
REASONABLE MINIMUM
ACTUAL

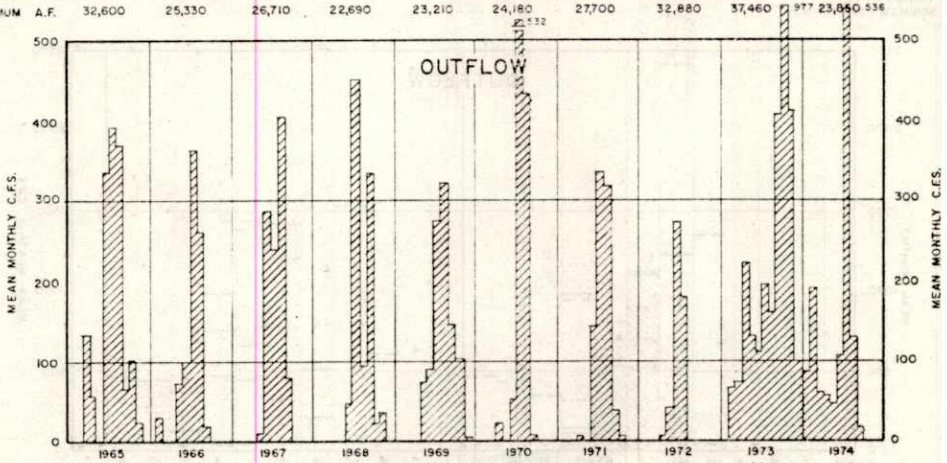
LOVEWELL RESERVOIR
HISTORICAL OPERATION



	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974
MEAN ANNUAL C.F.S.	119	69	96	75	95	123	77	65	267	98
TOTAL ANNUAL A.F.	86,500	64,100	69,200	54,800	69,100	88,835	55,775	47,465	192,977	70,728



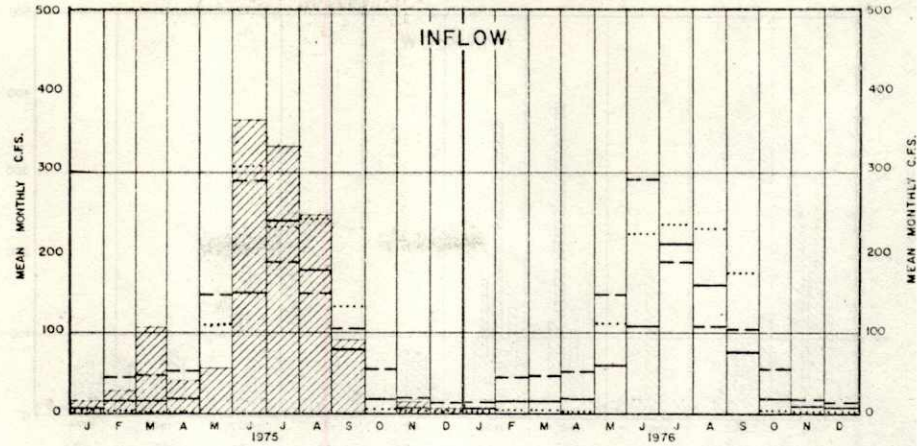
	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974
MAXIMUM A.F.	55,190	45,090	47,800	44,130	47,700	43,420	45,860	45,700	90,700	48,790
MINIMUM A.F.	32,600	25,330	26,710	22,690	23,210	24,180	27,700	32,880	37,460	23,860

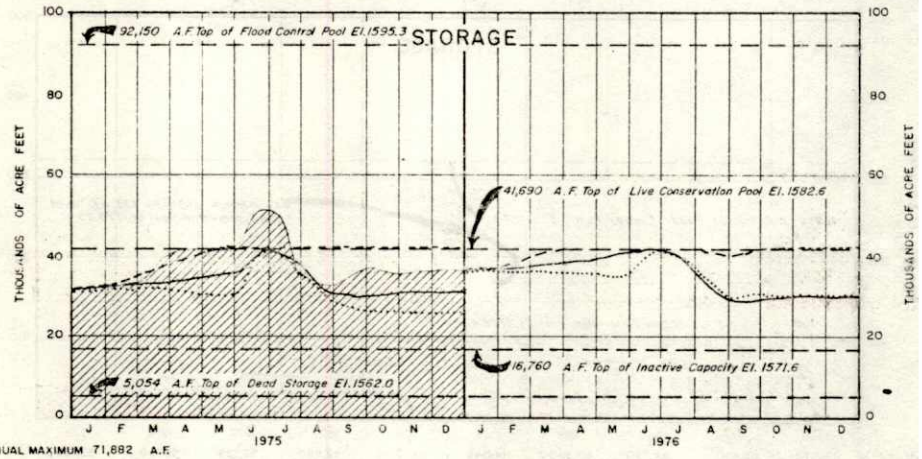


	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974
MEAN ANNUAL C.F.S.	117	73	86	81	89	78	71	43	254	102
TOTAL ANNUAL A.F.	84,800	52,900	61,900	58,600	64,500	56,565	51,349	31,502	183,604	74,151

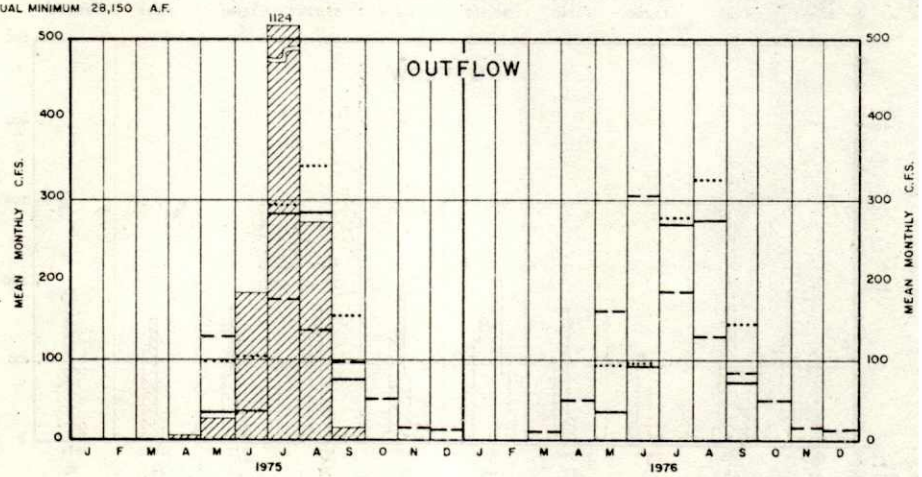
Exhibit 11

LOVEWELL RESERVOIR
OPERATING PLANS



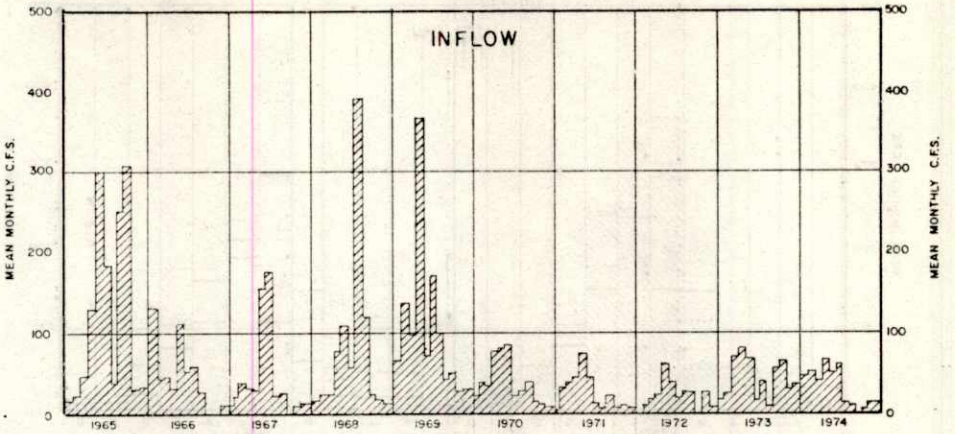


ANNUAL MAXIMUM 71,882 A.F.
ANNUAL MINIMUM 28,150 A.F.

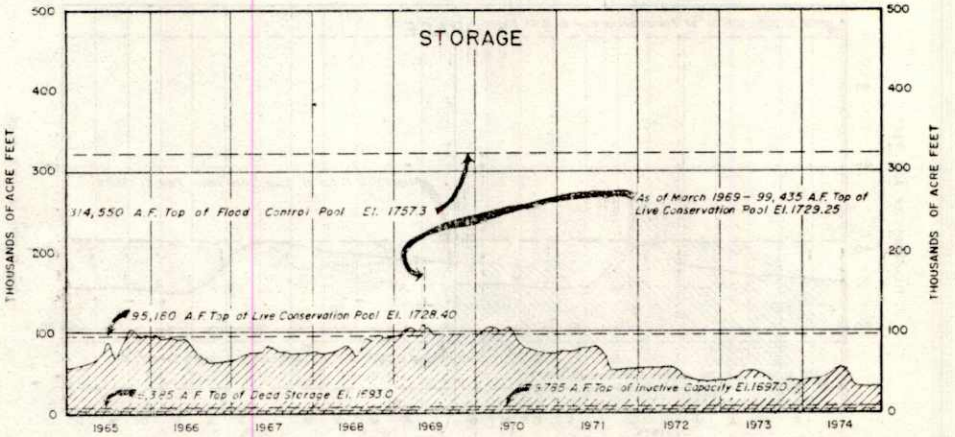


MOST PROBABLE
REASONABLE MAXIMUM
REASONABLE MINIMUM
ACTUAL

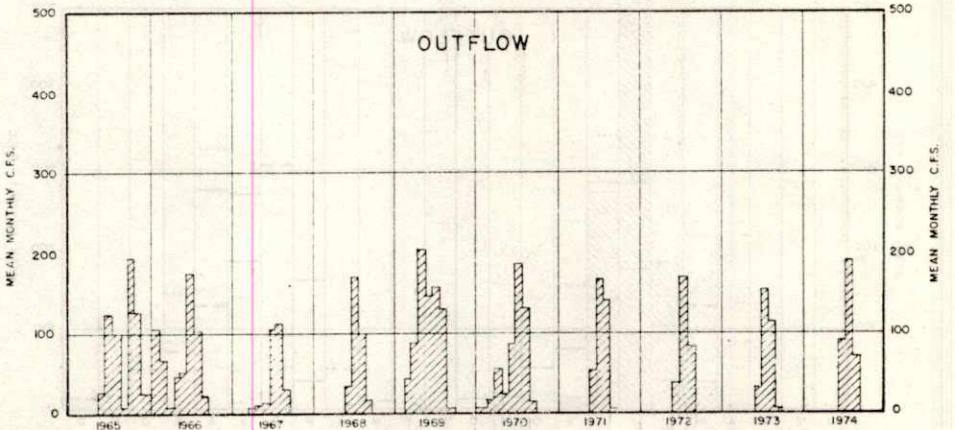
KIRWIN RESERVOIR
HISTORICAL OPERATION



	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974
MEAN ANNUAL C.F.S.	113	42	41	71	94	35	27	21	42	32
TOTAL ANNUAL A.F.	82,000	30,300	29,900	51,600	68,400	25,428	19,605	15,513	30,370	22,971



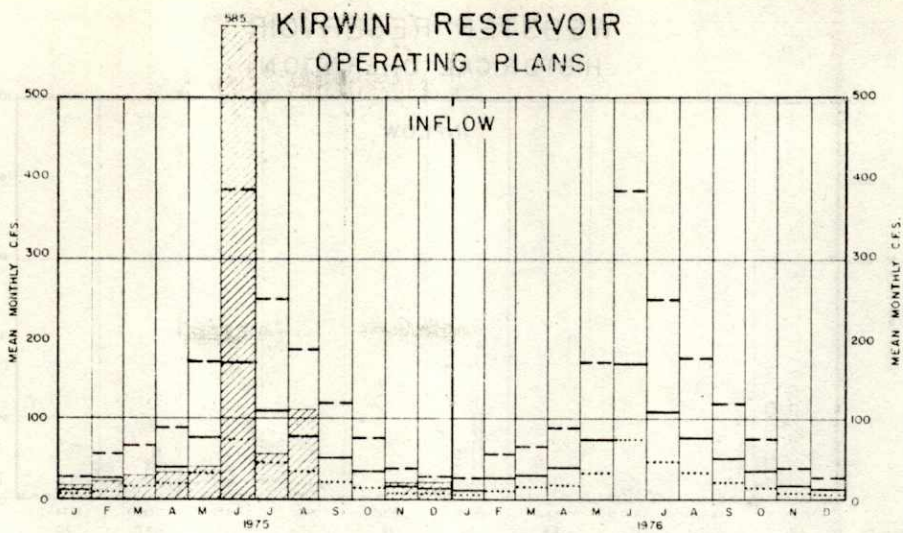
	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974
MAXIMUM A.F.	105,270	89,890	84,790	90,990	114,040	102,200	82,980	57,329	51,560	53,190
MINIMUM A.F.	57,884	74,050	73,200	67,340	90,370	74,600	53,722	37,661	31,298	29,248

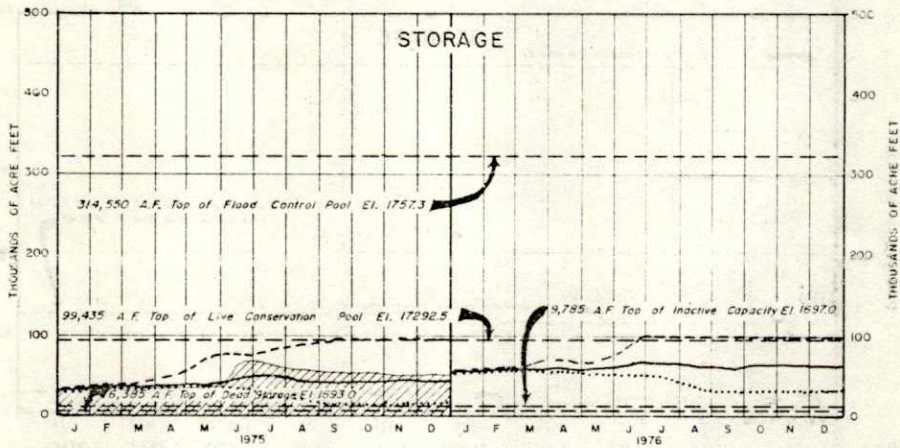


	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974
MEAN ANNUAL C.F.S.	43	49	23	27	46	42	32	25	26	30
TOTAL ANNUAL A.F.	31,200	35,400	17,000	19,500	33,100	30,352	22,629	15,474	18,555	21,966

