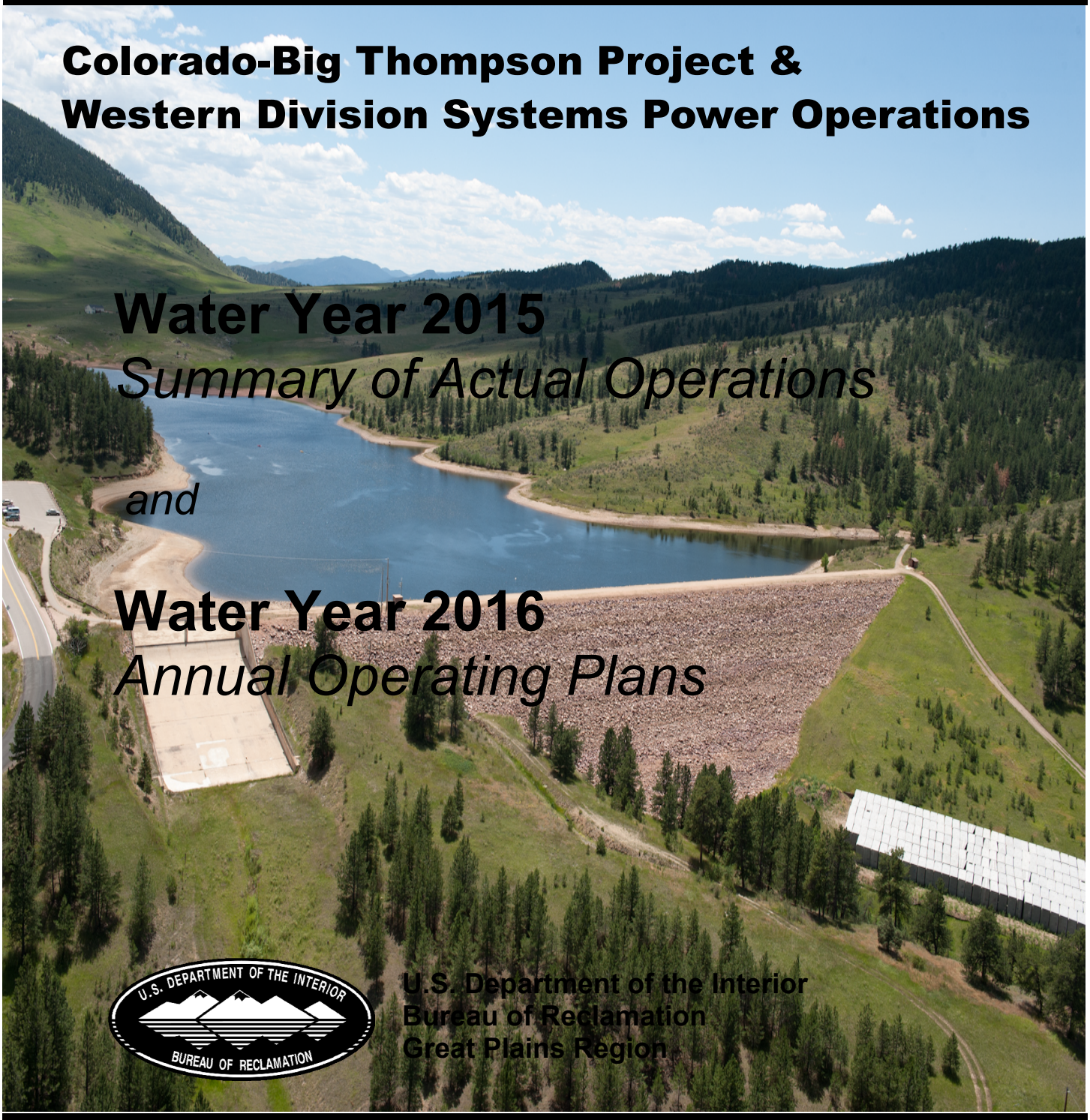
RECLAMATION

Managing Water in the West

Annual Operating Plans



Colorado-Big Thompson Project & Western Division Systems Power Operations

Water Year 2015

Summary of Actual Operations

and

Water Year 2016

Annual Operating Plans

U.S. Department of the Interior
Bureau of Reclamation
Great Plains Region

SIXTY-FOURTH ANNUAL REPORT
COLORADO-BIG THOMPSON PROJECT

This report is the sixty-fourth Annual Report for the Colorado-Big Thompson Project. Its purpose is to inform interested parties of the coordinated operation of the project. The report has two main parts: one which describes the actual operation of the project during Water Year (WY) 2015 and the plan of operation for WY 2016, while the other presents the hydropower operations for WY 2015 and the forecast for WY 2016.

This report meets the requirement of the Stipulation dated October 5, 1955, as amended October 12, 1955, and filed with the United States District Court for the District of Colorado in Civil Action Number's. 2782, 5016, and 5017 for an annual report of the Green Mountain Reservoir Operations and the Agreements in the Stipulation and Agreement of the Orchard Mesa Check Case (Colorado Water Division 5, 91CW247) dated September 6, 1996, to produce a Historic Users Pool Annual Operating Plan.

COLORADO-BIG THOMPSON PROJECT
ANNUAL OPERATING PLANS

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DESCRIPTION OF THE COLORADO-BIG THOMPSON PROJECT

The Colorado-Big Thompson Project (C-BT) is one of the largest and most complex natural resource developments undertaken by the Bureau of Reclamation. It consists of over 100 structures integrated into a trans-mountain water diversion system through which multiple benefits are provided.

The C-BT spreads over approximately 250 miles in the state of Colorado. It stores, regulates, and diverts water from the Colorado River west of the Rocky Mountains, providing supplemental water for irrigation of 720,000 acres of land east of the Rocky Mountains. It also provides water for municipal use, industrial use, hydroelectric power, and water-oriented recreation. Additionally, it provides storage of replacement water to the west slope for agricultural, recreation, and environmental uses including supplemental fish flow. This replacement water ensures that senior water rights on the west slope are not impacted by diversions to the east slope. Major features of the C-BT include; dams, dikes, reservoirs, powerplants, pumping plants, pipelines, tunnels, transmission lines, substations, and other associated structures (Table 1, Exhibits 1 and 2).

Historically, the C-BT has diverted approximately 230,000 acre-feet (AF) of water annually (310,000 AF maximum) from the Colorado River headwaters on the western slope to the South Platte River basin on the eastern slope, for distribution to project lands and communities. The Northern Colorado Water Conservancy District (Northern Water) apportions the water used for irrigation to more than 120 ditches and 60 reservoirs. Twenty-nine communities receive municipal and industrial water from the C-BT. The Western Area Power Administration (WAPA) markets the electric power produced at the six powerplants.

The western portion of the C-BT consists of a series of reservoirs forming a runoff collection system. This system captures runoff from the high mountains and stores, regulates, and conveys the water to Adams Tunnel for delivery to the east slope, passing under the Continental Divide. Another C-BT west slope feature is Green Mountain Reservoir, a repayment facility used to regulate flows in the Colorado River. Pursuant to authorities in Senate Document 80, (which authorized the C-BT), the 1984 Green Mountain Operating Policy and the agreements in the September 1996 Stipulation and Agreement of the Orchard Mesa Check Case settlement (Case Number 91CW247, Colorado Water Division 5), the content of the HUP in Green Mountain Reservoir is evaluated during the summer to determine the availability of water surplus for the needs of historic beneficiaries. If it is determined that surplus water is available, it may be delivered based upon need, first to the federal Grand Valley Powerplant, and then to other uses based on a priority system or on specific agreements.

Irrigation systems on the Colorado River, above the Blue River confluence, were improved to enable continued use of existing rights. Releases are made from Lake Granby to maintain the fishery in the Colorado River.

The C-BT's principal Colorado River storage facilities on the west slope are Lake Granby, Grand Lake, and Shadow Mountain Reservoir.

Figure 1: A summer spill at Green Mountain Dam and Reservoir. Green Mountain Powerplant, located just below the dam, also generating power.

Willow Creek Reservoir located on Willow Creek, a tributary to the Colorado River below Lake Granby, is also a principal C-BT west slope facility. Willow Creek Pumping Plant lifts the water 175 feet. It then flows by gravity via the Willow Creek Feeder Canal to Lake Granby.

Completed in 1953, Willow Creek Reservoir has a total storage capacity of 10,600 AF. The uncontrolled spillway, located at the left abutment, has a maximum flow capacity of 3,200 cubic feet per second (cfs). The Willow Creek Feeder Canal begins at the left abutment and has a capacity of 400 cfs. The canal is used to transfer water to Granby Reservoir. Excess inflow of water into the reservoir is transferred by the Willow Creek Feeder Canal and pumped to Lake Granby for storage.

Granby Reservoir is located on the upper Colorado River, and was completed in 1950. The reservoir stores the flow of the Colorado River and water pumped from Willow Creek Reservoir. The reservoir has a total storage capacity of 539,800 AF. Flows through the spillway are controlled by two radial gates with a total release capacity of 11,500 cfs.

Granby Pumping Plant lifts the water 99 feet from Lake Granby to Granby Pump Canal. The canal conveys the water 1.8 miles to Shadow Mountain Lake, which also intercepts flows from the North Fork of the Colorado River. Shadow Mountain Lake connects with Grand Lake to make a single body of water, from which diversions flow into Adams Tunnel to be conveyed to the eastern slope. The Granby Pumping Plant has three units with a combined installed capacity of 1,200 cfs.

Figure 2: Farr Pumping Plant, on the shores of Granby Reservoir.

Emerging from Adams Tunnel into the East Portal Reservoir, the water flows across Aspen Creek Valley in a siphon and then under Rams Horn Mountain through a tunnel. At this point, it enters a steel penstock and falls 205 feet to Mary's Lake Powerplant. This powerplant is located on the west shore of Mary's Lake. The water is conveyed between Mary's Lake and Estes Powerplant, through Prospect Mountain Conduit and Prospect Mountain Tunnel.

Lake Estes is located on the Big Thompson River, and is formed by Olympus Dam, completed in 1949. It serves as an afterbay for the Estes Powerplant. The storage in Lake Estes and the forebay storage in Mary's Lake enable the Estes Powerplant to meet daily variations in energy demand. Lake Estes has a total capacity of 3,100 AF, approximately. It captures the discharge of Estes Powerplant, and inflow coming from the Big Thompson River. It also regulates river flow below Olympus Dam, and releases water to the Southern Arm of the Foothills Power System via Olympus Tunnel, which has a capacity of 550 cfs. The Estes Powerplant has three hydroelectric units with a total capacity of 45 megawatts. The combined flow capacity for the three units is 1,300 cfs. The spillway, located on the right abutment, has five radial gates with a total discharge capacity of approximately 21,200 cfs. The center gate has been automated, and is operated remotely from the Casper Control Center (CCC). During the winter months, C-BT water is diverted through Adams and Olympus Tunnels and routed through the Foothills Power System to terminal storage at Carter and Horsetooth Reservoirs. This entire operation is controlled remotely from the CCC.

Figure 3: West Portal of the Adams Tunnel, on the shores of Grand Lake.

Figure 4: The East Portal of the Adams Tunnel, including the East Portal gage and the entrance to the Aspen Creek Siphon.

Figure 5: Mary's Lake and Mary's Powerplant with Rocky Mountain National Park and the continental divide in the background.

Figure 6: Olympus Dam and Lake Estes, along with the Big Thompson River gage below Olympus Dam. The Town of Estes Park and Rocky Mountain National Park can be seen in the background.

Water from Lake Estes and the Big Thompson River is conveyed by Olympus Siphon and Tunnel, and Pole Hill Tunnel and Canal, to a penstock through which the water drops 815 feet to Pole Hill Powerplant. The flow is then routed through Pole Hill Powerplant afterbay, Rattlesnake Tunnel, Pinewood Lake, Bald Mountain Pressure Tunnel, and eventually dropped 1,055 feet through two penstocks to Flatiron Powerplant. This powerplant discharges into Flatiron Reservoir, which regulates the water for release to the foothills storage and distribution system. The afterbay storage in Flatiron Reservoir and the forebay storage in Pinewood Lake enable Flatiron Powerplant to regulate power releases to meet daily power loads.

Flatiron Reservoir pump/turbine lifts water as much as 297 feet, and delivers it through Carter Lake Reservoir Pressure Conduit and Tunnel to Carter Lake Reservoir. When the flow is reversed, the unit acts as a turbine generator and produces electricity, discharging back into Flatiron Reservoir.

Figure 7: Flatiron Powerplant penstocks, with Flatiron Reservoir and Flatiron Powerplant on the left and Carter Reservoir on the right.

The Saint Vrain Supply Canal delivers water from Carter Lake Reservoir to the Little Thompson River, St. Vrain Creek, and Boulder Creek Supply Canal. The latter delivers water to Boulder Creek and Boulder Reservoir. The South Platte Supply Canal, diverting from Boulder Creek, delivers water to the South Platte River.

Figure 8: Charles Hansen Feeder Canal at the Trifurcation. The photo also includes the siphon over Highway 34 and 7..

The Charles Hansen Feeder Canal (CHFC) transports water from Flatiron Reservoir to the Big Thompson River and Horsetooth Reservoir. The canal crosses the Big Thompson River in a siphon above the river and canyon highway. Water from the Big Thompson River can be diverted into the canal by Dille Diversion Dam one mile up the canyon mouth and used for power generation at Big Thompson Powerplant.

C-BT water deliveries and water diverted from the Big Thompson River for power generation purposes, are dropped through a chute from the feeder canal ahead of the siphon crossing, or are passed through the Big Thompson Powerplant to convert the available head to electricity. Horsetooth Reservoir is located west of Fort Collins and is formed by Horsetooth Dam at the north end; Soldier, Dixon, and Spring Canyon Dams on the east; and Satanka Dike. An outlet at Soldier Canyon Dam supplies water to the city of Fort Collins, three rural water districts, Colorado State University, and the Dixon Feeder Canal for irrigation. The principal outlet from Horsetooth Reservoir is through Horsetooth Dam into the Charles Hansen Supply Canal. This canal delivers water to a chute discharging into the Cache La Poudre River and to a siphon crossing the river to supply the Windsor Reservoir and Canal Company. A turnout from the Supply Canal supplies the city of Greeley municipal water works. Water delivered to the river replaces, by exchange, water diverted upstream to the North Poudre Supply Canal, which conveys it to the North Poudre Irrigation Company System.

SUMMARY OF OPERATIONS FOR WATER YEAR 2015

Review of Water Year 2015 Most-Probable Plan

The C-BT most probable Annual Operating Plan (AOP 2015) from October 2014 was developed considering the effects of historical average runoff values, the expected demands and depletions of the Northern Water and Denver Water, pool levels recorded at the end of WY 2014, other average values, special operations such as previously planned system outages and maintenance schedules, and an assumed Northern Water quota of 70 percent.

The AOP 2015 assumed diversions through the Adams Tunnel totaling 190,500 AF during WY 2014. Most of that water was planned to be diverted during January, February, May, June and July 2015 while leaving sufficient capacity within the system to convey Big Thompson River skim water used for power generation, and possibly Big Thompson River priority water during the late spring and early summer months. The skim operation, according to the AOP 2015, could convey a total estimated volume of 16,700 AF of water through the Olympus Tunnel. The Dille Tunnel diversion structure remained unavailable during WY 2015, and did not participate in skim operations.

The Green Mountain Reservoir operational plan was developed considering the effects of upstream operations at Dillon Reservoir, forecasted depletions provided by Denver Water, average runoff values, anticipated system outages and planned special operations. Green Mountain Reservoir began the WY 2015 with an initial content of 115,215 AF. That content was expected to drop to 69,000 AF by late March 2015 before rebounding and reaching a full pool by early July 2015. According to the plan, the reservoir would physically fill in WY 2015 assuming a volume of inflow after depletions totaling 278,800 AF and depletions from Denver Water totaling 94,900 AF. The plan did not account for the Coordinated Reservoir Operations (CROS) in the spring months, or the Grand Lake Water Clarity Initiative in August 2015.

The operations at Granby Reservoir are highly dependent on the runoff conditions on both sides of the Continental Divide. The conditions on the east slope have a direct effect on the diversions through the Adams Tunnel. The diversions through the Adams Tunnel affect the pumping operations at the Farr Pumping Plant, and consequently the storage levels at Granby Reservoir. Granby Reservoir began WY 2015 with 522,187 AF in storage, the fifth highest in project history for September 30. Based on the diversion plans for the Adams Tunnel presented in the AOP 2015, the reservoir content was expected to drop to 474,800 AF by the end of March 2015, while rising to reach 527,900 AF by the end of June 2015. Under the AOP 2015, Granby Reservoir was expected to finish the year with a storage content of 502,000 AF. The Farr Plant pumping volume to Shadow Mountain was expected to total 102,300 AF for the entire WY 2015, with the bulk of the pumping operation taking place between January and February 2015 and later in July 2015. The WY 2015 AOP did not account for any pumping from the Windy Gap project during WY 2015. Meanwhile, pumping from Willow Creek to Granby was planned to total only 9,700 AF, mainly during April 2015.

Carter Reservoir began WY 2015 with 92,745 AF of water in storage, the highest volume in project history for September 30. Based on the AOP 2015 pumping to Carter Reservoir was to

resume in late December 2014 and continue through the middle of February 2015 with no interruptions. Additional pumping operations were planned late April through May 2015 and for June through July 2015. A total of 74,400 AF of water were planned to be pumped to Carter Reservoir during WY 2015. The AOP 2015 also assumed that no water stored at Carter Lake would be used to satisfy demands at the Trifurcation along the CHFC. Deliveries of water from Carter Reservoir were expected to total 89,000 AF; 78,300 AF of that C-BT water; and 10,700 AF from the Windy Gap Project. The boat ramps were expected to be operational for WY 2015, based on those projections.

Figure 9: Hiker enjoying one of the many trails around the Horsetooth Reservoir. In the picture Horsetooth Reservoir, Horsetooth Dam and the outlet works, which empty into the Charles Hansen Supply Canal. The reservoir has three more dams; Spring Creek, Dixon Canyon and Soldier Canyon. All the dams were refurbished between 1999 and 2003.

Horsetooth Reservoir began WY 2015 with 134,301 AF of water in storage the highest in project history for September 30. According to the AOP 2015, inflow to Horsetooth Reservoir was expected to total 80,700 AF by the end of September 2015 while the reservoir content of 114,600 AF for the same date. Deliveries of water were anticipated to total 94,500 AF for the entire WY 2015 with 86,600 AF coming from the C-BT Project, and 7,900 AF from the Windy Gap Project. The boat ramps were also expected to stay in the water during WY 2015 based on the AOP 2015 projections.

Three versions of the Annual Operating Plan were developed in October 2014; the maximum reasonable plan, most probable plan, and minimum reasonable plan. Only the most probable plan was considered for this report.

Weather Conditions and their Impact on C-BT Operations

Snow storms during the fall, winter and spring seasons of WY 2015 were intermittent. The area surrounding the C-BT project began WY 2015 with significant snow, as early as November 2014, along with colder than normal weather. But by December 2014 the snow ended and by January 2015 temperatures warmed up significantly, enough to melt some of the snow at lower elevations. As February arrived, cold weather and snow returned to the Northern Colorado Mountains. February 2015 was one of the snowiest on record, but it was then followed by one of the driest months of March on record. The weather was so dry in March 2015 that by April 2015 the snowpack had begun to decline significantly. What had appeared a promising runoff year back in February 2015 was beginning to look like a minimum-reasonable runoff year. The snowpack for the Granby contributing area had fallen to 82 percent of average, with the Big Thompson River at 86 percent of average and the Blue River holding just below-average.

Figure 10: Flatiron Powerplant penstocks, looking towards the plains. The Eastern Colorado Area Office of the Bureau of Reclamation, along with Flatiron Reservoir and The Charles Hansen Feeder Canal can be seen in the background.

Table A provides a view of the snowpack condition on April 1, 2015 at some of the watersheds within the C-BT system. Based on the snowpack conditions, the runoff forecast for April 1, 2015 was also below-average for all the locations within the C-BT region. Table B provides the runoff forecasts for several C-BT facilities.

TABLE A
Snow-Water Content for April 1, 2015

Watershed	Snow-Water Content		
	2015 (In.)	Avg. (In.)	% of Avg.
Green Mountain Reservoir	14.1	14.2	99
Willow Creek	8.1	9.3	87
Lake Granby	9.0	11.0	82
Lake Estes	8.5	9.8	86

TABLE B
Runoff Forecast for Several Locations within the C-BT Area

	Chance of Exceeding					
Forecast Point	**95% Reason-able Min 1/**	**75%**	**50% Most Probable**	**25%**	**5% Reason-able Max 1/**	**Most Probable % Avg**
Green Mtn. Res	185	229	260	291	335	95
Willow Crk. Res	9	24	34	44	59	71
Lake Granby	115	156	185	214	256	94
Big Thompson River Above Lake Estes	23	44	58	73	94	84
Big Thompson River at Canyon Mouth	69	97	116	135	163	125

1/ The probability is estimated to be 9 chances in 10 that the actual volume will fall between the reasonable minimum and reasonable maximum.

The forecasts from the National Weather Service during the winter months, called for an active spring weather pattern. By late April 2015, those forecasts began to materialize. The dry and warm weather pattern from March and early April 2015 began to change. Snow storms began to push into the Northern Colorado Mountains. Rain and snow also began to impact the foothills of the Front Range. By the later part of May 2015, the snowpack at most locations across the C-BT region had reached near or above average levels. An early runoff season, fed by the snowpack at lower elevations, along with high carryover storage content at Granby, forced the C-BT west slope reservoirs in the collection system to begin spilling prematurely. With Horsetooth and Carter Reservoirs near full capacity, and no demands for C-BT water yet, the Adams Tunnel diversions were shutoff in early May 2015. The already high level of Granby Reservoir forced an early spill at Willow Creek Reservoir. Preempted releases from Willow Creek Reservoir had

begun as early as March 2015. Granby Reservoir began preempted releases in early May 2015, taking advantage of the outlet works while the spillway concrete was being repaired. Higher releases from Granby Reservoir over the spillway began in late May 2015. Both reservoirs continued to spill past July 2015, while the Adams Tunnel diversions remained off, and Horsetooth and Carter were at near full capacity.

Wet and cooler weather continued through June 2015. The runoff remained consistently high at most locations. Free river conditions continued for the Big Thompson River until the middle of July 2015. Regular upslope weather systems continued to impact the region weekly in June 2015, bringing moisture from the Gulf of Mexico and causing significant flooding over the eastern plains. But the cooler weather also kept the snowmelt manageable, and releases from Olympus Dam were kept at or below 600 cfs during June 2015. Figure 11 illustrates how the Olympus Dam releases were managed during June 2015.

Most reservoirs across Northern Colorado began the spring season with high storage levels. The wet spring and high runoff allowed reservoir operators along the east slope to fill any available spaces in their pools early in the season. The continuous precipitation kept water demands very low during May and June 2015 along the Front Range, leaving almost every reservoir in the region near full capacity. Carter and Horsetooth Reservoirs began July 2015 at 98 percent capacity. Granby Reservoir also began the month of July 2015 at 98 percent capacity. Given the high runoff and low demands for water, the C-BT was able to capture a substantial volume of east slope priority water during that period, which helped to keep Carter and Horsetooth Reservoirs almost full.

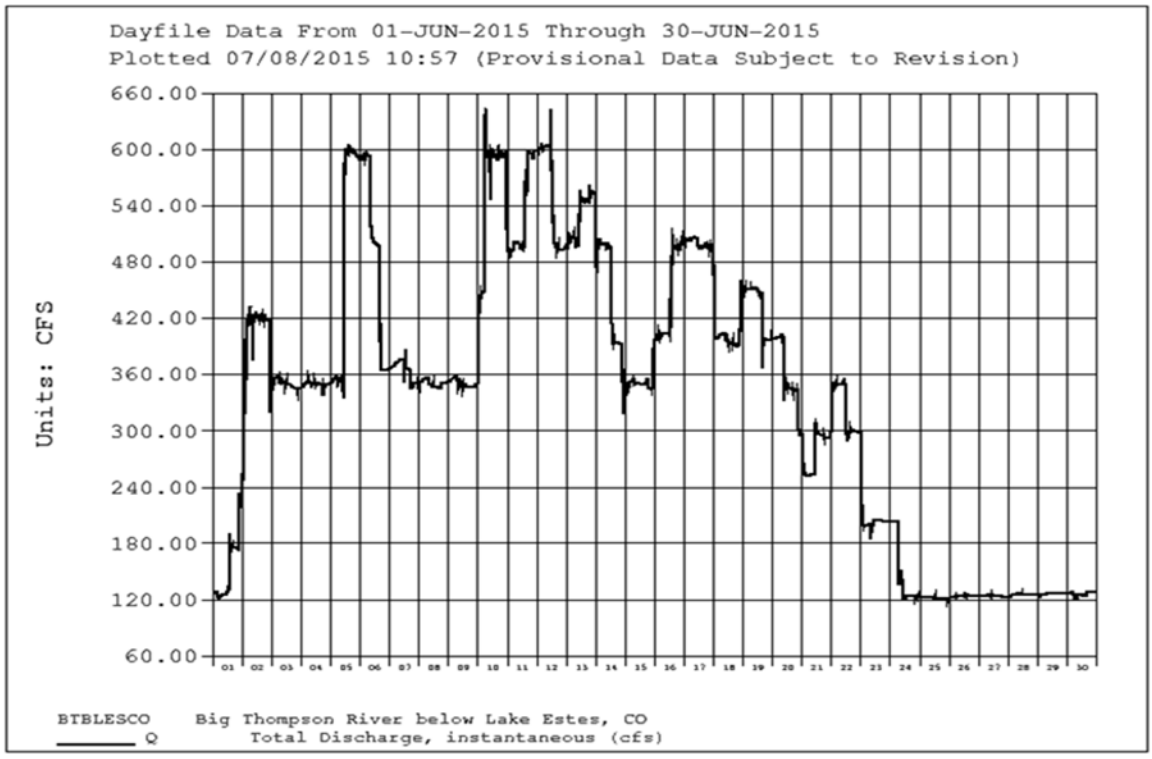


Figure 11: Water Releases from Olympus Dam during June 2015.

Finally, by late June 2015, the wet and cool weather pattern changed. Warmer weather made a return to the region, but it came accompanied by an active monsoonal season. By early July 2015 the weather had turned hot, but afternoon and evening showers kept the runoff relatively high for that late in the season. Water demands remained low during this period given the continuous wet weather. By July 6, 2015, a multi-day, very wet weather system engulfed the mountains of Northern Colorado, pushing up river flows once again and delaying any demands for water even further away. This wet weather system also impacted operations for Granby and Green Mountain Reservoirs, both of which were reaching maximum storage capacities by that time.

Because of the high runoff and full reservoirs over the west slope, the CROS for WY 2015 was very successful. The runoff peak projections early in the season were surpassed, while the peak was prolonged beyond all the early forecasts. The peak flow reached 20,000 cfs, and the high flows lasted over two weeks. CROS is an important component of the C-BT operations. CROS can be described as an initiative supported by reservoir operators over the west slope, in an effort to augment Colorado River flows at the 15-Mile reach near Grand Junction, Colorado. The goal of the operation is to pass inflow during the peak of the runoff for the Colorado River to benefit endangered species of fish along that section of the river. CROS is voluntary and is planned in a way that it does not affect water supply, or hinder filling reservoirs. During years of extremely high runoff, CROS is often cancelled to prevent any potential flooding from occurring in vulnerable areas.

Northern Water declared a quota of 50 percent in November 2014, but that quota was raised to 70 percent in April 2015. The 70 percent quota was held for the remainder of the WY 2015. The quota assumed for the AOP 2015 during October 2014 was 70 percent for WY 2015. The Grand Lake Water Clarity Initiative plan for WY 2015 was prepared to move 250 cfs continuously between July 15, 2015 and early September 2015, while using the Farr Pumping Plant units intermittently. But, by late June 2015 that plan was aborted due to the lack of storage capacity at Carter and Horsetooth Reservoirs, the continuous wet weather, and to the expected low demands for C-BT water over the east slope. Instead, a new approach was practiced; pulsating diversions twice a week, bringing between 700 and 900 AF of water every Monday and Thursday. These diversions were sufficient to satisfy the demands for C-BT water over the east slope between late July and early September 2015. The diversions also allowed some of the powerplants in the system to continue generating power on a limited basis. WY 2015 Grand Lake Water Clarity Initiative was conducted between July 27, 2015 and September 11, 2015.

Because of the high runoff during WY 2015, the skim operation was also very successful, keeping Flatiron and Pole Hill powerplants producing critical power generation, often during periods of high power demand. The Big Thompson Powerplant was also able to contribute to the skim operation, despite the loss of the Dille Tunnel contribution due to repairs from the WY 2013 flood. The skim operation was conducted from May through August 2015, using water diverted via Olympus Tunnel. A total of 47,461 AF of water was used to generate power as part of the skim operation. This water was returned to the Big Thompson River at the Charles Hansen Feeder Canal trifurcation.

The Olympus Tunnel was also used to capture a substantial volume of east slope priority water. For WY 2015, the Olympus Tunnel captured 18,139 AF of priority water, from which 9,400 AF was pumped to Carter Reservoir, while 8,739 AF was moved to Horsetooth Reservoir. The volume captured during the operation was limited by the high pools at Carter and Horsetooth Reservoirs and their limited space available.

Figure 12: Ice covers Carter Reservoir during the cold winter months.

Impact of Maintenance and Other Outages on C-BT Operations

The fall maintenance season work plan during WY 2015 was very successful. Numerous inspections took place, including Olympus Tunnel, Rattlesnake Tunnel and Bald Mountain Tunnel. The Adams Tunnel was also toured to plan for the installation of the fiber optics line during the fall of 2015. In addition to that work, the Estes Powerplant crew completed the annual maintenance for Mary's Powerplant, and also tested and recalibrated the radial gates at Olympus Dam. Work on the headcover for Estes Powerplant Unit 1 also began in October 2014. The Flatiron crew completed the annual maintenance of the Pole Hill Powerplant unit along with other peripheral work around the Flatiron Powerplant. The annual maintenance of the Charles Hansen Feeder Canal 550 section for WY 2014, which began in late September 2014, was completed in early October 2014. In addition, Pinewood Reservoir was lowered by late October 2014 to allow Larimer County to complete the extension of the boat ramp in that body of water.

Water diversions from the west slope were suspended for almost 4 weeks during the fall outage period. The water surface at Lake Estes was dropped to the spillway level of 7460.0 feet to allow the testing and recalibration of all the radial gates. Because of the quick progress in all the inspections and maintenance work, diversions resumed almost three weeks ahead of schedule. Filling Lake Estes back to its operational level began ahead of schedule on November 23, 2014. Normal operations resumed on December 15, 2014 when pumping to Carter Reservoir began.

The WY 2015 fall outage work did not impact C-BT water deliveries. Deliveries to the Charles Hansen Feeder Canal continued, uninterrupted, without using any water from Carter Reservoir. Water stored within the conveyance system was sufficient to satisfy the demands in November 2014.

The annual maintenance for the Estes Powerplant units has been shifted around over the last 3 years, in order to accommodate the headcover repair work for each unit. One unit was repaired each year over the last three years starting in October and ending the following summer. The annual maintenance schedule for each unit was rearranged accordingly to allow work to continue without impacting water movement or power generation. The repair work on the headcover for Unit 1 was completed in May 2015, ending the 3 year project. The work was completed on schedule and under budget. The final test for Unit 1 was completed in July 2015. All units were available, simultaneously, for the first time in three years.

Figure 13: Aerial view of the Charles Hansen Feeder Canal 930 Section.

Flatiron Powerplant Units 1 and 2 had their annual maintenance done during their regular periods between January and May 2015. These outages did not impact water operations but they had limited impact on peaking power capabilities. The impact was minimized in April 2015 by the fact that the Adams Tunnel diversions were curtailed during most of that month. With the annual maintenance of the Charles Hansen Feeder Canal 930 Section in April 2015 and the Flatiron Unit 3 offline, there was no water to move or any place to store it. The annual maintenance for the Big Thompson Powerplant was completed in the off-season, as it always is therefore its outage had no impact on operations.

The Charles Hansen Feeder Canal 550 Section annual maintenance outage for WY 2015 began on September 25, 2015 and ended one week into WY 2016. The outage had minimal impact on water or power operations given the high volume of water left at Horsetooth Reservoir at the time.

Impact of the Grand Lake Water Clarity Initiative on C-BT Operations

The Grand Lake Water Clarity Initiative had a limited effect on C-BT operations during WY 2015. Given the high storage levels at Carter and Horsetooth Reservoirs, along with the very wet spring and early summer, the needs for C-BT water remained relatively low most of the summer. Those demands were satisfied simply by following the plan for WY 2015 Grand Lake Water Clarity Initiative, which included pulsating flows along the Adams Tunnel twice a week, bringing between 1,500 and 1,800 AF of water every week; sufficient water to satisfy demands and to keep the system partially functioning. No water from Carter Reservoir was used during the operation. Despite the low diversion flows from the west slope during August 2015, the reservoir levels at Carter and Horsetooth Reservoirs remained high for the season. Recreation at Carter and Horsetooth Reservoirs was very successful during WY 2015. The boat ramps remained in the water the entire summer and into the fall months. The Grand Lake Water Clarity Initiative for WY 2015 was planned in order to attempt a new approach from previous years. Water from Carter Lake was never needed to satisfy the demands for C-BT water.

Drought Impact on C-BT Operations

The drought conditions that affected northern Colorado a few years ago ended after the September 2013 flood. The combined storage content for the C-BT reached practically 100 percent of capacity by the end of June 2015.

Flooding Impact on C-BT Operations

The C-BT project did not experience flooding conditions during WY 2015. A strong and prolonged runoff season did produce high volumes of inflow into Green Mountain and Granby reservoirs. Both reservoirs were forced to discharge up to 2,400 cfs in June 2015, due to their high inflows. But those releases were considered to be below flood stage. The Granby operation was carefully coordinated with Northern Water during the spring and summer months. Over the east slope, the Olympus Dam experienced releases that did not surpass 600 cfs.

WY 2015 OPERATIONS BY FACILITY

Green Mountain Reservoir Chronological Summary of Operations

Fall, Winter and Spring of WY 2015: The Green Mountain Reservoir contributing watershed experienced average snowfall during the entire snowfall season. Snowfall continued into late May 2015, adding to the snowpack and pushing it above the average for the season. By late May 2015, the snow-water equivalent was almost 21 inches before it began to drop sharply during the last week in May 2015. By late June 2015 the snowpack was gone, but the high runoff continued. Figure 14 shows the basin snow-water equivalent for WY 2015 in comparison to the 30-year average.

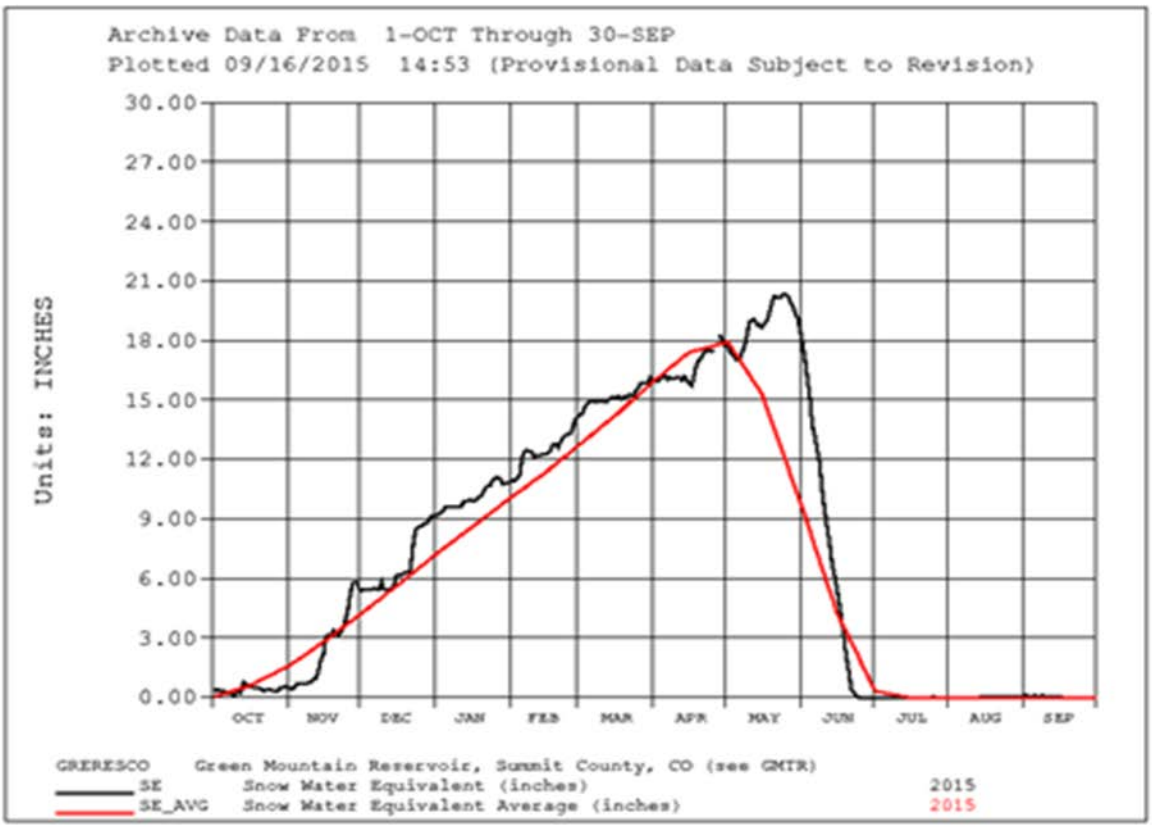


Figure 14: WY 2015 and 30-year average snow-water equivalent for the Green Mountain Reservoir drainage area.

October through May: Green Mountain Reservoir experienced no operation restrictions during the fall-winter-spring drawdown. The Heeney Landslide operation restriction is the only potential current operational restriction. This potential restriction limits drawdown rate to 0.5 feet per day when reservoir surface elevation is at or below 7865 feet. Green Mountain Reservoir reached a minimum elevation of 7897.47 feet on March 26, 2015.

WY 2015 carryover storage content for Green Mountain Reservoir was about 92 percent of the 30 year average, similar to the previous year. Figure 15 illustrates the storage content for the reservoir during WY 2015 compared to the 30-year average. The March 2015 forecast projected that Green Mountain Reservoir would fill within the range of the 5 percent to 95 percent exceedance. Within this range the forecast projected significant quantities of water would be available for hydropower generation. With the well positioned carryover storage conditions and the very high May 1, 2015 streamflow projections, reservoir operators projected that all of the Colorado River basin's reservoirs would have little problem filling, including Green Mountain.

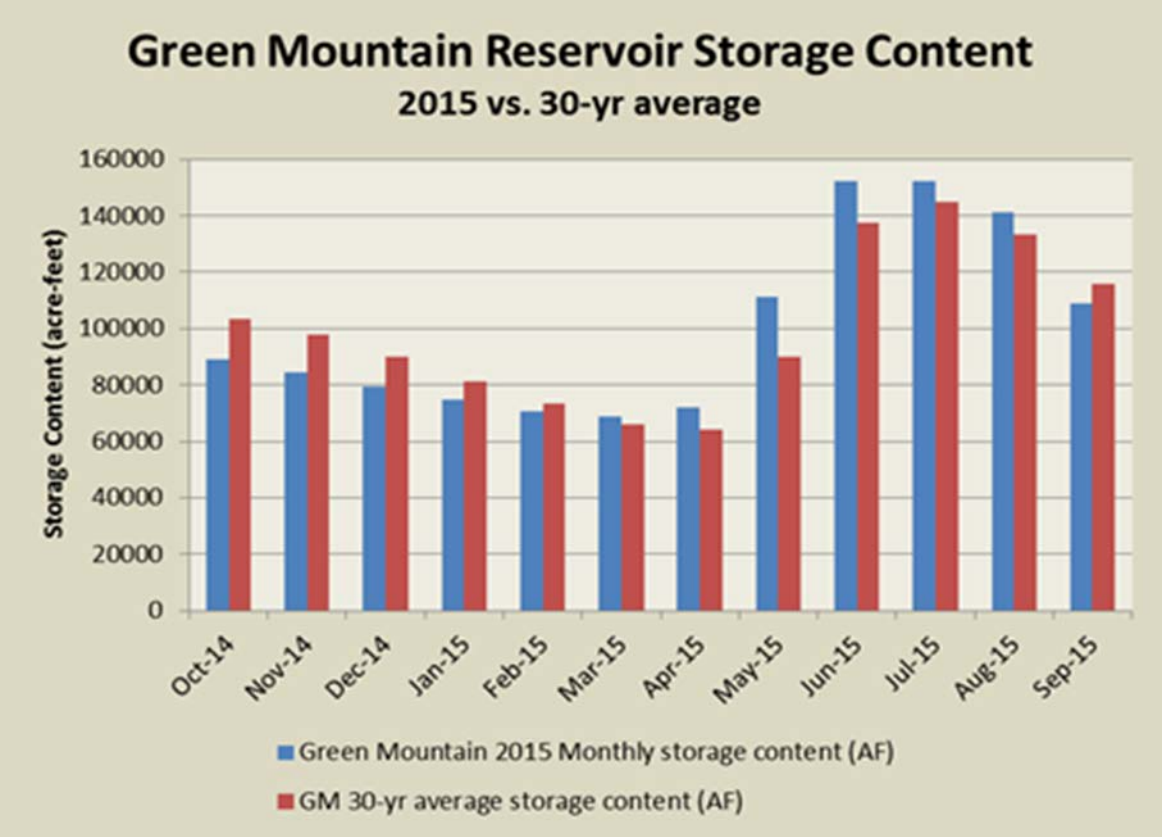


Figure 15: Comparison between the Green Mountain Reservoir monthly content during WY 2015 and its 30-year average content.

Reclamation anticipated supporting the Colorado River Endangered Fish Recovery Program, CROS. Green Mountain, along with Granby and Ruedi Reservoirs, which is part of the Fryingpan-Arkansas Project were expected to participate in 2015. The contributions along with the high runoff produce one of the longest peak stretches in recent memory.

The State Engineer administered Green Mountain Reservoir pursuant to the Green Mountain Reservoir Administrative Protocol (Protocol) for the 2015 irrigation year (Attachment B).

May 15: The Start of Fill for Green Mountain for WY 2015 was declared on May 15, 2015 with the reservoir holding 86,733 AF in storage, well above its historic 65,000 AF start of fill target. The reallocation of carry over pool included filling the C-BT 52,000 AF replacement pool, the 5,000 AF Silt Project replacement allocations and 29,733 AF toward the HUP allocation.

June 3 to June 8: Green Mountain Reservoir contributed to the CROS in support of Colorado River Endangered Fish Recovery Program. Green Mountain released at power plant capacity from June 3, 2015 through June 8, 2015 above the operating plan. Green Mountain Reservoir released 11,292 AF in support of the CROS operation.

Green Mountain Reservoir was operated under conservative operations per the joint request of Denver Water Board and Colorado Springs as described within the Protocol section IV.A.4.b. The request included a 5,000 AF power loss replacement offer and was

accepted by Reclamation. Green Mountain Reservoir releases were reduced to below power plant capacity on June 8, 2015. Releases were returned to power plant capacity on June 12, 2015. Green Mountain Reservoir stored a total of 2,663 AF that would have otherwise been used for power generation and were subsequently spilled during the fill schedule.

June 16: Green Mountain Reservoir achieved a paper fill on June 16, 2015. By that date, Denver Water and Colorado Springs Utilities (Cities) had depleted a total of 13,974 AF against the Green Mountain Reservoir First Fill Storage Right. A provision of the Protocol allows Green Mountain Reservoir to continue storing its inflow under a 1955 priority date after "paper filling" to reduce the amount of water owed by the Cities. Under this provision Green Mountain Reservoir stored sufficient water between June 16, 2015 and June 21, 2015 to fully eliminate the amount owed by the Cities. End-of-fill occurred on June 21, 2015 as defined under the terms of the Protocol.

June 16 to July 1: Green Mountain Dam began bypassing flows through the spillway to slow the rate of reservoir filling. During this period reservoir average daily inflow peaked at 3,171 cfs on June 18, 2015. A peak average daily spillway flow of 940 cfs occurred on June 21, 2015. Green Mountain Reservoir bypassed a total volume of 15,257 AF during this period.

June 24 to October 28: The HUP Managing Entities conducted several meetings to coordinate operations for the main stem of the Colorado River and manage the release of the 66,000 AF HUP allocations within the Power Pool. The Managing Entities held their initial meeting on June 24, 2015 to consider conditions and plan for the upcoming season's operations. Beginning July 29, 2015 Reclamation hosted weekly conference calls until the end of the irrigation season. A total of 15 HUP meetings were held between June 24, 2015 and October 28, 2015 to manage releases from Green Mountain, Ruedi, Granby, Wolford Mountain, and Williams Fork Reservoirs. Coordinate irrigation diversions in the Grand Valley, and attempt to maintain the mean monthly target flows in the 15-Mile Reach. These meetings are a stipulation of the Orchard Mesa Check Case settlement.

June 24: At the June 24, 2015 HUP meeting, the U.S. Fish and Wildlife Service set the mean monthly target flow for the 15-Mile Reach at the Wet Year Target of 1,640 cfs based upon the above average runoff and current water supply conditions.

July 4: Green Mountain Reservoir achieved a physical fill of 151,778 AF on July 4, 2015 and officially declared the end of fill. By continuing to store under its refill rights, Green Mountain Reservoir was able to reach a maximum physical content for the year on July 17, 2015 with a total of 152,560 AF in storage. Because the reservoir achieved a "paper fill", water was available to fully satisfy each of the following: the 52,000 AF C-BT replacement pools; the 5,000 AF Silt Project reservations; the 66,000 AF HUP allocations; and the 20,000 AF set aside for contracts.

July 4: While the interim policy requires that upstream depletions by Green Mountain Reservoir beneficiaries junior to Green Mountain Reservoir be charged against the paper fill of Green Mountain Reservoir, those depletions were not charged against this year's HUP allocation.

Therefore, the entire 66,000 AF HUP allocation remained available when the reservoir achieved its "paper fill" on June 16, 2015.

August through September: The Colorado State Engineer administered the main stem of the Colorado River for most of the period from August 7, 2015 until the end of the water year. The Junior Shoshone Powerplant water right was in effect twice for a total of nine days. The Senior Shoshone Powerplant water right was in effect three times for a total sixteen days. The Cameo Water Rights Call was in effect twice for a total of seventeen days. The main stem was not under administration from September 8 through September 21, 2015 because the Shoshone Powerplant was not operational. Dry conditions persisted throughout the late summer and reflected the need for continuous river administration.

September 8 through 21: The Shoshone Outage Protocol (ShOP) was implemented during this period in response to a maintenance shutdown of the Shoshone Power Plant. ShOP was exercised under the terms that occur if Green Mountain Reservoir achieved a paper fill and the outage occurs after the fill season. As per the ShOP, Green Mountain Reservoir continued to pass inflows and released from storage the equivalent volume of water that would have occurred if the Senior Shoshone Power water right call was in effect. During the September 2015 ShOP operation Green Mountain Reservoir released a total of 3,726 AF of power pool storage. ShOP releases included: 2,000 AF of ShOP available water, 619 AF of uncontracted water in the Marketing Allocation and 1,107 AF reductions in the HUP allocation.

September 18: Green Mountain Dam Powerplant placed a call on the Blue River in response to inflow and storage releases being less than power plant capacity. This is pursuant to Paragraph II.B.6 of the Protocol.

WY 2015: The maximum drawdown rate limitation initially put in place due to landslide concerns remained in effect for WY 2015 operations. This drawdown rate limitation restricts the maximum pool drawdown to 0.5 ft. per day when Green Mountain Reservoir's water surface elevation is less than 7865.0 feet. With the reservoir achieving a physical fill in 2015 the water surface elevation remained above 7865.0 feet during the entire irrigation season. The drawdown restriction was not exercised this year.

For WY 2015 Green Mountain Reservoir delivered a total of 54,302 AF. Deliveries included a 15,454 AF for C-BT out of priority replacement, 1,557 AF for Silt Project Replacement, 35,299 AF for HUP beneficial use and 1993 AF for the Marketable Contract Pool. HUP releases included 6,623 AF for replacement and 28,677 AF Surplus releases for the Colorado River Endangered Fish Recovery Program. There were no HUP direct call releases for the Grand Valley Irrigators in WY 2015.

HUP surplus releases began on August 19, 2015 with the declaration of a surplus by the HUP Managing Entities. Surplus releases continued until terminated on October 31, 2015. During this period, HUP surplus releases varied between 118 cfs and 468 cfs with an average release of 380 cfs. HUP surplus releases totaled 54,136 AF in the 2015 irrigation season.

Figure16: Green Mountain Reservoir and Dam.

Willow Creek Reservoir Chronological Summary of Operations

February and March: Willow Creek had an average fall and early winter snow accumulation, but after a dry and warm January 2015, it fell below average. By February 2015, the snowpack began a steady rise once again, and it continued to rise until March 2015, but never reaching the 30-year average. Runoff had an early start by the middle of March 2015 as warm weather returned to the region.

March: Runoff at the Willow Creek watershed began in the middle of March 2015, earlier than normal. A decision was reached to begin preempted releases immediately. With no space available at Granby Reservoir to store water without spilling it later in the spring, pumping to Granby Reservoir was not an option. Additional space was needed to store the runoff temporarily while keeping releases from Willow Creek Reservoir below flood stage during the peak runoff days of May 2015.

April: Runoff began at the Willow Creek watershed.

May: The pumping operation from Willow Creek Reservoir to Granby Reservoir was cancelled in 2015 because of the expected spill at Granby Reservoir. Excess inflow to Willow Creek Reservoir was bypassed in the Willow Creek below the dam.

May 9: The peak of the runoff came on May 9, 2015 a little earlier than normal. The peak daily average inflow for the year was 360 cfs, almost 1,000 cfs lower than the previous year. A second peak came in early June 2015, but it only reached 344 cfs.

May-June: The highest daily average release flow recorded during the runoff season occurred on May 7, 2015 a flow of 368 cfs.

June - August: Repairs at the Willow Creek Canal pumping plant took place during this period.

Figure 17: Releases from Willow Creek Reservoir to Willow Creek during WY 2015.

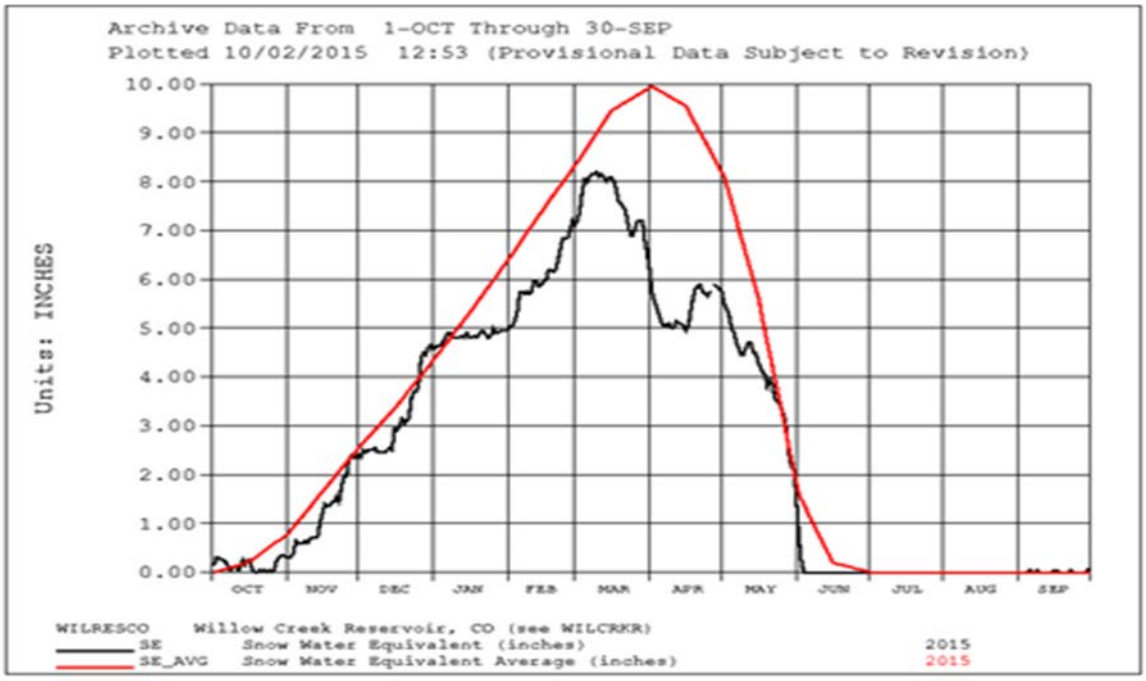


Figure 18: WY 2015 and 30-year average snow-water equivalent for the Willow Creek Reservoir drainage area.

Granby Reservoir – Chronological Summary of Operations

October through December: Carryover content from WY 2014 was 522,187 AF the seventh highest in project history, and 125 percent of the 30-year average. Full capacity of the Granby Reservoir is 539,758 AF. Granby Reservoir content continued to rise until early December 2014, when it reached 531,155 AF.

December through April: As diversions through the Adams Tunnel resumed, Granby Reservoir content began to drop. The reservoir content dropped to 477,041 AF by March 29, 2015 before it began to rise again. By early April 2015, with the Adams Tunnel diversions off due to the limited space at Carter Reservoir and the annual maintenance work at the Charles Hansen Feeder Canal 930 Section, along with an early runoff, the reservoir content began to climb faster.

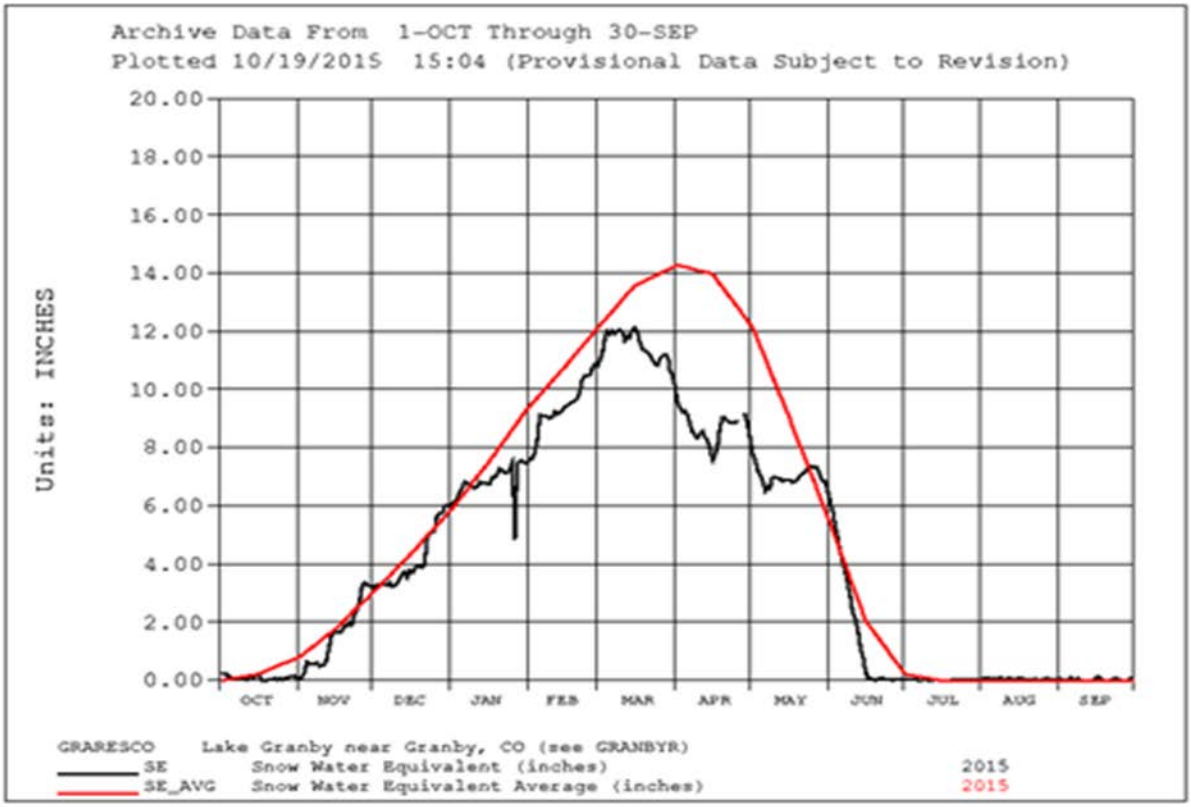


Figure 19: WY 2015 versus 30-year average snow-water equivalent for the Granby Reservoir drainage area.

May: The forecast for the runoff season was that, with Carter and Horsetooth Reservoir contents at near full capacity, Granby Reservoir was going to face a significant spill during June and July 2015. With the high levels at the two terminal reservoirs over the east slope, diversions through the Adams Tunnel were curtailed in early May 2015. Given the repair work taking place at the Granby Reservoir spillway during May 2015, the decision was reached to begin preempted releases via the outlet works. East slope priority water was used to completely fill the remaining

pools at Horsetooth and Carter Reservoirs. By early May 2015, Granby Reservoir was releasing 400 cfs via its outlet works. Spillway repairs continued until late May 2015.

June: Despite releases over the spillway as high as 2,400 cfs, the water surface level at Granby Reservoir continued to rise at a significant pace throughout June 2015. The high releases did not cause any flood damages downstream. As the peak the inflow passed, the releases over the spillway were lowered accordingly to keep a full reservoir. By the end of June 2015 Granby Reservoir releases had been reduced to approximately 500 cfs. There were no releases through the outlet works in June 2015. By late May 2015 construction work of the new powerplant rendered the outlet works unavailable. All the releases had to be made over the spillway.

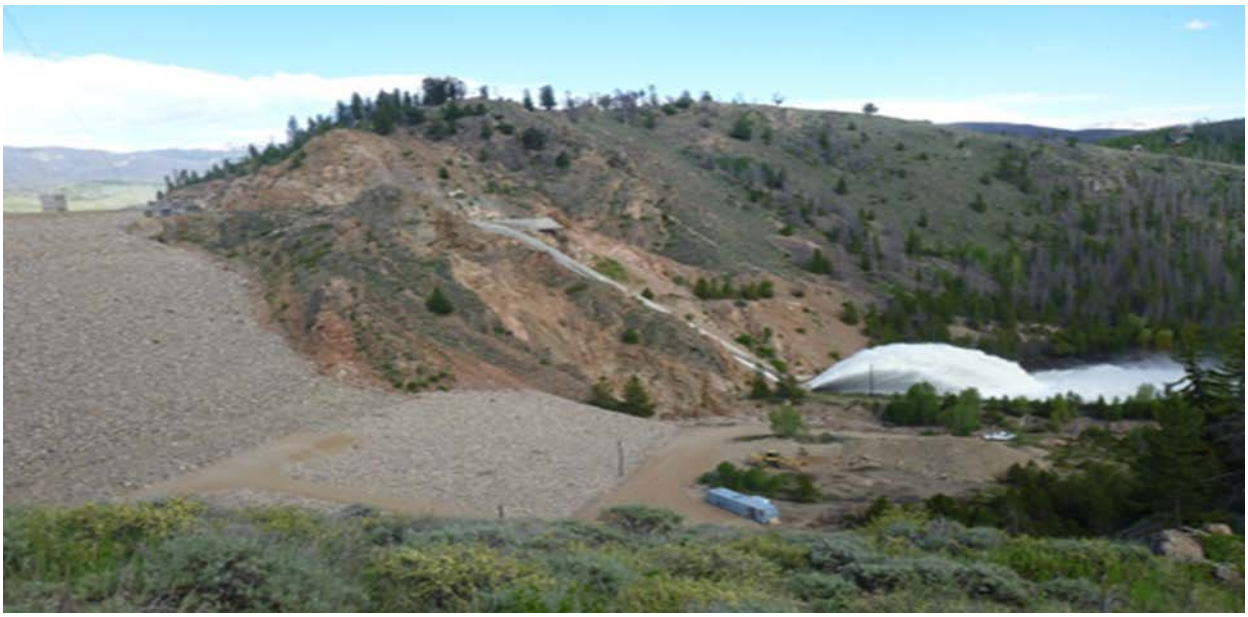


Figure 20: Granby Reservoir spill; approximately 2,400 cfs, June 13 through June 21, 2015.

