ANNUAL OPERATING PLAN FRYINGPAN-ARKANSAS PROJECT WATER YEAR 2006 OPERATIONS

I. GENERAL

This is the 37th annual operating plan for the Fryingpan-Arkansas Project. The project, completed in 1990, imports spring snowmelt runoff from Colorado's west slope to the semi-arid Arkansas River basin on Colorado's east slope. The project consists of federally owned dams, reservoirs, stream diversion structures, conduits, tunnels, pumping plants, a pumped-storage powerplant, electric transmission lines, substations, and recreation facilities. These features are located in the Fryingpan River and Hunter Creek watersheds of the upper Colorado River basin, and in the Arkansas River basin in central and southeastern Colorado. The project provides water for irrigation, municipal and industrial use, hydroelectric power generation, recreation, and wildlife habitat. The project also provides for flood control.

The project was authorized under Public Law 87-590 on August 16, 1962. This law provides that the project will be operated under the operating principles adopted by the State of Colorado on April 30, 1959, as amended on December 30, 1959, and on December 9, 1960. These operating principles were published as House Document 130 (87th Congress, 1st Session), and are included in Appendix E.

This annual operating plan is a summary of the actual project operation in water year 2006 (October 1, 2005 through September 30, 2006).

II. PROJECT FEATURES IN OPERATION DURING WATER YEAR 2006

Ruedi Dam and Reservoir are located on the Fryingpan River, a tributary of the Roaring Fork River, on Colorado's west slope about 13 miles east of Basalt, Colorado. Ruedi Reservoir has a total capacity of 102,373 acre-feet at a water surface elevation of 7766.0 feet. The reservoir is operated on an annual cycle. Steady winter releases draft the reservoir such that it is filled with the spring snowmelt runoff, while releases to the Fryingpan River are maintained below the safe channel capacity. The reservoir provides replacement water for out-of-priority depletions to the Colorado River by the project as well as water for west slope irrigation, municipal, and industrial uses on a contractual basis. The reservoir is also operated to provide for recreation, wildlife habitat, and flood control.

The west slope collection system, located upstream of Ruedi Reservoir in the upper Fryingpan River and Hunter Creek watersheds, is a series of 16 stream diversion structures and 8 tunnels. The system collects spring snowmelt runoff

for diversion, by gravity, to the inlet of the Charles H. Boustead Tunnel. The Boustead Tunnel conveys water collected by the west slope collection system under the continental divide and into Turquoise Lake on the east slope. The tunnel is 5 miles long and has a water conveyance capacity of 945 cubic feet per second (cfs).

Sugarloaf Dam and Turquoise Lake are located on Lake Fork Creek, a tributary of the Arkansas River, about 5 miles west of Leadville, Colorado. The lake has a total capacity of 129,398 acre-feet at a water surface elevation of 9869.4 feet. The lake is operated to provide regulation of both project and non-project water imported from the west slope. Turquoise Lake is operated on an annual cycle, as is Ruedi Reservoir. The lake is drafted through the Mt. Elbert Conduit during the winter to provide adequate space for the spring imports of west slope water. Most of the native inflow from Lake Fork Creek is impounded in the lake and returned to the Arkansas River via the Mt. Elbert Conduit, the Mt. Elbert Powerplant, and Twin Lakes. The lake is also operated to provide for recreation and wildlife habitat.

The Mt. Elbert Conduit conveys project, non-project, and native Lake Fork Creek water from Turquoise Lake to Twin Lakes. The conduit is 10.7 miles long and has a water conveyance capacity of 370 cfs. Native water from Halfmoon Creek is also added to the conduit and returned to the Arkansas River from Twin Lakes Dam. All conduit flow which reaches the Mt. Elbert Forebay is used to generate electricity at the Mt. Elbert Powerplant as it is delivered to Twin Lakes.

The Mt. Elbert Powerplant is a pumped-storage facility located on the shore of Twin Lakes. It has two 100-megawatt turbine generators, which can be reversed and used as 340,000-horsepower pumps. In addition to being used to generate energy with the Mt. Elbert Conduit flow, the plant is used to follow daily peak power loads. This load following is accomplished by pumping water to the Mt. Elbert Forebay, an 11,143-acre-foot regulating pool at the terminus of the Mt. Elbert Conduit, from Twin Lakes during off-peak load hours using surplus or low cost energy. That water is then returned to Twin Lakes through the turbines during peak load hours, along with the Mt. Elbert Conduit flow. The energy generated at the plant is transmitted and marketed by the Western Area Power Administration, with the revenues applied to the repayment of the project.

Twin Lakes Dam and Twin Lakes are located on Lake Creek, a tributary of the Arkansas River, about 13 miles south of Leadville, Colorado. Twin Lakes has a capacity of 140,855 acre-feet at a maximum water surface elevation of 9200 feet. The reservoir is operated to regulate both project and non-project water imported from the west slope. The project water stored in the reservoir is released to Lake Creek for storage in Pueblo Reservoir during the winter months, in anticipation of spring imports from the west slope. Native inflows into Turquoise Lake, native flows diverted from Halfmoon Creek, and native inflows into Twin Lakes, are all released to Lake Creek from the Twin Lakes Dam. The cities of Colorado Springs

and Aurora take direct delivery of water from the reservoir through the Otero Pipeline. The operation of Twin Lakes also provides for recreation and wildlife habitat.

Pueblo Dam and Reservoir are located on the Arkansas River 6 miles west of the city of Pueblo, Colorado. The reservoir is the terminal storage facility for the Fryingpan-Arkansas Project and has a total storage capacity of 349,940 acre-feet at a water surface elevation of 4898.7 feet. The upper 26,991 acre-feet of storage space are reserved for flood control at all times, and an additional 66,000 acre-feet of space are reserved from April 15 through November 1. Non-project water may be stored in the reservoir under temporary contract. Native inflow can be stored when the project storage right is in priority or under the winter water storage program (WWSP). Under the WWSP, irrigators are permitted to store native Arkansas River water in Pueblo Reservoir during the winter months for an additional supply of irrigation water, on the condition that the water is used before May 1 of the next water year. The majority of project water deliveries is made from the reservoir. The Fountain Valley Authority, the Pueblo West Metropolitan District, and the Pueblo Board of Water Works take direct delivery of municipal water through the south outlet works and joint-use manifold. A direct irrigation delivery is made to the Bessemer Ditch. Other project deliveries are made as releases to the Arkansas River for diversion downstream. Pueblo Reservoir is also operated to provide for recreation and wildlife habitat.

HYDROLOGIC CONDITIONS AND MAJOR WEATHER EVENTS – WATER YEAR 2006

Water year 2006 presented a wet winter and a very dry spring and summer for the Fryingpan River basin. The water year began with above average precipitation, which lasted until March. However, after the month of March, precipitation ended almost entirely and the snowpack water slowly began to disappear. What promised to be a possible record runoff year ended up being an average runoff year.

Given the high precipitation over the area during the winter months, inflow to Ruedi remained higher than normal through the season. As temperatures began to rise in early April, so did the runoff. Initially, most of the runoff came from the lower elevations. Once the snow in the higher elevations began to melt, most of the runoff was captured but the Fryingpan-Arkansas Project west slope collection system.

As the spring progressed, the drought conditions intensified. The dry conditions continued into the summer and early fall. By September, the total precipitation for the water year was 101 percent of average.

The inflow for the year was sufficient to bring the reservoir level within 1,500 acrefeet of the top of the spillway, while allowing the project's participation in the Coordinated Reservoir Operations for 2006 in support of endangered species of fish along the Colorado River. Inflow total for October 2005 through September 2006 was 100 percent of average, with an accumulated total volume of 130,500 acre-feet. The April through July season produced a total of 45,281 acre-feet of inflow, 28,419 acre-feet lower than water year 2005.

IV. REPORT ON OPERATIONS DURING WATER YEAR 2006

A. Ruedi Reservoir

Ruedi Reservoir began the water year 2006 with a storage content of 83,685 acrefeet, which is 89 percent of average. Precipitation over the Fryingpan River basin was high during the winter months and early spring. By April 1, the snow-water content in the Fryingpan River Basin was estimated at 16.10 inches, which represents 110 percent of average, higher than the previous year. Releases during the winter and spring months were made through the city of Aspen's hydroelectric powerplant.

The spring forecast for runoff in the Fryingpan River basin predicted high inflows for Ruedi Reservoir in water year 2006, given the high inflows of the previous two springs and the deep snowpack collected during the months of November through January. A near-record runoff season was considered to be a possibility for water year 2006. In preparation for such a runoff event, winter releases at Ruedi Reservoir began higher than normal and were increased as winter progressed. The releases for November were set at 90 cfs and increased by late December to 125 cfs. By January 11, releases out of Ruedi were increased once again to 155 cfs and continued at that rate until April. By April 12, Ruedi Reservoir had reached its lowest water surface level of water year 2006, an elevation of 7720.48 feet with a storage content of 63,201 acre-feet. That elevation represented 103 percent of average for the period of record 1970 to 1999. As runoff started in April and the reservoir level began to rise, releases were increased once more to 240 cfs, in preparation for the expected high inflows of May and June. In response to the forecasted high inflows, Reclamation prepared a plan in April for Ruedi to participate in the Coordinated Reservoir Operations in support of endangered fish species along the Colorado River.

By late April, however, it became evident that inflows were not going to reach the projected levels. The dry pattern and mild temperatures which dominated the weather in the area during the latter spring months, reduced the snowpack earlier and much more quickly than previously anticipated. The forecasted high and extended inflows of May and June did not materialize. Based upon early predictions, Ruedi Reservoir did participate in the Coordinated Reservoir Operations, but the rate of releases was reduced from that originally planned, and

the duration was decreased in an effort to contribute while still attempting to fill the reservoir. During and after the participation in the Coordinated Reservoir Operations, inflow to Ruedi further dropped below forecasted rates. Ruedi reached a maximum storage content of 100,824 acre-feet on July 23, approximately 1,500 acre-feet short of its capacity but 103 percent of average. The water surface level that day was 7764.44 feet. By July 24, the reservoir level began a slow but steady drop. The high level of storage and favorable flow conditions along the Colorado River, during the summer and early fall months, allowed Ruedi Reservoir to maintain water surface elevations above the boat ramps (elevation 7747.50 feet) and provide releases that were beneficial to recreation through the end of the summer. The highest computed inflow for the water year was 994 cfs, recorded on May 23.

The reservoir storage observed this summer was deemed adequate to make the 4-out-of-5-year 5,000 acre-foot pool available to the endangered fish this year. Therefore, the total volume of water released from Ruedi to support the target flows at the 15-Mile Reach in Grand Junction was 19,645 acre-feet, which included 5,000 acre-feet from the firm fish pool; the 10,825 acre-feet of mitigation water; and 3,820 acre-feet from the 4-out-of-5-year fish pool. Flow down the Colorado River was sufficient during most of the summer to keep the 15-Mile Reach well above the required level at the Palisade stream gage. Flow augmentation releases for the endangered fish began August 24 and continued through October 6. The 5,000 acre-feet of water in the firm fish pool were exhausted by August 10, and the 10,825 acre-feet of mitigation water were exhausted by September 20. Only 3,820 acre-feet of the 5,000 acre-feet of water in the 4-out-of-5-year fish pool were released during 2006. That follows the order of release from the various sources of Ruedi water available to support the endangered fish. With no river calls for Ruedi in water year 2006, there were no contract water releases.

Given the above-average precipitation within the basin and with no contract releases and no river calls, Ruedi Reservoir finished the water year with 82,246 acre-feet in storage, which is 87 percent of average. Total cumulative precipitation for the year was 16.83 inches, or 101 percent of average. Discretionary releases for the water year totaled 17,260 acre-feet.

Ruedi Reservoir is one of the participating reservoirs in the Coordinated Reservoir Operations effort of the Upper Colorado River Endangered Fish Recovery Program. The effort is directed at augmenting peak flow in the 15-Mile Reach of the Colorado River to benefit habitat improvement and spawning for two of the endangered Colorado River fishes. The 15-Mile Reach is the 15-mile stretch of the Colorado River above the confluence with the Gunnison River in Grand Valley. Ruedi Reservoir was able to participate in this operation during the spring runoff of 2006. During the Coordinated Reservoir Operations in May of 2006, increases and reductions in releases were made in steps of only 50 cfs. Flow adjustments were made twice a day to minimize downstream impact. Releases during the

operation included a combination of powerplant and outlet works discharges, which began on May 19 and reached a maximum flow of 764 cfs on May 24. Releases reached a flow rate of 250 cfs by May 30, the end of the Coordinated Reservoir Operations. Further flow reductions followed in June. During the Coordinated Reservoir Operations releases, Reclamation coordinated with the local emergency preparedness agencies to use the opportunity to conduct a response exercise. Reclamation staff visited sites along the river with local officials to document the impacts to these flow levels. While there were some concerns about the levels, there were no reports of flooding incidents or any kinds of property damages along the banks of the Fryingpan, as a consequence of either the Coordinated Reservoir Operations of 2006, or any other reservoir operation at Ruedi during the water year.

Ruedi Reservoir finished water year 2006 with a storage content of 82,246 acrefeet, or 82 percent of average.

B. West Slope Collection System and Project Diversions

The import of project water through the Boustead Tunnel began on April 24, 2006, and concluded on August 8, 2006. The daily discharge record for the diversion structures is included as Appendix D. A total of 61,213 acre-feet was imported during the 2006 water year, which is 126 percent of average. There was no Busk-Ivanhoe water imported through the Boustead Tunnel. The maximum mean daily import was 920 cfs on June 7, 2006. The most probable forecasts for the first of February, March, April, and May were 71,800 acre-feet, 76,500 acre-feet, 69,800 acre-feet, and 58,600 acre-feet, respectively.

The total imports for the water year; the accumulated imports to the Arkansas River; the water used for the Twin Lakes Reservoir and Canal Company exchange; and the import water available for allocations by the Southeastern Colorado Water Conservancy District, are shown on Table 4. The 35 years of accumulated imports total 1,698,800 acre-feet, for an average of 48,537 acre-feet per year. A plot of the Boustead Tunnel imports during water year 2006 is shown on Exhibit 5.

C. Twin Lakes Reservoir and Canal Company/Fryingpan-Arkansas Project <u>Exchange</u>

The Bureau of Reclamation is obligated to maintain minimum streamflows in the Roaring Fork River by the authorizing legislation of the project. This is accomplished through an exchange of water with the Twin Lakes Reservoir and Canal Company. On October 1, 2005, the company began bypassing water into the Roaring Fork River on the west slope in exchange for project water stored in Twin Lakes on the east slope. The total amount of the exchange at Twin Lakes

Reservoir was 2,962 acre-feet. The operating criteria and the monthly summary of the exchange are shown in Appendix C.

D. Turquoise Lake

On September 30, 2005, there were 117,272 acre-feet (elevation 9862.52 feet) of water stored in Turquoise Lake, which is 132 percent of average. Releases made to Twin Lakes through the Mt. Elbert Conduit drafted Turquoise Lake to 59,008 acre-feet (elevation 9825.52 feet), the lowest storage of the water year, by March 16, 2006. There were 109,720 acre-feet (elevation 9858.13 feet) of water in storage at the end of the water year, which is 114 percent of average.

Homestake Tunnel imports totaled 32,077 acre-feet during the water year, 130 percent of average. Busk-Ivanhoe imports totaled 4,805 acre-feet, 92 percent of average, and were divided between the Pueblo Board of Water Works and the city of Aurora. Project water imports through the Boustead Tunnel totaled 61,216 acre-feet, which is 126 percent of average.

Exhibits 8 and 9 show the precipitation and pan evaporation at Turquoise Lake. Exhibits 5, 6, and 7 show the monthly imports through the Boustead, Homestake, and Busk-Ivanhoe Tunnels, respectively. Table 5 and Exhibit 10 depict the monthly operation of Turquoise Lake during the 2006 water year.

E. Mt. Elbert Conduit/Halfmoon Creek Diversion

During water year 2006, 125,600 acre-feet of water released from Turquoise Lake, and 14,000 acre-feet of water diverted from Halfmoon Creek, were conveyed through the Mt. Elbert Conduit to the Mt. Elbert Forebay, and subsequently to Twin Lakes through the Mt. Elbert Powerplant. An additional 3,909 acre-feet of water were released into the conduit from Turquoise Lake for use by the Leadville Federal Fish Hatchery. The water delivered to the hatchery was returned to the Arkansas River and stored in Pueblo Reservoir.

F. Twin Lakes/Mt. Elbert Forebav and Mt. Elbert Pumped-Storage Powerplant

The storage in Twin Lakes was 109,300 acre-feet (elevation 9187.32 feet) on September 30, 2005. The combined storage of Twin Lakes and the Mt. Elbert Forebay was 118,053 acre-feet. Twin Lakes Reservoir releases to Lake Creek were made throughout the winter to pass the entire flow of the Mt. Elbert Conduit, and to transfer the project water stored in the reservoir to Pueblo Reservoir. The native inflow was stored in the Twin Lakes Reservoir and Canal Company storage space from November 15 through March 15. A total of 29,321 acre-feet of project water was released to Lake Creek during this time. This water was released such

that the flow in the Arkansas River at the Wellsville gage was maintained as close to the average October 15 to November 15 trout-spawning flow as possible. The combined reservoir and forebay storage reached a low point of 111,032 acre-feet on May 13, 2006, and was at its high point of 137,400 acre-feet on July 13, 2006. A total of 8,552 acre-feet of project water was released beginning on July 20 and ending on August 15, to augment rafting flows in the Arkansas River.

At least one generating/pumping unit was available at the Mt. Elbert Powerplant throughout the 2006 water year. The capacity of one unit is greater than the capacity of the Mt. Elbert Conduit. A total of 337,618 megawatt-hours of energy was generated at the powerplant, with 976,323 acre-feet of water; 114,948 acrefeet came through the Mt. Elbert Conduit; and 836,627 acre-feet were first pumped to the Mt. Elbert Forebay from Twin Lakes during off-peak electric demand hours. Table 7 depicts the monthly powerplant operation for the 2006 water year.

G. Pueblo Reservoir

The storage content of Pueblo Reservoir was 91,008 acre-feet (elevation 4831.82 feet) on September 30, 2005, which is 68 percent of average. Project water released from Turquoise Lake, through the Leadville Federal Fish Hatchery, and from Twin Lakes, was stored in Pueblo Reservoir through the winter and spring. A total of 38,304 acre-feet of native inflow was stored in the reservoir under the winter water storage program from November 15, 2005, through March 14, 2006. During the water year, a total of 28,528 acre-feet of winter water and 1,906 acrefeet of winter water carryover was released, and 1,874 acre-feet evaporated. The reservoir reached a high point in storage of 159,623 acre-feet (elevation 4855.68 feet) on April 6, 2006. There were 117,913 acre-feet (elevation 4842.03 feet) in storage on September 30, 2006. This is 88 percent of average, and 139,036 acrefeet less than a full conservation pool.

Table 8 and Exhibit 20 depict Pueblo Reservoir monthly operations during the 2006 water year. The 2005-06 winter water storage is shown on Exhibit 17, and the winter water releases are shown on Exhibit 18. The pan evaporation at the reservoir is shown on Exhibit 19.

H. Storage Contracts

There were seven contracts for storage of non-project water in project storage space on the east slope in effect in water year 2006. Six of those were long-term contracts: the Twin Lakes Reservoir and Canal Company for 54,452 acre-feet; the City of Colorado Springs for 17,416 acre-feet; the City of Aurora for 5,000 acre-feet; the Pueblo Board of Water Works for 5,000 acre-feet; Busk-Ivanhoe, Inc., for 10,000 acre-feet; and the Homestake Project for 30,000 acre-feet. There was one long-term, non-firm contract for Pueblo Board of Water Works. The remaining contracts were interim one-year contracts for "if-and-when" storage space. Under

"if-and-when" contracts, non-project water may be stored in project storage space as long as that storage space is not required for project water.

Project Water Sales and Deliveries

The project made available 49,230 acre-feet of water to the Southeastern Colorado Water Conservancy District during water year 2006. The district purchased 46,384 acre-feet and called for 26,015 acre-feet of project and project carryover water during the year. Evaporation reduced the project water in storage by 6,149 acre-feet. By the end of the water year (September 30, 2006), the district had 31,786 acre-feet of 2006 allocated water and 61,578 acre-feet of carryover water remaining in storage. Of the 26,015 acre-feet of project water released, 5, 807 acre-feet were for municipal and industrial use, and 20,211 acre-feet were for irrigation. The monthly release of project water from Pueblo Reservoir is shown on Exhibit 21.

J. Reservoir Storage Allocation Data

Table 9 presents the reservoir storage allocations for the five project reservoirs.

K. Reservoir Evaporation and Precipitation

Tables 11 and 12 present the monthly average evaporation and precipitation at the four weather stations near project facilities. When an evaporation pan is not in service and a reservoir is not completely ice-covered, the daily water surface evaporation is computed using seasonal evaporation factors. Those factors are listed in Table 10. It is assumed that there is no evaporation from a reservoir water surface when the reservoir is completely covered by ice.

L. Flood Control Benefits

The Corps of Engineers determined that Pueblo Reservoir and Ruedi Reservoir both prevented flood damage in water year 2006.