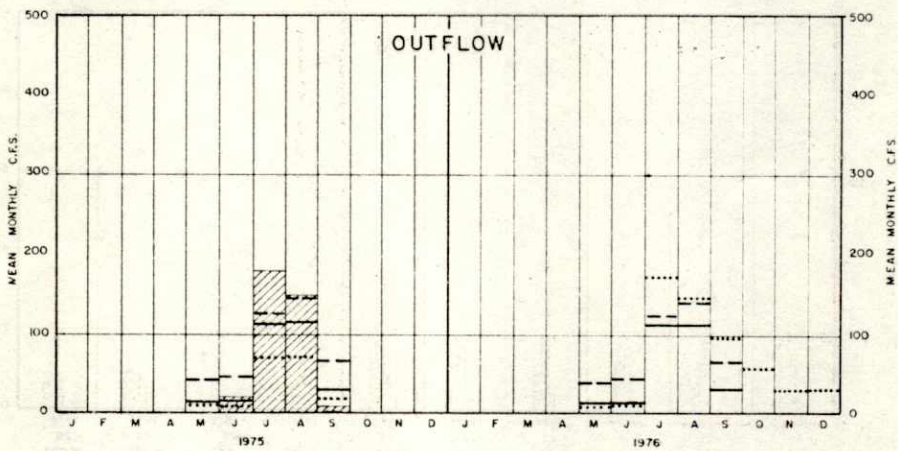
Exhibit 12

KIRWIN RESERVOIR
OPERATING PLANS



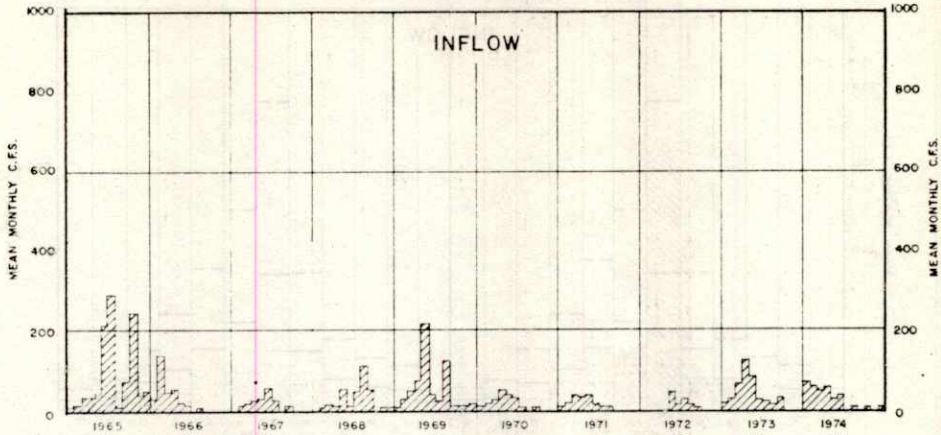


ANNUAL MAXIMUM 68,270 A.F.
ANNUAL MININUM 30,508 A.F.

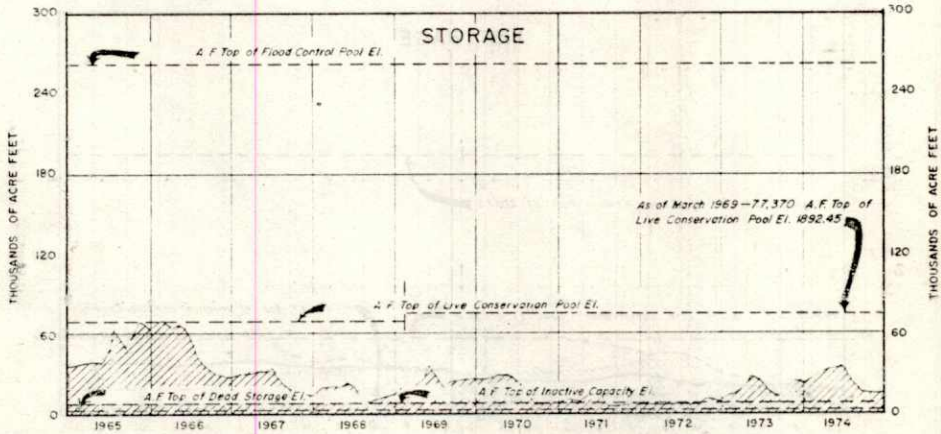


MOST PROBABLE
REASONABLE MAXIMUM
REASONABLE MINIMUM
ACTUAL

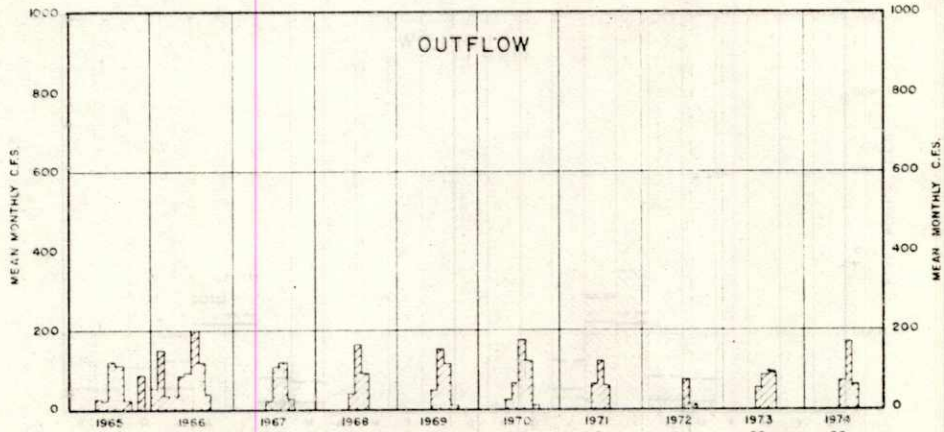
WEBSTER RESERVOIR
HISTORICAL OPERATION



	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974
MEAN ANNUAL C.F.S.	89	23	15	24	52	18	17	13	47	30
TOTAL ANNUAL A.F.	64,700	16,300	11,200	17,700	37,900	12,748	12,021	9,466	33,839	21,966

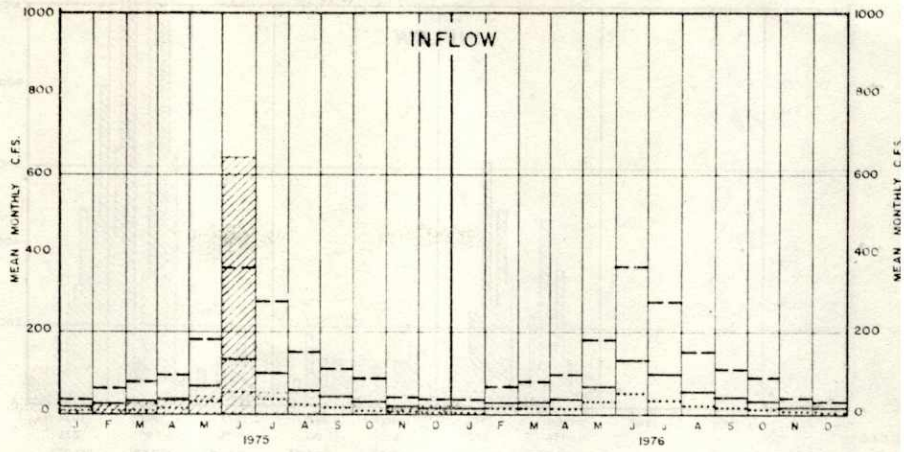


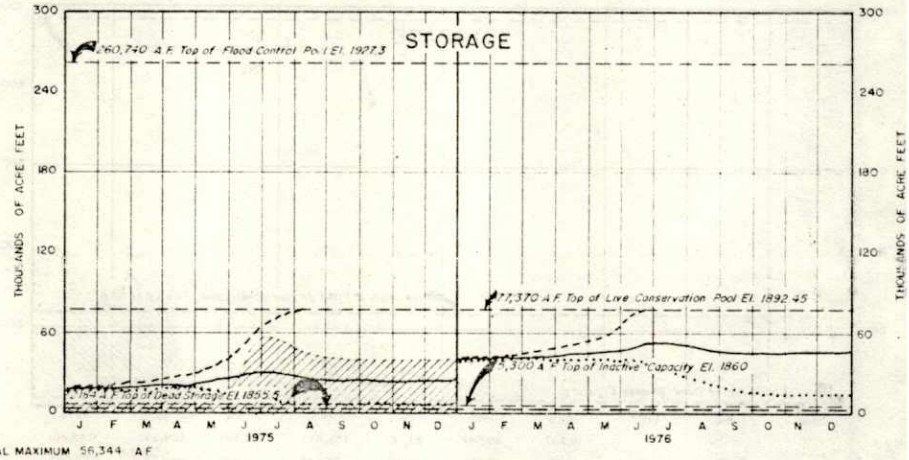
	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974
MAXIMUM A.F.	69,891	71,850	33,760	21,520	36,230	31,951	16,118	8,785	24,610	37,850
MINIMUM A.F.	36,470	29,420	17,601	6,393	13,206	9,148	3,224	3,290	8,445	15,725



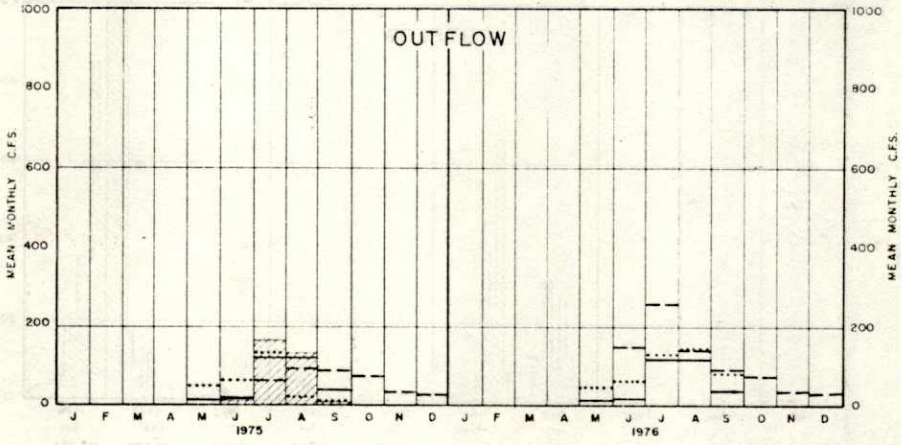
	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974
MEAN ANNUAL C.F.S.	49	100	22	23	26	34	17	1	20	26
TOTAL ANNUAL A.F.	35,600	72,100	15,800	16,700	18,800	24,657	12,652	430	14,282	19,006

WEBSTER RESERVOIR
OPERATING PLANS



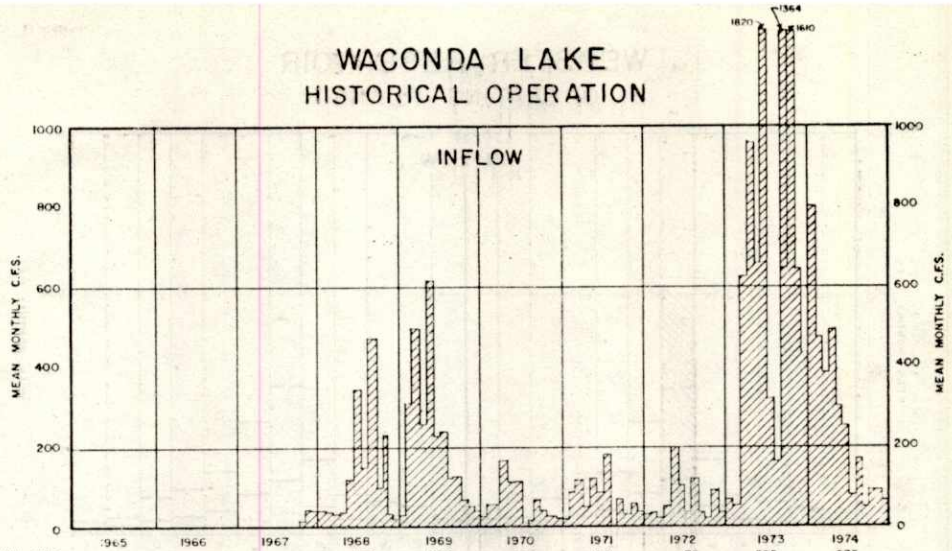


ANNUAL MAXIMUM 56,344 A.F.
ANNUAL MINIMUM 15,846 A.F.

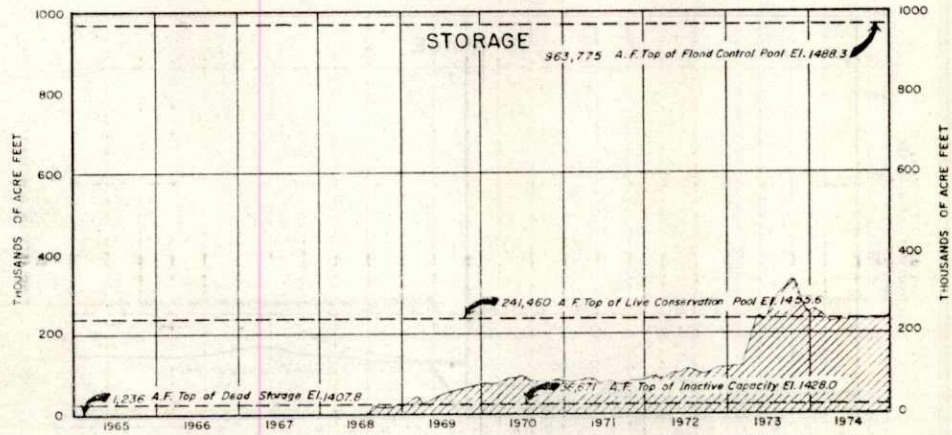


MOST PROBABLE
REASONABLE MAXIMUM
REASONABLE MINIMUM
ACTUAL

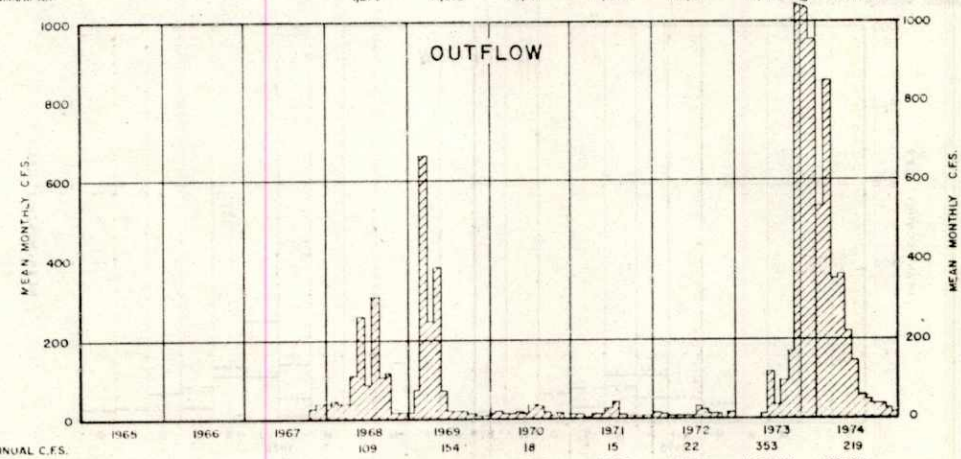
WACONDA LAKE
HISTORICAL OPERATION



	1968	1969	1970	1971	1972	1973	1974
MEAN ANNUAL C.F.S.	136	222	65	90	76	595	275
TOTAL ANNAL A.F.	98,500	160,400	47,162	64,903	54,941	430,681	199,072