July: By July 2015, the threat of high releases and potential flooding had passed. Granby Reservoir level had stabilized just above an elevation of 8279.0 feet, where it stayed the entire month. The releases over the spillway were managed to maintain that level. Work on the new powerplant continued throughout July 2015.

August: The construction work of the new powerplant at Granby Dam forced the releases over the spillway to continue into the hot days of the summer. The drop in inflow forced a significant drop in reservoir releases by late July 2015. By early August 2015 the low release combined with the heat of the summer and lack of precipitation created problems downstream of the dam; the water temperature began to rise, putting stress on the fish population. The coordinated efforts of Reclamation, Northern Water and other officials allowed for the release of additional water to keep the water temperature in the stream tolerable for fish and other creatures. The plan was to count this extra water as part of the preempted release for WY 2016. With Carter, Horsetooth and Granby Reservoirs near full capacity by early August 2015 the expectation was that Granby Reservoir will be spilling by June 2016.

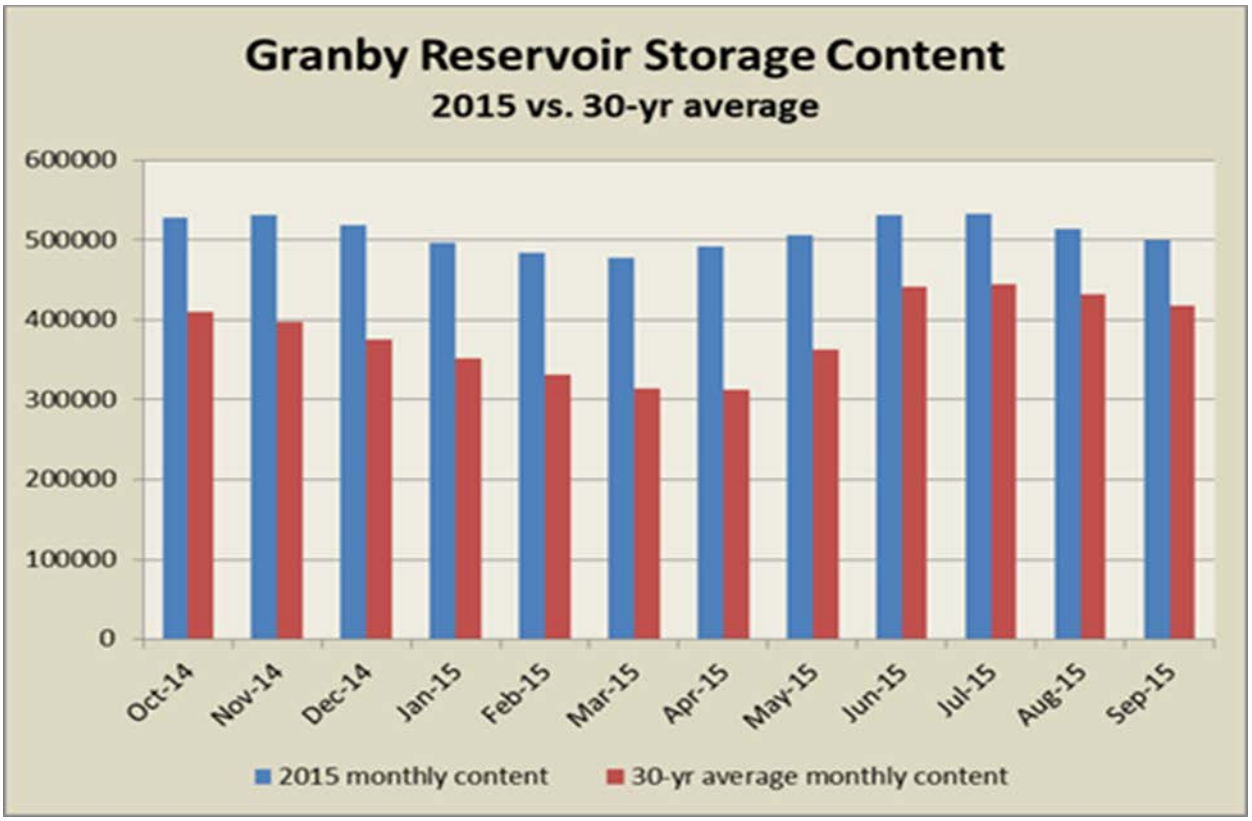


Figure 21: Granby Reservoir storage content during WY 2015 versus the 30-year average.

September: By September 2015 temperatures had subsided, and water releases over the spillway had been lowered to 100 cfs. By the end of the month, releases were down to 40 cfs. Construction of the penstock and all related piping for the new powerplant continued.

Figure 22: Granby Reservoir outlet works intake during winter. Bubblers prevent ice from forming above and around the structure, preventing any possible damage.

Adam's Tunnel, Mary's Lake and Estes Lake – Chronological Summary of Operations

November 7: The Lake Estes water surface was lowered to the spillway crest level in November 2014, to inspect, test and recalibrate the radial gates at Olympus Dam.

November 24: Water began to flow into Lake Estes from Marys Lake once again, and its water surface began to rise slowly.

December 3: The level at Lake Estes reached its normal operational pool.

December 15: As the C-BT maintenance season came to an end, the Adams Tunnel flow reached 400 cfs, as recommended by the C-BT Annual Operating Plan for WY 2016. Diversions through the Adams Tunnel continued, uninterrupted, until April 1, 2015.

February and March: Snowpack remained at or below the 30-year average. But despite the mild winter and average snowpack, the inflow to Lake Estes remained significantly high for the season.

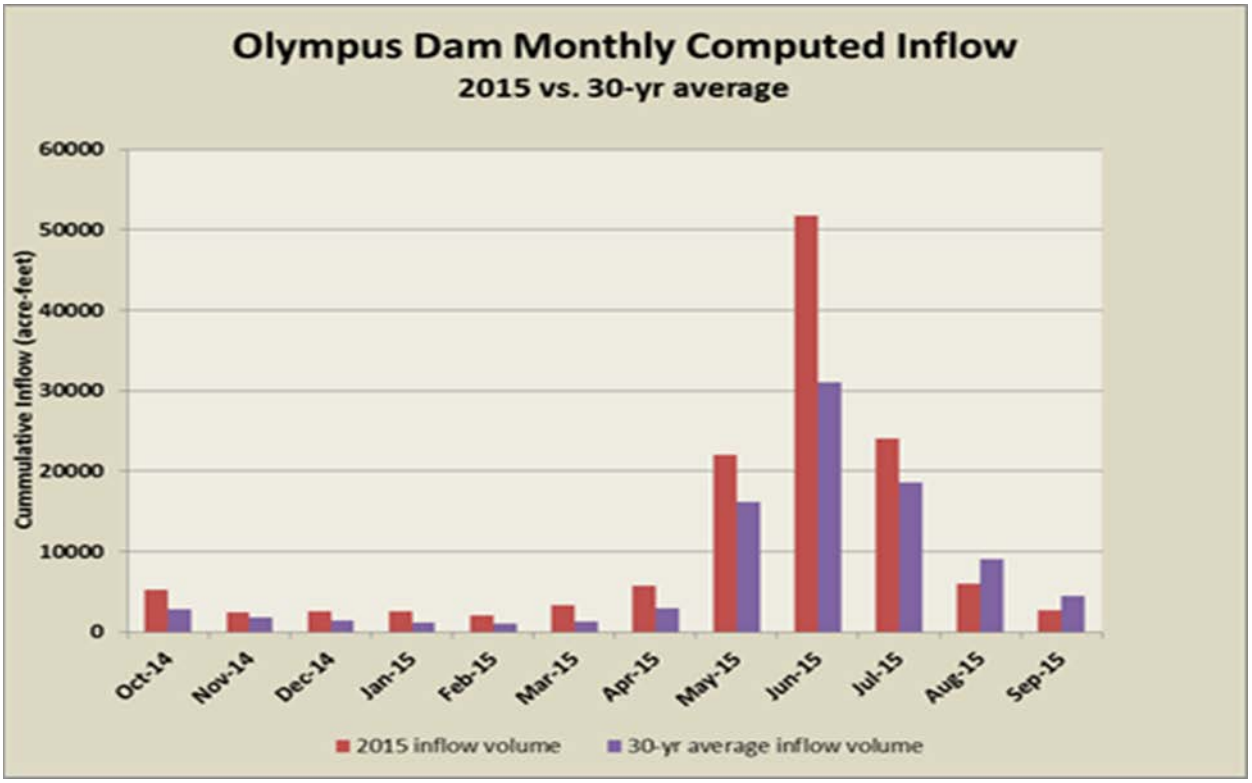


Figure23: Computed 24-hour average native inflow for Lake Estes during WY 2015 versus its 30-year average.

Late March: A relatively warm period in late March and early April 2015 began to melt some of the snow at lower elevations. Inflow to Lake Estes began to rise soon after. By the middle of March 2015, runoff was already beginning. The C-BT continued to benefit from a free river by capturing some of this water and storing it at Horsetooth Reservoir.

April 27: Pumping to Carter Reservoir resumed. The plan was to push the Carter Reservoir level to its maximum capacity while preventing the water from being spilled from Granby Reservoir on the west slope.

April 30: By the end of April 2015 the daily average inflow to Lake Estes was almost 200 cfs. A significant portion of this water was being diverted and stored at Horsetooth Reservoir as east slope priority water.

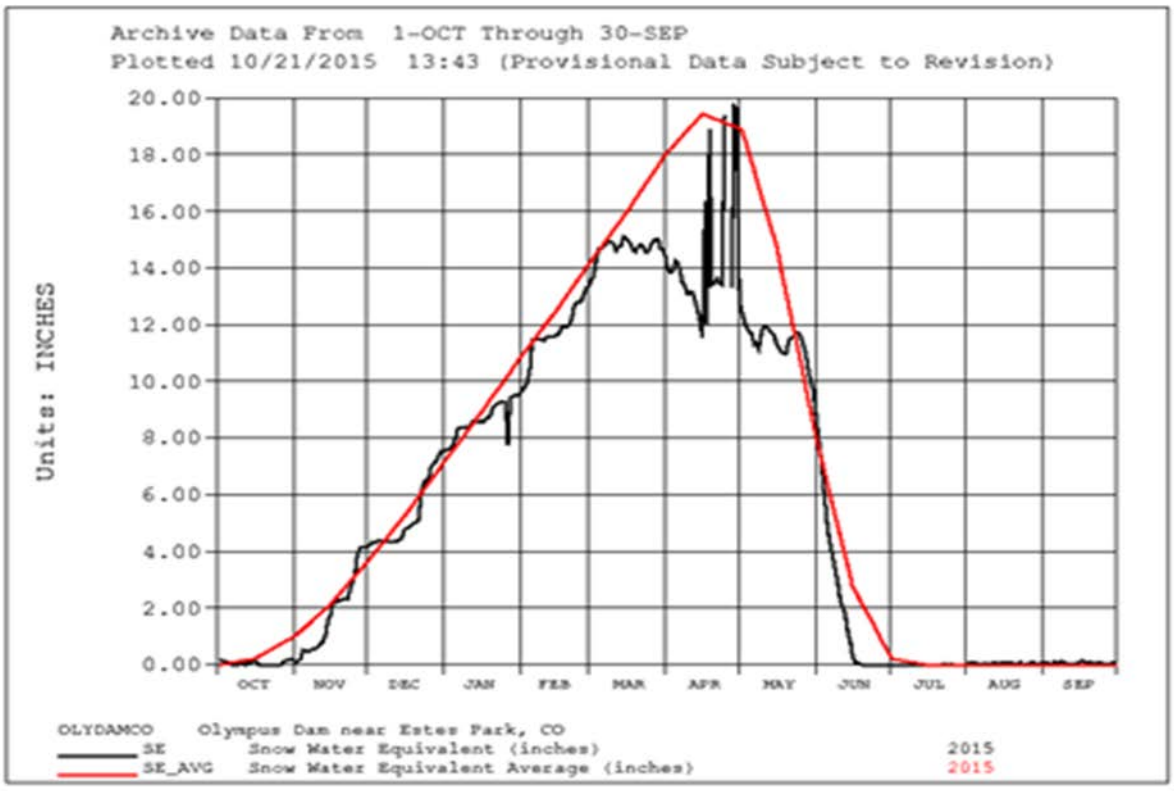


Figure24: WY 2015 and 30-year average snow-water for the Olympus Dam drainage area.

May: May was a relatively cool and wet month. Snow and rain continued to fall over the Front Range, keeping the runoff relatively high.

May 10: Pumping to Carter Reservoir ended. Carter Reservoir had reached its maximum capacity. Horsetooth Reservoir had also reached almost full capacity. The Adams Tunnel diversions were stopped, out of the lack of storage space over the east slope. The Olympus Tunnel continued to divert skim water, generating power at Pole Hill, Flatiron and the Big Thompson powerplants.

June: Temperatures over the Front Range remained relatively cool throughout most of June 2015. A series of cold fronts and wet systems continued to impact the region. The wet condition contributed to high runoff, but the cool temperature alleviated the situation by slowing down the snow melt at high elevations.

June 10: The highest average 24-hour release from Olympus Dam to the Big Thompson River was 556 cfs. The high releases from Olympus Dam in late May 2015 and June 2015 were not considered flood operations, and did not cause any known issues along the Big Thompson River.

June 12: The peak of the runoff occurred, reaching a daily average flow of 1,151 cfs. The average 24-hour release that day from Olympus Dam was 551 cfs. The remaining water was diverted as skim water through the Olympus Tunnel and used for power generation at the powerplants in the southern power arm of the system.

July 14: Intermittent diversions through the Adams Tunnel resumed this day, as demands for C-BT water began to increase.

Late July: The Grand Lake Water Clarity Initiative began in late June 2015. The WY 2015 plan was to divert a full Adams Tunnel on Mondays and Thursdays only, then shutting off the flow for the remainder of the time. The operation lasted until early September 2015. The volume of water moved during those days was sufficient to satisfy all the demands for C-BT water and to keep some power generation at the system powerplants.

September 10: Diversions from the west slope via the Adams Tunnel resumed.

September 27: Diversions through the Adams Tunnel were interrupted due to the outages at the Flatiron Powerplant Unit 3 and the Charles Hansen Feeder Canal 550 Section.

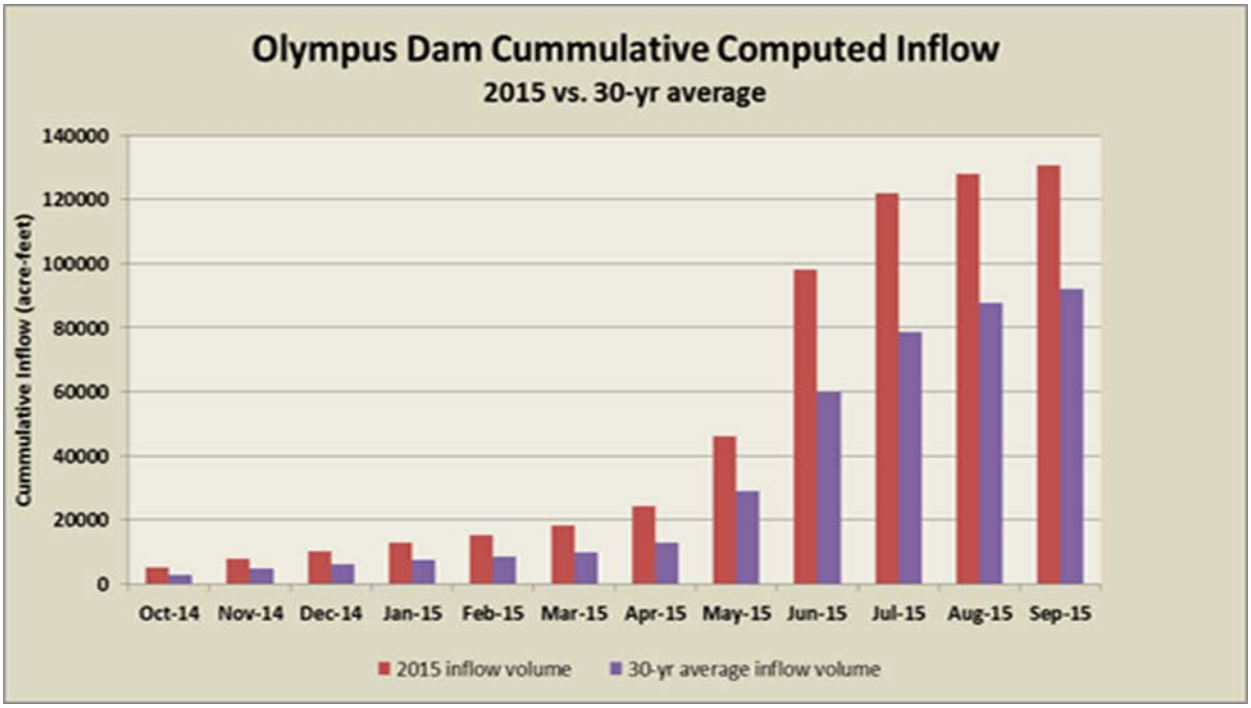


Figure25: Cumulative inflow to Lake Estes for WY 2015, compared to its 30-year average. 130,243 AF was the six highest in C-BT history.

Foothill's Power Arm – Chronological Summary of Operations

October 1: Flows through the Olympus Tunnel were low in October 2014. With Carter and Horsetooth Reservoir levels well above the normal for the fall season, diversions through the Adams Tunnel were low during October 2014. The low diversions from the west slope limited the Olympus Tunnel flows.

November 1: Pinewood Reservoir began the month of November 2014 with its water surface level down below an elevation of 6550.0 feet in preparation for inspections at the Rattle Snake Tunnel and the Bald Mountain Tunnel. A temporary clearance was set in place for the Olympus Tunnel to allow an inspection of that facility. Those inspections were completed within a few days, the Olympus Tunnel clearance was quickly removed, and the Pinewood Reservoir level returned to a more seasonal elevation by November 9, 2014.

December 15: Normal operations resumed during the middle of December 2015, and pumping to Carter Reservoir began for the season. Some water also began flowing towards Horsetooth Reservoir via the Charles Hansen Feeder Canal.

February 16: Carter Reservoir reached its full capacity on February 16, 2015. The Pumping operation ended that day, and the flows to Horsetooth Reservoir were increased to over 200 cfs. This flow regime continued until early April 2015.

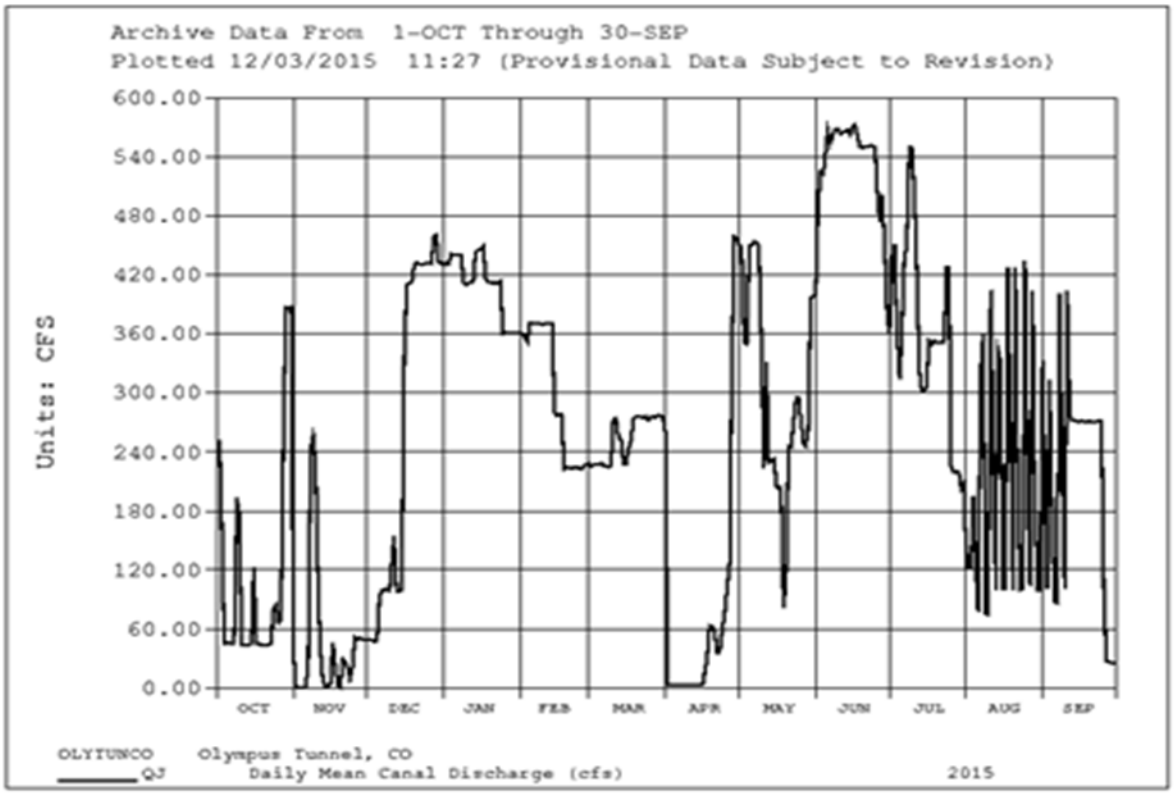


Figure26: Olympus Tunnel 24-hour average flow during WY 2015.

April 2: The annual maintenance of the Charles Hansen Feeder Canal 930 Section began this day. This outage required significant coordination between, Northern Water, Reclamation, and C-BT allottees along that facility. The outage lasted two weeks, during which there were no diversions of west slope water through the Adams Tunnel. The Olympus Tunnel also remained dry during those two weeks.

May 12: The Big Thompson Powerplant began generating power this day. The operation used skimmed water from the plentiful inflow to Lake Estes, and allowed flows into the Big Thompson River Canyon to be kept below 600 cfs during the peak of the runoff season in June 2015.

Figure27: Pole Hill Powerplant and its empty afterbay.

June 22: The pumping operation to Carter Reservoir resumed, to reduce the spill at Granby Reservoir, and to maximize the storage of C-BT water. Carter Reservoir reached its maximum capacity on July 5, 2015. This was the last pumping operation of the WY 2015.

August: While the power generation at the Big Thompson Powerplant was completely fed by the excess runoff from the Big Thompson River in May and June 2015 most of the generation in late July, August and September 2015 was fed by a combination of excess runoff and deliveries of C-BT water to the Big Thompson River. The deeper the operation went into August 2015 the more dependent its power generation became on C-BT water deliveries as the runoff began to disappear.

September 25: The annual maintenance for the Charles Hansen Feeder Canal 55 Section began and continued until October 9, 2015.

Figure28: Morning sun rise at Horsetooth Reservoir.

Carter and Horsetooth Reservoirs – Chronological Summary of Operations

October 1: Carter Reservoir began WY 2015 with 92,777 AF of water in storage. Its 30-year average is 55,350 AF.

October 1: Horsetooth Reservoir began WY 2015 with 134,282 AF of water in storage. Its 30-year average is 82,620 AF.

October: At the beginning of WY 2015, with the storage contents for Carter and Horsetooth Reservoir as high as they were, there was no immediate need to begin recharging them early. Pumping to Carter Reservoir did not resume until the middle of December 2014, while deliveries to Horsetooth Reservoir were kept low until February 16, 2015.

October through early December: Carter Reservoir did not deliver any water to Flatiron Reservoir during the fall and early winter of WY 2015.

December 15: Pumping to Carter Reservoir began. Pumping continued, uninterrupted, until February 16, 2015 when Carter Reservoir reached its full operational capacity for the first time in WY 2015.

February 16: Pumping to Carter Reservoir ended. The flow of C-BT water was then redirected towards Horsetooth Reservoir.

April 27: Pumping to Carter Lake resumed this day. This operation was aimed at maximizing the storage of C-BT water while reducing any potential loss of C-BT water from Granby Reservoir later in the summer. The pumping operation lasted until May 10, 2015.

May 10: Carter Reservoir reached its full capacity for the second time in WY 2015 and the pump was turned off.

May 20: Horsetooth Reservoir reached its maximum storage capacity for the year on this day. The reservoir level reached an elevation of 5429.88 feet, before it began a short but steady descent.

Figure29: A full Horsetooth Reservoir. The high level caused some shore erosion and affected some of the recreational facilities. Despite those, recreation was very successful during WY 2015 at Carter and Horsetooth Reservoirs.

June 22: To reduce any spilling of C-BT water at Granby Reservoir, pumping to Carter Reservoir resumed. Pumping continued until July 5, 2015.

July, August, September: Deliveries via the Charles Hansen Supply Canal out of Horsetooth Reservoir began as early as April 2015. But the bulk of the deliveries were made between the middle of July and the late September 2015. For Carter Reservoir, deliveries of water via the Saint Vrain Canal began earlier in the year than for Horsetooth Reservoir, and they were more evenly distributed.

Throughout WY 2015: With both reservoirs full for the majority of the year, recreation was very successful. The boat ramps were in the water the entire year.

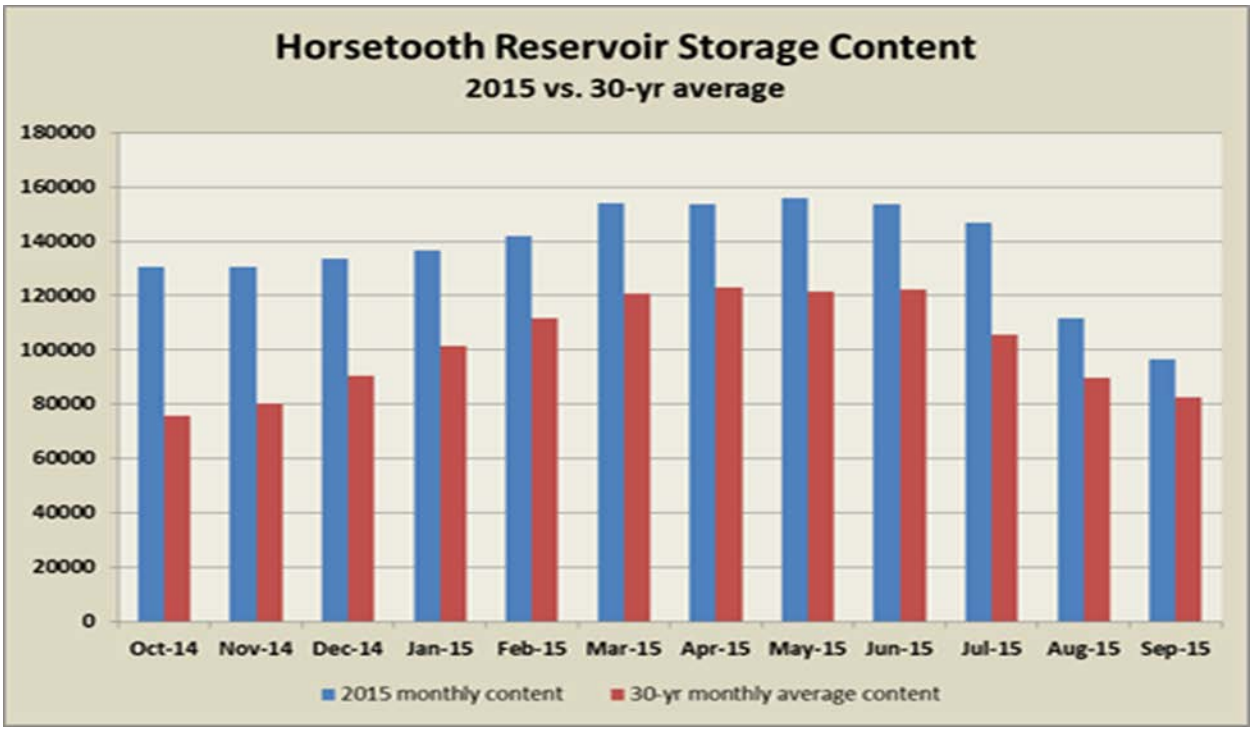


Figure 30: Horsetooth Reservoir storage content during WY 2015 versus its 30-year average.

Throughout WY 2015: Carter Reservoir delivered 71,005 AF of C-BT water and 7,909 AF of Windy Gap water, approximately. Meanwhile, Horsetooth Reservoir delivered 79,403 AF of C-BT water and 5,993 AF of Windy Gap water.

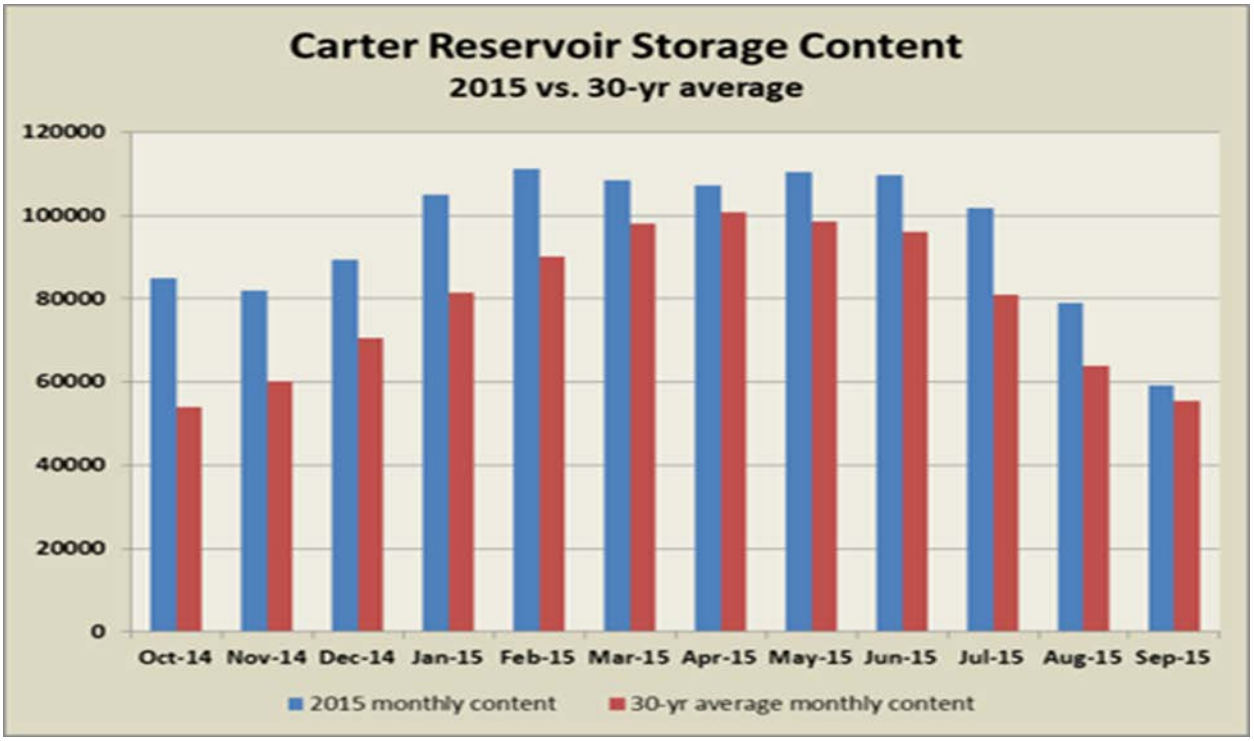


Figure 31: Carter Reservoir storage content during WY 2015 versus its 30-year average.

C-BT Planning and Control

The C-BT is operated for the purpose for which it was authorized and constructed; to provide supplemental municipal and industrial water supply, irrigation water supply and hydroelectric power production.

The integrated operation of the C-BT is planned and coordinated by the Water Resources Group at ECAO in Loveland, Colorado. Staff at this office collect and analyze information daily and makes the decisions necessary for successful operation of the C-BT. This continuous water management function involves coordination between the Division of Water Resources of the state of Colorado, Northern Water, Upper Colorado and Great Plains regions of the Bureau of Reclamation, the Western Area Power Administration, other Reclamation groups, and many other local, state, and Federal agencies.

Experience has proven that proper use of the available water resource in a multi-purpose project such as the C-BT can be achieved only through careful budgeting and management of the anticipated water supply. One product of this budgeting and management process is an AOP. The C-BT is operated to optimize the most-probable water supply without jeopardizing the operational position, should either the reasonable-maximum or the reasonable-minimum water supply conditions occur. The plan is reviewed and revised monthly, or as needed during the year, as new information becomes available or changing conditions occur.

Computer programs and models are used by ECAO to develop the AOP and water supply forecasts. Tables 5A, 5B and 5C include the October 2015 three versions of the AOP. Exhibits 3 through 9 also provide a view of the planned WY 2016 C-BT operations.

IRRIGATION REQUIREMENTS

The amount of water that is made available to the C-BT for irrigation will be determined by Northern Water. This determination will be subject to change by agreement throughout the remainder of the irrigation season. Changes may occur as a result of substantial changes in the prevailing climatic, demand or operational conditions. Irrigation requirements for the three inflow conditions were estimated by analyzing actual use under a variety of actual runoff conditions.

Estimated supplemental irrigation deliveries from Green Mountain Reservoir to irrigators in the Colorado River Basin are included in the release from Green Mountain Reservoir according to the "Operating Criteria for Green Mountain Reservoir."

Figure 32: Charles Hansen Feeder Canal 550 Section flowing at full capacity.

MINIMUM REQUIRED RESERVOIR RELEASES

January 19, 1961, the Secretary of the Interior established specific guidelines for water releases out of Lake Granby to satisfy fish habitat requirements. A release from Lake Granby of 20 cfs is required from October to April of each year. During the remaining months of the year, the control point is almost 3 miles downstream from the dam at the YMCA gauging station.

A minimum flow requirement of 75 cfs, 40 cfs during August, and 20 cfs during September is maintained at the YMCA gauge downstream of Lake Granby. The flow during the May to September period can be progressively reduced if the inflow during the WY to Shadow Mountain Lake, Grand Lake, and Lake Granby (less the decreed rights in the reach of the Colorado River between Granby Dam and the mouth of the Fraser River) and the water capable of being pumped from Willow Creek Reservoir during that year is forecasted to be 230,000 AF or less.

According to the *"Principles to Govern the Release of Water at Granby Dam to Provide Fishery Flows immediately Downstream in the Colorado River"* signed by the Secretary of the Interior and Commissioner of the Bureau of Reclamation in 1961, the following reduction of fishery flows below Lake Granby will apply on the basis of a forecast to be made by Reclamation during the last week in April, using information from all available sources.

Forecast Inflow in AF	Percentage Reduction in Minimum Release
220,000 - 230,000	15
210,000 - 220,000	20
195,000 - 210,000	25
Less than 195,000	30

Adjustments will be made in the reductions, when appropriate, based on revised forecasts and consideration of actual flows during May to July. A copy of the document is included in the Standard Operating Procedures (SOP) for Granby Dams and Reservoir, Appendix A, Exhibit 4.
Also according to the SOP, Willow Creek below Willow Creek Reservoir is not considered a fishery resource since an irrigation ditch a short distance below the dam typically uses the entire flow in the late summer months. In the Secretarial determination minimum instream flow requirements for Willow Creek were not provided. However, a release of 7 cfs or inflow (whichever is the lesser) from Willow Creek Reservoir is required between October 1to April 30 to augment fish habitat flows in the Colorado River.

In accordance with the SOP for Shadow Mountain Reservoir, Chapter 4, Section D, minimum releases from Shadow Mountain Lake of 35 cfs during September to October, 45 cfs during November and December, 20 cfs from January through May, 50 cfs in June to July, and 40 cfs in August or inflow (whichever is the lesser) must be maintained to protect fish and wildlife in the Colorado River above Lake Granby.

The minimum release required out of Green Mountain Reservoir is determined by senior adjudicated water rights downstream from the reservoir. Inflow to Green Mountain Reservoir is

released, as required, to meet these downstream rights. Releases are maintained at all times to be adequate for the preservation of fish habitat.

The State of Colorado Department of Natural Resources, Parks and Wildlife Division, and the United States Fish and Wildlife Service have recommended the following minimum release schedule for Lake Estes. This schedule meets the flow requirements of native fish along the Big Thompson River.

Minimum Releases (cfs)	Period
25	November 1 - April 15
50	April 16 - April 30
100	May 1 - May 15
125	May 16 - August 15
100	August 16 - August 31
75	September 1 - September 15
50	September 16 - October 31

Diversion of flows from the Big Thompson River at Olympus Dam for power production is generally restricted to the May 15 to September 15 period, since runoff during the remaining period of the year usually is much less than the recommended minimum flows. Releases in excess of inflows are not required.

GREEN MOUNTAIN RESERVOIR OPERATIONS

Paragraph 6 of the October 5, 1955 Stipulation in the decree for the Consolidated Cases Numbers 2782, 5016, and 5017 in the United States District Court for the District of Colorado (Blue River Decree), calls for periodic plans for the operation of Green Mountain Reservoir to be developed. This plan addresses this requirement.

Provisions guiding the operations of Green Mountain Reservoir are contained in the following documents. Operations will be consistent with the applicable provisions in the following documents:

Manner of Operation of Project Facilities and Auxiliary Features, Senate Document Number 80, seventy-fifth Congress, first Session

Consolidated Cases Numbers 2782, 5016, and 5017
October 12, 1955, Stipulation and Decree
April 16, 1964, Stipulation and Decree

Operating Policy for Green Mountain Reservoir, Colorado-Big Thompson Project, published in the Federal Register, Volume 48, Number 247 December 22, 1983.

September 4, 1996, Stipulation and Agreement in Colorado Water Division 5, Case Number 91CW247 (Orchard Mesa Check Case), and attached HUP Operating Criteria.

The General Operations Guided By These Provisions Are Given Below:

1. Winter Operation (November-March)
   a. Bypass inflow to supply downstream vested senior rights.
   b. Make releases to replace water diverted or stored out of priority by the C-BT collection system, as required.
   c. Make releases for west slope irrigation and domestic uses per Green Mountain Operating Policy and the HUP Operating Criteria.
   d. Make releases for water service contracts pursuant to the Operating Policy.
   e. Maximize power generation, while maintaining:
      i. Adequate storage to meet the anticipated needs under the guiding documents.
      ii. A minimum power head consistent with the integrated system power operations.

2. Operation during Snowmelt Period (April-July)
   a. Bypass inflow to supply downstream vested senior rights.
   b. Make releases to replace water diverted or stored out of priority by the C-BT collection system, as required.
   c. Make releases for west slope irrigation and domestic uses per Green Mountain Operating Policy and the HUP Operating Criteria.
   d. Make releases for water service contracts pursuant to the Operating Policy.
   e. Participate in the Coordinated Reservoir Operations effort to enhance peak flows for the Colorado River Endangered Fishes. Reduce releases from traditional levels before and after the peak flow period on the Colorado River in the Grand Junction area. During peak flow period, release the lesser of inflows or turbine capacity for approximately a 10-day period.
   f. Fill without spilling to maximize power generation by using the storage and power rights concurrently.
   g. On or before June 30 each year, meet with Managing Entities established under the settlement of the Orchard Mesa Check Case to assess availability of surplus water in the HUP.
   h. Confer with Managing Entities on a regular basis through the irrigation season to assess availability of surplus water in the HUP.
   i. If a surplus condition is declared, make releases up to the amount of surplus, under agreements, to:
      i. the Grand Valley Powerplant up to its need or capacity; then to
      ii. the Grand Valley under the Municipal Recreation contract in excess of that needed by the powerplant
   j. Maximize power operation consistent with 1.e.
   k. Make releases as outlined in the above referenced documents.[1]

3. Operation After Snowmelt Period (August-October)

1 By the use of these criteria for current operating purposes, the United States does not intend to imply any definition of rights and obligations. The order in which these criteria are listed does not reflect any intended priority.

a. Bypass inflow to supply downstream vested senior rights.
b. Make releases to replace water diverted or stored out of priority by the C-BT collection system, as required.
c. Make releases for west slope irrigation and domestic uses per Green Mountain Operating Policy and the HUP Operating Criteria.
d. Make releases for water service contracts pursuant to the Operating Policy.
e. Confer with Managing Entities on a regular basis through the irrigation season to assess availability of surplus water in the HUP.
f. If a surplus condition is declared, make releases up to the amount of surplus, under agreements, to:
    i. the Grand Valley Powerplant up to its need or capacity; then to
    ii. the Grand Valley under the Municipal Recreation contract in excess of that needed by the powerplant
g. Maximize power operation consistent with 1.e.
h. Make releases as outlined in the above referenced documents.[2]

2 By the use of these provisions for current operating purposes, the United States does not intend to imply any definition of rights and obligations. The order in which these criteria are listed does not reflect any intended priority.

GREEN MOUNTAIN HISTORIC USERS POOL AND THE ORCHARD MESA CHECK CASE SETTLEMENT

Background and Authority

The Orchard Mesa Check (Check) is a structure below the common afterbay of the Orchard Mesa Irrigation District (OMID) Pumping Plant and the federal Grand Valley Powerplant in the Grand Valley of Colorado. The purpose of the Check is to raise the water level in the common afterbay, allowing water to flow through the bypass channel to support hydropower operations and return to the Colorado River upstream of the Grand Valley Irrigation Company (GVIC) diversion dam.

Operation of the Check was determined to constitute an 'exchange' of water whereby water destined for the senior GVIC irrigation water rights is borrowed for pumping and hydroelectric power generation purposes and returned to GVIC for irrigation use. Operation of the Check influences the operation of the following: Grand Valley irrigation systems; Grand Valley Powerplant; Green Mountain Reservoir releases; and the 15-Mile Reach of the Colorado River. The 15-Mile Reach is that section of the Colorado River from the GVIC diversion dam to the confluence of the Gunnison River and has been designated critical habitat by the Upper Colorado River Endangered Fish Recovery Program.

The Check has been operated on an informal basis without a decreed right since approximately 1926 to manage flows in the Colorado River for the benefit of the United States, Grand Valley Water Users Association, and OMID. In the late 1980's, a hydropower development was proposed in a reach of the Colorado River between the Grand Valley Diversion Dam, the point where the exchange water is diverted, and the GVIC diversion dam where the exchange water is returned. The OMID was concerned that a water right awarded for this development could interfere with the exchange of water. In response the OMID filed an application in State Water Court on December 30, 1991, for approval of an exchange of water. This case (Water Division 5, Case Number 91CW247) was informally known as the Orchard Mesa Check Case. Resolution of the case resulted in a negotiated Stipulation and Agreement entered into the District Court, Water Division Number 5, State of Colorado, on September 4, 1996.

Overview of the Stipulated Settlement

The settlement contains two major components: the Stipulation and Agreement and the Green Mountain Reservoir Historic Users Pool Operating Criteria (Operating Criteria). The Operating Criteria further defines operation of the Green Mountain Reservoir HUP consistent with Senate Document 80 and the 1984 Operating Policy. The parts of the Stipulation and Agreement pertinent to the operation of the HUP are summarized below.

As part of the Stipulation and Agreement the OMID and GVIC agree not to exercise their irrigation rights against any upstream HUP beneficiary provided that the Check is physically operable; there is at least 66,000 AF of water in storage in the Green Mountain Reservoir HUP, or approved substitute storage reservoir, when Green Mountain Reservoir storage rights cease to be in priority; and the water rights for the Shoshone Powerplant continue to be exercised in a manner consistent with their historical operation. (Section 3.b. of the Stipulation and

Agreement). The Stipulation and Agreement also provides that Reclamation will declare surplus water which is in excess of the needs of HUP beneficiaries for a given WY. Water declared surplus might be delivered through agreements for beneficial uses in western Colorado. This is to be done in accordance with the provisions of the HUP Operating Criteria, which are summarized below.

Management of the HUP Under the Operating Criteria

The management of the HUP is accomplished through the process defined in Sections 3.d and 3.e of the Operating Criteria. This process requires the development of this Annual HUP Operating Plan on or before June 30 of each year.

The Annual HUP Operating Plan is developed by the Bureau of Reclamation in consultation with the Grand Valley Water Users Association, the Orchard Mesa Irrigation District, the Grand Valley Irrigation Company, the Division 5 Engineer, the Colorado Water Conservation Board, and Fish and Wildlife Service (Managing Entities). The Managing Entities agree to make a good faith effort to develop an Annual HUP Operating Plan that is unanimously supported. However, the Bureau of Reclamation reserves the right to establish a release schedule should unanimous consent proves unattainable.

The Annual HUP Operating Plan is based upon actual HUP storage conditions, projected runoff forecasts, operational and climatological conditions, projected irrigation demands, and 15-Mile Reach flow needs. It is expressly recognized that, in some years, release of the entire HUP by the end of the irrigation season will not be necessary or possible.

On or before June 30 of each year the Bureau of Reclamation assembles initial information on storage in the HUP and comparative runoff years. Based upon the information assembled a meeting is held with the other Managing Entities. During this meeting a review of the forecasts is analyzed and initial determinations are made of the level of checking required to preserve water in the HUP, and of water surplus available for HUP beneficiaries.

The HUP operations are reviewed and modified by the Managing Entities as necessary to respond to changing conditions. Subsequent meetings or conference calls are held as needed to reconsider prevailing conditions including HUP storage conditions, runoff forecasts, climatological conditions, irrigation demands, 15-Mile Reach flow needs, and other operational conditions. The Managing Entities adjust the checking as warranted by the examination of prevailing conditions, and determine the water surplus and release schedule for HUP beneficiaries. During periods of below average river flows the Managing Entities may meet as frequently as every week.

This mechanism provides a way to integrate management of releases from the HUP with operation of the Check to accomplish the purposes of the Operating Criteria. The mechanism is also used to integrate releases from the HUP with releases for the endangered fish from other reservoirs including Ruedi and Wolford Mountain.

OPERATION SKIM

Big Thompson River water in excess of the minimum instream flow requirements is diverted at Olympus Dam into the Southern Power Arm of the Foothills System to be used for power generation. This operation is known as "Operation Skim". The amount diverted depends on the flow at the Big Thompson River and the tributaries above Lake Estes, C-BT water imported through the Adams Tunnel, and the capacity of the Foothills System.

The water taken from the Big Thompson River can be used for power generation immediately. It can also be held in storage and replaced to the river with water from other facilities, depending on the power requirements. In general, water taken from the Big Thompson River at a variable rate, on a given date, is returned to the river at a flat rate, on the following day. This operation provides incidental benefits to the tourist and fishing industries along the Big Thompson Canyon by attenuating high flows, and by maintaining a steady stream during the runoff season.

Operation Skim and storage of surplus water from the Big Thompson River in C-BT reservoirs are managed according to the AOP and as prescribed by the ECAO Water Resources staff.

Figure33: Big Thompson Powerplant. (photo prior to the September, 2013 flood)

A volume of 47,461 AF of Big Thompson River water was skimmed through the Olympus Tunnel during WY 2015, producing an estimated 73,000 megawatts of power while passing through Pole Hill, Flatiron and the Big Thompson powerplants. An additional 18,138 AF of east slope priority water was also diverted through the Olympus Tunnel, which also helped produce approximately 27,000 megawatts of power at Pole Hill and Flatiron powerplants. The Dille Tunnel was not available to divert water during WY 2015 due to the damage caused by the September 2013 flood, which lowered the power production at the Big Thompson Powerplant.

FLOOD BENEFITS

Precipitation in Northern Colorado was below average during the winter and early spring seasons of WY 2015. But the pattern changed to a very wet weather, as we approached the middle of April 2015. May, June and early July of 2015 brought significant precipitation to the area, pushing the snowpack to average levels for the season. The precipitation at lower elevations also caused an early start of the runoff season. But cool weather, which continued into late June 2015, caused the snow to melt slowly. The slow melting process helped the Eastern Colorado Area Office personnel manage any potential flooding conditions at C-BT facilities without any serious issues. However, that was not the case over the Colorado eastern plains, where serious flooding was experienced along many streams during the same period.

The monsoonal season during WY 2015 began strong in early July 2015, but despite predictions of a wet summer, it was short lived and did not create any flooding conditions over the C-BT region. After early July 2015, the weather turned hot and very dry. The C-BT did not experience any significant precipitation between early July and late September 2015.

The runoff season lasted from April through late July 2015. At Green Mountain and Granby Reservoirs, the runoff season in WY 2015 was average. Both reservoirs experienced high releases due to their high carry over from the previous water year, but the flows were kept below flooding levels. Contrary to west slope reservoirs, Lake Estes experienced the fifth highest inflow volume ever recorded since the C-BT began operating. But once again, despite the high inflow volume, the combination of cool temperatures in May and June 2015, along with maximum diversions through the Olympus Tunnel, helped to keep the releases from Olympus Dam into the Big Thompson Canyon not higher than 600 cfs.

There was flood-protection benefits associated to C-BT operations during WY 2015. Based on the data collected from the Colorado River Basin, and according to figures provided by the U.S. Army Corps of Engineers, Sacramento District, the C-BT reservoirs over the west slope prevented a total of $14,694 in potential flood damages. While the C-BT reservoirs are not authorized for flood control, prevented flood damages are calculated for the cluster of reservoirs the upper Colorado River reaches, which include Granby, Willow Creek, Shadow Mountain and Grand Lake, as well as for Green Mountain Reservoir in the Blue River. The operations at these reservoirs contribute ancillary benefits to conditions at Dotsero, Colorado, a location where economic studies have enabled calculation of such benefits. All the C-BT flood protection benefits were attributed to Green Mountain Reservoir during WY 2015, while Granby, Willow Creek, Shadow Mountain and Grand Lake did not have any measurable contributions towards flood prevention. Since construction, the C-BT has prevented flood damages totaling $614,094.

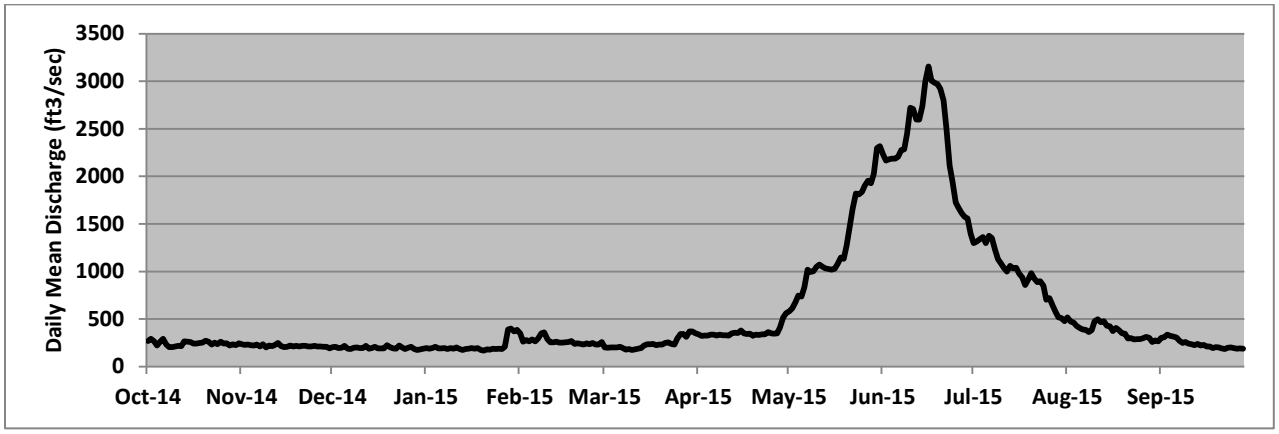
APPENDIX A – DAILY RECORDS

Appendix A (Table 1 of 38)
Green Mountain Reservoir, CO

Location. --Lat 39°52'42", long 106°19'42", Summit County, Hydrologic Unit 14010002, on Green Mountain Dam, 13 miles southeast of Kremmling, Colorado, on the Blue River.
Gage. –Water level recorder with satellite telemetry. Elevation of gage is 7960 from topographic map.
Remarks.-- Inflow computed daily based on change in content from midnight to midnight, and on the 24-hour average releases from Green Mountain Reservoir. Recorders were operated from 01-Oct-2014 to 30-Sep-2015. Records are complete and fair, but the data has not been revised. This record consists of operational data which could be subject to future revisions and changes.

Inflow, Cubic Feet per Second, Daily Mean Values

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	278	226	208	179	370	229	368	517	2296	1558	510	273
2	312	245	191	189	387	256	349	563	2316	1391	476	263
3	268	233	203	195	350	202	339	579	2229	1299	519	300
4	292	227	207	186	261	198	323	610	2165	1315	472	310
5	265	230	195	193	277	201	326	676	2179	1338	463	336
6	220	223	197	207	265	202	325	748	2187	1363	426	323
7	263	222	217	190	284	201	335	735	2187	1297	407	315
8	293	231	187	191	266	208	335	833	2206	1374	388	305
9	233	211	185	193	294	196	326	1017	2277	1351	385	273
10	205	234	196	184	350	178	334	997	2283	1227	362	247
11	204	200	199	194	358	185	329	1003	2449	1130	383	258
12	213	222	193	187	287	172	327	1049	2721	1086	475	241
13	217	214	194	202	254	182	324	1072	2708	1036	499	234
14	214	227	219	184	254	187	348	1050	2597	997	465	223
15	263	247	188	173	262	194	355	1034	2596	1058	475	238
16	261	213	195	183	253	219	351	1026	2741	1031	429	221
17	257	205	206	189	252	236	378	1020	2997	1038	422	228
18	242	208	192	195	255	234	348	1027	3155	978	374	211
19	241	222	192	186	259	239	341	1081	3008	939	407	210
20	248	211	189	195	269	225	345	1146	2984	859	384	194
21	250	217	223	176	238	232	326	1134	2969	917	350	204
22	272	212	204	168	244	232	335	1273	2922	981	345	203
23	260	218	191	181	240	247	332	1476	2799	927	295	191
24	233	216	186	177	230	255	340	1662	2502	889	298	185
25	250	210	221	189	245	238	340	1820	2114	898	284	198
26	233	211	200	184	235	230	364	1809	1945	851	288	201
27	262	218	183	186	249	294	350	1836	1725	703	289	194
28	242	212	198	183	232	342	346	1905	1668	719	300	186
	244	210	207	208		341	350	1956	1612	648	313	189
30	222	209	185	390		311	414	1928	1573	575	302	187
31	236		176	400		370		2025		518	259	
Min	204	200	176	168	230	172	323	517	1573	518	259	185
Max	312	247	223	400	387	370	414	2025	3155	1558	519	336
Mean	248	219	198	201	276	233	343	1181	2404	1042	388	238
ac-ft	15231	13037	12130	12349	15282	14330	20402	72481	142776	63934	23846	14142

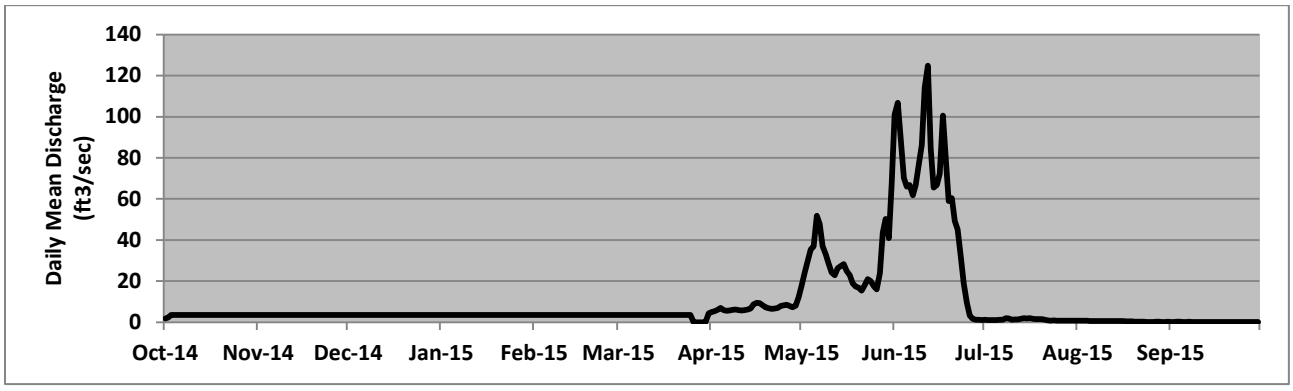


Appendix A (Table 2 of 38)
Elliot Creek Canal near Green Mountain Reservoir, CO

Location. --Lat 39°52'25", long 106°19'49", Summit County, Hydrologic Unit 14010002 , on left bank at concrete flume structure, and 1.1 mi west of Heeney.
Gage.--Water-stage recorder with satellite telemetry. Elevation of gage is 8050 ft from topographic map.
Remarks.—This is a diversion from Elliot Creek in the Blue River Basin to Green Mountain Reservoir. Recorder was winterized on 2-Oct-2014. The station became operational again on 31-March-2015, and continued transmitting reliable data through 30-Sep-2015. Any values between 3-Oct-2014 and 30-Mar-2015 are not considered reliable. Records are incomplete and only reliable while recorder is operated. This record contains operational data which could be subject to future revisions and changes. Official data is published by the United States Geological Survey.

Discharge, Cubic Feet per Second, Daily Mean Values

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	2	4	4	4	4	4	5	18	101	1	1	0
2	2	4	4	4	4	4	5	24	107	1	1	0
3	4	4	4	4	4	4	6	30	90	1	1	0
4	4	4	4	4	4	4	7	35	70	1	1	0
5	4	4	4	4	4	4	6	37	66	1	1	0
6	4	4	4	4	4	4	6	52	67	1	1	0
7	4	4	4	4	4	4	6	48	62	1	1	0
8	4	4	4	4	4	4	6	37	67	2	1	0
9	4	4	4	4	4	4	6	33	77	2	1	0
10	4	4	4	4	4	4	6	28	86	1	1	0
11	4	4	4	4	4	4	6	24	114	1	1	0
12	4	4	4	4	4	4	6	23	125	1	1	0
13	4	4	4	4	4	4	6	26	84	2	1	0
14	4	4	4	4	4	4	7	27	66	2	1	0
15	4	4	4	4	4	4	9	28	67	2	1	0
16	4	4	4	4	4	4	9	25	72	2	1	0
17	4	4	4	4	4	4	9	23	101	2	1	0
18	4	4	4	4	4	4	8	19	80	1	1	0
19	4	4	4	4	4	4	7	17	59	2	0	0
20	4	4	4	4	4	4	7	17	60	2	0	0
21	4	4	4	4	4	4	7	15	49	1	0	0
22	4	4	4	4	4	4	7	18	45	1	0	0
23	4	4	4	4	4	4	7	21	32	1	0	0
24	4	4	4	4	4	4	8	20	19	1	0	0
25	4	4	4	4	4	4	8	18	9	1	0	0
26	4	4	4	4	4	0	9	16	3	1	0	0
27	4	4	4	4	4	0	8	24	2	1	0	0
28	4	4	4	4	4	0	7	44	1	1	0	0
29	4	4	4	4		0	8	50	1	1	0	0
30	4	4	4	4		0	12	41	1	1	0	0
31	4		4	4		4		68		1	0	
Min	2	4	4	4	4	0	5	15	1	1	0	0
Max	4	4	4	4	4	4	12	68	125	2	1	0
Mean	3	4	4	4	4	3	7	29	59	1	0	0
ac-ft	209	208	215	215	194	182	423	1795	3529	76	28	11

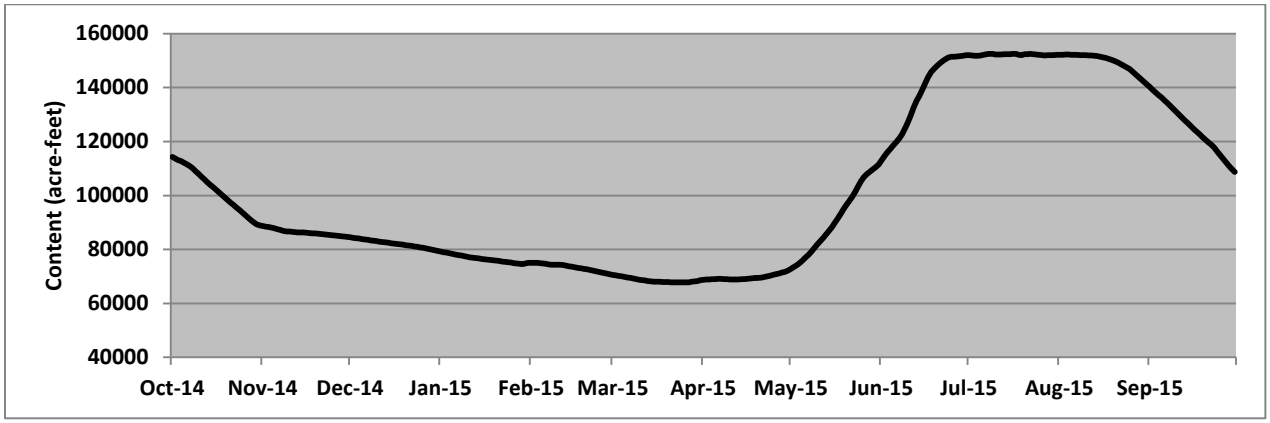


Green Mountain Reservoir, CO

Location. --Lat 39°52'42", long 106°19'42", Summit County, Hydrologic Unit 14010002, on Green Mountain Dam, 13 miles southeast of Kremmling, Colorado, on the Blue River..
Gage. –Water level recorder with satellite telemetry. Elevation of gage is 7960 from topographic map.
Remarks.--Reservoir is formed by an earth-fill dam. Construction completed in 1943. Impoundment began on 16-Nov-1942. Green Mountain Reservoir provides storage used for replacement water of the Colorado-Big Thompson Project diversions. Recorder was operated from 01-Oct-2014 to 30-Sep-2015. Maximum capacity is 153,639 acre-feet at elevation 7950.00 ft, with 146,779 acre-feet of active capacity. Records are complete and fair, but the data has not been revised. This record consists of operational data which could be subject to future revisions and changes.