The event at Pueblo Reservoir occurred over the lower Arkansas River. Flood operations were triggered with a rainfall event that took place between July 9 and July 12. Pueblo Reservoir was able to catch a significant percentage of the runoff produced by the storm. The flood operations eased the peak flows which otherwise would have caused severe damage to downstream communities and agricultural fields along the lower Arkansas River. A total of \$20,159,000 in flood damages was credited to the reservoir. Since impoundment, Pueblo Reservoir has prevented a total of \$31,476,200 in flood damages, according to estimates of the U. S. Army Corps of Engineers, Albuquerque District.

Ruedi Reservoir provided limited flood protection to properties, local residents, and the general public along the Fryingpan and Roaring Fork rivers by attenuating the peak flows during the runoff season and capturing significant volumes of inflow during the spring months. The reservoir prevented \$799,000 in flood damages during water year 2006, according to the U.S. Army Corps of Engineers, Sacramento District. Since impoundment, Ruedi Reservoir has prevented a total of \$9,843,300 in flood damages.

Table 13 shows the historic flood control benefits provided by Pueblo and Ruedi Dams.

Ruedi Reservoir Water Year 2006 Operations Unit: 1,000 Acre-Feet

Year	Month	Inflow	Evaporation	Outflow	End of Month Content	Water Surface Elevation (FEET)	
2005	Sep				83.9	7746.21	
	Oct	7.4	0.1	7.6	83.7	7746.06	
	Nov	5.2	0	5.1	83.8	7746.14	
	Dec	4.1	0	6.4	81.5	7743.52	
2006	Jan	3.8	0	9.0	76.3	7737.38	
	Feb	3.2	0	8.7	70.8	7730.54	
	Mar	4.5	0	9.8	65.4	7723.52	
	Apr	16.3	0	15.5	66.3	7724.60	
	May	34.5	0.2	22.3	78.3	7739.71	
	Jun	27.3	0.4	8.6	96.5	7760.04	
	Jul	11.7	0.3	8.5	99.4	7762.95	
	Aug	7.0	0.3	15.6	90.5	7753.60	
	Sep	5.4	0.1	13.5	82.2	7744.37	
Total		130.4	1.4	130.6			

FRYINGPAN-ARKANSAS PROJECT RUEDI RESERVOIR RELEASES FOR ENDANGERED FISH WATER YEAR 2006 APRIL 2006

FRYINGPAN RUEDI REQUIRED

	=: =:				TOTAL RESERVOIR FO		GAGE		LOW RUEDI	ENDANGERED CU FISH	FISH	PALISADE
		TORAGE INF			(0.50)				SH RELEASE RELE		RELEASE	GAGE
DATE	(FT)	(AC-FT)	(CFS)	(CFS)	(CFS)	(CFS)	(CFS)	NO = N	(CFS)	(CFS)	(AC-FT)	(CFS)
4/1/20067,7	723.32	65,294.28	84.75	0.00	159.88	2.93	162.81	N	39.00	0.00	0.00	0.00
4/2/20067,7	723.15	65,167.94	96.28	0.00	159.97	3.03	163.01	N	39.00	0.00	0.00	0.00
4/3/20067,7	722.97	65,034.49	92.80	0.00	160.08	3.29	163.37	N	39.00	0.00	0.00	0.00
4/4/20067,7	722.84	64,937.76	118.97	0.00	167.74	3.79	171.53	N	39.00	0.00	0.00	0.00
4/5/20067,7	722.53	64,708.04	132.83	0.00	248:65	4.52	253.17	N	39.00	0.00	0.00	0.00
4/6/20067,7	722.22	64,479.15	152.61	0.00	268.01	4.98	272.99	N	39.00	0.00	0.00	0.00
4/7/20067,7	721.84	64,198.53	131,23	0.00	272.71	4.62	277.33	N	39.00	0.00	0.00	0.00
4/8/20067,7	721.46	63,918.97	132.42	0.00	273.36	5.12	278.48	N	39.00	0.00	0.00	0.00
4/9/20067,7	721.17	63,705.99	165.94	0.00	273.32	5.87	279.19	N	39.00	0.00	0.00	0.00
4/10/20067,7	720.82	63,449.45	146.46	0.00	275.80	6.79	282.59	N	39.00	0.00	0.00	0.00
4/11/20067,7	720.62	63,303.37	204.13	0.00	277.78	6.94	284.72	N	39.00	0.00	0.00	0.00
4/12/20067,7	720.48	63,200.98	225.64	0.00	277.27	7.16	284.42	N	39.00	0.00	0.00	0.00
4/13/20067,7	720.50	63,215.60	284.81	0.00	277.43	8.10	285.53	N	39.00	0.00	0.00	0.00
4/14/20067,7	720.83	63,456.95	399.01	0.00	277.33	9.03	286.36	N	39.00	0.00	0.00	0.00
4/15/20067,7	721.11	63,661.94	380.35	0.00	277.01	10.42	287.43	N	39.00	0.00	0.00	0.00
4/16/20067,7	721.20	63,728.20	309.72	0.00	276.32	11.93	288.24	N	39.00	0.00	0.00	0.00
4/17/20067,7	721.37	63,852.95	339.60	0.00	276.71	13.10	289.81	N	39.00	0.00	0.00	0.00
4/18/20067,7	721.56	63,992.56	347.53	0.00	277.15	13.09	290.24	N	39.00	0.00	0.00	0.00
4/19/20067,7	721.59	64,014.47	288.45	0.00	277.40	12.93	290.33	N	39.00	0.00	0.00	0.00
4/20/20067,7	721.58	64,007.29	273.96	0.00	277.58	12.51	290.10	N	39.00	0.00	0.00	0.00
4/21/2006 7,	721.64	64,051.48	300.60	0.00	278.32	11.84	290.17	N	39.00	0.00	0.00	0.00
4/22/20067,7	721.80	64,169.03	337.52	0.00	278.25	11.42	289.67	N	39.00	0.00	0.00	0.00
4/23/2006 7,	722.26	64,508.36	450.26	0.00	279.18	11.45	290.63	N	39.00	0.00	0.00	0.00
4/24/20067,7	722.88	64,967.46	511.28	0.00	279.82	12.33	292.15	N	39.00	0.00	0.00	0.00
4/25/2006 7,	723.16	65,175.56	385.43	0.00	280.52	14.06	294.58	N	39.00	0.00	0.00	0.00
4/26/20067,7	723.34	65,309.18	348.22	0.00	280.86	14.73	295.59	N	39.00	0.00	0.00	0.00
4/27/20067,7	723.67	65,555.02	405.31	0.00	281.37	14.49	295.86	N	39.00	0.00	0.00	0.00
4/28/2006 7,	724.20	65,951.09	481.07	0.00	281.38	14.53	295.91	N	39.00	0.00	0.00	0.00
4/29/20067,7	724.37	66,078.28	345.35	0.00	281.23	15.24	296.47	N	39.00	0.00	0.00	0.00
4/30/20067,7	724.60	66,250.66	369.71	0.00	282.81	15.14	297.94	N	39.00	0.00	0.00	0.00
Averages 7,7	722.17	64,444.83	274.74	0.00	261.17	9.51	270.69			0.00		0
Totals (a/f)			16,349	0	15,541	566	16,107			0	0	0

FRYINGPAN-ARKANSAS PROJECT RUEDI RESERVOIR RELEASES FOR ENDANGERED FISH WATER YEAR 2006 MAY 2006

FRYINGPAN RUEDI REQUIRED

					TC	TAL	ROC	KY RIVER	CALLED MIN	IIMUM FLOW	/ ENDA	NGERED CUMULA	TIVE	
							RVOIR FORK	(GAGE	OUT BELO	OW RUEDI	FISH	FISH	PALISADE
			ELEV STOP	RAGE INFL	OW EVAP RELE	ASE	CRE	EK BELOW	V DAM YES =	Y W/O FISH	RELEASE RELE	ASE	RELEASE	GAGE
DATE	(FT)	(AC-FT)	(CFS)	(CFS)	(CFS)	(CFS)	(CFS)	NO = N	(CFS)		(CFS)	(AC-FT)	(CFS)	
5/1/2006 7,72	24.86	66,445.66	380.53	0.00	282.22	14.79	297.01	N		110.00	0.00	0.00	0.00	
5/2/20067,72	25.19	66,693.95	407.67	0.00	282.49	14.65	297.13	Ν		110.00	0.00	0.00	0.00	
5/3/20067,72	25.63	67,025.90	450.02	0.00	282.66	15.57	298.23	N		110.00	0.00	0.00	0.00	
5/4/20067,72	26.08	67,366.84	454.97	0.00	283.08	16.87	299.94	N		110.00	0.00	0.00	0.00	
5/5/20067,72	26.54	67,716.46	460.07	0.00	283.81	18.62	302.43	Ν		110.00	0.00	0.00	0.00	
5/6/20067,72	26.88	67,975.63	414.24	0.00	283.58	19.05	302.63	N		110.00	0.00	0.00	0.00	
5/7/2006 7,72	27.15	68,182.05	387.43	0.00	283.37	18.66	302.03	N		110,00	0.00	0.00	0.00	
5/8/2006 7,72	27.39	68,366.09	379.05	3.21	283,05	18.49	301.55	N		110.00	0.00	0.00	0.00	
5/9/2006 7,72	27.68	68,588.76	383.48	2.04	269.18	17.85	287.03	N		110.00	0.00	0.00	0.00	
5/10/2006 7,72	27.92	68,773.21	348.36	4.31	251.06	17.42	268.48	Ν		110.00	0.00	0.00	0.00	
5/11/20067,72	28.14	68,942.95	341.21	4.31	251.32	16.58	267.91	Ν		110.00	0.00	0.00	0.00	
5/12/20067,72	28.50	69,220.98	393.69	4.33	249.19	16.44	265.63	Ν		110.00	0.00	0.00	0.00	
5/13/20067,72		69,585.47	435.99	4.34	247.89	17.61	265.49	N		110.00	0.00	0.00	0.00	
5/14/20067,72		70,075.88	499.46	4.36	247.86	20.10	267.96	N		110.00	0.00	0.00	0.00	
5/15/2006 7,73		70,702.10	568.02	4.85	247.46	24.31	271.77	N		110.00	0.00	0.00	0.00	
5/16/2006 7,73	31.29	71,403.59	606.72	5.12	247.94	27.43	275.38	N		110.00	0.00	0.00	0.00	
5/17/2006 7,73		72,133.55	623.17	7.02	248.14	30.98	279.12	N		110.00	0.00	0.00	0.00	
5/18/2006 7,73	33.17	72,900.70	636.84	1.23	248.84	33.35	282.19	N		110.00	0.00	0.00	0.00	
5/19/2006 7,73		73,697.82	679.32	6.18	271.26	36.23	307.49	N		110.00	0.00	0.00	0.00	
5/20/2006 7,73		74,199.61	659.87	8.60	398.29	37.99	436.28	N		110.00	0.00	0.00	0.00	
5/21/2006 7,73		74,630.84	720.70	5.99	497.30	41.65	538.95	N		110.00	0.00	0.00	0.00	
5/22/2006 7,73		75,055.28	805.26	0.00	591.28	46.16	637.44	N		110.00	0.00	0.00	0.00	
5/23/2006 7,73	36.57	75,661.66	994.19	3.62	684.86	55.60	740.46	N		110.00	0.00	0.00	0.00	
5/24/2006 7,73	36.49	75,596.28	738.34	7.49	763.81	51.06	814.87	N		110.00	0.00	0.00	0.00	
5/25/2006 7,73		75,653.64	779.22	7.49	742.81	49.64	792.45	N		110.00	0.00	0.00	0.00	
5/26/2006 7,73		75,974.66	808.51	6.54	640.13	50.59	690.72	N		110.00	0.00	0.00	0.00	
5/27/2006 7,73		76,519.39	818.30	6.33	537.34	49.77	587.11	N		110.00	0.00	0.00	0.00	
5/28/2006 7,73	38.14	76,959.04	665.63	3.00	440.97	46.26	487.23	N		110.00	0.00	0.00	0.00	
5/29/2006 7,73		77,383.17	571.75	4.08	353.84	41.58	395.42	N		110.00	0.00	0.00	0.00	
5/30/2006 7,73	39.19	77,834.08	507.04	6.89	272.82	37.31	310.14	N		110.00	0.00	0.00	0.00	
5/31/2006 7,73	39.71	78,269.81	479.04	8.39	250.97	35.17	286.13	N		110.00	0.00	0.00	0.00	
	731,86	71,920.49	561.23	3.86	361.90	30.25	392.15				0.00		0	
Totals (a/f)			34,509	237	22,252	1,860	24,113				0	0	0	

FRYINGPAN-ARKANSAS PROJECT RUEDI RESERVOIR RELEASES FOR ENDANGERED FISH WATER YEAR 2006 JUNE 2006

FRYINGPAN RUEDI REQUIRED

					TOTAL	ROCKY	DIVED CAL	LED MINIMU	IN ELOW EN	NDANGERED CU	MIII ATIVE	
					RESERVOIR F		GAGE		ELOW RUEDI	FISH	FISH	PALISADE
EI	EV/ CT	ORAGE INFL			KL3LKVOIK I				ISH RELEASE RELEAS		RELEASE	GAGE
DATE	.LV 31 (FT)	(AC-FT)	(CFS)	(CFS)	(CFS)	(CFS)	(CFS)	NO = N	(CFS)	(CFS)	(AC-FT)	(CFS)
DATE	(1-1)	(AC-FT)	(CF3)	(CF3)	(65)	(CF3)	(CF3)	NO = N	(CF3)	(65)	(AC-FT)	(013)
6/1/2006 7,74	0.27	78,740.80	496.04	6.94	251.65	33.60	285.25	N	110.00	0.00	0.00	0.00
6/2/2006 7,740	0.92	79,289.70	537.70	8.46	252.50	33.10	285.60	N	110.00	0.00	0.00	0.00
6/3/2006 7,74	1.69	79,943.30	590.06	7.51	253.03	33.62	286.65	N	110.00	0.00	0.00	0.00
6/4/2006 7,74	2.53	80,660.25	623.94	8.56	253.92	34.28	288.21	N	110.00	0.00	0.00	0.00
6/5/2006 7,743	3.46	81,459.24	666.63	8.87	254.94	34.61	289.54	N	110.00	0.00	0.00	0.00
6/6/2006 7,74	4.57	82,419.38	736.78	8.94	243.77	34.82	278.59	N	110.00	0.00	0.00	0.00
6/7/2006 7,74	5.94	83,614.58	770.08	2.58	164.93	34.85	199.78	N	110.00	0.00	0.00	0.00
6/8/2006 7,74	7.38	84,881.67	779.97	0.00	141.16	35.17	176.33	N	110.00	0.00	0.00	0.00
6/9/2006 7,748	8.54	85,910.71	620.23	4.98	96.45	33.76	130.21	N	110.00	0.00	0.00	0.00
6/10/2006 7,74	9.34	86,624.36	461.78	6.84	95.15	30.92	126.07	N	110.00	0.00	0.00	0.00
6/11/2006 7,750	0.06	87,269.95	429.64	9.51	94.65	28.56	123.21	N	110.00	0.00	0.00	0.00
6/12/2006 7,75	0.72	87,864.31	402.23	7.96	94.62	26.38	121.00	N	110.00	0.00	0.00	0.00
6/13/2006 7,75	1.40	88,478.99	402.82	8.00	84.93	24.51	109.44	N	110.00	0.00	0.00	0.00
6/14/2006 7,752	2.16	89,169.82	444.07	10.72	85.06	22.91	107.97	N	110.00	0.00	0.00	0.00
6/15/2006 7,75	2.79	89,744.80	379.52	3.23	86.41	21.67	108.08	N	110.00	0.00	0.00	0.00
6/16/2006 7,75	3.35	90,258.05	351.44	3.24	89.44	20.35	109.79	N	110.00	0.00	0.00	0.00
6/17/2006 7,75	3.87	90,736.30	356.06	7.32	107.62	18.43	126.05	N	110.00	0.00	0.00	0.00
6/18/2006 7,75	4.40	91,225.19	362.40	8.70	107.22	16.65	123.87	N	110.00	0.00	0.00	0.00
6/19/2006 7,75	4.94	91,725.27	368.20	8.45	107.63	15.42	123.05	N	110.00	0.00	0.00	0.00
6/20/2006 7,75	5.42	92,171.25	341.40	9.03	107.52	14.43	121.96	N	110.00	0.00	0.00	0.00
6/21/2006 7,75	5.82	92,543.95	302.36	6.59	107.87	13.64	121.50	N	110.00	0.00	0.00	0.00
6/22/2006 7,75	6.34	93,030.12	349.54	8.26	96.17	12.72	108.89	N	110.00	0.00	0.00	0.00
6/23/2006 7,75	6.88	93,536.84	356.88	8.85	92.56	12.17	104.72	N	110.00	0.00	0.00	0.00
6/24/2006 7,75	7.39	94,017.33	344.93	10.54	92.15	11.43	103.58	N	110.00	0.00	0.00	0.00
6/25/2006 7,75	7.88	94,480.07	334.53	8.91	92.32	11.06	103.39	N	110.00	0.00	0.00	0.00
6/26/2006 7,75	8.34	94,916.07	324.88	8.37	96.70	10.69	107.38	N	110.00	0.00	0.00	0.00
6/27/2006 7,758	8.78	95,334.36	320.16	7.28	102.00	10.36	112.35	N	110.00	0.00	0.00	0.00
6/28/2006 7,75	9.23	95,763.68	321.32	2.69	102.18	10.00	112.18	N	110.00	0.00	0.00	0.00
6/29/2006 7,759	9.61	96,126.95	290.89	5.35	102.39	9.79	112.18	N	110.00	0.00	0.00	0.00
6/30/2006 7,76	0.04	96,539.45	317.15	6.49	102.70	9.45	112.14	N	110.00	0.00	0.00	0.00
Averages 7,75	1.80	88,949.23	446.12	7.11	131.99	21.98	153.97			0.00		0
Totals (a/f)			26,546	423	7,854	1,308	9,162			0	0	0

FRYINGPAN-ARKANSAS PROJECT RUEDI RESERVOIR RELEASES FOR ENDANGERED FISH WATER YEAR 2006 JULY 2006

					JULY 2006						
						RYINGPAN RI		REQUIRED			
				TOTAL	ROCKY		LED MINIM		NDANGERED CU		
				RESERVOIR F		GAGE		BELOW RUEDI	FISH	FISH	PALISADE
		SE INFLOW EVAP						FISH RELEASE RELEAS		RELEASE	GAGE
DATE	(FT) (AC	C-FT) (CFS)	(CFS)	(CFS)	(CFS)	(CFS)	NO = N	(CFS)	(CFS)	(AC-FT)	(CFS)
7/1/2006	7,760.27 96,76		3.57	103.02	9.14	112.16	N	110.00	0.00	0.00	0.00
7/2/2006	7,760.52 97,00		5.67	103.22	8.79	112.01	N	110.00	0.00	0.00	0.00
7/3/2006	7,760.84 97,30		0.00	103.73	8.54	112.27	N	110.00	0.00	0.00	0.00
7/4/2006	7,761.09 97,55		7.39	103.30	8.48	111.78	N	110.00	0.00	0.00	0.00
7/5/2006	7,761.27 97,72		10.06	103.51	8.48	111.99	N	110.00	0.00	0.00	0.00
7/6/2006	7,761.49 97,93	88.51 215.29	4.28	103.48	8.46	111.94	N	110.00	0.00	0.00	0.00
7/7/2006	7,761.69 98,13	32.20 204.19	2.81	103.73	8.17	111.90	N	110.00	0.00	0.00	0.00
7/8/2006	7,762.08 98,5	11.29 295.12	0.00	104.00	8.17	112.16	N	110.00	0.00	0.00	0.00
7/9/2006	7,762.38 98,80	3.24 251.13	0.00	103.94	8.26	112.19	N	110.00	0.00	0.00	0.00
7/10/2006	7,762.65 99,06	66.67 242.39	6.03	103.55	9.32	112.86	N	110.00	0.00	0.00	0.00
7/11/2006	7,762.86 99,27	71.82 215.23	7.56	104.24	9.90	114.15	N	110.00	0.00	0.00	0.00
7/12/2006	7,763.04 99,44	18.09 195.81	4.32	102.62	9.58	112.19	N	110.00	0.00	0.00	0.00
7/13/2006	7,763.18 99,58	35.32 179.20	8.65	101.37	8.92	110.29	N	110.00	0.00	0.00	0.00
7/14/2006	7,763.32 99,72	22.20 179.48	8.65	101.82	8.34	110.16	N	110.00	0.00	0.00	0.00
7/15/2006	7,763.44 99,84	10.02 171.07	9.81	101.86	7.81	109.67	N	110.00	0.00	0.00	0.00
7/16/2006	7,763.56 99,95	7.95 171.66	10.40	101.81	7.38	109.18	N	110.00	0.00	0.00	0.00
7/17/2006	7,763.74 100,13	35.17 192.67	1.69	101.63	6.99	108.62	N	110.00	0.00	0.00	0.00
7/18/2006	7,763.93 100,32	21.50 201.47	5.79	101.74	6.68	108.42	N	110.00	0.00	0.00	0.00
7/19/2006	7,764.06 100,45	50.00 173.26	6.46	102.02	6.53	108.55	N	110.00	0.00	0.00	0.00
7/20/2006	7,764.21 100,59	98.00 186.32	0.00	111.71	6.39	118.10	N	110.00	0.00	0.00	0.00
7/21/2006	7,764.30 100,68	36.21 162.12	6.10	111.55	6.40	117.95	N	110.00	0.00	0.00	0.00
7/22/2006	7,764.39 100,77	75.45 163.02	6.10	111.93	6.37	118.29	N	110.00	0.00	0.00	0.00
7/23/2006	7,764.44 100,82	24.00 141.62	5.48	111.66	6.20	117.86	N	110.00	0.00	0.00	0.00
7/24/2006	7,764.42 100,80	04.88 141.76	6.66	144.74	6.13	150.87	N	110.00	40.87	81.07	0.00
7/25/2006	7,764.29 100,67	76.00 159.66	5.22	219.42	6.16	225.57	N	110.00	115.57	310.31	0.00
7/26/2006	7,764.17 100,55		4.51	218.88	6.35	225.23	N	110.00	115.23	538.86	0.00
7/27/2006	7,764.10 100,48		4.93	219.08	6.07	225.16	N	110.00	115.16	767.27	0.00
7/28/2006	7,763.89 100,28		8.68	247.70	5.61	253.30	N	110.00	143.30	1,051.52	0.00
7/29/2006	7,763.56 99,95		8.67	284.50	5.60	290.11	N	110.00	180.11	1,408.76	0.00
7/30/2006	7,763.22 99,62		8.65	286.31	5.47	291.78	N	110.00	181.78	1,769.32	0.00
7/31/2006	7,762.95 99,36		0.00	285.52	5.27	290.79	N	110.00	180.79	2,127.91	0.00
Averages	7,763.01 99,42		5.42	138.95	7.42	146.37			34.61		0
	Totals (a/f)	11,698	334	8,544	456	9,000			2,128	2,128	0