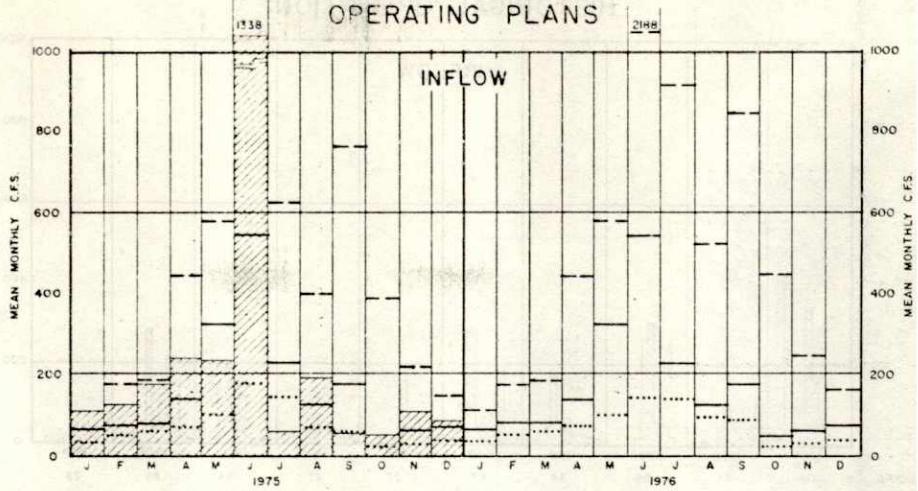


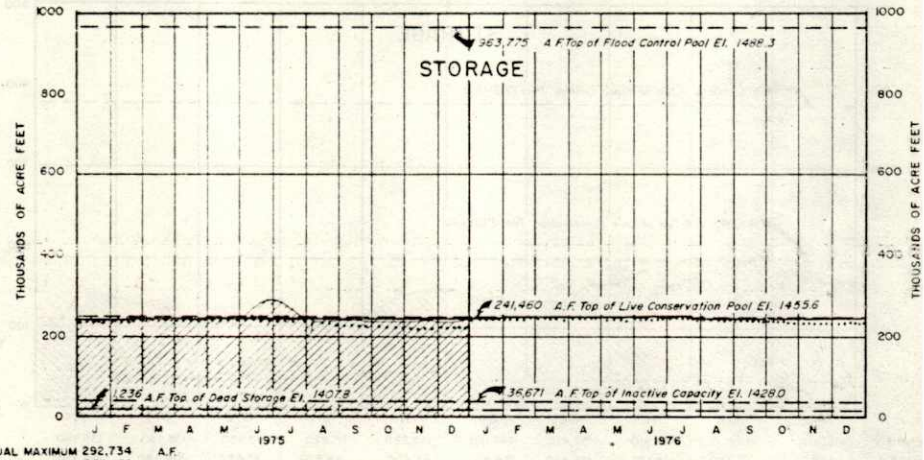
	1968	1969	1970	1971	1972	1973	1974
MAXIMUM A.F.	18,307	69,942	89,281	105,833	116,541	384,341	263,461
MINIMUM A.F	1,279	17,012	70,101	78,445	102,338	116,463	225,665



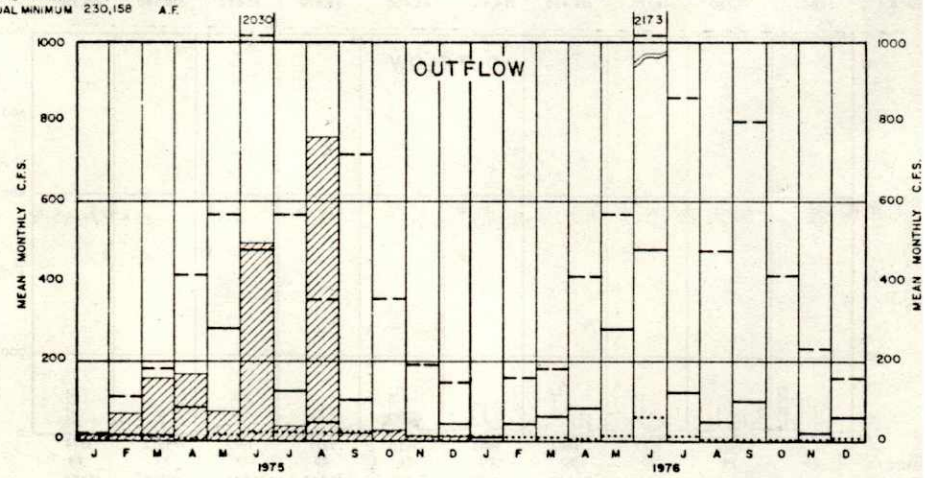
	1968	1969	1970	1971	1972	1973	1974
MEAN ANNUAL C.F.S.	109	154	18	15	22	353	219
TOTAL ANNUAL A.F.	79,000	111,800	13,310	11,024	15,668	255,920	158,234

WACONDA LAKE
OPERATING PLANS



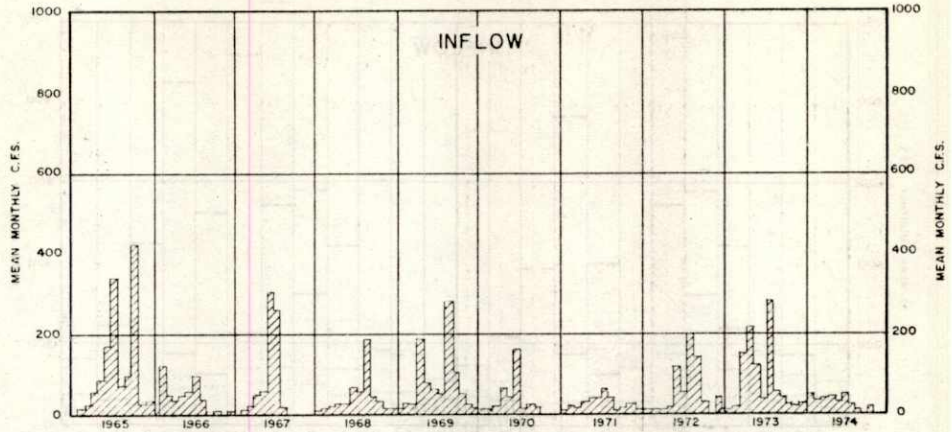


ANNUAL MAXIMUM 292,734 A.F.
ANNUAL MINIMUM 230,158 A.F.

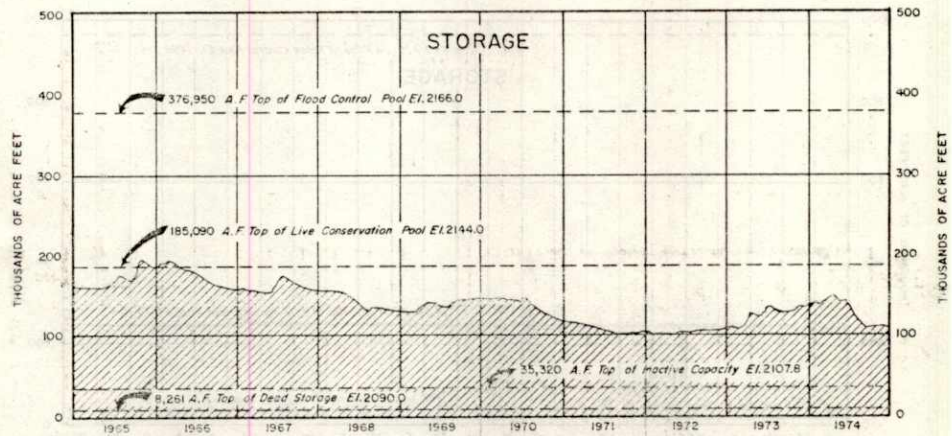


MOST PROBABLE
REASONABLE MAXIMUM
REASONABLE MINIMUM
ACTUAL

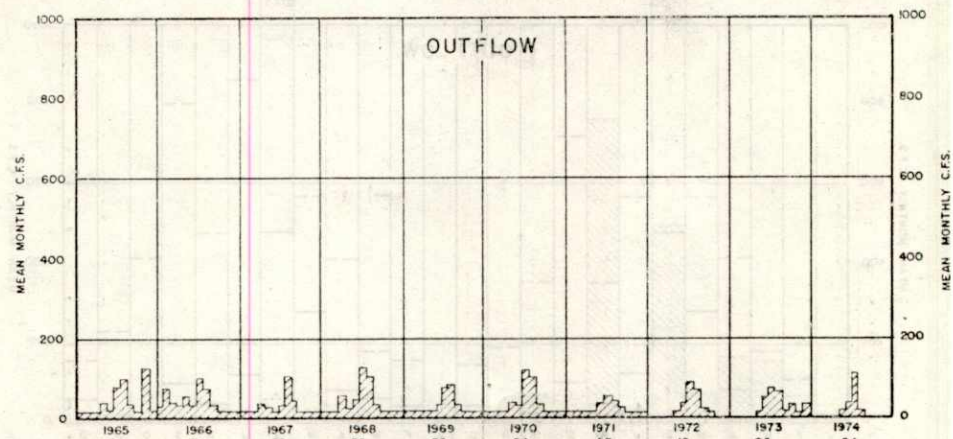
CEDAR BLUFF RESERVOIR
HISTORICAL OPERATION



	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974
MEAN ANNUAL C.F.S.	108	33	56	34	67	27	25	54	89	23
TOTAL ANNUAL A.F.	78,000	24,000	40,800	24,600	48,700	19,336	18,302	39,196	64,740	16,512



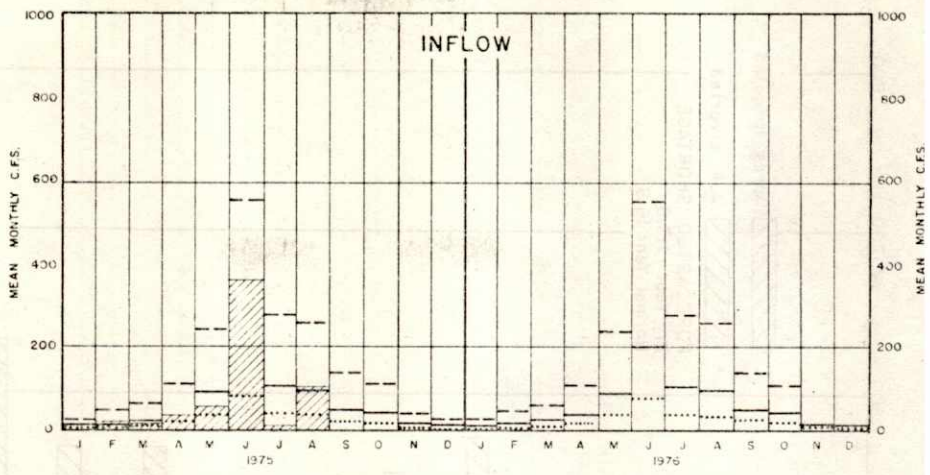
	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974
MAXIMUM A.F.	192,030	188,200	174,310	152,470	142,150	145,220	117,920	110,660	135,990	139,980
MINIMUM A.F.	157,060	149,760	149,170	126,490	124,410	116,400	96,870	95,530	106,940	105,330

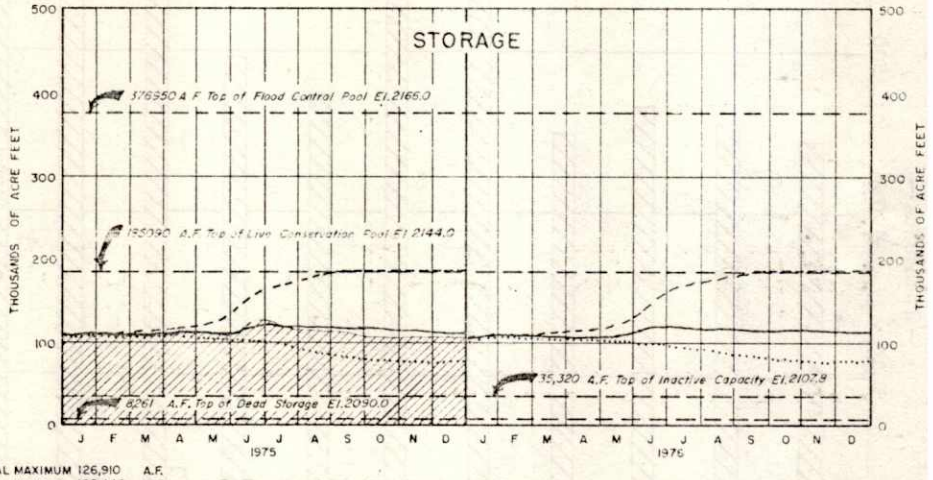


	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974
MEAN ANNUAL C.F.S.	29	34	20	30	20	26	23	19	22	24
TOTAL ANNUAL A.F.	21,300	24,400	14,400	21,900	14,400	18,882	16,447	13,843	15,769	17,236

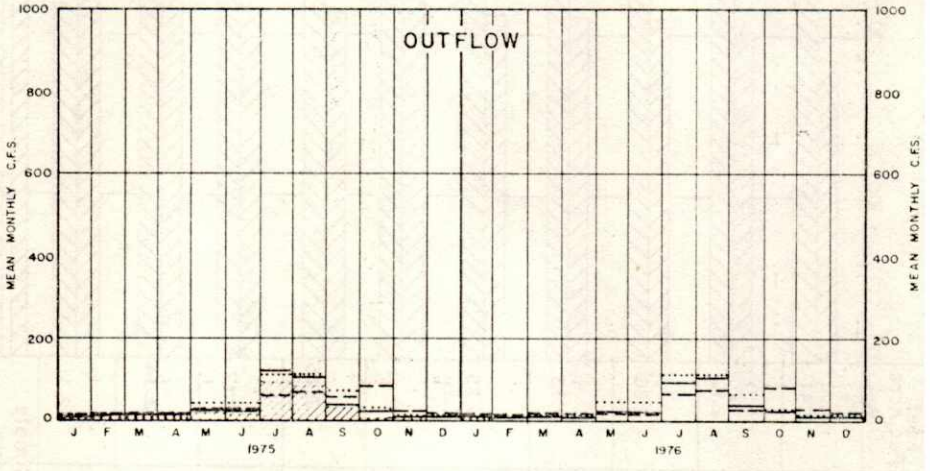
CEDAR BLUFF RESERVOIR

OPERATING PLANS





ANNUAL MAXIMUM 126,910 A.F.
ANNUAL MINIMUM 106,440 A.F.