Storage, Acre-Feet, 2400-hour Values

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	114286	88632	84510	79218	75024	70551	68768	72769	112996	152053	152180	140114
2	113710	88475	84316	78993	75062	70406	68863	73481	114548	151905	152180	139094
3	113169	88289	84164	78782	75024	70212	68935	74224	115921	151757	152243	138163
4	112703	88088	84026	78558	74922	70018	68971	75024	117180	151778	152201	137192
5	112186	87832	83860	78334	74845	69824	69019	75957	118465	151905	152159	136210
6	111599	87521	83695	78151	74654	69630	69067	77016	119763	152180	152116	135208
7	110881	87224	83572	77929	74501	69437	69079	78020	121052	152412	152095	134216
8	109995	86927	83394	77720	74350	69258	69019	79139	122606	152518	152032	133186
9	109015	86686	83216	77511	74274	69055	68947	80549	124712	152476	152010	132087
10	108005	86616	83066	77289	74274	68816	68887	81841	127008	152307	152010	131011
11	106975	86503	82915	77080	74287	68648	68828	83038	129654	152201	151926	129960
12	105967	86419	82751	76912	74173	68481	68828	84289	132434	152264	151884	128895
13	104950	86335	82587	76809	73985	68338	68863	85594	134877	152370	151778	127797
14	103943	86279	82477	76680	73783	68208	68947	86856	137113	152412	151609	126708
15	103021	86265	82328	76525	73594	68090	69031	88232	139333	152391	151419	125714
16	102095	86181	82193	76383	73393	68031	69115	89839	141659	152476	151189	124675
17	101173	86083	82071	76254	73180	68007	69258	91453	143969	152455	150979	123655
18	100211	85999	81909	76138	72993	67972	69342	93088	145747	152159	150623	122680
19	99241	85943	81747	76009	72806	67948	69414	94819	146898	151968	150287	121708
20	98293	85846	81571	75892	72632	67901	69497	96574	147974	152328	149805	120742
21	97370	85734	81463	75738	72408	67865	69605	98077	148971	152412	149262	119781
22	96483	85594	81314	75572	72196	67830	69824	99646	149910	152476	148680	118808
23	95557	85482	81138	75419	71961	67818	70078	101409	150623	152370	148057	117715
24	94579	85370	80937	75253	71703	67830	70345	103344	151126	152264	147496	116362
25	93651	85244	80776	75113	71482	67806	70600	105327	151419	152159	146898	115021
26	92688	85119	80576	74973	71248	67759	70905	106826	151398	152053	146014	113693
27	91775	85008	80348	74845	71040	67842	71187	107939	151482	151905	144968	112358
28	90810	84883	80134	74717	70794	68019	71469	108880	151693	152032	143969	111119
29	89984	84759	79947	74628		68208	71752	109722	151820	152032	143053	109944
30	89319	84634	79707	74858		68338	72159	110506	152032	152053	142104	108746
31	88890		79456	74998		68588		111478		152116	141095	
Min	88890	84634	79456	74628	70794	67759	68768	72769	112996	151757	141095	108746
Max	114286	88632	84510	79218	75062	70551	72159	111478	152032	152518	152243	140114
EOM	88890	84634	79456	74998	70794	68588	72159	72159	152032	152116	141095	108746

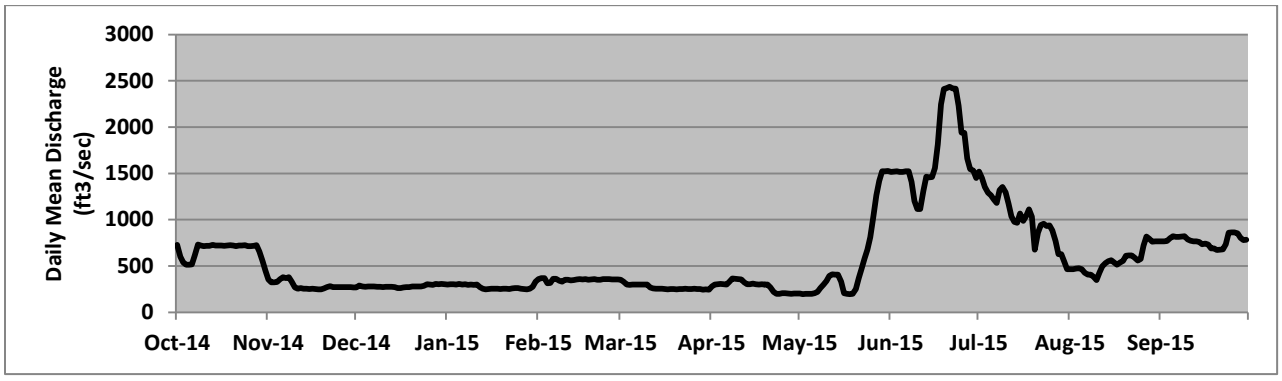


Appendix A (Table 4 of 38)
Blue River below Green Mountain Reservoir, CO

Location.--Lat 39°52'49", long 106°20'00", Summit County, Hydrologic Unit 14010002, on left bank 0.3 miles upstream from Elliot Creek, 0.3 miles downstream from Green Mountain Reservoir and 13 miles southeast of Kremmling.
Gage.-- Water-stage recorder with satellite telemetry. Datum of gage is 7682.66 feet (levels by U.S. Bureau of Reclamation).
Remarks.--Drainage area is 599 mi^2 including 15.3 mi^2 of Elliot Creek above the diversion for Elliot Creek feeder canal. Flow regulated by Green Mountain Reservoir since 1942. Diversions for irrigation of 5,000 acres occur upstream from this station. Transmountain diversions operate upstream from this station. Recorder was operated from 01-Oct-2014 to 30-Sep-2015. Records are complete and reliable, but the data has not been revised. This record consists of operational data which could be subject to future revisions and changes. Official record is published by the United States Geological Survey.

Discharge, Cubic Feet per Second, Daily Mean Values

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	728	353	270	299	357	352	277	202	1518	1518	465	767
2	599	322	288	302	367	330	301	196	1521	1449	467	766
3	538	324	279	301	370	300	302	198	1523	1352	472	770
4	515	326	276	299	312	296	305	200	1517	1292	476	799
5	515	357	278	306	316	299	302	198	1517	1263	464	823
6	516	378	279	299	362	300	301	206	1524	1218	427	816
7	615	370	278	302	361	298	329	221	1522	1179	406	816
8	733	379	276	296	342	298	365	262	1408	1321	406	819
9	721	330	274	298	332	298	362	298	1201	1354	382	821
10	715	267	272	296	350	299	360	337	1114	1296	349	787
11	718	254	274	299	352	270	355	392	1115	1173	426	774
12	716	261	275	272	344	257	323	410	1313	1036	495	767
13	727	253	276	254	349	254	301	406	1465	977	532	766
14	722	253	273	249	355	253	301	405	1456	967	550	759
15	720	252	263	251	357	254	308	332	1461	1065	562	735
16	720	253	262	255	354	249	304	207	1557	989	538	741
17	716	252	267	254	359	248	301	198	1813	1041	514	730
18	721	248	273	253	350	252	301	194	2244	1110	536	691
19	726	248	273	252	353	251	300	199	2410	1031	555	691
20	719	258	277	253	357	249	298	252	2422	677	610	672
21	714	271	277	253	351	250	267	368	2437	859	612	676
22	720	280	278	252	350	250	220	472	2419	941	612	680
23	723	273	279	258	358	253	199	578	2415	957	591	734
24	723	271	287	261	360	249	200	677	2231	932	560	858
25	713	271	301	260	357	250	206	810	1942	939	574	863
26	714	272	301	255	353	254	206	1044	1939	885	721	863
27	716	271	297	250	354	252	203	1265	1662	769	816	853
28	724	272	306	247	355	252	199	1420	1547	627	795	804
29	655	270	301	253		246	203	1521	1531	627	763	781
30	552	269	306	274		246	204	1523	1452	548	764	783
31	447		302	329		243		1525		466	767	
Min	447	248	262	247	312	243	199	194	1114	466	349	672
Max	733	379	306	329	370	352	365	1525	2437	1518	816	863
Mean	671	289	281	274	351	269	280	533	1707	1028	555	773
ac-ft	41183	17144	17265	16799	19479	16532	16640	32702	101367	63080	34070	45941

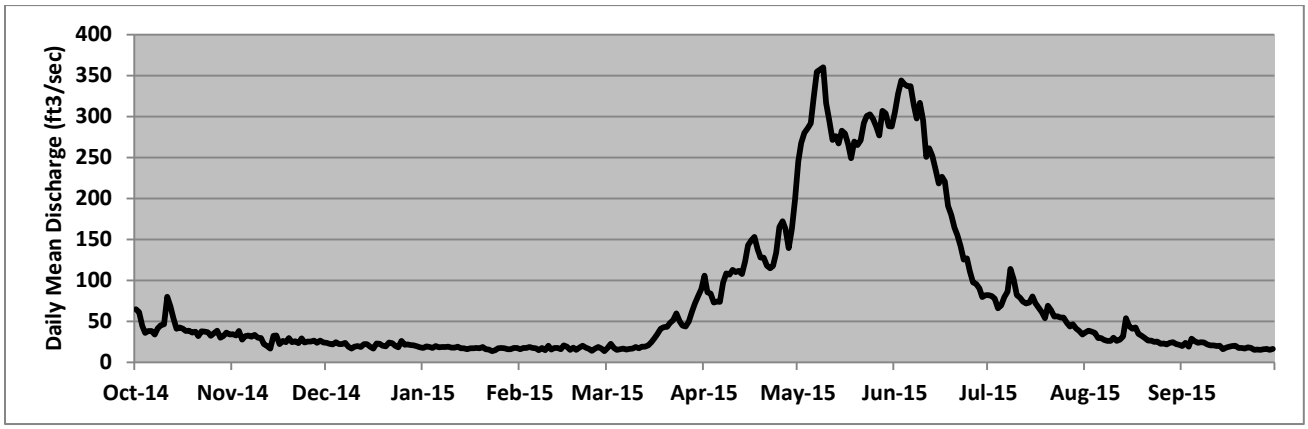


Appendix A (Table 5 of 38)
Willow Creek Reservoir, CO

Location. –- Lat 40°08’52”, long 105°56’28”, Grand County, Hydrologic Unit 14010001, at Willow Creek Dam, 4 miles north of Granby, Colorado, on Willow Creek, a tributary of the Colorado River.
Gage.— Water level recorder with satellite telemetry. Elevation of gage is 8130 from topographic map.
Remarks.—Inflow computed daily using change in content from midnight to midnight, plus the 24-hour average releases through the Willow Creek Pump Canal and the reservoir outlet works. Recorders were operated from 01-Oct-2014 to 30-Sep-2015. Records are complete and reliable, but the data has not been revised. This record consists of operational data which could be subject to future revisions and changes.

Inflow, Cubic Feet per Second, Daily Mean Values

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	65	34	24	17	16	18	106	245	305	82	36	20
2	61	33	23	19	18	22	86	267	328	81	39	24
3	44	38	22	19	18	18	84	280	344	78	37	19
4	36	27	25	18	19	15	73	286	340	66	36	29
5	38	32	22	20	17	16	74	292	337	69	30	26
6	38	33	22	18	17	17	74	323	337	80	30	24
7	34	31	24	19	15	16	97	355	314	86	27	25
8	41	33	19	19	17	16	108	357	297	114	26	24
9	45	30	17	19	15	17	107	360	317	101	26	22
10	46	30	19	18	20	18	113	316	295	82	30	21
11	80	22	20	18	16	17	110	295	251	79	26	20
12	68	20	19	19	17	19	112	271	261	74	28	20
13	54	17	22	17	18	19	108	276	252	72	32	20
14	41	32	22	17	16	21	123	267	235	73	54	16
15	42	33	19	16	21	25	143	283	218	80	44	18
16	41	22	17	17	19	30	149	279	227	72	41	19
17	38	26	23	17	15	35	153	266	221	67	42	20
18	39	25	22	18	18	41	138	249	191	61	35	20
19	36	30	20	17	15	43	128	270	180	54	32	18
20	38	25	20	19	18	43	128	265	164	69	29	17
21	32	26	24	16	20	48	118	271	155	63	26	17
22	38	23	23	16	18	52	115	292	142	56	26	18
23	37	29	20	14	16	60	117	301	125	56	25	18
24	37	24	18	15	14	50	134	303	127	54	25	15
25	32	25	26	17	17	45	165	297	111	55	22	16
26	35	25	21	18	19	44	172	287	98	48	23	15
27	38	26	22	17	17	50	163	277	96	44	22	16
28	30	24	21	16	14	62	139	307	90	46	24	16
29	32	26	21	16		72	163	304	80	41	25	15
30	36	24	20	17		81	199	288	82	38	22	16
31	34		18	17		90		288		34	21	
Min	30	17	17	14	14	15	73	245	80	34	21	15
Max	80	38	26	20	21	90	199	360	344	114	54	29
Mean	42	28	21	17	17	36	123	291	217	67	30	19
ac-ft	2591	1635	1296	1068	947	2211	7321	17849	12911	4111	1865	1157

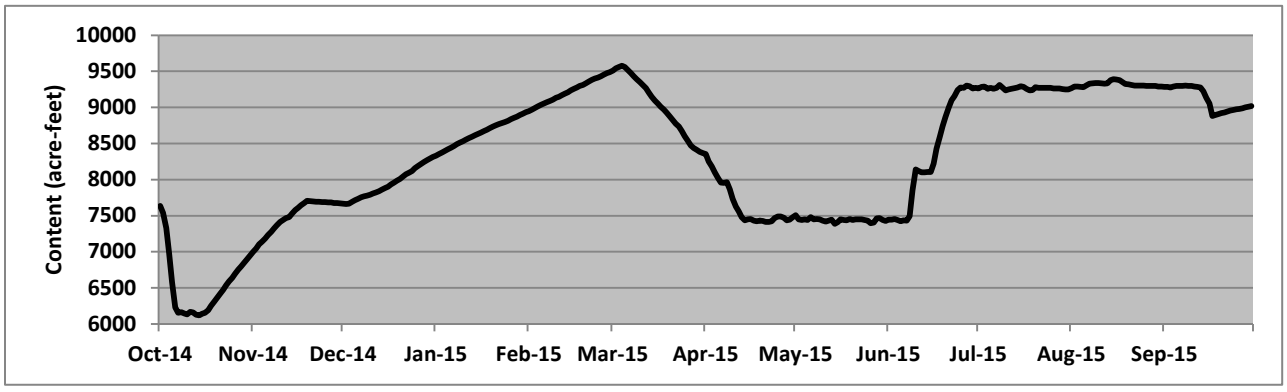


Appendix A (Table 6 of 38)
Willow Creek Reservoir, CO

Location. –-Lat 40° 08’52”, long 105° 56’28”, Grand County, Hydrologic Unit 14010001, at Willow Creek Dam, 4 miles north of Granby, Colorado, on Willow Creek, a tributary of the Colorado River.
Gage.— Water level recorder with satellite telemetry. Elevation of gage is 8130 from topographic map.
Remarks.—Reservoir is formed by an earth-fill dam. Construction completed in 1953. Impoundment began on April 2, 1953. Willow Creek Reservoir stores water from Willow Creek for diversion to Granby Reservoir via the Willow Creek Canal. Maximum capacity is 10,600 acre-feet at elevation 8,130.00 ft, with 9,100 acre-feet of active capacity between elevations 8077.00 and 8130.00 feet. Recorder was operated from 01-Oct 2014 to 30-Sep-2015. Record is complete and fair, but the data has not been revised. This record consists of operational data which could be subject to future revisions and changes.

Storage, Acre-Feet, 2400-hour Values

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	7637	6998	7668	8333	8950	9509	8353	7505	7444	9261	9267	9283
2	7538	7046	7661	8355	8970	9540	8254	7448	7444	9286	9288	9283
3	7330	7102	7668	8378	8991	9559	8181	7441	7452	9288	9291	9278
4	6974	7139	7693	8398	9015	9575	8100	7450	7439	9259	9286	9291
5	6579	7185	7714	8422	9035	9561	8029	7441	7422	9269	9280	9296
6	6230	7232	7734	8444	9054	9520	7958	7479	7437	9259	9307	9296
7	6153	7277	7757	8467	9070	9476	7956	7450	7433	9272	9329	9299
8	6166	7326	7768	8489	9091	9432	7963	7455	7494	9313	9334	9302
9	6146	7370	7778	8512	9107	9391	7865	7450	7851	9278	9340	9299
10	6133	7413	7791	8532	9134	9353	7734	7430	8142	9237	9340	9296
11	6170	7441	7808	8552	9149	9313	7626	7419	8118	9248	9332	9291
12	6158	7466	7821	8574	9171	9267	7561	7430	8102	9259	9329	9286
13	6129	7481	7840	8594	9192	9205	7479	7446	8100	9267	9332	9278
14	6119	7529	7860	8614	9210	9147	7437	7389	8105	9278	9377	9224
15	6140	7579	7883	8632	9237	9096	7448	7411	8107	9294	9391	9136
16	6156	7607	7902	8651	9259	9056	7455	7448	8219	9283	9385	9056
17	6192	7644	7933	8672	9275	9012	7433	7441	8427	9259	9377	8879
18	6253	7675	7960	8693	9296	8968	7424	7435	8589	9234	9353	8895
19	6308	7705	7986	8712	9313	8924	7433	7455	8741	9240	9326	8908
20	6365	7700	8010	8736	9334	8872	7426	7439	8869	9280	9321	8921
21	6414	7698	8043	8754	9358	8822	7413	7450	8996	9269	9310	8931
22	6475	7691	8074	8769	9380	8774	7413	7448	9099	9272	9305	8944
23	6534	7693	8098	8782	9399	8736	7424	7450	9154	9272	9305	8957
24	6590	7689	8121	8797	9413	8674	7466	7439	9242	9272	9305	8965
25	6639	7687	8159	8817	9432	8602	7490	7430	9278	9272	9302	8973
26	6694	7684	8188	8838	9454	8534	7490	7397	9272	9261	9299	8981
27	6755	7684	8217	8856	9474	8474	7470	7406	9305	9261	9296	8989
28	6799	7677	8242	8874	9487	8437	7435	7461	9294	9261	9296	8999
29	6845	7677	8268	8892		8410	7446	7468	9264	9253	9296	9009
30	6899	7673	8292	8913		8385	7479	7439	9272	9248	9291	9020
31	6948		8314	8934		8365		7426		9251	9288	
Min	6119	6998	7661	8333	8950	8365	7413	7389	7422	9234	9267	8879
Max	7637	7705	8314	8934	9487	9575	8353	7505	9305	9313	9391	9302
EOM	6948	7673	8314	8934	9487	8365	7479	7479	9272	9251	9288	9020

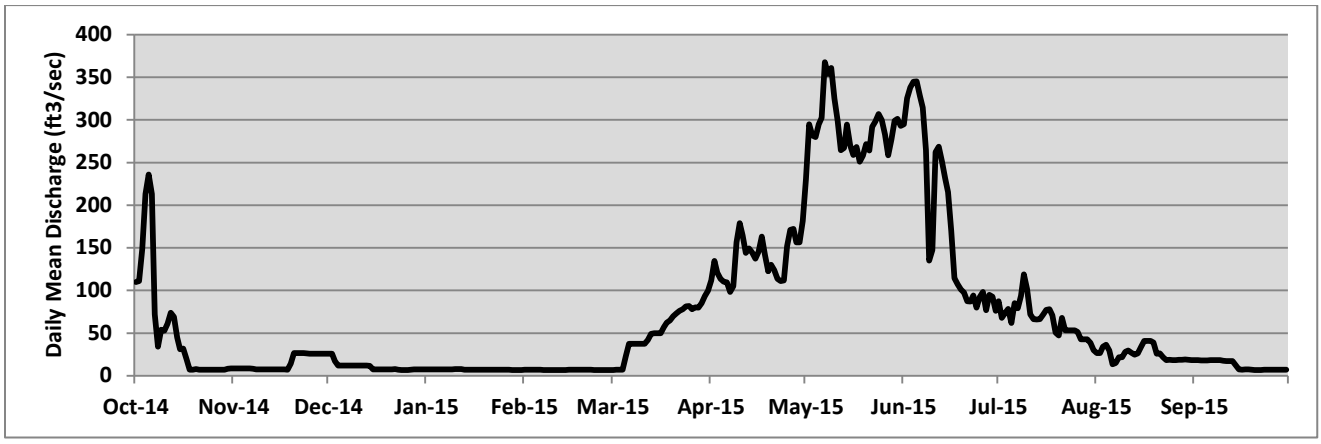


Appendix A (Table 7 of 38)
Willow Creek below Willow Creek Reservoir, CO

Location.--Lat 40°08'50", long 105°56'16", Grand County, Hydrologic Unit 14010001, at Willow Creek Dam, 4 miles north of Granby, Colorado, on Willow Creek, a tributary of the Colorado River.
Gage.--Water-stage recorder with satellite telemetry. Elevation of gage is 8040 feet from topographic map.
Remarks.-- Drainage area is 127 square miles. Recorder was operated from 01-Oct-2014 to 30-Sep-2015. Records are complete and reliable. The official record is published by the Division of Water Resources, State of Colorado. This record contains operational data which could be subject to future revisions and changes.

Discharge, Cubic Feet per Second, Daily Mean Values

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	110	8	26	7	7	7	112	231	295	87	27	18
2	111	8	26	7	7	7	135	295	325	68	27	18
3	149	8	17	7	7	7	121	282	338	73	34	18
4	213	8	12	7	7	7	114	280	345	78	36	18
5	236	8	12	7	7	23	110	295	345	62	30	18
6	213	9	12	7	7	38	110	302	328	85	13	18
7	72	8	12	7	7	38	98	368	314	79	15	18
8	34	7	12	7	7	38	105	354	265	94	22	18
9	54	7	12	8	7	38	156	361	135	119	22	18
10	53	8	12	8	7	38	179	325	148	102	28	17
11	61	7	12	8	7	37	165	299	262	72	30	17
12	74	7	12	8	7	42	144	265	269	66	27	17
13	69	7	12	7	7	49	149	267	251	66	25	17
14	45	7	12	7	7	50	144	294	231	66	26	12
15	31	7	7	7	7	50	137	270	215	72	34	7
16	32	7	7	7	7	50	145	259	170	77	41	7
17	20	7	7	7	7	57	163	268	115	78	41	7
18	7	7	7	7	7	62	141	251	107	71	41	7
19	7	14	7	7	7	65	123	258	101	51	39	7
20	8	27	7	7	7	70	130	272	97	47	26	7
21	7	27	8	7	7	73	124	264	87	68	26	7
22	7	27	8	7	7	76	114	292	87	53	22	7
23	7	27	7	7	7	78	111	298	94	53	18	7
24	7	26	7	7	7	81	112	307	80	53	19	7
25	7	26	7	7	7	82	152	300	92	53	18	7
26	7	26	7	7	7	78	171	283	98	51	18	7
27	7	26	7	7	7	80	172	259	77	43	19	7
28	7	26	7	7	7	80	156	277	95	43	19	7
29	7	26	7	7		85	156	299	93	43	19	7
30	8	26	7	7		93	182	301	76	39	19	7
31	8		7	7		100		293		30	18	
Min	7	7	7	7	7	7	98	231	76	30	13	7
Max	236	27	26	8	7	100	182	368	345	119	41	18
Mean	54	15	10	7	7	54	138	289	185	66	26	12
ac-ft	3324	878	642	443	383	3320	8179	17756	10962	4045	1578	706

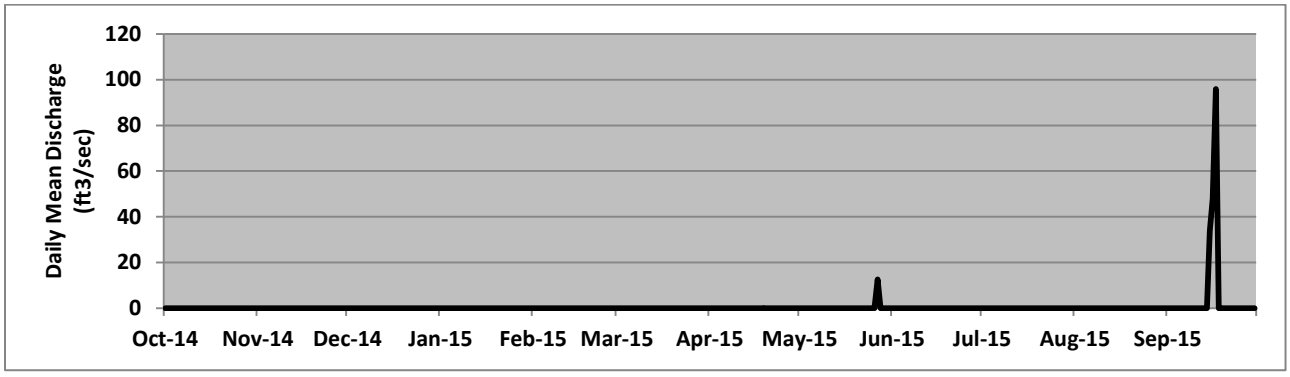


Appendix A (Table 8 of 38)
Willow Creek Pump Canal, CO

Location. –-Lat 40°08’39”, long 105°54’10”, Grand County, Hydrologic Unit 14010001, at Willow Creek Pump Canal, 4 miles north of Granby, Colorado, on Willow Creek, a tributary of the Colorado River.
Gage.— Water-stage recorder with satellite telemetry at 15 foot Parshall Flume. Elevation of gage is 8300 feet from topographic map.
Remarks.—Canal is used to divert water from Willow Creek Reservoir to Granby Reservoir. Diversions are seasonal, mainly during late spring and early summer. Construction completed in 1953. Length of the canal is 3.4 miles. Recorder was operated from 01-Oct-2013 to 30-Sep-2014. Records are complete and reliable, but the data has not been revised. This record consists of operational data which could be subject to future revisions and changes.

Discharge, Cubic Feet per Second, Daily Mean Values

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	34
16	0	0	0	0	0	0	0	0	0	0	0	48
17	0	0	0	0	0	0	0	0	0	0	0	96
18	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	13	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	0	0
29	0	0	0	0		0	0	0	0	0	0	0
30	0	0	0	0		0	0	0	0	0	0	0
31	0		0	0		0		0		0	0	
Min	0	0	0	0	0	0	0	0	0	0	0	0
Max	0	0	0	0	0	0	0	13	0	0	0	96
Mean	0	0	0	0	0	0	0	0	0	0	0	6
ac-ft	0	0	0	0	0	0	0	25	0	0	0	352

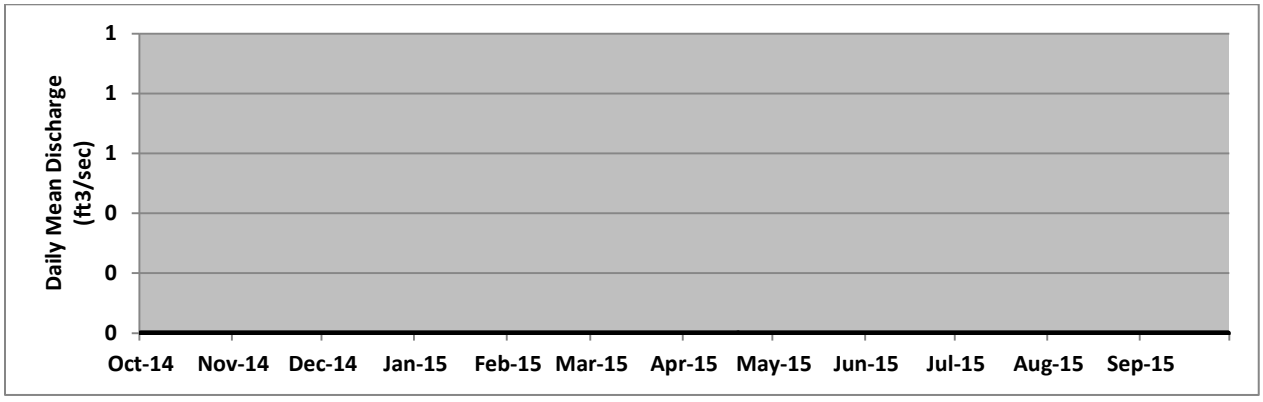


Appendix A (Table 9 of 38)
Windy Gap Pumping Plant, CO

Location. --Lat 40°06'24", long 105°58'48", Grand County, Hydrologic Unit 14010001, 5.5 miles northeast of Granby, Colorado, on the Colorado River.
Gage.-- Reading taken directly from the pumps. Elevation of the pumping plant is 7823 from topographic map.
Remarks.— Water is pumped from Windy Gap Reservoir to Granby Reservoir. Water is stored at Granby Reservoir before delivery through Adams Tunnel. Data was provided by Farr Pumping Plant operators each morning. Data was collected from 01-Oct-2014 to 30-Sep-2015. Records are complete and reliable, but the data has not been revised. This record consists of operational data which could be subject to future revisions and changes. Readings were provided by the Northern Colorado Water Conservancy District.

Windy Gap Pump Discharge, Cubic Feet per Second, Daily Mean Values

1	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	0	0
29	0	0	0	0		0	0	0	0	0	0	0
30	0	0	0	0		0	0	0	0	0	0	0
31	0		0	0		0		0		0	0	
Min	0	0	0	0	0	0	0	0	0	0	0	0
Max	0	0	0	0	0	0	0	0	0	0	0	0
Mean	0	0	0	0	0	0	0	0	0	0	0	0
ac-ft	0	0	0	0	0	0	0	0	0	0	0	0

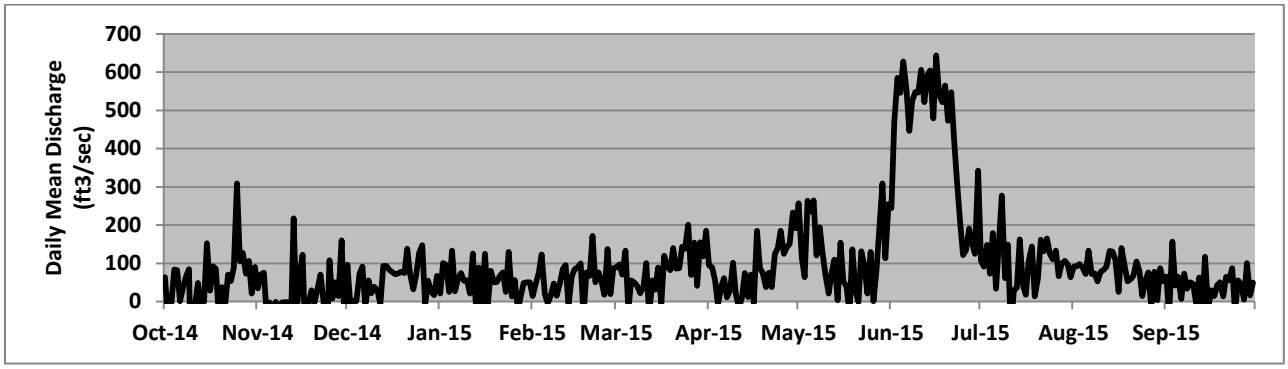


Appendix A (Table 10 of 38)
Granby Reservoir, CO

Location. --Lat 40°08'54", long 105°51'48", Grand County, Hydrologic Unit 14010001, on Granby Dam, 5.5 miles northeast of Granby, Colorado, on the Colorado River.
Gage.-- Water level recorder with satellite telemetry. Elevation of gage is 8300 from topographic map.
Remarks.-- Inflow computed daily based on change in content from midnight to midnight, and on the average daily releases through the reservoir outlet works. It does not include water coming from Shadow Mountain Reservoir, Windy Gap Pumping Plant or Willow Creek Reservoir. Recorders were operated from 01-Oct-2014 to 30-Sep-2015. Records are complete, but the data has not been revised. This record consists of operational data which could be subject to future revisions and changes.

Inflow, Cubic Feet per Second, Daily Mean Values

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	64	35	97	21	14	89	95	257	244	106	91	65
2	-52	71	-19	101	48	97	89	114	469	91	92	-38
3	-14	76	3	97	75	70	55	64	585	148	98	157
4	84	-38	1	25	123	133	-9	264	546	73	88	42
5	82	-3	73	133	19	-23	38	235	628	180	73	65
6	1	-40	91	27	-5	56	61	265	555	34	133	7
7	40	-1	-14	61	14	49	12	121	447	155	72	73
8	66	-39	55	75	47	41	30	194	525	277	74	34
9	85	-3	22	55	15	22	102	126	548	62	53	50
10	-332	-2	39	55	44	37	19	69	547	149	78	46
11	-7	-2	30	21	85	101	-16	22	606	-73	83	-4
12	49	-74	-7	126	96	-34	10	76	521	31	92	63
13	-27	218	94	-16	-12	56	75	110	592	36	132	-28
14	1	-37	94	89	65	31	12	3	604	162	131	117
15	153	72	83	-16	85	89	71	154	479	44	110	-20
16	29	122	78	125	89	-6	-4	53	643	18	25	30
17	92	-111	72	-7	100	120	185	39	542	105	140	14
18	85	-2	74	80	-38	93	88	-33	522	144	97	43
19	-49	29	78	51	76	82	75	136	565	14	53	50
20	38	-2	75	51	67	140	38	26	473	62	58	14
21	-18	34	139	66	172	87	75	-2	547	162	67	65
22	70	71	72	76	50	87	38	131	423	132	105	56
23	54	4	32	26	76	143	125	91	314	165	80	87
24	89	-122	71	130	54	138	140	21	205	125	15	-29
25	309	108	127	14	18	201	186	130	122	111	56	56
26	106	8	147	56	137	70	125	1	134	133	76	46
27	127	50	-9	-22	19	154	142	78	191	67	-16	6
28	73	14	55	15	87	41	151	199	152	99	78	101
29	106	160	25	49		155	233	309	125	107	3	16
30	21	-65	17	51		118	192	113	343	98	88	49
31	91		67	50		185		256		64	53	
Min	-332	-122	-19	-22	-38	-34	-16	-33	122	-73	-16	-38
Max	309	218	147	133	172	201	233	309	643	277	140	157
Mean	46	18	57	54	58	85	81	117	440	99	77	41
ac-ft	2807	1055	3483	3294	3214	5194	4816	7175	26130	6097	4710	2444

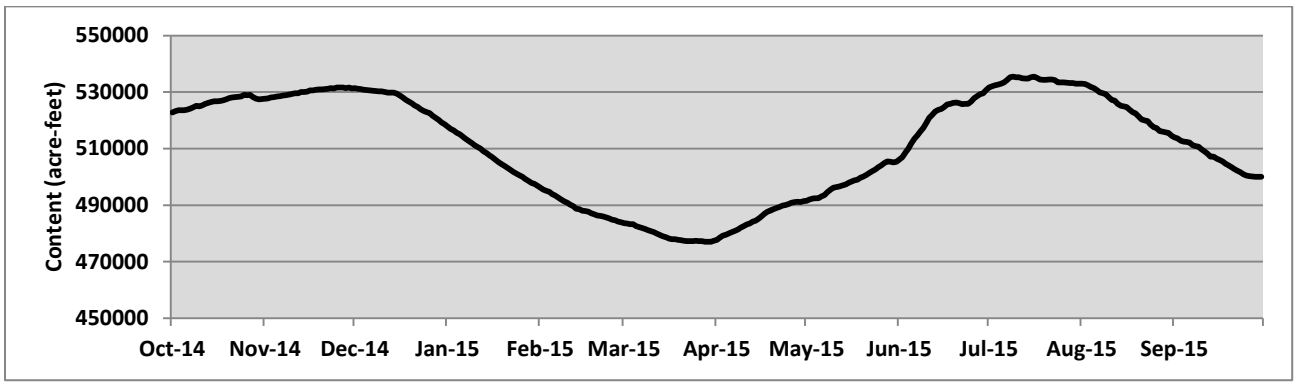


Appendix A (Table 11 of 38)
Granby Reservoir, CO

Location. --Lat 40°08'54", long 105°51'48", Grand County, Hydrologic Unit 14010001, on Granby Dam, 5.5 miles northeast of Granby, Colorado, on the Colorado River.
Gage.-- Water level recorder with satellite telemetry. Elevation of gage is 8300 from topographic map.
Remarks.--Reservoir is formed by an earth-fill dam and four earth-fill dikes. Construction completed in 1950. Impoundment began on 14-Sep-1949. Granby Reservoir provides west-slope storage for the Colorado-Big Thompson Project. Maximum capacity is 539,800 acre-feet at elevation 8,280.00, with 463,300 acre-feet of active capacity between elevations 8186.90 and 8280.00 feet. Recorder was operated from 01-Oct-2014 to 30-Sep-2015. Records are complete, but the data has not been revised. This record consists of operational data which could be subject to future revisions and changes.

Storage, Acre-Feet, 2400-hour Values

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	522825	527627	531441	517831	496166	483679	477728	491551	506208	531658	532952	513992
2	523255	527771	531151	517046	495533	483541	478487	491968	506916	532090	532880	513636
3	523541	528060	531006	516406	495045	483333	479180	492388	508607	532377	532377	512855
4	523541	528205	530791	515622	494695	483264	479593	492459	509951	532593	531875	512501
5	523541	528420	530720	515053	493924	482642	480006	492459	511789	533024	531441	512430
6	523826	528563	530648	514275	493367	482296	480491	493088	513493	533458	530720	512145
7	524185	528778	530504	513565	492669	481948	480908	493576	514629	534182	529927	511295
8	524617	528921	530361	512713	492038	481531	481323	494624	515980	535267	529637	510871
9	525117	529136	530289	512003	491342	481116	482018	495533	517333	535484	529207	510660
10	524903	529351	530216	511295	490921	480769	482642	496166	519110	535267	528277	509738
11	525331	529565	530071	510519	490224	480491	483126	496377	520897	535194	527196	508963
12	525902	529637	529854	509951	489599	479869	483541	496586	522038	534903	526981	508182
13	526189	530071	529854	509104	488760	479455	484167	496935	523112	534830	525831	507198
14	526550	529999	529854	508465	488620	478973	484586	497284	523754	534758	525117	507127
15	526767	530144	529422	507619	488065	478626	485210	497915	524041	535267	524974	506492
16	526767	530576	528778	506916	487926	478140	486116	498337	524688	535484	524688	505997
17	526910	530576	528060	506067	487646	477934	487017	498757	525617	535049	523754	505435
18	527125	530791	527339	505222	487086	477934	487646	499036	525831	534469	522896	504726
19	527411	530935	526695	504516	486740	477728	488134	499671	526189	534326	522465	504095
20	527844	530935	526045	503885	486393	477659	488551	500162	526334	534326	521326	503394
21	528133	531006	525331	503183	486255	477453	489041	500721	526117	534397	520252	502758
22	528277	531151	524688	502477	485978	477244	489390	501351	525759	534397	519968	502197
23	528348	531368	523969	501705	485629	477314	489876	502057	525831	534182	519683	501634
24	528491	531296	523327	501140	485280	477314	490085	502617	525831	533458	518469	500930
25	528993	531658	522896	500581	484863	477453	490432	503394	526695	533458	517547	500511
26	528921	531658	522609	500022	484655	477244	490921	504095	527844	533458	517190	500301
27	528993	531658	521611	499247	484237	477244	491131	504939	528563	533313	516264	500162
28	528277	531441	520897	498548	483958	477036	491201	505435	529207	533240	515980	500092
29	527627	531658	520181	497915		477036	491131	505364	529565	533240	515765	500092
30	527411	531296	519253	497494		477106	491412	505151	530720	533024	515551	500092
31	527554		518611	496865		477453		505364		532952	514487	
Min	522825	527627	518611	496865	483958	477036	477728	491551	506208	531658	514487	500092
Max	528993	531658	531441	517831	496166	483679	491412	505435	530720	535484	532952	513992
EOM	527554	531296	518611	496865	483958	477453	491412	491412	530720	532952	514487	500092

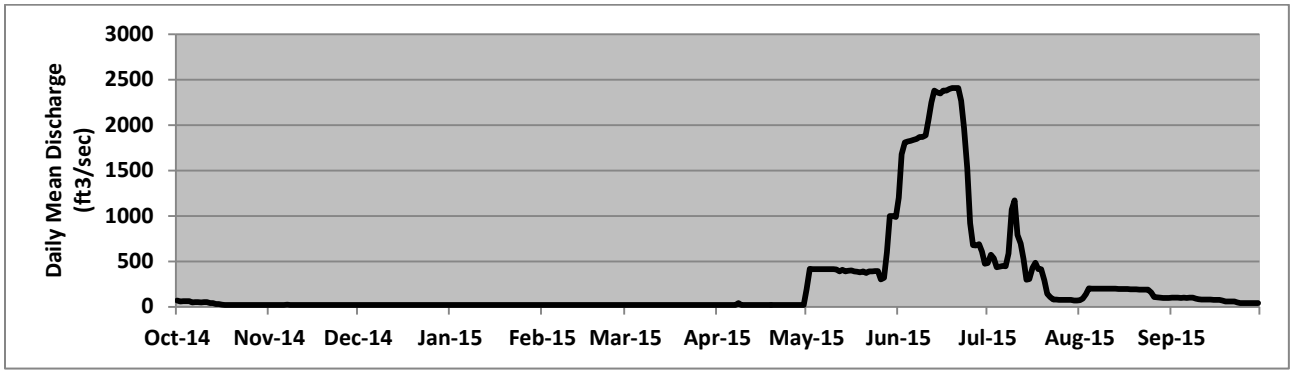


Appendix A (Table 12 of 38)
Granby Reservoir, CO

Location. --Lat 40°08'54", long 105°51'48", Grand County, Hydrologic Unit 14010001, on Granby Dam, 5.5 miles northeast of Granby, Colorado, on the Colorado River.
Gage.-- Water level recorder with satellite telemetry. Elevation of gage is 8300 feet, from topographic map.
Remarks.--Reservoir is formed by an earth-fill dam and four earth-fill dikes. Construction completed in 1950. Impoundment began on 14-Sep-1949. Granby Reservoir provides west-slope storage for the Colorado-Big Thompson Project. Data was provided by personnel from the Northern Colorado Water Conservancy District. Releases were made through the outlet works valve. The stream gage directly below the dam is used to measure flows during winter. A USGS station further downstream is used to measure flows between spring and fall. Data was recorded from 01-Oct-2014 to 30-Sep-2015. Records are complete and fair. This record contains operational data which could be subject to future revisions and changes.

Discharge, Cubic Feet per Second, 2400-hour Values

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	68	21	21	21	20	20	20	193	1198	481	74	100
2	60	21	21	21	20	20	20	419	1678	573	90	100
3	61	21	21	21	20	20	20	414	1808	534	139	100
4	61	21	21	21	20	20	20	414	1818	435	204	99
5	61	21	21	21	20	20	20	413	1828	444	201	100
6	50	20	21	21	20	20	20	414	1838	449	199	99
7	51	23	21	21	20	20	20	413	1848	448	200	100
8	52	21	21	21	20	20	40	414	1868	586	200	100
9	50	21	21	21	20	20	20	416	1868	1070	200	91
10	52	22	21	20	20	20	20	414	1888	1170	200	83
11	52	22	22	20	20	20	20	412	2058	792	200	80
12	43	22	22	20	20	21	20	390	2248	695	199	80
13	40	22	22	20	20	20	20	409	2378	523	199	80
14	31	22	22	20	20	20	20	389	2358	297	198	80
15	31	22	22	20	20	20	20	398	2348	305	198	78
16	24	22	22	20	20	20	20	401	2378	430	198	78
17	21	21	22	20	20	20	20	389	2378	484	197	78
18	21	21	22	20	20	20	20	388	2398	413	194	69
19	21	21	22	20	20	20	20	378	2408	414	193	60
20	21	21	22	20	20	20	20	389	2408	290	192	59
21	21	21	22	20	20	20	20	372	2408	142	191	58
22	20	21	22	20	20	20	20	390	2268	108	190	58
23	21	21	21	20	20	20	20	391	1968	79	189	50
24	21	21	21	20	20	20	20	394	1528	80	189	42
25	21	21	21	20	20	20	20	394	923	76	159	42
26	21	21	21	20	20	20	20	303	679	77	110	42
27	21	21	21	20	20	20	20	319	676	77	104	42
28	21	21	22	20	20	20	20	602	688	77	101	42
29	21	21	21	20		20	20	998	609	75	99	42
30	21	21	21	20		20	20	998	474	68	99	43
31	21		22	20		20		988		68	99	
Min	20	20	21	20	20	20	20	193	474	68	74	42
Max	68	23	22	21	20	21	40	998	2408	1170	204	100
Mean	36	21	21	20	20	20	21	452	1774	379	168	73
ac-ft	2180	1263	1317	1245	1109	1230	1228	27752	105378	23285	10306	4307

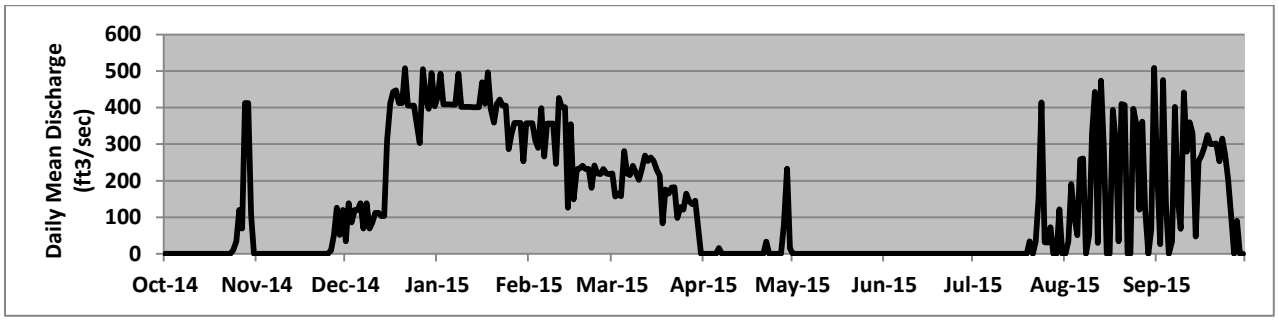


Appendix A (Table 13 of 38)
Farr Pumping Plant, Granby Reservoir, CO

Location. --Lat 40°11'30", long 105°52'52", Grand County, Hydrologic Unit 14010001, at Farr Pumping Plant on the north end of Granby Reservoir, 8 miles northeast of Granby, Colorado, on the Colorado River.
Gage.-- Reading taken directly from the pumps, based on conduit pressure and Granby Reservoir's elevation. Elevation of the pumping plant is 8320 from topographic map.
Remarks.-- Water is pumped from Granby to the Granby Pump Canal which discharges into Shadow Mountain Reservoir. The operation keeps Shadow Mountain Reservoir/Grand Lake at a steady water surface level when transmountain diversions via Adams Tunnel are taking place. Data was provided by Farr Pumping Plant operators, Northern Colorado Water Conservancy District, each morning. Data was collected from 01-Oct-2014 to 30-Sep-2015. Records are complete and reliable. This record contains operational data which could be subject to future revisions and changes.

Discharge, Cubic Feet per Second, Daily Mean Values

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0	0	34	429	357	220	0	0	0	0	0	237
2	0	0	138	493	357	157	0	0	0	0	34	26
3	0	0	86	409	311	165	0	0	0	0	191	475
4	0	0	120	409	290	158	0	0	0	0	107	136
5	0	0	120	409	398	281	0	0	0	0	51	0
6	0	0	138	408	266	220	16	0	0	0	258	34
7	0	0	69	408	356	215	0	0	0	0	261	402
8	0	0	138	493	356	241	0	0	0	0	0	152
9	0	0	69	402	356	221	0	0	0	0	52	68
10	0	0	86	402	246	202	0	0	0	0	330	441
11	0	0	112	402	426	231	0	0	0	0	443	279
12	0	0	112	402	401	269	0	0	0	0	30	360
13	0	0	103	401	401	254	0	0	0	0	474	330
14	0	0	103	401	126	264	0	0	0	0	287	47
15	0	0	310	401	355	254	0	0	0	0	0	254
16	0	0	412	469	149	229	0	0	0	0	0	269
17	0	0	443	411	231	214	0	0	0	0	394	292
18	0	0	447	496	234	83	0	0	0	0	308	325
19	0	0	412	397	241	176	0	0	0	0	34	300
20	0	0	412	359	232	165	0	0	0	34	410	300
21	0	0	508	410	232	181	0	0	0	0	407	302
22	0	0	405	422	180	182	33	0	0	34	0	253
23	0	0	405	405	242	98	0	0	0	154	0	315
24	10	0	405	405	220	128	0	0	0	414	397	271
25	34	0	354	286	218	121	0	0	0	32	352	206
26	120	10	303	328	232	165	0	0	0	31	121	101
27	69	52	505	358	220	144	0	0	0	73	362	0
28	412	126	424	358	218	136	80	0	0	0	121	90
29	412	52	397	358		145	233	0	0	0	0	0
30	108	120	495	253		73	15	0	0	122	67	0
31	0		404	357		0		0		0	509	
Min	0	0	34	253	126	0	0	0	0	0	0	0
Max	412	126	508	496	426	281	233	0	0	414	509	475
Mean	38	12	273	398	280	180	13	0	0	29	194	209
ac-ft	2307	713	16769	24435	15545	11072	746	0	0	1770	11880	12405

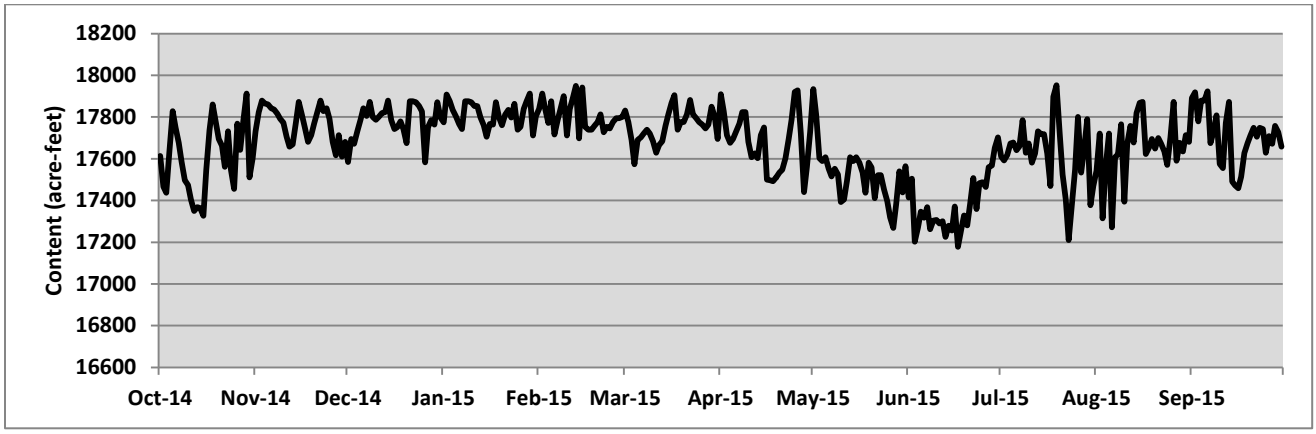


Appendix A (Table 14 of 38)
Shadow Mountain/Grand Lake, CO

Location. --Lat 40°12'26", long 105°50'28", Grand County, Hydrologic Unit 14010001, on the Colorado River at the Shadow Mountain outlet works structure, 10 miles northeast of Granby, Colorado.
Gage.--Water-stage recorder with satellite telemetry. Elevation of gage is 8375 feet from topographic map.
Remarks.—Shadow Mountain/Grand Lake was constructed between 1944 and 1946. Impoundment began in 1946. Active capacity between elevations 8,366 and 8,367 is 1,800 acre-feet. Grand Lake is used as forebay storage for Adams Tunnel. Recorder was operated from 01-Oct-2014 to 30-Sep-2015. Some data were provided by Farr Pumping Plant personnel during down time. Records are complete and fair. This record contains operational data which could be subject to future revisions and changes.

Storage, Acre-Feet, 2400-hour Values

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
2												
4												
6												
8												
10												
12												
14												
16												
18												
20												
22												
24												
26												
28												
30												
Max												

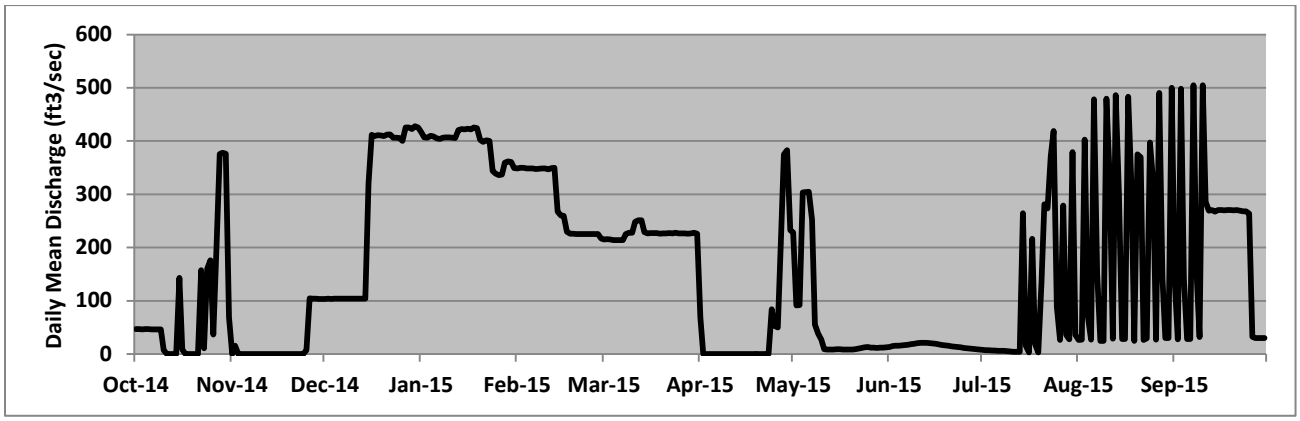


Appendix A (Table 15 of 38)
Alva B. Adams Tunnel at East Portal, near Estes Park, CO

Location. --Lat 40°19'40", long 105°34'39", Larimer County, Hydrologic Unit 10190006, 4.5 miles southwest of Estes Park, Colorado.
Gage.-- Water-stage recorder with satellite telemetry at 15 foot Parshall flume. Elevation of gage is 8250 from topographic map.
Remarks.-- Constructed between 1940 and 1947. Tunnel is 13.1 miles long, and extends between Grand Lake and Estes Park. Its maximum capacity is 550 cubic feet per second. Recorder was operated from 01-Oct-2014 to 30-Sep-2015. Records are complete and reliable. This record contains operational data which could be subject to future revisions and changes. Official record published by the Colorado Division of Water Resources.

Discharge, Cubic Feet per Second, Daily Mean Values

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	47	0	103	416	348	215	69	229	13	8	27	142
2	47	16	104	407	350	216	0	91	15	7	27	28
3	47	0	103	406	350	215	0	92	16	7	403	498
4	47	0	104	410	349	214	0	304	15	7	70	142
5	47	0	104	408	349	214	0	304	16	6	27	28
6	46	0	104	405	349	214	0	305	17	6	478	28
7	46	0	104	404	348	214	0	252	17	6	152	505
8	46	0	104	406	348	225	0	55	19	6	25	162
9	46	0	104	407	349	228	0	39	19	5	25	32
10	7	0	104	407	349	228	0	27	20	5	480	505
11	0	0	104	406	347	248	0	9	21	4	333	286
12	0	0	104	406	349	251	0	9	21	4	29	269
13	0	0	104	421	350	251	0	8	21	4	486	270
14	0	0	104	423	268	229	0	8	20	264	302	267
15	143	0	320	422	260	227	0	9	20	16	28	270
16	9	0	411	423	260	227	0	9	19	3	28	270
17	0	0	409	422	229	227	0	9	18	216	483	270
18	0	0	411	425	226	227	0	8	17	19	318	270
19	0	0	411	424	226	226	0	8	16	3	25	270
20	0	0	409	402	226	227	0	9	15	134	375	270
21	0	0	412	399	226	227	0	9	14	281	370	271
22	158	0	412	401	226	227	0	10	14	273	26	270
23	11	0	406	400	225	227	0	11	13	372	30	268
24	160	0	406	344	225	228	84	12	12	419	397	268
25	176	7	406	339	225	227	53	13	11	88	323	264
26	37	105	400	336	225	227	50	12	11	27	27	33
27	201	104	425	337	225	226	218	12	10	279	490	30
28	375	104	425	359	217	226	375	12	10	36	143	30
29	378	104	423	362		227	383	12	9	28	30	30
30	376	104	428	361		228	233	12	8	379	30	30
31	69		426	349		226		12		36	500	
Min	0	0	103	336	217	214	0	8	8	3	25	28
Max	378	105	428	425	350	251	383	305	21	419	500	505
Mean	81	18	271	395	287	226	49	62	16	95	209	209
ac-ft	4987	1082	16626	24229	15884	13893	2907	3788	932	5843	12844	12426

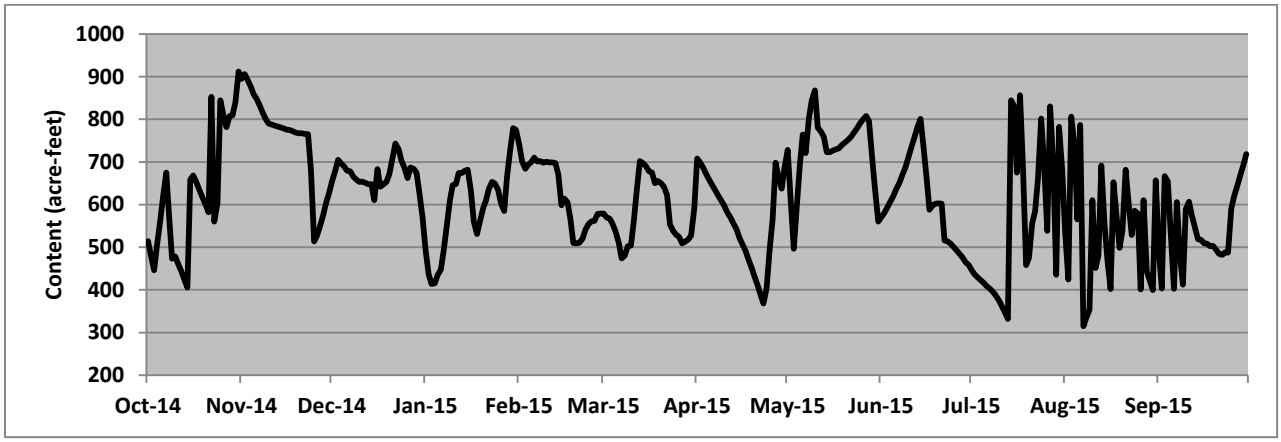


Appendix A (Table16 of 38)
Mary's Lake, CO

Location. --Lat 40°22'40", long 105°31'50", Larimer County, Hydrologic Unit 10190006, 2 miles southwest of Estes Park, Colorado.
Gage.-- Water-level recorder with satellite telemetry. Elevation of gage is 8060 feet from topographic map.
Remarks.-- Constructed between 1947 and 1949. Impoundment began in August, 1950. Active capacity between elevations 8,025 and 8,040 is 500 acre-feet. Used as a forebay storage for Estes Powerplant. The only measurable inflow into the reservoir comes from Adams Tunnel. Recorder was operated from 01-Oct-2014 to 30-Sep-2015. Record is complete and reliable. The gage does not record water surface levels below elevation 8,022.62 feet, content of 322 acre-feet. These are operational data which could be subject to further revisions and changes.