Fryingpan-Arkansas Project Imports Charles H. Boustead Tunnel Outlet Unit: 1,000 Acre-feet

		Acumulated	Twin Lakes	Available for
Year	Imports	Imports	Exchange	Allocations
	-	•		
1972	32.0	32.0	0	0.0
1973	36.8	68.8	0	16.0
1974	34.1	102.9	0	18.6
1975	37.2	140.1	0	25.0
1976	26.9	167.0	0	24.0
1977	11.4	178.4	0	25.0
1978	49.2	227.6	0	25.0
1979	53.7	281.3	0	25.6
1980	55.7	337.0	0	70.0
1981	34.6	371.6	0	25.0
1982	75.2	446.8	2.7	68.0
1983	90.8'	537.6	0.3	125.0
1984	110.12	647.7	1.9	210.0
1985	70.2	717.9	1.7	289.9
1986	30.3	748.2	1.5	300.3
1987	2.2	750.4	1.1	288.0
1988	13.4	763.8	2.0	247.8
1989	36.2	800.0	1.7	197.6
1990	46.6	846.6	1.7	142.1
1991	59.1	905.7	1.5	58.7
1992	54.8	960.5	1.2	32.9
1993	86.6	1,047.1	2.3	70.1
1994	52.2	1,099.3	1.3	51.7
1995	90.5	1,189.8	2.3	55.0
1996	36.9	1,226.7	1.8	110.0
1997	78.6	1,305.3	1.8	116.0
1998	51.3	1,356.6	2.6	102.0
1999	40.8	1,397.4	2.1	127.5
2000	44.8	1,442.2	1.7	171.6
2001	45.3	1,487.5	2.1	67.5
2002	13.2	1,500.7	1.5	8.5
2003	54.9	1,555.6	2.4	37.5
2004	27.4	1,583.0	1.3	15.3
2005	54.6	1,637.6	3.0	40.8
2006	61.2	1,698.8	3.0	49.2

Restriction: Not to exceed 120,000 acre-feet in 1 year but not to exceed 2,352,800 acre-feet in 34 consecutive years.

Includes 3,120 acre-feet imported through Twin Lakes Tunnel

² Includes 2,080 acre-feet imports through Boustead Tunnel in October and 420 acre-feet in November. All other years are water year totals.

Turquoise Lake Water Year 2006 Operations Unit: 1,000 Acre-Feet

_____Inflow____

			k-Ivanhoe Imports	Homestake Imports	Project Imports	Native Inflow	Total Inflow	Evap	Total Outflow	End of Month Content (FEET)	Water Surface Elevation
Year	Month	Through Carlton	Through Boustead							(/	
1 ear	MOIIII	Cariton	Doustead								
2005	Sep									117.3	9862.52
	Oct	0.1	0	0	0	0.9	1.0	0.4	1.6	116.2	9861.93
	Nov	0.1	0	0	0	1.5	1.6	0.2	15.1	102.6	9853.90
	Dec	0.1	0	0	0	1.6	1.7	0	15.0	89.3	9845.80
2006	Jan	0.1	0	0	0	1.6	1.7	0	16.4	74.5	9836.35
	Feb	0.1	0	9.0	0	0.9	10.0	0	16.9	67.7	9831.70
	Mar	0.1	0	9.3	0	1.7	11.1	0	19.5	59.3	9825.72
	Apr	0.1	0	6.2	0.6	2.9	9.8	0	8.7	60.4	9826.51
	May	1.5	0	7.6	26.0	10.1	45.2	0.5	6.6	98.5	9851.46
	Jun	1.6	0	0	29.4	11.0	42.0	0.8	20.3	119.4	9863.77
	Jul	0.7	0	0	5.1	3.5	9.3	0.4	9.4	118.9	9863.44
	Aug	0.2	0	0	0.1	1.3	1.6	0.4	5.9	114.2	9860.72
	Sep	0.1	0	0	0	0.9	1.0	0.4	5.0	109.7	9858.13
Subtot	al	4.8	0								
Total		4.8		32.1	61.2	37.9	136.0	3.1	140.4		

Twin Lakes/Mt. Elbert Forebay Water Year 2006 Operations Unit: 1,000 Acre-Feet

		Twin I	akes	Inflow		Native	Total		Total	End of Mor	nth Water Surface
		Canal Co		Mt. Elbert	Conduit	Inflow	Inflow	Evap	Outflow	Content'	Elevation' (FEED
					Project						(
Year	Month	Imports	Other	Halfmoon	Water						
2005	Sep									114.4	9185.66
	Oct	1.8	0	0	1.0	3.9	6.7	0.6	4.2	116.3	9186.20
	Nov	1.2	0.9	0	14.6	0	16.7	0.2	15.0	117.8	9186.59
	Dec	0.7	1.7	0	14.5	0	16.9	0	16.2	117.3	9186.89
2006	Jan	0.5	1.5	0	15.9	0	17.9	0	16.7	117.1	9186.83
	Feb	0.3	0.8	0	16.4	0	17.5	0	13.5	120.1	9188.05
	Mar	0.3	0.4	0	18.9	0.1	19.7	0	21.0	117.7	9187.02
	Apr	1.3	0	0	8.1	2.2	11.6	0.3	14.9	114.2	9185.49
	May	15.9	0.8	3.7	4.8	19.1	44.3	1.1	42.8	114.6	9185.93
	Jun	21.8	2.8	5.1	13.8	22.7	66.2	1.5	46.1	133.2	9194.53
	Jul	6.0	0.6	3.5	8.2	9.5	27.8	0.8	30.0	130.2	9193.03
	Aug	2.2	0.6	1.4	4.9	5.8	14.9	0.7	22.6	121.8	9189.66
	Sep	1.5	1.9	0.3	4.5	2.1	10.3	0.7	2.0	129.4	9192.71
Subtota	al	53.5	12.0	14.0	125.6						
Total		65.5	5	139.	.6	65.4	270.5	5.9	245.0		

Contents of both Twin Lakes and Mt. Elbert Forebay

² Elevation of Twin Lakes

Mt. Elbert Pumped-Storage Powerplant Operations Water Year 2006

		Mt. Elbert			
Year	Month	Conduit Inflow to Mt. Elbert Forebay (acre-ft)	Water Pumped from Twin Lakes to Mt. Elbert Forebay (acre-ft)	Water through Generator (acre-ft)	Megawatt- Hours Net Generation* (mWh)
2005	Oct	1,016	56,916	56,951	19,108
	Nov	14,503	40,440	56,030	19,135
	Dec	14,521	48,546	63,530	21,741
2006	Jan	15,976	46,797	63,022	20,642
	Feb	16,576	42,145	58,284	19,334
	Mar	19,080	66,257	83,782	29,129
	Apr	7,992	57,930	66,458	22,970
	May	9,216	55,048	63,868	22,640
	Jun	19,634	97,079	116,714	41,268
	Jul	11,899	111,466	122,381	42,882
	Aug	6,489	111,438	118,223	41,825
	Sep	5,046	102,565	107,080	36,944
Total		141,948	836,627	976,323	337,618

^{*}Net Generation is gross plant generation less station service.

Pueblo Reservoir Water Year 2006 Operations Unit: 1,000 Acre-Feet

,	Year	Month		In	flow						
	i eai	Wolldi	Project Water	Other	Native	Total Inflow	Evapo- ration	Outflow	End of month content	Water surface elevation (FEET)	
	2005	Sep							91.0	4831.82	
		Oct	0.7	3.5	20.1	24.3	0.7	21.8	92.7	4832.52	
		Nov	2.9	3.0	20.9	26.8	0.6	15.4	103.5	4836.74	
		Dec	5.5	2.7	18.1	26.3	0.3	8.3	121.2	4843.19	
	2006	Jan	6.0	1.5	15.6	23.1	0.4	8.2	135.7	4848.13	
		Feb	9.1	1.4	14.6	25.1	0.5	9.9	150.4	4852.86	
		Mar	10.6	4.2	16.0	30.8	0.9	21.3	159.0	4855.50	
		Apr	3.9	3.9	11.2	19.0	2.0	22.5	153.6	4853.85	
		May	0.3	7.7	62.5	70.5	2.0	85.9	136.2	4848.29	
		Jun	3.5	7.3	86.2	97.0	2.6	105.4	125.2	4844.58	
		Jul	3.4	6.9	65.1	75.4	1.7	74.8	124.1	4844.20	
		Aug	4.9	6.9	32.3	44.1	1.4	43.8	122.9	4843.78	
		Sep	0.3	4.1	18.3	_ 22.7	1.1	26.6	117.9	4842.03	
	Subto	otal	51.1	53.1	380.9						
	Total					485.1	14.2	443.9			

Fryingpan-Arkansas Project Reservoir Storage Allocation Data Unit: Acre-Feet

Reservoir	Dead	Inactive	Active conservation	Joint use	Flood control	Total capacity storage
Ruedi	63	1,095		0	0	
			101,278			102,373'
Turquoise	2,810	8,920	120,478	0	0	129,398'
Pueblo	2,329	28,121	228,828	66,000	26,991	349,9402
Twin Lakes	63,324	72,938	67,917	0	0	140,855
Mt. Elbert Forebay	561	3,825	7,318	0	0	11,143'

Note: Inactive includes dead storage

¹New area-capacity tables (1984)

²New area-capacity table (1994)

Fryingpan-Arkansas Project Monthly Evaporation Factors

	Meredith	Sugar Loaf	Twin Lakes	Pueblo
Month	Factor	Factor	Factor	Factor
Oct	1/	.220	.220	.247
Nov		.100	.100	.155
Dec		.030	.030	.133
Jan		.050	.050	.128
Feb		.080	.080	.173
Mar		.140	.140	.280
Apr		.233	.233	.308
May		.363	.363	-
Jun		.448	.448	-
Jul		.405	.405	-
Aug		.318	.318	-
Sep		.290	.290	-

Note: Factor is used when pan is not in operation. Factor divided by number of days in the month times reservoir area not covered by ice equals daily water surface evaporation in acre-feet.

^{1/} Factors have not been determined for Meredith. Factors from Twin Lakes are used for Meredith.

Fryingpan-Arkansas Project Monthly Average vs. Current Water Year Evaporation (Unit = Inches)

	Meredith		Sugar Loaf		Twi	n Lakes	Pueblo		
Month Ave	Pan (In.)	WY 06	Ave Pan (In.)	WY 06	Ave Pan (In.)	WY 06	Ave Pan (In.)	WY 06	
Oct	0.89	0.49	2.34	3.86	2.73	3.92	5.36	5.23	
Nov	0	0	1.57	1.70	1.70	1.70	2.63	3.90	
Dec	0	0	0.30	0.53	0.37	0.53	2.28	2.28	
Jan	0.21	0	0	0	0	0	2.19	2.19	
Feb	0	0	0	0	0	0	2.98	2.97	
Mar	0	0	0.30	2.40	0.54	2.40	4.86	4.92	
Apr	0.21	0	0.62	3.99	1.85	3.99	6.36	10.17	
May	2.33	5.22	1.66	7.22	4.57	7.50	8.79	11.34	
Jun	7.49	8.37	5.47	8.13	7.36	9.43	10.17	15.01	
Jul	7.60	6.32	5.25	3.34	6.79	3.47	10.94	10.60	
Aug	6.06	6.05	4.21	3.72	5.58	3.48	9.00	8.63	
Sep	4.02	2.54	3.45	3.48	4.87	4.56	7.34	6.89	

Fryingpan-Arkansas Project Monthly Average Vs. Current Water Year Precipitation (Unit = Inches)

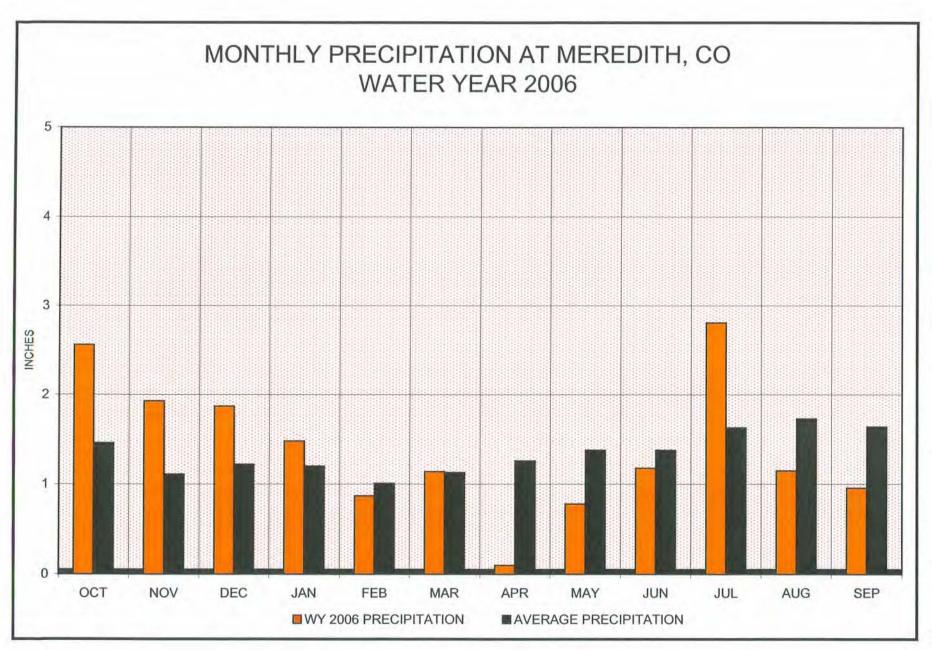
	Mere dith		Sugar Loaf		Twin	Lakes Pu		eblo Roc		Ford
Month	Avg.	WY 06	Avg.	WY 06	Avg.	WY 06	Avg.	WY 06	Avg.	WY 06
Oct	1.46	2.56	0.97	2.83	0.64	3.56	0.65	1.91	0.78	2.04
Nov	1.11	1.93	1.28	1.90	0.51	0.96	0.54	0.01	0.46	0.04
Dec	1.22	1.87	1.23	1.66	0.47	0.51	0.37	0.28	0.32	0.25
Jan	1.20	1.48	1.43	1.96	0.40	0.34	0.28	0.58	0.26	0.61
Feb	1.01	0.87	1.21	0.86	0.49	0.04	0.25	0.07	0.29	0.00
Mar	1.13	1.14	1.46	1.05	0.73	0.34	0.85	0.69	0.68	0.91
Apr	1.26	0.10	1.42	1.66	0.76	0.22	1.36	0.25	1.32	0.31
May	1.38	0.78	1.27	0.55	0.92	0.76	1.58	1.10	1.83	1.58
Jun	1.38	1.18	1.15	0.26	0.87	0.41	1.34	0.24	1.40	0.28
Jul	1.63	2.81	1.97	2.38	1.59	3.51	1.94	4.86	1.97	3.25
Aug	1.73	1.15	2.01	1.94	1.51	2.78	1.93	2.44	1.54	3.81
Sep	1.64	0.96	1.35	2.15	0.96	1.99	0.93	1.49	0.90	2.85
Total	16.15	16.83	16.75	19.20	9.85	15.42	12.02	13.92	11.75	15.93
Max. Annual	26.70	(1984)	25.95	(1957)	17.27	(1952)	17.73	(1995)	22.75	(1999)

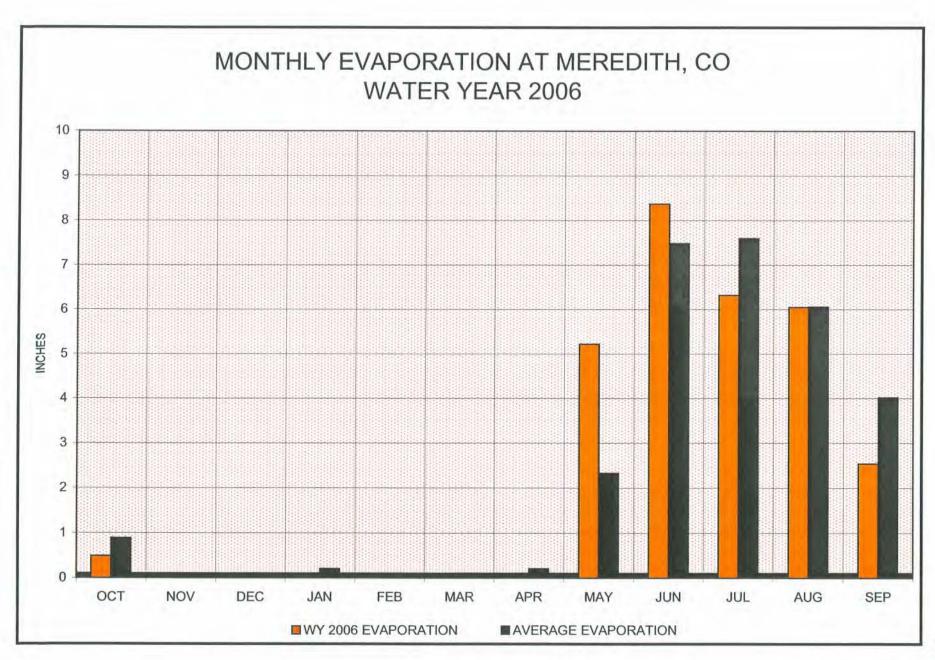
31,476,200

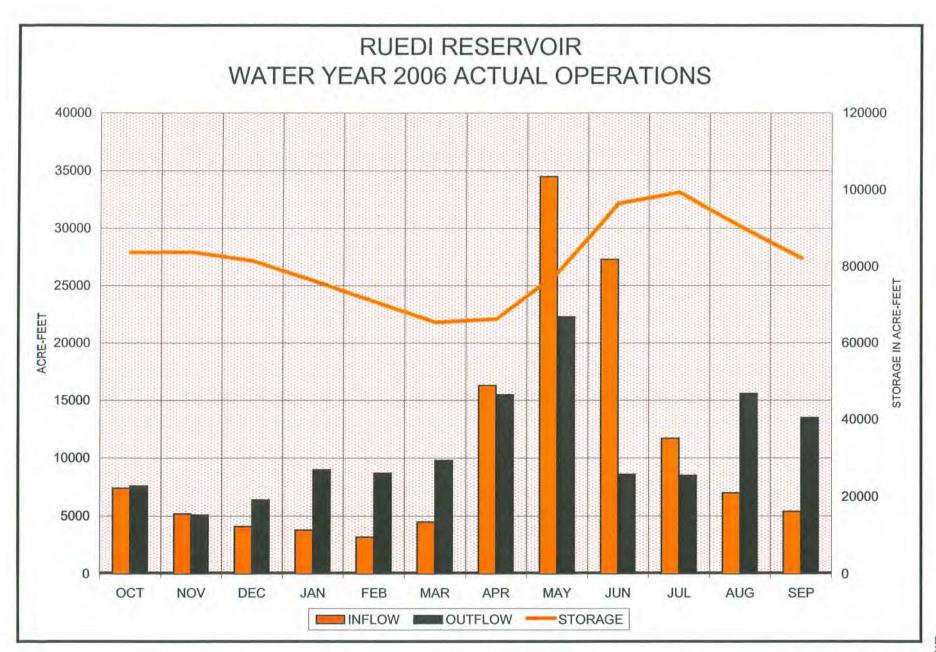
Fryingpan-Arkansas Project Flood Control Benefits in Dollars