MOST PROBABLE
REASONABLE MAXIMUM
REASONABLE MINIMUM
ACTUAL

CANAL DIVERSIONS AND ACRES IRRIGATED

All Districts in Niobrara, Lower Platte and Kansas River Basins

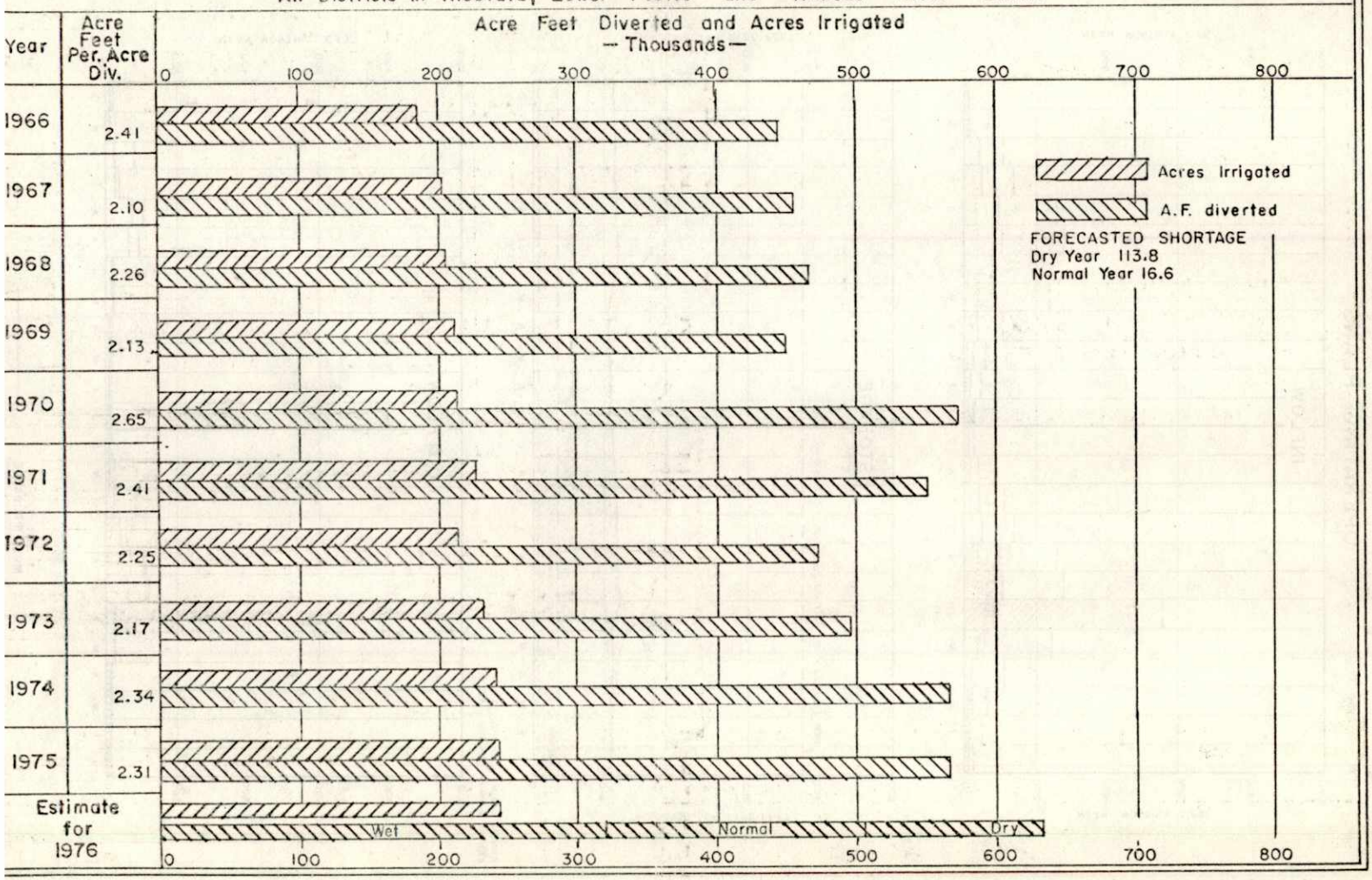


Exhibit 16

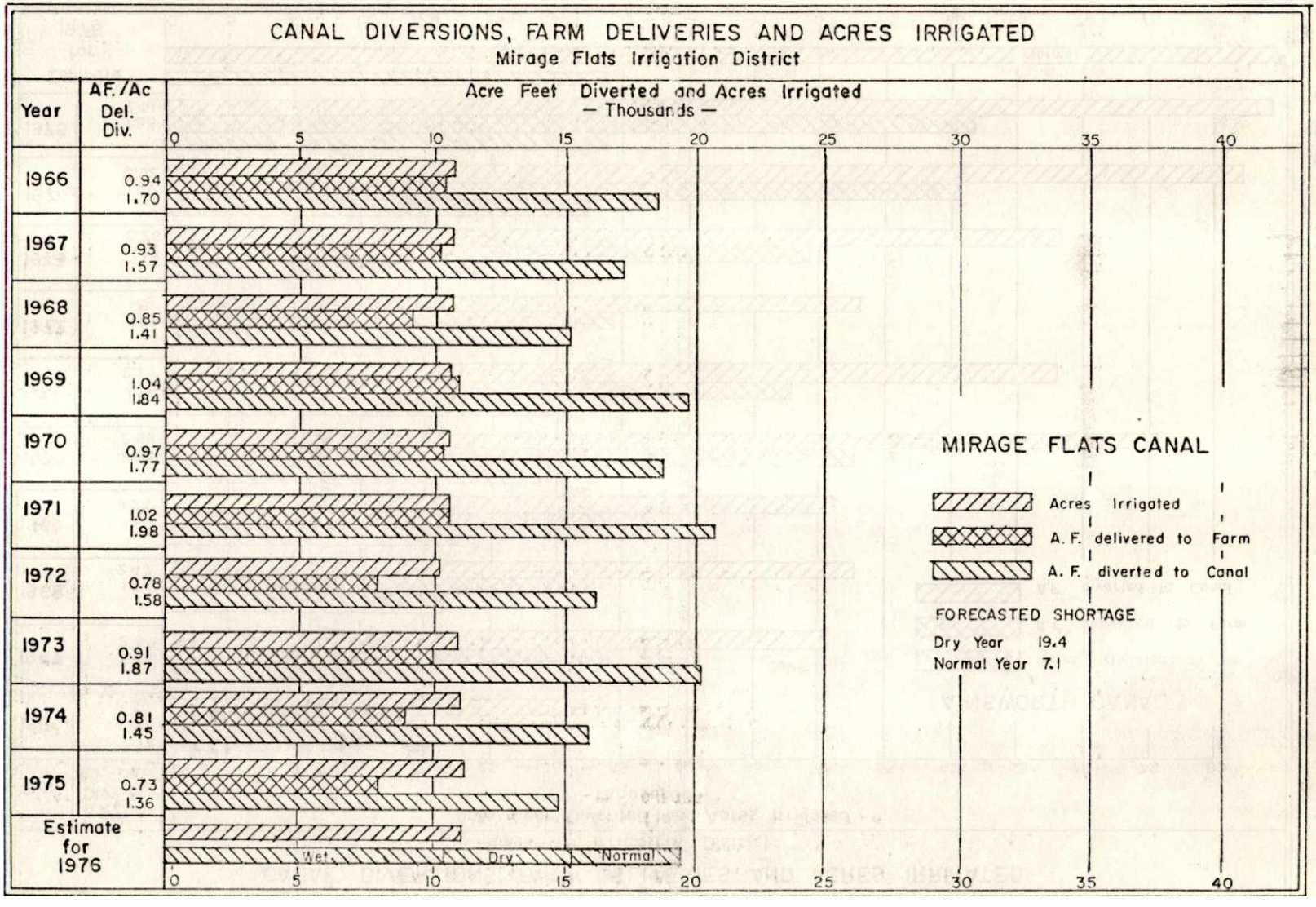

CANAL DIVERSIONS, FARM DELIVERIES AND ACRES IRRIGATED
Mirage Flats Irrigation District
Year
AF./Ac Del. Div.
Acre Feet Diverted and Acres Irrigated
— Thousands —
0
5
10
15
20
25
30
35
40
1966
0.94
1.70
1967
0.93
1.57
1968
0.85
1.41
1969
1.04
1.84
1970
0.97
1.77
1971
1.02
1.98
1972
0.78
1.58
1973
0.91
1.87
1974
0.81
1.45
1975
0.73
1.36
Estimate for 1976
Wet
Dry
Normal
MIRAGE FLATS CANAL
Acres Irrigated
A. F. delivered to Farm
A. F. diverted to Canal
FORECASTED SHORTAGE
Dry Year 19.4
Normal Year 7.1

Exhibit 17

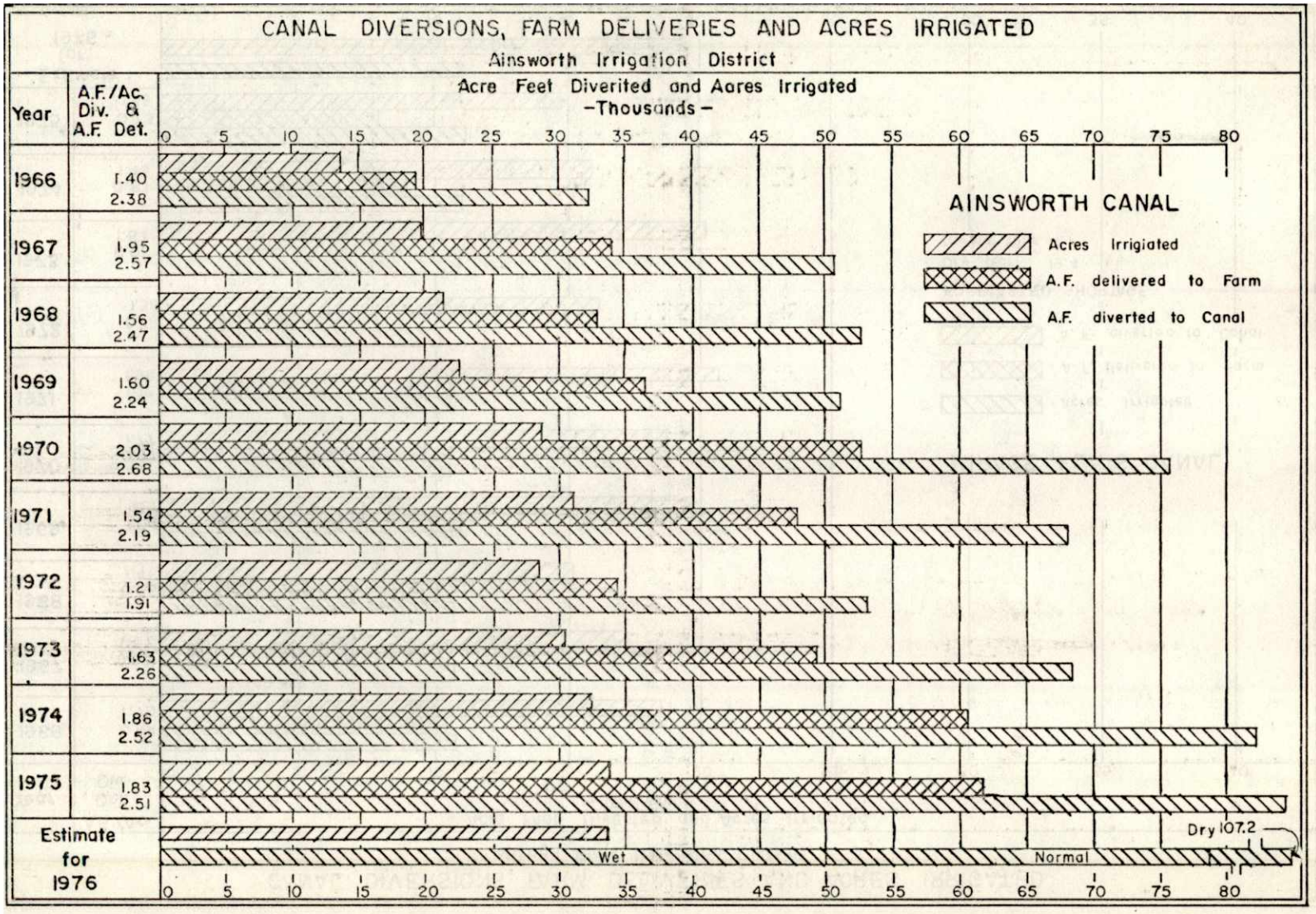

CANAL DIVERSIONS, FARM DELIVERIES AND ACRES IRRIGATED
Ainsworth Irrigation District
Acre Feet Diverted and Acres Irrigated
-Thousands-
Year
A.F./Ac. Div. & A.F. Det.
1966 1.40 2.38
1967 1.95 2.57
1968 1.56 2.47
1969 1.60 2.24
1970 2.03 2.68
1971 1.54 2.19
1972 1.21 1.91
1973 1.63 2.26
1974 1.86 2.52
1975 1.83 2.51
Estimate for 1976
Wet
Normal
Dry 107.2
AINSWORTH CANAL
Acres Irrigated
A.F. delivered to Farm
A.F. diverted to Canal