Storage, Acre-Feet, 2400-hour Values

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	514	895	654	495	740	579	708	728	570	446	534	489
2	481	906	680	436	701	570	699	614	580	437	424	403
3	446	893	705	414	684	567	686	496	593	429	806	667
4	505	877	697	415	694	554	672	592	606	423	742	654
5	562	859	689	435	699	537	658	694	620	416	565	531
6	619	848	679	447	710	510	646	764	636	409	786	403
7	675	832	678	493	701	474	633	721	651	403	315	606
8	571	816	666	547	702	481	621	801	669	396	334	479
9	473	800	658	608	698	502	610	844	688	387	353	412
10	478	790	653	645	701	504	597	868	710	375	610	589
11	461	788	654	648	699	561	582	780	733	362	451	606
12	444	785	651	674	699	632	570	771	758	347	481	574
13	425	783	648	674	698	702	556	758	780	332	691	545
14	406	780	648	680	671	698	542	723	801	844	555	519
15	658	778	610	682	598	690	523	723	738	832	471	518
16	668	776	683	632	614	679	507	727	662	675	402	509
17	652	774	642	560	605	675	492	729	588	856	652	508
18	635	772	647	531	566	650	473	732	597	692	570	502
19	617	769	653	560	510	656	452	740	602	458	498	503
20	601	767	671	591	509	650	432	745	603	475	539	494
21	582	767	709	610	511	642	411	751	602	556	682	484
22	852	766	743	636	521	622	389	759	516	584	606	482
23	560	765	730	653	542	553	368	769	514	660	529	488
24	603	682	703	649	555	539	404	779	508	802	586	488
25	844	514	687	634	561	530	490	790	501	698	579	590
26	808	527	662	603	562	525	567	800	493	538	401	620
27	782	548	687	585	578	509	698	808	484	830	610	644
28	808	574	684	666	579	513	662	796	475	693	444	668
29	809	603	675	724		518	637	709	465	435	423	693
30	840	628	622	779		527	686	635	458	782	400	718
31	912		569	775		591		560		678	657	
Min	406	514	569	414	509	474	368	496	458	332	315	403
Max	912	906	743	779	740	702	708	868	801	856	806	718
EOM	912	628	569	775	579	591	686	686	458	678	657	718

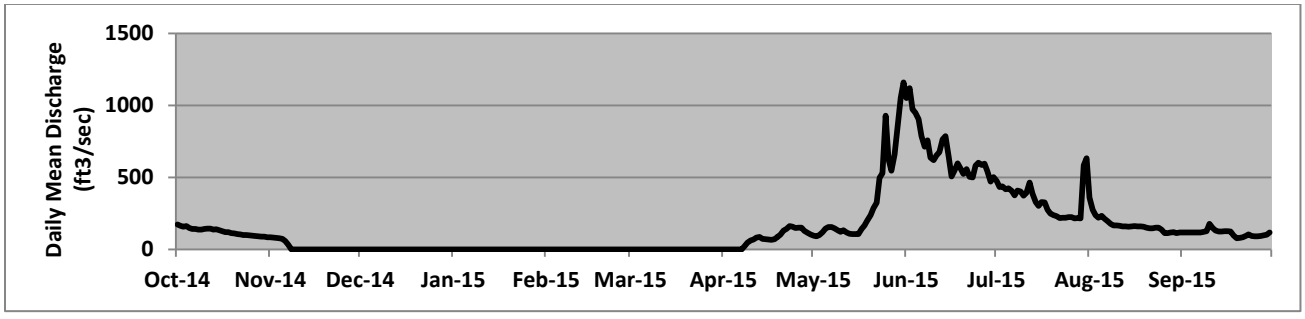


Appendix A (Table 17 of 38)
Big Thompson River above Lake Estes, CO

Location. --Lat 40°22'42", long 105°30'48", Larimer County, Hydrologic Unit 10190006, 600 feet downstream from bridge on state highways 7 and 36 in Estes Park, Colorado, downstream from Black Canyon Creek, and 0.3 miles northwest of Estes Powerplant.
Gage.-- Water-stage recorder with satellite telemetry. 15 foot Parshall flume with overflow weirs and supplemental outside gage. Datum of gage at 7492.5 feet.
Remarks.— Drainage area is 137 mi^2. Station consists of a shaft encoder and a data collection platform as primary data recorder. Recorder was operated from 01-Oct-2014 until 17-Nov-14, before it was winterized. The station was put back into service from 10-Apr-2015 to 30-Sep-2015. Values for the off-season are marked as zero, but winter month flows normally fluctuate between 10 and 30 cfs. This record contains operational data which could be subject to future revisions and changes. This station has confronted sedimentation serious issues after the September, 2013 flood, creating concerns about the validity of its data. The official record for this station is published by the Colorado Division of Water Resources.

Discharge, Cubic Feet per Second, Daily Mean Values

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	172	83	0	0	0	0	0	94	1050	475	359	118
2	163	82	0	0	0	0	0	91	1120	433	275	117
3	156	80	0	0	0	0	0	100	972	436	238	116
4	162	77	0	0	0	0	0	120	949	416	220	116
5	148	72	0	0	0	0	0	143	903	423	233	116
6	142	58	0	0	0	0	0	155	787	406	213	118
7	142	33	0	0	0	0	0	155	713	375	195	118
8	138	0	0	0	0	0	21	147	758	409	178	122
9	137	0	0	0	0	0	47	132	638	402	167	125
10	141	0	0	0	0	0	61	122	619	372	167	177
11	144	0	0	0	0	0	69	132	653	392	163	148
12	143	0	0	0	0	0	81	116	675	464	159	130
13	136	0	0	0	0	0	85	108	763	386	159	124
14	140	0	0	0	0	0	73	107	785	328	158	123
15	133	0	0	0	0	0	70	106	643	302	159	125
16	125	0	0	0	0	0	69	105	505	328	161	125
17	119	0	0	0	0	0	66	141	546	325	160	123
18	120	0	0	0	0	0	70	166	598	274	160	98
19	112	0	0	0	0	0	85	202	561	249	156	76
20	111	0	0	0	0	0	102	237	523	236	151	79
21	106	0	0	0	0	0	130	286	558	230	147	84
22	103	0	0	0	0	0	141	323	503	218	147	93
23	100	0	0	0	0	0	161	497	499	219	151	104
24	99	0	0	0	0	0	157	529	582	219	150	93
25	97	0	0	0	0	0	148	928	602	223	136	90
26	96	0	0	0	0	0	151	626	587	224	113	89
27	93	0	0	0	0	0	151	545	594	215	112	92
28	91	0	0	0	0	0	129	660	541	216	118	97
29	88	0	0	0		0	114	843	470	215	119	101
30	89	0	0	0		0	103	1050	502	583	113	118
31	83		0	0		0		1160		632	117	
Min	83	0	0	0	0	0	0	91	470	215	112	76
Max	172	83	0	0	0	0	161	1160	1120	632	359	177
Mean	124	16	0	0	0	0	76	327	673	343	169	112
ac-ft	7581	961	0	0	0	0	4520	20049	39994	21038	10403	6643

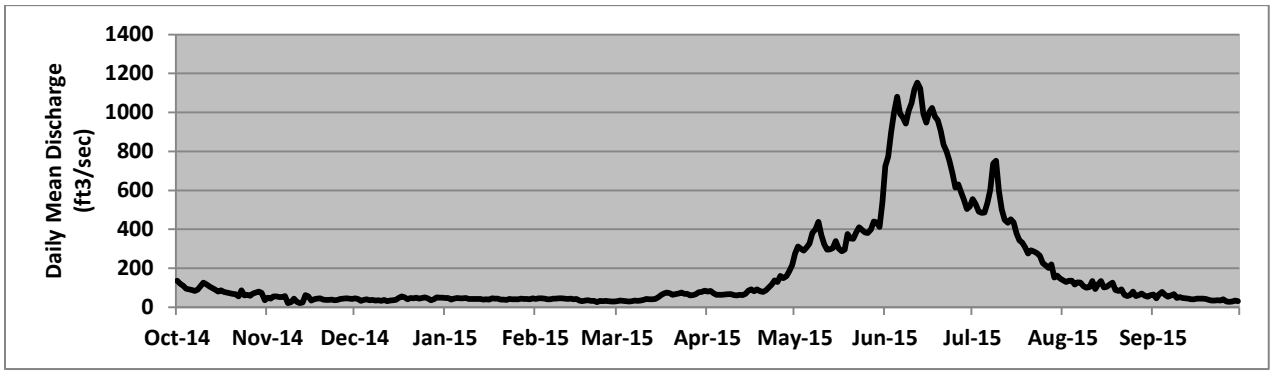


Appendix A (Table 18 of 38)
Olympus Dam, CO

Location. --Lat 40°22'31", long 105°29'15", Larimer County, Hydrologic Unit 10190006, 1.5 miles east of Estes Park, Colorado, on the Big Thompson River.
Gage.—Water-stage recorders with satellite telemetry. Inflow computed daily based on the change in content from midnight to midnight at Marys Lake and Lake Estes, daily average releases from Olympus Dam, and daily average discharge at Olympus Tunnel and Adams Tunnel.
Remarks.— Olympus dam was constructed between 1947 and 1949. Impoundment began on November 1948. Total capacity at maximum water surface elevation of 7475.0 feet is 3,070 acre-feet. Inflow is computed based on change-in-storage, flow through the Adams Tunnel and outflow. Records are complete and reliable. Record has not been revised. This record contains operational data which could be subject to future revisions and changes.

Inflow, Cubic Feet per Second, Daily Mean Values

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	136	49	46	47	42	30	80	275	724	555	138	66
2	122	45	42	47	45	34	83	312	773	531	130	46
3	109	55	32	39	45	33	72	300	896	491	135	68
4	94	55	37	44	44	31	64	291	998	484	136	78
5	92	53	41	48	40	29	64	307	1080	487	117	63
6	88	52	36	46	42	31	64	327	994	535	128	54
7	84	57	37	45	44	35	65	380	975	602	125	60
8	90	20	34	47	44	32	67	401	943	737	107	67
9	108	26	36	42	45	35	66	439	1008	752	100	47
10	126	44	33	43	46	37	62	371	1047	596	104	52
11	117	28	38	43	44	43	61	324	1119	500	135	48
12	107	22	31	43	42	41	63	295	1154	448	93	45
13	98	24	34	42	45	41	63	297	1123	433	119	44
14	90	62	36	39	41	43	68	304	991	451	134	40
15	81	56	38	40	43	51	85	340	948	434	101	40
16	86	34	47	40	33	61	92	302	999	379	105	44
17	79	41	55	46	32	71	82	287	1023	343	116	43
18	75	44	50	45	34	75	92	295	980	331	127	44
19	71	45	41	44	35	71	82	375	960	307	88	43
20	68	38	47	40	33	63	79	353	906	276	83	38
21	66	37	45	39	33	67	86	352	834	291	91	35
22	56	37	49	37	26	70	102	384	802	285	64	34
23	86	39	43	43	33	75	117	411	754	277	57	35
24	60	36	47	41	31	69	137	397	686	264	62	34
25	63	38	51	41	33	68	130	384	615	226	81	41
26	59	42	46	41	31	60	161	381	630	216	57	29
27	71	44	36	44	29	62	149	399	589	202	63	28
28	76	45	41	42	30	67	159	440	551	219	71	29
29	80	44	50	42		76	185	434	503	152	58	35
30	74	43	49	40		78	217	413	518	162	53	31
31	36		49	45		84		540		148	63	
Min	36	20	31	37	26	29	61	275	503	148	53	28
Max	136	62	55	48	46	84	217	540	1154	752	138	78
Mean	85	42	42	43	38	54	97	358	871	391	98	45
ac-ft	5247	2485	2569	2623	2106	3294	5734	22001	51723	23985	6026	2695

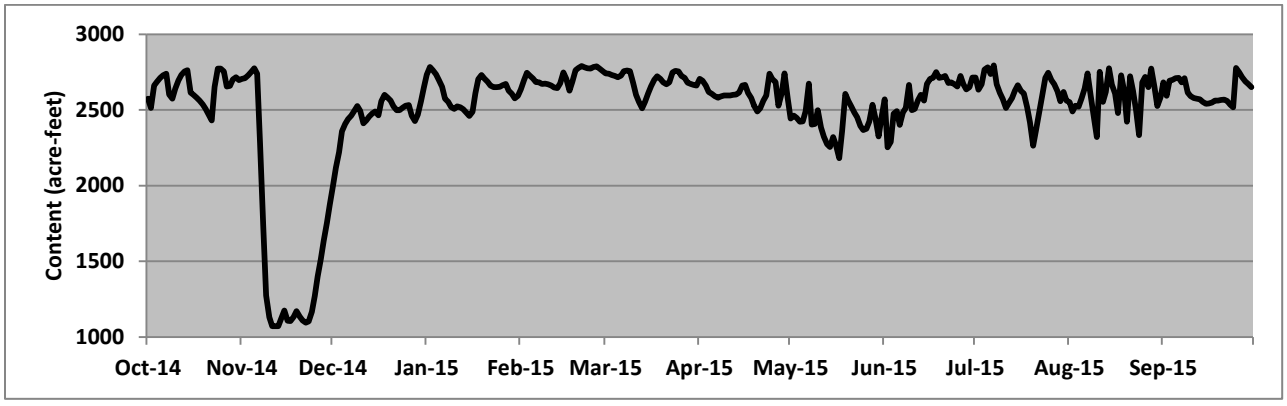


Appendix A (Table 19 of 38)
Olympus Dam, CO

Location. --Lat 40°22'31", long 105°29'19", Larimer County, Hydrologic Unit 10190006, 1.5 miles east of Estes Park, Colorado, on the Big Thompson River.
Gage.-- Water-level recorder with satellite telemetry. Elevation of gage is 7490 feet from topographic map.
Remarks.-- Constructed between 1947 and 1949. Impoundment began in November, 1948. Active capacity between elevations 7,450.25 and 7,474.00 is 2,476 acre-feet. Used as afterbay storage for Estes Powerplant and forebay for Olympus Tunnel. Recorder was operated from 01-Oct-2014 to 30-Sep-2015. Records are complete and reliable. This record contains operational data which could be subject to future revisions and changes.

Storage, Acre-Feet, 2400-hour Values

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	2574	2705	1999	2733	2637	2742	2705	2443	2571	2713	2551	2682
2	2514	2710	2119	2784	2696	2740	2693	2462	2253	2633	2491	2594
3	2662	2728	2222	2762	2745	2732	2662	2447	2288	2670	2529	2693
4	2688	2750	2359	2735	2727	2725	2620	2423	2475	2766	2521	2699
5	2711	2775	2407	2696	2708	2716	2606	2424	2492	2782	2575	2710
6	2728	2740	2439	2654	2684	2727	2591	2492	2402	2737	2642	2711
7	2740	2281	2462	2574	2682	2756	2580	2674	2483	2794	2742	2682
8	2603	1733	2492	2554	2672	2761	2589	2403	2513	2669	2592	2710
9	2575	1274	2525	2519	2674	2757	2596	2407	2665	2613	2462	2614
10	2640	1130	2494	2506	2669	2679	2596	2499	2497	2572	2320	2592
11	2694	1072	2411	2524	2660	2601	2596	2384	2506	2514	2752	2579
12	2730	1072	2431	2517	2648	2554	2599	2323	2564	2544	2553	2575
13	2754	1072	2455	2504	2645	2511	2603	2274	2599	2579	2618	2571
14	2762	1126	2478	2481	2676	2554	2614	2256	2563	2626	2775	2553
15	2614	1175	2491	2460	2747	2611	2660	2322	2672	2664	2667	2541
16	2599	1108	2464	2488	2706	2657	2665	2265	2706	2625	2609	2542
17	2580	1105	2558	2611	2628	2699	2613	2182	2711	2609	2480	2549
18	2561	1132	2599	2703	2688	2723	2579	2362	2750	2519	2728	2561
19	2536	1170	2584	2730	2762	2705	2527	2606	2711	2418	2630	2563
20	2506	1136	2561	2708	2778	2682	2491	2563	2716	2264	2423	2566
21	2472	1110	2524	2688	2791	2670	2511	2521	2725	2367	2723	2567
22	2431	1095	2499	2660	2782	2682	2561	2483	2677	2486	2628	2559
23	2652	1104	2497	2650	2775	2747	2596	2452	2682	2592	2492	2534
24	2773	1167	2516	2650	2773	2759	2739	2395	2670	2711	2333	2517
25	2773	1271	2529	2652	2784	2754	2703	2367	2655	2745	2682	2777
26	2754	1399	2532	2664	2789	2725	2684	2376	2725	2698	2718	2747
27	2655	1515	2462	2672	2773	2711	2527	2424	2669	2669	2650	2716
28	2659	1636	2427	2626	2756	2681	2608	2534	2635	2623	2773	2689
29	2701	1755	2468	2606		2672	2742	2445	2650	2558	2654	2672
30	2716	1875	2558	2577		2665	2577	2325	2713	2620	2525	2650
31	2696		2648	2594		2660		2450		2561	2582	
Min	2431	1072	1999	2460	2628	2511	2491	2182	2253	2264	2320	2517
Max	2773	2775	2648	2784	2791	2761	2742	2674	2750	2794	2775	2777
EOM	2696	1875	2648	2594	2756	2660	2577	2577	2713	2561	2582	2650

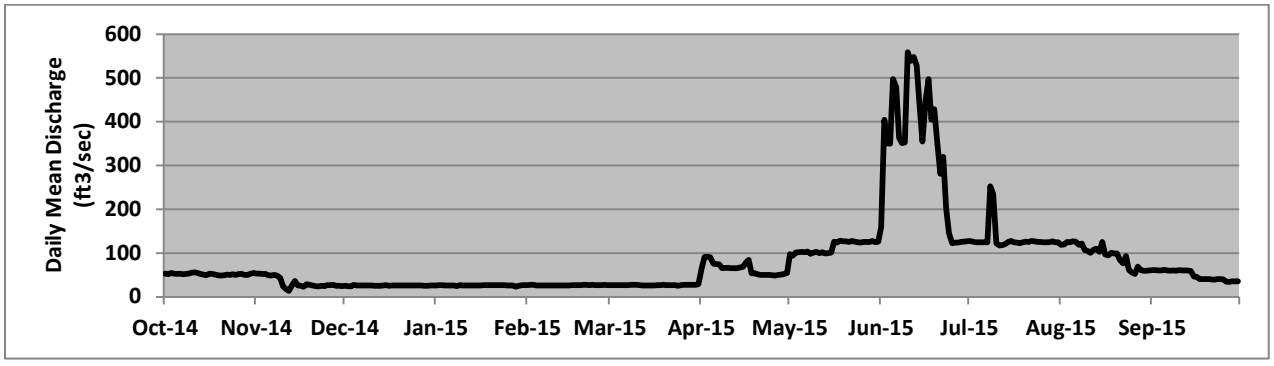


Appendix A (Table 20 of 38)
Big Thompson River below Olympus Dam, CO

Location. --Lat 40°22'35", long 105°29'06", Larimer County, Hydrologic Unit 10190006, 620 feet downstream from Olympus Dam and 100 feet upstream of Dry Gulch, 2.0 miles east in Estes Park.
Gage.-- Water-stage recorder with satellite telemetry. 15 foot Parshall flume with overflow weirs in a concrete shelter with a supplemental outside gage. Datum of gage at 7422.50 feet.
Remarks.— Drainage area is 155 mi^2. Area at site used between 29-Jan-1934 and 21-Mar-1951 was 162 mi^2. Station consists of data collection platform and digital recorder as primary record. Recorder was operated from 01-Oct-2014 to 30-Sep-2015. Record is complete. Flow calculations during peak runoff could lose accuracy as the water begins to flow over the outside boards. This record contains operational data which could be subject to future revisions and changes. The official record for this station is published by the Colorado Division of Water Resources.

Discharge, Cubic Feet per Second, Daily Mean Values

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	53	53	25	26	27	27	65	98	159	128	119	61
2	52	53	24	26	27	27	91	94	405	126	119	61
3	54	53	24	27	27	27	92	101	350	125	125	60
4	53	53	28	26	26	27	90	102	350	125	125	60
5	52	50	26	26	26	27	76	103	498	125	127	61
6	53	49	26	26	26	27	75	102	479	125	126	60
7	51	50	26	26	26	27	74	104	364	125	119	59
8	52	49	26	24	26	27	66	99	351	252	122	60
9	53	44	26	26	26	27	66	101	353	235	107	60
10	55	24	26	26	26	27	66	103	559	122	105	61
11	56	18	26	26	26	27	66	100	539	117	100	60
12	54	14	25	26	26	26	65	102	548	118	108	61
13	52	25	25	26	26	26	65	99	528	120	110	60
14	51	36	26	26	26	26	67	100	438	125	102	59
15	49	26	26	26	26	26	68	102	355	127	126	47
16	53	25	26	26	27	26	77	126	449	125	97	45
17	52	23	26	27	27	26	84	124	497	124	95	40
18	50	29	26	27	26	27	54	128	404	123	101	40
19	50	28	26	27	27	27	54	127	429	124	99	40
20	49	26	26	27	27	27	52	127	355	126	99	40
21	50	24	26	27	27	27	50	126	281	125	85	40
22	51	23	26	27	27	27	50	128	320	128	76	39
23	50	25	26	27	27	27	50	126	203	127	93	40
24	51	25	26	26	27	25	50	125	145	125	61	41
25	50	27	26	26	27	26	49	124	122	125	56	40
26	52	26	26	26	27	27	49	126	124	125	52	35
27	52	27	26	26	27	28	50	125	124	124	69	34
28	50	25	26	23	27	27	51	126	125	125	61	35
29	50	25	26	25		27	52	127	126	127	60	35
30	53	25	26	27		28	54	125	127	125	60	35
31	54		26	27		29		126		125	60	
Min	49	14	24	23	26	25	49	94	122	117	52	34
Max	56	53	28	27	27	29	92	128	559	252	127	61
Mean	52	33	26	26	27	27	64	114	337	132	96	49
ac-ft	3185	1936	1581	1610	1472	1648	3801	6974	20010	8114	5868	2916

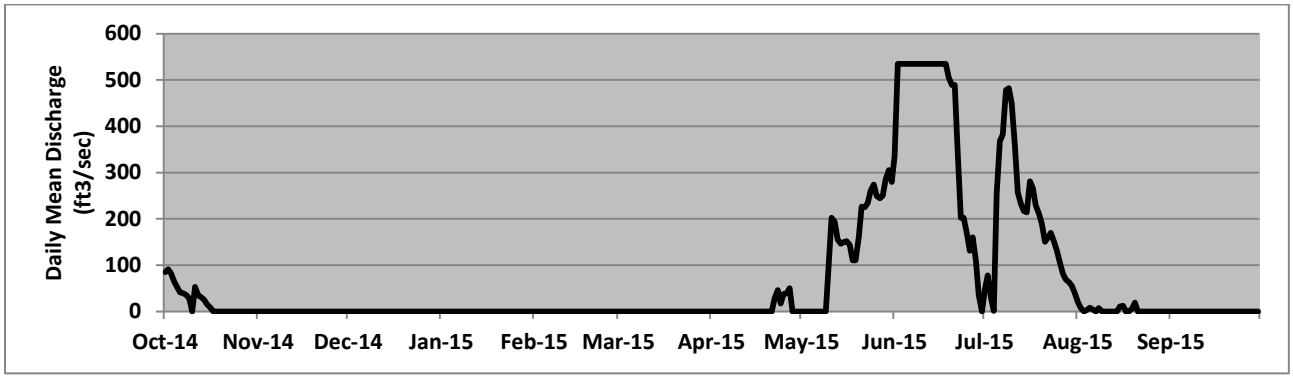


Appendix A (Table 21 of 38)
Olympus Tunnel near Estes Park, CO

Location. --Lat 40°22'24", long 105°29'00", Larimer County, Hydrologic Unit 10190006, southeast of Estes Park, Colorado.
Gage.-- Water-stage recorder and satellite telemetry. Elevation of gage is 7460 from topographic map.
Remarks.— Constructed between 1949 and 1952. The tunnel is 7.2 miles long, between Estes Park and the Pole Hill Canal. Its diameter is 9.75 feet and maximum capacity is 550 cubic feet per second. The hydropower diversion operation, also known as the skim operation, diverts water from the Big Thompson River through Olympus Tunnel for power generation at three power plants down the foothills, before returning it to the Big Thompson River near the canyon mouth. The skim daily value is determined based on the data from the stream gages in the system. Period of record includes from 01-Oct-2014 through 30-Sep-2015. Records are complete and reliable. This record contains operational data which could be subject to future revisions and changes.

Hydropower Diversion (Skim), Cubic Feet per Second, Daily Mean Values

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	85	0	0	0	0	0	0	0	335	47	20	0
2	91	0	0	0	0	0	0	0	535	78	7	0
3	82	0	0	0	0	0	0	0	535	30	0	0
4	64	0	0	0	0	0	0	0	535	1	3	0
5	52	0	0	0	0	0	0	0	535	254	8	0
6	41	0	0	0	0	0	0	0	535	368	4	0
7	39	0	0	0	0	0	0	0	535	382	0	0
8	36	0	0	0	0	0	0	0	535	478	7	0
9	28	0	0	0	0	0	0	0	535	482	0	0
10	0	0	0	0	0	0	0	100	535	449	0	0
11	53	0	0	0	0	0	0	202	535	357	0	0
12	34	0	0	0	0	0	0	193	535	257	0	0
13	31	0	0	0	0	0	0	155	535	232	0	0
14	25	0	0	0	0	0	0	146	535	217	0	0
15	15	0	0	0	0	0	0	150	535	214	11	0
16	9	0	0	0	0	0	0	152	535	281	12	0
17	0	0	0	0	0	0	0	143	535	267	0	0
18	0	0	0	0	0	0	0	110	535	230	0	0
19	0	0	0	0	0	0	0	110	506	212	6	0
20	0	0	0	0	0	0	0	160	490	190	19	0
21	0	0	0	0	0	0	0	226	490	151	0	0
22	0	0	0	0	0	0	28	225	347	160	0	0
23	0	0	0	0	0	0	46	234	202	170	0	0
24	0	0	0	0	0	0	17	260	202	151	0	0
25	0	0	0	0	0	0	38	274	168	132	0	0
26	0	0	0	0	0	0	39	249	131	107	0	0
27	0	0	0	0	0	0	50	244	160	81	0	0
28	0	0	0	0	0	0	0	250	110	69	0	0
29	0	0	0	0		0	0	285	35	63	0	0
30	0	0	0	0		0	0	305	0	55	0	0
31	0		0	0		0		280		40	0	
Min	0	0	0	0	0	0	0	0	0	1	0	0
Max	91	0	0	0	0	0	50	305	535	482	20	0
Mean	22	0	0	0	0	0	7	144	409	200	3	0
ac-ft	1356	0	0	0	0	0	432	8821	24296	12280	193	0

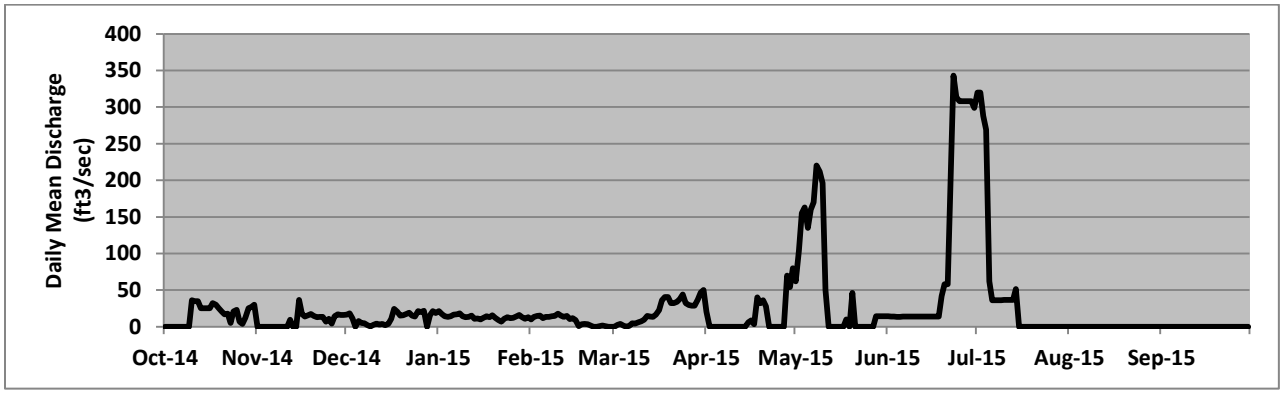


Appendix A (Table 22 of 38)
Olympus Tunnel, CO

Location. --Lat 40°22'24", long 105°29'00", Larimer County, Hydrologic Unit 10190006, southeast of Estes Park, Colorado.
Gage.-- Water-stage recorder and satellite telemetry. Elevation of gage is 7460 from topographic map.
Remarks.— Constructed between 1949 and 1952. The tunnel is 7.2 miles long, between Estes Park and the Pole Hill Canal. Its diameter is 9.75 feet and maximum capacity is 550 cubic feet per second. The right to divert native run-off is determined by the Colorado Division of Water Resources. Period of record from 01-Oct-2014 through 30-Sep-2015. Record is complete and reliable.

East Slope Priority Water Diversion Flow, Cubic Feet per Second, Daily Mean Values

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0	0	16	21	10	0	20	62	14	320	0	0
2	0	0	18	18	13	2	0	104	14	320	0	0
3	0	0	11	14	15	4	0	155	14	288	0	0
4	0	0	0	14	15	2	0	163	14	269	0	0
5	0	0	8	14	12	0	0	135	14	62	0	0
6	0	0	5	16	14	1	0	160	14	36	0	0
7	0	0	5	17	14	5	0	170	14	36	0	0
8	0	0	2	18	14	4	0	220	14	36	0	0
9	0	0	0	15	15	6	0	212	14	36	0	0
10	36	0	3	13	18	7	0	196	14	37	0	0
11	35	0	4	14	15	9	0	50	14	37	0	0
12	35	9	3	15	13	15	0	0	14	37	0	0
13	25	0	4	11	15	14	0	0	14	37	0	0
14	25	0	2	11	11	13	0	0	14	52	0	0
15	25	37	4	10	12	17	6	0	14	0	0	0
16	25	18	11	12	9	23	9	0	14	0	0	0
17	32	14	25	14	1	36	3	0	14	0	0	0
18	30	16	21	13	4	41	40	10	14	0	0	0
19	25	17	15	16	4	41	32	0	42	0	0	0
20	21	15	16	12	3	32	36	46	58	0	0	0
21	17	13	18	9	1	32	28	0	58	0	0	0
22	18	13	19	7	0	34	0	0	201	0	0	0
23	5	13	15	11	0	38	0	0	343	0	0	0
24	21	7	14	13	1	44	0	0	314	0	0	0
25	23	11	21	12	2	32	0	0	308	0	0	0
26	7	4	20	12	1	29	0	0	308	0	0	0
27	4	14	22	14	0	29	0	0	308	0	0	0
28	12	17	0	16	0	29	70	14	308	0	0	0
29	25	16	16	13		37	54	14	308	0	0	0
30	27	16	21	11		47	80	14	299	0	0	0
31	30		19	13		50		14		0	0	
Min	0	0	0	7	0	0	0	0	14	0	0	0
Max	36	37	25	21	18	50	80	220	343	320	0	0
Mean	16	8	11	13	8	22	13	56	103	52	0	0
ac-ft	996	494	703	827	454	1329	749	3445	6148	3169	0	0

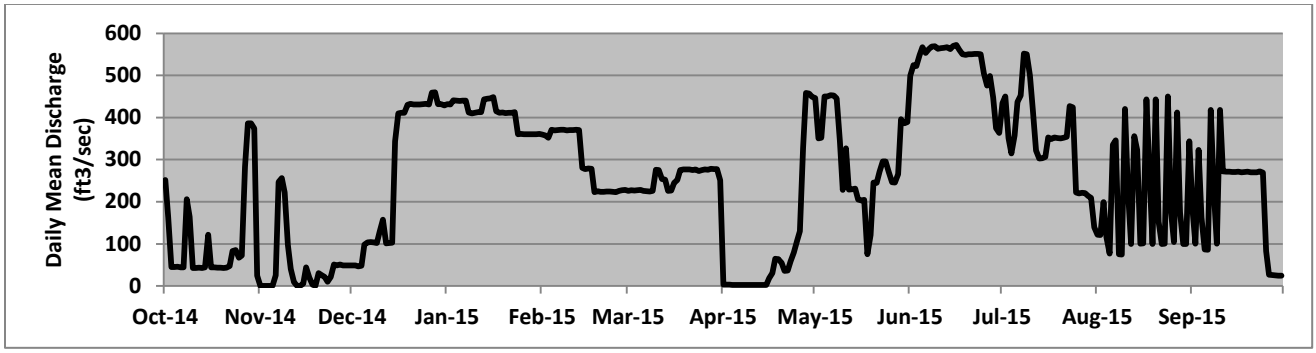


Appendix A (Table 23 of 38)
Olympus Tunnel, CO

Location. --Lat 40°22'24", long 105°29'00", Larimer County, Hydrologic Unit 10190006, southeast of Estes Park, Colorado, on the Big Thompson River.
Gage.-- Water-stage recorder with satellite telemetry. Elevation of gage is 7460 from topographic map.
Remarks.— Constructed between 1949 and 1952. The tunnel is 7.2 miles long, between Estes Park and the Pole Hill Canal. Its diameter is 9.75 feet and maximum capacity is 550 cubic feet per second. Recorder was operated from 01-Oct-2014 to 30-Sep-2015. Records are complete and reliable. This record contains operational data which could be subject to future revisions and changes. Official record is published by the Colorado Division of Water Resources.

Discharge, Cubic Feet per Second, Daily Mean Values

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	252	0	49	432	360	226	3	446	500	434	122	181
2	164	0	49	431	357	228	3	351	524	450	121	101
3	45	0	47	441	352	227	3	352	522	351	200	323
4	45	0	48	440	371	227	3	450	548	315	116	163
5	46	0	98	440	370	228	3	450	567	357	77	87
6	44	25	103	440	370	226	3	453	553	437	335	86
7	44	247	104	440	371	225	3	452	563	452	346	418
8	206	256	103	412	371	225	3	446	569	552	75	219
9	164	222	102	410	369	226	3	345	569	550	74	100
10	43	98	130	411	370	276	3	228	563	500	420	418
11	43	40	157	413	370	275	3	327	565	418	230	272
12	43	9	101	413	371	254	3	229	565	322	100	272
13	43	0	102	443	371	253	2	230	567	303	356	272
14	44	0	103	445	281	226	2	231	563	304	323	271
15	122	6	344	446	278	227	2	205	570	307	100	271
16	44	45	410	448	279	245	19	203	572	353	101	272
17	44	20	411	415	278	252	31	204	561	349	444	270
18	43	3	412	412	223	275	65	75	550	353	260	271
19	43	0	431	412	225	277	63	121	549	351	100	271
20	43	30	432	410	224	277	55	246	551	351	443	270
21	44	26	431	411	224	277	36	245	551	352	153	270
22	47	21	431	411	224	275	37	272	551	354	100	270
23	83	10	431	413	224	277	58	296	551	428	101	272
24	86	22	432	360	224	273	79	296	550	424	450	269
25	67	51	432	361	223	276	107	270	505	222	175	83
26	72	49	431	361	226	277	130	246	476	220	104	27
27	283	51	459	360	227	276	328	246	499	221	412	26
28	386	49	460	360	228	279	459	266	448	221	175	25
29	386	49	432	360		278	457	396	375	214	99	25
30	374	49	432	360		277	450	387	363	209	100	25
31	25		429	361		251		389		139	344	
Min	25	0	47	360	223	225	2	75	363	139	74	25
Max	386	256	460	448	371	279	459	453	572	552	450	418
Mean	110	46	275	409	299	254	80	302	532	349	211	203
ac-ft	6769	2729	16900	25091	16552	15621	4776	18518	31602	21407	12980	12074

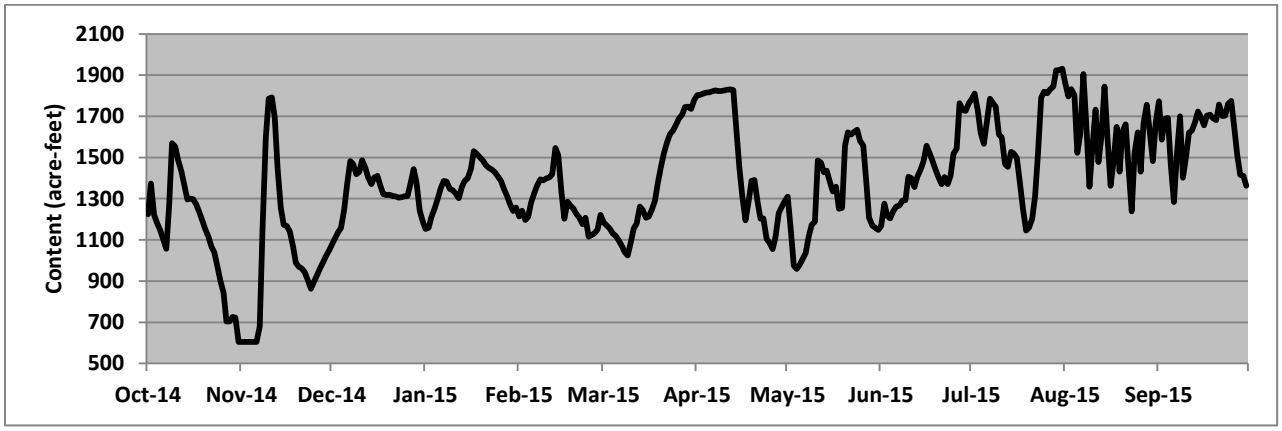


Appendix A (Table 24 of 38)
Pinewood Reservoir near Loveland, CO

Location. --Lat 40°22', long 105°17.9', Larimer County, Hydrologic Unit 10190006, 10 miles southwest of Loveland, Colorado.
Gage.-- Water-level recorder with satellite telemetry. Elevation of gage is 6,600 feet from topographic map.
Remarks.-- Constructed between 1951 and 1952. Impoundment began in January 4, 1954. Active capacity between elevations 6,550.00 and 6.580.00 is 1,570 acre-feet. Used as the forebay storage for Flatiron Powerplant. Recorder was operated from 01-Oct-2013 to 30-Sep-2014. Record is complete and reliable. The gage is capable of measuring the water surface elevation down to 6555.70 feet, a content of 604 acre-feet. This record contains operational data which could be subject to future revisions and changes.

Storage, Acre-Feet, 2400-hour Values

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	1224	604	1079	1154	1214	1185	1802	1310	1167	1784	1863	1774
2	1374	604	1110	1160	1241	1170	1805	1159	1277	1810	1797	1587
3	1222	604	1137	1214	1197	1155	1811	975	1217	1728	1833	1688
4	1183	604	1158	1254	1212	1132	1815	959	1204	1619	1803	1693
5	1146	604	1249	1299	1281	1120	1817	981	1239	1567	1523	1467
6	1104	604	1369	1353	1328	1096	1822	1008	1262	1669	1611	1283
7	1056	679	1483	1386	1365	1073	1825	1034	1267	1785	1905	1512
8	1268	1163	1469	1383	1394	1039	1823	1119	1290	1765	1661	1700
9	1569	1595	1419	1347	1389	1024	1823	1173	1293	1747	1358	1402
10	1553	1786	1430	1342	1399	1091	1826	1189	1407	1612	1547	1495
11	1487	1791	1487	1324	1404	1157	1829	1485	1401	1598	1733	1620
12	1434	1694	1450	1303	1419	1179	1831	1474	1357	1468	1477	1630
13	1369	1445	1403	1358	1546	1262	1828	1428	1407	1454	1596	1671
14	1295	1254	1370	1388	1510	1245	1625	1436	1440	1528	1844	1723
15	1300	1173	1404	1398	1330	1208	1450	1381	1479	1519	1602	1694
16	1298	1167	1411	1446	1203	1214	1313	1335	1557	1499	1362	1656
17	1271	1140	1363	1531	1286	1250	1195	1359	1522	1373	1479	1703
18	1236	1069	1322	1517	1267	1290	1278	1251	1486	1252	1648	1707
19	1192	988	1318	1502	1252	1376	1387	1256	1441	1145	1431	1690
20	1152	969	1320	1484	1224	1456	1390	1557	1404	1160	1626	1682
21	1114	961	1313	1462	1207	1521	1282	1623	1370	1203	1662	1757
22	1068	942	1312	1450	1176	1575	1203	1612	1405	1312	1454	1702
23	1039	902	1305	1441	1208	1613	1204	1623	1371	1517	1239	1703
24	970	863	1308	1428	1116	1631	1104	1636	1413	1790	1524	1761
25	902	898	1311	1407	1123	1660	1086	1580	1518	1820	1623	1774
26	844	927	1312	1386	1131	1689	1055	1558	1543	1812	1431	1652
27	704	960	1373	1345	1151	1708	1116	1392	1764	1831	1666	1509
28	705	991	1443	1312	1222	1745	1230	1209	1730	1844	1756	1416
29	726	1021	1378	1274		1747	1259	1170	1727	1924	1630	1411
30	722	1048	1241	1241		1736	1287	1160	1763	1923	1483	1363
31	604		1192	1257		1779		1149		1932	1669	
Min	604	604	1079	1154	1116	1024	1055	959	1167	1145	1239	1283
Max	1569	1791	1487	1531	1546	1779	1831	1636	1764	1932	1905	1774
EOM	604	1048	1192	1257	1222	1779	1287	1287	1763	1932	1669	1363

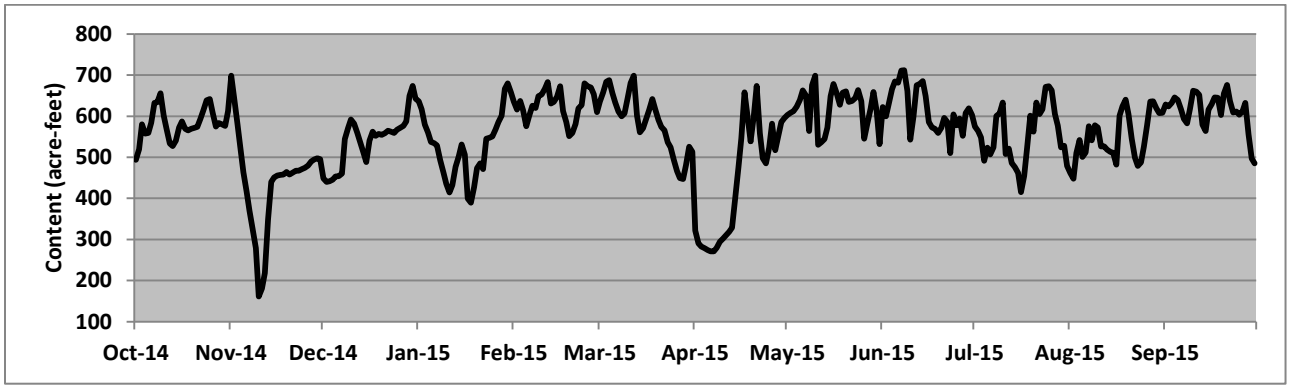


Appendix A (Table 25 of 38)
Flatiron Reservoir, CO

Location. --Lat 40°22.1', long 105°13.3', Larimer County, Hydrologic Unit 10190006, 8 miles southwest of Loveland, Colorado.
Gage.-- Water-level recorder with satellite telemetry. Elevation of gage is 5,600 feet from topographic map.
Remarks.-- Constructed between 1951 and 1953. Impoundment began in January, 1954. Active capacity between elevations 5,462.00 and 5.472.80 is 436 acre-feet. Used as the afterbay storage for Flatiron Powerplant. Recorder was operated from 01-Oct-2014 to 30-Sep-2015. Record is complete and reliable. This record contains operational data which could be subject to future revisions and changes.

Storage, Acre-Feet, 2400-hour Values

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	494	698	449	636	636	635	322	603	622	574	462	629
2	519	645	440	617	616	658	290	608	600	564	448	624
3	580	584	442	579	637	684	283	612	631	549	510	632
4	558	520	445	560	614	688	279	623	666	492	542	645
5	559	464	453	538	575	656	274	640	685	523	501	640
6	584	417	454	534	600	633	271	663	682	507	512	617
7	632	370	460	529	625	612	271	651	711	524	576	594
8	634	325	544	493	620	599	280	564	712	601	541	582
9	656	279	570	464	649	606	294	675	661	607	578	618
10	601	161	592	435	652	645	302	698	543	633	573	662
11	568	181	582	414	667	681	310	530	599	508	527	659
12	533	218	559	432	683	698	319	536	675	521	527	651
13	528	348	536	476	631	602	329	544	678	486	519	579
14	540	440	512	502	635	561	401	573	686	476	514	564
15	573	451	488	531	647	570	475	649	649	462	511	616
16	587	456	541	506	673	592	546	678	586	415	482	630
17	569	457	563	400	612	615	658	656	573	455	602	646
18	566	458	552	390	586	642	603	628	569	523	624	644
19	569	464	557	428	551	617	539	658	559	601	641	603
20	571	458	554	473	559	591	600	661	571	563	605	655
21	574	463	559	485	581	574	674	634	595	633	545	676
22	595	467	565	472	619	566	558	637	586	605	500	637
23	614	468	563	545	627	536	498	644	510	617	479	609
24	638	471	559	548	680	524	485	664	604	672	488	612
25	642	474	567	550	673	494	524	636	578	673	526	604
26	608	480	571	568	670	467	582	545	594	663	578	612
27	574	490	576	586	653	450	517	583	552	605	636	632
28	583	495	587	602	610	447	550	618	608	577	636	556
29	580	498	650	667		481	586	658	619	524	619	497
30	576	495	674	680		526	595	612	603	528	608	486
31	612		642	658		514		532		479	608	
Min	494	161	440	390	551	447	271	530	510	415	448	486
Max	656	698	674	680	683	698	674	698	712	673	641	676
EOM	612	495	642	658	610	514	595	595	603	479	608	486

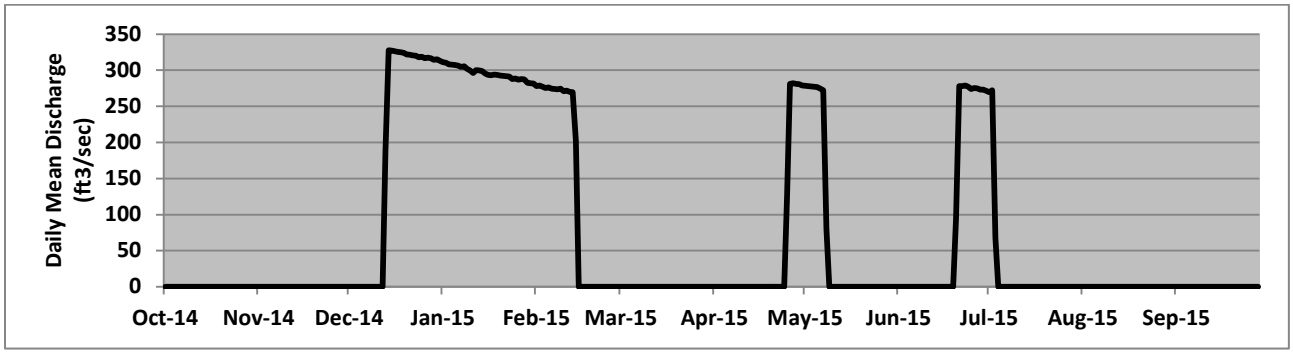


Appendix A (Table 26 of 38)
Flatiron Powerplant Unit 3 Pump, CO

Location. --Lat 40°21'53", long 105°14'09", Larimer County, Hydrologic Unit 10190006, 9 miles west of Loveland, Colorado
Gage.-- There is a flow meter in place.
Remarks.-- Constructed between 1951 and 1953. The Powerplant consists of three generating units. Unit #3 can be used to pump water from Flatiron Reservoir to Carter Lake, or to generate power. For the purpose of this table, any negative values indicate power generation. The maximum capacity of the pump is approximately 480 cubic feet per second, but the efficiency varies according to the water surface levels at Carter Lake and Flatiron Reservoir. Discharges are measured using a flow meter inside the pressure conduit. Recorder was operated from 01-Oct-2014 to 30-Sep-2015. Record is complete and reliable. This record contains operational data which could be subject to future revisions and changes.

Discharge, Cubic Feet per Second, Daily Mean Values

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0	0	0	315	282	0	0	281	0	273	0	0
2	0	0	0	313	281	0	0	279	0	271	0	0
3	0	0	0	311	278	0	0	279	0	270	0	0
4	0	0	0	311	279	0	0	278	0	272	0	0
5	0	0	0	308	277	0	0	278	0	68	0	0
6	0	0	0	308	275	0	0	277	0	0	0	0
7	0	0	0	307	276	0	0	277	0	0	0	0
8	0	0	0	307	274	0	0	274	0	0	0	0
9	0	0	0	305	274	0	0	272	0	0	0	0
10	0	0	0	305	273	0	0	80	0	0	0	0
11	0	0	0	302	274	0	0	0	0	0	0	0
12	0	0	0	300	271	0	0	0	0	0	0	0
13	0	0	0	296	272	0	0	0	0	0	0	0
14	0	0	0	300	270	0	0	0	0	0	0	0
15	0	0	189	300	270	0	0	0	0	0	0	0
16	0	0	328	299	202	0	0	0	0	0	0	0
17	0	0	327	296	0	0	0	0	0	0	0	0
18	0	0	326	293	0	0	0	0	0	0	0	0
19	0	0	326	293	0	0	0	0	0	0	0	0
20	0	0	325	294	0	0	0	0	0	0	0	0
21	0	0	324	293	0	0	0	0	0	0	0	0
22	0	0	322	293	0	0	0	0	95	0	0	0
23	0	0	321	292	0	0	0	0	278	0	0	0
24	0	0	321	292	0	0	0	0	278	0	0	0
25	0	0	320	291	0	0	0	0	279	0	0	0
26	0	0	318	288	0	0	0	0	277	0	0	0
27	0	0	319	289	0	0	127	0	274	0	0	0
28	0	0	317	287	0	0	281	0	275	0	0	0
29	0	0	317	288		0	282	0	275	0	0	0
30	0	0	317	287		0	281	0	273	0	0	0
31	0		315	282		0		0		0	0	
Min	0	0	0	282	0	0	0	0	0	0	0	0
Max	0	0	328	315	282	0	282	281	279	273	0	0
Mean	0	0	172	298	155	0	32	83	77	37	0	0
ac-ft	0	0	10555	18306	8574	0	1922	5097	4565	2285	0	0

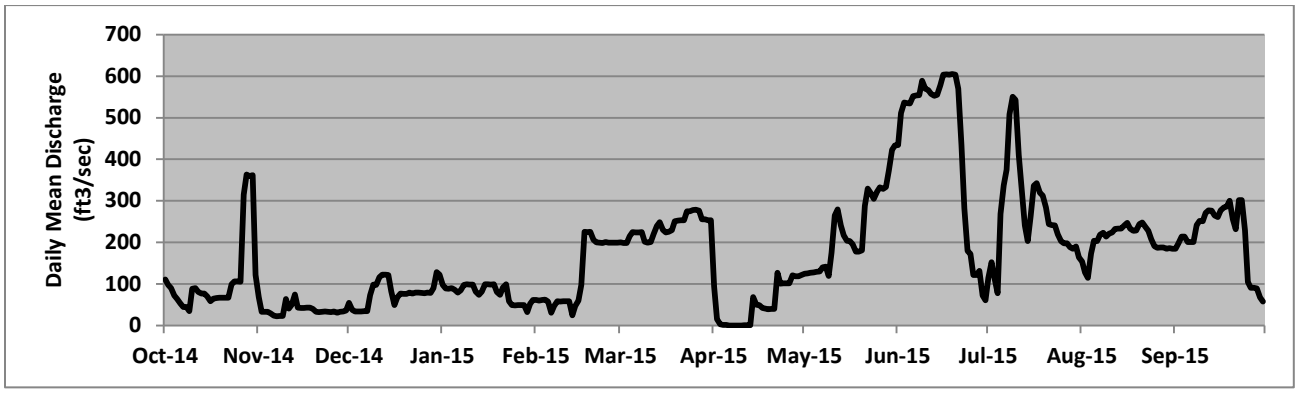


Appendix A (Table 27 of 38)
Charles Hansen Feeder Canal 930 Section, CO

Location. --Lat 40°22'26", long 105°13'52", Larimer County, Hydrologic Unit 10190006, 8 miles southwest of Loveland, Colorado.
Gage.-- Water-stage recorder with satellite telemetry. Elevation of gage is 5470 feet from topographic map.
Remarks.-- Constructed between 1949 and 1953. The canal is 3.8 miles long and has a maximum capacity of 930 cubic feet per second. The canal is used to move Colorado-Big Thompson Project water and diverted native water to the Big Thompson River and/or Horsetooth Reservoir. Recorder was operated from 01-Oct-2014 to 30-Sep-2015. Data from this station has been question in the past for its low accuracy, due to algae growth issues. The record is complete and fair. This record contains operational data which could be subject to future revisions and changes.

Flow, Cubic Feet per Second, Daily Mean Values

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	111	69	55	98	62	200	94	125	434	115	154	185
2	98	33	38	89	60	199	15	126	511	153	128	198
3	90	33	34	89	62	199	3	127	537	115	115	214
4	72	34	34	90	62	215	2	128	535	78	173	214
5	64	29	34	86	58	225	2	129	535	269	204	201
6	53	24	35	80	31	224	0	130	552	338	204	201
7	45	23	35	85	47	224	0	140	554	375	219	201
8	45	24	74	98	58	225	0	141	555	508	223	242
9	35	24	98	99	58	202	0	119	589	550	214	252
10	89	64	98	99	59	200	0	176	569	543	221	251
11	90	41	116	99	59	201	1	265	566	410	224	271
12	81	50	123	82	59	221	1	280	557	330	233	277
13	77	75	122	74	25	239	1	241	553	241	234	276
14	77	43	122	82	47	248	69	217	555	203	233	265
15	70	43	83	100	60	230	50	204	578	262	241	261
16	59	42	49	100	98	224	50	203	603	337	247	277
17	65	43	68	99	226	225	43	196	604	343	233	284
18	67	43	77	99	225	229	41	178	604	320	228	286
19	67	40	76	81	225	251	39	178	605	312	229	301
20	67	33	77	74	206	253	40	181	604	284	244	256
21	67	32	79	92	200	253	40	288	570	244	248	232
22	67	33	77	99	200	253	127	330	433	242	237	302
23	100	34	79	59	199	275	101	318	282	241	228	302
24	107	34	79	50	201	275	102	305	180	220	208	229
25	106	32	78	49	200	278	102	322	173	203	191	105
26	105	34	78	50	199	279	102	332	122	198	187	91
27	315	31	79	50	199	276	121	329	122	198	188	91
28	363	33	79	49	200	256	119	333	132	189	188	90
29	359	34	90	33		256	119	373	73	185	185	68
30	362	36	128	52		254	122	423	61	190	186	58
31	122		123	62		254		433		164	185	
Min	35	23	34	33	25	199	0	119	61	78	115	58
Max	363	75	128	100	226	279	127	433	605	550	248	302
Mean	113	38	78	79	121	237	50	235	445	270	208	216
ac-ft	6924	2265	4789	4841	6704	14541	2978	14400	26426	16549	12739	12830

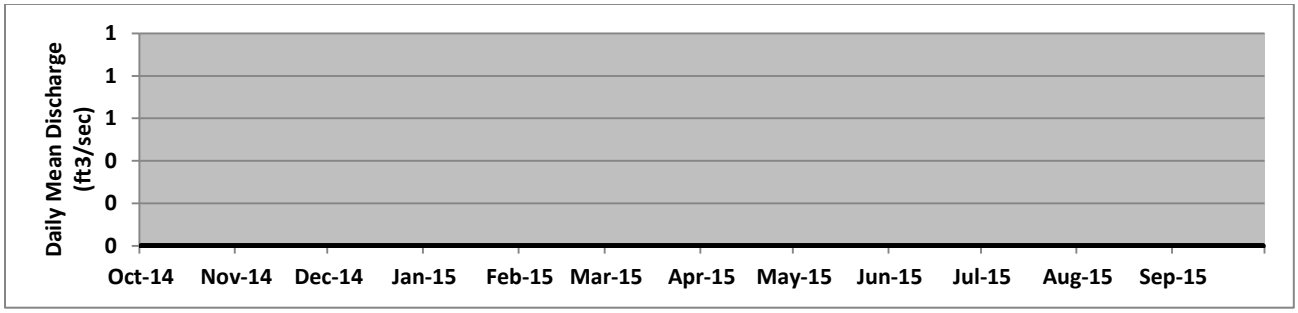


Appendix A (Table 28 of 38)
Dille Tunnel near Drake, CO

Location. --Lat 40°25'02", long 105°14'35", Larimer County, Hydrologic Unit 10190006, 11 miles west of Loveland, Colorado, on the Big Thompson River.
Gage.-- Water-stage recorder with satellite telemetry at Parshall Flume. Elevation of gage is 5520 feet from topographic map.
Remarks.-- Constructed in 1950. Maximum capacity is 600 cubic feet per second. Dille Tunnel diverts water from the Big Thompson River for power generation and water supply. The hydropower diversion operation, also known as the skim operation, diverts water from the Big Thompson River through Dille Tunnel for power generation at the Big Thompson Power Plant, where the diverted water is returned to the river. The skim daily value is determined based on the data from the gage. The skim operation for the Dille Tunnel during water year 2015 was cancelled due to the damages caused by the flood of September 2013. Recorder was not operated during water year 2015.

Hydropower Diversion Flow (Skim), Cubic Feet per Second, Daily Mean Values

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	0	0
29	0	0	0	0		0	0	0	0	0	0	0
30	0	0	0	0		0	0	0	0	0	0	0
31	0		0	0		0		0		0	0	
Min	0	0	0	0	0	0	0	0	0	0	0	0
Max	0	0	0	0	0	0	0	0	0	0	0	0
Mean	0	0	0	0	0	0	0	0	0	0	0	0
ac-ft	0	0	0	0	0	0	0	0	0	0	0	0

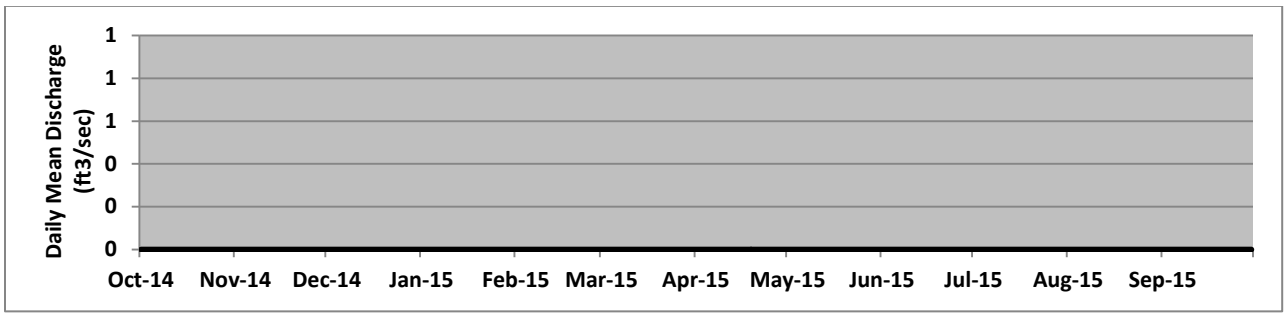


Appendix A (Table 29 of 38)
Dille Tunnel near Drake, CO

Location. --Lat 40°25'02", long 105°14'35", Larimer County, Hydrologic Unit 10190006, 11 miles west of Loveland, Colorado, on the Big Thompson River.
Gage.-- None.
Remarks.-- Constructed in 1950. Maximum capacity is 600 cubic feet per second. Dille Tunnel diverts water from the Big Thompson River for power generation and water supply. The right to divert native run-off is determined by the State of Colorado. The skim operation for the Dille Tunnel during water year 2015 was cancelled due to the damages caused by the flood of September 2013. Recorder was not operated during water year 2015. The numbers presented in this table are based on mass balance computations. Record is complete and reliable. This record contains operational data which could be subject to future revisions and changes.