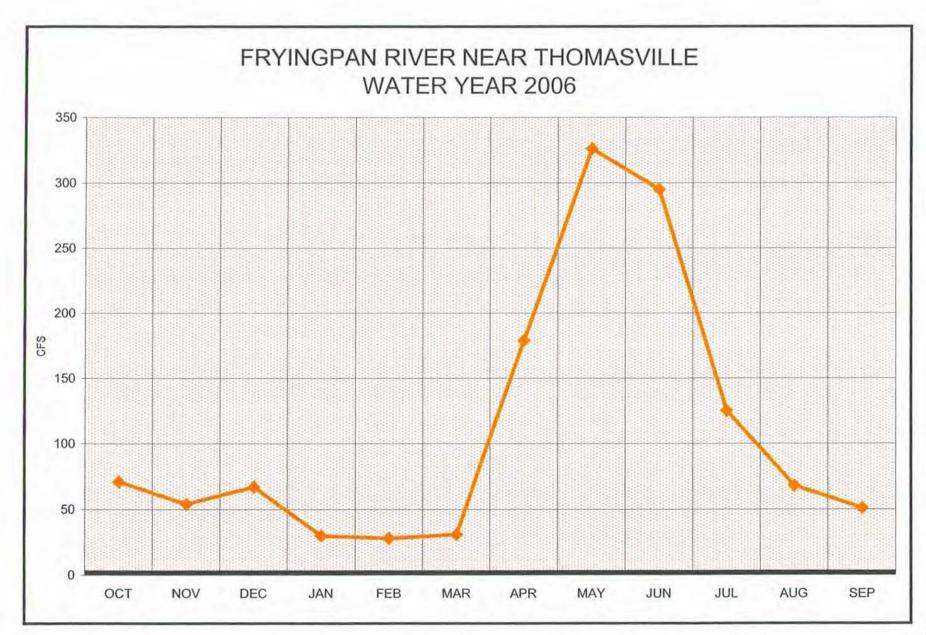
Ruedi Reservoir Pueblo Reservoir Accumulated Accumulated Benefits Benefits Benefits Benefits 320,000 1976 320,000 1979 90,000 410,000 1980 86,000 496,000 1981 111,000 607,000 1982 836,000 1,443,000 80,000 80,000 1983 47,000 1,490,000 410,000 1984 330,000 1,039,000 2,529,000 501,000 1985 91,000 234,000 2,763,000 571,000 70,000 1986 0 2,763,000 571,000 90,000 1987 2,853,000 1988 0 571,000 0 2,853,000 1989 0 571,000 0 2,853,000 571,000 1990 0 0 2,853,000 571,000 0 482,000 1991 3,335,000 571,000 1992 0 266,000 3,601,000 575,000 1993 4,000 496,000 4,097,000 855,000 1994 280,000 290,000 4,387,000 1995 1,770,000 2,625,000 832,000 5,219,000 4,175,000 1996 1,550,000 0 5,219,000 5,382,000 320,200 1997 1,207,000 6,539,200 1998 0 5,382,000 0 6,539,200 116,000 5,498,000 1999 4,778,000 11,317,200 6,559,000 2000 1,061,000 0 11,317,200 6,559,000 0 2001 0 11,317,200 6,559,000 0 2002 0 11,317,200 8,074,100 1,515,100 0 2003 11,317,200 8,074,100 2004 0 0 11,317,200 2005 970,200 9,044,300 0 11,317,200 9,843,300 799,000 20,159,000

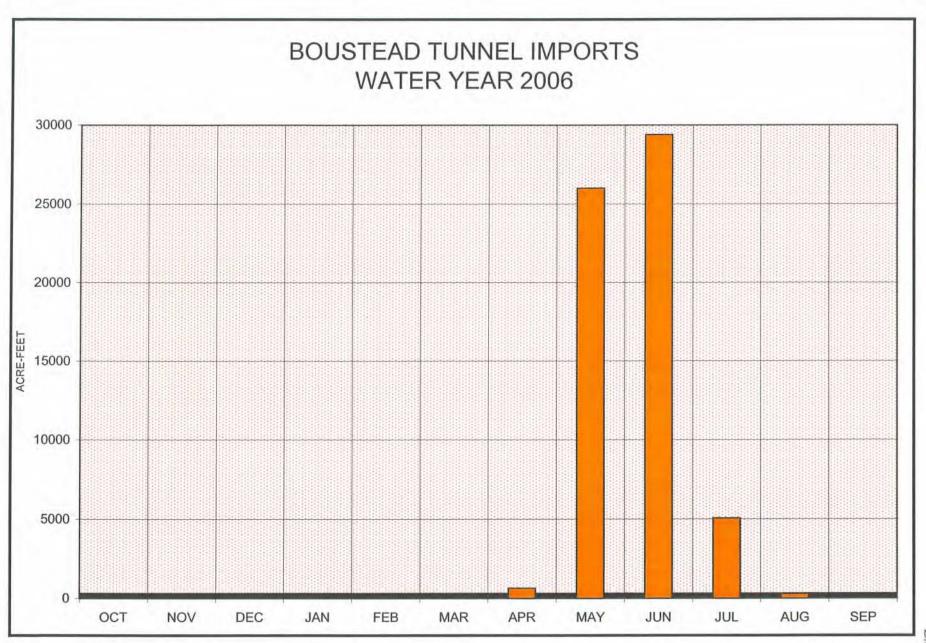
2006

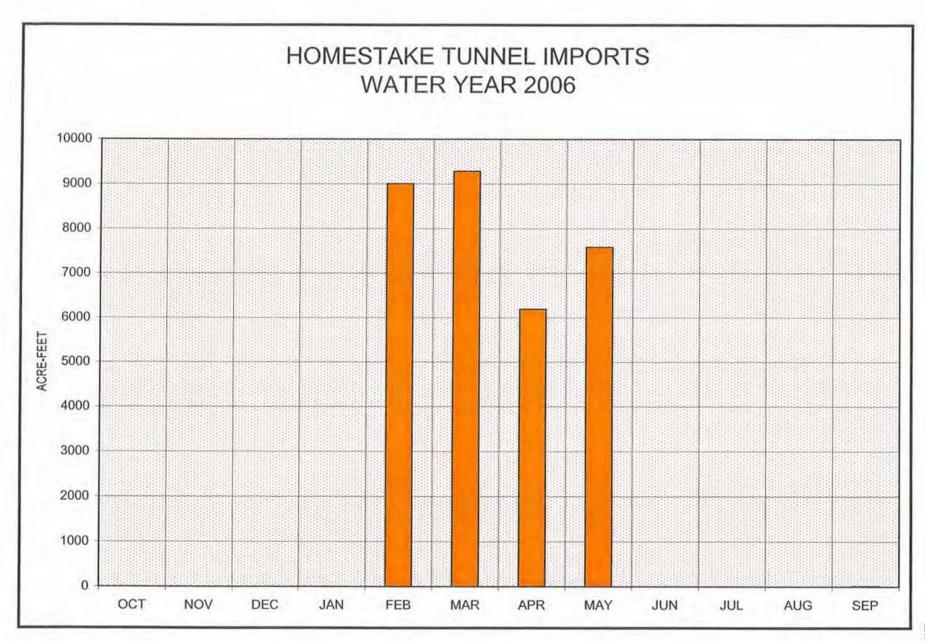


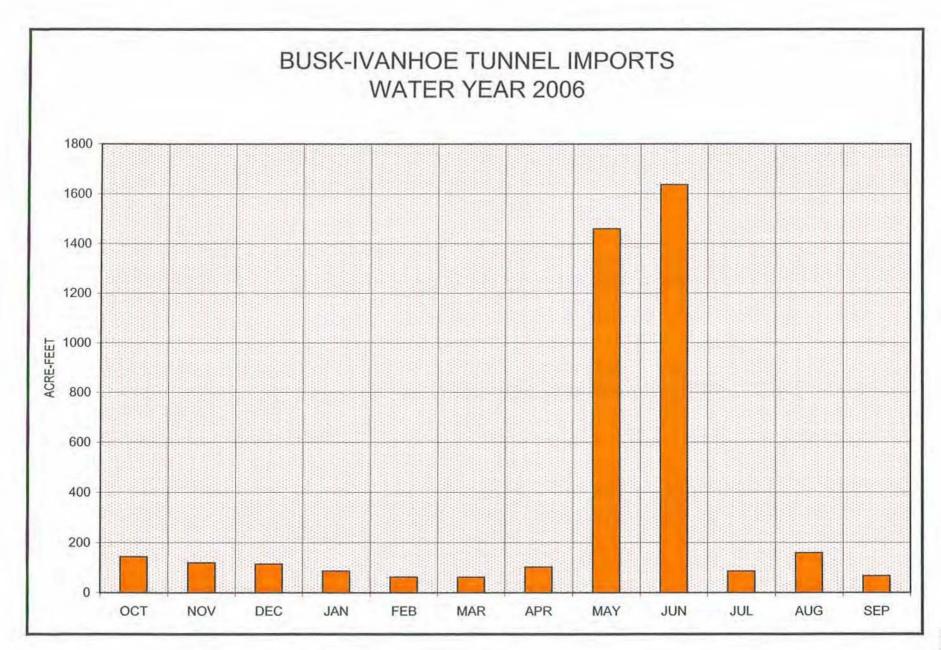


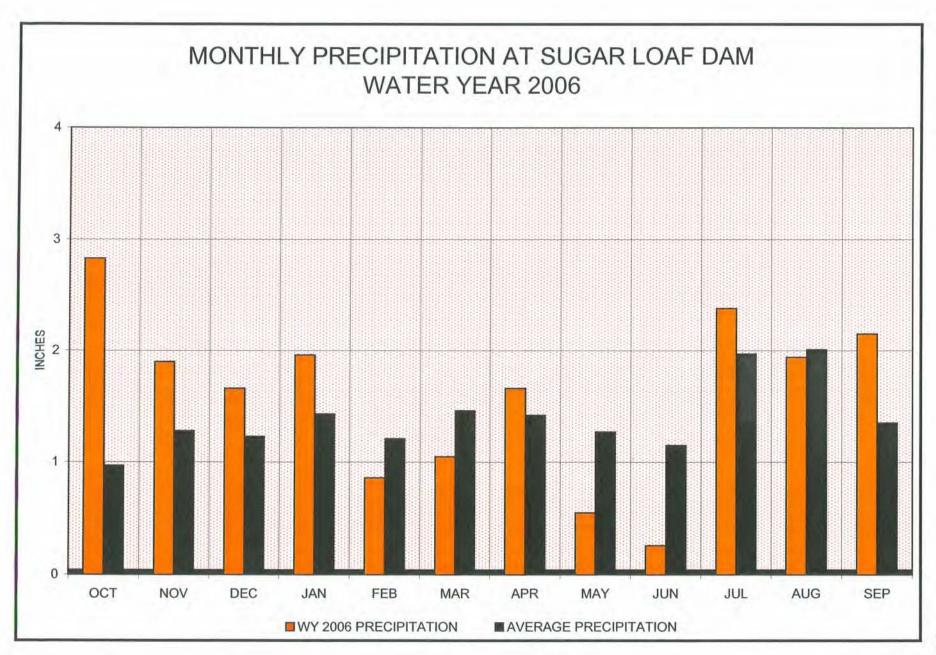


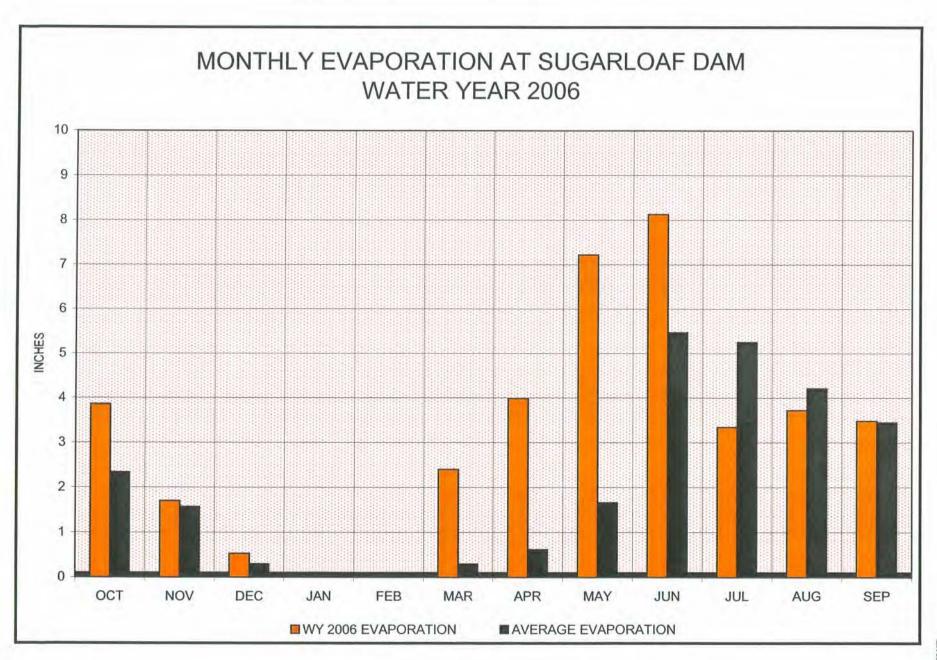


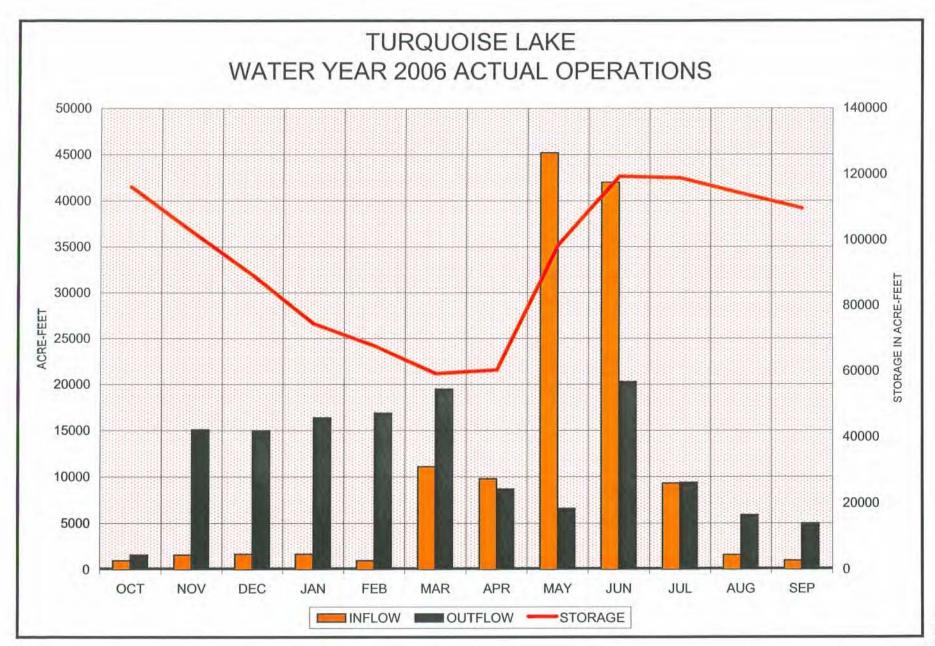


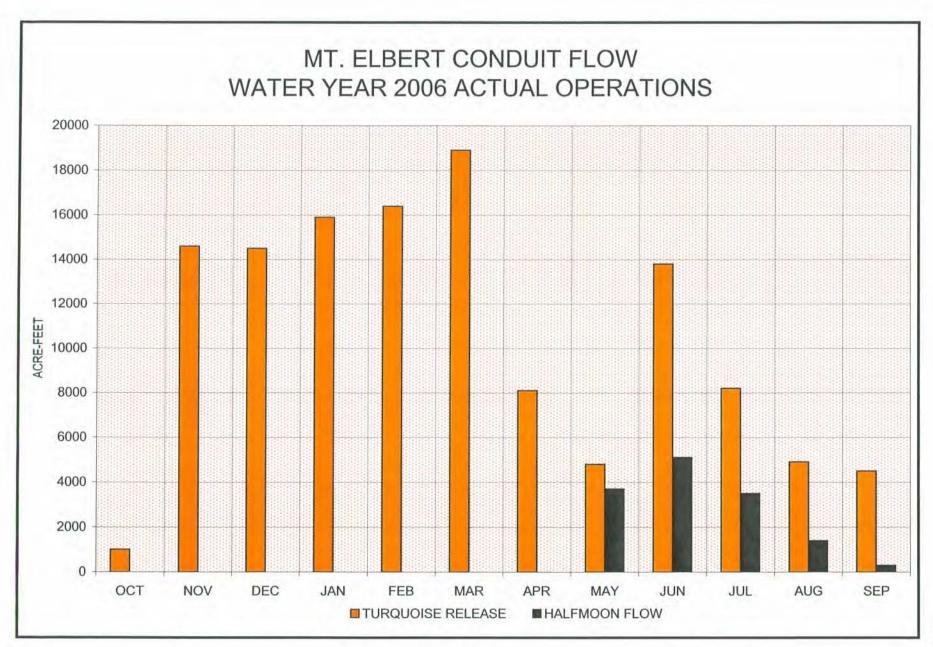


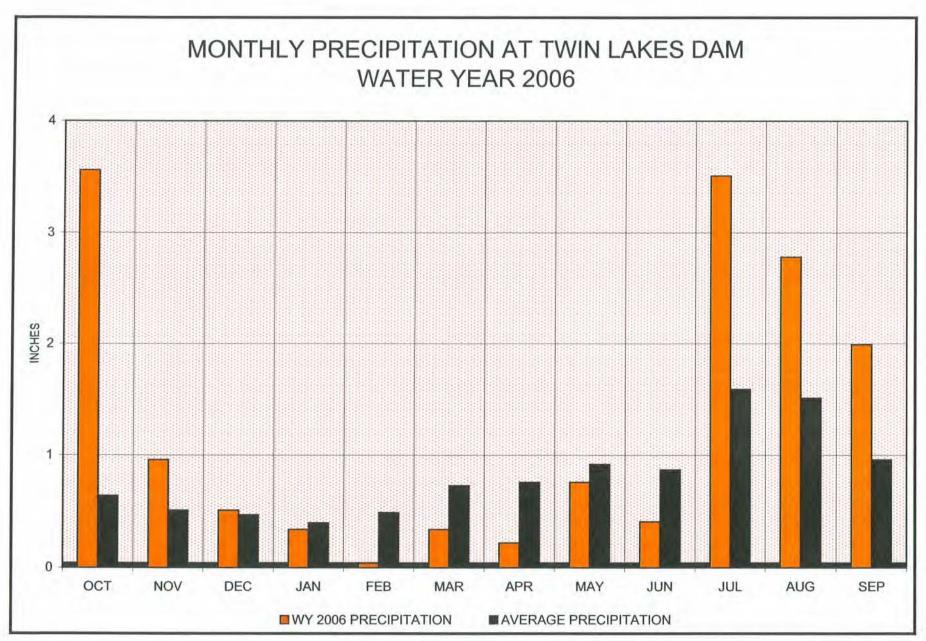


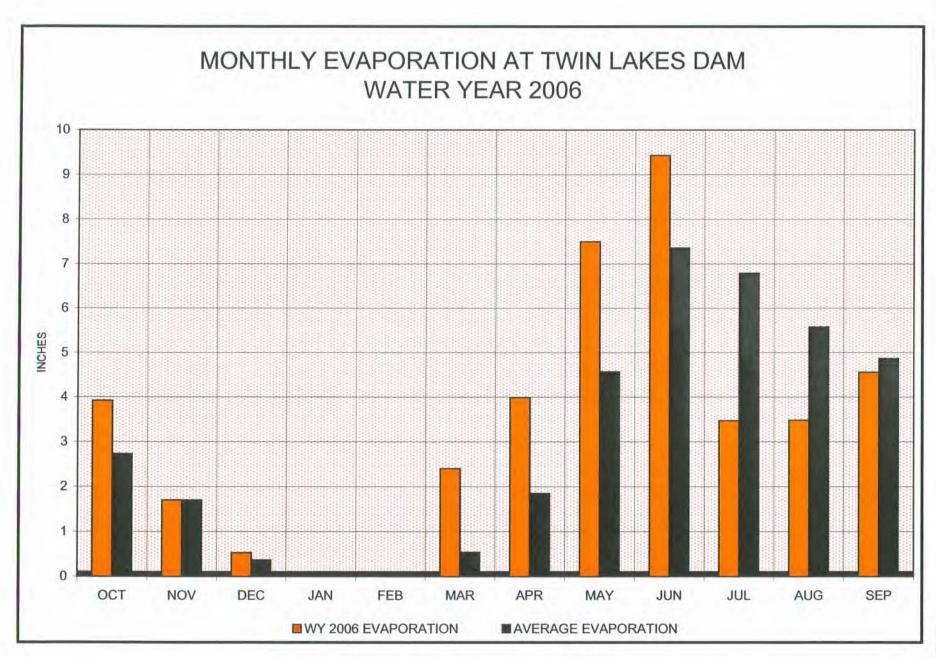












Appendix D (1 of 15) Carter Creek Feeder Conduit near Norrie, CO

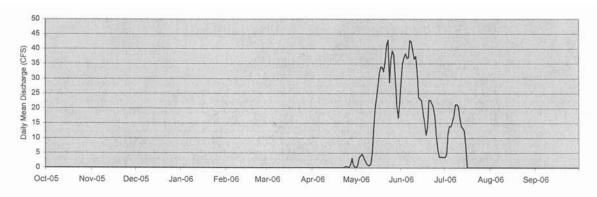
Location. --Lat 39°22'00", long 106°32'40", Eagle County, Hydrologic Unit 14010004, on left bank at concrete diversion structure, and 6.7 mi northeast of Non-ie, and 0.6 mi above confluence with North Fork Fryingpan River.

Gage.—Water-stage recorder and standard 8 foot suppressed rectangular weir. Elevation of gage is 10,125 ft from topographic map. Remarks.—This is a trans-mountain diversion from Carter Creek in the Roaring Fork Basin through the Fryingpan-Arkansas Project Collection system and Charles H. Boustead tunnel to the Arkansas River basin. Diversion began 24-April-2006 and ceased 15-July-2006. Recorder was operated 20-April-2006 through 28-July-2006. Record is complete and reliable.