Exhibit 18

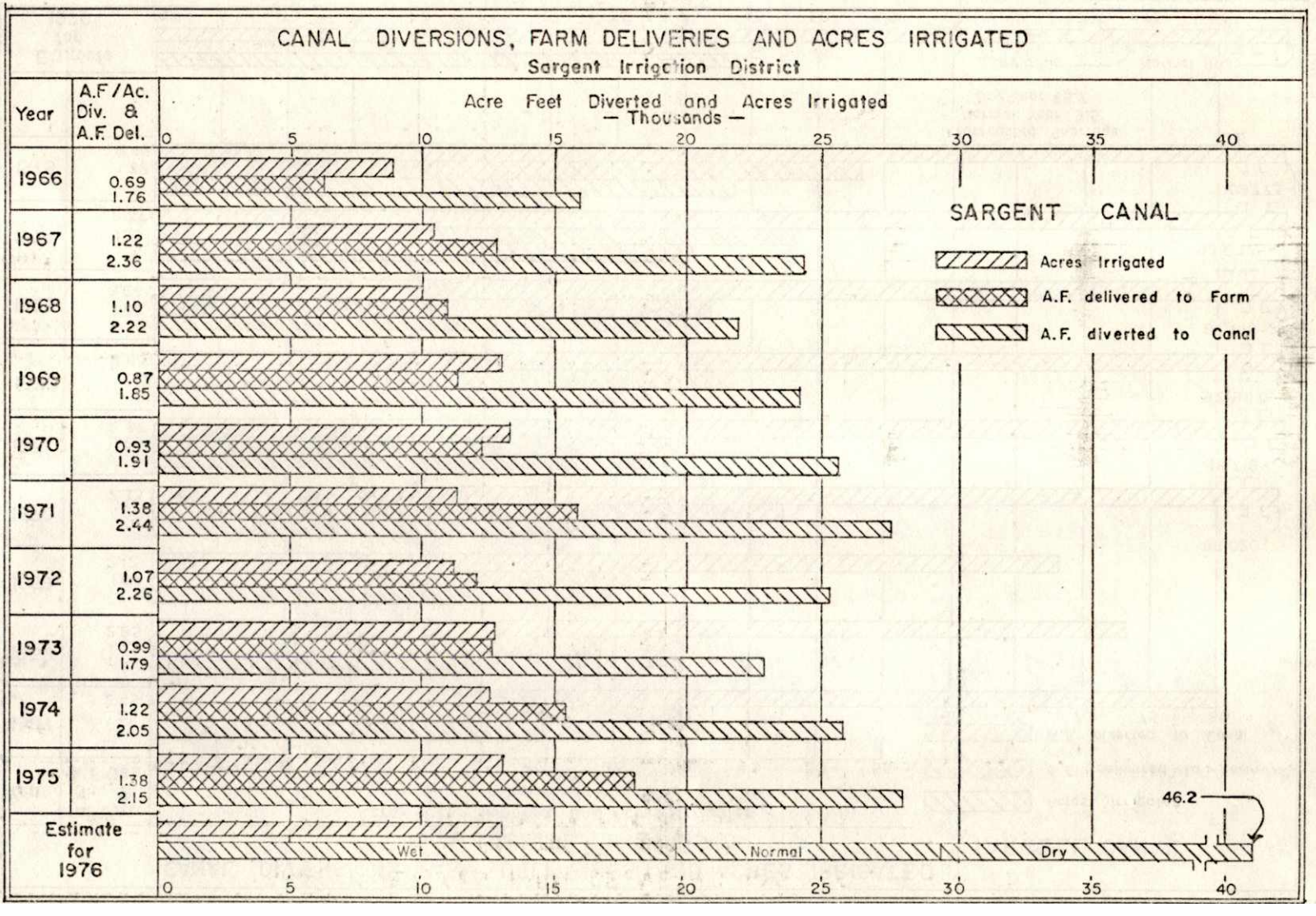

CANAL DIVERSIONS, FARM DELIVERIES AND ACRES IRRIGATED
Sargent Irrigation District
Year
A.F./Ac. Div. & A.F. Del.
Acre Feet Diverted and Acres Irrigated
— Thousands —
0
5
10
15
20
25
30
35
40
1966
0.69
1.76
1967
1.22
2.36
1968
1.10
2.22
1969
0.87
1.85
1970
0.93
1.91
1971
1.38
2.44
1972
1.07
2.26
1973
0.99
1.79
1974
1.22
2.05
1975
1.38
2.15
Estimate for 1976
Wet
Normal
Dry
46.2
SARGENT CANAL
Acres Irrigated
A.F. delivered to Farm
A.F. diverted to Canal

Exhibit 19

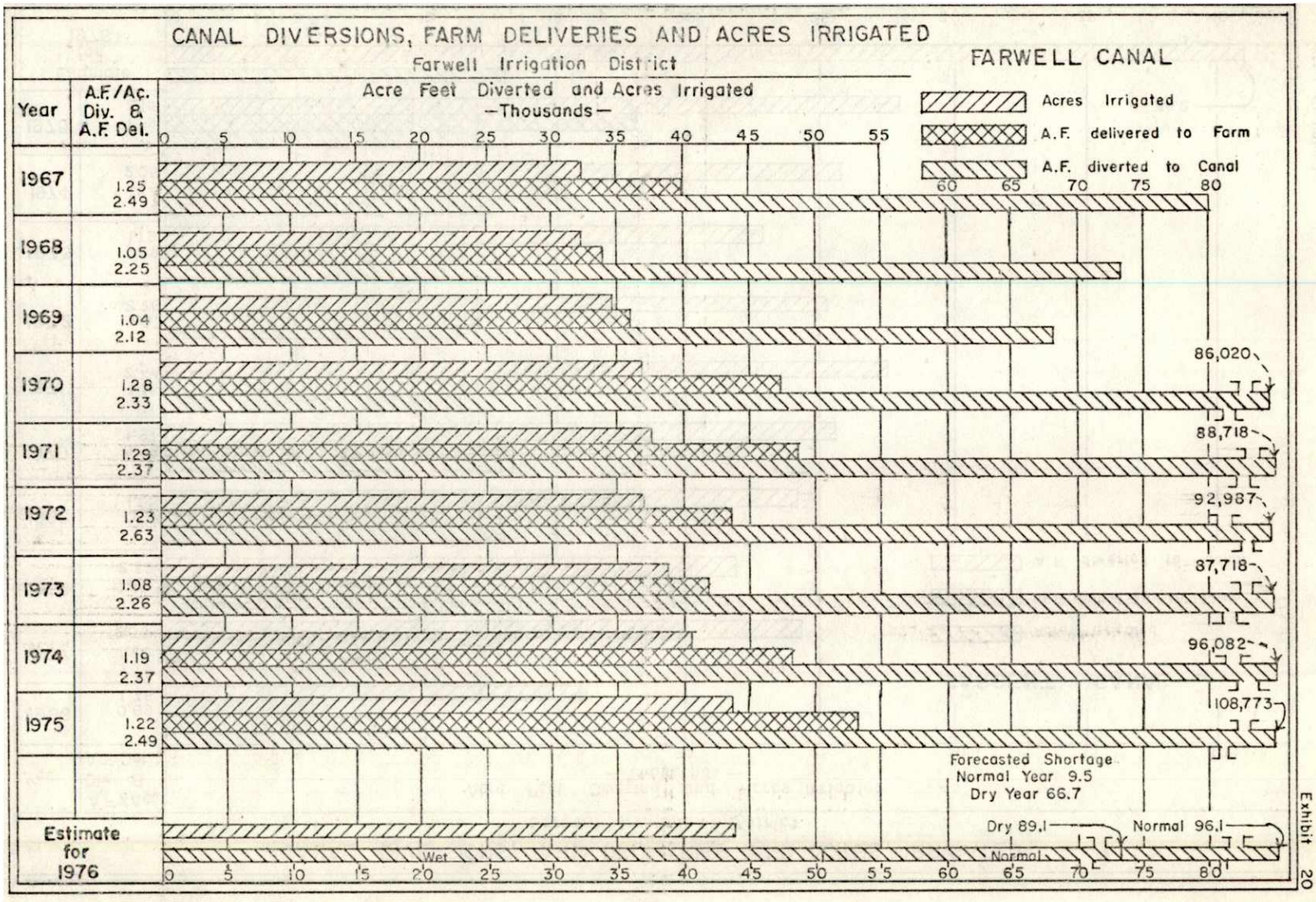

CANAL DIVERSIONS, FARM DELIVERIES AND ACRES IRRIGATED
Farwell Irrigation District
FARWELL CANAL
Year
A.F./Ac. Div. & A.F. Del.
Acre Feet Diverted and Acres Irrigated
—Thousands—
0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80
Acres Irrigated
A.F. delivered to Farm
A.F. diverted to Canal
1967 1.25 2.49
1968 1.05 2.25
1969 1.04 2.12
1970 1.28 2.33
1971 1.29 2.37
1972 1.23 2.63
1973 1.08 2.26
1974 1.19 2.37
1975 1.22 2.49
86,020
88,718
92,987
87,718
96,082
108,773
Forecasted Shortage
Normal Year 9.5
Dry Year 66.7
Estimate for 1976
Dry 89.1
Normal 96.1
Wet
Normal
0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80

Exhibit 20

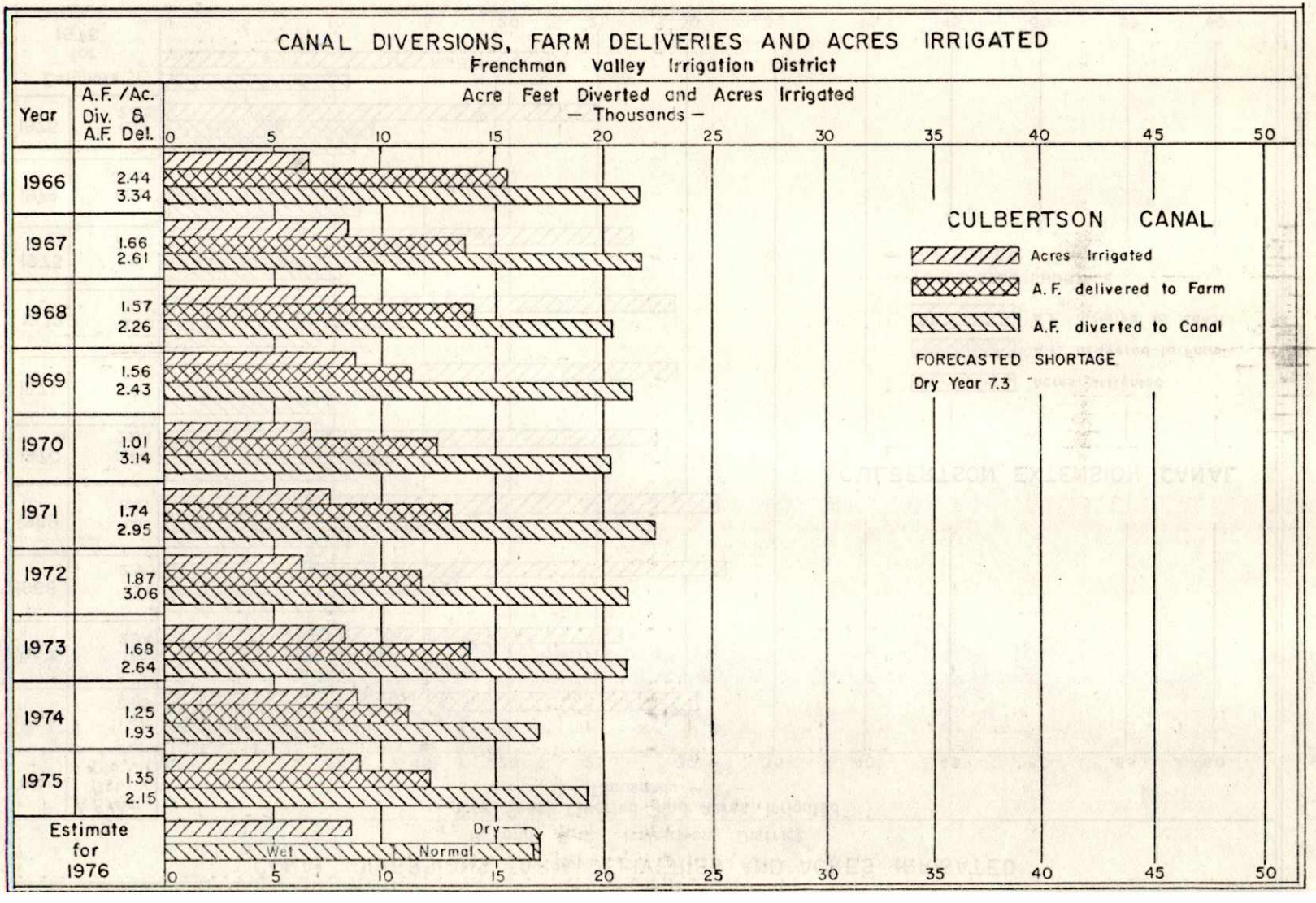

CANAL DIVERSIONS, FARM DELIVERIES AND ACRES IRRIGATED
Frenchman Valley Irrigation District
Year
A.F. /Ac. Div. & A.F. Del.
Acre Feet Diverted and Acres Irrigated
— Thousands —
0 5 10 15 20 25 30 35 40 45 50
1966 2.44 3.34
1967 1.66 2.61
1968 1.57 2.26
1969 1.56 2.43
1970 1.01 3.14
1971 1.74 2.95
1972 1.87 3.06
1973 1.68 2.64
1974 1.25 1.93
1975 1.35 2.15
Estimate for 1976
Dry
Wet
Normal
CULBERTSON CANAL
Acres Irrigated
A.F. delivered to Farm
A.F. diverted to Canal
FORECASTED SHORTAGE
Dry Year 7.3