Priority Diversion Flow, Cubic Feet per Second, Daily Mean Values

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	0	0
29	0	0	0	0		0	0	0	0	0	0	0
30	0	0	0	0		0	0	0	0	0	0	0
31	0		0	0		0		0		0	0	
Min	0	0	0	0	0	0	0	0	0	0	0	0
Max	0	0	0	0	0	0	0	0	0	0	0	0
Mean	0	0	0	0	0	0	0	0	0	0	0	0
ac-ft	0	0	0	0	0	0	0	0	0	0	0	0

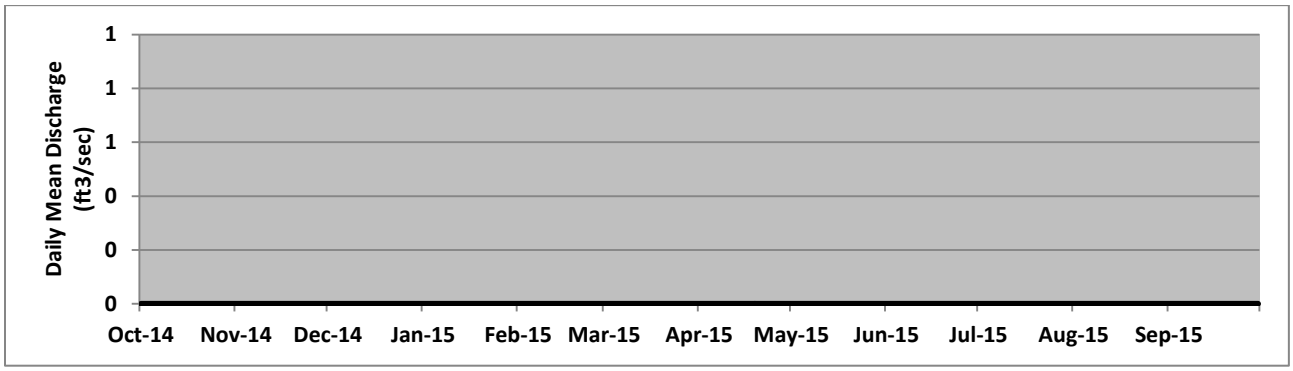


Appendix A (30 of 38)
Dille Tunnel near Drake, CO

Location. --Lat 40°25'02", long 105°14'35", Larimer County, Hydrologic Unit 10190006, 11 miles west of Loveland, Colorado, on the Big Thompson River.
Gage.-- Water-stage recorder with satellite telemetry at Parshall Flume. Elevation of gage is 5520 feet from topographic map.
Remarks.— Constructed in 1950. Maximum capacity is 600 cubic feet per second. Dille Tunnel diverts water from the Big Thompson River for power generation and water supply. The skim operation for the Dille Tunnel during water year 2015 was cancelled due to the damages caused by the flood of September 2013. Recorder was not operated during water year 2015. Record is complete and reliable, although data has not been revised. This record contains operational data which could be subject to future revisions and changes. The official record is published by the Colorado Division of Water Resources.

Discharge, Cubic Feet per Second, Daily Mean Values

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	0	0
29	0	0	0	0		0	0	0	0	0	0	0
30	0	0	0	0		0	0	0	0	0	0	0
31	0		0	0		0		0		0	0	
Min	0	0	0	0	0	0	0	0	0	0	0	0
Max	0	0	0	0	0	0	0	0	0	0	0	0
Mean	0	0	0	0	0	0	0	0	0	0	0	0
ac-ft	0	0	0	0	0	0	0	0	0	0	0	0

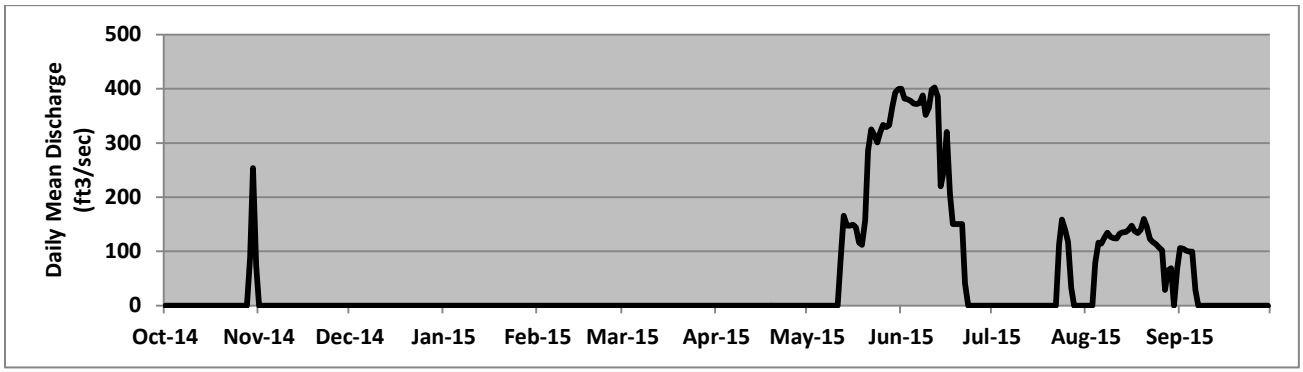


Appendix A (Table 31 of 38)
Big Thompson Power Plant, CO

Location. --Lat 40°25'16", long 105°13'26", Larimer County, Hydrologic Unit 10190006, 9 miles west of Loveland, Colorado, on the Big Thompson River.
Gage.-- Flow meter with satellite telemetry. Elevation of gage is 5280 feet from topographic map.
Remarks.-- Initial operation in 1959. Maximum capacity is 400 cubic feet per second. Power plant returns hydropower diversions to the Big Thompson River downstream of the Big Thompson River canyon mouth. The plant is also used to deliver Colorado-Big Thompson project and Windy Gap Project water to the Big Thompson River. The plant is winterized from November through April each year. This record contains data recorded between 01-Oct-2014 and 30-Sep-2015. Record is complete and fair. This record contains operational data which could be subject to future revisions and changes.

Discharge, Cubic Feet per Second, Daily Mean Values

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0	0	0	0	0	0	0	0	400	0	0	106
2	0	0	0	0	0	0	0	0	382	0	0	105
3	0	0	0	0	0	0	0	0	380	0	0	102
4	0	0	0	0	0	0	0	0	378	0	79	100
5	0	0	0	0	0	0	0	0	373	0	116	100
6	0	0	0	0	0	0	0	0	372	0	114	29
7	0	0	0	0	0	0	0	0	374	0	126	0
8	0	0	0	0	0	0	0	0	388	0	135	0
9	0	0	0	0	0	0	0	0	352	0	127	0
10	0	0	0	0	0	0	0	0	364	0	125	0
11	0	0	0	0	0	0	0	0	398	0	124	0
12	0	0	0	0	0	0	0	91	403	0	132	0
13	0	0	0	0	0	0	0	166	385	0	135	0
14	0	0	0	0	0	0	0	147	220	0	135	0
15	0	0	0	0	0	0	0	148	250	0	140	0
16	0	0	0	0	0	0	0	149	320	0	147	0
17	0	0	0	0	0	0	0	144	206	0	137	0
18	0	0	0	0	0	0	0	116	150	0	134	0
19	0	0	0	0	0	0	0	112	150	0	140	0
20	0	0	0	0	0	0	0	157	150	0	160	0
21	0	0	0	0	0	0	0	285	150	0	145	0
22	0	0	0	0	0	0	0	325	41	0	122	0
23	0	0	0	0	0	0	0	315	0	113	117	0
24	0	0	0	0	0	0	0	301	0	159	113	0
25	0	0	0	0	0	0	0	320	0	140	107	0
26	0	0	0	0	0	0	0	333	0	117	102	0
27	0	0	0	0	0	0	0	329	0	33	29	0
28	0	0	0	0	0	0	0	333	0	0	65	0
29	89	0	0	0		0	0	367	0	0	69	0
30	254	0	0	0		0	0	393	0	0	0	0
31	73		0	0		0		400		0	68	
Min	0	0	0	0	0	0	0	0	0	0	0	0
Max	254	0	0	0	0	0	0	400	403	159	160	106
Mean	13	0	0	0	0	0	0	159	220	18	101	18
ac-ft	823	0	0	0	0	0	0	9763	13042	1112	6225	1070



Appendix A (Table 32 of 38)
Charles Hansen Feeder Canal Wasteway, CO

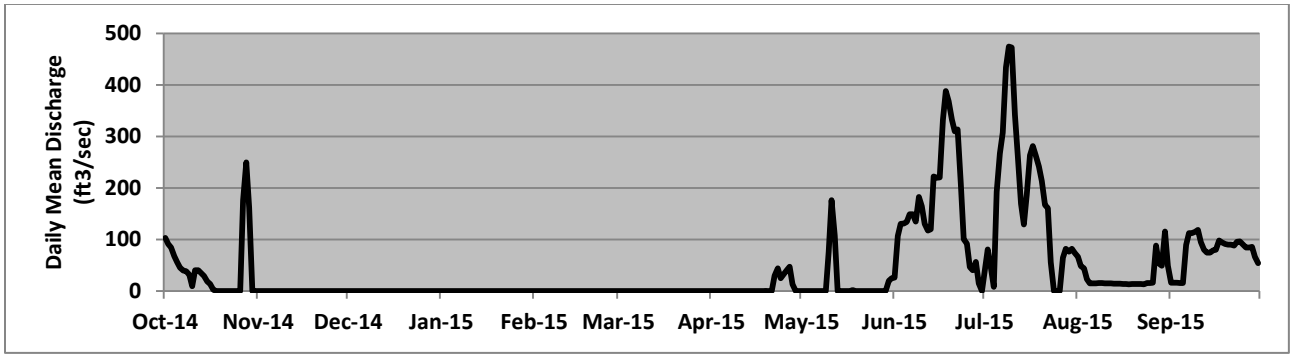
Location. --Lat 40°25'13", long 105°13'28", Larimer County, Hydrologic Unit 10190006, 9 miles west of Loveland, Colorado, on the Big Thompson River.

Gage.-- Water-stage recorder with satellite telemetry at 15 foot Parshall Flume. Elevation of gage is 5465 feet from Designer's Operating Criteria.

Remarks.-- Constructed between 1949 and 1953. Maximum capacity is 400 cubic feet per second. The structure is used to return diverted water and to deliver Colorado-Big Thompson Project and Windy Gap Project water to the Big Thompson River. The facility is winterized between November and April. Recorder was operated in October and November, 2014, and between April and 30-Sep-2015. Record is complete and reliable. These data are provisional operations data and are subject to further revision and change. The official record is published by the Colorado Division of Water Resources.

Discharge, Cubic Feet per Second, Daily Mean Values

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	103	0	0	0	0	0	0	0	26	40	67	16
2	91	0	0	0	0	0	0	0	107	81	48	16
3	84	0	0	0	0	0	0	0	130	45	44	16
4	67	0	0	0	0	0	0	0	131	8	23	16
5	56	0	0	0	0	0	0	0	134	192	15	15
6	46	0	0	0	0	0	0	0	149	267	15	89
7	40	0	0	0	0	0	0	0	149	308	15	113
8	39	0	0	0	0	0	0	0	135	434	15	113
9	32	0	0	0	0	0	0	0	183	474	15	115
10	9	0	0	0	0	0	0	76	165	473	15	119
11	40	0	0	0	0	0	0	176	130	342	15	95
12	40	0	0	0	0	0	0	108	117	262	15	80
13	35	0	0	0	0	0	0	0	120	170	14	75
14	29	0	0	0	0	0	0	0	222	129	14	75
15	18	0	0	0	0	0	0	0	220	187	14	79
16	13	0	0	0	0	0	0	0	221	263	14	80
17	2	0	0	0	0	0	0	0	332	281	14	98
18	0	0	0	0	0	0	0	2	388	263	13	95
19	0	0	0	0	0	0	0	0	368	242	14	92
20	0	0	0	0	0	0	0	0	333	213	14	90
21	0	0	0	0	0	0	0	0	310	167	14	90
22	0	0	0	0	0	0	30	0	314	161	13	88
23	0	0	0	0	0	0	44	0	207	56	13	96
24	0	0	0	0	0	0	25	0	100	0	15	96
25	0	0	0	0	0	0	32	0	92	0	16	90
26	0	0	0	0	0	0	40	0	47	0	16	84
27	176	0	0	0	0	0	48	0	41	65	88	85
28	250	0	0	0	0	0	13	0	57	82	54	86
29	162	0	0	0		0	0	0	15	76	49	66
30	0	0	0	0		0	0	20	0	82	116	54
31	0		0	0		0		25		74	49	
Min	0	0	0	0	0	0	0	0	0	0	13	15
Max	250	0	0	0	0	0	48	176	388	474	116	119
Mean	43	0	0	0	0	0	8	13	165	175	28	77
ac-ft	2644	0	0	0	0	0	459	804	9783	10767	1698	4595

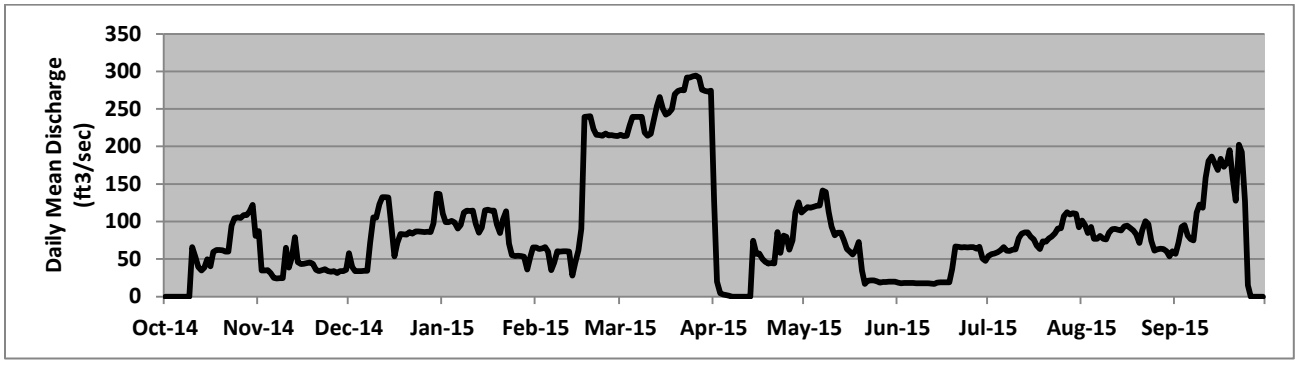


Appendix A (Table 33 of 38)
Charles Hansen Feeder Canal 550 Section, CO

Location. --Lat 40°25'25", long 105°13'34", Larimer County, Hydrologic Unit 10190006, 9 miles west of Loveland, Colorado.
Gage.-- Water-stage recorder with satellite telemetry. Elevation of gage is 5460 feet from topographic map.
Remarks.-- Constructed between 1949 and 1953. The canal is 9.4 miles long and has a maximum capacity of 550 cubic feet per second. The canal is used to move Colorado-Big Thompson Project water and Big Thompson River priority water to Horsetooth Reservoir. Recorder was operated from 01-Oct-2014 to 30-Sep-2015. Record is complete and reliable. This record contains operational data which could be subject to future revisions and changes.

Discharge, Cubic Feet per Second, Daily Mean Values

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0	87	58	111	66	215	127	116	19	54	101	57
2	0	35	40	99	64	214	20	119	18	56	95	71
3	0	35	34	99	64	214	5	118	18	57	85	93
4	0	35	34	101	66	228	3	120	18	59	93	95
5	0	31	34	99	60	240	2	121	18	62	77	81
6	0	25	34	91	35	239	1	121	18	66	77	77
7	0	24	34	95	45	239	0	141	18	61	81	75
8	0	24	72	112	60	240	0	139	18	61	77	112
9	0	24	105	114	60	219	0	113	18	63	76	123
10	66	65	105	114	60	214	0	93	18	63	85	118
11	52	39	123	115	60	217	0	82	18	78	90	159
12	39	51	133	97	60	234	0	85	17	84	90	181
13	35	79	132	85	28	253	0	85	17	86	89	187
14	38	46	132	92	45	266	74	76	19	86	88	178
15	50	43	96	115	62	250	57	63	19	80	93	169
16	40	44	54	116	90	242	57	60	19	76	94	184
17	59	45	72	114	240	245	50	56	19	68	91	173
18	62	45	83	114	240	250	46	62	19	64	88	178
19	62	44	83	96	240	270	44	73	37	73	83	195
20	62	36	82	85	223	274	45	35	67	73	71	156
21	60	34	86	102	216	275	44	17	66	77	89	128
22	60	35	84	113	215	275	86	21	65	80	100	202
23	94	36	87	71	214	292	58	21	66	84	97	193
24	104	34	87	55	217	292	81	21	66	91	74	127
25	105	33	86	54	215	294	80	20	66	91	61	15
26	105	34	86	54	215	295	63	19	66	107	63	0
27	109	32	86	54	214	292	75	19	64	113	64	0
28	108	34	86	53	214	276	112	19	66	109	63	0
29	113	34	97	36		274	126	20	51	111	60	0
30	122	35	137	52		273	112	20	47	110	54	0
31	81		137	65		274		20		92	60	
Min	0	24	34	36	28	214	0	17	17	54	54	0
Max	122	87	137	116	240	295	127	141	67	113	101	202
Mean	53	40	84	90	128	254	46	68	35	79	81	111
ac-ft	3223	2374	5145	5495	7106	15591	2707	4152	2082	4820	4971	6582

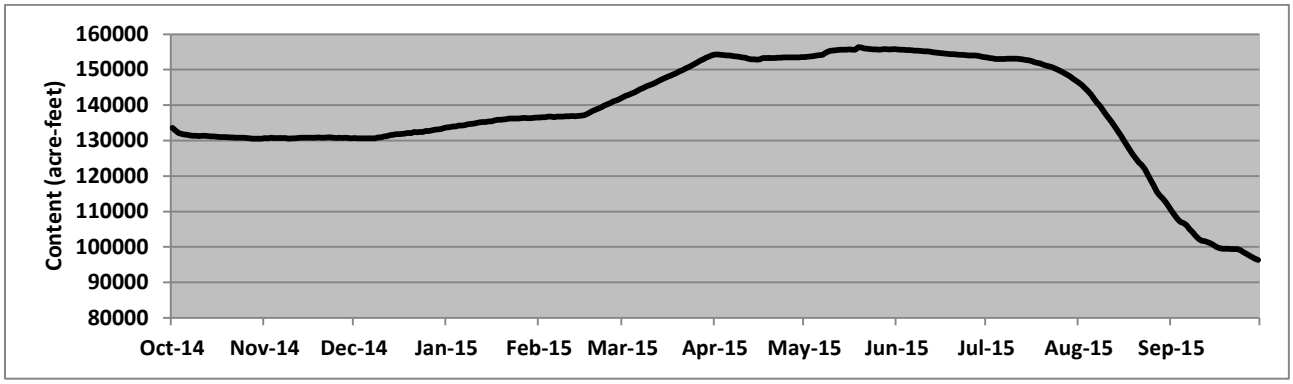


Appendix A (34 of 38)
Horsetooth Reservoir near Fort Collins, CO

Location. –-Lat 40°36'00", long 105°10'05" , Larimer County, Hydrologic Unit 10190007, at Horsetooth Dam outlet works, 4.8 miles west of Fort Collins, Colorado.
Gage.— Water level recorder with satellite telemetry. Elevation of gage is 5300 from topographic map.
Remarks.—Reservoir is formed by four earth-fill dams. Construction completed in 1949. Impoundment began in 1951. Horsetooth Reservoir is one of two terminal reservoirs for Colorado-Big Thompson Project diversions. Transmountain diversions are stored at Horsetooth Reservoir before final delivery. Maximum capacity is 156,735 acre-feet at elevation 5430.00 ft, with 142,038 acre-feet of active storage. Recorder was operated from 01-Oct-2014 to 30-Sep-2015. Record is complete and reliable. This record contains operational data which could be subject to future revisions and changes.

Storage, Acre-Feet, 2400-hour Values

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	133645	130730	130694	133682	136500	142156	154257	153530	155717	153429	146265	110236
2	132880	130657	130638	133794	136576	142620	154317	153611	155616	153288	145657	109005
3	132173	130786	130657	133944	136594	142911	154156	153712	155616	153167	144836	107915
4	131914	130768	130657	133944	136765	143260	154136	153854	155555	153047	143979	107113
5	131748	130749	130602	134224	136765	143648	154035	153975	155534	153027	142969	106713
6	131599	130694	130638	134243	136632	144057	153975	154116	155473	153007	141828	106149
7	131488	130749	130638	134318	136802	144504	153854	154217	155412	153027	140710	105139
8	131358	130712	130657	134599	136784	144934	153753	154743	155330	153087	139752	104183
9	131358	130565	130952	134674	136802	145324	153611	155209	155249	153087	138625	103230
10	131303	130675	130952	134786	136878	145637	153510	155371	155148	153087	137428	102349
11	131322	130657	131174	134974	136859	145990	153349	155453	155148	153067	136273	101796
12	131340	130712	131266	135106	136916	146382	153127	155514	155067	152987	135106	101698
13	131266	130860	131506	135219	136897	146796	152946	155656	154946	152886	133944	101407
14	131211	130786	131636	135275	136916	147229	152906	155656	154844	152765	132601	101017
15	131192	130823	131840	135388	137049	147604	152825	155636	154743	152644	131451	100581
16	131044	130842	131840	135425	137144	147979	152906	155697	154682	152443	130122	100065
17	131026	130860	131859	135707	137485	148335	153328	155636	154581	152142	128654	99710
18	131007	130823	131969	135858	137921	148672	153288	155676	154439	151961	127413	99501
19	130971	130897	132155	135896	138416	149069	153248	156368	154358	151721	126124	99501
20	130952	130842	132118	135972	138721	149525	153248	156307	154338	151440	124968	99469
21	130879	130842	132434	136084	139160	149904	153288	155981	154297	151141	123888	99373
22	130860	130897	132322	136198	139522	150341	153349	155900	154197	150941	123188	99421
23	130805	130879	132434	136254	139943	150701	153409	155859	154156	150641	121992	99373
24	130823	130842	132415	136235	140308	151101	153510	155758	154076	150341	120483	99132
25	130823	130749	132750	136254	140691	151581	153450	155717	154056	149944	118913	98620
26	130768	130805	132750	136368	141076	152042	153470	155676	153995	149525	117319	98125
27	130602	130768	132880	136424	141384	152543	153429	155697	153975	149089	115683	97631
28	130583	130860	133085	136368	141750	152946	153450	155778	153914	148612	114576	97154
29	130528	130694	133141	136349		153369	153490	155737	153732	148039	113784	96678
30	130528	130638	133290	136406		153773	153530	155758	153551	147466	112686	96346
31	130583		133515	136481		154076		155778		146875	111491	
Min	130528	130565	130602	133682	136500	142156	152825	153530	153551	146875	111491	96346
Max	133645	130897	133515	136481	141750	154076	154317	156368	155717	153429	146265	110236
EOM	130583	130638	133515	136481	141750	154076	153530	153530	153551	146875	111491	96346

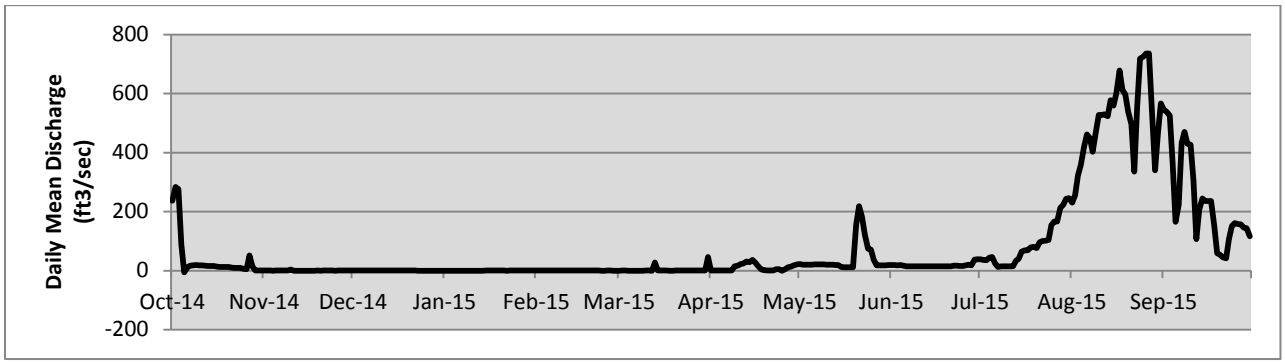


Appendix A (35 of 38)
Charles Hansen Supply Canal below Horsetooth Reservoir, CO

Location. --Lat 40°36'01", long 105°10'18", Larimer County, Hydrologic Unit 10190007, 4 miles west of Fort Collins, Colorado.
Gage.-- Two flow meters with satellite telemetry measure the flow for each conduits leading toward the hollow jet valves.
Remarks.-- Constructed between 1950 and 1952. The canal is 5.1 miles long and has a maximum capacity of 1500 cubic feet per second. The canal is used to deliver Colorado-Big Thompson Project and Windy Gap Project water stored at Horsetooth Reservoir. Recorder was operated from 01-Oct-2014 to 30-Sep-2015 by the Northern Colorado Water Conservancy District and the Colorado Division of Water Resources. Record is complete and fair. This record contains operational data which could be subject to future revisions and changes.

Discharge, Cubic Feet per Second, Daily Mean Values

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	237	0	0	0	0	0	0	22	19	39	231	546
2	284	1	0	0	0	0	0	21	19	36	255	537
3	277	0	0	0	0	0	0	20	19	36	322	526
4	89	0	0	0	0	0	0	20	19	44	358	362
5	-6	0	0	0	0	0	0	20	17	47	419	166
6	12	0	0	0	0	0	0	21	15	24	462	223
7	17	0	0	0	0	0	0	21	15	13	450	433
8	18	0	0	0	0	0	0	21	15	15	403	470
9	19	0	0	0	0	0	15	21	15	15	470	430
10	18	4	0	0	0	0	16	21	15	15	527	427
11	18	0	0	0	0	0	23	20	15	15	528	305
12	17	0	0	0	0	0	25	21	15	15	530	107
13	16	0	0	0	0	27	31	19	15	33	523	206
14	16	0	0	0	0	0	28	19	15	41	577	245
15	16	0	0	0	0	0	37	13	15	64	559	236
16	14	0	0	0	0	0	26	11	15	70	601	236
17	13	0	0	0	0	0	15	11	15	69	679	236
18	13	0	0	0	0	0	4	11	15	78	613	151
19	13	0	0	0	0	0	2	11	15	81	596	59
20	13	0	0	0	0	0	1	157	15	77	538	54
21	10	0	0	0	0	0	0	218	15	96	496	45
22	9	0	0	0	0	0	0	183	17	101	336	42
23	9	0	0	0	0	0	5	122	17	102	555	108
24	9	0	0	0	0	1	5	75	16	103	719	152
25	6	0	0	0	0	0	0	71	16	155	724	161
26	6	0	0	0	0	1	6	36	18	167	736	158
27	52	0	0	0	0	1	12	19	20	167	735	156
28	15	0	0	0	0	1	14	19	18	213	545	146
29	0	0	0	0		1	19	19	37	223	340	144
30	1	0	0	0		1	21	19	39	244	466	116
31	0		0	0		46		19		245	567	
Min	-6	0	0	0	0	0	0	11	15	13	231	42
Max	284	4	0	0	0	46	37	218	39	245	736	546
Mean	40	0	0	0	0	3	10	42	18	85	512	239
ac-ft	2438	21	12	13	15	164	611	2577	1046	5227	31405	14221

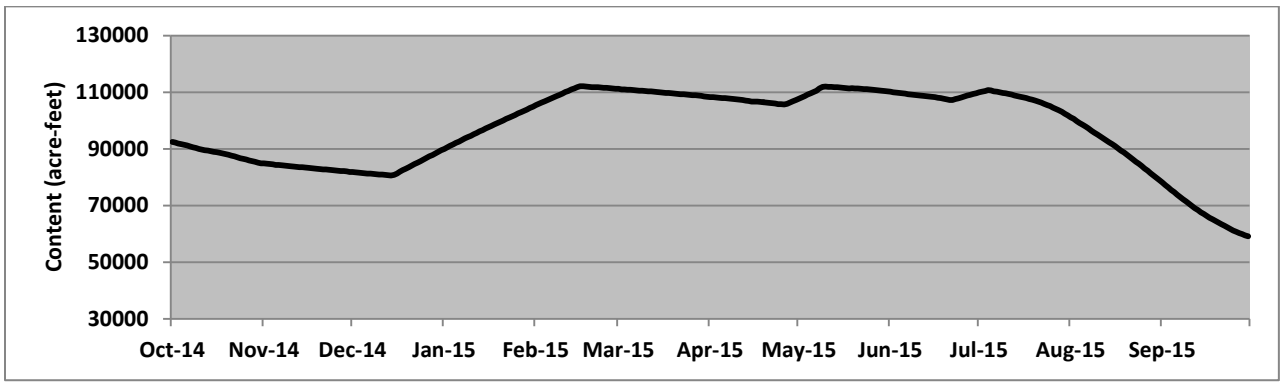


Appendix A (36 of 38)
Carter Lake near Berthoud, Colorado, CO

Location. --Lat 40°19' 28" , long 105°12' 41" , Larimer County, Hydrologic Unit 10190006, on Dam #1, 7 miles northwest of Berthoud, Colorado, and 10 miles west of Loveland, Colorado.
Gage.--Water level recorder with satellite telemetry. Elevation of gage is 5770 from topographic map.
Remarks.--Reservoir is formed by three earth-fill dams. Construction completed in 1952. Carter Lake is one of two terminal reservoirs for Colorado-Big Thompson Project water diversions. Transmountain water diversions are stored at Carter Lake before final delivery. Maximum capacity is 112,200 acre-feet at elevation 5759.00 ft, with 108,900 acre-feet of active capacity. Recorder was operated from 01-Oct-2014 to 30-Sep-2015. Record is complete and fair. This record contains operational data which could be subject to future revisions and changes.

Storage, Acre-Feet, 2400-hour Values

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	92475	84839	81858	90003	105407	111155	108296	107720	110165	109915	101173	78086
2	92186	84724	81714	90524	105854	110996	108217	108161	109995	110165	100534	77236
3	91897	84589	81549	91055	106393	110996	108161	108623	109858	110460	99819	76359
4	91663	84516	81457	91524	106831	110905	108059	109121	109711	110699	99160	75536
5	91450	84340	81374	92101	107304	110836	107969	109620	109575	110585	98514	74656
6	91194	84277	81251	92604	107754	110734	107889	110074	109472	110335	97848	73840
7	90875	84173	81200	93160	108195	110654	107788	110574	109336	110142	97161	73016
8	90577	84081	81118	93644	108634	110574	107664	111269	109223	109949	96432	72217
9	90269	83935	81035	94117	109087	110494	107596	111886	109099	109779	95760	71381
10	90003	83821	80923	94624	109563	110403	107450	111943	108929	109609	95056	70617
11	89771	83738	80871	95110	110017	110313	107360	111886	108827	109393	94375	69857
12	89559	83666	80758	95629	110437	110244	107202	111829	108725	109166	93719	69089
13	89390	83563	80645	96117	110927	110153	107045	111794	108589	108884	93054	68352
14	89221	83511	80564	96671	111372	110052	106864	111737	108488	108646	92357	67629
15	88988	83427	80789	97150	111806	109972	106708	111611	108364	108398	91631	66966
16	88809	83283	81282	97629	112160	109892	106708	111509	108240	108149	90928	66285
17	88545	83189	81889	98131	112091	109779	106708	111395	108093	107901	90185	65636
18	88323	83045	82456	98678	111943	109722	106584	111281	107901	107630	89421	65074
19	88102	82993	82993	99062	111829	109632	106483	111395	107731	107326	88661	64477
20	87924	82879	83531	99555	111806	109506	106393	111361	107495	107045	87945	63966
21	87629	82776	84101	100050	111806	109416	106236	111269	107281	106696	87084	63390
22	87314	82693	84620	100545	111714	109325	106113	111201	107247	106303	86288	62835
23	87052	82600	85109	101041	111657	109257	105990	111144	107585	105911	85463	62245
24	86717	82518	85682	101494	111532	109132	105832	111041	107810	105486	84704	61685
25	86466	82373	86256	101980	111497	109065	105743	110939	108161	105049	83914	61145
26	86173	82322	86790	102490	111440	108997	105709	110859	108511	104580	83055	60671
27	85902	82167	87314	102977	111349	108906	105888	110779	108827	104089	82250	60264
28	85672	82116	87839	103444	111258	108827	106326	110688	109110	103600	81415	59840
29	85390	82033	88387	103911		108691	106797	110551	109427	103044	80615	59463
30	85099	81838	88945	104424		108511	107270	110437	109677	102390	79745	59132
31	84912		89474	104904		108398		110324		101836	78940	
Min	84912	81838	80564	90003	105407	108398	105709	107720	107247	101836	78940	59132
Max	92475	84839	89474	104904	112160	111155	108296	111943	110165	110699	101173	78086
EOM	84912	81838	89474	104904	111258	108398	107270	107270	109677	101836	78940	59132

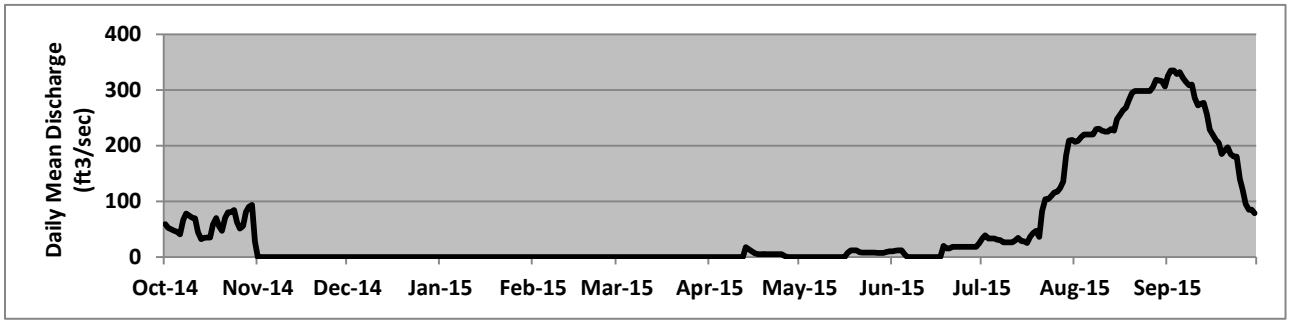


Appendix A (37 of 38)
Saint Vrain Canal below Carter Reservoir, CO

Location. --Lat 40°19'27", long 105°12'35", Larimer County, Hydrologic Unit 10190006, downstream from Carter Reservoir Dam #1, 7 miles northwest of Berthoud, Colorado, and 10 miles west of Loveland, Colorado.
Gage.-- Water-stage recorder with telephone telemetry. Data provided by the Northern Colorado Water Conservancy District. Elevation of gage is 5,590 feet from topographic map.
Remarks.-- Constructed between 1952 and 1954. The canal is 9.8 miles long and has a maximum capacity of 625 cubic feet per second. The canal is used to deliver Colorado-Big Thompson Project and Windy Gap Project water as well as diverted native water from conveyance contract holders. Record was provided by the Northern Colorado Water Conservancy District for the period 01-Oct-2014 to 30-Sep-2015. Record is complete and fair. This record contains operational data which could be subject to future revisions and changes.

Flow, Cubic Feet per Second, Daily Mean Values

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	59	0	0	0	0	0	0	0	10	33	207	325
2	52	0	0	0	0	0	0	0	11	39	208	335
3	50	0	0	0	0	0	0	0	12	33	215	335
4	47	0	0	0	0	0	0	0	12	33	220	328
5	45	0	0	0	0	0	0	0	5	33	220	332
6	40	0	0	0	0	0	0	0	0	31	220	322
7	66	0	0	0	0	0	0	0	0	30	220	315
8	78	0	0	0	0	0	0	0	0	26	230	308
9	75	0	0	0	0	0	0	0	0	26	230	310
10	70	0	0	0	0	0	0	0	0	26	227	285
11	69	0	0	0	0	0	0	0	0	26	225	272
12	44	0	0	0	0	0	0	0	0	30	225	275
13	32	0	0	0	0	0	18	0	0	34	230	277
14	34	0	0	0	0	0	13	0	0	28	227	256
15	35	0	0	0	0	0	10	0	0	28	248	229
16	35	0	0	0	0	0	7	0	0	25	255	220
17	58	0	0	0	0	0	5	7	0	36	264	210
18	70	0	0	0	0	0	5	12	20	43	268	205
19	55	0	0	0	0	0	5	12	15	47	281	185
20	47	0	0	0	0	0	5	12	15	36	295	192
21	70	0	0	0	0	0	5	8	18	83	298	197
22	80	0	0	0	0	0	5	8	18	104	298	185
23	80	0	0	0	0	0	5	8	18	104	298	180
24	84	0	0	0	0	0	5	8	18	109	298	180
25	63	0	0	0	0	0	5	8	18	116	298	140
26	51	0	0	0	0	0	2	8	18	117	298	120
27	56	0	0	0	0	0	0	7	18	124	305	95
28	81	0	0	0	0	0	0	7	18	136	318	85
29	90	0	0	0		0	0	7	18	182	317	85
30	93	0	0	0		0	0	9	25	209	316	78
31	28		0	0		0		10		210	306	
Min	28	0	0	0	0	0	0	0	0	25	207	78
Max	93	0	0	0	0	0	18	12	25	210	318	335
Mean	59	0	0	0	0	0	3	4	10	69	260	229
ac-ft	3638	0	0	0	0	0	186	260	569	4230	15963	13585

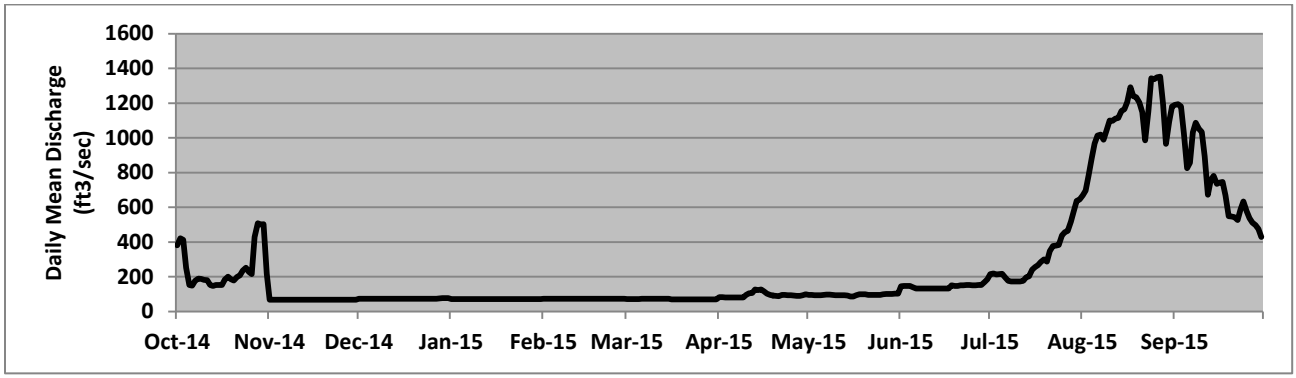


Appendix A (38 of 38)
Colorado-Big Thompson Project, CO

Location. -- Larimer , Grand, Summit, Boulder, Weld counties in Colorado, hydrologic units 14010001, 14010002 and 10190006, 10190007**,** on the Colorado River, Big Thompson River and Cache La Poudre River basins.
Remarks.— This table presents a summation of all the daily deliveries of Colorado-Big Thompson Project and Windy Gap Project water through the Saint Vrain Canal, the Charles Hansen Supply Canal, the Dixon Canal ,the Charles Hansen Feeder Canal and small deliveries upstream from Flatiron Reservoir. These values include metered water. The Colorado-Big Thompson Project is a transmountain water diversion system. The water diverted is used for agricultural, municipal and industrial purposes, to generate hydroelectric power and to provide recreation for the public. This record contains operational data which could be subject to future revisions and changes. Period of record is between 01-Oct-2014 and 30-Sep-2015. Data was provided by the Northern Colorado Water Conservancy District. Record is complete and reliable.

Total Daily Water Deliveries, Cubic Feet per Second, Daily Mean Values

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	380	67	74	72	73	71	82	96	146	214	669	1191
2	422	67	74	72	73	71	82	94	147	219	696	1194
3	412	67	74	72	73	71	81	94	148	213	780	1181
4	252	67	74	72	73	71	81	94	148	215	883	1026
5	153	67	74	72	73	71	81	94	139	217	968	825
6	149	67	74	72	73	72	81	95	133	195	1013	856
7	176	67	74	72	73	73	81	97	133	175	1019	1032
8	190	67	74	72	73	73	81	97	133	173	990	1087
9	187	67	74	72	73	73	81	95	133	173	1040	1053
10	183	67	74	72	73	73	96	94	132	173	1099	1033
11	180	67	74	72	73	73	105	94	132	173	1099	893
12	153	67	74	72	73	73	105	94	132	176	1111	671
13	146	67	74	72	73	73	126	94	132	196	1115	758
14	152	67	74	72	73	73	123	91	132	201	1156	781
15	153	67	74	72	73	73	126	87	132	241	1165	735
16	151	67	74	72	73	70	115	87	132	256	1206	741
17	184	67	74	72	73	68	103	94	132	267	1291	745
18	201	67	74	72	73	68	95	99	151	285	1240	668
19	185	67	74	72	73	68	92	99	147	299	1234	548
20	178	67	74	72	73	68	89	99	147	286	1203	547
21	199	67	74	72	73	68	87	95	150	347	1147	543
22	208	67	74	72	73	68	96	95	151	377	986	527
23	234	67	74	72	73	68	95	95	152	378	1151	588
24	252	67	74	72	73	68	94	95	152	383	1342	634
25	228	67	74	72	73	68	94	95	150	438	1339	578
26	215	67	74	72	73	68	91	98	151	457	1349	537
27	429	67	74	72	73	68	90	100	152	463	1352	512
28	509	67	74	72	73	68	90	100	152	517	1193	496
29	500	67	76	72		68	94	100	168	578	966	474
30	503	67	76	72		69	98	102	185	638	1092	429
31	217		76	72		69		103		644	1181	
Min	146	67	74	72	73	68	81	87	132	173	669	429
Max	509	67	76	72	73	73	126	103	185	644	1352	1194
Mean	248	67	74	72	73	70	94	95	144	309	1099	763
ac-ft	15204	3965	4545	4411	4035	4318	5611	5854	8549	18946	67466	45308



APPENDIX B – OPERATIONS DATA

TABLE 1

WESTERN DIVISION – PICK-SLOAN MISSOURI BASIN PROGRAM
PERTINENT RESERVOIR DATA

(Data in AF)

Reservoir	Dead Storage 1/	Active Storage 2/	Total Storage	Normal Minimum Storage	Limitation on normal minimum storage
Green Mountain	6,860	146,779	153,639	47,684	Minimum elevation for rated power output
Willow Creek	1,486	9,779	10,553	6,675	Elevation of pump canal head-works
Lake Granby	74,190	465,568	539,758	74,190	Lowest outlet elevation
Shadow Mountain	506	16,848	17,354	16,026	Minimum permissible Grand Lake elevation; 8,366 ft.
Grand Lake	3/	511	1,015	504	Legislation limits fluctuation
Marys Lake	42	885	927	308	Minimum elevation for power generation
Lake Estes	409	2,659	3,068	740	Minimum elevation to release 550 cfs
Pinewood Lake	416	1,765	2,181	613	Minimum elevation for power generation
Flatiron	125	635	760	324	Minimum elevation to release 550 cfs
Carter Lake	3,306	108,924	112,230	306	Lowest outlet elevation
Horsetooth	7,003	149,732	156,735	17,600	Elevation on highest delivery works
Total	94,343	903,373	998,220	167,970	

1/ Storage capacity below elevation of lowest outlet
2/ Total storage minus dead storage
3/ Not determined

TABLE 2

COLORADO-BIG THOMPSON PROJECT
MONTHLY SUMMARY
OF BLUE RIVER OPERATIONS

WATER YEAR 2015 **(ACRE-FEET)**

	INITIAL	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
UNDEPLETED RUNOFF ABOVE GREEN MNT RESV		19,300	14,400	12,000	11,600	10,000	14,400	23,000	51,500	177,200	68,500	24,400	16,000
UNDEPLETED RUNOFF ABOVE DILLON RES.		10,800	8,000	6,700	7,000	5,600	7,800	13,300	31,900	117,300	41,200	14,900	9,000
PERCENT OF TOTAL UN-DEPLETED RUNOFF ABV DILLON		0.56	0.556	0.558	0.603	0.56	0.542	0.578	0.619	0.662	0.602	0.611	0.562
DEPLETIONS BY 1929 COLORADO SPRINGS RIGHT		0	0	0	0	0	0	33	107	769	189	97	70
DEPLETIONS BY 1948 COLORADO SPRINGS RIGHT		122	-441	-73	0	0	0	158	632	3924	443	316	115
INFLOW TO DILLON		10,700	8,500	6,800	7,000	5,600	7,800	13,100	31,200	112,600	40,600	14,500	8,800
DILLON STORAGE (1000 AF)	247.2	250	250.9	250.9	250.1	244.8	244.8	247.1	224.8	253.5	256.5	255	247
ROBERTS TUNNEL DIVERSIONS		16	0	0	0	0	0	0	0	0	0	204	8,300
DILLON OUTFLOW TO THE RIVER		6,700	6,600	6,800	7,800	11,000	7,800	10,700	53,100	83,100	36,700	14,400	7,200
TOTAL DEPLETIONS BY DENVER		4,000	1,900	0	-800	-5,300	0	2,400	-21,700	29,250	3,800	60	1,600
RUNOFF BETWEEN DILLON & GREEN MTN RESERVOIR		8,700	6,500	5,400	4,700	4,500	6,700	9,800	20,000	61,400	27,900	9,700	7,100
ACTUAL INFLOW TO GREEN MTN RESERVOIR		15,300	13,000	12,100	12,400	15,300	14,400	20,400	72,500	143,300	64,000	23,900	14,200
GREEN MOUNTAIN EOM STORAGE (1000 AF)	115.2	88.9	84.6	79.5	75	70.8	68.6	72.1	111.4	152.1	152.1	141.1	108.8
TOTAL GREEN MOUNTAIN OUTFLOW		41,300	17,200	17,300	16,800	19,500	16,600	16,700	32,700	101,700	63,200	34,100	46,100

PICK-SLOAN MISSOURI BASIN PROGRAM
WESTERN DIVISION WATER AND POWER SYSTEM
COLORADO-BIG THOMPSON PROJECT

2015 ACTUAL OPERATIONS

	WATER IN 1000 ACRE-FEET				* * *	* * *	* * *	* * *	* * *	ENERGY IN GWH		
	INITIAL OR TOTAL	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
GREEN MOUNTAIN RESERVOIR													
Depleted Watershed Inflow	420.8	15.3	13.0	12.1	12.4	15.3	14.4	20.4	72.5	143.3	64.0	23.9	14.2
Turbine Release	405.8	41.3	15.1	17.3	16.8	19.5	16.6	16.7	32.7	86.5	63.1	34.1	46.1
Bypass	2.16	0.0	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.06	0.0	0.0
Spill	15.24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15.2	0.04	0.0	0.0
End of Month Content	115.2	88.9	84.6	79.5	75.0	70.8	68.6	72.1	111.4	152.1	152.1	141.1	108.8
Kwh/AF		184.0	165.6	161.8	154.8	169.2	156.6	155.7	186.5	205.8	218.7	208.2	190.9
Generation	77.6	7.6	2.5	2.8	2.6	3.3	2.6	2.6	6.1	17.8	13.8	7.1	8.8
WILLOW CREEK RESERVOIR													
Inflow	55.1	2.6	1.6	1.3	1.1	1.0	2.2	7.3	17.9	12.9	4.1	1.9	1.2
Release to River	52.3	3.3	0.9	0.6	0.4	0.4	3.3	8.2	17.8	11.0	4.1	1.6	0.7
Pumped to Granby	00.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4
End of Month Content	7.7	7.0	7.7	8.3	8.9	9.5	8.4	7.5	7.4	9.3	9.3	9.3	9.0
Pump Energy	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
GRANBY - SHADOW MOUNTAIN - GRAND LAKE													
Natural Watershed Inflow	299.6	14.7	7.2	6.0	4.4	4.7	9.5	19.9	48.5	135.6	34.8	9.1	5.2
Total Inflow into Granby	279.8	11.8	6.7	6.1	4.6	4.3	6.7	17.5	44.7	134.7	30.5	7.3	4.9
Granby Fish Release	32.2	2.2	1.3	1.3	1.3	1.1	1.2	1.2	4.6	4.5	4.6	4.6	4.3
Granby Seepage	7.2	0.6	0.6	0.6	0.6	0.6	0.6	0.5	0.5	0.6	0.7	0.7	0.6
Granby Spill	125.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	101.1	18.7	5.7	0.02
Adams Tunnel	113.9	4.9	1.1	16.6	24.3	15.9	13.9	2.9	3.3	0.1	5.6	12.8	12.5
Granby End of Month content	522.2	527.6	531.3	518.6	496.9	484.0	477.5	491.3	505.2	530.7	533.0	514.6	500.1
SM-GL End of Month Content	17.7	17.6	17.7	17.8	17.8	17.8	17.7	17.7	17.6	17.7	17.5	17.7	17.7
Pumped from Granby	97.8	2.3	0.7	16.8	24.5	15.6	11.1	0.7	0.0	0.0	1.8	11.9	12.4
Granby Pump Kwh/AF		130.4	0.0	136.9	138.8	147.4	144.1	142.9	0.0	000.0	111.1	142.9	145.2
Granby Pump Energy	13.6	0.3	0.0	2.3	3.4	2.3	1.6	0.1	0.0	0.0	0.2	1.7	1.8

PICK-SLOAN MISSOURI BASIN PROGRAM
WESTERN DIVISION WATER AND POWER SYSTEM
COLORADO-BIG THOMPSON PROJECT

2015 ACTUAL OPERATIONS

WATER IN 1000 ACRE-FEET * * * * * * * * * * * * ENERGY IN GWH

	INITIAL OR TOTAL	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MARYS LAKE – ESTES – FLATIRON													
Adams Tunnel Water	113.9	4.9	1.1	16.6	24.3	15.9	13.9	2.9	3.3	0.1	5.6	12.8	12.5
Marys Lake Generation	16.4	0.2	0.0	2.4	4.3	2.6	2.2	0.4	0.5	0.0	0.9	1.5	1.5
Estes Generation	50.4	1.8	0.3	7.6	11.0	7.3	6.1	1.1	1.6	0.2	2.3	5.7	5.4
Divertible Big-Thompson	85.2	2.2	1.0	1.0	1.1	0.7	1.7	3.4	14.5	43.5	16.1	0.0	0.0
Diverted Big-Thompson Water	47.4	1.4	0.0	0.0	0.0	0.0	0.0	0.4	8.8	24.3	12.3	0.2	0.0
Olympus Tunnel	185.3	6.8	2.7	16.9	25.1	16.6	15.6	4.7	18.6	31.7	21.5	13.0	12.1
Pole Hill Generation	110.2	2.6	0.0	9.8	16.8	10.5	9.4	2.2	11.9	22.4	11.6	5.9	7.1
Flatiron 1 & 2 Generation	152.1	5.5	0.8	13.8	20.8	13.4	11.6	4.3	17.0	26.1	17.2	11.1	10.4
Flatiron 3 Turbine Release	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Flatiron 3 Kwh/AF Gen.		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Flatiron 3 Generation	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Flatiron 3 Pumping	51.4	0.0	0.0	10.6	18.3	8.6	0.0	1.9	5.1	4.6	2.3	0.0	0.0
Flatiron 3 Kwh/AF Pump		0.0	0.0	330.2	349.7	360.5	0.0	368.4	372.5	369.6	347.8	0.0	0.0
Flatiron 3 Pump Energy	18.1	0.0	0.0	3.5	6.4	3.1	0.0	0.7	1.9	1.7	0.8	0.0	0.0
CARTER LAKE													
Pumped from Flatiron	51.4	0.0	0.0	10.6	18.3	8.6	0.0	1.9	5.1	4.6	2.3	0.0	0.0
Release to Flatiron	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Irrigation Delivery	71.6	7.1	1.4	1.7	1.8	1.7	1.9	2.1	2.2	3.4	8.2	21.0	19.1
Evaporation & Seepage	2.2	0.2	0.1	0.0	0.0	0.0	0.2	0.2	0.0	0.4	0.4	0.4	0.3
End of Month Content	92.7	84.8	81.8	89.5	104.9	111.3	108.4	107.2	110.3	109.7	101.9	79.0	59.2
BIG THOMPSON POWERPLANT													
Diverted Dille Tunnel Water	0.0	0.0	0.0	0.0	0.0	0.0	0.0 .	0.0	0.0	0.0	0.0	0.0	0.0
Irrigation Delivery	28.8	3.6	0.1	0.2	0.4	0.3	0.4	0.6	1.6	0.5	2.7	10.8	7.6
Turbine Release	32.1	.8	0.0	0.0	0.0	0.0	0.0	0.0	9.8	13.1	1.1	6.2	1.1
Generation	4.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	1.4	1.9	0.1	0.7	0.1
HORSETOOTH RESERVOIR													
Hansen Feeder Canal Inflow	51.6	1.8	2.3	4.9	5.1	6.8	15.2	2.1	2.6	1.7	2.4	2.0	4.7
Irrigation Delivery	81.7	4.2	1.5	1.9	1.6	1.4	1.8	2.4	2.8	3.8	7.8	34.4	18.1
Evaporation	4.1	0.4	0.0	0.0	0.0	0.0	0.4	0.5	0.2	0.7	0.7	0.7	0.5
End of Month Content	134.3	130.6	130.6	133.5	136.5	141.8	154.1	153.5	155.7	153.6	146.9	111.5	96.3
TOTAL CBT DELIVERY *	182.1	14.9	3.0	3.8	3.8	3.4	4.1	5.1	6.6	7.7	18.7	66.2	44.8

* May include Windy Gap and/or carriage contract water.