Discharge, Cubic Feet Per Second, Daily Mean Values

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1								0	29	4		
2								1	35	5		
3	7			F14				3	37	12		10.111
4								4	38	14		*****
5	(9					- 12 B		5	37	14		
6								4	37	15	******	
7					Jan. 35		1 20.00	3	43	17	1 2 2 2 2	
8								1	42	21		
9				11111			******	1	39	21		111111
10				*****	*****			1	37	21		
11			11000	222				1	37	17		
12								5	33	14		
13								12	24	13		
14								19	23	13		
15	2222				12222			23	23	7		
16								27	19	0		
17	11111							32	15	0		
18			*****					34	11	0		
19			1200	*****	*****		Contracti	34	13	0		
20							0	32	23	0		
21					******		0	36	23	0	*****	
22							0	41	22	0		
23		1.1				E MARKET	0	43	20	0		
24					******		1	29	17	0		
25				Charles ((a)	0	36	11	0		
26							0	39	6	0		
27							1	38	4	0		
28							3	30	4	0		
29			ROUGH TO SERVICE				1	21	4			
30							0	17	4			
31	4							22				
Min	0	0	0	0	0	0	0	0	4	0	0	0
Max	0	0	0	0	0	0	3	43	43	21	0	0
Mon Mean	0	0	0	0	0	0	0	19	24	7	0	0
Div Mean	0	0	0	0	0	0	1	20	24	14	0	0
Ac-Ft	0	0	0	0	0	0	13	1180	1406	413	0	0

Water Year total – 3012 Ac-Ft, Maximum Discharge 55 CFS at 0100 hours, 23-May-2006, Monthly Mean is average of all recorded values, Diversion Mean is average of all recorded values above zero, ---- indicates no data were collected.



Appendix D (2 of 15) North Fork Fryingpan River Feeder Conduit near Norrie, CO

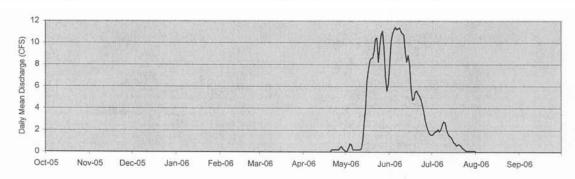
Location. --Lat 39°21'42", long 106°32'16", Eagle County, Hydrologic Unit 14010004, on left bank at concrete diversion structure, and 6.7 mi northeast of Non-ie, and 0.2 mi above confluence with Mormon Creek.

Gage.—Water-stage recorder and standard 6 foot suppressed rectangular weir. Elevation of gage is 10,200 feet from topographic map. Remarks.—This is a trans-mountain diversion from the North Fork Fryingpan River in the Roaring Fork Basin through the Fryingpan-Arkansas Project Collection system and Charles H. Boustead tunnel to the Arkansas River basin. Diversion began 27-April-2006 and ceased 21-July-2006. Recorder was operated 21-April-2006 through 10-August-2006. Record is complete and reliable.

Discharge, Cubic Feet Per Second, Daily Mean Values

			D	ischarge, Ci	ibic Feet Pe	r Second, D	aily Mean V					
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1				*****				0	8	2	0	
2				5				0	10	2	0	
3						77777	(Verener)	0	11	2	0	
4								1	11	2	0	
5			F 1					1	11	2	0	
6								0	11	2	0	
7					7,547571			0	11	2	0	
8				******				0	11	3	0	
9							*****	0	11	3	0	
10					*****			0	11	3	0	
11	6			STREET,		TURNET		0	11	2		
12								0	9	2		
13			******					1	8	2		
14			*****				******	3	9	1		
15								4	8	1		
16		*****	*****	*****				7	6	1		
17			22					7	5	1	220222	
18		*****						8	5	1		
19			11111				The same	9	5	1	2000	2000
20			*****				******	9	6	1		
21			22222			11111	0	9	5	1		22.2
22							0	10	5	0		9200
23	100000		- Treat		22222		0	10	5	0		
24							0	8	4	0	*****	
25						111111	0	10	4	0		72222
26	Comment.						0	11	3	0		*****
27	10,222		******		111111	******	0	11	2	0		
28							1	10	2	0		
29							0	7	2	0		
30							0	6	2	0	*****	
31	(process							6	31,025,0	0	*****	
Min	0	0	0	0	0	0	0	0	2	0	0	0
Max	0	0	0	0	0	0	1	11	11	3	0	0
Mon Mean	0	0	0	0	0	0	0	5	7	1	0	0
Div Mean	0	0	0	0	0	0	1	7	7	2	0	0
Ac-Ft	0	0	0	0	0	0	6	296	422	69	0	0

Water Year total - 793 Ac-Ft, Maximum Discharge 12 CFS at 0000 hours, 05-June-2006



Appendix D (3 of 15) Mormon Creek Feeder Conduit near Norrie, CO

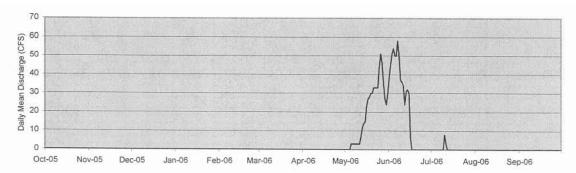
Location. --Lat 39°21'19", long 106°32'02", Pitkin County, Hydrologic Unit 14010004, on left bank at concrete diversion structure, 0.5 mi upstream from unnamed tributary, 1.0 mi above Carter Creek and 6.8 mi northeast of Norrie.

Gage.—Water-stage recorder and standard 5 foot suppressed rectangular weir. Elevation of gage is 10,090 ft from topographic map. Remarks.—This is a trans-mountain diversion from Mormon Creek in the Roaring Fork Basin through the Fryingpan-Arkansas Project Collection system and Charles H. Boustead tunnel to the Arkansas River basin. Diversion began 04-May-2006 and ceased 11-July-2006. Recorder was operated 18-April-2006 through 28-July-2006. Record is complete and reliable.

Discharge, Cubic Feet Per Second, Daily Mean Values

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1								0	38	0		0,1600
2					******			0	45	0		
3	4							0	51	0	200	
4						*****		0	54	0		
5		2002			1.1			3	50	0		11 25
6								3	50	0		
7					100000	11111	7	3	58	0		*****
8	*****	*****				******		3	50	0		
9	22.22		(Carrier)	9219312			121222	3	37	0		
10								3	36	8		
11	Line		2222				2222	3	34	3		22222
12								7	24	0		
13	******		******			*****	*****	12	31	0		
14								14	32	0	*****	
15				22222				15	30	0		
16						Leasure.		23	7	0		
17								27	0	0		
18							0	28	0	0		
19		W		5 E			0	30	0	0		
20							0	30	0	0		
21				1			0	33	0	0		
22							0	33	0	0		
23				12			0	33	0	0		
24			*****				0	33	0	0		
25							0	44	0	0	22222	
26							0	51	0	0		
27						******	0	46	0	0		
28						******	0	35	0	0		
29							0	27	0			
30							0	24	0			
31		- 1150 1115 12				*****		30				
Min	0	0	0	0	0	0	0	0	0	0	0	0
Max	0	0	0	0	0	0	0	51	58	8	0	0
Mon Mean	0	0	0	0	0	0	0	19	21	0	0	0
Div Mean	0	0	0	0	0	0	0	21	39	6	0	0
Ac-Ft	0	0	0	0	0	0	0	1183	1242	22	0	0

Water Year total – 2447 Ac-Ft Maximum Discharge 74 CFS at 1700 hours, 07-June-2006



Appendix D (4 of 15) North Cunningham Feeder Conduit near Norrie, CO

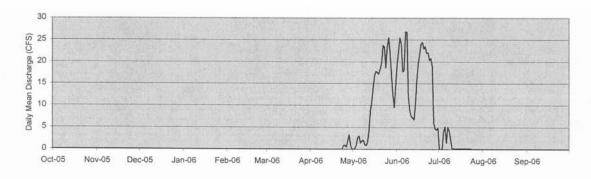
Location. --Lat 39°20'12", long 106°32'35", Pitkin County, Hydrologic Unit 14010004, on right bank at concrete diversion structure, 0.8 mi upstream from Middle Cunningham Creek, and 6.2 mi east of Non-ie.

Gage.—Water-stage recorder and standard 6 foot suppressed rectangular weir. Elevation of gage is 10,100 ft from topographic imp. Remarks.—This is a trans-mountain diversion from North Cunningham Creek in the Roaring Fork Basin through the Fryingpan-Arkansas Project Collection system and Charles H. Boustead tunnel to the Arkansas River basin. Diversion began 24-Apr-2006 and ceased 11-July-2006. Recorder was operated 19-April-2006 through 10-August-2006. Record is complete and reliable.

Discharge, Cubic Feet Per Second, Daily Mean Values

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1								0	19	1	0	
2								0	22	1	0	
3								1	25	1	0	
4								3	24	0	0	
5		-W						3	18	1	0	
6								1	18	1	0	
7								2	27	1	0	11111
8								2	27	2	0	
9								1	21	2	0	22222
10		*****						1	21	3	0	
11		TELL.	221220					2	20	1		
12							******	4	14	0		
13			22,022	12212		1 2222	11111	9	17	0		
14								11	19	0		
15	*****			2222				14	14	0		
16				*****	*****			17	9	0	*****	******
17	*****				*****			18	9	0		
18							******	18	11	0		
19							0	17	11	0		
20							0	18	10	0		
21			*****		*****		0	20	9	0		
22					******		0	24	8	0		
23				*****			0	23	7	0		******
24							1	19	5	0		
25					******		1	23	4	0		
26							1	25	3	0		
27	*****		*****		******		2	22	2	0		
28			******				3	17	2	0		
29			*****	*****	711		1	12	1	0		
30							0	10	0	0		
31			*****	*****	E INEVAN			15		0	******	
Min	0	0	0	0	0	0	0	0	0	0	0	0
Max	0	0	0	0	0	0	3	25	27	3	0	0
Mon Mean	0	0	0	0	0	0	0	11	13	1	0	0
Div Mean	0	0	0	0	0	0	1	12	13	1	0	0
Ac-Ft	0	0	0	0	0	0	17	697	789	38	7	0

Water Year total - 1541 Ac-Ft Maximum Discharge 64 CFS at 1800 hours, 04-June-2006 Monthly Mean is average of all recorded values, Diversion Mean is average of all recorded values above zero, ----- indicates no data were collected



Appendix D (5 of 15) Middle Cunningham Feeder Conduit near Norrie, CO

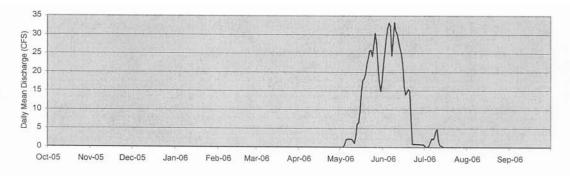
Location. --Lat 39°19'43", long 106°33'08", Pitkin County, Hydrologic Unit 14010004, on left bank at concrete diversion structure, 0.4 mi upstream from Cunningham Creek, and 5.7 mi east of Norrie.

Gage.—Water-stage recorder and standard 5 foot suppressed rectangular weir. Elevation of gage is 10,050 ft from topographic map. Remarks.—This is a trans-mountain diversion from Middle Cunningham Creek in the Roaring Fork Basin through the Fryingpan-Arkansas Project Collection system and Charles H. Boustead tunnel to the Arkansas River basin. Diversion began 04-May-2006 and ceased 12-July-2006. Recorder was operated 19-April-2006 through 10-August-2006. Record is complete and reliable.

Discharge. Cubic Feet Per Second. Daily Mean Values

			אוע	charge. Cut	nc reet rei	Second. D	any mean v	atues				
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1							/E	0	22	0	0	
2		******						0	25	0	0	
3				*****				0	29	0	0	
4								1	32	0	0	
5				*****				2	33	1	0	
6								2	32	2	0	
7			*****		******			2	24	2	0	
8								2	29	3	0	
9								2	33	4	0	
10					111111			2	31	5	0	
11								1	30	2	219717	
12								3	28	1		
13								6	26	0		
14								7	25	0		
15						******		9	22	0		******
16								14	16	0		
17	777777		*****					18	14	0	*****	
18	*****							18	15	0		
19		11		*****			0	19	15	0		
20					*****		0	22	15	0		
21			200000				0	24	7	0		*****
22	******						0	26	1	0		
23							0	26	1	0		
24	*****						0	24	1	0		
25				******	277222		0	27	1	0		
26							0	30	1	0		
27		7.1111111	22224	*****			0	28	1	0		
28							0	22	1	0		
29		T	NO SERVED	1210002			0	17	1	0		
30							0	15	1	0		
31	*****		S Level	Negation (18		.0	******	
Min	0	0	0	0	0	0	0	0	1	0	0	0
Max	0	0	0	0	0	0	0	30	33	5	0	0
Mon Mean	0	0	0	0	0	0	0	13	17	1	0	0
Div Mean	0	0	0	0	0	0	0	14	17	2	0	0
Ac-Ft	0	0	0	0	0	0	0	770	1015	42	0	0

Water Year total - 1827 Ac-Ft Maximum Discharge 50 CFS at 1715 hours, 05-June-2006



Appendix D (6 of 15) Ivanhoe Creek **Feeder Conduit near** Norrie, **CO**

Location. --Lat 39°17'15", long 106°33'32", Pitkin County, Hydrologic Unit 14010004, on left bank 300 feet downstream from diversion point on Ivanhoe Creek, 2.3 mi east of Nast, and 5.8 mi southeast of Norrie.

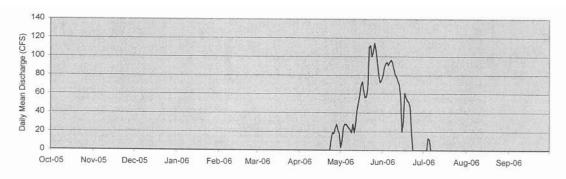
Gage.—Water-stage recorder and modified 8 foot Parshall flume. Elevation of gage is 10,000 ft from topographic map.

Remarks.—This is a trans-mountain diversion from Ivanhoe Creek in the Roaring Fork Basin through the Fryingpan-Arkansas Project Collection system and Charles H. Boustead tunnel to the Arkansas River basin. Diversion began 24-April-2006 and ceased 05-Jul-2006. Recorder was operated 21-April-2006 through 10-August2006. Record is complete and fair.

Discharge, Cubic Feet Per Second, Daily Mean Values

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1								3	79	0	0	
2								10	88	0	0	
3							10.000	25	92	0	0	
4							*****	28	94	13	0	
5								28	91	12	0	
6								26	94	0	0	
7						******		24	96	0	0	
8								22	94	0	0	
9								19	87	0	0	
10								28	81	0	0	
11			(444444)				*****	19	78	0	فيخبنه	0:4-14-
12								28	74	0		
13							*****	42	70	0		
14		The same						50	58	0		
15								58	20	0		34754
16	*****	******						69	30	0		
17			******		Server 8		*****	73	61	0		
18				2000				63	56	0		T
19				*****				56	53	0		*****
20								57	51	0		
21							0	67	46	0		
22							0	110	19	0		
23							0	112	0	0		
24							12	100	0	0		
25							19	105	0	0		
26							18	115	0	0		
27						*****	24	106	0	0		
28		*****					28	94	0	0		
29					5-14		22	80	0	0		
30							18	72	0	0	22000	
31		i <u>alendi</u>				700		75			Annone	
Min	0	0	0	0	0	0	0	3	0	0	0	0
Max	0	0	0	0	0	0	28	115	96	13	0	0
Mon Mean	0	0	0	0	0	0	5	57	50	1	0	0
Div Mean	0	0	0	0	0	0	20	57	69	12	0	0
Ac-Ft	0	0	0	0	0	0	280	3498	3001	49	0	0

Water Year total - 6828 Ac-Ft, Maximum Discharge 142 CFS at 1830 hours, 26-May-2006



Appendix D (7 of 15) Lily Pad Creek Feeder Conduit near Norrie, CO

Location. --Lat 39°15'32", long 106°32'16", Pitkin County, Hydrologic Unit 14010004, on right bank at concrete diversion structure, 200 feet downstream from diversion point on Lily Pad Creek, and 7.7 mi southwest of Norrie.

Gage.—Water-stage recorder and standard 5 foot suppressed rectangular weir. Elevation of gage is 10,200 ft from topographic map. Remarks.

—This is a trans-mountain diversion from Lily Pad Creek in the Roaring Fork Basin through the Fryingpan-Arkansas Project Collection system and Charles H. Boustead tunnel to the Arkansas River basin. Diversion began on 24-April-2006 and ceased on 07-August2006.

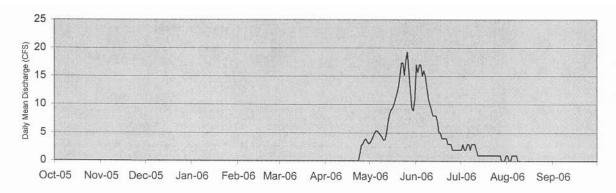
Recorder was operated 14-April-2006 through 10-August-2006. Record is complete and fair.

Discharge, Cubic Feet Per Second, Daily Mean Values

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1 1				100	*****	*****		3	17	2	1	
2								4	16	3	0	
3							22	4	17	2	0	
4								5	17	2	1	
5								5	15	3	1	
6								5	16	3	1	
7			2			63		5	15	2	1	
8								5	13	3	0	
9		*****			*****	*****		4	11	3	0	
10								4	10	3	0	
11	24						*****	4	9	2	22222	
12								5	8	1		
13					*****			7	8	1		
14	******		******				0	8	8	1		
15							0	9	7	1	2120211	
16		7		1000000		2.00	0	9	5	1	192.575	
17							0	10	5	1		
18	T						0	11	4	1		
19			15000				0	12	4	1		
20		757000					0	13	4	1		
21							0	15	4	1		
22							0	17	3	1		
23							0	17	3	1		
24							1	15	3	1		
25							3	18	2	1		-
26							3	19	2	1		
27							4	16	2	1		
28			*****				4	13	2	Ö		
29							3	9	2	0		
30							3	9	2	0		
31							-	11	-	1	*****	
			CHEROLE'S					- ''		1	-	
Min	0	0	0	0	0	0	0	3	2	0	0	0
Max	0	0	0	0	0	0	4	39	17	3	1	0
Mon Mean	0	0	0	0	0	0	1	10	8	1	1	0
Div Mean	0	0	0	0	0	0	3	10	8	2	1	0
Ac-Ft	0	0	0	0	0	0	42	639	464	89	10	0

Water Year total – 1244 Ac-Ft, Maximum Discharge 32 CFS at 2200 hours, 22-May-2006

Monthly Mean is average of all recorded values, Diversion Mean is average of all recorded values above zero, ----- indicates no data were collected



Appendix D (8 of 15) Granite Creek Feeder Conduit near Norrie, CO

Location. --Lat 39°16′03", long 106°33′15", Pitkin County, Hydrologic Unit 14010004, on right bank at concrete adit structure, 1.0 mi through siphon from diversion point on Granite Creek, and 6.7 mi southeast of Norrie.

Gage.—Water-stage recorder and standard 3 foot Parshall flume. Elevation of gage is 10,000 ft from topographic map.

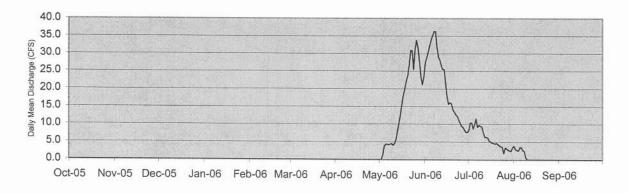
Remarks.—This is a trans-mountain diversion from Granite Creek in the Roaring Fork Basin through the Fryingpan-Arkansas Project Collection system and Charles H. Boustead tunnel to the Arkansas River basin. Diversion began 03-May-2006 and ceased 09-August-2006. Recorder was operated 14-April-2006 through 10-August-2006. Record is complete and reliable.

Discharge, Cubic Feet Per Second. Daily Mean Values

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1.000				(Frenching)				0	27	8	4	
2								0	29	10	3	
3								1	30	10	3	
4							***************************************	4	32	9	- 3	
5		(1) Y						4	34	10	3	
6								4	35	11	3	
7								4	36	9	3	
8							******	4	36	10	2	
9			FRANK		*****		(Server 1)	4	32	9	1	
10								4	29	9	0	
11								4	28	8		
12								6	27	6		
13								8	25	6		
14							0	10	25	6	22222	
15	100000000000000000000000000000000000000						0	13	21	5		
16							0	16	18	5		
17							0	18	16	5	*****	
18							0	20	16	5		
19							0	22	16	4		
20							0	24	14	5		
21			*****		*****		0	27	13	4		
22							0	31	13	4		
23							0	31	12	4		100000
24			1 1				0	25	11	4		
25			*****		******		0	31	10	2		
26							0	34	9	3		
27			*****				0	32	9	3	-	
28	******						0	28	8	3		
29		44-4			2015		0	23	8	3		
30							0	21	8	2		
31	*****	5.5172	*****		o architeat	Therese,		23	MEDICAL SECTION	3	100.44	
Min	0	0	0	0	0	0	0	0	8	2	0	0
Max	0	0	0	0	0	0	0	34	36	11	4	0
Mon Mean	0	0	0	0	0	0	0	15	21	6	2	0
Div Mean	0	0	0	0	0	0	0	16	21	6	3	0
Ac-Ft	0	0	0	0	0	0	0	945	1250	368	49	0

Water Year total – 2611 Ac-Ft, Maximum Discharge 41 CFS at 2100 hours, 07-June-2006

Monthly Mean is average of all recorded values, Diversion Mean is average of all recorded values above zero, ----- indicates no data were collected



Appendix D (9 of 15) No Name Creek Feeder Conduit near Norrie, CO

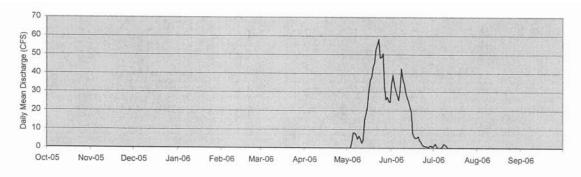
Location. --Lat 39°11'00", long 106°43'12", Pitkin County, Hydrologic Unit 14010004, on right bank at concrete diversion structure, 0.9 mi upstream from mouth, and 5.5 mi southeast of Aspen.