Exhibit 21

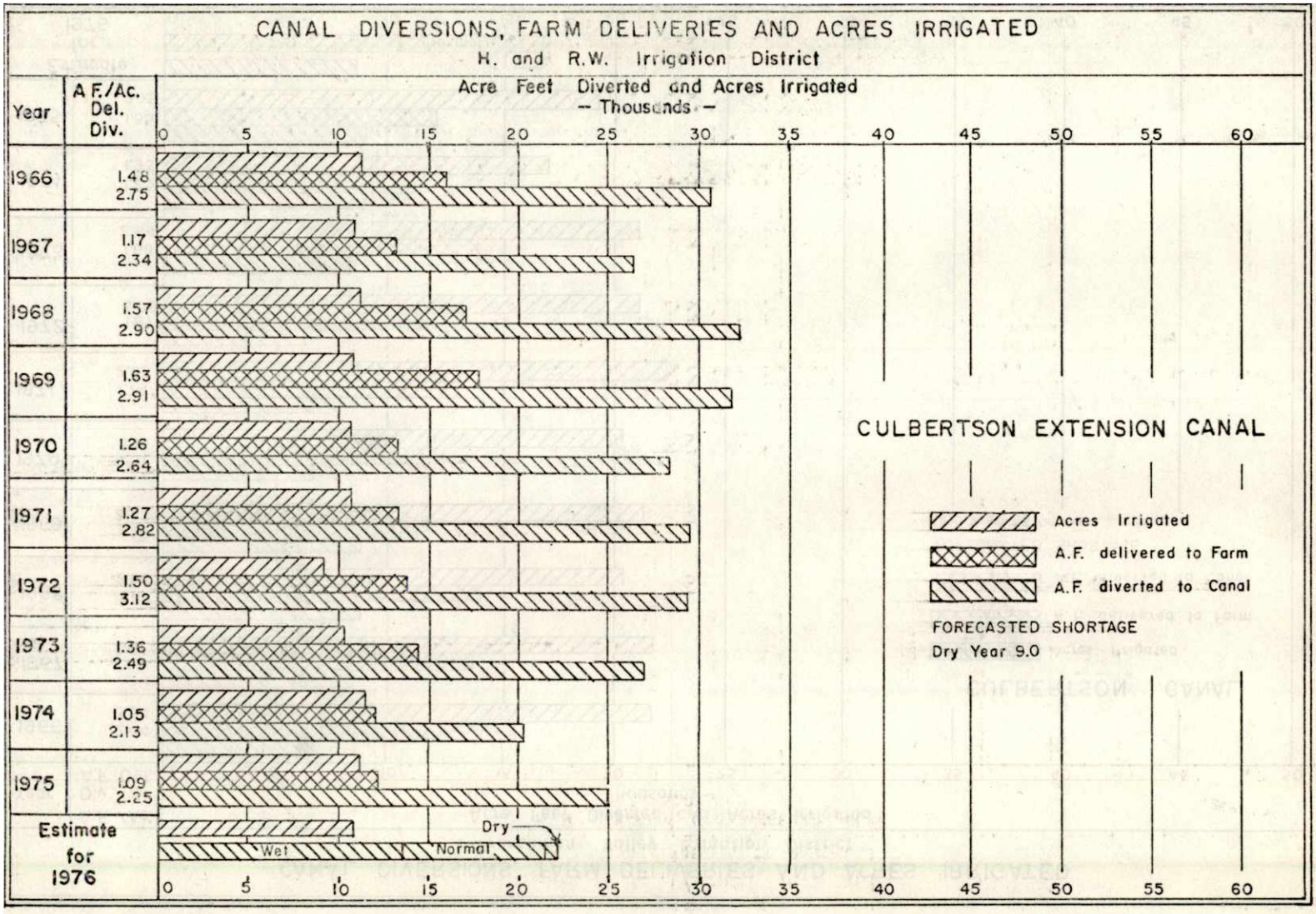

CANAL DIVERSIONS, FARM DELIVERIES AND ACRES IRRIGATED
H. and R.W. Irrigation District
Year
A F./Ac.
Del.
Div.
Acre Feet Diverted and Acres Irrigated
-- Thousands --
0 5 10 15 20 25 30 35 40 45 50 55 60
1966 1.48 2.75
1967 1.17 2.34
1968 1.57 2.90
1969 1.63 2.91
1970 1.26 2.64
1971 1.27 2.82
1972 1.50 3.12
1973 1.36 2.49
1974 1.05 2.13
1975 1.09 2.25
Estimate for 1976
Dry
Wet
Normal
CULBERTSON EXTENSION CANAL
Acres Irrigated
A.F. delivered to Farm
A.F. diverted to Canal
FORECASTED SHORTAGE
Dry Year 9.0

Exhibit 22

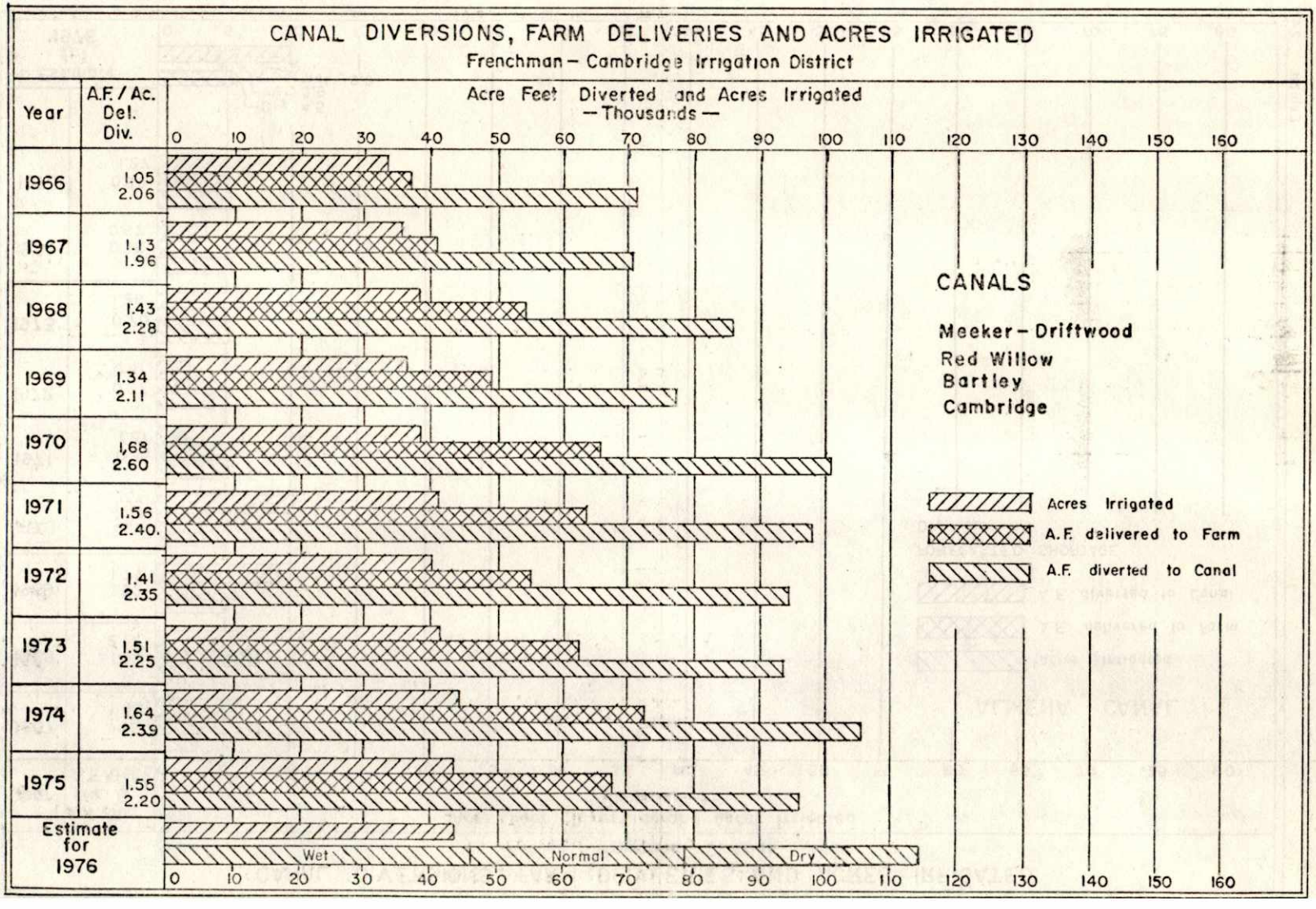

CANAL DIVERSIONS, FARM DELIVERIES AND ACRES IRRIGATED
Frenchman – Cambridge Irrigation District
Year
A.F. / Ac. Del. Div.
Acre Feet Diverted and Acres Irrigated
— Thousands —
0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160
1966 1.05 2.06
1967 1.13 1.96
1968 1.43 2.28
1969 1.34 2.11
1970 1.68 2.60
1971 1.56 2.40.
1972 1.41 2.35
1973 1.51 2.25
1974 1.64 2.39
1975 1.55 2.20
Estimate for 1976
Wet
Normal
Dry
CANALS
Meeker – Driftwood
Red Willow
Bartley
Cambridge
Acres Irrigated
A.F. delivered to Farm
A.F. diverted to Canal

Exhibit 23

CANAL DIVERSIONS, FARM DELIVERIES AND ACRES IRRIGATED

Almena Irrigation District

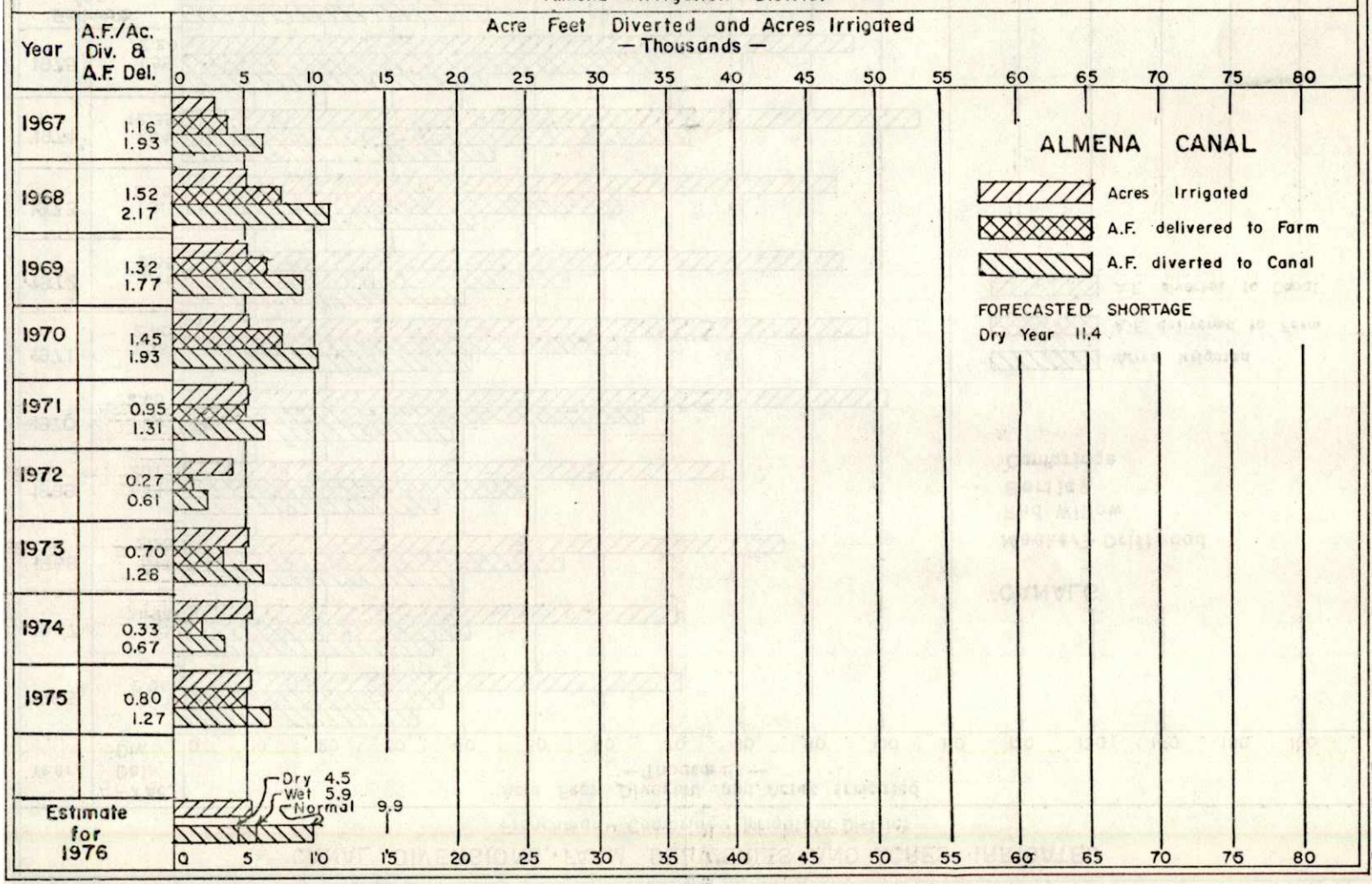


Exhibit 24

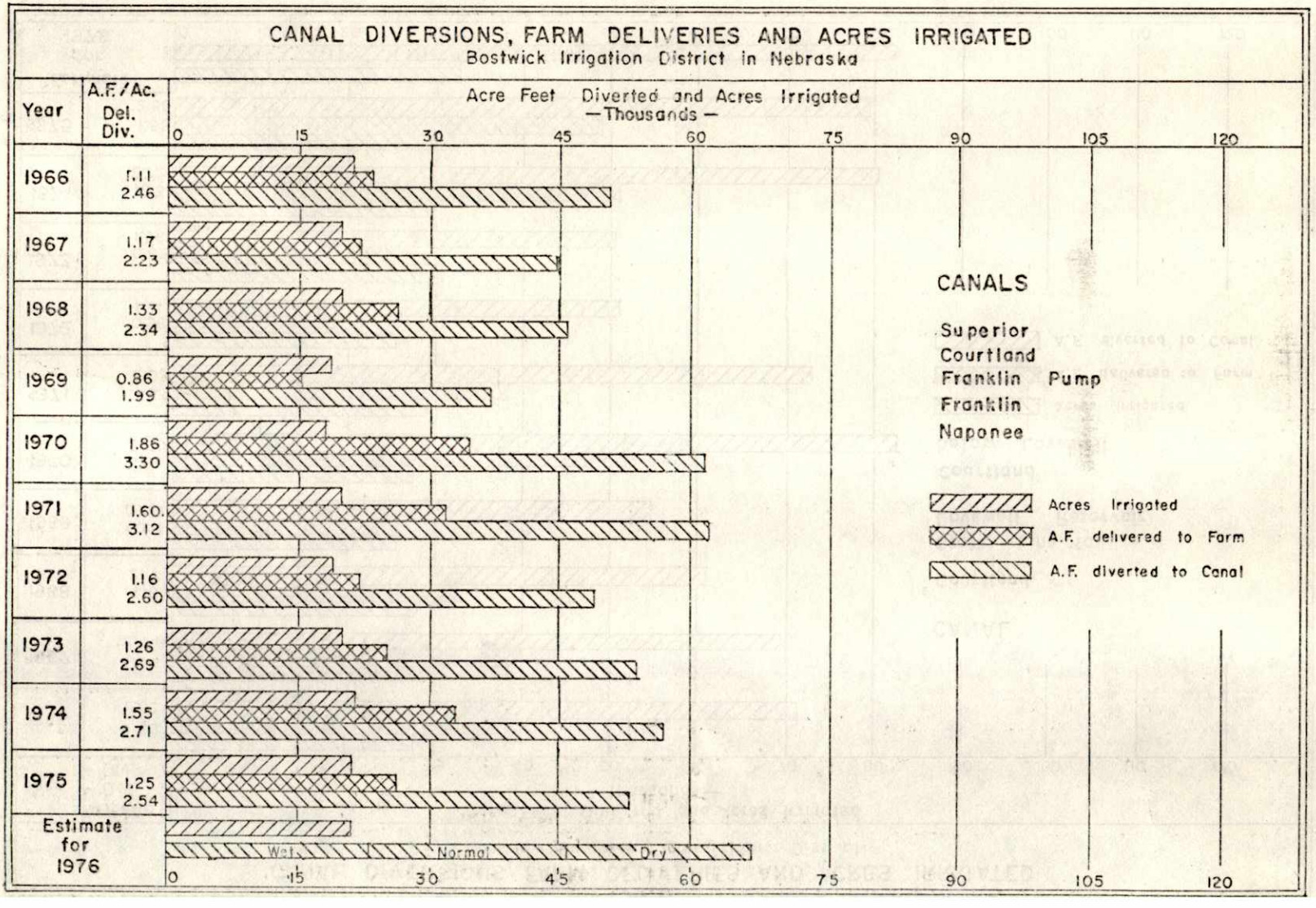

CANAL DIVERSIONS, FARM DELIVERIES AND ACRES IRRIGATED
Bostwick Irrigation District in Nebraska
Year
A.F./Ac.
Del.
Div.
Acre Feet Diverted and Acres Irrigated
—Thousands—
0
15
30
45
60
75
90
105
120
1966
1.11
2.46
1967
1.17
2.23
1968
1.33
2.34
1969
0.86
1.99
1970
1.86
3.30
1971
1.60
3.12
1972
1.16
2.60
1973
1.26
2.69
1974
1.55
2.71
1975
1.25
2.54
Estimate for 1976
Wet
Normal
Dry
CANALS
Superior
Courtland
Franklin Pump
Franklin
Naponee
Acres Irrigated
A.F. delivered to Farm
A.F. diverted to Canal