PICK-SLOAN MISSOURI BASIN PROGRAM
WESTERN DIVISION WATER AND POWER SYSTEM
COLORADO-BIG THOMPSON PROJECT

2015 ACTUAL OPERATIONS

WATER IN 1000 ACRE-FEET * * * * * * * * * * * * ENERGY IN GWH

	INITIAL OR TOTAL	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
BASE GENERATION													
Green Mountain	77.6	7.6	2.5	2.8	2.6	3.3	2.6	2.6	6.1	17.8	13.8	7.1	8.8
Flatiron 3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Big Thompson	4.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	1.4	1.9	0.1	0.7	0.1
TOTAL	82.0	7.7	2.5	2.8	2.6	3.3	2.6	2.6	7.5	19.7	13.9	7.8	8.9
LOAD FOLLOWING GENERATION													
Marys Lake	16.4	0.2	0.0	2.4	4.3	2.6	2.2	0.4	0.5	0.0	0.9	1.5	1.5
Estes	50.4	1.8	0.3	7.6	11.0	7.3	6.1	1.1	1.6	0.2	2.3	5.7	5.4
Pole Hill	110.2	2.6	0.0	9.8	16.8	10.5	9.4	2.2	11.9	22.4	11.6	5.9	7.1
Flatiron 1 & 2	152.1	5.5	0.8	13.8	20.8	13.4	11.6	4.3	17.0	26.1	17.2	11.1	10.4
TOTAL	329.1	10.1	1.1	33.6	52.9	33.8	29.3	8.0	31.0	48.7	32.0	24.2	24.4
PUMP ENERGY													
Willow Creek	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0..0	0.0	0.0	0.0	0.0	0.1
Granby	13.6	0.3	0.0	2.3	3.4	2.3	1.6	0.1	0.0	0.0	0.2	1.7	1.8
Flatiron 3	18.1	0.0	0.0	3.5	6.4	3.1	0.0	0.7	1.9	1.7	0.8	0.0	0.0
TOTAL	31.8	0.3	0.0	5.8	9.8	5.4	1.6	0.8	1.9	1.7	1.0	1.7	1.9
TOTAL GENERATION	411.1	17.8	3.6	36.4	55.5	37.1	31.9	10.6	38.5	68.4	45.9	32.0	33.3
TOTAL GENERATION MINUS PUMP	379.3	17.5	3.6	30.6	45.7	31.7	30.3	9.8	36.6	66.7	44.9	30.3	31.4

TABLE 4

COLORADO-BIG THOMPSON PROJECT
FLOOD DAMAGE PREVENTED IN WATER YEAR 2015

	Cumulative Total Prior to WY 2015	WY 2015	Cumulative Total Current
Granby, Willow Creek, Shadow Mountain and Grand Lake	$434,700	$0.00	$434,700
Green Mountain	$164,700	$14,694	$179,394
Total	$599,400	$14,694.00	$614,094

RECLAMATION
Managing Water in the West

CBT October 2015 Most Probable: 01-OCT-2015

COLORADO - BIG THOMPSON MONTHLY OPERATIONS
United States Bureau of Reclamation
Eastern Colorado Area Ofice
Loveland, Colorado

HYDROLOGY OPERATIONS

Dillon Reservoir

		Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Total
Dillon Inflow	kaf	7.2	6.2	5.6	5.0	4.2	5.9	16.0	48.6	47.3	28.0	13.7	8.3	196.0
DL to GM Gain	kaf	4.7	4.2	3.9	3.6	3.3	6.5	14.6	32.3	31.4	18.4	11.8	6.2	140.9

Green Mountain Reservoir

Init Cont: 109.00 kaf Maximum Cont: 154.60 kaf Minimum Cont: 8.00 kaf
Elev: 7926.4 ft Elev: 7950.4 ft Elev: 7804.7 ft

		Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Total
Undepleted Inflow	kaf	11.9	10.4	9.6	8.6	7.5	12.5	30.7	82.2	82.0	47.4	25.8	14.6	343.2
Depletion	kaf	0.8	0.4	0.2	0.1	-0.4	0.5	10.1	39.2	8.7	15.8	5.6	2.0	83.0
Depleted Inflow	kaf	11.1	10.0	9.4	8.5	7.9	12.0	20.6	43.1	73.3	31.6	20.3	12.6	260.4
Turbine Release	kaf	40.7	12.4	11.9	11.0	10.4	16.2	15.1	12.7	20.7	34.9	47.7	21.2	254.9
Spill/Waste	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total River Release	cfs	661	209	193	180	181	264	254	207	347	567	777	356	
Min Release	cfs	60	60	60	60	60	60	100	100	100	100	100	100	
Total River Release	kaf	40.7	12.4	11.9	11.0	10.4	16.2	15.1	12.7	20.7	34.9	47.7	21.2	254.9
Evaporation	kaf	0.2	0.1	0.0	0.0	0.0	0.1	0.2	0.3	0.6	0.7	0.5	0.4	3.1
End-Month Targets	kaf	79.0	76.5	74.0	71.5	69.0	70.0	70.0	100.0	152.0	148.0	120.0	111.0	
End-Month Contents	kaf	79.0	76.5	74.0	71.5	69.0	64.7	70.0	100.0	152.0	148.0	120.0	111.0	
End-Month Elevation	ft	7906.44	7904.53	7902.57	7900.56	7898.49	7894.79	7899.33	7921.04	7949.22	7947.31	7932.87	7927.75	

Willow Creek Reservoir

Init Cont: 9.00 kaf Maximum Cont: 10.20 kaf Minimum Cont: 7.20 kaf
Elev: 8124.6 ft Elev: 8128.8 ft Elev: 8116.9 ft

		Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Total
Native Inflow	kaf	1.1	1.1	1.1	0.9	0.8	1.1	4.3	23.5	9.9	3.0	1.6	1.2	49.6
Minimum Release	kaf	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	4.8
Spill/Bypass	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total River Release	kaf	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	4.8
Pumped to Granby	kaf	0.0	2.8	0.0	0.0	0.0	0.0	5.4	22.2	10.2	2.5	1.0	0.7	44.8
Evaporation	kaf	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.7
End-Month Targets	kaf	9.2	7.2	7.2	7.2	7.2	7.2	8.0	8.0	8.0	8.0	8.0	8.0	
End-Month Contents	kaf	9.6	7.4	8.1	8.5	8.9	9.6	8.0	8.8	8.0	8.0	8.0	8.0	
End-Month Elevation	ft	8126.83	8117.97	8120.74	8122.66	8124.26	8126.77	8120.48	8123.69	8120.48	8120.48	8120.48	8120.48	

RECLAMATION
Managing Water in the West

COLORADO - BIG THOMPSON MONTHLY OPERATIONS
United States Bureau of Reclamation
Eastern Colorado Area Ofice
Loveland, Colorado

CBT October 2015 Most Probable: 01-OCT-2015

Granby Reservoir

Init Cont: 500.00 kaf **Maximum Cont:** 539.80 kaf **Minimum Cont:** 76.50 kaf
Elev: 8274.4 ft **Elev:** 8280.0 ft **Elev:** 8186.9 ft

		Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Total
Native Inflow	kaf	2.8	2.2	1.9	1.7	1.5	1.8	8.5	26.2	31.0	10.0	4.4	3.4	95.4
Release from Shadow Mtn	kaf	2.2	2.8	2.8	2.8	2.6	2.8	2.7	13.4	29.9	3.3	2.8	2.7	70.8
Pump from Windy Gap	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pump from Willow Creek	kaf	0.0	2.8	0.0	0.0	0.0	0.0	5.4	22.2	10.2	2.5	1.0	0.7	44.8
Total Inflow	kaf	4.9	7.9	4.7	4.5	4.0	4.5	16.6	61.8	71.1	15.8	8.2	6.7	210.7
Minimum River Release	kaf	1.2	1.2	1.2	1.2	1.2	1.2	1.2	4.6	4.5	4.6	4.6	4.5	31.2
Spill/Bypass	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total River Release	kaf	1.2	1.2	1.2	1.2	1.2	1.2	1.2	4.6	4.5	4.6	4.6	4.5	31.2
Pumped to Shadow Mtn	kaf	11.3	6.0	25.7	34.3	32.3	34.5	18.0	6.5	0.0	6.2	12.9	24.9	212.6
Evaporation	kaf	1.6	0.7	0.0	0.0	0.0	0.9	1.4	2.2	3.0	2.8	2.2	2.0	16.8
Seepage loss	kaf	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	3.6
End-Month Contents	kaf	490.5	490.3	467.7	436.3	406.6	374.3	370.0	418.2	481.5	483.4	471.6	446.7	
End-Month Elevation	ft	8273.08	8273.04	8269.76	8265.08	8260.46	8255.24	8254.53	8262.28	8271.78	8272.04	8270.34	8266.65	

Shadow Mountain Reservoir

Init Cont: 17.00 kaf **Maximum Cont:** 18.40 kaf **Minimum Cont:** 16.60 kaf
Elev: 8366.6 ft **Elev:** 8367.0 ft **Elev:** 8366.0 ft

		Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Total
Native Inflow	kaf	3.7	3.0	2.5	2.3	1.9	2.3	11.2	33.9	37.7	13.2	5.9	4.5	122.1
Pumped from Granby	kaf	11.3	6.0	25.7	34.3	32.3	34.5	18.0	6.5	0.0	6.2	12.9	24.9	212.6
Total Inflow	kaf	15.0	8.9	28.3	36.6	34.2	36.8	29.2	40.4	37.7	19.4	18.7	29.4	334.6
Minimum River Release	kaf	2.2	2.7	2.8	2.8	2.6	2.8	2.7	2.8	2.7	2.8	2.8	2.7	32.4
Spill/Bypass	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total River Release	kaf	2.2	2.8	2.8	2.8	2.6	2.8	2.7	13.4	29.9	3.3	2.8	2.7	70.8
Adams Tunnel Flow	kaf	12.5	5.9	25.5	33.8	31.6	33.8	26.1	26.3	7.0	15.4	15.4	26.2	259.5
Evaporation	kaf	0.3	0.1	0.0	0.0	0.0	0.2	0.3	0.5	0.6	0.5	0.4	0.4	3.3
End-Month Contents	kaf	16.9	16.9	16.9	16.9	16.9	16.9	16.9	16.9	16.9	16.8	16.8	16.8	
End-Month Elevation	ft	8366.62	8366.62	8366.62	8366.62	8366.63	8366.62	8366.62	8366.62	8366.62	8366.62	8366.62	8366.62	

Adams Tunnel

		Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Total
Maximum Tunnel Capacity	kaf	15.4	5.9	25.5	33.8	31.6	33.8	32.7	33.8	32.7	15.4	15.4	26.2	302.2
Actual Diversion	kaf	12.5	5.9	25.5	33.8	31.6	33.8	26.1	26.3	7.0	15.4	15.4	26.2	259.5
% Maximum Delivery	%	82	100	100	100	100	100	80	78	21	100	100	100	

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Lake Estes

		Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Total
Big Thompson Inflow	kaf	2.6	1.7	1.1	0.8	0.6	0.8	2.1	10.3	22.3	15.2	8.1	4.1	69.7
Minimum River Release	kaf	3.1	1.5	1.5	1.5	1.4	1.5	2.2	6.9	7.4	7.7	6.9	3.7	45.3
Actual River Release	kaf	2.5	1.5	1.1	0.8	0.6	0.8	2.1	7.2	7.4	7.7	6.7	4.0	42.4
Max Diversion Available	kaf	0.0	0.2	0.0	0.0	0.0	0.0	0.1	3.6	14.9	7.5	1.4	0.4	28.1
Priority Water Diverted	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.3
Skim Water Diverted	kaf	0.0	0.2	0.0	0.0	0.0	0.0	0.0	3.1	14.6	7.5	1.4	0.1	26.9
% Maximum Diversion	%	96	98	0	0	0	0	26	87	100	100	100	23	
Irrigation Demand	kaf	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.1	1.8
Irrigation Delivery	kaf	0.3	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.1	1.7
Total River Release	kaf	2.5	1.5	1.1	0.8	0.6	0.8	2.1	7.2	7.4	7.7	6.7	4.0	42.4

Olympus Tunnel

		Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Total
Maximum Tunnel Capacity	kaf	33.8	32.7	33.8	33.8	31.6	33.8	32.7	33.8	32.7	33.8	33.8	32.7	399.0
Actual Delivery	kaf	12.2	6.1	25.4	33.7	31.5	33.7	26.0	29.2	21.7	22.7	16.5	26.2	284.9
% Maximum Delivery	%	36	19	75	100	100	100	79	86	66	67	49	80	
Inflow to Flatiron	kaf	12.2	7.2	25.4	33.7	31.5	33.7	26.0	29.2	21.7	22.7	17.7	11.6	272.6

Carter Lake

Init Cont: 59.00 kaf **Maximum Cont:** 112.20 kaf **Minimum Cont:** 6.00 kaf
Elev: 5707.7 ft **Elev:** 5759.0 ft **Elev:** 5626.8 ft

		Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Total
Pumped from Flatiron	kaf	0.0	0.0	13.2	22.0	18.4	17.8	15.8	8.8	4.9	0.0	8.0	2.6	111.5
Carter to Flatiron	kaf	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.5	2.8
Evaporation Loss	kaf	0.2	0.1	0.0	0.0	0.0	0.1	0.3	0.4	0.5	0.4	0.3	0.3	2.6
Seepage Loss	kaf	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.1	1.7
End-Month Targets	kaf	40.0	40.0	112.0	112.0	112.0	112.0	112.0	112.0	80.0	80.0	80.0	80.0	
End-Month Contents	kaf	46.0	41.7	51.7	70.7	85.8	100.1	110.7	112.0	107.1	86.0	66.8	64.6	
End-Month Elevation	ft	5692.78	5687.58	5699.41	5719.95	5734.87	5747.66	5757.20	5758.59	5754.50	5735.05	5715.57	5713.57	
Priority Water Diverted to Carter	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Irrigation Demand	kaf	11.5	2.2	2.4	2.3	2.6	2.8	4.7	6.5	7.7	19.3	24.3	17.4	103.7
Metered Demand	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Windy Gap demand	kaf	1.3	0.8	0.7	0.5	0.6	0.5	0.1	0.4	1.4	1.2	1.3	1.5	10.3
Total Demand	kaf	12.8	3.0	3.2	2.8	3.2	3.3	4.8	6.9	9.1	20.5	25.6	18.9	114.1
Total Delivery	kaf	12.8	3.0	3.2	2.8	3.2	3.3	4.8	6.9	9.1	20.5	25.6	18.9	114.1
% Required Delivery	%	100	100	100	100	100	100	100	100	100	100	100	100	
Shortage	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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Hansen Canal 930

		Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Total
Minimum Flow	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum Flow	kaf	57.2	55.3	57.2	57.2	53.5	57.2	55.3	57.2	55.3	57.2	57.2	55.3	675.1
Actual Flow	kaf	12.2	7.2	12.2	11.7	13.1	15.9	10.2	20.4	16.8	22.7	9.7	9.3	161.4

Dille Tunnel

		Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Total
Big Thompson River Below Lake Estes	kaf	2.5	1.5	1.1	0.8	0.6	0.8	2.1	7.2	7.4	7.7	6.7	4.0	42.4
North Fork Big Thompson River at Drake	kaf	1.1	0.8	0.6	0.5	0.4	0.4	0.4	1.8	2.6	4.1	2.4	1.4	16.5
Dille Skim Water Diverted	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dille Priority Water Diverted	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
water available	kaf	3.6	2.2	1.8	1.3	1.0	1.2	2.5	8.9	10.0	11.8	9.1	5.4	58.8
water diverted	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
% Diverted	%	0	0	0	0	0	0	0	0	0	0	0	0	
Big T @ Canyon Mouth	kaf	3.6	2.2	1.8	1.3	1.0	1.2	2.5	8.9	10.0	11.8	9.1	5.4	58.8

Trifurcation

		Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Total
Release from Flatiron	kaf	12.2	7.2	12.2	11.7	13.1	15.9	10.2	20.4	16.8	22.7	9.7	9.3	161.4
Release to 550 Canal	kaf	7.0	6.7	11.8	11.4	12.8	15.6	9.9	16.6	1.7	13.0	3.5	1.5	111.5
Dille Tunnel	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total release to river	kaf	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	3.8	6.7	15.6
Irrigation demand	kaf	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	3.8	6.7	15.6
Windy Gap demand	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total requirement	kaf	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	3.8	6.7	15.6
Total delivery	kaf	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	3.8	6.7	15.6
% Required Delivery	%	100	0	0	0	0	0	100	100	100	100	100	100	
Shortage	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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Hansen Canal 550

		Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Total
Inflow from Flatiron	**kaf**	7.0	6.7	11.8	11.4	12.8	15.6	9.9	16.6	1.7	13.0	3.5	1.5	111.5
Maximum flow	**kaf**	23.6	30.8	31.8	31.8	29.7	31.8	30.8	31.8	30.8	31.8	31.8	30.8	367.3
Irrigation demand	**kaf**	1.5	0.3	0.3	0.3	0.3	0.3	0.4	0.6	0.5	1.1	1.0	1.0	7.6
Irrigation delivery	**kaf**	1.1	0.3	0.3	0.3	0.3	0.3	0.2	0.6	0.5	1.1	1.0	1.0	7.0
Minimum flow	**kaf**	1.5	2.6	4.6	4.6	4.3	4.6	1.5	1.5	1.5	1.5	1.5	1.5	31.2
Rels to Horsetooth	**kaf**	7.0	6.7	11.8	11.4	12.8	15.6	9.9	16.6	1.7	13.0	3.5	1.5	111.5

Horsetooth Reservoir

Init Cont: 96.00 kaf **Maximum Cont:** 157.00 kaf **Minimum Cont:** 13.00 kaf
Elev: 5396.5 ft **Elev:** 5430.0 ft **Elev:** 5316.8 ft

		Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Total
Inflow	**kaf**	7.0	6.7	11.8	11.4	12.8	15.6	9.9	16.6	1.7	13.0	3.5	1.5	111.5
Total irrigation delivery	**kaf**	12.7	1.6	1.6	2.1	1.8	2.1	3.0	5.3	5.9	27.5	31.4	14.6	109.6
Evaporation loss	**kaf**	0.4	0.2	0.0	0.0	0.0	0.3	0.4	0.7	0.9	0.8	0.6	0.5	4.8
Seepage loss	**kaf**	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	2.4
End-Month Targets	**kaf**	105.0	110.0	115.0	125.0	130.0	140.0	154.7	154.7	100.0	154.7	154.7	154.7	
End-Month Content	**kaf**	90.2	95.0	105.0	114.1	125.0	138.0	144.3	154.8	149.5	134.0	105.3	91.6	
End-Month Elevation	**ft**	5392.55	5395.66	5401.90	5407.31	5413.49	5420.51	5423.78	5429.03	5426.40	5418.34	5402.08	5393.47	
Priority water diverted to Horsetooth	**kaf**	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.2
Irrigation demand	**kaf**	9.4	0.0	0.0	0.0	0.0	0.0	0.6	1.0	1.3	20.0	24.3	9.9	66.5
Metered Demand	**kaf**	2.6	1.3	1.4	1.6	1.5	1.5	2.1	3.8	4.1	6.5	5.5	3.6	35.5
Windy Gap demand	**kaf**	0.7	0.3	0.2	0.6	0.3	0.6	0.3	0.5	0.5	1.0	1.6	1.2	7.8
Total demand	**kaf**	12.7	1.6	1.6	2.1	1.8	2.1	3.0	5.3	5.9	27.5	31.4	14.6	109.6
Total irrigation	**kaf**	12.7	1.6	1.6	2.1	1.8	2.1	3.0	5.3	5.9	27.5	31.4	14.6	109.6
% Required Delivery	**%**	100	100	100	100	100	100	100	100	100	100	100	100	
Shortage	**kaf**	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

CBT Project Summary

		Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Total
Total CBT Delivery	**kaf**	28.6	3.8	4.2	4.2	4.4	4.7	7.6	11.9	13.6	48.0	58.9	38.6	228.5

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Windy Gap

		Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Total
Pumping	**kaf**	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Losses	**kaf**	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Spill	**kaf**	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delivery	**kaf**	2.0	1.0	1.0	1.1	0.9	1.1	0.4	1.0	1.9	2.2	2.9	2.7	18.2
Account Balance	**kaf**	-2.0	-3.1	-4.0	-5.1	-6.0	-7.1	-7.5	-8.4	-10.4	-12.6	-15.5	-18.2	

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U.S. DEPARTMENT OF THE INTERIOR
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PUMPING AND GENERATION OPERATIONS

Green Mountain Generation

		Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Total
Maximum Generation	gwh	18.600	18.000	18.600	10.200	13.500	9.300	15.600	18.600	18.000	18.600	18.600	18.000	195.600
Generation	gwh	7.400	2.100	2.000	1.900	1.700	2.600	2.500	2.200	4.100	7.400	9.700	4.100	47.700
% Maximum Generation	%	40	12	11	18	13	28	16	12	23	40	52	23	
Average	kwh/af	182	171	169	168	166	163	163	175	201	211	204	195	

Willow Creek Pumping

		Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Total
Maximum Pumping	kaf	0.0	4.0	0.0	0.0	0.0	0.0	23.8	24.6	23.8	24.6	24.6	23.8	149.2
Actual Pumping	kaf	0.0	2.8	0.0	0.0	0.0	0.0	5.4	22.2	10.2	2.5	1.0	0.7	44.8
Pump Energy	gwh	0.000	0.600	0.000	0.000	0.000	0.000	1.200	4.700	2.200	0.500	0.200	0.100	9.500
% Maximum Pumping	%	0	72	0	0	0	0	23	90	43	10	4	3	245
Average	kwh/af	0	213	0	0	0	0	213	213	213	213	213	213	

Lake Granby Pumping

		Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Total
Maximum Pumping	kaf	36.9	35.7	36.9	36.9	34.5	36.9	35.7	36.9	35.7	36.9	36.9	35.7	435.6
Actual Pumping	kaf	11.3	6.0	25.7	34.3	32.3	34.5	18.0	6.5	0.0	6.2	12.9	24.9	212.6
Pump Energy	gwh	1.600	0.800	3.700	4.900	4.700	5.100	2.700	1.000	0.000	0.900	1.800	3.600	30.800
% Maximum Pumping	%	31	17	70	93	94	94	50	18	0	17	35	70	
Average	kwh/af	142	142	143	144	146	148	149	149	0	143	143	144	

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Marys Lake Generation

		Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Total
Adams Tunnel Flow	kaf	12.5	5.9	25.5	33.8	31.6	33.8	26.1	26.3	7.0	15.4	15.4	26.2	259.5
Maximum Generation	gwh	6.400	0.200	4.100	6.400	6.000	6.400	6.200	6.400	6.200	6.400	6.400	6.200	67.300
Generation	gwh	1.900	0.100	3.800	6.400	6.000	6.400	4.800	4.800	0.900	2.600	2.600	4.800	45.100
% Maximum Generation	%	15	1	15	19	19	19	19	18	13	17	17	19	
Average	kwh/af	154	14	148	189	189	189	185	184	126	169	169	185	

Lake Estes Generation

		Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Total
Adams Tunnel Flow	kaf	12.5	5.9	25.5	33.8	31.6	33.8	26.1	26.3	7.0	15.4	15.4	26.2	259.5
Maximum Generation	gwh	16.000	15.500	16.000	16.000	15.000	16.000	15.500	16.000	15.500	16.000	16.000	15.500	189.000
Generation	gwh	5.600	2.800	12.100	16.000	14.900	16.000	12.100	12.300	2.800	7.200	7.200	12.400	121.400
% Maximum Generation	%	35	18	75	100	100	100	78	77	18	45	45	80	
Average	kwh/af	445	476	474	473	472	473	465	470	399	470	472	473	

Pole Hill Generation

		Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Total
Olympus Tunnel Flow	kaf	33.8	32.7	33.8	33.8	31.6	33.8	32.7	33.8	32.7	33.8	33.8	32.7	399.0
Maximum Generation	gwh	25.800	0.800	16.600	25.800	24.100	25.800	25.000	25.800	25.000	25.800	25.800	25.000	271.300
Generation	gwh	7.600	0.400	15.100	25.700	24.000	25.700	19.400	22.000	15.900	16.600	11.400	19.500	203.300
% Maximum Generation	%	29	42	91	100	100	100	78	85	64	64	44	78	
Average	kwh/af	225	11	447	761	760	761	592	649	486	492	338	597	

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Flatiron Units 1 and 2 Generation

		Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Total
Inflow to Flatiron	kaf	12.2	7.2	25.4	33.7	31.5	33.7	26.0	29.2	21.7	22.7	17.7	11.6	272.6
Maximum Generation	gwh	32.200	31.200	32.200	32.200	30.200	32.200	31.200	32.200	31.200	32.200	32.200	31.200	380.400
Generation	gwh	9.200	4.600	23.000	32.100	30.000	32.100	23.700	26.600	18.000	18.800	13.000	8.100	239.200
% Maximum Generation	%	29	15	71	99	99	100	76	83	58	58	40	26	
Average	kwh/af	754	641	904	951	950	951	911	913	828	829	735	698	

Flatiron Unit 3 Pump/Generation

		Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Total
Maximum Pumping	kaf	0.0	0.0	13.2	22.0	18.4	17.8	15.8	15.6	15.2	17.4	20.0	7.6	163.0
Pump from Flatiron	kaf	0.0	0.0	13.2	22.0	18.4	17.8	15.8	8.8	4.9	0.0	8.0	2.6	111.5
Pump Energy	gwh	0.000	0.000	3.700	6.600	5.900	6.100	5.700	3.200	1.800	0.000	2.500	0.800	36.300
% Maximum Pumping	%	0	0	100	100	100	100	100	56	32	0	40	34	
Average	kwh/af	0	0	282	301	323	341	357	366	366	0	315	304	
Maximum Turbine release	kaf	0.7	21.3	22.0	23.4	23.1	25.6	25.6	27.0	26.0	25.9	24.5	8.4	253.5
Carter to Flatiron	kaf	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.5	2.8
Maximum Generation	gwh	0.100	3.800	3.900	4.600	4.800	5.500	5.700	6.000	5.800	5.600	5.100	1.700	52.600
Actual Generation	gwh	0.000	0.200	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.200	0.100	0.500
% Maximum Generation	%	0	5	0	0	0	0	0	0	0	0	5	6	
Average	kwh/af	0	179	0	0	0	0	0	0	0	0	205	198	

Big Thompson Generation

		Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Total
Total release	kaf	4.1	0.2	0.0	0.0	0.0	0.0	0.0	3.1	14.6	8.6	5.2	6.8	42.6
Turbine release	kaf	4.1	0.0	0.0	0.0	0.0	0.0	0.0	3.1	14.6	8.6	5.2	6.8	42.4
Wasteway release	kaf	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
Maximum Generation	gwh	3.800	0.000	0.000	0.000	0.000	0.000	0.000	3.800	3.700	3.800	3.800	3.700	22.600
Generation	gwh	0.200	0.000	0.000	0.000	0.000	0.000	0.000	0.400	2.300	1.100	0.500	0.800	5.300
% Maximum Generation	%	6	0	0	0	0	0	0	9	61	29	12	21	
Average	kwh/af	58	0	0	0	0	0	0	114	154	129	89	116	

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Project Generation

		Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Total
Total Generation	**gwh**	32.000	10.200	55.900	82.000	76.700	82.900	62.500	68.400	43.900	53.700	44.700	49.900	662.800
Total Max Generation	**gwh**	103.000	69.500	91.500	95.200	93.600	95.300	99.100	108.900	105.300	108.500	107.900	101.200	1179.000

Project Pump Energy

		Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Total
Granby	**gwh**	1.600	0.800	3.700	4.900	4.700	5.100	2.700	1.000	0.000	0.900	1.800	3.600	30.800
Willow Creek	**gwh**	0.000	0.600	0.000	0.000	0.000	0.000	1.200	4.700	2.200	0.500	0.200	0.100	9.500
Flatiron Unit 3	**gwh**	0.000	0.000	3.700	6.600	5.900	6.100	5.700	3.200	1.800	0.000	2.500	0.800	36.300
Total Pump Energy	**gwh**	1.600	1.500	7.400	11.600	10.700	11.200	9.500	8.900	4.000	1.400	4.600	4.500	76.900

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HYDROLOGY OPERATIONS

Dillon Reservoir

		Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Total
Dillon Inflow	kaf	7.2	6.6	5.7	5.0	4.2	4.1	4.9	17.1	25.7	13.2	7.6	5.5	106.8
DL to GM Gain	kaf	4.7	4.1	3.9	3.5	3.1	3.6	6.4	18.9	20.9	12.6	9.4	5.1	96.2

Green Mountain Reservoir

Init Cont: 109.00 kaf **Maximum Cont:** 154.60 kaf **Minimum Cont:** 8.00 kaf
Elev: 7926.4 ft **Elev:** 7950.4 ft **Elev:** 7804.7 ft

		Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Total
Undepleted Inflow	kaf	11.9	10.3	9.5	8.6	7.3	7.7	11.4	36.4	48.0	25.9	17.1	10.6	204.7
Depletion	kaf	2.9	2.9	2.2	1.7	0.9	0.4	1.5	14.2	21.3	7.6	1.6	0.4	57.6
Depleted Inflow	kaf	9.1	7.4	7.3	6.9	6.4	7.3	9.9	22.1	26.7	18.3	15.5	10.2	147.1
Turbine Release	kaf	38.6	9.8	9.8	9.4	8.9	11.0	6.0	6.1	6.0	6.1	11.5	18.8	142.0
Spill/Waste	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total River Release	cfs	628	165	160	152	154	178	100	100	100	100	188	316	
Min Release	cfs	60	60	60	60	60	60	100	100	100	100	100	100	
Total River Release	kaf	38.6	9.8	9.8	9.4	8.9	11.0	6.0	6.1	6.0	6.1	11.5	18.8	142.0
Evaporation	kaf	0.2	0.1	0.0	0.0	0.0	0.1	0.2	0.3	0.5	0.5	0.5	0.4	2.8
End-Month Targets	kaf	79.0	76.5	74.0	71.5	69.0	70.0	70.0	100.0	152.0	148.0	120.0	111.0	
End-Month Contents	kaf	79.0	76.5	74.0	71.5	69.0	65.2	69.0	84.6	104.9	116.5	120.0	111.0	
End-Month Elevation	ft	7906.44	7904.53	7902.57	7900.56	7898.49	7895.29	7898.48	7910.62	7924.10	7930.93	7932.87	7927.75	

Willow Creek Reservoir

Init Cont: 9.00 kaf **Maximum Cont:** 10.20 kaf **Minimum Cont:** 7.20 kaf
Elev: 8124.6 ft **Elev:** 8128.8 ft **Elev:** 8116.9 ft

		Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Total
Native Inflow	kaf	1.1	1.0	0.9	0.8	0.7	1.0	3.1	13.4	6.3	2.3	1.4	1.1	33.1
Minimum Release	kaf	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	4.8
Spill/Bypass	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total River Release	kaf	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	4.8
Pumped to Granby	kaf	0.0	2.8	0.0	0.0	0.0	0.0	3.7	12.8	5.8	1.8	0.9	0.6	28.4
Evaporation	kaf	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.7
End-Month Targets	kaf	9.2	7.2	7.2	7.2	7.2	7.2	8.0	8.0	8.0	8.0	8.0	8.0	
End-Month Contents	kaf	9.6	7.4	7.9	8.3	8.6	9.0	8.0	8.0	8.0	8.0	8.0	8.0	
End-Month Elevation	ft	8126.79	8117.70	8119.85	8121.53	8122.78	8124.68	8120.48	8120.48	8120.48	8120.48	8120.48	8120.48	

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Granby Reservoir

Init Cont: 500.00 kaf **Maximum Cont:** 539.80 kaf **Minimum Cont:** 76.50 kaf
Elev: 8274.4 ft **Elev:** 8280.0 ft **Elev:** 8186.9 ft

		Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Total
Native Inflow	kaf	2.5	2.1	1.9	1.7	1.4	1.8	3.9	18.2	25.3	8.1	4.2	2.6	73.7
Release from Shadow Mtn	kaf	2.2	2.7	2.8	2.8	2.6	2.8	2.7	7.8	14.1	4.7	2.8	2.7	50.7
Pump from Windy Gap	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pump from Willow Creek	kaf	0.0	2.8	0.0	0.0	0.0	0.0	3.7	12.8	5.8	1.8	0.9	0.6	28.4
Total Inflow	kaf	4.6	7.5	4.7	4.5	4.0	4.5	10.2	38.8	45.2	14.6	7.8	5.9	152.3
Minimum River Release	kaf	1.2	1.2	1.2	1.2	1.2	1.2	1.2	4.6	4.5	4.6	4.6	4.5	31.2
Spill/Bypass	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total River Release	kaf	1.2	1.2	1.2	1.2	1.2	1.2	1.2	4.6	4.5	4.6	4.6	4.5	31.2
Pumped to Shadow Mtn	kaf	11.7	6.1	25.8	34.3	32.3	34.5	19.6	7.8	1.6	1.5	9.0	19.7	203.9
Evaporation	kaf	1.6	0.7	0.0	0.0	0.0	0.9	1.4	2.2	2.8	2.6	2.1	1.8	16.1
Seepage loss	kaf	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	3.6
End-Month Contents	kaf	489.8	489.1	466.4	435.0	405.3	373.0	360.8	384.7	420.7	426.3	418.2	397.8	
End-Month Elevation	ft	8272.97	8272.87	8269.58	8264.88	8260.26	8255.03	8252.99	8256.95	8262.68	8263.54	8262.28	8259.06	

Shadow Mountain Reservoir

Init Cont: 17.00 kaf **Maximum Cont:** 18.40 kaf **Minimum Cont:** 16.60 kaf
Elev: 8366.6 ft **Elev:** 8367.0 ft **Elev:** 8366.0 ft

		Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Total
Native Inflow	kaf	3.3	2.7	2.5	2.2	1.9	2.3	5.2	23.6	33.3	10.5	5.6	3.5	96.6
Pumped from Granby	kaf	11.7	6.1	25.8	34.3	32.3	34.5	19.6	7.8	1.6	1.5	9.0	19.7	203.9
Total Inflow	kaf	15.0	8.8	28.3	36.6	34.2	36.8	24.8	31.4	34.9	12.0	14.6	23.2	300.6
Minimum River Release	kaf	2.2	2.7	2.8	2.8	2.6	2.8	2.7	2.8	2.7	2.8	2.8	2.7	32.4
Spill/Bypass	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total River Release	kaf	2.2	2.7	2.8	2.8	2.6	2.8	2.7	7.8	14.1	4.7	2.8	2.7	50.7
Adams Tunnel Flow	kaf	12.5	5.9	25.5	33.8	31.6	33.8	21.6	23.0	19.9	6.6	11.2	20.0	245.4
Evaporation	kaf	0.3	0.1	0.0	0.0	0.0	0.2	0.3	0.5	0.6	0.5	0.4	0.4	3.3
End-Month Contents	kaf	16.9	16.9	16.9	16.9	16.9	16.9	16.9	16.9	16.8	16.8	16.8	16.8	
End-Month Elevation	ft	8366.62	8366.62	8366.62	8366.62	8366.63	8366.62	8366.62	8366.62	8366.62	8366.62	8366.62	8366.62	

Adams Tunnel

		Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Total
Maximum Tunnel Capacity	kaf	15.4	5.9	25.5	33.8	31.6	33.8	32.7	33.8	32.7	15.4	15.4	26.2	302.2
Actual Diversion	kaf	12.5	5.9	25.5	33.8	31.6	33.8	21.6	23.0	19.9	6.6	11.2	20.0	245.4
% Maximum Delivery	%	81	100	100	100	100	100	66	68	61	43	73	76	

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Lake Estes

		Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Total
Big Thompson Inflow	kaf	2.5	1.6	1.1	0.8	0.5	0.6	1.6	7.2	16.0	12.8	8.1	4.1	56.9
Minimum River Release	kaf	3.1	1.5	1.5	1.5	1.4	1.5	2.2	6.9	7.4	7.7	6.9	3.7	45.3
Actual River Release	kaf	2.5	1.5	1.1	0.8	0.5	0.6	1.6	6.0	7.8	7.7	6.7	3.8	40.6
Max Diversion Available	kaf	0.0	0.1	0.0	0.0	0.0	0.0	0.0	1.1	8.6	5.1	1.4	0.4	16.7
Priority Water Diverted	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Skim Water Diverted	kaf	0.0	0.1	0.0	0.0	0.0	0.0	0.0	1.1	8.2	5.1	1.4	0.3	16.2
% Maximum Diversion	%	95	103	0	0	0	0	0	100	95	100	100	81	
Irrigation Demand	kaf	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.9
Irrigation Delivery	kaf	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.9
Total River Release	kaf	2.5	1.5	1.1	0.8	0.5	0.6	1.6	6.0	7.8	7.7	6.7	3.8	40.6

Olympus Tunnel

		Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Total
Maximum Tunnel Capacity	kaf	33.8	32.7	33.8	33.8	31.6	33.8	32.7	33.8	32.7	33.8	33.8	32.7	399.0
Actual Delivery	kaf	12.5	6.1	25.5	33.8	31.5	33.7	21.5	24.0	27.9	11.5	12.5	20.3	260.8
% Maximum Delivery	%	37	19	75	100	100	100	66	71	85	34	37	62	
Inflow to Flatiron	kaf	12.5	7.2	25.5	33.8	31.5	33.7	21.5	24.0	27.9	11.5	12.5	20.3	261.9

Carter Lake

Init Cont: 59.00 kaf **Maximum Cont:** 112.20 kaf **Minimum Cont:** 6.00 kaf
Elev: 5707.7 ft **Elev:** 5759.0 ft **Elev:** 5626.8 ft

		Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Total
Pumped from Flatiron	kaf	0.0	0.0	12.9	21.4	17.9	17.2	6.8	12.0	6.9	0.0	0.0	0.4	95.5
Carter to Flatiron	kaf	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1
Evaporation Loss	kaf	0.2	0.1	0.0	0.0	0.0	0.2	0.3	0.4	0.5	0.4	0.3	0.3	2.7
Seepage Loss	kaf	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.1	1.7
End-Month Targets	kaf	40.0	40.0	83.0	98.0	106.0	106.0	108.0	112.0	108.0	88.0	60.0	49.0	
End-Month Contents	kaf	50.3	46.1	56.1	75.0	90.6	105.1	108.0	112.0	108.0	88.9	64.4	49.0	
End-Month Elevation	ft	5697.75	5692.87	5704.41	5724.32	5738.81	5752.22	5755.16	5758.58	5754.96	5737.76	5713.37	5695.80	
Priority Water Diverted to Carter	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Irrigation Demand	kaf	8.3	1.9	1.8	1.8	1.6	1.9	3.4	7.0	8.8	17.3	22.2	13.5	89.5
Metered Demand	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Windy Gap demand	kaf	0.3	0.9	1.0	0.5	0.6	0.5	0.1	0.4	1.4	1.2	1.8	2.0	10.7
Total Demand	kaf	8.5	2.8	2.7	2.3	2.2	2.4	3.5	7.4	10.2	18.5	24.0	15.4	99.9
Total Delivery	kaf	8.5	2.8	2.7	2.3	2.2	2.4	3.5	7.4	10.2	18.5	24.0	15.4	99.9
% Required Delivery	%	100	100	100	100	100	100	100	100	100	100	100	100	
Shortage	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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Hansen Canal 930

		Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Total
Minimum Flow	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum Flow	kaf	57.2	55.3	57.2	57.2	53.5	57.2	55.3	57.2	55.3	57.2	57.2	55.3	675.1
Actual Flow	kaf	12.5	7.2	12.6	12.4	13.6	16.5	14.7	12.0	21.0	11.5	12.5	19.8	166.3

Dille Tunnel

		Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Total
Big Thompson River Below Lake Estes	kaf	2.5	1.5	1.1	0.8	0.5	0.6	1.6	6.0	7.8	7.7	6.7	3.8	40.6
North Fork Big Thompson River at Drake	kaf	1.1	0.8	0.6	0.5	0.4	0.4	0.4	0.9	1.7	1.5	1.5	1.3	11.1
Dille Skim Water Diverted	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dille Priority Water Diverted	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
water available	kaf	3.6	2.2	1.8	1.3	0.9	1.0	2.0	6.9	9.6	9.2	8.2	5.1	51.8
water diverted	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
% Diverted	%	0	0	0	0	0	0	0	0	0	0	0	0	
Big T @ Canyon Mouth	kaf	3.6	2.2	1.8	1.3	0.9	1.0	2.0	6.9	9.6	9.2	8.2	5.1	51.8

Trifurcation

		Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Total
Release from Flatiron	kaf	12.5	7.2	12.6	12.4	13.6	16.5	14.7	12.0	21.0	11.5	12.5	19.8	166.3
Release to 550 Canal	kaf	6.8	6.7	12.4	12.2	13.5	16.3	14.5	9.4	11.1	2.8	2.5	8.7	116.9
Dille Tunnel	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total release to river	kaf	4.2	0.0	0.0	0.0	0.0	0.0	0.1	0.8	1.2	2.5	7.0	9.3	25.1
Irrigation demand	kaf	4.2	0.0	0.0	0.0	0.0	0.0	0.1	0.8	1.2	2.5	7.0	9.3	25.1
Windy Gap demand	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total requirement	kaf	4.2	0.0	0.0	0.0	0.0	0.0	0.1	0.8	1.2	2.5	7.0	9.3	25.1
Total delivery	kaf	4.2	0.0	0.0	0.0	0.0	0.0	0.1	0.8	1.2	2.5	7.0	9.3	25.1
% Required Delivery	%	100	100	0	0	0	0	100	100	100	100	100	100	
Shortage	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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Hansen Canal 550

		Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Total
Inflow from Flatiron	kaf	6.8	6.7	12.4	12.2	13.5	16.3	14.5	9.4	11.1	2.8	2.5	8.7	116.9
Maximum flow	kaf	23.6	30.8	31.8	31.8	29.7	31.8	30.8	31.8	30.8	31.8	31.8	30.8	367.3
Irrigation demand	kaf	2.0	0.4	0.1	0.1	0.1	0.2	0.3	0.6	0.5	1.1	1.6	1.4	8.4
Irrigation delivery	kaf	1.5	0.4	0.1	0.1	0.1	0.2	0.2	0.6	0.5	1.1	1.6	1.4	7.8
Minimum flow	kaf	1.5	2.6	4.6	4.6	4.3	4.6	1.5	1.5	1.5	1.5	1.5	1.5	31.2
Rels to Horsetooth	kaf	6.8	6.7	12.4	12.2	13.5	16.3	14.5	9.4	11.1	2.8	2.5	8.7	116.9

Horsetooth Reservoir

Init Cont: 96.00 kaf **Maximum Cont:** 157.00 kaf **Minimum Cont:** 13.00 kaf
Elev: 5396.5 ft **Elev:** 5430.0 ft **Elev:** 5316.8 ft

		Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Total
Inflow	kaf	6.8	6.7	12.4	12.2	13.5	16.3	14.5	9.4	11.1	2.8	2.5	8.7	116.9
Total irrigation delivery	kaf	14.5	1.8	1.8	1.9	1.6	2.0	2.7	8.5	10.0	21.2	27.2	13.6	106.8
Evaporation loss	kaf	0.4	0.2	0.0	0.0	0.0	0.3	0.5	0.7	0.9	0.8	0.6	0.5	4.9
Seepage loss	kaf	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	2.4
End-Month Targets	kaf	105.0	127.0	131.0	137.0	142.0	148.0	150.0	150.0	150.0	132.0	109.0	100.0	
End-Month Content	kaf	88.1	92.7	103.1	113.3	125.0	138.9	150.1	150.1	150.0	130.7	105.3	99.9	
End-Month Elevation	ft	5391.19	5394.21	5400.76	5406.79	5413.47	5420.96	5426.69	5426.69	5426.68	5416.60	5402.09	5398.75	
Priority water diverted to Horsetooth	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Irrigation demand	kaf	12.5	0.1	0.0	0.0	0.0	0.0	0.3	4.8	5.4	15.3	20.8	8.9	68.1
Metered Demand	kaf	1.8	1.2	1.4	1.4	1.3	1.4	2.0	3.1	4.1	5.0	4.4	3.4	30.5
Windy Gap demand	kaf	0.2	0.4	0.4	0.6	0.3	0.6	0.3	0.5	0.5	1.0	1.9	1.2	7.9
Total demand	kaf	14.5	1.8	1.8	1.9	1.6	2.0	2.7	8.5	10.0	21.2	27.2	13.6	106.8
Total irrigation	kaf	14.5	1.8	1.8	1.9	1.6	2.0	2.7	8.5	10.0	21.2	27.2	13.6	106.8
% Required Delivery	%	100	100	100	100	100	100	100	100	100	100	100	100	
Shortage	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

CBT Project Summary

		Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Total
Total CBT Delivery	kaf	28.2	3.6	3.3	3.4	3.1	3.5	6.0	16.4	20.1	41.2	56.1	36.6	221.5

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Windy Gap

		Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Total
Pumping	**kaf**	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Losses	**kaf**	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Spill	**kaf**	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delivery	**kaf**	0.5	1.4	1.4	1.1	0.9	1.1	0.4	1.0	1.9	2.2	3.7	3.2	18.8
Account Balance	**kaf**	-0.5	-1.9	-3.3	-4.4	-5.3	-6.3	-6.8	-7.7	-9.7	-11.9	-15.6	-18.8	

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PUMPING AND GENERATION OPERATIONS

Green Mountain Generation

		Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Total
Maximum Generation	gwh	18.600	18.000	18.600	10.200	13.500	9.300	15.600	18.600	18.000	18.600	18.600	18.000	195.600
Generation	gwh	7.000	1.700	1.700	1.600	1.500	1.800	1.000	1.000	1.100	1.200	2.300	3.700	25.600
% Maximum Generation	%	38	9	9	15	11	19	6	6	6	6	12	20	
Average	kwh/af	182	171	169	167	166	163	163	169	183	193	196	195	

Willow Creek Pumping

		Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Total
Maximum Pumping	kaf	0.0	4.0	0.0	0.0	0.0	0.0	23.8	24.6	23.8	24.6	24.6	23.8	149.2
Actual Pumping	kaf	0.0	2.8	0.0	0.0	0.0	0.0	3.7	12.8	5.8	1.8	0.9	0.6	28.4
Pump Energy	gwh	0.000	0.600	0.000	0.000	0.000	0.000	0.800	2.700	1.200	0.400	0.200	0.100	6.000
% Maximum Pumping	%	0	70	0	0	0	0	15	52	24	7	4	3	175
Average	kwh/af	0	213	0	0	0	0	213	213	213	213	213	213	

Lake Granby Pumping

		Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Total
Maximum Pumping	kaf	36.9	35.7	36.9	36.9	34.5	36.9	35.7	36.9	35.7	36.9	36.9	35.7	435.6
Actual Pumping	kaf	11.7	6.1	25.8	34.3	32.3	34.5	19.6	7.8	1.6	1.5	9.0	19.7	203.9
Pump Energy	gwh	1.700	0.900	3.700	5.000	4.700	5.100	2.900	1.200	0.200	0.200	1.300	2.900	29.800
% Maximum Pumping	%	32	17	70	93	94	93	55	21	4	4	24	55	
Average	kwh/af	142	142	143	144	146	148	149	150	146	145	146	147	

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Marys Lake Generation

		Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Total
Adams Tunnel Flow	**kaf**	12.5	5.9	25.5	33.8	31.6	33.8	21.6	23.0	19.9	6.6	11.2	20.0	245.4
Maximum Generation	**gwh**	6.400	0.200	4.100	6.400	6.000	6.400	6.200	6.400	6.200	6.400	6.400	6.200	67.300
Generation	**gwh**	1.900	0.100	3.800	6.400	6.000	6.400	3.800	4.100	3.500	0.300	0.500	3.500	40.300
% Maximum Generation	**%**	15	1	15	19	19	19	17	18	18	5	4	18	
Average	**kwh/af**	155	14	148	189	189	189	174	180	178	51	45	177	

Lake Estes Generation

		Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Total
Adams Tunnel Flow	**kaf**	12.5	5.9	25.5	33.8	31.6	33.8	21.6	23.0	19.9	6.6	11.2	20.0	245.4
Maximum Generation	**gwh**	16.000	15.500	16.000	16.000	15.000	16.000	15.500	16.000	15.500	16.000	16.000	15.500	189.000
Generation	**gwh**	5.700	2.800	12.100	16.000	14.900	16.000	9.900	10.400	9.000	2.300	5.100	9.100	113.300
% Maximum Generation	**%**	36	18	75	100	100	100	64	65	58	15	32	59	
Average	**kwh/af**	458	479	475	473	472	473	458	452	452	357	450	456	

Pole Hill Generation

		Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Total
Olympus Tunnel Flow	**kaf**	33.8	32.7	33.8	33.8	31.6	33.8	32.7	33.8	32.7	33.8	33.8	32.7	399.0
Maximum Generation	**gwh**	25.800	0.800	16.600	25.800	24.100	25.800	25.000	25.800	25.000	25.800	25.800	25.000	271.300
Generation	**gwh**	7.800	0.400	15.100	25.800	24.000	25.700	15.100	17.800	21.000	1.700	5.500	14.900	174.800
% Maximum Generation	**%**	30	42	91	100	100	100	60	69	84	7	22	60	
Average	**kwh/af**	230	11	448	762	760	761	461	526	641	50	164	456	

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Flatiron Units 1 and 2 Generation

		Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Total
Inflow to Flatiron	**kaf**	12.5	7.2	25.5	33.8	31.5	33.7	21.5	24.0	27.9	11.5	12.5	20.3	261.9
Maximum Generation	**gwh**	32.200	31.200	32.200	32.200	30.200	32.200	31.200	32.200	31.200	32.200	32.200	31.200	380.400
Generation	**gwh**	9.500	4.600	23.000	32.100	30.000	32.100	19.500	20.000	25.300	8.300	9.300	16.700	230.400
% Maximum Generation	**%**	29	15	71	100	99	100	63	62	81	26	29	53	
Average	**kwh/af**	758	641	904	952	950	951	906	834	904	725	740	824	

Flatiron Unit 3 Pump/Generation

		Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Total
Maximum Pumping	**kaf**	0.0	0.0	12.9	21.4	17.9	17.2	15.6	15.7	15.4	17.1	19.9	21.2	174.3
Pump from Flatiron	**kaf**	0.0	0.0	12.9	21.4	17.9	17.2	6.8	12.0	6.9	0.0	0.0	0.4	95.5
Pump Energy	**gwh**	0.000	0.000	3.700	6.600	5.900	6.000	2.500	4.400	2.500	0.000	0.000	0.100	31.700
% Maximum Pumping	**%**	0	0	100	100	100	100	44	76	45	0	0	2	
Average	**kwh/af**	0	0	288	306	328	347	360	364	361	0	0	285	
Maximum Turbine release	**kaf**	0.7	21.6	22.4	23.8	23.3	25.9	25.7	26.9	25.8	26.0	24.6	21.6	268.3
Carter to Flatiron	**kaf**	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1
Maximum Generation	**gwh**	0.100	3.900	4.100	4.700	4.900	5.700	5.700	6.000	5.700	5.700	5.100	4.100	55.700
Actual Generation	**gwh**	0.000	0.200	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.200
% Maximum Generation	**%**	0	5	0	0	0	0	0	0	0	0	0	0	
Average	**kwh/af**	0	183	0	0	0	0	0	0	0	0	0	0	

Big Thompson Generation

		Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Total
Total release	**kaf**	4.2	0.2	0.0	0.0	0.0	0.0	0.0	2.0	9.4	7.6	8.4	9.6	41.4
Turbine release	**kaf**	4.2	0.0	0.0	0.0	0.0	0.0	0.0	2.0	9.4	7.6	8.4	9.6	41.2
Wasteway release	**kaf**	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
Maximum Generation	**gwh**	3.800	0.000	0.000	0.000	0.000	0.000	0.000	3.800	3.700	3.800	3.800	3.700	22.600
Generation	**gwh**	0.300	0.000	0.000	0.000	0.000	0.000	0.000	0.100	1.300	0.900	1.100	1.300	5.000
% Maximum Generation	**%**	7	0	0	0	0	0	0	3	35	24	28	36	
Average	**kwh/af**	66	0	0	0	0	0	0	49	136	120	127	137	

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Project Generation

		Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Total
Total Generation	**gwh**	32.200	9.800	55.700	81.900	76.400	82.000	49.300	53.400	61.200	14.800	23.700	49.200	589.600
Total Max Generation	**gwh**	103.000	69.700	91.700	95.400	93.700	95.400	99.200	108.900	105.300	108.600	108.000	103.700	1182.600

Project Pump Energy

		Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Total
Granby	**gwh**	1.700	0.900	3.700	5.000	4.700	5.100	2.900	1.200	0.200	0.200	1.300	2.900	29.800
Willow Creek	**gwh**	0.000	0.600	0.000	0.000	0.000	0.000	0.800	2.700	1.200	0.400	0.200	0.100	6.000
Flatiron Unit 3	**gwh**	0.000	0.000	3.700	6.600	5.900	6.000	2.500	4.400	2.500	0.000	0.000	0.100	31.700
Total Pump Energy	**gwh**	1.700	1.500	7.400	11.500	10.600	11.100	6.200	8.300	3.900	0.600	1.500	3.100	67.400

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HYDROLOGY OPERATIONS

Dillon Reservoir

		Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Total
Dillon Inflow	kaf	7.9	7.4	6.1	5.2	4.5	6.7	18.3	74.2	107.9	52.4	26.8	14.6	332.0
DL to GM Gain	kaf	5.4	5.0	4.3	3.8	3.7	7.0	15.8	52.1	73.6	38.0	18.4	9.5	236.6

Green Mountain Reservoir

Init Cont: 109.00 kaf Maximum Cont: 154.60 kaf Minimum Cont: 8.00 kaf
Elev: 7926.4 ft Elev: 7950.4 ft Elev: 7804.7 ft

		Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Total
Undepleted Inflow	kaf	13.5	12.4	10.5	9.0	8.2	13.7	34.2	128.0	185.4	91.8	45.8	24.2	576.7
Depletion	kaf	1.1	1.1	-0.1	-0.7	-1.1	0.5	11.7	55.4	50.6	24.2	13.9	6.9	163.5
Depleted Inflow	kaf	12.4	11.2	10.6	9.7	9.3	13.2	22.6	72.6	134.9	67.6	31.8	17.2	413.1
Turbine Release	kaf	42.0	13.7	13.1	12.2	11.8	17.3	17.2	42.2	82.3	71.0	59.3	25.9	408.0
Spill/Waste	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total River Release	cfs	682	230	213	199	205	282	289	687	1383	1154	965	435	
Min Release	cfs	60	60	60	60	60	60	100	100	100	100	100	100	
Total River Release	kaf	42.0	13.7	13.1	12.2	11.8	17.3	17.2	42.2	82.3	71.0	59.3	25.9	408.0
Evaporation	kaf	0.2	0.1	0.0	0.0	0.0	0.1	0.2	0.3	0.6	0.7	0.5	0.4	3.1
End-Month Targets	kaf	79.0	76.5	74.0	71.5	69.0	70.0	70.0	100.0	152.0	148.0	120.0	111.0	
End-Month Contents	kaf	79.0	76.5	74.0	71.5	69.0	64.8	70.0	100.0	152.0	148.0	120.0	111.0	
End-Month Elevation	ft	7906.44	7904.53	7902.57	7900.56	7898.49	7894.90	7899.33	7921.04	7949.22	7947.31	7932.87	7927.75	

Willow Creek Reservoir

Init Cont: 9.00 kaf Maximum Cont: 10.20 kaf Minimum Cont: 7.20 kaf
Elev: 8124.6 ft Elev: 8128.8 ft Elev: 8116.9 ft

		Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Total
Native Inflow	kaf	1.3	1.2	1.0	0.9	0.9	2.4	10.4	43.6	28.9	6.7	3.0	1.9	102.2
Minimum Release	kaf	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	4.8
Spill/Bypass	kaf	0.0	0.0	0.0	0.0	0.0	0.3	0.0	15.8	8.8	0.0	0.0	0.0	24.9
Total River Release	kaf	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	4.8
Pumped to Granby	kaf	0.0	3.2	0.0	0.0	0.0	0.0	12.5	24.6	22.2	6.2	2.4	1.4	72.5
Evaporation	kaf	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.7
End-Month Targets	kaf	9.2	7.2	7.2	7.2	7.2	7.2	8.0	8.0	8.0	8.0	8.0	8.0	
End-Month Contents	kaf	9.8	7.4	8.0	8.5	8.9	10.6	8.0	10.7	8.0	8.0	8.0	8.0	
End-Month Elevation	ft	8127.58	8117.97	8120.62	8122.47	8124.30	8130.12	8120.48	8130.53	8120.48	8120.48	8120.48	8120.48	

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Granby Reservoir

		Init Cont:	500.00	kaf	Maximum Cont:	539.80	kaf	Minimum Cont:	76.50	kaf
		Elev:	8274.4	ft	Elev:	8280.0	ft	Elev:	8186.9	ft

		Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Total
Native Inflow	kaf	3.3	2.5	2.0	1.7	1.6	3.6	13.2	41.5	61.0	22.8	9.5	5.8	168.5
Release from Shadow Mtn	kaf	2.2	3.1	2.8	2.8	2.6	2.8	11.6	37.8	63.0	12.8	2.9	2.7	147.1
Pump from Windy Gap	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pump from Willow Creek	kaf	0.0	3.2	0.0	0.0	0.0	0.0	12.5	24.6	22.2	6.2	2.4	1.4	72.5
Total Inflow	kaf	5.4	8.8	4.8	4.5	4.2	6.3	37.3	103.9	146.2	41.7	14.9	9.9	387.9
Minimum River Release	kaf	1.2	1.2	1.2	1.2	1.2	1.2	1.2	4.6	4.5	4.6	4.6	4.5	31.2
Spill/Bypass	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	112.2	35.1	3.9	0.0	151.2
Total River Release	kaf	1.2	1.2	1.2	1.2	1.2	1.2	1.2	4.6	4.5	4.6	4.6	4.5	31.2
Pumped to Shadow Mtn	kaf	10.4	5.9	25.6	34.3	32.1	28.6	4.1	0.0	0.0	0.5	6.3	21.8	169.6
Evaporation	kaf	1.6	0.7	0.0	0.0	0.0	0.9	1.5	2.4	3.2	2.9	2.3	2.1	17.6
Seepage loss	kaf	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	3.6
End-Month Contents	kaf	492.0	492.8	470.4	439.1	409.8	385.1	415.3	511.9	537.9	536.2	533.7	514.9	
End-Month Elevation	ft	8273.28	8273.39	8270.16	8265.50	8260.96	8257.01	8261.83	8276.11	8279.74	8279.51	8279.16	8276.54	

Shadow Mountain Reservoir

		Init Cont:	17.00	kaf	Maximum Cont:	18.40	kaf	Minimum Cont:	16.60	kaf
		Elev:	8366.6	ft	Elev:	8367.0	ft	Elev:	8366.0	ft

		Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Total
Native Inflow	kaf	4.3	3.4	2.7	2.3	2.1	4.7	17.5	54.2	74.6	28.4	12.6	7.6	214.4
Pumped from Granby	kaf	10.4	5.9	25.6	34.3	32.1	28.6	4.1	0.0	0.0	0.5	6.3	21.8	169.6
Total Inflow	kaf	14.7	9.3	28.3	36.6	34.2	33.3	21.6	54.2	74.6	28.9	18.9	29.4	384.0
Minimum River Release	kaf	2.2	2.7	2.8	2.8	2.6	2.8	2.7	2.8	2.7	2.8	2.8	2.7	32.4
Spill/Bypass	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total River Release	kaf	2.2	3.1	2.8	2.8	2.6	2.8	11.6	37.8	63.0	12.8	2.9	2.7	147.1
Adams Tunnel Flow	kaf	12.2	5.9	25.5	33.8	31.6	30.3	9.6	15.7	10.7	15.4	15.4	26.2	232.3
Evaporation	kaf	0.3	0.1	0.0	0.0	0.0	0.2	0.3	0.5	0.6	0.5	0.4	0.4	3.3
End-Month Contents	kaf	16.9	16.9	16.9	16.9	16.9	16.9	16.9	16.9	16.9	16.8	16.8	16.8	
End-Month Elevation	ft	8366.62	8366.62	8366.62	8366.62	8366.63	8366.62	8366.62	8366.62	8366.62	8366.62	8366.62	8366.62	

Adams Tunnel

		Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Total
Maximum Tunnel Capacity	kaf	15.4	5.9	25.5	33.8	31.6	33.8	32.7	33.8	32.7	15.4	15.4	26.2	302.2
Actual Diversion	kaf	12.2	5.9	25.5	33.8	31.6	30.3	9.6	15.7	10.7	15.4	15.4	26.2	232.3
% Maximum Delivery	%	80	100	100	100	100	90	29	46	33	100	100	100	

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Lake Estes

		Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Total
Big Thompson Inflow	kaf	3.1	2.1	1.3	0.9	0.8	1.5	4.1	20.9	40.7	20.2	8.1	4.1	107.8
Minimum River Release	kaf	3.1	1.5	1.5	1.5	1.4	1.5	2.2	6.9	7.4	7.7	6.9	3.7	45.3
Actual River Release	kaf	3.0	1.5	1.3	0.9	0.8	1.4	2.7	7.5	18.5	11.1	6.7	4.1	59.5
Max Diversion Available	kaf	0.2	0.6	0.0	0.0	0.0	0.2	1.9	13.9	33.2	12.6	1.4	0.4	64.4
Priority Water Diverted	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	14.1	0.0	0.0	0.0	16.7
Skim Water Diverted	kaf	0.2	0.6	0.0	0.0	0.0	0.1	1.4	10.8	8.1	9.1	1.4	0.1	31.8
% Maximum Diversion	%	100	101	97	0	0	79	75	96	67	72	100	16	
Irrigation Demand	kaf	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.7
Irrigation Delivery	kaf	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.7
Total River Release	kaf	3.0	1.5	1.3	0.9	0.8	1.4	2.7	7.5	18.5	11.1	6.7	4.1	59.5

Olympus Tunnel

		Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Total
Maximum Tunnel Capacity	kaf	33.8	32.7	33.8	33.8	31.6	33.8	32.7	33.8	32.7	33.8	33.8	32.7	399.0
Actual Delivery	kaf	12.4	6.5	25.5	33.8	31.6	30.4	11.0	29.0	32.7	24.4	16.7	26.2	280.2
% Maximum Delivery	%	37	20	75	100	100	90	33	86	100	72	49	80	
Inflow to Flatiron	kaf	12.4	7.6	25.5	33.8	31.6	30.4	11.0	29.0	32.7	25.9	17.6	26.2	283.7

Carter Lake

Init Cont: 59.00 kaf **Maximum Cont:** 112.20 kaf **Minimum Cont:** 6.00 kaf
Elev: 5707.7 ft **Elev:** 5759.0 ft **Elev:** 5626.8 ft

		Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Total
Pumped from Flatiron	kaf	0.0	0.0	12.7	21.0	17.5	11.7	5.1	13.2	8.7	12.6	5.1	0.0	107.6
Carter to Flatiron	kaf	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.9	0.0	3.5
Evaporation Loss	kaf	0.2	0.1	0.0	0.0	0.0	0.2	0.3	0.4	0.5	0.5	0.4	0.3	2.9
Seepage Loss	kaf	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.1	1.8
End-Month Targets	kaf	40.0	40.0	83.0	98.0	105.0	103.0	105.0	112.0	112.0	112.0	100.0	74.0	
End-Month Contents	kaf	52.3	48.7	58.9	77.9	93.5	103.0	105.0	112.0	112.0	108.2	93.5	80.9	
End-Month Elevation	ft	5700.13	5695.93	5707.51	5727.18	5741.58	5750.75	5752.51	5758.62	5758.55	5755.09	5741.81	5730.15	
Priority Water Diverted to Carter	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Irrigation Demand	kaf	6.2	1.4	1.3	1.4	1.2	1.4	2.6	5.2	6.6	13.0	16.7	10.1	67.1
Metered Demand	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Windy Gap demand	kaf	0.3	0.9	1.0	0.5	0.6	0.5	0.1	0.4	1.4	1.2	1.8	2.0	10.7
Total Demand	kaf	6.5	2.3	2.3	1.9	1.8	1.9	2.7	5.7	8.0	14.2	18.5	12.1	77.9
Total Delivery	kaf	6.5	2.3	2.3	1.9	1.8	1.9	2.7	5.7	8.0	14.2	18.5	12.1	77.9
% Required Delivery	%	100	100	100	100	100	100	100	100	100	100	100	100	
Shortage	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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Hansen Canal 930

		Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Total
Minimum Flow	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum Flow	kaf	57.2	55.3	57.2	57.2	53.5	57.2	55.3	57.2	55.3	57.2	57.2	55.3	675.1
Actual Flow	kaf	12.4	7.6	12.8	12.8	14.0	18.6	5.9	15.7	24.0	13.3	12.4	26.2	175.7

Dille Tunnel

		Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Total
Big Thompson River Below Lake Estes	kaf	3.0	1.5	1.3	0.9	0.8	1.4	2.7	7.5	18.5	11.1	6.7	4.1	59.5
North Fork Big Thompson River at Drake	kaf	1.1	0.8	0.7	0.5	0.5	0.6	1.0	4.8	8.9	4.9	2.4	1.4	27.6
Dille Skim Water Diverted	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dille Priority Water Diverted	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
water available	kaf	4.0	2.3	2.0	1.5	1.3	2.0	3.7	12.3	27.4	16.1	9.1	5.4	87.1
water diverted	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
% Diverted	%	0	0	0	0	0	0	0	0	0	0	0	0	
Big T @ Canyon Mouth	kaf	4.0	2.3	2.0	1.5	1.3	2.0	3.7	12.3	27.4	16.1	9.1	5.4	87.1

Trifurcation

		Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Total
Release from Flatiron	kaf	12.4	7.6	12.8	12.8	14.0	18.6	5.9	15.7	24.0	13.3	12.4	26.2	175.7
Release to 550 Canal	kaf	7.9	6.7	12.7	12.7	13.9	18.4	4.3	3.8	14.6	1.5	4.6	18.1	119.2
Dille Tunnel	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total release to river	kaf	3.1	0.0	0.0	0.0	0.0	0.0	0.1	0.6	0.9	1.9	5.3	7.0	18.9
Irrigation demand	kaf	3.1	0.0	0.0	0.0	0.0	0.0	0.1	0.6	0.9	1.9	5.3	7.0	18.9
Windy Gap demand	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total requirement	kaf	3.1	0.0	0.0	0.0	0.0	0.0	0.1	0.6	0.9	1.9	5.3	7.0	18.9
Total delivery	kaf	3.1	0.0	0.0	0.0	0.0	0.0	0.1	0.6	0.9	1.9	5.3	7.0	18.9
% Required Delivery	%	100	100	0	0	0	0	100	100	100	100	100	100	
Shortage	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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Hansen Canal 550

		Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Total
Inflow from Flatiron	kaf	7.9	6.7	12.7	12.7	13.9	18.4	4.3	3.8	14.6	1.5	4.6	18.1	119.2
Maximum flow	kaf	23.6	30.8	31.8	31.8	29.7	31.8	30.8	31.8	30.8	31.8	31.8	30.8	367.3
Irrigation demand	kaf	1.5	0.3	0.1	0.1	0.1	0.1	0.2	0.5	0.4	0.8	1.2	1.1	6.4
Irrigation delivery	kaf	1.1	0.3	0.1	0.1	0.1	0.1	0.1	0.5	0.4	0.8	1.2	1.1	5.9
Minimum flow	kaf	1.5	2.6	4.6	4.6	4.3	4.6	1.5	1.5	1.5	1.5	1.5	1.5	31.2
Rels to Horsetooth	kaf	7.9	6.7	12.7	12.7	13.9	18.4	4.3	3.8	14.6	1.5	4.6	18.1	119.2

Horsetooth Reservoir

Init Cont: 96.00 kaf **Maximum Cont:** 157.00 kaf **Minimum Cont:** 13.00 kaf
Elev: 5396.5 ft **Elev:** 5430.0 ft **Elev:** 5316.8 ft

		Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Total
Inflow	kaf	7.9	6.7	12.7	12.7	13.9	18.4	4.3	3.8	14.6	1.5	4.6	18.1	119.2
Total irrigation delivery	kaf	11.0	1.4	1.5	1.6	1.3	1.7	2.1	6.5	7.7	16.2	20.9	10.5	82.4
Evaporation loss	kaf	0.4	0.2	0.0	0.0	0.0	0.3	0.5	0.7	0.9	0.8	0.6	0.5	4.9
Seepage loss	kaf	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	2.4
End-Month Targets	kaf	105.0	127.0	131.0	137.0	142.0	148.0	150.0	145.0	147.0	150.0	140.0	133.0	
End-Month Content	kaf	92.8	97.8	108.8	119.7	132.2	148.5	150.1	146.5	152.4	136.8	119.7	126.7	
End-Month Elevation	ft	5394.26	5397.43	5404.17	5410.50	5417.39	5425.89	5426.69	5424.88	5427.86	5419.85	5410.52	5414.39	
Priority water diverted to Horsetooth	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	13.0	0.0	0.0	0.0	15.3
Irrigation demand	kaf	9.4	0.1	0.0	0.0	0.0	0.0	0.3	3.6	4.0	11.5	15.6	6.7	51.2
Metered Demand	kaf	1.3	0.9	1.0	1.0	1.0	1.1	1.5	2.3	3.1	3.8	3.3	2.6	22.9
Windy Gap demand	kaf	0.2	0.4	0.4	0.6	0.3	0.6	0.3	0.5	0.5	1.0	1.9	1.2	7.9
Total demand	kaf	11.0	1.4	1.5	1.6	1.3	1.7	2.1	6.5	7.7	16.2	20.9	10.5	82.4
Total irrigation	kaf	11.0	1.4	1.5	1.6	1.3	1.7	2.1	6.5	7.7	16.2	20.9	10.5	82.4
% Required Delivery	%	100	100	100	100	100	100	100	100	100	100	100	100	
Shortage	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

CBT Project Summary

		Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Total
Total CBT Delivery	kaf	21.2	2.7	2.5	2.5	2.3	2.7	4.5	12.3	15.1	30.9	42.1	27.5	166.3

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U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION

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Windy Gap

		Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Total
Pumping	**kaf**	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Losses	**kaf**	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Spill	**kaf**	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-9.6	-2.2	-2.2	0.0	-14.0
Total Delivery	**kaf**	0.5	1.4	1.4	1.1	0.9	1.1	0.4	1.0	1.9	2.2	3.7	3.2	18.8
Account Balance	**kaf**	-0.5	-1.9	-3.3	-4.4	-5.3	-6.3	-6.8	-7.7	-0.1	-0.1	-1.6	-4.7	

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PUMPING AND GENERATION OPERATIONS

Green Mountain Generation

		Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Total
Maximum Generation	**gwh**	18.600	18.000	18.600	10.200	13.500	9.300	15.600	18.600	18.000	18.600	18.600	18.000	195.600
Generation	**gwh**	7.600	2.300	2.200	2.000	2.000	2.800	2.800	7.200	16.400	15.000	12.100	5.000	77.400
% Maximum Generation	**%**	41	13	12	20	14	30	18	39	91	81	65	28	
Average	**kwh/af**	182	171	169	167	166	163	163	171	200	212	204	195	

Willow Creek Pumping

		Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Total
Maximum Pumping	**kaf**	0.0	4.0	0.0	0.0	0.0	0.0	23.8	24.6	23.8	24.6	24.6	23.8	149.2
Actual Pumping	**kaf**	0.0	3.2	0.0	0.0	0.0	0.0	12.5	24.6	22.2	6.2	2.4	1.4	72.5
Pump Energy	**gwh**	0.000	0.700	0.000	0.000	0.000	0.000	2.700	5.200	4.700	1.300	0.500	0.300	15.400
% Maximum Pumping	**%**	0	80	0	0	0	0	53	100	93	25	10	6	367
Average	**kwh/af**	0	213	0	0	0	0	213	213	213	213	213	213	

Lake Granby Pumping

		Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Total
Maximum Pumping	**kaf**	36.9	35.7	36.9	36.9	34.5	36.9	35.7	36.9	35.7	36.9	36.9	35.7	435.6
Actual Pumping	**kaf**	10.4	5.9	25.6	34.3	32.1	28.6	4.1	0.0	0.0	0.5	6.3	21.8	169.6
Pump Energy	**gwh**	1.500	0.800	3.700	4.900	4.700	4.200	0.600	0.000	0.000	0.100	0.900	3.100	24.500
% Maximum Pumping	**%**	28	16	69	93	93	78	12	0	0	1	17	61	
Average	**kwh/af**	142	142	143	144	146	148	148	0	0	140	140	141	

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Marys Lake Generation

		Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Total
Adams Tunnel Flow	kaf	12.2	5.9	25.5	33.8	31.6	30.3	9.6	15.7	10.7	15.4	15.4	26.2	232.3
Maximum Generation	gwh	6.400	0.200	4.100	6.400	6.000	6.400	6.200	6.400	6.200	6.400	6.400	6.200	67.300
Generation	gwh	1.900	0.100	3.800	6.400	6.000	5.600	1.000	2.300	0.200	2.600	2.600	4.800	37.300
% Maximum Generation	%	16	1	15	19	19	18	11	15	2	17	17	19	
Average	kwh/af	158	14	148	189	189	183	107	148	18	169	169	185	

Lake Estes Generation

		Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Total
Adams Tunnel Flow	kaf	12.2	5.9	25.5	33.8	31.6	30.3	9.6	15.7	10.7	15.4	15.4	26.2	232.3
Maximum Generation	gwh	16.000	15.500	16.000	16.000	15.000	16.000	15.500	16.000	15.500	16.000	16.000	15.500	189.000
Generation	gwh	5.600	2.800	12.100	16.000	15.000	14.300	3.900	6.800	4.700	7.300	7.300	12.400	108.200
% Maximum Generation	%	35	18	76	100	100	89	25	43	30	46	46	80	
Average	kwh/af	458	479	475	473	473	471	406	435	437	475	476	474	

Pole Hill Generation

		Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Total
Olympus Tunnel Flow	kaf	33.8	32.7	33.8	33.8	31.6	33.8	32.7	33.8	32.7	33.8	33.8	32.7	399.0
Maximum Generation	gwh	25.800	0.800	16.600	25.800	24.100	25.800	25.000	25.800	25.000	25.800	25.800	25.000	271.300
Generation	gwh	7.800	0.400	15.100	25.800	24.100	22.400	4.200	22.000	25.000	17.900	11.500	19.600	195.800
% Maximum Generation	%	30	44	91	100	100	87	17	85	100	70	45	78	
Average	kwh/af	231	11	448	762	761	663	127	649	763	530	341	597	

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Flatiron Units 1 and 2 Generation

		Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Total
Inflow to Flatiron	**kaf**	12.4	7.6	25.5	33.8	31.6	30.4	11.0	29.0	32.7	25.9	17.6	26.2	283.7
Maximum Generation	**gwh**	32.200	31.200	32.200	32.200	30.200	32.200	31.200	32.200	31.200	32.200	32.200	31.200	380.400
Generation	**gwh**	9.400	4.800	23.000	32.200	30.000	28.600	8.700	25.800	31.200	21.000	13.200	24.000	251.900
% Maximum Generation	**%**	29	15	71	100	99	89	28	80	100	65	41	77	
Average	**kwh/af**	758	626	905	952	951	942	792	892	953	812	749	916	

Flatiron Unit 3 Pump/Generation

		Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Total
Maximum Pumping	**kaf**	0.0	0.0	12.7	21.0	17.5	17.0	15.9	15.9	15.1	15.8	17.0	6.4	154.3
Pump from Flatiron	**kaf**	0.0	0.0	12.7	21.0	17.5	11.7	5.1	13.2	8.7	12.6	5.1	0.0	107.6
Pump Energy	**gwh**	0.000	0.000	3.700	6.500	5.800	4.100	1.800	4.800	3.200	4.600	1.800	0.000	36.300
% Maximum Pumping	**%**	0	0	100	100	100	69	32	83	58	80	30	0	
Average	**kwh/af**	0	0	291	310	332	348	356	362	366	363	346	0	
Maximum Turbine release	**kaf**	0.7	21.8	22.6	24.0	23.5	26.1	25.6	26.8	26.2	26.8	26.1	9.0	259.2
Carter to Flatiron	**kaf**	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.9	0.0	3.5
Maximum Generation	**gwh**	0.100	4.000	4.200	4.800	5.000	5.700	5.600	5.900	5.800	5.900	5.700	2.000	54.700
Actual Generation	**gwh**	0.000	0.200	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.300	0.200	0.000	0.700
% Maximum Generation	**%**	0	5	0	0	0	0	0	0	0	6	3	0	
Average	**kwh/af**	0	186	0	0	0	0	0	0	0	222	218	0	

Big Thompson Generation

		Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Total
Total release	**kaf**	3.3	0.6	0.0	0.0	0.0	0.1	1.5	11.5	9.0	11.0	6.6	7.0	50.6
Turbine release	**kaf**	3.3	0.0	0.0	0.0	0.0	0.0	0.0	11.5	9.0	11.0	6.6	7.0	48.4
Wasteway release	**kaf**	0.0	0.6	0.0	0.0	0.0	0.1	1.5	0.0	0.0	0.0	0.0	0.0	2.2
Maximum Generation	**gwh**	3.800	0.000	0.000	0.000	0.000	0.000	0.000	3.800	3.700	3.800	3.800	3.700	22.600
Generation	**gwh**	0.100	0.000	0.000	0.000	0.000	0.000	0.000	1.600	1.200	1.500	0.700	0.800	5.900
% Maximum Generation	**%**	1	0	0	0	0	0	0	43	34	40	19	22	
Average	**kwh/af**	17	0	0	0	0	0	0	143	138	141	112	118	

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Project Generation

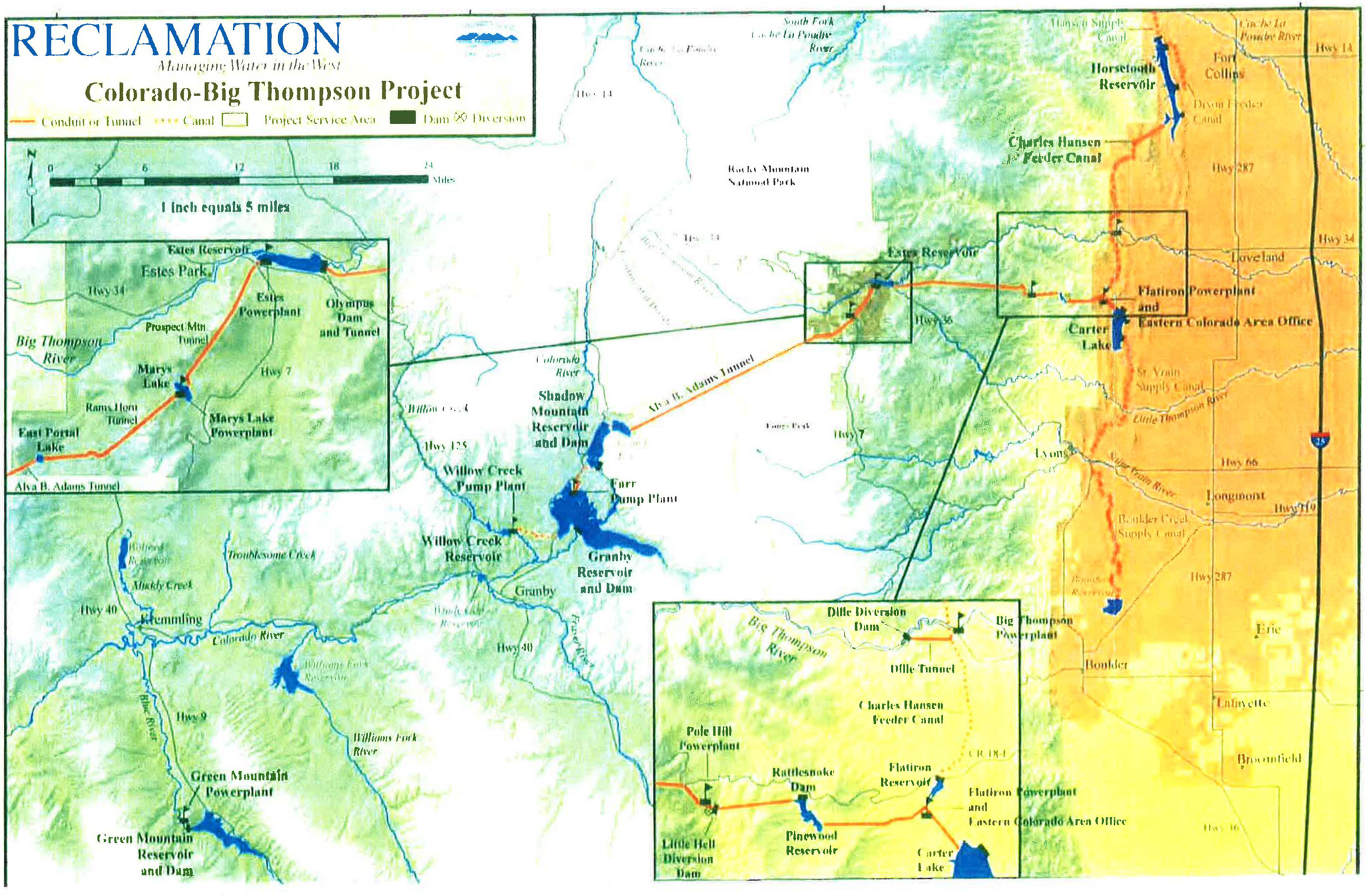
		Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Total
Total Generation	gwh	32.400	10.600	56.300	82.400	76.900	73.700	20.600	65.800	78.700	65.800	47.600	66.700	677.500
Total Max Generation	gwh	103.000	69.800	91.800	95.500	93.800	95.500	99.100	108.800	105.400	108.800	108.600	101.500	1181.600

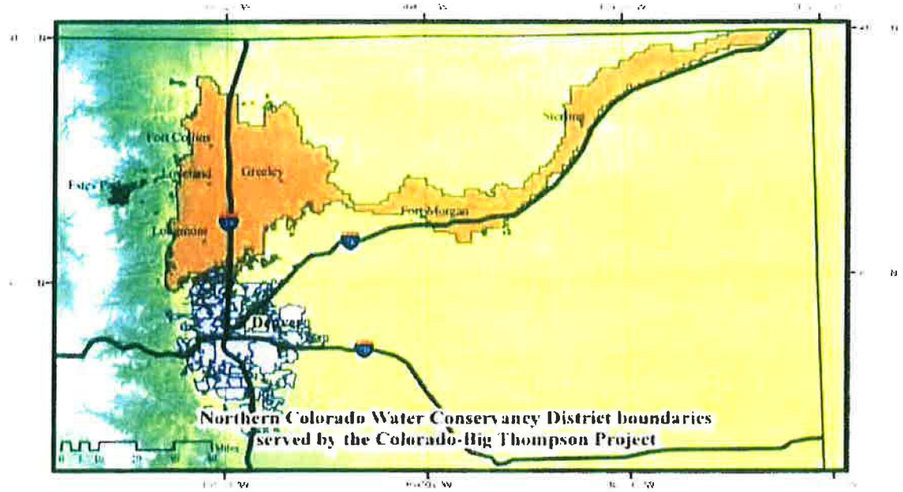
Project Pump Energy

		Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Total
Granby	gwh	1.500	0.800	3.700	4.900	4.700	4.200	0.600	0.000	0.000	0.100	0.900	3.100	24.500
Willow Creek	gwh	0.000	0.700	0.000	0.000	0.000	0.000	2.700	5.200	4.700	1.300	0.500	0.300	15.400
Flatiron Unit 3	gwh	0.000	0.000	3.700	6.500	5.800	4.100	1.800	4.800	3.200	4.600	1.800	0.000	36.300
Total Pump Energy	gwh	1.500	1.500	7.300	11.500	10.500	8.300	5.100	10.000	7.900	5.900	3.200	3.400	76.100

APPENDIX C - EXHIBITS

Exhibit 1


RECLAMATION
Managing Water in the West
Colorado-Big Thompson Project
Conduit or Tunnel
Canal
Project Service Area
Dam
Diversion
1 inch equals 5 miles
Miles
Estes Reservoir
Estes Park
Hwy 34
Estes Powerplant
Olympus Dam and Tunnel
Prospect Mtn Tunnel
Big Thompson River
Marys Lake
Hwy 7
Rams Horn Tunnel
Marys Lake Powerplant
East Portal Lake
Alva B. Adams Tunnel
Rocky Mountain National Park
Hwy 34
Hwy 36
Estes Reservoir
Alva B. Adams Tunnel
Colorado River
Shadow Mountain Reservoir and Dam
Willow Creek
Hwy 125
Willow Creek Pump Plant
Farr Pump Plant
Willow Creek Reservoir
Granby Reservoir and Dam
Granby
Hwy 40
Hwy 7
Fraser River
Troublesome Creek
Muddy Creek
Hwy 40
Kremmling
Colorado River
Williams Fork Reservoir
Blue River
Hwy 9
Williams Fork River
Green Mountain Powerplant
Green Mountain Reservoir and Dam
Horsetooth Reservoir
Fort Collins
Hwy 14
Charles Hansen Feeder Canal
Hwy 287
Loveland
Hwy 34
Flatiron Powerplant and Eastern Colorado Area Office
Carter Lake
St. Vrain Supply Canal
Little Thompson River
Lyons
Hwy 66
Longmont
Boulder Creek Supply Canal
Hwy 287
Erie
Boulder
Lafayette
Broomfield
Hwy 36
Dille Diversion Dam
Big Thompson Powerplant
Dille Tunnel
Big Thompson River
Charles Hansen Feeder Canal
Pole Hill Powerplant
Rattlesnake Dam
Flatiron Reservoir
Flatiron Powerplant and Eastern Colorado Area Office
Little Hell Diversion Dam
Pinewood Reservoir
Carter Lake



Colorado-Big Thompson Facts

- A trans-mountain, trans-basin water diversion, storage, and delivery project
- Signed into law by President Roosevelt in 1937
- Construction period 1938-1952
- Ten major reservoirs (Green Mountain, Willow Creek, Granby, Shadow Mountain, Marys Lake, Estes, Pinewood, Carter, Flatiron and Horsetooth)
- Twenty major dams and dikes
- Twenty-two tunnels, canals and other conduits covering about 130 miles
- Six hydroelectric powerplants (Green Mountain, Marys, Estes, Pole Hill, Flatiron, Big Thompson)
- Water right allows for diversion of up to 310,000 acre-feet of water a year
- Average annual diversion over life of project is 260,000 acre-feet
- Water falls over 2000 feet from Continental Divide to Colorado's eastern Plains, providing for hydroelectric power generation.
- Together, all six powerplants generate approximately 759 million kilo-Watt hours of electricity a year—enough to power 58,300 American homes for a year
- The C-BT provides water to 29 cities and towns, including 620,000 irrigated acres and a population of 725,000 people

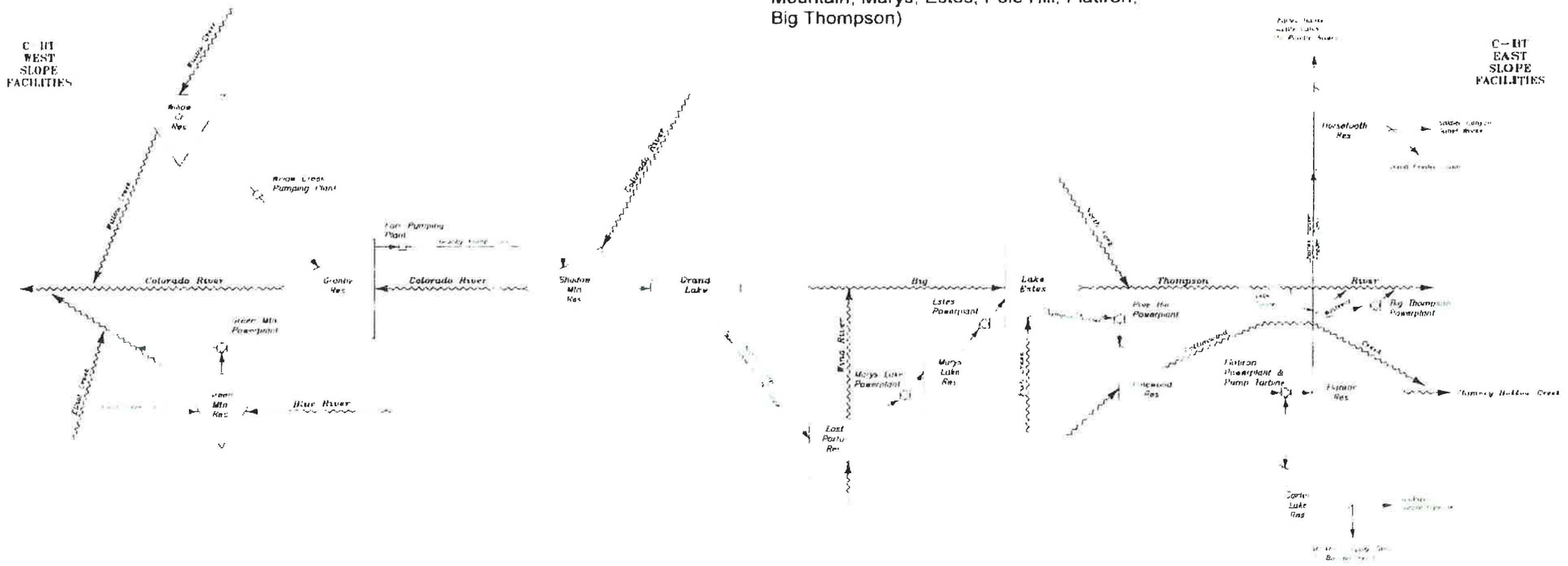


Exhibit 2

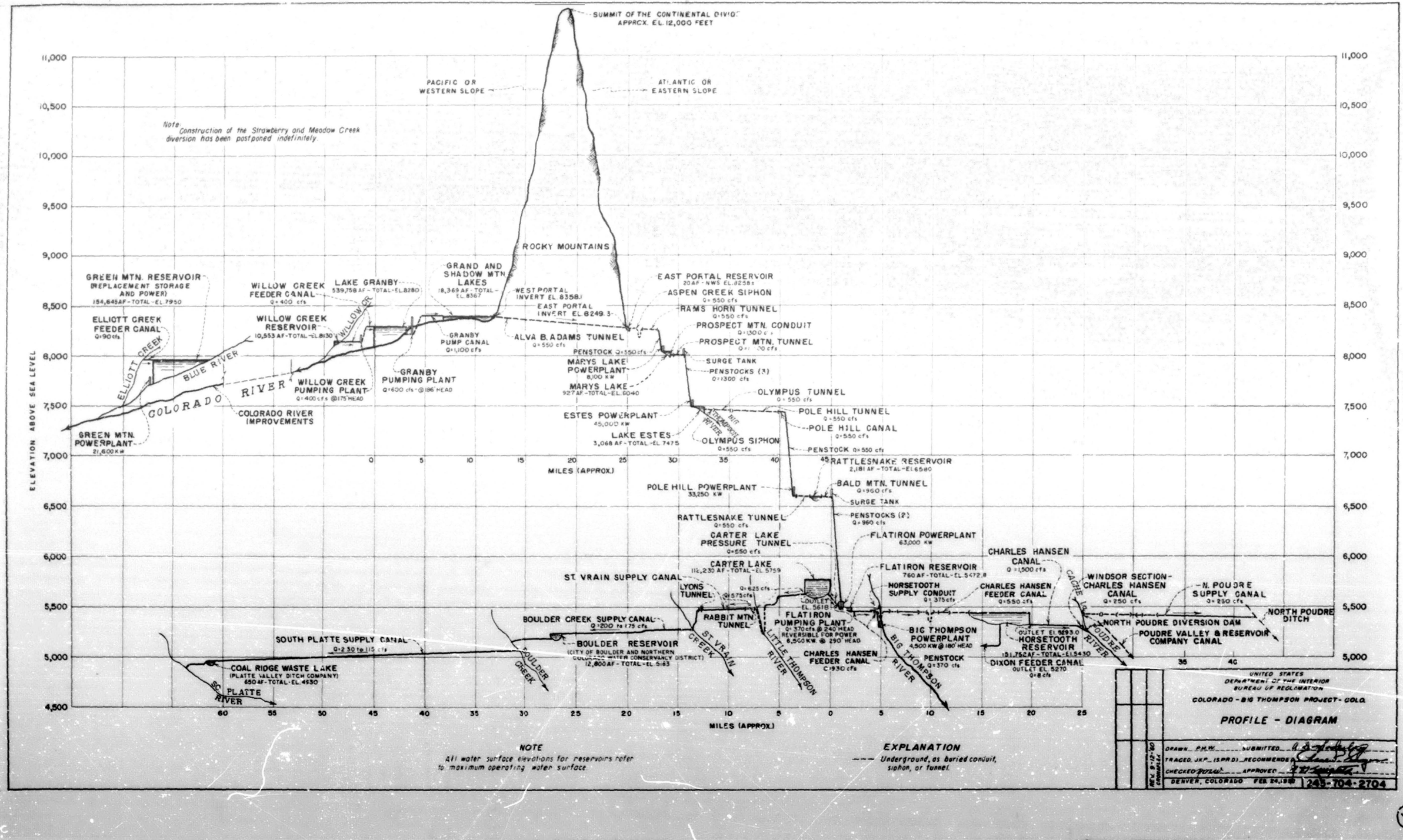

SUMMIT OF THE CONTINENTAL DIVIDE
APPROX. EL. 12,000 FEET
PACIFIC OR WESTERN SLOPE
ATLANTIC OR EASTERN SLOPE
Note
Construction of the Strawberry and Meadow Creek diversion has been postponed indefinitely.
ROCKY MOUNTAINS
GREEN MTN. RESERVOIR
(REPLACEMENT STORAGE AND POWER)
154,645AF-TOTAL-EL.7950
ELLIOTT CREEK FEEDER CANAL
Q=90cfs
ELLIOTT CREEK
BLUE RIVER
COLORADO RIVER
GREEN MTN. POWERPLANT
21,600KW
WILLOW CREEK FEEDER CANAL
Q=400 cfs
LAKE GRANBY
539,758AF-TOTAL-EL.8280
WILLOW CREEK RESERVOIR
10,553AF-TOTAL-EL.8130
WILLOW CR.
WILLOW CREEK PUMPING PLANT
Q=400cfs @175'HEAD
COLORADO RIVER IMPROVEMENTS
GRANBY PUMPING PLANT
Q=600 cfs-@186'HEAD
GRAND AND SHADOW MTN. LAKES
18,369AF-TOTAL-EL.8367
GRANBY PUMP CANAL
Q=1,100 cfs
WEST PORTAL INVERT EL. 8358.1
EAST PORTAL INVERT EL. 8249.3
ALVA B. ADAMS TUNNEL
Q=550 cfs
EAST PORTAL RESERVOIR
20AF-NWS EL.8258±
ASPEN CREEK SIPHON
Q=550 cfs
RAMS HORN TUNNEL
Q=550 cfs
PROSPECT MTN. CONDUIT
Q=1300 cfs
PROSPECT MTN. TUNNEL
Q=1300 cfs
PENSTOCK Q=550cfs
MARYS LAKE POWERPLANT
8,100 KW
MARYS LAKE
927AF-TOTAL-EL.8040
SURGE TANK
PENSTOCKS (3)
Q=1300 cfs
ESTES POWERPLANT
45,000 KW
LAKE ESTES
3,068 AF-TOTAL-EL.7475
THOMPSON RIVER
BIG
OLYMPUS TUNNEL
Q=550 cfs
POLE HILL TUNNEL
Q=550 cfs
POLE HILL CANAL
Q=550 cfs
OLYMPUS SIPHON
Q=550 cfs
PENSTOCK Q=550 cfs
RATTLESNAKE RESERVOIR
2,181AF-TOTAL-EL.6580
BALD MTN. TUNNEL
Q=960 cfs
SURGE TANK
PENSTOCKS (2)
Q=960 cfs
POLE HILL POWERPLANT
33,250 KW
RATTLESNAKE TUNNEL
Q=550 cfs
CARTER LAKE PRESSURE TUNNEL
Q=550 cfs
FLATIRON POWERPLANT
63,000 KW
CHARLES HANSEN CANAL
Q=1,500 cfs
CARTER LAKE
112,230 AF-TOTAL-EL.5759
FLATIRON RESERVOIR
760 AF-TOTAL-EL.5472.8
ST VRAIN SUPPLY CANAL
LYONS TUNNEL
Q=575cfs
Q=625 cfs
OUTLET EL.5618
NORSETOOTH SUPPLY CONDUIT
Q=375cfs
CHARLES HANSEN FEEDER CANAL
Q=550 cfs
WINDSOR SECTION-CHARLES HANSEN CANAL
Q=250 cfs
N. POUDRE SUPPLY CANAL
Q=250 cfs
NORTH POUDRE DITCH
CACHE LA POUDRE RIVER
NORTH POUDRE DIVERSION DAM
POUDRE VALLEY & RESERVOIR COMPANY CANAL
BOULDER CREEK SUPPLY CANAL
Q=200 to 175 cfs
RABBIT MTN. TUNNEL
FLATIRON PUMPING PLANT
Q=370 cfs @ 240 HEAD
REVERSIBLE FOR POWER
6,500 KW. @ 290' HEAD
LITTLE THOMPSON RIVER
BIG THOMPSON POWERPLANT
4,500 KW @ 180' HEAD
PENSTOCK
Q=370 cfs
BIG THOMPSON RIVER
OUTLET EL.5293.0
HORSETOOTH RESERVOIR
151,752AF-TOTAL-EL.5430
DIXON FEEDER CANAL
OUTLET EL.5270
Q=8 cfs
SOUTH PLATTE SUPPLY CANAL
Q=230 to 115 cfs
BOULDER RESERVOIR
(CITY OF BOULDER AND NORTHERN COLORADO WATER CONSERVANCY DISTRICT)
12,800AF-TOTAL-EL.5183
BOULDER CREEK
ST VRAIN CREEK
COAL RIDGE WASTE LAKE
(PLATTE VALLEY DITCH COMPANY)
650AF-TOTAL-EL.4630
SO. PLATTE RIVER
ELEVATION ABOVE SEA LEVEL
MILES (APPROX.)
NOTE
All water surface elevations for reservoirs refer to maximum operating water surface.
EXPLANATION
Underground, as buried conduit, siphon, or tunnel.
UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
COLORADO-BIG THOMPSON PROJECT-COLO.
PROFILE - DIAGRAM
DRAWN P.H.W.
SUBMITTED
TRACED J.K.P. (S.P.R.D.)
RECOMMENDED
CHECKED P.H.W.
APPROVED
DENVER, COLORADO FEB. 24, 1950
245-704-2704

Exhibit 3

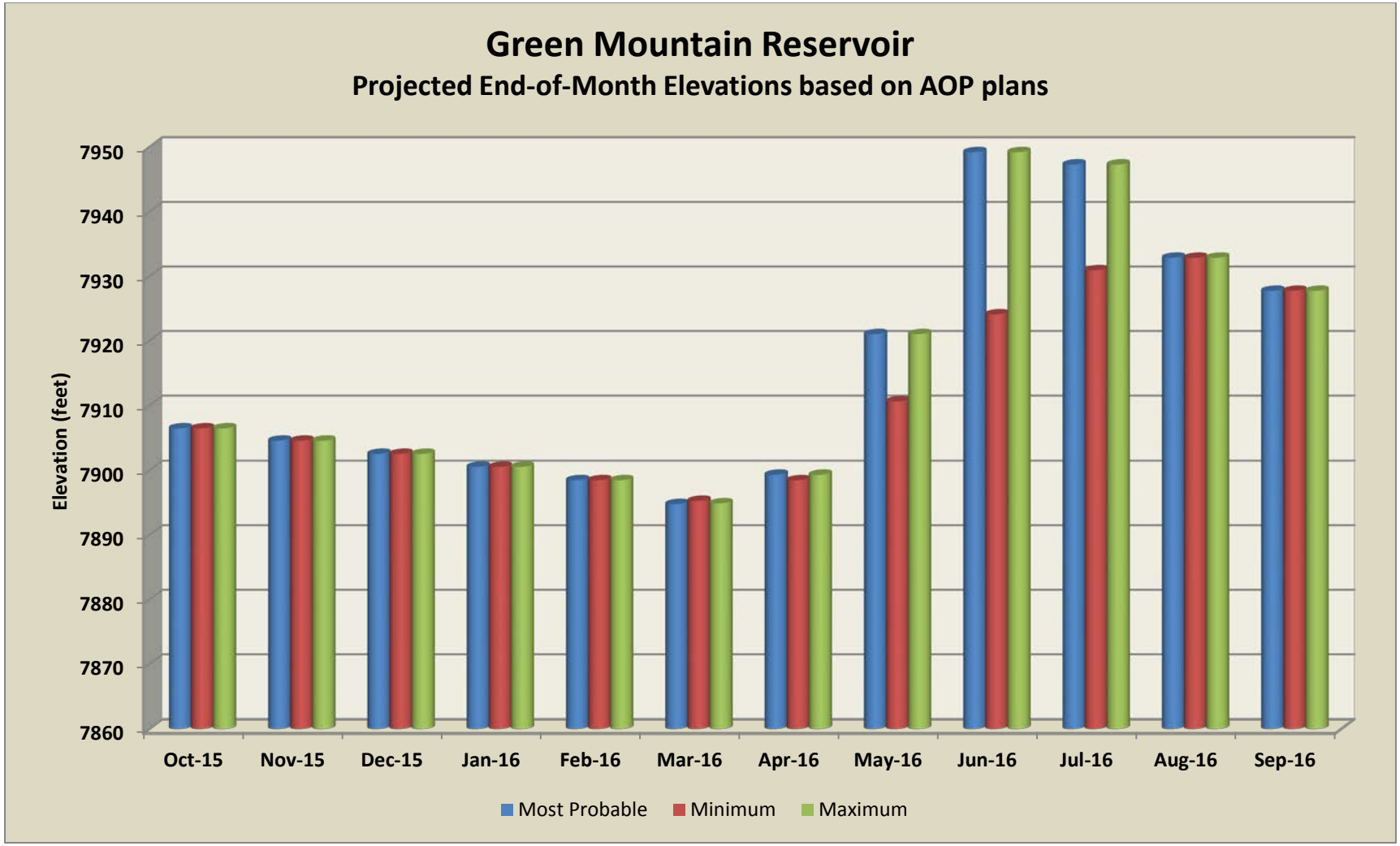

Green Mountain Reservoir
Projected End-of-Month Elevations based on AOP plans
Elevation (feet)
7950
7940
7930
7920
7910
7900
7890
7880
7870
7860
Oct-15
Nov-15
Dec-15
Jan-16
Feb-16
Mar-16
Apr-16
May-16
Jun-16
Jul-16
Aug-16
Sep-16
Most Probable
Minimum
Maximum

Exhibit 4

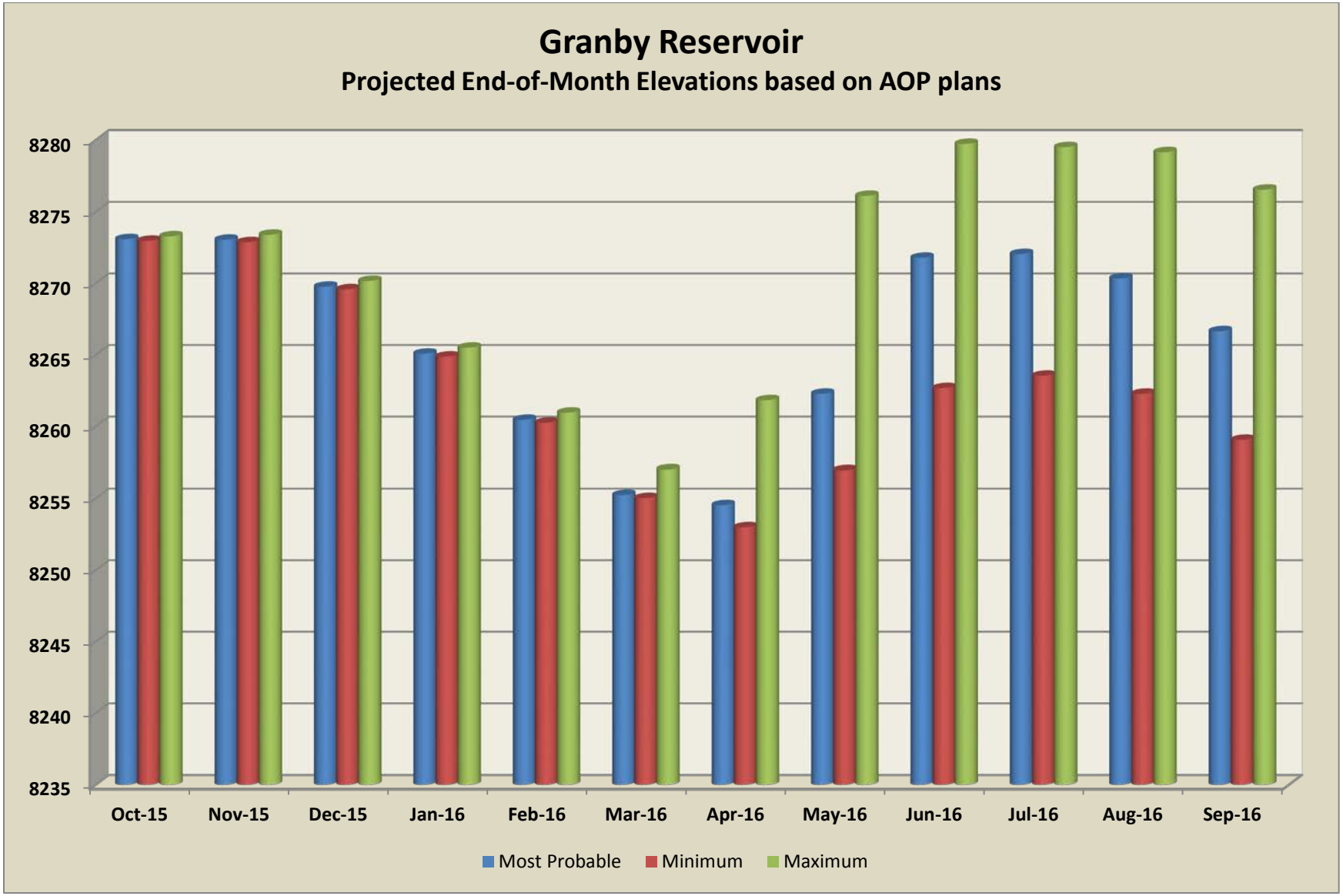

Granby Reservoir
Projected End-of-Month Elevations based on AOP plans
8280
8275
8270
8265
8260
8255
8250
8245
8240
8235
Oct-15
Nov-15
Dec-15
Jan-16
Feb-16
Mar-16
Apr-16
May-16
Jun-16
Jul-16
Aug-16
Sep-16
Most Probable
Minimum
Maximum

Exhibit 5

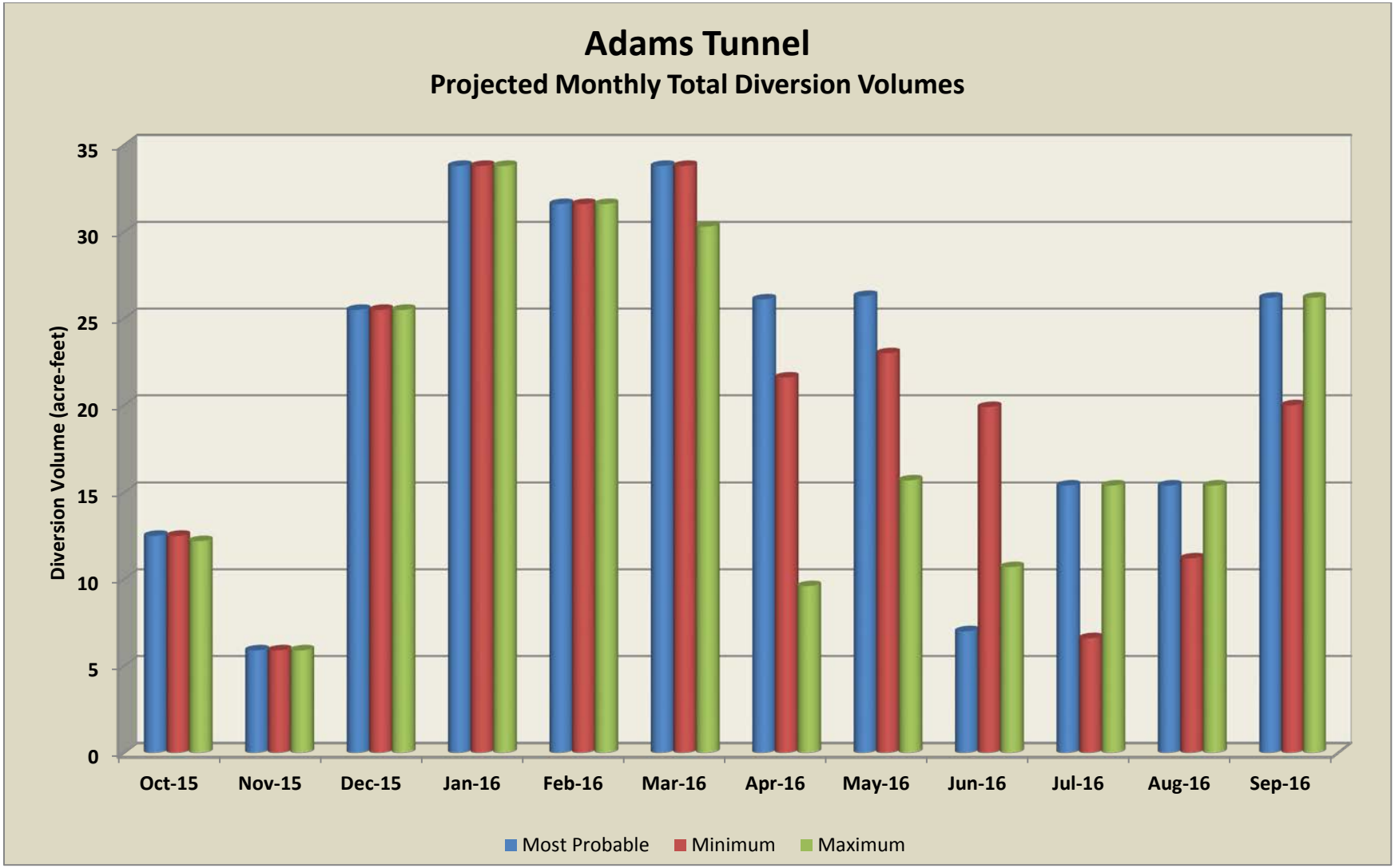

Adams Tunnel
Projected Monthly Total Diversion Volumes
Diversion Volume (acre-feet)
35
30
25
20
15
10
5
0
Oct-15
Nov-15
Dec-15
Jan-16
Feb-16
Mar-16
Apr-16
May-16
Jun-16
Jul-16
Aug-16
Sep-16
Most Probable
Minimum
Maximum

Exhibit 6

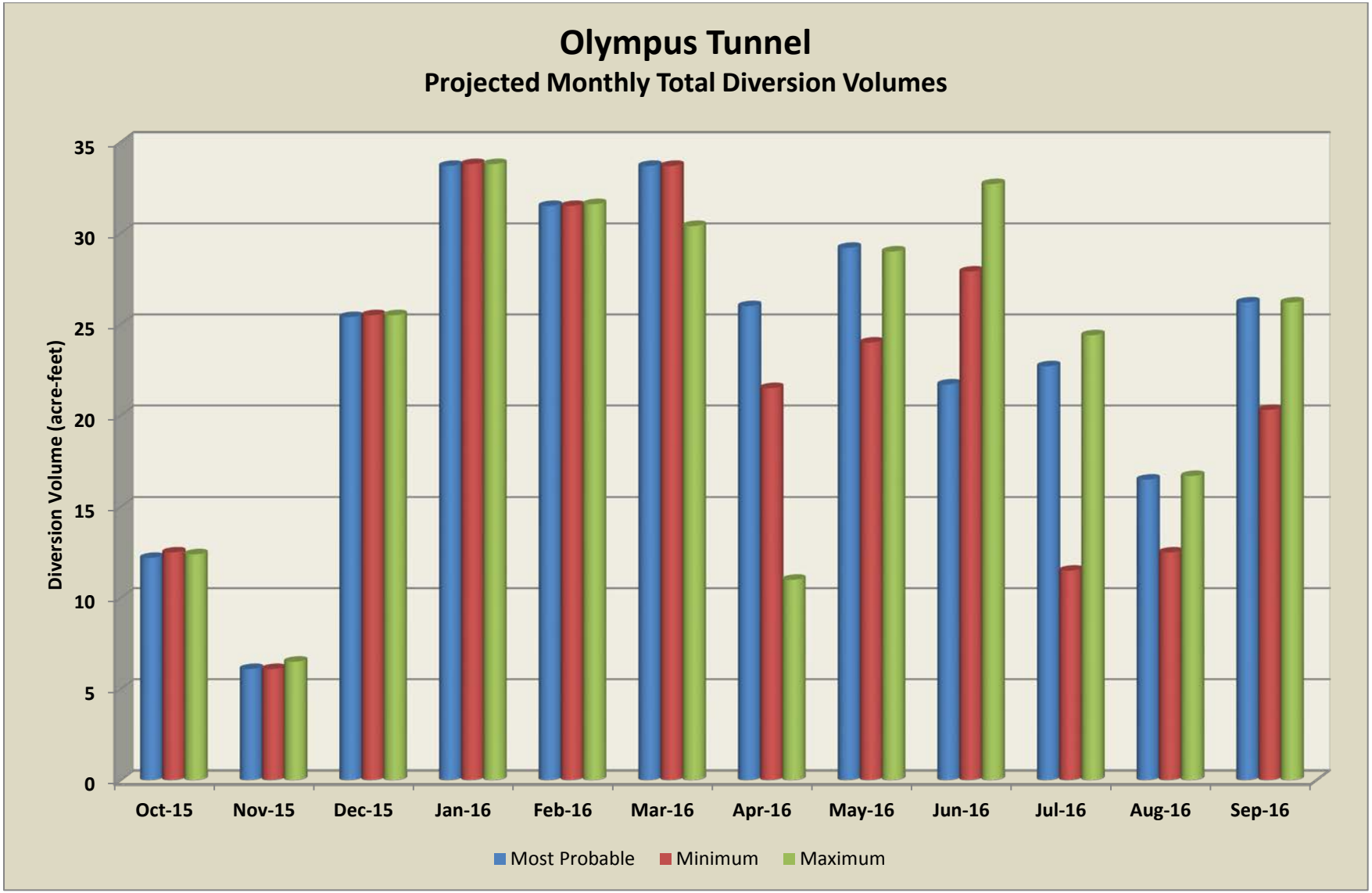

Olympus Tunnel
Projected Monthly Total Diversion Volumes
Diversion Volume (acre-feet)
35
30
25
20
15
10
5
0
Oct-15
Nov-15
Dec-15
Jan-16
Feb-16
Mar-16
Apr-16
May-16
Jun-16
Jul-16
Aug-16
Sep-16
Most Probable
Minimum
Maximum

Exhibit 7

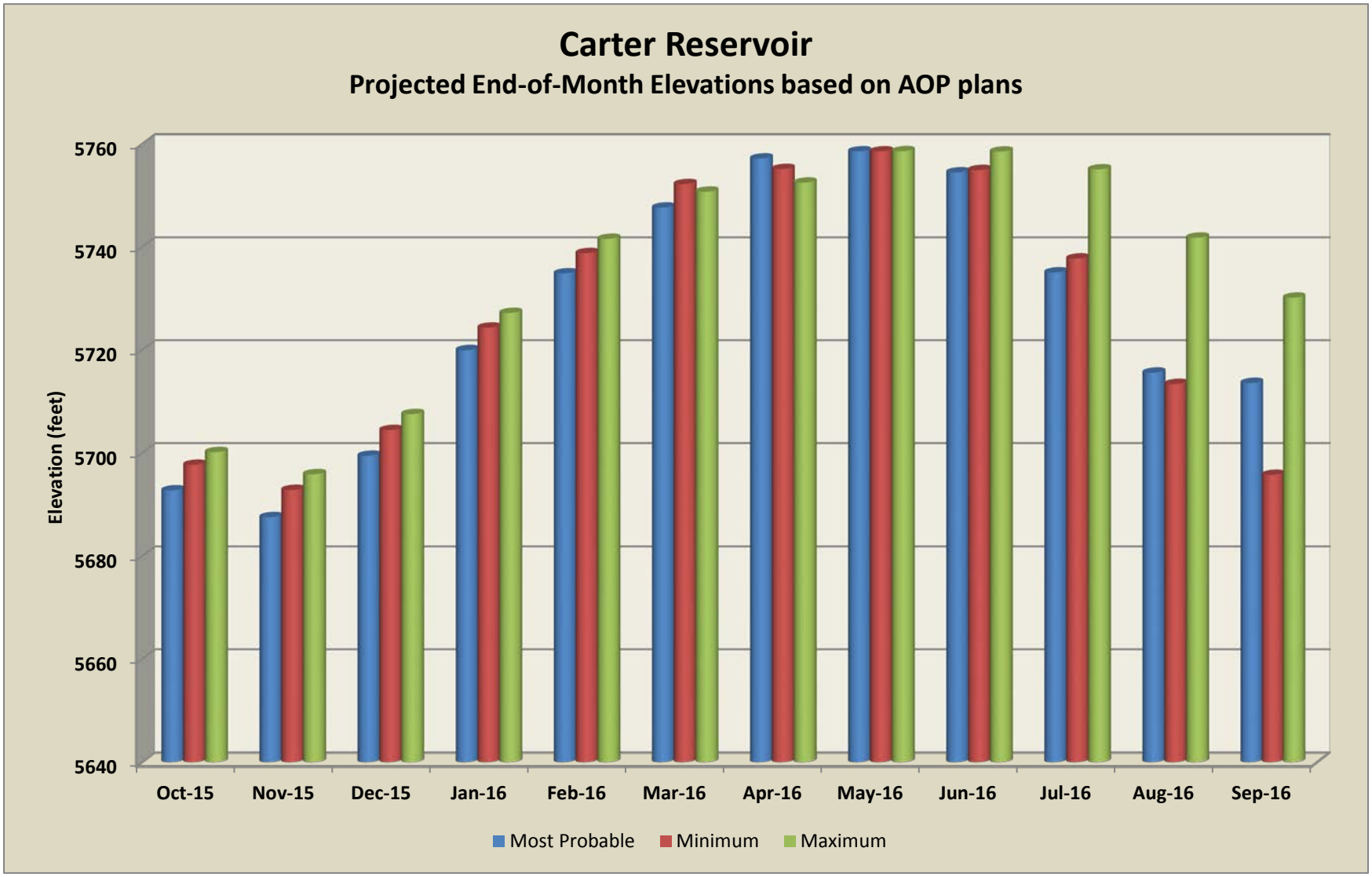

Carter Reservoir
Projected End-of-Month Elevations based on AOP plans
Elevation (feet)
5760
5740
5720
5700
5680
5660
5640
Oct-15
Nov-15
Dec-15
Jan-16
Feb-16
Mar-16
Apr-16
May-16
Jun-16
Jul-16
Aug-16
Sep-16
Most Probable
Minimum
Maximum

Exhibit 8

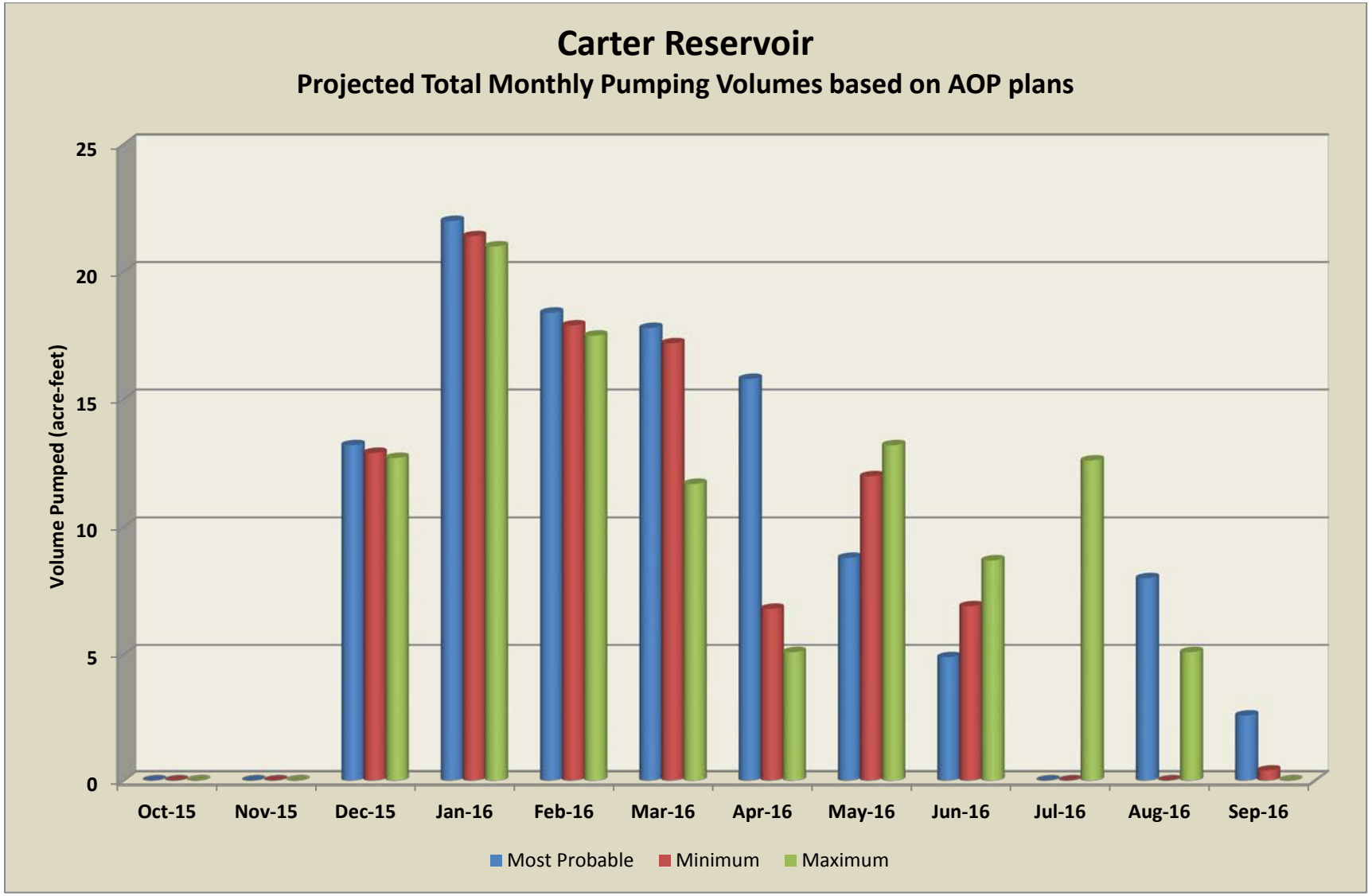

Carter Reservoir
Projected Total Monthly Pumping Volumes based on AOP plans
Volume Pumped (acre-feet)
25
20
15
10
5
0
Oct-15
Nov-15
Dec-15
Jan-16
Feb-16
Mar-16
Apr-16
May-16
Jun-16
Jul-16
Aug-16
Sep-16
Most Probable
Minimum
Maximum

Exhibit 9

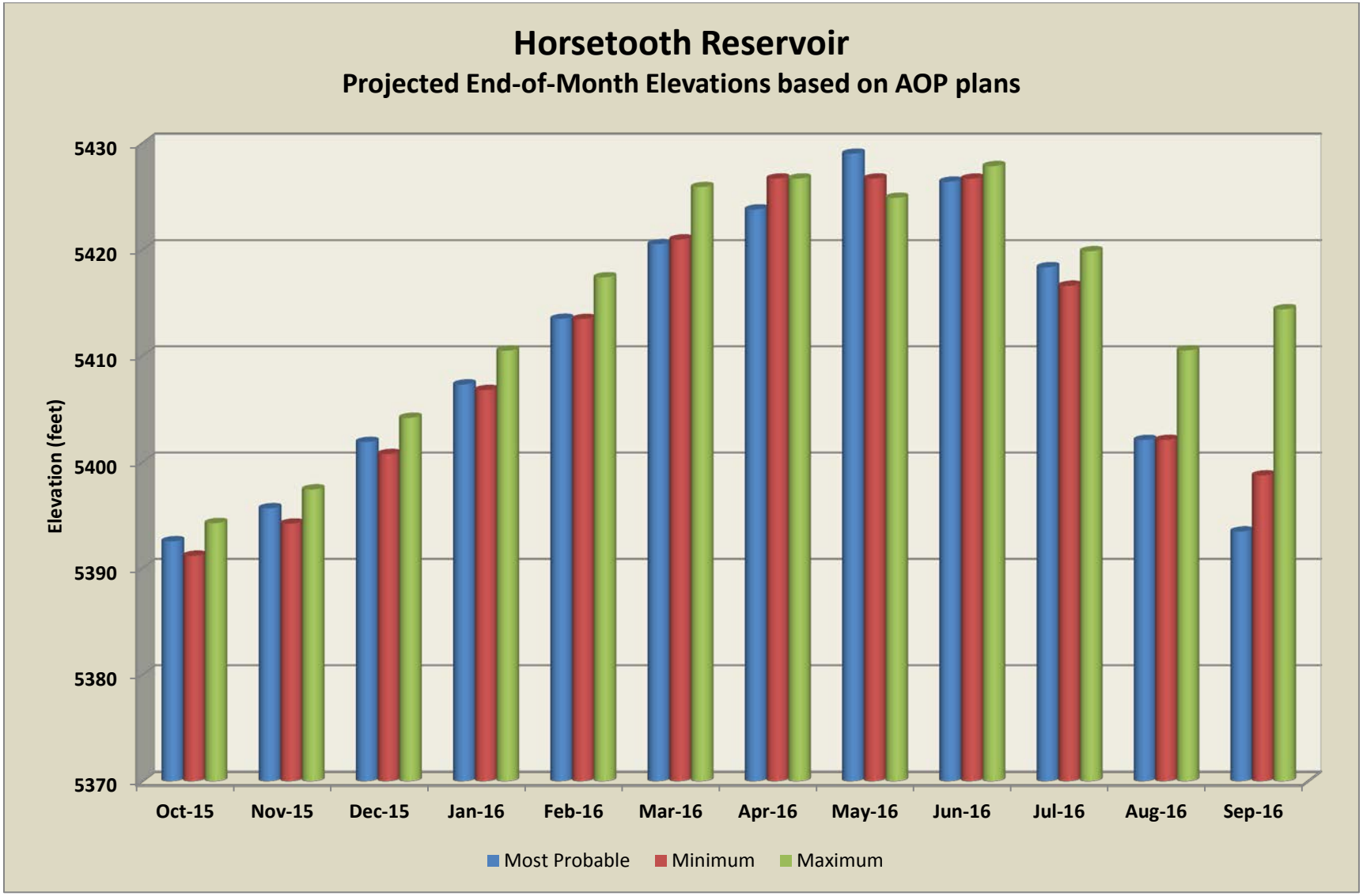

Horsetooth Reservoir
Projected End-of-Month Elevations based on AOP plans
Elevation (feet)
5430
5420
5410
5400
5390
5380
5370
Oct-15
Nov-15
Dec-15
Jan-16
Feb-16
Mar-16
Apr-16
May-16
Jun-16
Jul-16
Aug-16
Sep-16
Most Probable
Minimum
Maximum