Gage.—Water-stage recorder and standard 8 foot suppressed rectangular weir. Elevation of gage is 10,165 ft from topographic map. Remarks. —This is a trans-mountain diversion from No Name Creek in the Roaring Fork Basin through the Fryingpan-Arkansas Project Collection system and Charles H. Boustead tunnel to the Arkansas River basin. Diversion began 04-May-2006 and ceased 10-July-2006. Recorder was operated 05-April-2006 through 30-August-2006. Record is complete and reliable.

Discharge, Cubic Feet Per Second. Daily Mean Values

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1							7491	0	34	1	0	- ССР
2								0	39	2	0	
3								0	34	1	0	101
4								3	31	0	0	
5							0	8	28	0	0	
6							0	8	26	0	0	
7		1250,1111	1				0	7	31	1	0	
8			******		*****		0	5	42	2	0	
9							0	7	37	2	0	
10							0	5	34	1	0	
11							0	3	30	0	0	
12							0	5	27	0	0	
13							0	15	25	0	0	
14							0	18	22	0	0	
15						1000000	0	22	19	0	0	
16				Chamber !	*****		0	30		553	0	
17							0		8	0	0	
18				******	*****	******		36	6	0	0	
19							0	38	5	0	0	
20		*****			******	******	0	43	6	0	0	
21								46	6	0	0	
22					*****	******	0	53	4	0	0	*****
23		******					0	55	3	0	0	
24			*****		******	******	0	58	2	0	0	
25					ARRARA		0	48	1	0	0	
26			******	*****	*****		0	49	1	0		
27	744444		*****	*****	755755		0	51	1	0	0	
28	10000000	- Henrich	*****	Control to c	*****	******	0	33	0	0	0	
29			100000000000000000000000000000000000000	******	*****	******	0	26	1	0	0	
30	******		******				0	27	1	0	0	
31	*****						0	25	1	0	0	
31								24		0		
Min	0	0	0	0	0	0	0	0	0	0	0	0
Max	0	0	0	0	0	0	0	58	42	2	0	0
Mon Mean	0	0	0	0	0	0	0	24	17	0	0	0
Div Mean	0	0	0	0	0	0	0	27	17	1	0	0
Ac-Ft	0	0	0	0	0	0	0	1486	1005	21	0	0

Water Year total – 2512 Ac-Ft Maximum Discharge 64CFS at 0100 hours, 23-May-2006



Appendix D (10 of 15) Midway Creek Feeder Conduit near Norrie, CO

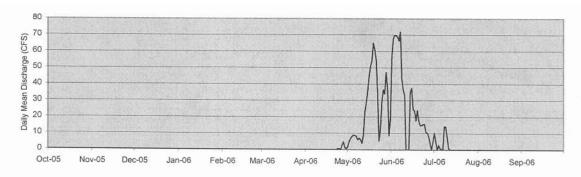
Location. --Lat 39°11'26", long 106°41'07", Pitkin County, Hydrologic Unit 14010004, on right bank at concrete diversion structure, 0.8 mi upstream from mouth, and 8.3 mi east of Aspen.

Gage.—Water-stage recorder and standard 8 foot suppressed rectangular weir. Elevation of gage is 10,180 ft from topographic map. Remarks.—This is a trans-mountain diversion from Midway Creek in the Roaring Fork Basin through the Fryingpan-Arkansas Project Collection system and Charles H. Boustead tunnel to the Arkansas River basin. Diversion began 24-April-2006 and ceased 11-July-2006. Recorder was operated 07-April-2006 through 29-August-2006. Record is complete and reliable.

Discharge, Cubic Feet Per Second, Daily Mean Values

			Dis	charge, Cu	<u>bic Feet Pe</u>	Second, D	aily Mean	Values_				
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	Title:			1 1				2	56	10	0	<u> </u>
2								5	68	5	0	(**************************************
3								7	70	0	0	
4		******	******					8	70	3	0	
5								9	69	1	0	
6								9	66	0	0	
7							0	8	72	0	0	
8							0	6	43	14	0	
9							0	7	37	14	0	
10							0	6	33	8	0	(277777)
11		*****					0	4	- 0	1	0	*****
12							0	9	0	0	0	
13							0	23	0	0	0	******
14							0	28	35	0	0	
15					*****	*****	0	36	38	0	0	
16			12000	2222		*****	0	44	25	0	0	
17		******				*****	0	51	24	0	0	*****
18			/20012				0	54	18	0	0	
19					******		0	65	24	0	0	
20			V	union.			0	61	18	0	0	
21				******			0	55	15	0	0	
22							0	35	15	0	0	
23				100000		*****	0	5	16	0	0	
24							1	12	16	0	0	*****
25				*****		*****	0	29	11	0	0	*****
26			******				0	37	10	0	0	
27							3	34	- 8	0	0	
28							5	47	4	0	0	
29				77777	4241-1-A	*****	1	38	0	0	0	
30							1	9	5	0		10000
31				January 18	1			18	4 172	0	*****	
Min	0	0	0	0	0	0	0	2	0	0	0	0
Max	0	0	0	0	0	0	5	65	72	14	0	0
Mon Mean	0	0	0	0	0	0	0	25	29	2	0	0
Div Mean	0	0	0	0	0	0	2	25	33	7	0	0
Ac-Ft	0	0	0	0	0	0	22	1507	1710	111	0	0

Water Year total - 3350 Ac-Ft, Maximum Discharge 82 CFS at 1530 hours, 08-June-2006.



Appendix D (11 of 15) Hunter Creek Feeder Conduit near Norrie, CO

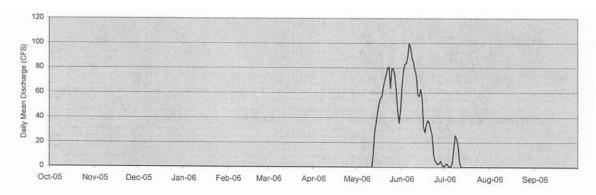
Location. --Lat 39°12'28", long 106°40'44", Pitkin County, Hydrologic Unit 14010004, on right bank at concrete diversion structure, 0.9 mi upstream from confluence with Midway Creek, and 8.3 mi east of Aspen.

Gage.—Water-stage recorder and standard 8 foot suppressed rectangular weir. Elevation of cage is 10,180 ft from topographic map. Remarks.—This is a trans-mountain diversion from Hunter Creek in the Roaring Fork Basin through the Fryingpan-Arkansas Project Collection system and Charles H. Boustead tunnel to the Arkansas River basin. Diversion began 12-May-2006 and ceased 11-July-2006. Recorder was operated 11-April-2006 through 29-August-2006. Record is complete and reliable.

Discharge, Cubic Feet Per Second, Daily Mean Values

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1				1 2 3			Ferrer	0	65	2	0	
2								0	77	3	0	
3								0	83	1	0	
4								0	84	0	0	
5		22.1				14.00		0	89	1	0	02000
6								0	100	4	0	
7	2	Tipe contr	111111	<u> </u>				0	97	15	0	1 1111111
8								0	88	26	0	
9	#15.55							0	85	23	0	
10					*****	*****		0	78	17	0	*****
11		7					0	0	74	4	0	
12			*****	******	*****		0	10	59	0	0	
13			******				0	29	57	0	0	
14				*****	*****		0	36	63	0	0	
15			*****		******		0	44	56	0	0	
16				******			0	51	32	0	0	
17							0	56	28	0	0	
18							0	57	35	0	0	
19					1		0	64	38	0	0	
20							0	70	36	0	0	
21						2222	0	75	31	0	0	
22							0	80	26	0	0	
23			*****	1 2		*****	0	81	10	0	0	*****
24							0	64	5	0	0	
25							0	80	4	0	0	
26							0	80	2	0	0	
27							0	74	3	0	0	******
28							0	63	5	0	0	
29						******	0	45	2	0	0	
30				100000			0	36	0	0		
31	3	- 71				*****	the Comme	46		0		
Min	0	0	0	0	0	0	0	0	0	0	0	0
Max	0	0	0	0	0	0	0	81	100	26	0	0
Mon Mean	0	0	0	0	0	0	0	37	47	3	0	0
Div Mean	0	0	0	0	0	0	0	57	49	11	0	0
Ac-Ft	0	0	0	0	0	0	0	2259	2801	191	0	0

Water Year total – 5251 Ac-Ft, Maximum Discharge 127 CFS at 2000 hours, 06-June-2006, Monthly Mean is average of all recorded values, Diversion Mean is average of all recorded values above zero, ----- indicates no data were collected



Appendix D (12 of 15) Sawyer Creek Feeder Conduit near Norrie, CO

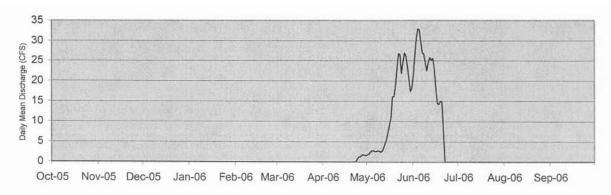
Location. --Lat 39°15'58", long 106°38'21", Pitkin County, Hydrologic Unit 14010004, on right bank, 3100 ft downstream from diversion point on Sawyer Creek and 4.0 mi south of Norrie.

Gage. Water-stage recorder and standard 24 inch Parshall flume. Elevation of gage is 10,050 ft from topographic map.

Remarks.—This is a trans-mountain diversion from Sawyer Creek in the Roaring Fork Basin through the Fryingpan-Arkansas Project Collection system and Charles H. Boustead tunnel to the Arkansas River basin. Diversion began 24-April-2006 and ceased 21-June-2006. Recorder was operated 03-April-2006 through 11-August-2006. Record is complete and fair. **Discharge, Cubic Feet Per Second, Daily Mean Values**

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	200	FE-222	Service 1					2	21	0	0	
2								2	26	0	0	
3				S			0	2	31	0	0	
4							0	3	33	- 0	0	
5							0	3	33	0	0	
6							0	3	30	0	0	*****
7							0	3	27	0	0	
8							0	3	27	0	0	
9			*****			******	0	3	24	0	0	
10							0	2	22	0	0	
11							0	3	25	0	0	
12							0	3	26	0		
13							0	5	25	0		
14							0	6	26	0		
15			222.00	20164			0	7	23	0		
16							0	9	18	0		
17							0	11	15	0		
18			*****		******		0	16	14	0		
19			-		******		0	16	15	0		
20						5000	0	19	15	0		
21				*****	******		0	23	8	0		
22	******						0	27	0	0	*****	
23				aratha.			0	27	0	0	*****	
24			72232				1	22	0	0		
25	15						1	25	0	0		
26							1	27	0	0		
27					CHARLES .		2	26	0	0		
28							2	24	0	0		
29							2	20	0	0		
30							2	17	0	0		
31	*****						-	18		0		
Min	0	0	0	0	0	0	0	2	0	0	0	0
Max	0	0	0	0	0	0	2	27	33	0	0	0
Mon Mean	0	0	0	0	0	0	0	12	16	0	0	0
Div Mean	0	0	0	0	0	0	1	12	23	0	0	0
Ac-Ft	0	0	0	0	0	0	19	745	965	22	0	0

Water Year total - 1751 Ac-Ft, Maximum Discharge 38 CFS at 2000 hours, 04-June-2006 Monthly Mean is average of all recorded values, Diversion Mean is average of all recorded values above zero, ----- indicates no data were collected



Appendix D (13 of 15) Chapman Gulch Feeder Conduit near Norrie, CO

Location. --Lat 39°15'46", long 106°37'52", Pitkin County, Hydrologic Unit 14010004, on right bank, 180 ft downstream from diversion point on Chapman Gulch and 4.9 mi south of Norrie.

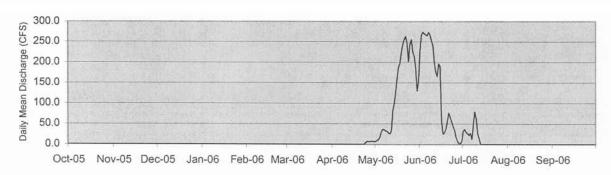
Gage.--Water-stage recorder and modified 10 ft Parshall flume. Elevation of gage is 10,050 ft from topographic map.

Remarks.—This is a trans-mountain diversion from Chapman Gulch, Sawyer Creek, Hunter Creek, Midway Creek, and No Name Creek in the Roaring Fork Basin through the Fryingpan-Arkansas Project Collection system and Charles H. Boustead tunnel to the Arkansas River basin. Diversion began on 24-April-2006 and ceased 12-July-2006. Recorder was operated 03-April-2006 through I l-August-2006. Record is complete and reliable.

Discharge, Cubic Feet Per Second, Daily Mean Values

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1								7	228	33	0	
2								10	266	37	0	
3			1				0	12	274	30	0	
4							0	18	270	27	0	
5	1						0	31	268	23	0	1
6							0	37	265	28	0	
7							0	36	273	13	0	
8							0	33	267	49	0	
9	Bullium,	22222				22222	0	32	253	79	0	
10							0	28	241	63	0	
11					*****		0	26	200	27	0	
12							0	33	176	15		
13					11111		0	82	166	0		
14							0	100	196	0		
15							0	126	190	0		
16							0	160	56	0		
17						102122	0	188	26	0		
18			20.000				0	197	29	0		
19							0	224	37	0		
20							0	243	56	0		
21			-			THE PERSON NAMED IN	0	256	76	0		
22							0	263	66	0		
23			******	******	******		0	247	55	0		
24							5	202	44	0		
25			*****				7	244	35	0		
26			2222				7	255	18	0		
27							7	225	8	0		1000
28							9	215	3	0		
29							7	186	2	0	*****	
30							7	130	8	0		
31	1000		GUSUT	#F125552111				153		0		
Min	0	0	0	0	0	0	0	7	2	0	0	0
Max	1 0	0	0	0	0	0	9	263	274	79	0	0
Mon Mean	0	0	0	0	0	0	2	129	135	14	0	0
Div Mean	0	0	0	0	0	0	7	129	135	35	0	0
Ac-Ft	0	0	0	0	0	0	98	7935	8037	838	0	0

Water Year total - 16907 Ac-Ft, Maximum Discharge 312 CFS at 2145 hours, 22-May-2006



Appendix D (14 of 15) South Fork Feeder Conduit near Norrie, CO

Location. --Lat 39°14'16", long 106°35'23", Pitkin County, Hydrologic Unit 14010004, on right bank, 110 ft downstream from diversion point on the South Fork Fryingpan River and 7.2 mi southeast of Norrie.

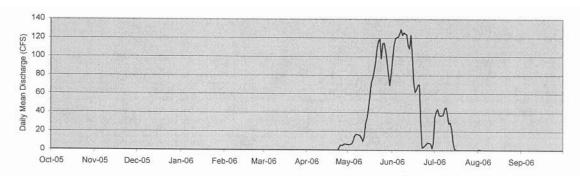
Gage.—Water-stage recorder and modified 8 ft Parshall flume. Elevation of gage is 10,000 ft from topographic map.

Remarks.—This is a trans-mountain diversion from the South Fork Fryingpan River in the Roaring Fork Basin through the Fryingpan-Arkansas Project Collection system and Charles H. Boustead tunnel to the Arkansas River basin. Diversion began on 24-April-2006 and ceased 15-July-2006. Recorder was operated 04-April-2006 through 10-August-2006. Record is complete and reliable.

Discharge, Cubic Feet Per Second, Daily Mean Values

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1		S						6	97	35	0	
2								6	112	41	0	
3			10 1 <u>22 72 5 5</u>				M	7	120	44	0	
4							0	9	121	38	0	
5						·	0	15	121	37	0	
6							0	17	125	37	0	
7			1000	0.00000			0	17	129	38	0	
8							0	16	123	44	0	
9			122	11 22222		Similar .	0	16	126	46	0	4.000
10							0	13	124	38	0	
11				()	*****		0	10	124	28		
12							0	14	112	30		
13							0	28	108	23	122223	12222
14							0	34	123	9	*****	*****
15					*****		0	44	101	2		
16		*****			-0.000		0	57	72	0		
17			*****				0	72	62	0		
18							0	77	65	0		
19			*****				0	85	70	0		
20						*****	0	94	70	0		
21		*****					0	109	31	0	*****	
22						*****	0	117	3	0		
23		*****				*****	0	119	3	0		
24						*****	3	98	5	0		
25	******						5	114	7	0		
26			******				5	115	8	0		
27			*****		******	*****	6	107	8	.0		
28						12222	7	96	7	0		
29				777777			6	81	2	0		
30						1	6	69	8	0		
31					murs es		100	81		0		
Min	0	0	0	0	0	0	0	6	2	0	0	0
Max	0	0	0	0	0	0	7	119	129	46	0	0
Mon Mean	0	0	0	0	0	0	1	56	73	16	0	0
Div Mean	0	0	0	0	0	0	5	56	73	33	0	0
Ac-Ft	0	0	0	0	0	0	76	3459	4336	968	0	0

Water Year total - 8839 Ac-Ft, Maximum Discharge 158 CFS at 1630 hours, 07-June-2006



Appendix D (15 of 15) Fryingpan Feeder Conduit near Norrie, CO

Location. --Lat 39°14'42", long 106°31'52", Pitkin County, Hydrologic Unit 14010004, on right bank, 210 ft downstream from diversion point on the Fryingpan River and 9.1 mi southeast of Norrie.

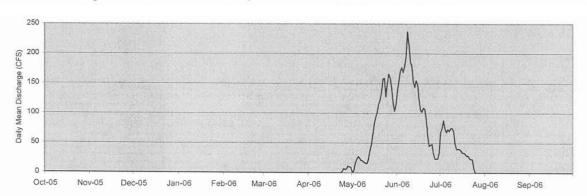
Gage.—Water-stage recorder and modified 12 ft Parshall flume. Elevation of gage is 9950 ft from topographic map.

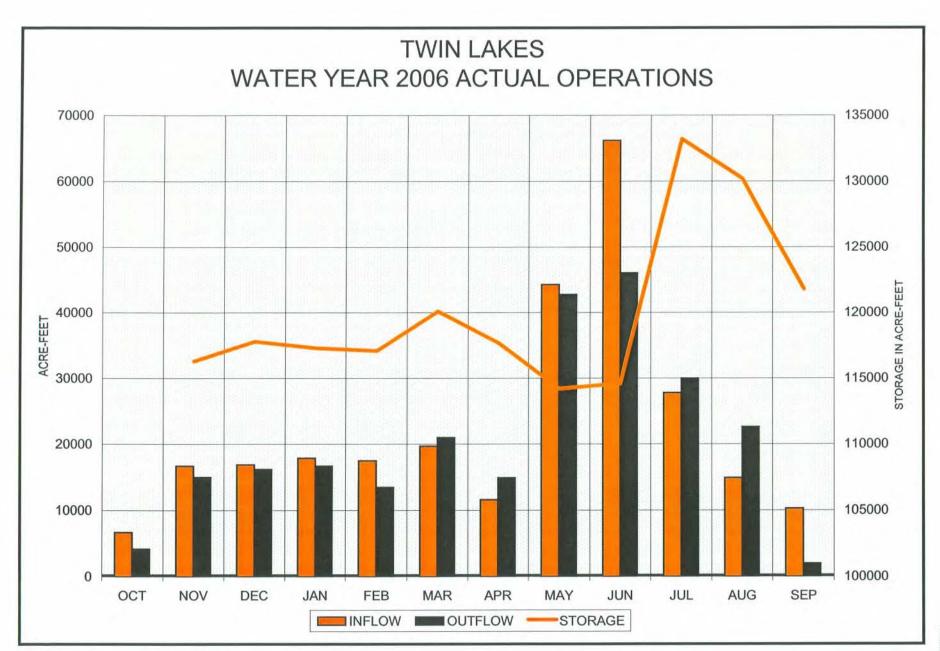
Remarks.—This is a trans-mountain diversion from the Fryingpan River in the Roaring Fork Basin through the Fryingpan-Arkansas Project Collection system and Charles H. Boustead tunnel to the Arkansas River basin. Diversion began on 24-April-2006 and ceased 24-July-2006. Recorder was operated 12-April-2006 through 10-August-2006. Record is complete and reliable.