Exhibit 25

CANAL DIVERSIONS, FARM DELIVERIES AND ACRES IRRIGATED

Kansas — Bostwick Irrigation District

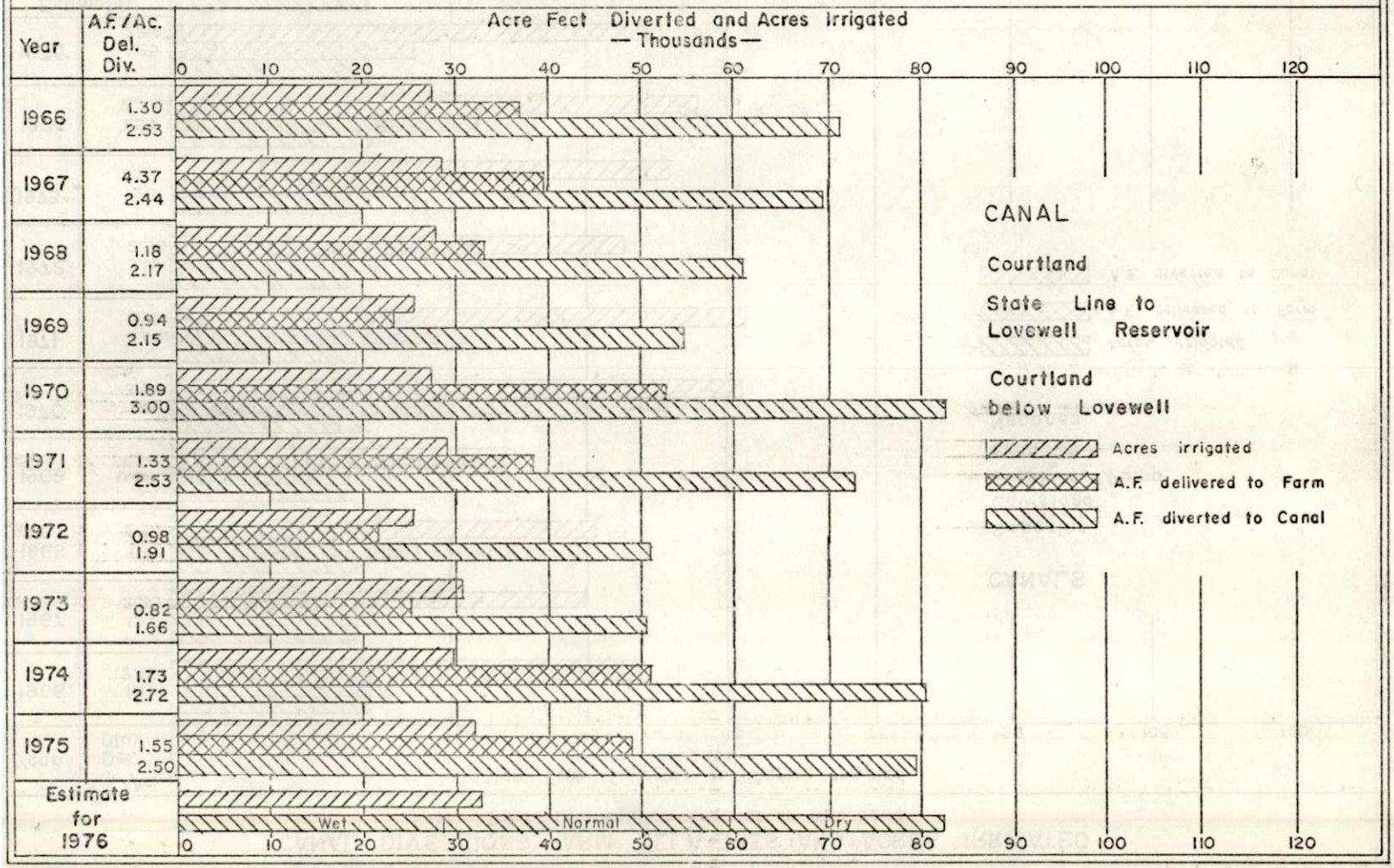


Exhibit 26

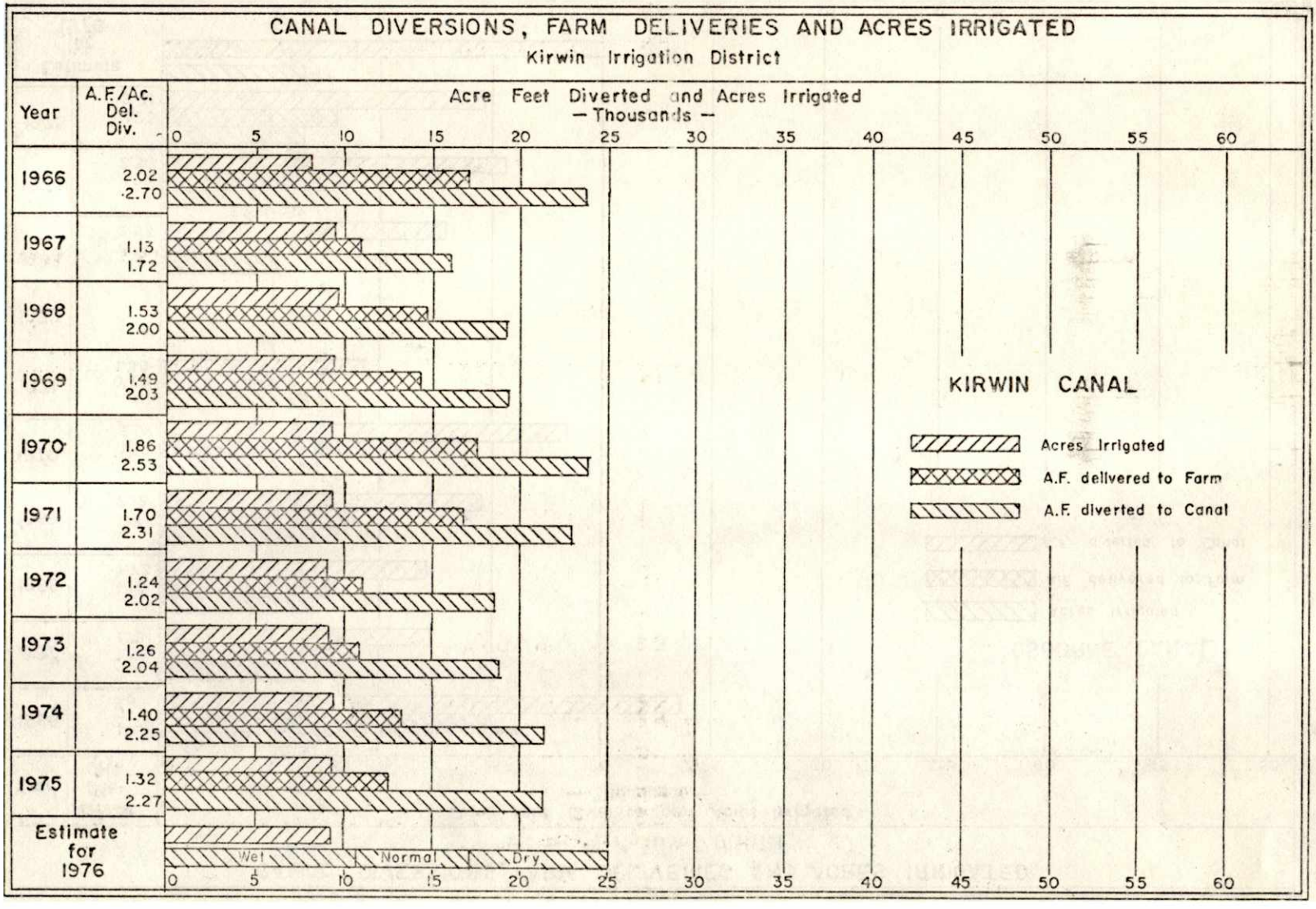

CANAL DIVERSIONS, FARM DELIVERIES AND ACRES IRRIGATED
Kirwin Irrigation District
Year
A.F./Ac. Del. Div.
Acre Feet Diverted and Acres Irrigated
— Thousands —
0 5 10 15 20 25 30 35 40 45 50 55 60
1966 2.02 2.70
1967 1.13 1.72
1968 1.53 2.00
1969 1.49 2.03
1970 1.86 2.53
1971 1.70 2.31
1972 1.24 2.02
1973 1.26 2.04
1974 1.40 2.25
1975 1.32 2.27
Estimate for 1976
Wet
Normal
Dry
KIRWIN CANAL
Acres Irrigated
A.F. delivered to Farm
A.F. diverted to Canal

Exhibit 27

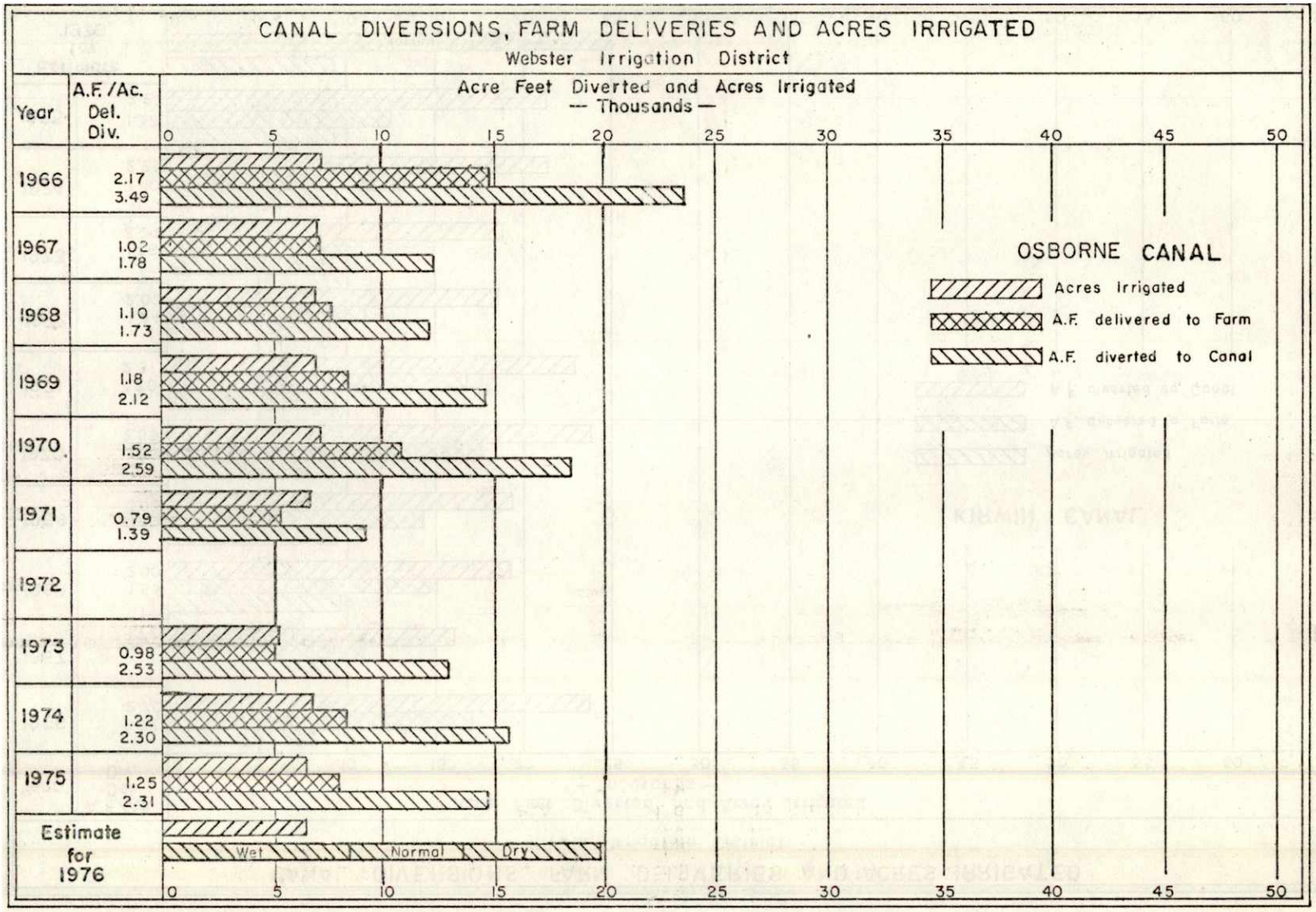

CANAL DIVERSIONS, FARM DELIVERIES AND ACRES IRRIGATED
Webster Irrigation District
Year
A.F./Ac. Del. Div.
Acre Feet Diverted and Acres Irrigated
— Thousands —
0 5 10 15 20 25 30 35 40 45 50
1966 2.17 3.49
1967 1.02 1.78
1968 1.10 1.73
1969 1.18 2.12
1970 1.52 2.59
1971 0.79 1.39
1972
1973 0.98 2.53
1974 1.22 2.30
1975 1.25 2.31
Estimate for 1976
Wet
Normal
Dry
OSBORNE CANAL
Acres Irrigated
A.F. delivered to Farm
A.F. diverted to Canal

Exhibit 28

CANAL DIVERSIONS, FARM DELIVERIES AND ACRES IRRIGATED
Cedar Bluff Irrigation District