Exhibit 10

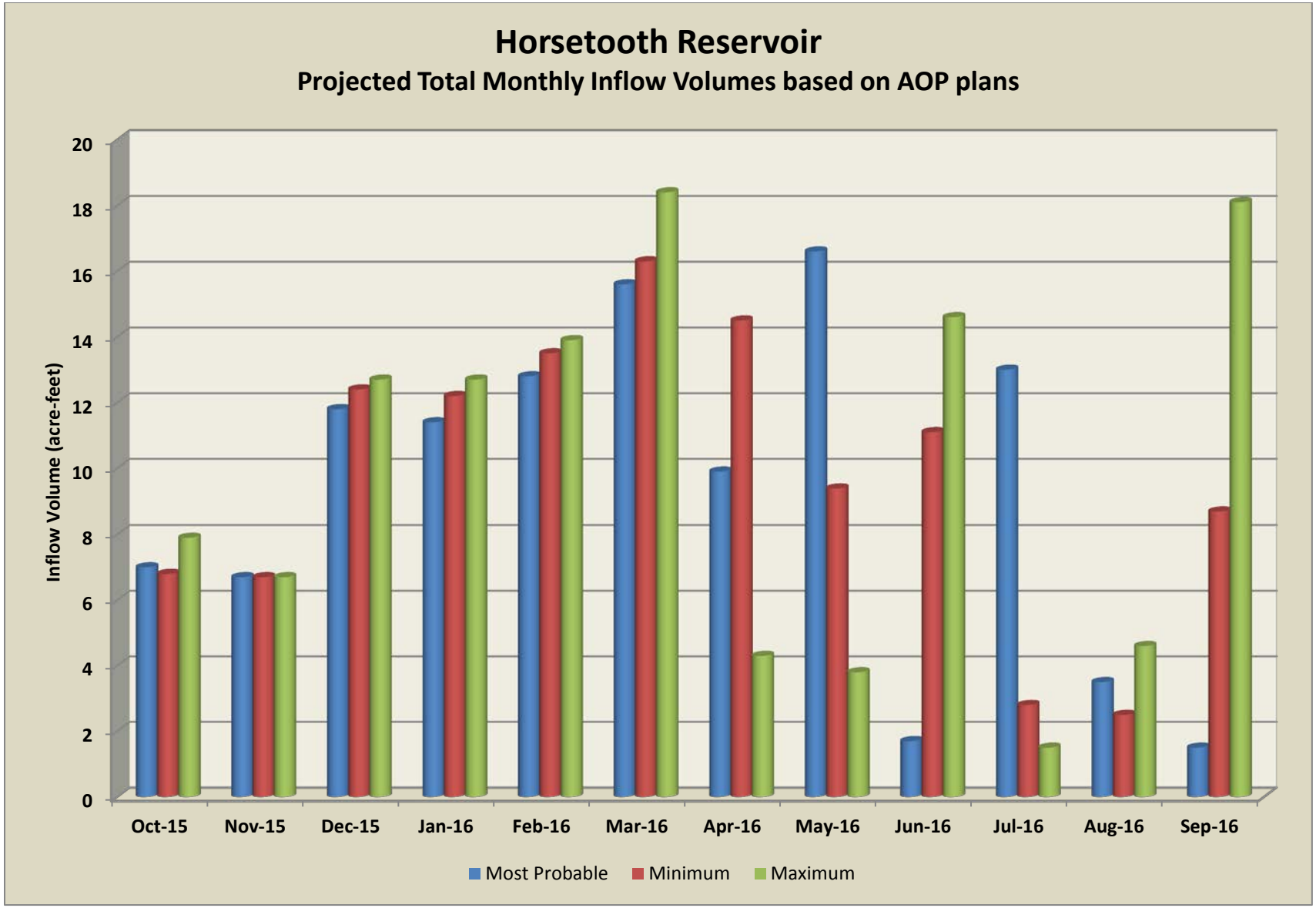
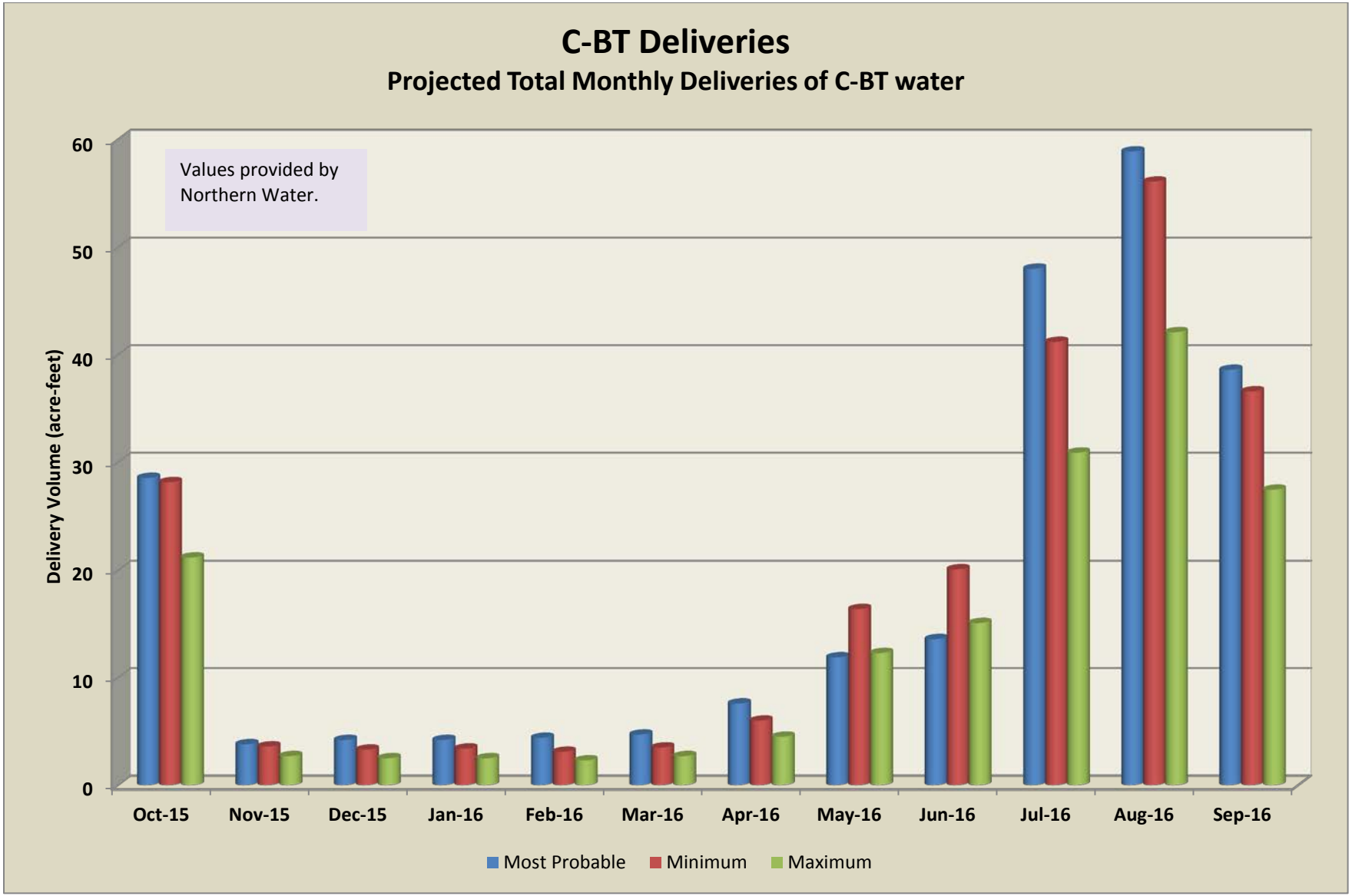

Horsetooth Reservoir
Projected Total Monthly Inflow Volumes based on AOP plans
Inflow Volume (acre-feet)
0
2
4
6
8
10
12
14
16
18
20
Oct-15
Nov-15
Dec-15
Jan-16
Feb-16
Mar-16
Apr-16
May-16
Jun-16
Jul-16
Aug-16
Sep-16
Most Probable
Minimum
Maximum

Exhibit 11


C-BT Deliveries
Projected Total Monthly Deliveries of C-BT water
Values provided by Northern Water.
Delivery Volume (acre-feet)
60
50
40
30
20
10
0
Oct-15
Nov-15
Dec-15
Jan-16
Feb-16
Mar-16
Apr-16
May-16
Jun-16
Jul-16
Aug-16
Sep-16
Most Probable
Minimum
Maximum

* * * * * * * * *

This is the sixty-fourth annual report for the Pick-Sloan Missouri Basin Program Western Division System power operations. For the purpose of this report, the System also includes the Yellowtail Powerplant Units 1 and 2 and the generating facilities of the Fryingpan-Arkansas Project. The purpose of the report is to inform interested parties of the generation and pump energy requirements of the hydropower system. The report consists of two parts: One part describes the actual generation and pumping operations for WY 2015 and the other part presents the plan of generation and pumping operations for WY 2016.

An update on the System generation and pumping operations is included in the "Water Supply and Utilization" report, which is issued monthly.

WESTERN DIVISION SYSTEM POWER OPERATIONS
GENERATION AND PUMP ENERGY

TABLE OF CONTENTS

WESTERN DIVISION POWER SYSTEM
WATER YEAR 2015 – GENERATION AND PUMP ENERGY SUMMARY

Power generation for the Colorado-Big Thompson (C-BT) and the Fryingpan-Arkansas (FryArk) projects, as well as most of the Western Division System during WY 2015 was lower than average. A few plants, such as Mount Elbert and Green Mountain produce above-average power generation during the water year. But in general, power generation declined during WY 2015, mainly due to the fact that there was a surplus of water at most locations. In the case of the C-BT, demands for water were low most of the year, and that translated into lower diversions and less power generation.

The C-BT powerplants produced an accumulated gross generation total of 411 gigawatt-hours (GWh) of electricity representing only 69 percent of its 30-year average. Meanwhile, the gross generation produced by the entire Western Division Power Systems was 2,262.7 GWh or 86 percent of the 30-year average. Gross generation includes one-half of the Yellowtail generation. Total generation is the gross generation less the energy used for pumping at Farr Plant, Willow Creek Pump, Flatiron Unit 3 and the two Mount Elbert units. The System total generation was 1,833 GWh. The average for a water year is 2,400.7 GWh. The total System load includes firm energy deliveries, C-BT use-energy, support-energy, plant station service, and an estimate of transmission-system losses.

The Western Division Power System boundaries are illustrated in Exhibit 1. Table 1 in this section includes the total generation for every powerplant in the system. Table 3 shows monthly generation and pumping energy, by plant, as well as monthly System loads for the water year. The total energy that was required to operate the pumps in the System is included in Table 2. Some of the numbers included in this section were provided by Western Area Power Administration (WAPA).

The Willow Creek Canal did not pump any water into Granby Reservoir during WY 2015. Meanwhile, the Farr Pumping Plant and the Flatiron Powerplant unit 3 required 13.8 and 18.1 GWh, respectively. The Farr Pumping Plant and Flatiron Powerplant unit 3 operations were below-average in WY 2015. Their power requirements were 56 percent of the 30-year average.

According to the numbers provided by WAPA's office in Loveland, sales of electric power totaled 2,427,474 mega-watt hours (MWh) during WY 2015, with a revenue of $91,658,459. Energy deficits were covered by a combination of scheduled interchange energy, use of the Mount Elbert pumped storage plant, and power purchases. The power purchases totaled 716,708 MWh during WY 2015 for which WAPA paid a total of $23,837,693.

WESTERN DIVISION POWER SYSTEM
WATER YEAR 2016 – GENERATION AND PUMP ENERGY FORECAST

Under the most-probable runoff condition plan developed in October 2015, the gross generation for the C-BT powerplants is projected to be 585.9 GWh during WY 2016, while pump energy requirements from the C-BT Power System are expected to reach 76.6 GWh. The total generation for the entire Western Division Power System (System) is expected to be 2,046.2 GWh, with a total load of 2,162.5 GWh, leaving a shortfall of 116.3 GWh. The System generation includes one-half of the total Yellowtail Powerplant generation and the Mount Elbert Powerplant generation resulting from Fryingpan-Arkansas Project water deliveries. The total load includes energy deliveries under firm contracts, seasonal support energy deliveries, energy dedicated for C-BT use, estimates of station service energy, and estimates of transmission system losses.

Under the reasonable-minimum runoff conditions plan from October 2015, the Gross generation for the C-BT powerplants is projected to be 459.0 GWh in WY 2016 while the total System generation is projected to be 1,740.1 GWh during WY 2016, 306.1 GWh less than the total generation projected under most probable runoff conditions. Under this plan, pump energy requirements for the C-BT would total 67.5 GWh. The total System load is expected to be 2,162.5 GWh over the entire water year, leaving a total generation shortfall of 422.4 GWh. Under the reasonable-minimum runoff conditions, total generation shortfalls are expected for almost every month except for May, June and August.

If reasonable-maximum runoff conditions occur during WY 2015, the C-BT powerplants should produce 601 GWh of power generation while the System total generation should reach 2,580.5 GWh, 534.3 GWh more than the generation projected under most-probable runoff conditions. Under the reasonable-maximum conditions the total C-BT pump energy requirements would be 76.2 GWh. The total System load is expected to be 2,162.5 GWh over the entire water year, leaving a total generation surplus of 418.0 GWh.

Tables 4A through 4C summarize the projected monthly System generation, pump energy, and loads for the three forecasted runoff conditions for WY 2016. Exhibits 3A through 3C graphically display the gross generation less pumping for the C-BT contributing to the System for the most probable, reasonable-minimum, and reasonable-maximum inflow conditions. Table 5 lists the scheduled maintenance for the various facilities in the C-BT. Tables 6 and 7 summarize the capacity data for the powerplants and pumping plants within the System, including the Yellowtail and Mount Elbert Units.

Table 1

WESTERN DIVISION SYSTEM
GENERATION FOR WY 2015

Powerplant	Accum. Gross Generation 1/		
	WY 2015 (GWH)	Avg 2/ (GWH)	% of Avg
Green Mtn.	77.6	51.9	150
Marys Lake	16.5	37.3	44
Estes	50.4	100.3	50
Pole Hill	110.2	172.3	64
Flatiron 1&2	152.0	226.7	67
Big Thompson	4.3	10.9	39
Seminoe	117.9	132.5	89
Kortes	107.8	140.3	77
Fremont C.	180.1	239.6	75
Alcova	78.8	118.1	67
Glendo	70.8	80.3	88
Guernsey	18.6	19.4	96
Boysen	65.4	69.3	94
Heart Mtn.	18.3	15.7 3/	117
Buffalo Bill	67.6	68.3 3/	99
Shoshone	19.3	20.3 3/	95
Spirit Mtn.	18.9	14.7 3/	129
Mt. Elbert	294.1	169.0 4/	174
Yellowtail	794.1	959.0 5/	83
Total	2,262.7	2645.9	86

1/ Oct-Sep
2/ 1976-2005 average
3/ 1995-2012 average
4/ 1990-1999 average
5/ 1971-1990 average; In general 1/2 of Yellowtail energy is dedicated to the Western Division System through marketing arrangement. The other 1/2 is marketed in Eastern Division System.

Table 2

PUMP ENERGY USED DURING WY 2015

Pumping Plant	Oct-September Pump Energy		
	WY2015 (GWH)	Avg 1/ (GWH)	% of Avg
Willow Crk	0.07	5.7	1
Farr	13.8	30.6	45
Flatiron 3	18.1	26.8	68
Mt. Elbert	397.7	182.1 2/	218
Total	429.67	245.2	175

1/ 1976-2005 average
2/ 1990-1999 average

Table 3

PICK-SLOAN MISSOURI BASIN PROGRAM WESTERN DIVISION POWER SYSTEM
WATER YEAR 2015 OPERATIONS
GROSS GENERATION LESS PUMPING IN GIGAWATT-HOURS

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	TOTAL
Mt. Elbert *	0.104632	2.822635	4.648479	3.551537	1.864007	4.008635	0.202444	3.474482	6.370367	4.768902	0.556175	0	32.37229
Green Mtn.	7.6	2.5	2.784	2.6	3.3	2.59	2.6	6.1	17.8	13.804	7.096	8.817	77.591
Willow Cr. pump	0	0	0	0	0	0	0	0.01	0	0	0	0.07	0.08
Farr pump	0.3	0	2.299	3.4	2.3	1.595	0.1	0	0	0.24	1.657	1.754	13.645
Marys Lake	0.2	0	2.425	4.3	2.6	2.151	0.4	0.5	0	0.89	1.478	1.495	16.439
Estes	1.8	0.3	7.608	11	7.3	6.108	1.1	1.6	0.2	2.251	5.726	5.396	50.389
Pole Hill	2.6	0	9.772	16.8	10.5	9.42	2.2	11.9	22.4	11.572	5.886	7.1	110.15
Flatiron 1&2	5.5	0.8	13.841	20.8	13.4	11.638	4.3	17	26.1	17.223	11.107	10.379	152.088
Flatiron 3	0	0	0.03	0	0.01	0	0	0	0	0.005	0	0.012	0.057
Flatiron 3 pump	0	0	3.501	6.4	3.1	0	0.7	1.9	1.7	0.834	0	0	18.135
Big Thompson	0.1	0	0	0	0	0	0	1.4	1.9	0.129	0.679	0.098	4.306
Seminoe	4.5	4.4	4.399	4.2	4	4.2	16.5	20.4	25.8	12.606	8.593	8.266	117.864
Kortes	5.3	5.1	5.178	5.1	4.9	5.235	9.3	17	18.1	13.795	9.53	9.335	107.873
Fremont Canyon	0.02	0	6.136	6.7	6.1	13.391	37.6	19.4	8.5	30.322	32.296	19.688	180.153
Alcova	2.7	2.6	2.443	2.6	2.3	5.406	15.5	9.2	3	12.145	13.309	7.699	78.902
Glendo	0	0	0	0	0	0	1.2	4.1	14.1	20.74	21.58	9.09	70.81
Guernsey	0	0	0	0	0	0	0.8	4	4.1	2.257	3.625	3.766	18.548
Pilot Butte **	0	0	0	0	0	0	0	0	0	0	0	0	0
Boysen	4.5	2.8	4.458	5.2	4.6	4.913	4.3	6.7	7.7	9.268	5.951	4.881	65.271
Shoshone	1.6	1.6	1.663	1.7	0.1	1.593	1.8	1.9	1.9	2.015	1.844	1.615	19.33
Buffalo Bill	10.2	2.5	0	0	0	1.67	6.8	9.5	12.9	10.918	8.509	4.548	67.545
Spirit Mtn.	1.9	0	0	0	0	0	1	3.2	3.2	3.367	3.192	2.963	18.822
Diamond Cr. pump	0	0	0	0	0	0	0	0	0	0	0	0	0
Heart Mtn.	2.1	0	0	0	0	0	1.1	3.3	3	3.055	2.946	2.814	18.315
Yellowtail/2	42.05	32	30.972	30.4	25.95	34.944	24	28.9	49.4	44.1405	26.9045	27.4135	397.0745
Fry-Ark	0.104632	2.822635	4.648479	3.551537	1.864007	4.008635	0.202444	3.474482	6.370367	4.768902	0.556175	0	32.37229
CBT	17.5	3.6	30.66	45.7	31.71	30.312	9.8	36.59	66.7	44.8	30.315	31.473	379.16
North Platte	12.52	12.1	18.156	18.6	17.3	28.232	80.9	74.1	73.6	91.865	88.933	57.844	574.15
Bighorn	62.35	38.9	37.093	37.3	30.65	43.12	39	53.5	78.1	72.7635	49.3465	44.2345	586.3575
TOTAL GEN	92.47463	57.42263	90.55748	105.1515	81.52401	105.6726	129.9024	167.6645	224.7704	214.1974	169.1507	133.5515	1572.04
TOTAL LOAD	162.4	162.2	177.1	172.6	137	149.3	176.4	184.7	211	262	211.2	156.6	2162.5
SURPLUS/DEFICIT	-69.9254	-104.777	-86.5425	-67.4485	-55.476	-43.6274	-46.4976	-17.0355	13.77037	-47.8026	-42.0493	-23.0485	-590.46

* projected values are historic average flow through energy

** projected values are marketed energy

Table 4A

PICK-SLOAN MISSOURI BASIN PROGRAM WESTERN DIVISION POWER SYSTEM
WATER YEAR 2016 FORECASTED OPERATIONS
MOST PROBABLE WATER SUPPLY CONDITION
GROSS GENERATION AND PUMPING IN GIGAWATT-HOURS

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	TOTAL
Mt. Elbert *	1.3	2.4	2.4	2.5	3.1	2.5	3.5	3.9	4.7	4.4	2	1	33.7
Green Mtn.	7.4	2.1	2	1.9	1.7	2.6	2.5	2.2	4.1	7.4	9.7	4.1	47.7
Willow Cr. pump	0	0.6	0	0	0	0	1.2	4.7	2.2	0.5	0.2	0.1	9.5
Farr pump	1.6	0.8	3.7	4.9	4.7	5.1	2.7	1	0	0.9	1.8	3.6	30.8
Marys Lake	1.9	0.1	3.8	6.4	6	6.4	4.8	4.8	0.9	2.6	2.6	4.8	45.1
Estes	5.6	2.8	12.1	16	14.9	16	12.1	12.3	2.8	7.2	7.2	12.4	121.4
Pole Hill	7.6	0.4	15.1	25.7	24	25.7	19.4	22	15.9	16.6	11.4	19.5	203.3
Flatiron 1&2	9.2	4.6	23	32.1	30	32.1	23.7	26.6	18	18.8	13	8.1	239.2
Flatiron 3	0	0.2	0	0	0	0	0	0	0	0	0.2	0.1	0.5
Flatiron 3 pump	0	0	3.7	6.6	5.9	6.1	5.7	3.2	1.8	0	2.5	0.8	36.3
Big Thompson	0.2	0	0	0	0	0	0	0.4	2.3	1.1	0.5	0.8	5.3
Seminoe	5.69	5.498	5.672	5.659	5.25	13.76	18.302	30.668	31.979	19.153	10.863	9.385	161.879
Kortes	5.607	5.435	5.607	5.624	5.246	13.76	18.421	27.606	26.712	18.507	10.578	9.219	152.322
Fremont Canyon	0.638	7.122	7.32	7.326	6.887	12.558	25.464	29.341	41.682	46.938	43.776	15.156	244.208
Alcova	4.211	4.053	4.175	4.175	3.917	6.691	9.853	13.804	19.334	21.532	19.81	6.678	118.233
Glendo	0	0	0	0	0	0	3.244	16.396	14.74	24.797	20.097	7.205	86.479
Guernsey	0	0	0	0	0	0	2.04	3.795	3.667	3.795	3.795	3.366	20.458
Pilot Butte**	0.4	0	0	0	0	0	0.6	1.2	1.2	1.2	1.2	1.2	7
Boysen	4.54	4.247	4.362	4.326	4.023	4.812	4.132	11.082	11.4	11.066	9.309	6.965	80.264
Shoshone	1.099	1.084	1.107	1.109	0.401	1.113	1.098	1.127	2.16	2.227	1.68	1.142	15.347
Buffalo Bill	1.672	1.6	1.687	1.689	1.555	1.694	4.022	13.366	12.967	13.395	13.379	12.83	79.856
Spirit Mtn.	1.571	0	0	0	0	0	1.091	2.76	2.899	3.243	3.265	2.961	17.79
Diamond Cr. pump	0	0	0	0	0	0	0	0	0	0	0	0	0
Heart Mtn.	1.843	0	0	0	0	0	0.862	4.453	4.309	4.453	4.453	4.309	24.682
Yellowtail/2	29	26.8	27.6	27.3	25	27	25	52.4	53.7	43	41.9	39.4	418.1
Fry-Ark	1.3	2.4	2.4	2.5	3.1	2.5	3.5	3.9	4.7	4.4	2	1	33.7
CBT	30.3	8.8	48.6	70.6	66	71.6	52.9	59.4	40	52.3	40.1	45.3	585.9
North Platte	16.146	22.108	22.774	22.784	21.3	46.769	77.324	121.61	138.114	134.722	108.919	51.009	783.579
Bighorn	40.125	33.731	34.756	34.424	30.979	34.619	36.805	86.388	88.635	78.584	75.186	68.807	643.039
TOTAL GEN	87.871	67.039	108.53	130.308	121.379	155.488	170.529	271.298	271.449	270.006	226.205	166.116	2046.218
TOTAL LOAD	162.4	162.2	177.1	172.6	137	149.3	176.4	184.7	211	262	211.2	156.6	2162.5
SURPLUS/DEFICIT	-74.529	-95.161	-68.57	-42.292	-15.621	6.188	-5.871	86.598	60.449	8.006	15.005	9.516	-116.282

* PROJECTED VALUES ARE HISTORIC AVERAGE FLOW THROUGH ENERGY

** PROJECTED VALUES ARE MARKETED ENERGY

Table 4B

PICK-SLOAN MISSOURI BASIN PROGRAM WESTERN DIVISION POWER SYSTEM
WATER YEAR 2016 FORECASTED OPERATIONS
REASONABLE MINIMUM WATER SUPPLY CONDITION
GROSS GENERATION AND PUMPING IN GIGAWATT-HOURS

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	TOTAL
Mt. Elbert *	1.3	2.4	2.4	2.5	3.1	2.5	3.5	3.9	4.7	4.4	2	1	33.7
Green Mtn.	7	1.7	1.7	1.6	1.5	1.8	1	1	1.1	1.2	2.3	3.7	25.6
Willow Cr. pump	0	0.6	0	0	0	0	0.8	2.7	1.2	0.4	0.2	0.1	6
Farr pump	1.7	0.9	3.7	5	4.7	5.1	2.9	1.2	0.2	0.2	1.3	2.9	29.8
Marys Lake	1.9	0.1	3.8	6.4	6	6.4	3.8	4.1	3.5	0.3	0.5	3.5	40.3
Estes	5.7	2.8	12.1	16	14.9	16	9.9	10.4	9	2.3	5.1	9.1	113.3
Pole Hill	7.8	0.4	15.1	25.8	24	25.7	15.1	17.8	21	1.7	5.5	14.9	174.8
Flatiron 1&2	9.5	4.6	23	32.1	30	32.1	19.5	20	25.3	8.3	9.3	16.7	230.4
Flatiron 3	0	0.2	0	0	0	0	0	0	0	0	0	0	0.2
Flatiron 3 pump	0	0	3.7	6.6	5.9	6	2.5	4.4	2.5	0	0	0.1	31.7
Big Thompson	0.34	0	0	0	0	0	0.009	0.1	1.3	0.9	1.1	1.3	5.049
Seminoe	5.67	5.49	5.63	5.61	5.25	6.35	10.23	14.33	16.56	15.91	13.56	7.93	112.52
Kortes	5.59	5.44	5.607	5.607	5.25	6.35	10.23	14.28	16.37	15.88	13.74	8.19	112.534
Fremont Canyon	1.14	7.58	7.83	7.83	7.3	12.48	21.93	40.55	44.22	44.68	43.52	13.72	252.78
Alcova	4.46	4.28	4.43	4.43	4.13	6.69	8.211	19.8	21.41	22.13	22.12	6.68	128.771
Glendo	0	0	0	0	0	0	2.39	16.16	11.28	24.42	19.66	6.94	80.85
Guernsey	0	0	0	0	0	0	0.997	3.8	3.67	3.8	3.8	3.37	19.437
Pilot Butte **	1.2	0.5	0	0	0	0	0.8	1.9	4	3.8	3.7	1.7	17.6
Boysen	4.54	4.24	4.35	4.3	4	4.75	4.06	5.18	5.86	5.74	5	3.47	55.49
Shoshone	1.1	1.08	1.1	1.1	0.4	1.1	1.1	1.13	1.15	1.2	1.2	1.1	12.76
Buffalo Bill	2.75	1.6	1.68	1.69	1.55	1.69	2.6	13.3	12.8	13.1	11.16	8.3	72.22
Spirit Mtn.	1.17	0	0	0	0	0	1.61	3	3.07	3.1	3.07	2.91	17.93
Diamond Cr. pump	0	0	0	0	0	0	0	0	0	0	0	0	0
Heart Mtn.	0.886	0	0	0	0	0	2.11	1.5	1.7	3.2	3.2	2.75	15.346
Yellowtail/2	28.94	25.86	26.56	26.2	22.1	20.77	18.99	23	23.44	24.55	23.7	21.89	286
Fry-Ark	1.3	2.4	2.4	2.5	3.1	2.5	3.5	3.9	4.7	4.4	2	1	33.7
CBT	30.54	8.3	48.3	70.3	65.8	70.9	43.109	45.1	57.3	14.1	22.3	46.1	522.149
North Platte	16.86	22.79	23.497	23.477	21.93	31.87	53.988	108.92	113.51	126.82	116.4	46.83	706.892
Bighorn	40.586	33.28	33.69	33.29	28.05	28.31	31.27	49.01	52.02	54.69	51.03	42.12	477.346
TOTAL GEN	89.286	66.77	107.887	129.567	118.88	133.58	131.867	206.93	227.53	200.01	191.73	136.05	1740.087
TOTAL LOAD	162.4	162.2	177.1	172.6	137	149.3	176.4	184.7	211	262	211.2	156.6	2162.5
SURPLUS/DEFICIT	-73.114	-95.43	-69.213	-43.033	-18.12	-15.72	-44.533	22.23	16.53	-61.99	-19.47	-20.55	-422.413

* PROJECTED VALUES ARE HISTORIC AVERAGE FLOW THROUGH ENERGY

** PROJECTED VALUES ARE MARKETED ENERGY

Table 4C

PICK-SLOAN MISSOURI BASIN PROGRAM WESTERN DIVISION POWER SYSTEM
WATER YEAR 2016 FORECASTED OPERATIONS
REASONABLE MAXIMUM WATER SUPPLY CONDITION
GROSS GENERATION AND PUMPING IN GIGAWATT-HOURS

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	TOTAL
Mt. Elbert *	1.3	2.4	2.4	2.5	3	2.5	3.5	3.9	4.7	4.4	2	1	33.6
Green Mtn.	7.6	2.3	2.2	2	2	2.8	2.8	7.2	16.4	15	12.1	5	77.4
Willow Cr. pump	0	0.7	0	0	0	0	2.7	5.2	4.7	1.3	0.5	0.3	15.4
Farr pump	1.5	0.8	3.7	4.9	4.7	4.2	0.6	0	0	0.1	0.9	3.1	24.5
Marys Lake	1.9	0.1	3.8	6.4	6	5.6	1	2.3	0.2	2.6	2.6	4.8	37.3
Estes	5.6	2.8	12.1	16	15	14.3	3.9	6.8	4.7	7.3	7.3	12.4	108.2
Pole Hill	7.8	0.4	15.1	25.8	24.1	22.4	4.2	22	25	17.9	11.5	19.6	195.8
Flatiron 1&2	9.4	4.8	23	32.2	30	28.6	8.7	25.8	31.2	21	13.2	24	251.9
Flatiron 3	0	0.2	0	0	0	0	0	0	0	0.3	0.2	0	0.7
Flatiron 3 pump	0	0	3.7	6.5	5.8	4.1	1.8	4.8	3.2	4.6	1.8	0	36.3
Big Thompson	0.1	0	0	0	0	0	0	1.6	1.2	1.5	0.7	0.8	5.9
Seminoe	5.67	5.46	5.66	5.66	5.29	32.4	30.95	32.31	32.12	32.11	27.14	9.43	224.2
Kortes	5.59	5.4	5.59	5.59	5.23	27.61	26.71	27.61	26.712	27.606	26.23	9.22	199.098
Fremont Canyon	0.6	7.13	7.33	7.34	6.89	31.75	45.74	47.33	45.81	47.35	47.31	43.11	337.69
Alcova	4.2	4.05	4.18	4.18	3.92	16.03	20.63	27.6	26.66	27.55	27.55	20.68	187.23
Glendo	0	0	0	0	0	5.84	19	26.23	26.26	25.37	21.44	16.81	140.95
Guernsey	0	0	0	0	0	3.3	3.39	3.8	3.67	3.8	3.8	3.4	25.16
Pilot Butte**	1.6	0	0	0	0	0	0.7	1.5	3.5	4.1	3	1.7	16.1
Boysen	4.5	4.26	4.38	4.35	4.05	7.9	10.4	10.21	11.24	11.9	11.67	7.45	92.31
Shoshone	1.12	1.08	1.13	1.11	0.4	1.12	1.39	2.24	2.16	2.23	2.23	2.16	18.37
Buffalo Bill	1.65	1.6	1.67	1.69	1.56	1.7	12.95	13.39	13	13.39	13.39	12.96	88.95
Spirit Mtn.	1.57	0	0	0	0	0	1.5	2.6	2.8	3.23	3.28	2.97	17.95
Diamond Cr. pump	0	0	0	0	0	0	0	0	0	0	0	0	0
Heart Mtn.	1.84	0	0	0	0	0	2.154	4.453	4.309	4.453	4.453	4.3	25.962
Yellowtail/2	29.1	27.4	28.2	28	25.7	43	66.2	75.3	72.9	75.3	52.2	48.6	571.9
Fry-Ark	1.3	2.4	2.4	2.5	3	2.5	3.5	3.9	4.7	4.4	2	1	33.6
CBT	30.9	9.1	48.8	71	66.6	65.4	15.5	55.7	70.8	59.6	44.4	63.2	601
North Platte	16.06	22.04	22.76	22.77	21.33	116.93	146.42	164.88	161.232	163.786	153.47	102.65	1114.328
Bighorn	41.38	34.34	35.38	35.15	31.71	53.72	95.294	109.693	109.909	114.603	90.223	80.14	831.542
TOTAL GEN	89.64	67.88	109.34	131.42	122.64	238.55	260.714	334.173	346.641	342.389	290.093	246.99	2580.47
TOTAL LOAD	162.4	162.2	177.1	172.6	137	149.3	176.4	184.7	211	262	211.2	156.6	2162.5
SURPLUS/DEFICIT	-72.76	-94.32	-67.76	-41.18	-14.36	89.25	84.314	149.473	135.641	80.389	78.893	90.39	417.97

* PROJECTED VALUES ARE HISTORIC AVERAGE FLOW THROUGH ENERGY

** PROJECTED VALUES ARE MARKETED ENERGY

Table 5

COLORADO-BIG THOMPSON AND FRYINGPAN-ARKANSAS PROJECTS
ESTIMATED MAINTENANCE SCHEDULE FOR WATER YEAR 2016

Facility	Description of Work	Begin Date	End Date	Generation Affected	Water Ops Affected
Estes Unit 1	Annual Maintenance	8-Feb-16	11-Mar-16	Y	N
Estes Unit 2	Annual Maintenance	4-Jan-16	5-Feb-16	Y	N
Estes Unit 3	Annual Maintenance & Relay Upgrade	14-Mar-16	31-May-16	Y	N
Flatiron Unit 3	Annual Maintenance (dates tentative)	12-Sep-16	21-Oct-16	Y	Y
Flatiron Unit 2	Annual Maintenance	18-Apr-16	27-May-16	Y	N
Flatiron SWYD KW2A	Annual Transformer Maintenance	2-May-16	6-May-16	Y	N
Flatiron Unit 1	Annual Maintenance	22-Feb-16	1-Apr-16	Y	N
Flatiron SWYD KW1A	Annual Transformer Maintenance	7-Mar-15	11-Mar-16	Y	N
Big T Powerplant	Annual Maintenance	4-Jan-15	12-Feb-16	N	N
Big T XFMR KW1A	Annual XFMR Maintenance	18-Jan-16	22-Jan-16	N	N
Hansen Canal 930 Section	Annual Maintenance (dates tentative)	1-Apr-16	15-Apr-16	Y	Y
Hansen Canal 550 Section	Annual Maintenance (dates tentative)	23-Sep-16	7-Oct-16	Y	Y
Hansen Canal 930 Section	Maitland Siphon inspection	7-Nov-16	18-Nov-16	Y	Y
Green Mountain Unit 1	GM Unit 1 Annual Maintenance	4-Jan-16	12-Feb-16	N	N
Green Mountain Unit 2	GM Unit 2 Annual Maintenance	29-Feb-16	08-Oct-16	N	N
Green Mountain Unit 1	KZ1A Annual Transformer Maintenance	25-Jan-16	29-Jan-16	N	N
Green Mountain Unit 2	KZ2A Annual Transformer Maintenance	21-Mar-16	25-Mar-16	N	N
Mt Elbert Unit 2	Annual Inspection & Maintenance	26-Jan-16	6-mar-16	Y	N
Marys Powerplant	Annual Maintenance	31-Oct-16	9-Dec-16	N	N
Pole Hill Powerplant	Annual Maintenance	31-Oct-16	9-Dec-16	Y	N
Pole Hill SWYD K1A	Annual Transformer Maintenance	14-Nov-16	18-Nov-16	Y	N
Dille Diversion Dam	Tentative Flood Recovery and Repair	01-Apr-15	20-May-16	Y	Y
	Other outages could take place between 31-Oct-16 and 9-Dec-16, during the C-BT maintenance season			Y	Y

TABLE 6

WESTERN DIVISION - PICK-SLOAN MISSOURI BASIN PROGRAM

POWERPLANT DATA

Facility	No. Units	Capacity Each Unit (kWh)	Total Installed Capacity (kWh)	Normal Operating Head (ft)	Output at Rated Head (ft^3/s)
Green Mountain	2	13,000	26,000	192-262	1,660
Marys Lake	1	8,100	8,100	202-217	550
Estes	3	16,500	49,500	551-571	1,300
Pole Hill	1	33,250	33,250	830-838	550
Flatiron units #1 & #2	2	43,000	86,000	1,096 - 1,118	1,070
(Flatiron 1/)	1	8,500	8,500	158-287	440
Big Thompson	1	5,300	5,300	183- 184	350
Seminoe	3	15,000	45,000	97-227	2,850
Kortes	3	12,000	36,000	192-204	2,700
Fremont Canyon	2	33,000	66,000	247-363	2,200
Alcova	2	18,000	36,000	153-165	2,200
Glendo	2	19,000	38,000	73-156	2,800
Guernsey	2	2,400	4,800	89-91	820
Pilot Butte2/	2	800	1,600	-- --	---
Boysen	2	7,500	15,000	72-112	2,415
Shoshone3/	1	3,000	3,000	-- --	---
Buffalo Bill3/	3	6,000	18,000	-- --	---
Heart Mountain	1	5,000	5,000	265-275	355
Mt. Elbert	2	103,000	206,000	447-477	6,400
Yellowtail	4	72,000	288,000	327-440	8,500
TOTAL	34	--------	979,050	----------	-------

TABLE 7

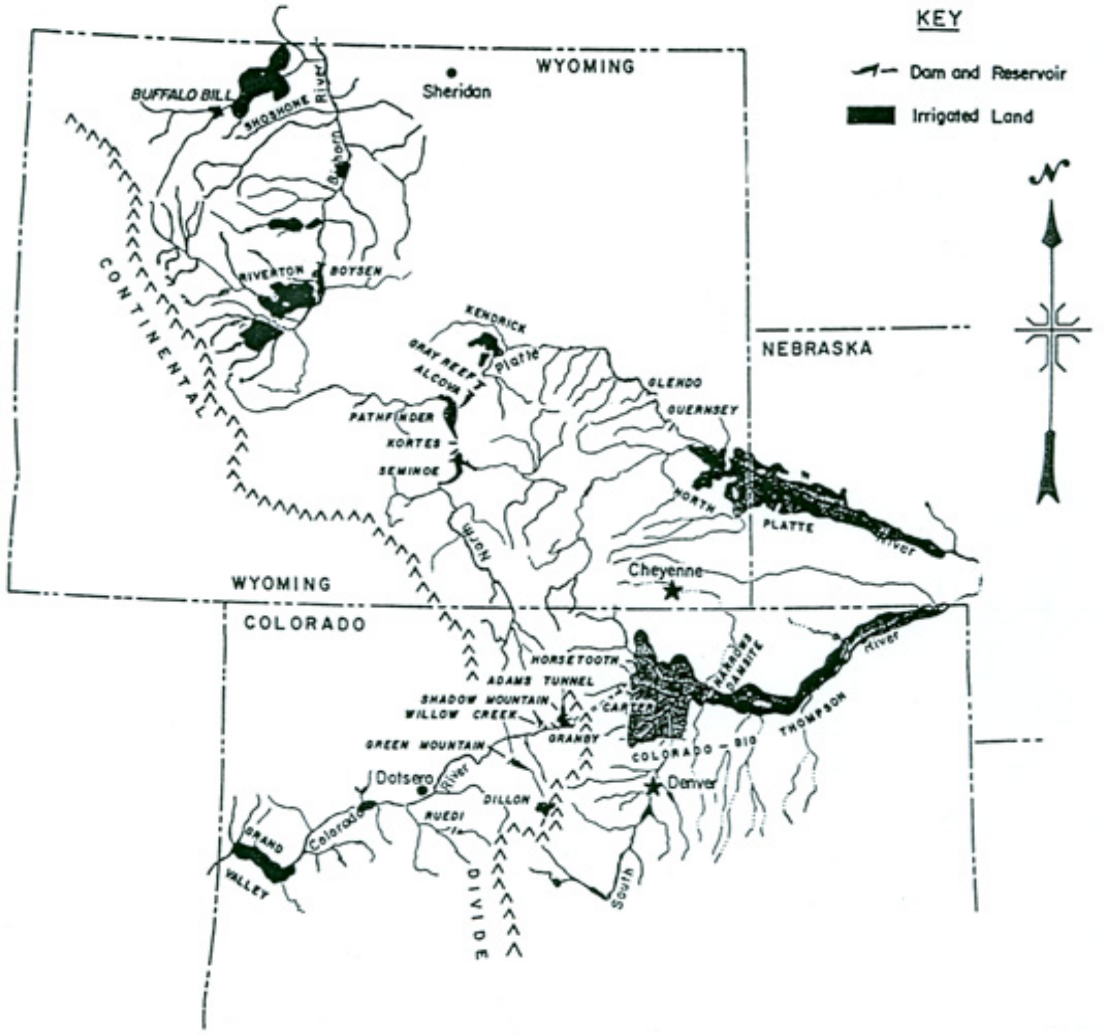
WESTERN DIVISION - PICK-SLOAN MISSOURI BASIN PROGRAM

PUMPING PLANT DATA

	Pumping Units			Plant Rating	
Facilities	No	Capacity (ft^3/s)	Normal Operating Head (ft)	Installed (Hp)	Kwh to Pump 1-Acre-ft at Maximum Head
Granby	3	600	92-186	18,000	227
Willow Creek	2	400	167-169	18,000	227
Flatiron	11/	440	173-287	13,000	391
Mt. Elbert	2	5,690	447-477	340,000	620

APPENDIX B - EXHIBITS

Exhibit 1



PICK-SLOAN MISSOURI BASIN PROJECT

WESTERN DIVISION

WATER RESOURCE MAP

50 0 50 100

SCALE OF MILES

MAP NO. X-700-121

JUNE 1, 1976

Exhibit 2

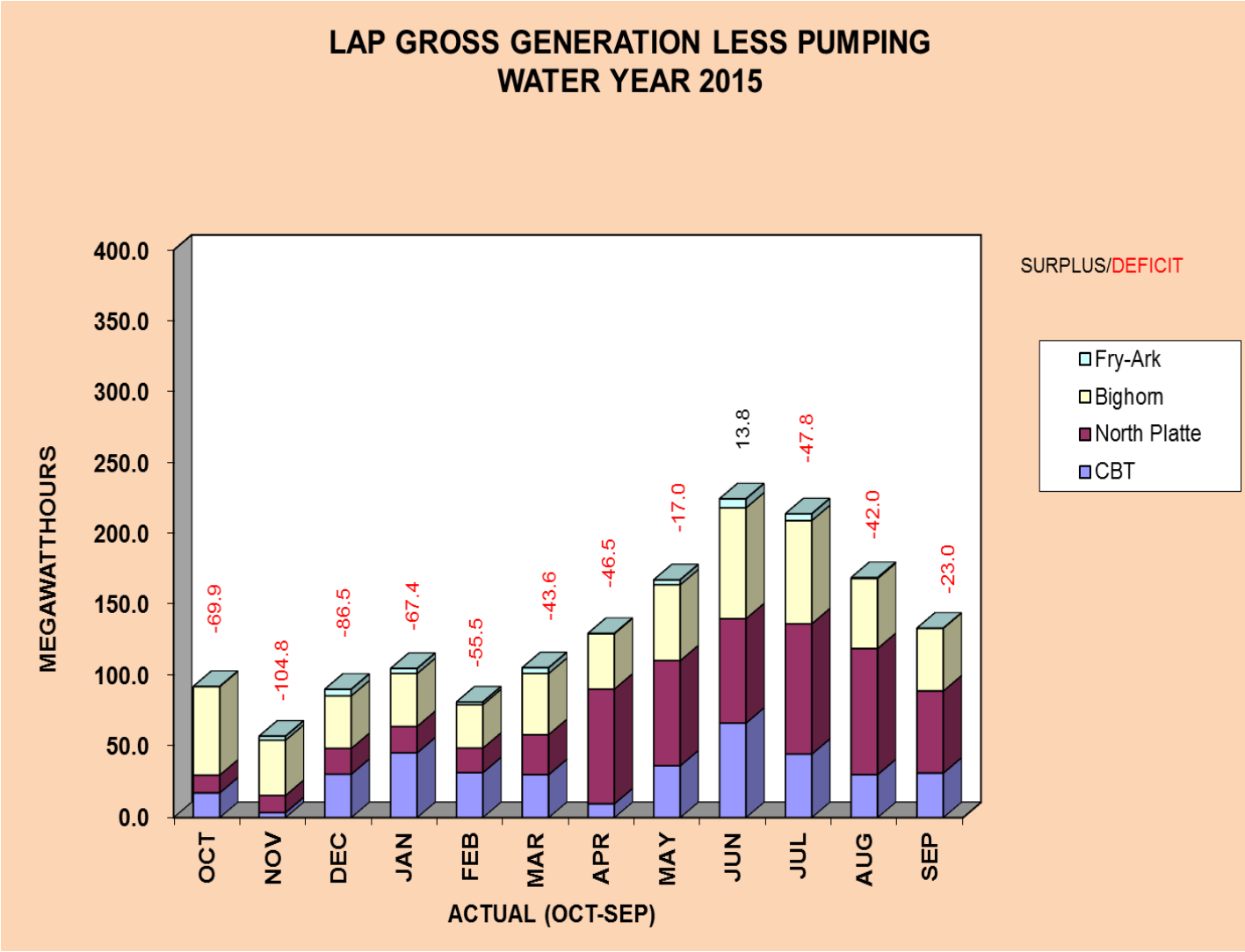

LAP GROSS GENERATION LESS PUMPING
WATER YEAR 2015
MEGAWATTHOURS
400.0
350.0
300.0
250.0
200.0
150.0
100.0
50.0
0.0
-69.9
-104.8
-86.5
-67.4
-55.5
-43.6
-46.5
-17.0
13.8
-47.8
-42.0
-23.0
OCT
NOV
DEC
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
ACTUAL (OCT-SEP)
SURPLUS/DEFICIT
Fry-Ark
Bighorn
North Platte
CBT

Exhibit 3A

PROJECTED LAP GROSS GENERATION LESS PUMPING
WATER YEAR 2016
FOR MOST PROBABLE INFLOW

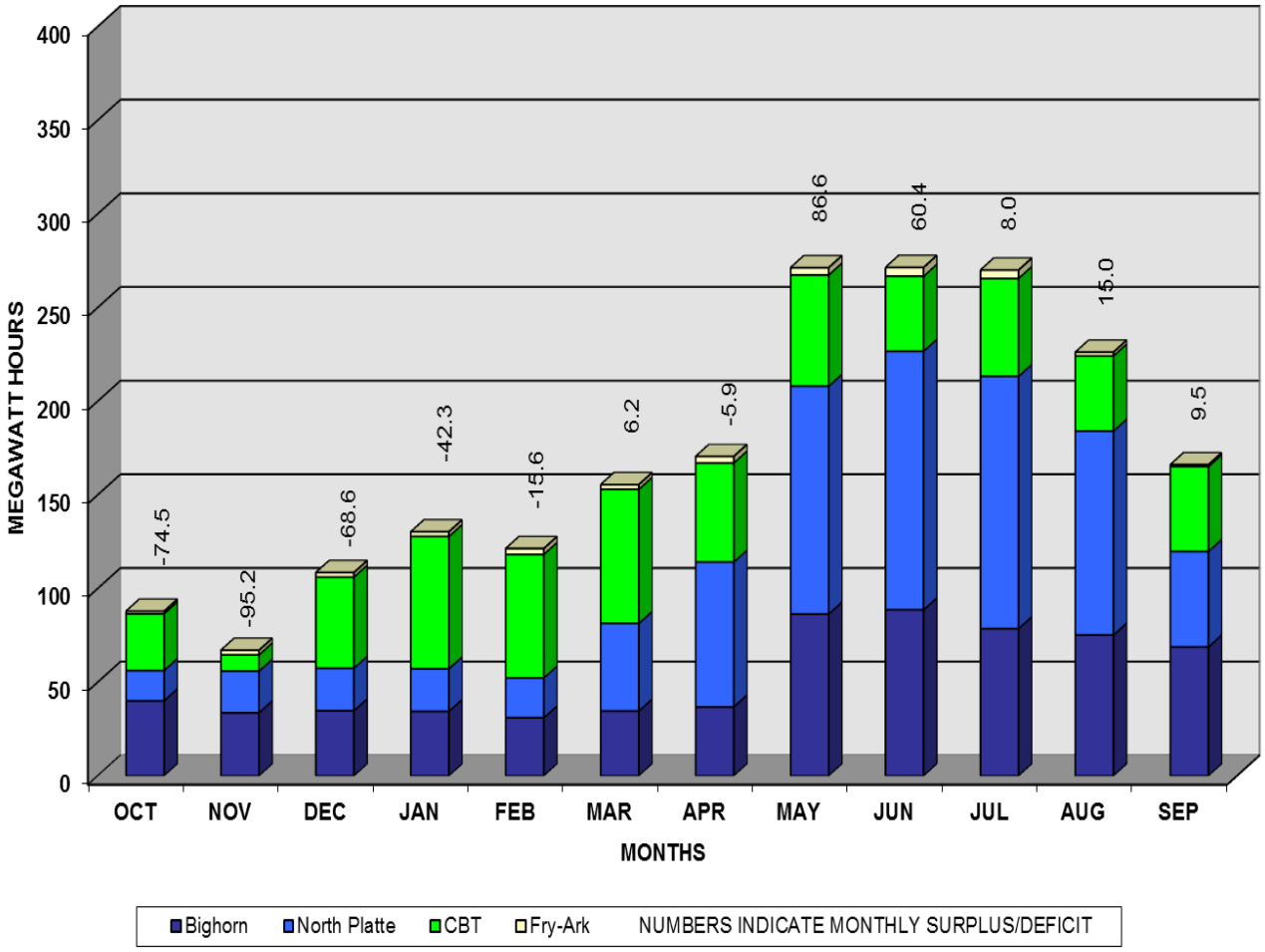


Exhibit 3B

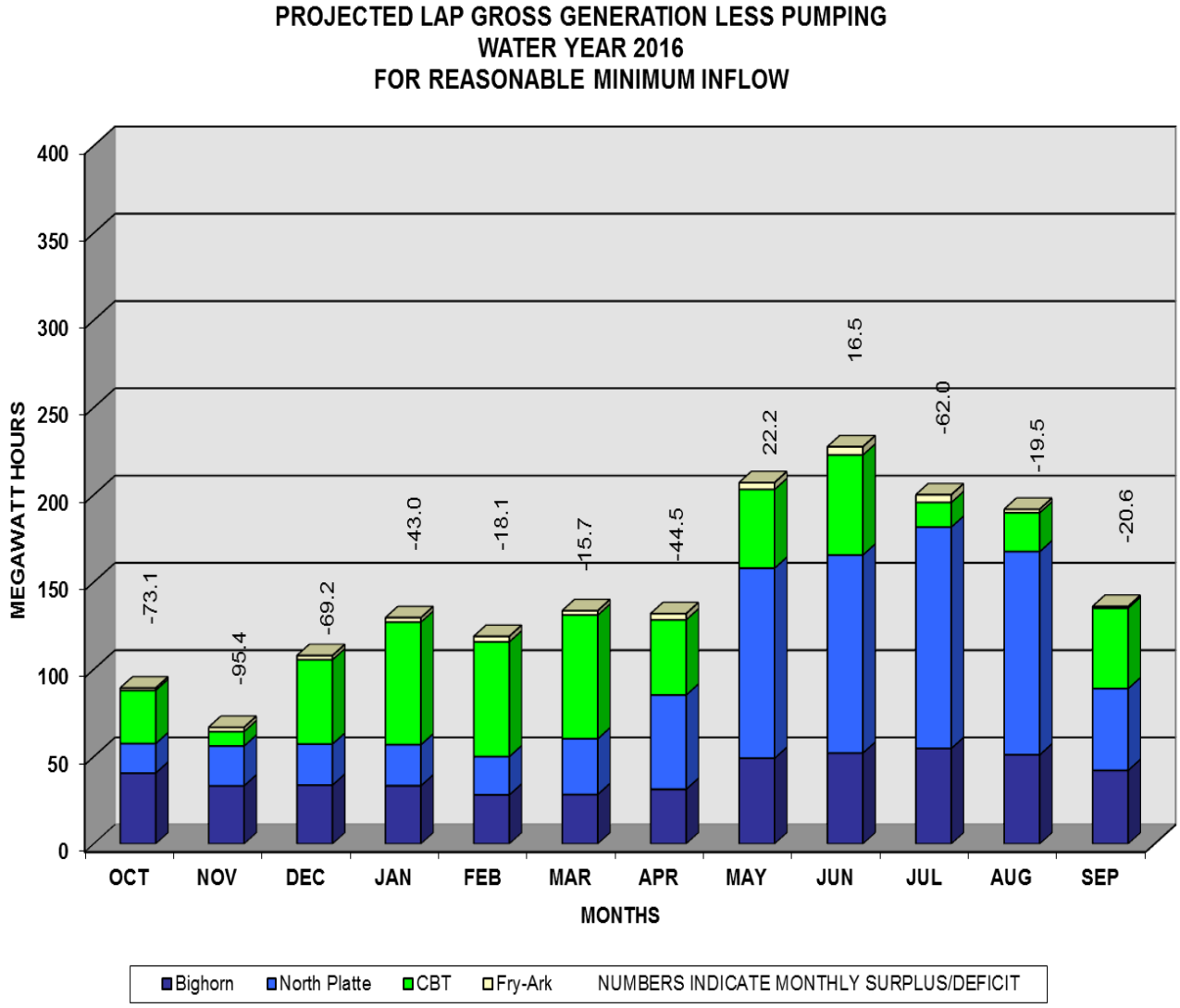
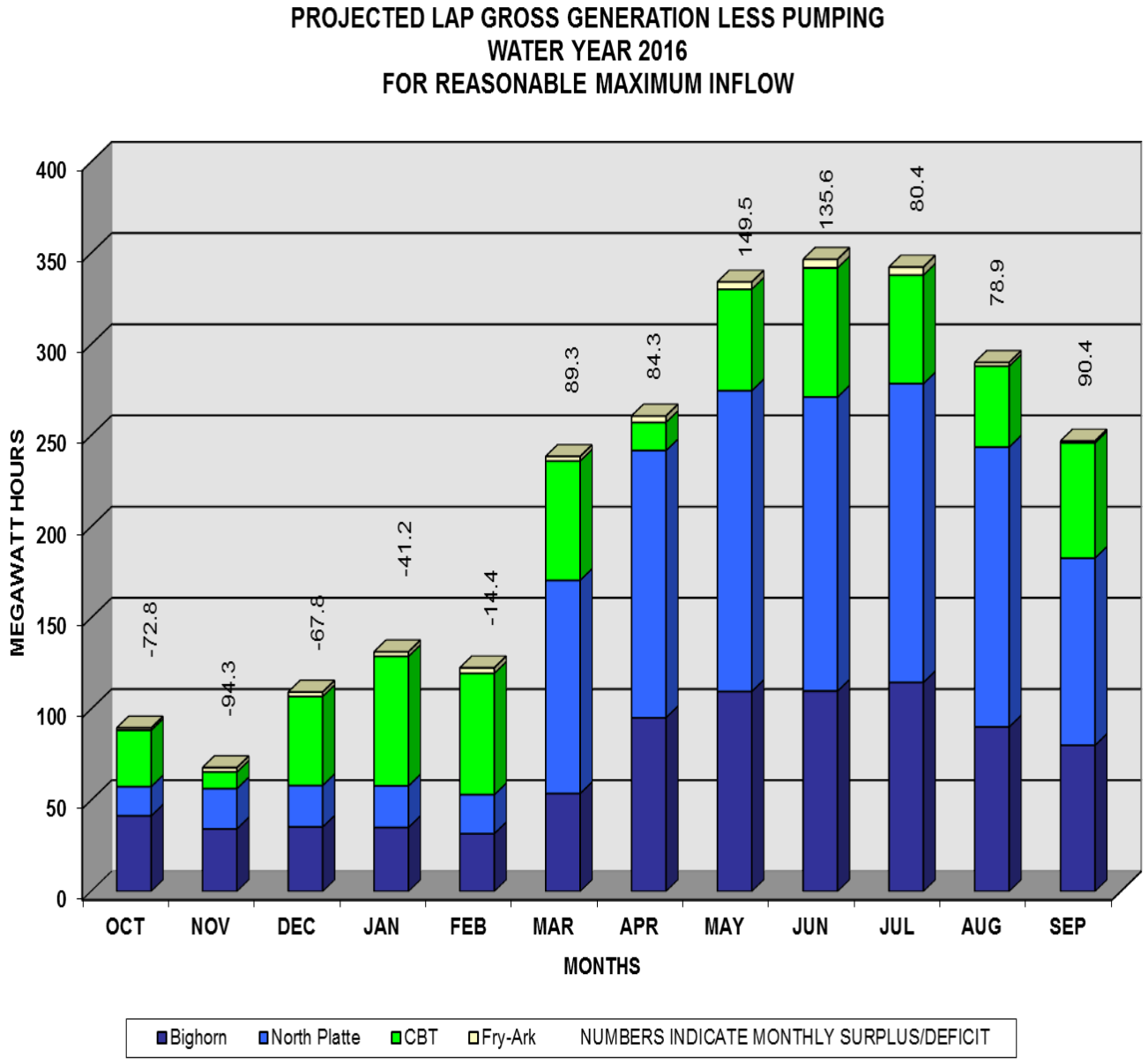

PROJECTED LAP GROSS GENERATION LESS PUMPING
WATER YEAR 2016
FOR REASONABLE MINIMUM INFLOW
MEGAWATT HOURS
400
350
300
250
200
150
100
50
0
-73.1
-95.4
-69.2
-43.0
-18.1
-15.7
-44.5
22.2
16.5
-62.0
-19.5
-20.6
OCT
NOV
DEC
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
MONTHS
Bighorn
North Platte
CBT
Fry-Ark
NUMBERS INDICATE MONTHLY SURPLUS/DEFICIT

Exhibit 3C


PROJECTED LAP GROSS GENERATION LESS PUMPING
WATER YEAR 2016
FOR REASONABLE MAXIMUM INFLOW
MEGAWATT HOURS
400
350
300
250
200
150
100
50
0
-72.8
-94.3
-67.8
-41.2
-14.4
89.3
84.3
149.5
135.6
80.4
78.9
90.4
OCT
NOV
DEC
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
MONTHS
Bighorn
North Platte
CBT
Fry-Ark
NUMBERS INDICATE MONTHLY SURPLUS/DEFICIT