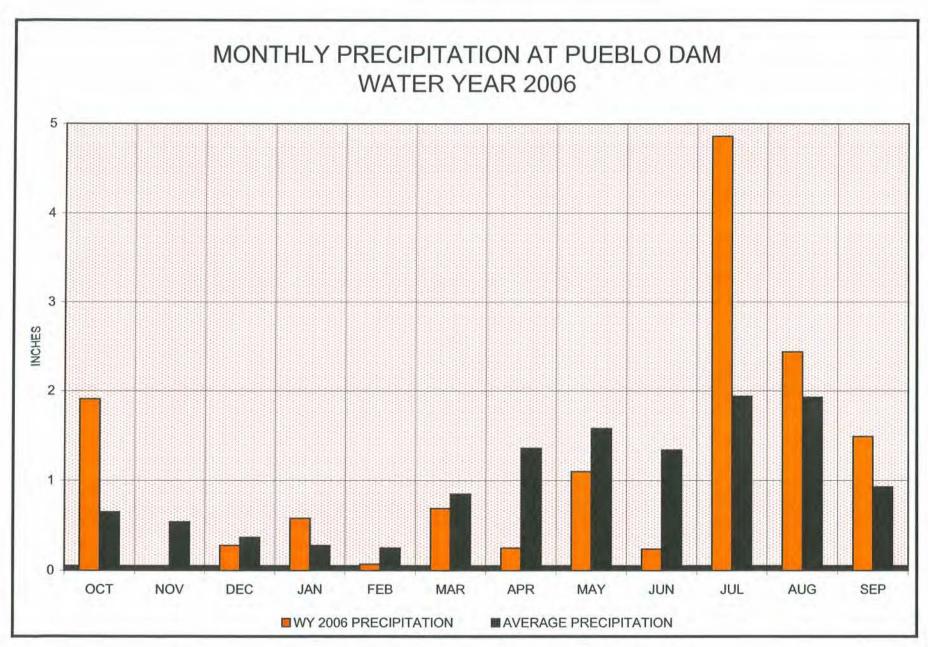
Discharge, Cubic Feet Per Second, Daily Mean Values

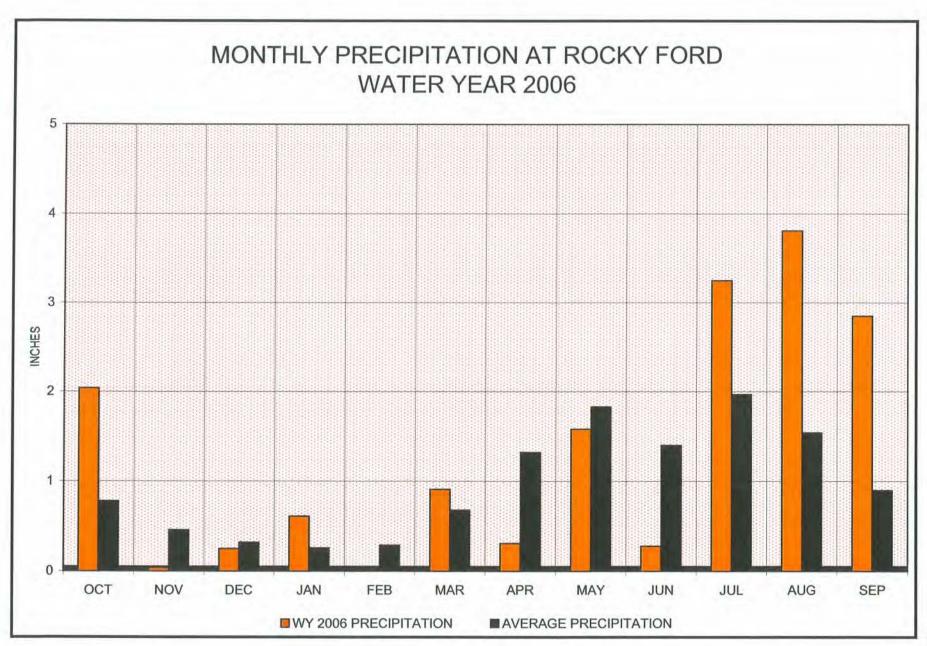
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1						·		0	137	68	0	
2								4	154	75	0	
3								17	171	88	0	
4								23	177	74	0	
5			1		*****		11/2	27	169	68	0	
6								24	179	73	0	
7								21	196	70	0	
8								20	237	75	0	
9								18	215	75	0	
10								16	186	70	0	
11								16	180	49	******	
12						22222	0	23	153	40		
13		777***				*****	0	37	144	40	E	
14							0	46	155	40		
15		J					0	63	149	38		
16			*****				0	82 🤉	124	34		
17							0	93	106	34		
18							0	102	102	32		
19			11202				0	115	109	29		
20							0	122	107	29		
21			7				0	135	91	25		
22							0	158	64	23	*****	
23		******	1	- Section 1	1		0	159	45	23		i je
24					Heren		2	128	47	8		
25				THE STATE OF			8	150	48	0		
26							5	166	33	0		
27	-		2000	Lucia			7	159	24	0		
28							11	143	24	0		
29						2222	10	119	24	0		
30	/						9	104	34	0		
31					ila i	and the		114		0	Citat	
Min	0	0	0	0	0	0	0	0	24	0	0	0
Max	0	0	0	0	0	0	11	166	237	88	0	0
Mon Mean	0	0	0	0	0	0	2	78	119	42	0	
Div Mean	0	0	0	0	0	0	8	80	119	42	1075	0
Ac-Ft	0	0	0	0	0	0	105	4766	7109	2341	0	0

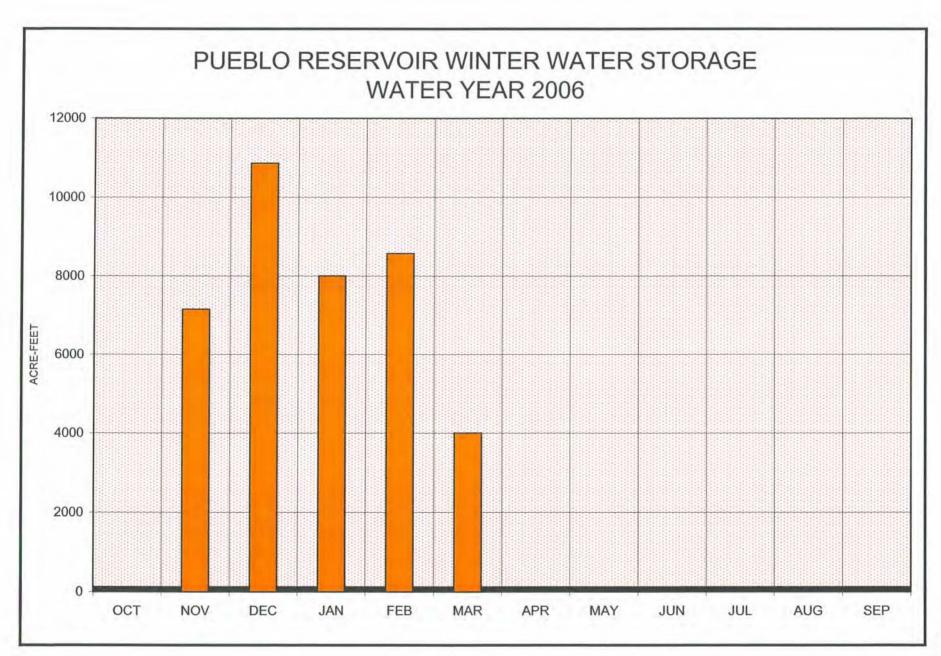
Water Year total – 14321 Ac-Ft, Maximum Discharge 250 CFS at 2000 hrs, 08-June-2006, Monthly Mean is average of all recorded values, Diversion Mean is average of all recorded values above zero, ----- indicates no data were collected

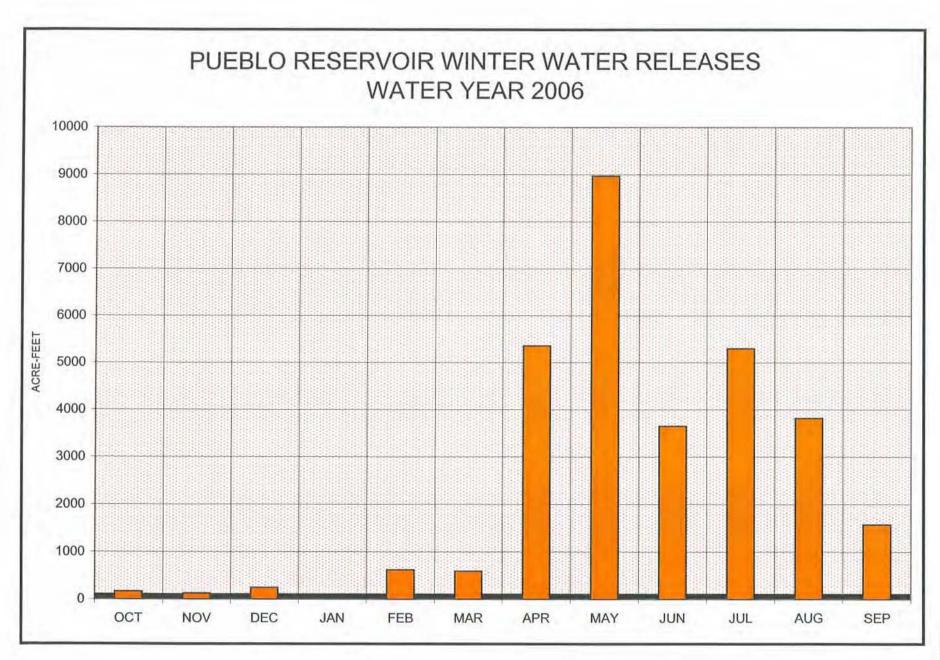


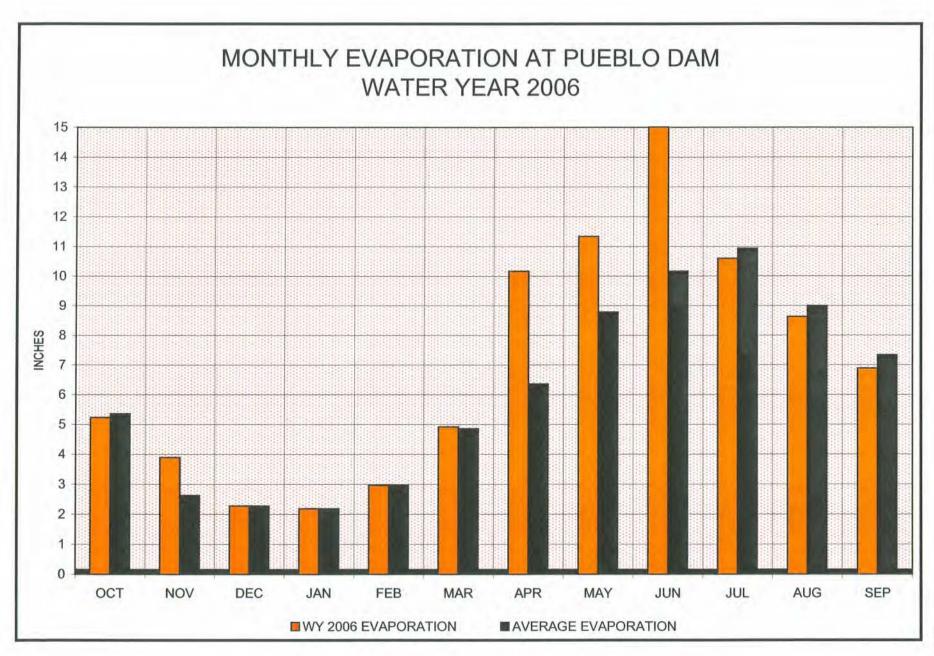


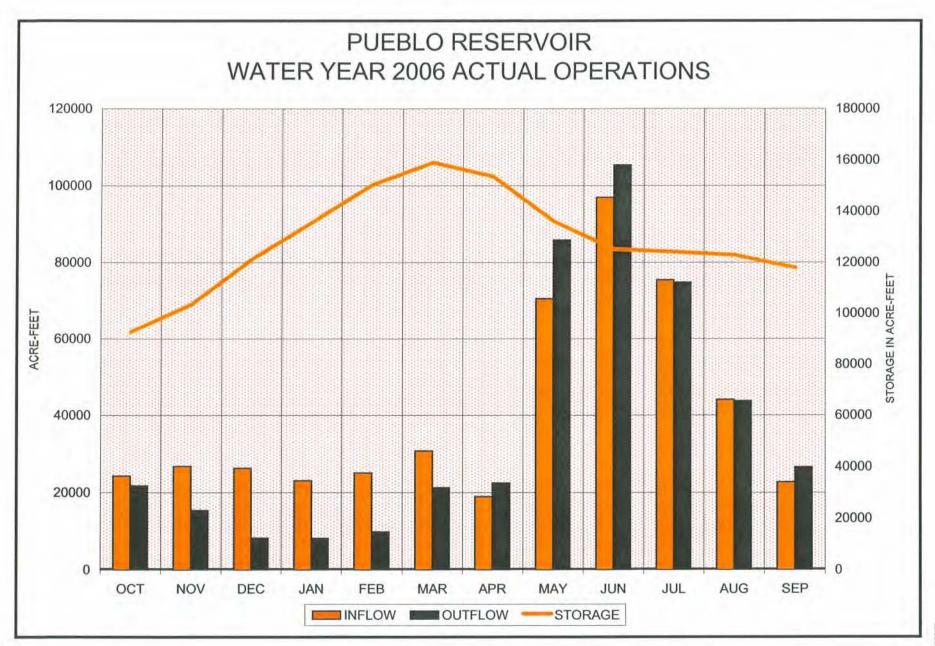


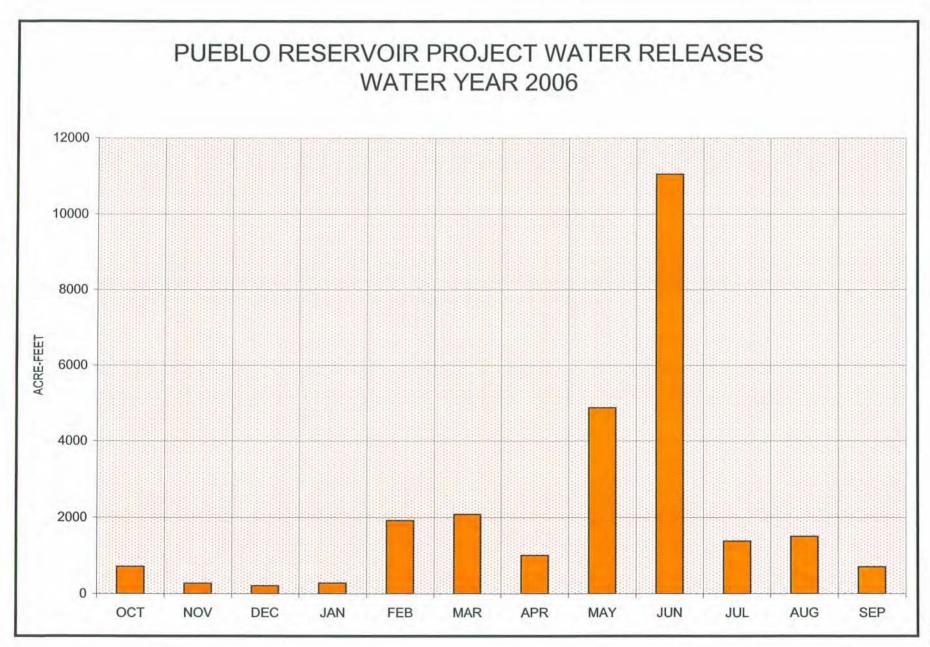












OPERATING CRITERIA

- 1. The water exchange will be implemented October 1 through September 30.
- 2. The releases to the Roaring Fork River at the Roaring Fork Diversion Dam and Lincoln Creek at the Grizzly Diversion Dam shall be accounted as follows:

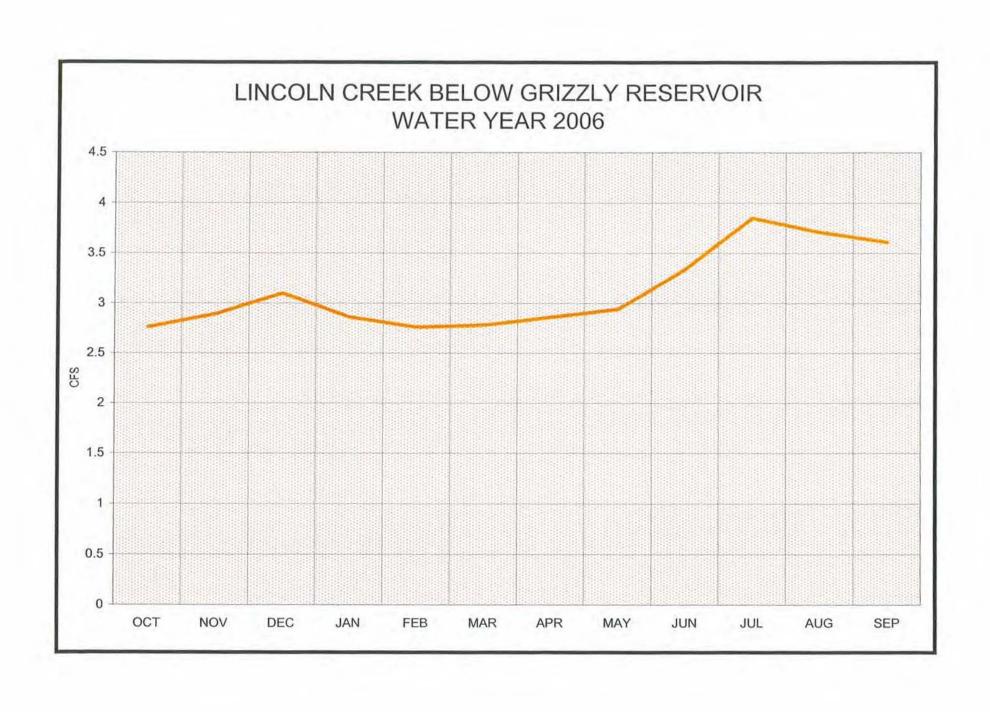
Month	Grizzly Diversion(ft ³ /s)	Roaring Fork Diversion(es)
October	3.0	4.0
November	3.0	0.0
December	3.0	0.0
January	3.0	0.0
February	3.0	0.0
March	3.0	0.0
April	3.0	0.0
May	3.0	1.0
June	2.0	1.5
July	2.0	1.5
August	3.0	4.0
September	3.0	4.0

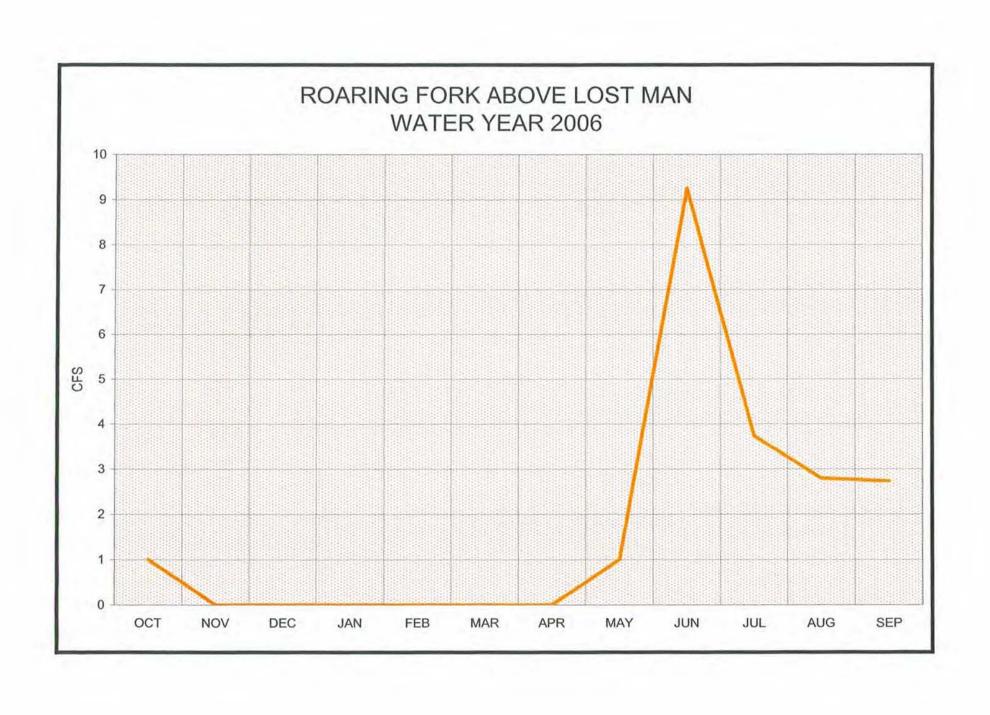
- 3. At any time the Twin Lakes Reservoir and Canal Company (Company) is bypassing water, in addition to that designated above, it will be assumed that the Company could not have diverted that water and will not receive any credit for exchange in excess of the above amounts.
- 4. In the event less water than the above amounts is bypassed, only the amount actually bypassed will be credited.
- 5. The total volume of the release at both gages combined shall not exceed 3,000 acre-feet in any one water year.
- 6. No credit for exchange will be made on days when there is no documentation of such bypasses.
- 7. No credit will be given for water bypassed when diversions are called out by the State Engineer.