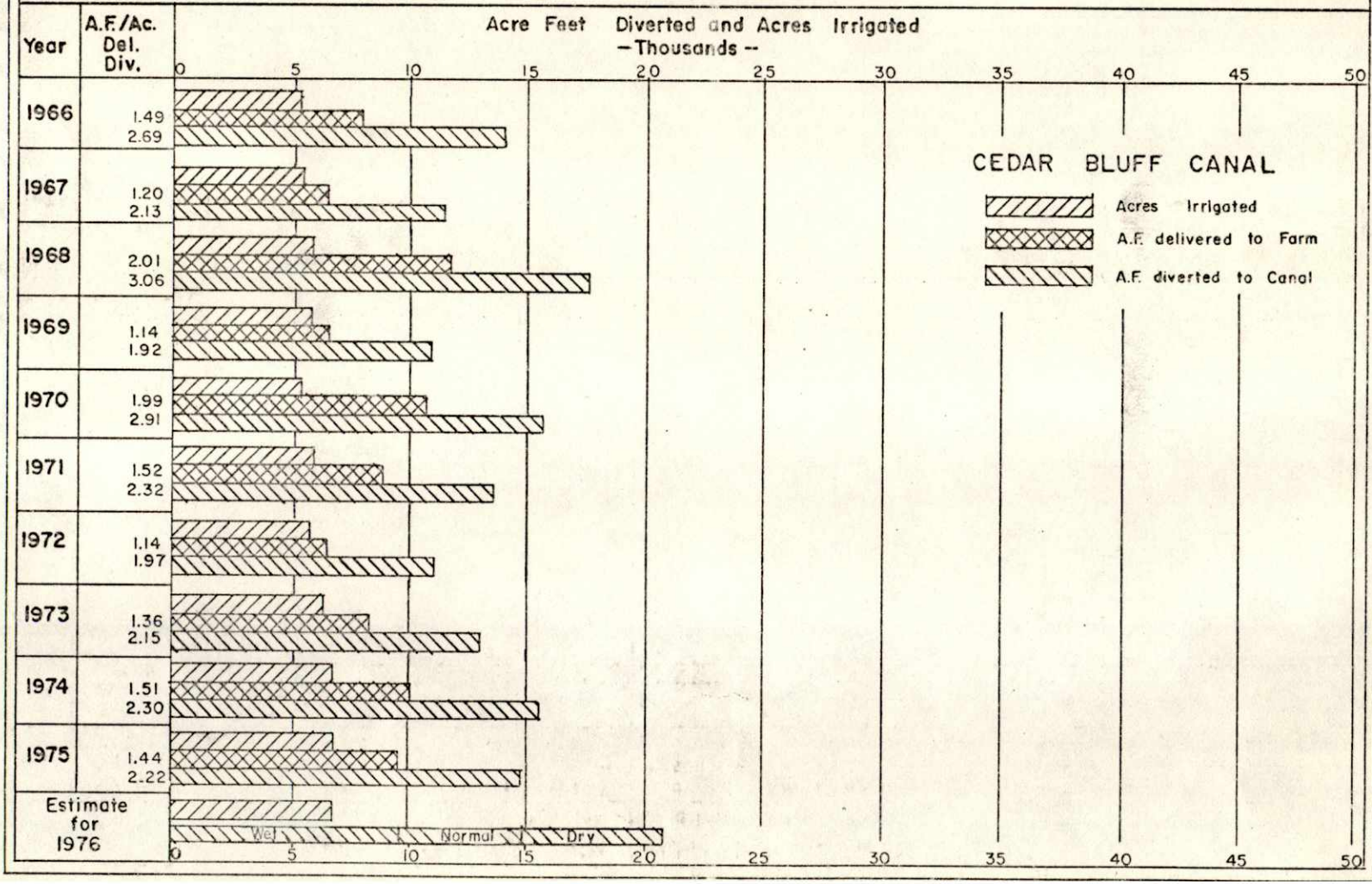
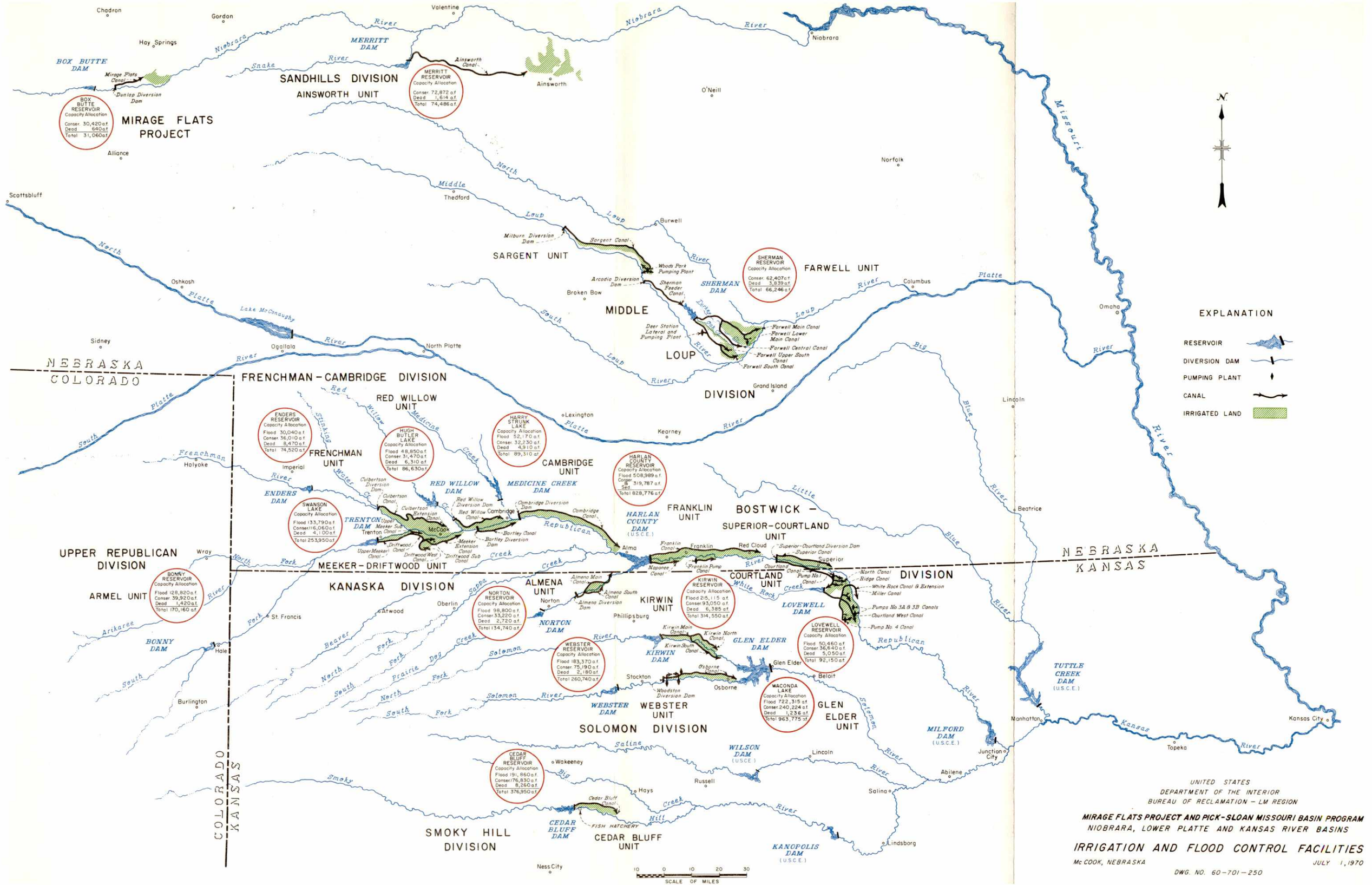


Exhibit 29


MIRAGE FLATS PROJECT
BOX BUTTE DAM
BOX BUTTE RESERVOIR Capacity Allocation Conser. 30,420 a.f. Dead 640 a.f. Total 31,060 a.f.
Mirage Flats Canal
Dunlap Diversion Dam
SANDHILLS DIVISION
AINSWORTH UNIT
MERRITT DAM
MERRITT RESERVOIR Capacity Allocation Conser. 72,872 a.f. Dead 1,614 a.f. Total 74,486 a.f.
Ainsworth Canal
Ainsworth
SHERMAN DAM
SHERMAN RESERVOIR Capacity Allocation Conser. 62,407 a.f. Dead 3,839 a.f. Total 66,246 a.f.
FARWELL UNIT
Farwell Main Canal
Farwell Lower Main Canal
Farwell Central Canal
Farwell Upper South Canal
Farwell South Canal
Deer Station Lateral and Pumping Plant
Sherman Feeder Canal
Arcadia Diversion Dam
Woods Park Pumping Plant
Milburn Diversion Dam
Sargent Canal
SARGENT UNIT
MIDDLE LOUP DIVISION
FRENCHMAN-CAMBRIDGE DIVISION
RED WILLOW UNIT
ENDERS RESERVOIR Capacity Allocation Flood 30,040 a.f. Conser. 36,010 a.f. Dead 8,470 a.f. Total 74,520 a.f.
HUGH BUTLER LAKE Capacity Allocation Flood 48,850 a.f. Conser. 31,470 a.f. Dead 6,310 a.f. Total 86,630 a.f.
HARRY STRUNK LAKE Capacity Allocation Flood 52,170 a.f. Conser. 32,230 a.f. Dead 4,910 a.f. Total 89,310 a.f.
HARLAN COUNTY RESERVOIR Capacity Allocation Flood 508,989 a.f. Conser. & Sed. 319,787 a.f. Total 828,776 a.f.
FRENCHMAN UNIT
CAMBRIDGE UNIT
ENDERS DAM
RED WILLOW DAM
MEDICINE CREEK DAM
HARLAN COUNTY DAM (U.S.C.E.)
SWANSON LAKE Capacity Allocation Flood 133,790 a.f. Conser. 116,060 a.f. Dead 4,100 a.f. Total 253,950 a.f.
TRENTON DAM
Culbertson Diversion Dam
Culbertson Canal
Culbertson Extension Canal
Red Willow Diversion Dam
Red Willow Canal
Cambridge Diversion Dam
Cambridge Canal
Bartley Canal
Bartley Diversion Dam
Meeker Extension Canal
Driftwood Canal
Driftwood West Canal
Driftwood Sub Canal
Upper Meeker Canal
Meeker Sub Canal
MEEKER-DRIFTWOOD UNIT
FRANKLIN UNIT
BOSTWICK - SUPERIOR-COURTLAND UNIT
Franklin Canal
Franklin Pump Canal
Naponee Canal
Superior-Courtland Diversion Dam
Superior Canal
Courtland Canal
Pump No. 1 Canal
North Canal
Ridge Canal
White Rock Canal & Extension
Miller Canal
Pumps No. 3A & 3B Canals
Courtland West Canal
Pump No. 4 Canal
COURTLAND UNIT
LOVEWELL DAM
LOVEWELL RESERVOIR Capacity Allocation Flood 50,460 a.f. Conser. 36,640 a.f. Dead 5,050 a.f. Total 92,150 a.f.
UPPER REPUBLICAN DIVISION
ARMEL UNIT
BONNY RESERVOIR Capacity Allocation Flood 128,820 a.f. Conser. 39,920 a.f. Dead 1,420 a.f. Total 170,160 a.f.
BONNY DAM
KANASKA DIVISION
ALMENA UNIT
Almena Main Canal
Almena South Canal
Almena Diversion Dam
NORTON RESERVOIR Capacity Allocation Flood 98,800 a.f. Conser. 33,220 a.f. Dead 2,720 a.f. Total 134,740 a.f.
NORTON DAM
KIRWIN UNIT
KIRWIN RESERVOIR Capacity Allocation Flood 215,115 a.f. Conser. 93,050 a.f. Dead 6,385 a.f. Total 314,550 a.f.
Kirwin Main Canal
Kirwin North Canal
Kirwin South Canal
KIRWIN DAM
GLEN ELDER DAM
Osborne Canal
Woodston Diversion Dam
WEBSTER RESERVOIR Capacity Allocation Flood 183,370 a.f. Conser. 75,190 a.f. Dead 2,180 a.f. Total 260,740 a.f.
WEBSTER DAM
WEBSTER UNIT
WACONDA LAKE Capacity Allocation Flood 722,315 a.f. Conser. 240,224 a.f. Dead 1,236 a.f. Total 963,775 a.f.
GLEN ELDER UNIT
SOLOMON DIVISION
CEDAR BLUFF RESERVOIR Capacity Allocation Flood 191,860 a.f. Conser. 176,830 a.f. Dead 8,260 a.f. Total 376,950 a.f.
Cedar Bluff Canal
FISH HATCHERY
CEDAR BLUFF DAM
CEDAR BLUFF UNIT
SMOKY HILL DIVISION
WILSON DAM (USCE)
KANOPOLIS DAM (U.S.C.E.)
MILFORD DAM (U.S.C.E.)
TUTTLE CREEK DAM (U.S.C.E.)
NEBRASKA
COLORADO
KANSAS
Chadron
Gordon
Valentine
Niobrara
Hay Springs
Alliance
O'Neill
Norfolk
Scottsbluff
Thedford
Burwell
Oshkosh
Lake McConaughy
Broken Bow
Columbus
Omaha
Sidney
Ogallala
North Platte
Grand Island
Lexington
Kearney
Lincoln
Holyoke
Imperial
Beatrice
Wray
Trenton
McCook
Alma
Franklin
Red Cloud
Superior
Norton
Oberlin
Atwood
St. Francis
Phillipsburg
Hale
Burlington
Stockton
Glen Elder
Beloit
Osborne
Manhattan
Junction City
Kansas City
Topeka
Abilene
Salina
Russell
Hays
Wakeeney
Lindsborg
Ness City
Niobrara River
Missouri River
North Platte River
South Platte River
Frenchman River
Red Willow Creek
Medicine Creek
Republican River
Little Blue River
Big Blue River
Loup River
Middle Loup River
North Loup River
South Loup River
Beaver Creek
Prairie Dog Creek
Solomon River
Saline River
Smoky Hill River
Kansas River
Arikaree River
Sappa Creek
Big Creek
Hill Creek
Stinking Water Creek
Lodge Pole Creek
White Rock Creek
Pawnee Creek
Salt Creek
Little Blue River
N.
EXPLANATION
RESERVOIR
DIVERSION DAM
PUMPING PLANT
CANAL
IRRIGATED LAND
SCALE OF MILES
10 0 10 20 30
UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION - LM REGION
MIRAGE FLATS PROJECT AND PICK-SLOAN MISSOURI BASIN PROGRAM
NIOBRARA, LOWER PLATTE AND KANSAS RIVER BASINS
IRRIGATION AND FLOOD CONTROL FACILITIES
McCOOK, NEBRASKA
JULY 1, 1970
DWG. NO. 60-701-250