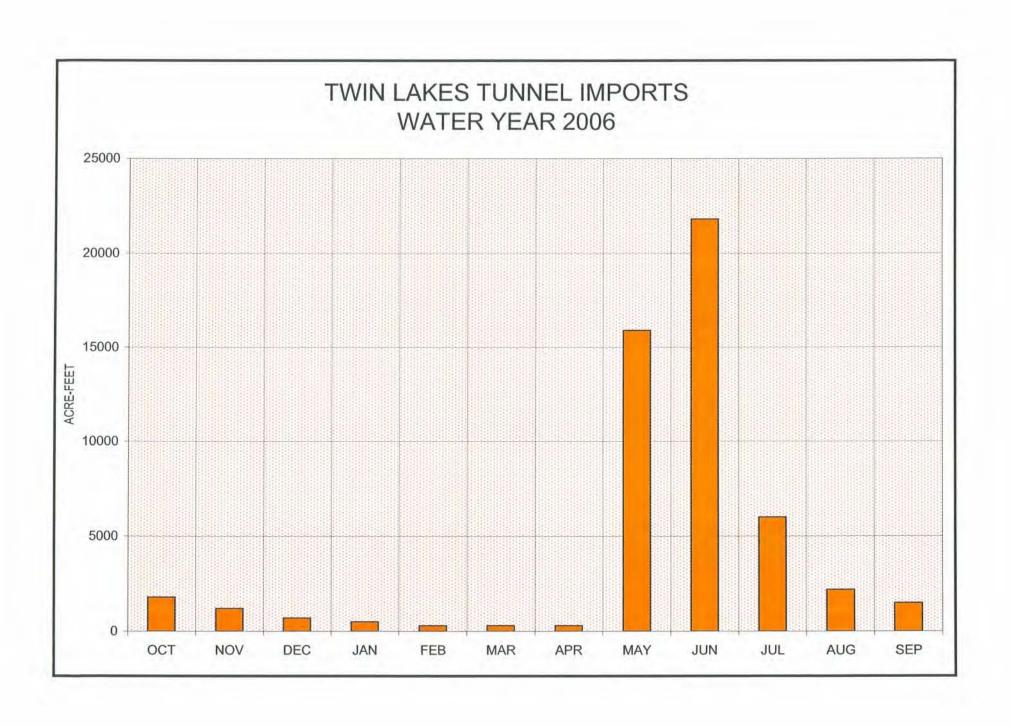
Twin Lakes Reservoir and Canal Company Exchange with Fryingpan-Arkansas Project Water 2005-2006 Units = Acre-Feet

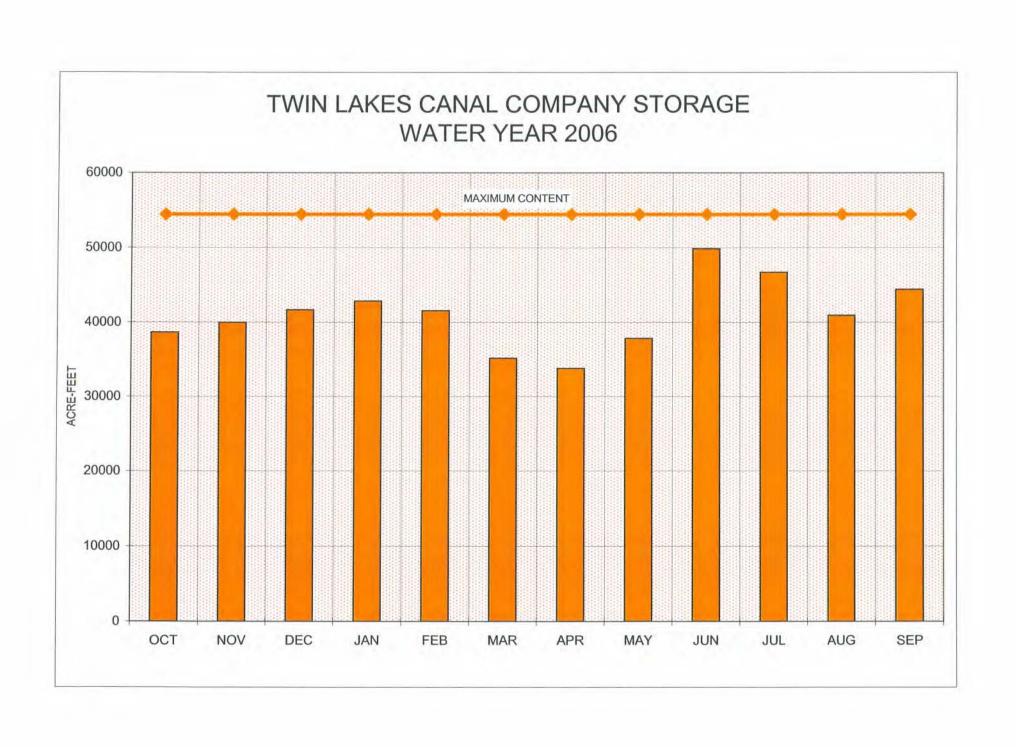
	Lincoln Creek below Grizzly Reservoir	Roaring Fork River above Lost Man Creek (2)	Total (1 + 2) (3)	Twin Lakes Storage (3) x 0.9913' (4)
October	170	0	170	168
November	172	0	172	170
December	180	0	180	178
January	176	0	176	174
February	153	0	153	152
March	171	0	171	169
April	169	0	169	167
May	175	0	175	174
June	195	186	381	378
July	237	230	467	463
August	227	171	398	396
September	214	162	376	373
Total	2,239	749	2,988	2,962

 $^{^{\}rm I}$.87% transit loss from the outlet of Twin Lakes Tunnel to Twin Lakes normally taken on all Twin Lakes Reservoir and Canal Company imported water.









OPERATING PRINCIPLES

FRYINGPAN-ARKANSAS PROJECT

ADOPTED BY THE STATE OF COLORADO

APRIL 30, 1959

(As amended December 30, 1959, and December 9, 1960)

MARCH 15, 1961----Ordered to be printed

U. S. GOVERNMENT PRINTING OFFICE WASHINGTON: 1961

H. RES. 91

In the House of Representatives, U.S.,

March 15, 1961.

Resolved, That there be printed as a House document the publication entitled " Operating Principles, Fryingpan-Arkansas Project, Adopted by the State of Colorado, April 30, 1959 (as amended December 30, 1959, and December 9, 1960)", and that there be printed for the use of the Committee on Interior and Insular Affairs one thousand additional copies.

Attest:

Ralph R. Roberts, Clerk.

OPERATING PRINCIPLES, FRYINGPAN-ARKANSAS PROJECT

ADOPTED BY THE STATE OF COLORADO, APRIL 30, 1959

(As Amended December 30, 1959, and December 9, 1960)

The construction and operation of the project involve the diversion of water from the headwaters of the Fryingpan River and other tributaries of the Roaring Fork River to the Arkansas River Basin. The project contemplates

- (a) The maximum conservation and use of water;
- (b) The protection of western Colorado water uses, both existing and potential, in accordance with the declared policy of the State of Colorado; and
- (c) The preservation of recreational values.

In order to accomplish such purposes, the project shall be operated by the United States in compliance with the Federal reclamation laws, the laws of the State of Colorado relating to the appropriation, use, or distribution of water, and the following operating principles:

1. As used herein:

- (a) "Project" means that certain enterprise planned and designed by the Bureau of Reclamation, Department of the Interior, for the transmountain diversion of water from the headwaters of the Fryingpan River and other tributaries of the Roaring Fork River to the basin of the Arkansas River, together with all of its appurtenant works and facilities in both eastern and western Colorado.
- (b) "Eastern Colorado" means that portion of the State of Colorado lying within the natural drainage basin of the Arkansas River.
- (c) "Western Colorado" means that portion of the State of Colorado lying within the natural drainage basin of the Colorado River and served by diversions made from the Colorado River, or its tributaries, above its confluence with the Gunnison River.
- (d) "Southeastern Colorado Water Conservancy District" means that entity created to contract for payment to the United States of an appropriate portion of project cost allocated to certain water uses in eastern Colorado.
- "Colorado River Water Conservation District" means that entity created by Colorado Revised Statutes 1953, 149-8, as amended.
 "Southwestern Water Conservation District" means that entity created by Colorado Revised Statutes 1953, 149-9, as amended.
- (g) "Ruedi Reservoir" means the reservoir presently planned for construction on the Fryingpan River above the town of Basalt as part of the project.
- (h) "Ashcroft Reservoir" means not only the reservoir contemplated for construction on Castle Creek, a tributary of the Roaring Fork River, but also, unless the context requires otherwise, any other reservoir that may be constructed in the Roaring Fork basin above the town of Aspen in lieu of that reservoir.
- (i) "cfs" means cubic feet of water per second of time.

2. The Ruedi Reservoir shall be constructed and maintained on the Fryingpan River above the town of Basalt with an active capacity of not less than 100,000 acrefeet. In addition thereto and in order to offset adverse strearnflow conditions on the Roaring Fork River above the town of Aspen which might occur as a result of the project enlargement of the Twin Lakes Reservoir, the Ashcroft Reservoir on Castle Creek, or some reservoir in lieu thereof, shall be constructed on the Roaring Fork drainage above Aspen to a capacity of approximately 5,000 acrefeet: Providing., However, That the Ashcroft Reservoir shall be constructed only if the Secretary of the Interior after appropriate study shall determine that its benefits exceed the costs: And providing further, That no part of the construction, operation, or maintenance of said Ashcroft Reservoir shall be chargeable to the Fryingpan-Arkansas project.

All of such stored water shall be released under the conditions and limitations hereinafter set forth.

- 3. The receipts from the sale of water from Ruedi Reservoir, as permitted in paragraph 6(b) hereof, shall be applied solely to the operation and maintenance costs and to those reimbursable construction costs of said reservoir which exceed \$7,600,000. The cost of perpetual operation and maintenance of the Ruedi Reservoir shall be borne by users of project water and users of water stored in Ruedi Reservoir in such proportion as may be determined by the Secretary of the Interior.
- 4. The inclusion of the Ruedi Reservoir in the project shall not preclude the construction of any other replacement or regulatory reservoirs on the Colorado River or its tributaries above Cameo gaging station.
- 5. The Ruedi Reservoir shall be completed and in operation before any water is diverted to eastern Colorado by means of the project.
- 6. (a) The replacement capacity of Ruedi Reservoir, and any reservoir constructed in addition thereto, is that portion of the total reservoir capacity required to permit project diversions at times when such diversions could not otherwise be made because of simultaneous demands of senior diversions in western Colorado existing at the time of the adoption of these operating principles, and shall be so operated to accomplish this purpose. Water stored in such capacity shall be released by the United States, upon the request of the Colorado State engineer, to the extent that water would have been available to said decreed rights except for stream depletion resulting from diversions by this project to the Arkansas Valley.
 - (b) The regulatory capacity of Ruedi Reservoir, and any reservoir constructed in addition thereto, is that portion of the total reservoir capacity not needed for replacement purposes. Water stored in such category may be sold or leased by the United States to water users in Colorado for any purpose recognized by the laws of the United States: Provided, That the sale of water for use outside the natural basin of the Colorado River can only be made with the consent of the Colorado River Water Conservation District. Charges for the use of such water shall be established by the Secretary of

the Interior by appropriate contract in accordance with the payment ability of such water users.

7. The primary purpose of Ruedi Reservoir, and any reservoir constructed in addition thereto, is to furnish, to the extent of its capacity, in like manner as if the project were constructed by a water conservancy district organized pursuant to the laws of the State of Colorado, the water required for the protection of western Colorado water users by the provisions of Colorado Revised Statutes 1953, 149-6-13, reading as follows:

However, any works or facilities planned and designed for the exportation of district created under this article, shall be subject to the provisions of the Colorado River water from the natural basin of the Colorado River and its tributaries in Colorado, by any compact and the Boulder Canyon Project Act. Any such works or facilities shall be designed, constructed and operated in such a manner that the present appropriations of water, and in addition thereto prospective uses of water for irrigation and other beneficial consumptive use purposes, including consumptive uses for domestic, mining, and industrial purposes, within the natural basin of the Colorado River in the State of Colorado, from which water is exported, will not be impaired nor increased in cost at the expense of the water users within the natural basin. The facilities and other means for the accomplishment of said purpose shall be incorporated in, and made a part of any project plans for the exportation of water from said natural basin in Colorado.

- 8. Project diversions from Lime Creek shall be made only in the months of May and June of each year, unless the Colorado River Water Conservation District shall, by written communication, advise the Colorado State engineer that additional diversions can be made.
- 9 The respective decrees which may be or have been awarded to the parties hereto as a part of the Fryingpan-Arkansas project and Basalt project shall be administered by the proper officials of the State of Colorado, in accordance with the applicable laws of the State of Colorado, and with the following principles and procedures, to wit:
 - (1) That the demand on the waters available under such decrees shall be allocated in the following sequence:
 - (a) For diversion to the Arkansas Valley through the collection system and the facilities of the Fryingpan-Arkansas project in an amount not exceeding an aggregate of 120,000 acre-feet of water in any year, but not to exceed a total aggregate of 2,352,800 acre-feet in any period of 34 consecutive years reckoned in continuing progressive series starting with the first full year of diversions, both limitations herein being exclusive of Roaring Fork exchanges as provided in (c) below, and exclusive of diversions for the Busk-Ivanhoe decree; and with the further and absolute limitation that in order to protect existing and future beneficial uses of water in Western Colorado, including recreational and fishing values, the State engineer shall so regulate the transmountain diversions above referred to, to the end that no diversions shall be made which will reduce the remaining aggregate streamflows to less than either of the following minimum standards:

- (i) The Fryingpan collection system at the points of diversion collectively, exclusive of Lime Creek: 15 cfs October 1 through March 31; 30 cfs April 1 through September 30.
- (ii) Near Norrie (immediately below the junction of North Fork and Fryingpan River): 30 cfs October 1 through March 31; 100 cfs April 1 through April 30; 150 cfs May 1 through May 31; 200 cfs June 1 through June 30; 100 cfs July 1 through July 31; 75 cfs August 1 through August 31; 65 cfs September 1 through September 30.

In maintaining the above minimum standards, the project diversions shall be regulated, so far as is practicable, in such a manner that the North Fork of the Fryingpan River, the Fryingpan River, and each of the tributaries of those streams, shall contribute to the residual streamflows required by those minimum standards quantities of water in proportion to their natural contributions.

- (b) For storage in Ruedi Reservoir to the extent of its actual capacity, which is to be not less than 100.000 acre-feet.
- (c) For 3,000 acre-feet annually, to the extent that it is available in excess of (a) and (b) above, or such part thereof as may be required, to be delivered to the Twin Lakes Reservoir and Canal Company in exchange for equivalent releases from the headwaters of the Roaring Fork River which would otherwise be diverted through such Twin Lakes Reservoir and Canal Company collection and diversion system.
- (d) For any other beneficial use in western Colorado in accordance with court decree, but not herein contemplated.
- (2) The effectuation of the above principles requires concurrent Fryingpan-Arkansas project diversion and Ruedi Reservoir storage to be accomplished in the manner following: The State engineer annually shall collect pertinent data, including information pertaining to snowpack and all other available evidence, and shall thereafter so divide and apportion the surface runoff as to achieve, as nearly as possible, the foregoing division of water and the maximum of concurrent diversions and storage. The diversions herein contemplated shall be on the basis of a water year hereby defined as that interim of October 1 through the following September 30.
- 10. For the protection of recreational values, including fishing, on the Fryingpan River below Ruedi Reservoir, releases of water from said reservoir, not to exceed the stream inflow, shall be made so that the streamflow immediately below the junction of the Fryingpan River and Rocky Fork shall not be reduced below 39 cfs from November 1 to April 30, and 110 cfs from May 1 to October 30, or as actual experience or court decree hereafter dictate.
- 11. An appropriate written contract may be made whereby Twin Lakes Reservoir and Canal Company shall refrain from diverting water whenever the natural flow of the Roaring Fork River and its tributaries shall be only sufficient to maintain a flow equal to or less than that required to maintain the recommended average flows in the Roaring Fork River immediately above its confluence with Difficult

Creek in a quantity proportionate to the respective natural flow of the Roaring Fork River. The recommended average flows above mentioned are flows in quantities equal to those recommended as a minimum immediately above its confluence with Difficult Creek according to the following schedule submitted by the United States Fish and Wildlife Service and the Colorado Game and Fish Commission:

Month	Average Second-feet	Acre-feet (thousands)	Month	Average Second-feet	Acre-feet (thousands)
October	44	2.7	May	100	6.2
November	35	2.1	June	120	7.1
December	29	1.8	July	100	6.2
February	25	1.4	September	44 _	2.6
March	24	1.5		_	
April	64	3.8	Total		40.9

In maintaining the above averages, at no time shall the flow be reduced below 15 cfs during the months of August to April, inclusive, or below 60 cfs during the months of May to July, inclusive, providing the natural flow during said period is not less than these amounts. The obligation to supply the minimum streamflow as set forth in the above table on the Roaring Fork River shall, to the extent of 3,000 acre-feet annually, be a project obligation to be supplied from any waters diverted from the south tributaries of Hunter Creek, Lime Creek, Last Chance Creek, or any of them.

The Twin Lakes Reservoir and Canal Company shall not be required to refrain from diverting water under its existing decrees from the Roaring Fork River except to the extent that a like quantity of replacement water is furnished to said company without charge therefore through and by means of project diversions and storage.

If by reason of storage capacity in the Ruedi Reservoir, or any reservoir constructed in addition thereto, the Twin Lakes Reservoir and Canal Company derives additional water or other benefits or advantages it would not have realized had this project not been constructed, then nothing herein contained shall prevent the project from making appropriate charges for such water or other benefits or advantages. All revenues derived from the use of water stored in Ashcroft Reservoir shall be used to assist in the repayment of the construction, operation, and maintenance costs of that reservoir, or any reservoir constructed in lieu thereof, as may be determined by the Secretary of the Interior.

- 12. All lands acquired and held for project construction and operation and water surfaces of project reservoirs will be open to the public for recreational purposes, excepting those areas reserved by the operating agency.
- 13. The project will be operated in such a manner that those in eastern Colorado using project water imported from the Colorado River Basin for domestic purposes shall have preference over those claiming or using water for any other purpose.

- 14. The project is to be operated in such a manner as to secure the greatest benefit from the use and reuse of imported project waters within project boundaries in the State of Colorado
- 15. Any and all benefits and rights of western Colorado water users in and to water stored in Green Mountain Reservoir, as described and defined in Senate Document 80, 75th Congress, ^{1st} session, shall not be impaired or diminished by this project.
- 16. The project, its operation, maintenance, and use shall be subject to the provisions of the Upper Colorado River Basin Compact of October 11, 1948 (Public Law 37, 81⁵¹ Congress, 1st session), and the Colorado River Compact of November 24, 1922 (House Document 605, 67th Congress, 4th session).
- 17. The Colorado River Water Conservation District of the State of Colorado shall acquire title to storage of water in Ruedi Reservoir and any reservoir constructed in addition thereto, by appropriate proceedings in the courts of the State of Colorado. The Southeastern Colorado Water Conservancy District of the State of Colorado shall likewise acquire title to the water required by the project for diversion to the Arkansas Valley. The Secretary of the Interior shall at any time after the authorization of the project have the option to obtain or require the transfer to the United States of any and all rights initiated or acquired by appropriation as herein set forth: Provided, however, That the rights so taken shall be subject to a beneficial use of such water as may be provided in the repayment contract or contracts, and subject to all the operating principles herein set forth.
- 18. No transmountain diversion of water shall ever be made through the collection and diversion system of the Fryingpan-Arkansas project in excess of the quantitative limitations and conditions established by this document: Provided, however, That when under the laws of the State of Colorado, there may be additional water available for such collection and diversion which is not at the time of diversion required for beneficial use in western Colorado or for filling interstate water compact agreements, then such water may be collected and diverted for beneficial use in the Arkansas Valley: Provided further, That such additional diversion shall only be made with the mutual consent of each of the following agencies of the State of Colorado, to wit: the Colorado Water Conservation Board, the Southwestern Water Conservation District, the Colorado River Water Conservation District, and the Southeastern Colorado Water Conservancy District.
- 19. To assure project operation in conformity with the operating principle heretofore stated, to provide a means for the collection and interchange of information, and to provide a method for the continued study of project operations to the end that, if the stated operating principles may be improved upon, recommendations for changes may be made to the contracting parties, a commission shall be created in an appropriate manner to be composed of one representative of the Southeastern Colorado Water Conservation District, one representatives of the Colorado River Water Conservation District, two representatives of the United States, and one representative of the State of Colorado appointed by the Colorado Water Conservation Board after

consultation with the Colorado Game and Fish Commission. The powers of such commission shall be limited to the collection of data, the making of findings of fact, and the suggestion of changes in operating principles.

These operating principles shall be deemed to have amended and take the place of those operating principles signed and executed on April 30, 1959. These operating principles shall be and do constitute a contract between the signatory parties, and shall inure to the benefit of and shall be and remain binding upon said parties, their respective successors and assigns.

Executed as amended at Denver, Colorado, this ₉th day of December 1960.

COLORADO WATER CONSERVATION BOARD

Steve McNichols, Chairman; Governor, State of Colorado

Attest:

Felix L. Sparks,

Director and Secretary

SOUTHEASTERN COLORADO WATER CONSERVANCY

DISTRICT

By J. Selby Young, President

Attest:

J. G. Shoun, Secretary

COLORADO RIVER WATER CONSERVATION DISTRICT

By A. Allen Brown, President Attest:

Philip P. Smith, Secretary

SOUTHWESTERN WATER CONSERVATION DISTRICT

By Ira E. Kelly, President Attest:

Archie B. Toner, Secretary